The Role of Internal Stakeholders and Influencing Factors during the Phases of E-government Initiative Implementation

Thesis submitted for the degree of Doctor of Philosophy by

Hajed M. Al-Rashidi

School of Information Systems Computing and Mathematics
Brunel University

November 2012

Abstract

Governments around the globe were actively implementing e-government initiatives in the past two decades. However, the majority of e-government initiatives fail in achieving their objectives before, during or after implementation. This study is addressing the problem, e-government initiatives are still more failure than success. Literature indicates differing models that analyse various stages, stakeholders and factors influencing e-government implementation in the public sector. Yet, these models do not explore in particular the important roles and responsibilities of internal stakeholders and influencing factors during different phases of the implementation cycle of the e-government initiative. There is a need for a framework that guides the e-government initiative implementation internally.

To achieve the aim of this research, this study should empirically investigate "managing e-government initiative implementation." Consequently, this thesis results in research that contributes towards successful e-government initiative implementation based on empirical data derived from three case studies. The practical parts of the research are three case studies on e-government initiative implementation, which are analysed using an interpretive and qualitative research approach. Besides document analysis and observation, interview was the main method to collect empirical data for this study. For an accurate result, only managers and above level are selected and interviewed. The study examines the proposed framework in three government organizations in the State of Kuwait by using a qualitative, interpretive, multiple case study research strategy.

As a result, this thesis is proposing a framework that can be used to enhance the implementation process of e-government initiative throughout the different phases of the implementation cycle, and contributes to the body of knowledge by extending the literature. The stakeholders, factors and implementation phases are mapped together to ease understanding the implementation process of e-government initiative implementation across the public organizations.

The study concludes by identifying internal stakeholders, factors, and providing a holistic framework for e-government initiative implementation. The findings of this research are useful for internal stakeholders in the field, as it enables them to gain a better understanding of their own roles and responsibilities. Moreover, researchers in similar fields may find this work useful as a way to approach the study of e-government initiative implementation.

Acknowledgement

FIRST

All Praise be unto Allah, the Almighty, the Glorious.

And to his final messenger MUHAMMED (Peace be upon him, his family and his companions)

Second

First of all, I would like to express my special gratitude to my supervisor *Dr. Sarmad AlShawi* for his enthusiastic support, patience and advice throughout this research. I would also like to thank Doctors and research students, at the School of Information Systems Computing and Mathematics, for their constant paramount support and guidance that influenced and was inherited in both the theoretical and practical aspects of this thesis.

I am indebted to my father, mother, sisters and brothers for their love, support and guidance. My father and mother who haven't seen me much for more than a decade during my study, in the USA and UK, I am sorry if this has caused any annoyance to you.

My special thanks and warm appreciation goes to my cousin *Ahmad Mohammad AlRashidi, Zebayan*, for his unlimited help and support during the empirical data collection. My dear cousin thanks a million, May ALLAH bless you and your family.

Finally, I would like to express my feelings of pride toward my wife. She encouraged, supported and guided me during all stages of my postgraduate studies, Master and PhD. At all times she behaved like a candle to enlighten my life. She has never disturbed my study with any kind of complaint. She always hides her pains and troubles just to make me feel that studying abroad was a pleasurable thing to do. She bore the responsibility of taking care of my children and house from the first day I started this endeavour. As a result, this thesis was not possible without her encouragement and support. Finally, there are no words to show you my appreciation.

Dedication

"اللهم تقبل عملي هذا واجعله خالصا لوجهك الكريم"

I especially dedicate this thesis to:

The Soul of my Father: I Love You.

My Merciful Mother

My Great Wife "Maryam"

And my Children

ساره ، عمر ، سالم، ابراهيم، محمد ، ريان و (عيسى)

Declarations

This thesis gives an account of the research undertaken by Hajed Al-Rashidi. Some of the material contained herein has been accepted and presented in the form of the following publications:

Journal Paper ***under review***

Al-Rashidi H., Al-Shawi, S. & Kamal, M., (2013) Influence of internal stakeholders and factors on the e-government initiative implementation. Information Systems Management.

Conference Papers ***Published***

Al-Rashidi, H. (2010) 'Examining Internal Challenges to E-Government Implementation: Kuwait as a case study'. CD-ROM/Online Proceedings of the European, Mediterranean & Middle Eastern Conference on Information Systems (EMCIS) Accepted Refereed Papers, 2010, 12-13 April, Le Royal Méridien Abu Dhabi
ISBN: 978-1-902316-80-2

Al-Rashidi, H (2012) 'Identifying the Role of Internal Stakeholders and their Influence on E-Government Initiative Implementation', CD-ROM/Online Proceedings of the European, Mediterranean & Middle Eastern Conference on Information Systems (EMCIS) Accepted Refereed Papers, 2012, 6-7 June, Hotel Vier Jahreszeiten Maximilianstraße, Munich, Germany.

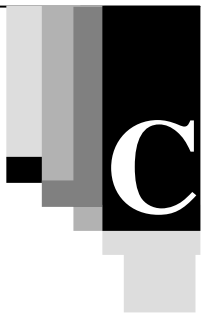
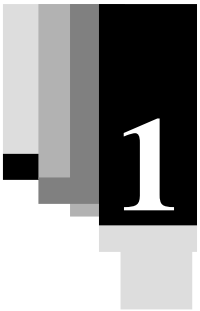


Table of Contents

List of Tables

List of Figures



Chapter 1: Introduction

Summary

This chapter provides the reader with a background on e-government. It is also important here to explain the steps and differences between e-government implementation, diffusion, and adoption. The research problem, questions and the aims of this study are also explained here. Furthermore, the objectives to achieve the aims of the study are explained in this chapter. Finally, the author describes the thesis structure and gives a brief summary of each chapter.

1.1 An Overview of E-government

The success of e-commerce encouraged the governments in the world to consider implementing e-government (Metaxiotis and Psarras, 2004). The difference between e-commerce and e-government is that e-government offer services to more customers (citizens, businesses, employees, and government itself). For the last two decades, governments around the world are underway to implementing e-government projects. The global attention towards e-government is increasing rapidly, as is the definitive guide on the importance of e-government and recognition of its role in the progress and growth of contemporary societies. When we talk about e-government, we mean that all government transactions are made through an e-government portal (a large web site where all information and services are provided online), in which a citizen can complete all transactions through the e-gate without human intervention or diverting time and effort to go to government departments or wait in line for interminable paperwork (Irani et al., 2006; Al-Sebie et al., 2005).

The e-government project, for every government in the globe, is of the utmost importance, since it constitutes the executive arm of what we aspire to achieve in administrative reform, reduction of waste, and raising work efficiency in the public sector while improving its competitiveness, not to mention its positive impact on citizens and the private sector. E-government advantages are unquestionable (Al-adawi, Yousafzaiand, Pallister, 2005). E-government, known as the ability of different governmental sectors to provide government information and services to citizens, businesses, and the government itself, is moving from traditional to electronic means using Information and Communication Technology (ICT), with the ability to quickly and meticulously lower costs and effort at any time via a single site on the Internet (Almarabeh and AbuAli, 2010; Ndou, 2004; Basu, 2004).

However, currently, e-government implementation is faced with internal and external challenges from public organizations (AlSobhi et al., 2009; Dpepa, 2001). In order to undertake an accurate study and eliminate chaos from studies that are replete in the literature, researchers should study implementation factors from different stakeholders' perspectives. For example, the perspective of end-users to e-government implementation challenges is completely different to that of government leaders and employees, and that is what is meant by internal and external factors. Hence, the aim of this research is to only focus on the role of internal stakeholders and factors that influence the e-government initiative implementation process, and to identify the major factors for each stakeholder at every e-government initiative development phase.

1.2 Background to the Research Problem: E-government Initiative Implementation

Although it is considered an information system, there are more disciplines related to e-government initiatives than any standard IS project. This makes it more complex and risky. Therefore, managing e-government initiative implementation depends on understanding the development process of the information system in order to prevent failure. However, any information system (IS) is considered a failure if its aims and objectives are not met (Lyytinen and Hirschheim, 1987). In fact, the IT/IS field remains in "chaos" in terms of systems failure, and more studies are needed to fill the gap between theory and practice (Yeo, 2002). As an IT/IS large system, e-government has various stakeholders and factors that influence the implementation of e-government initiatives (Kamal et al., 2011; Ebrahim et al., 2004; Mishra and Mishra, 2012; Sagheb-Tehrani, 2010; Detlor et al., 2010).

E-government is a huge information system project that is implemented in stages (Alshehri and Drew, 2010). Each stage has its challenges and value. E-government projects consist of smaller projects (initiatives) that should also be implemented in stages. E-government initiatives are represented by individual projects implemented under the umbrella of the e-government system. Accordingly, e-government initiatives need more focused research in order to overcome all current and future challenges.

Ideally, e-government as a whole project goes through stages of implementation ranging from the simple first stage toward the seamless one-stop shopping portal (Al-Shehry et al., 2006; Weerakkody et al., 2006). In fact, each e-government internal initiative is a smaller project that should also go through multiple implementation phases before it is placed on the government one-stop shopping portal. E-government internal stakeholders and other IT community need to understand the nature of IS projects and systems failures (Yeo, 2002).

E-government initiative is considered an information systems that are complex and many projects still fail most of the time (Garg et al., 2010; Pyster and Thayer, 2005; Hartman and Ashrafi, 2002). This is due to the ignorance of project management during implementation process, as well as many other factors (Ahuja et al., 2010). Implementing e-government initiatives are still unsuccessful and many challenges are paralyzing the continuity of the projects (Heeks, 2003b; Pardo and Scholl, 2002; Scholl, 2003; Wang and Hou, 2010; Corradini et al., 2009b). Similar to any IS project, e-government initiative brings with it complexity and high risks to the implementation process.

E-Government is becoming a high priority as a tool to offer online services to the public (Al Nagi and Hamdan, 2009). In addition, it is a promising phenomenon

(Justice et al., 2006). However, there is huge number of failed initiatives during implementation because of the many challenges that facing the implementation process (Heeks, 2003b; Dada, 2006; Ndou, 2004; Sarantis et al., 2011). In order to reduce the high number of e-government initiative implementation failure, we should unmistakably understand these key challenges in detail. internal stakeholders is one important issue of the e-government project implementation (Rowley, 2011; Sharifi and Manian, 2010). The relationships among internal stakeholders during e-government initiative implementation are also important (Welch, 2012; Detlor et al., 2010; Sharifi and Manian, 2010). Implementation success depends on the various stakeholders' long-term participation in e-government (Rowley, 2011).

According to Schware (2005) there are many countries that have had unsuccessful attempts to deliver e-government initiatives because they lacked adequate design, effective implementation, objective evaluation, and continual initiatives adaptation. As a new phenomenon (Morris and Moon, 2005), it is estimated that 85% of the e-government initiatives are totally or partially fail (Heeks, 2003b; Baumgarten and Chui, 2009; Wang and Hou, 2010; Corradini et al., 2009b). This leads to the importance to explore the research issues related to the e-government initiatives.

According to Srivastava (2011), e-government research was classified into three broad areas (a) the evolution and development of e-government initiatives, (b) adoption and implementation perspectives, and (c) the impact of e-government on stakeholders. This leads to the importance of understanding how to do research on e-government initiatives. Unfortunately, the literature is full of confusion regarding the concepts of implementation, diffusion, and adoption because electronic government is still maturing (Bélanger and Carter, 2008; Shareef et al., 2011) and the stakeholder needs further analysis (Scholl et al., 2007). It is very important when doing research to

understand specific terminology. Therefore, outlined below is a simple definition of the most common terminology used.

Implementation: This is the first step in the e-government project. The process focuses only on how to develop e-government such as identifying the requirements, responsibilities, and challenges facing the development process. According to Kwon and Zmud (1987), implementation is the process of development, installation, and maintenance.

Diffusion: This term refers to how to spread the e-government project to the public and attract them to use it.

Adoption: The terminology here is very clear, it is the study to adopt or reject something. E-government adoption studies are concerned with how the customers accept the use of the project. According to Rogers (1995), the innovation-decision process is either to make a decision of full use of an innovation or to reject adoption of an innovation.

The ultimate goal of e-government is to deliver government services through a one-stop portal (Fernandes et al., 2001; Wimmer and Krenner, 2001). However, many internal challenges impede e-government implementation. These challenges fall within the scope of: political, technical, and organisational. E-government implementation requires change and can be risky, complex, and expensive (Ahmad and Othman, 2006; Langford and Harrison, 2001; Corradini et al., 2009a). Globally, numerous e-government initiatives have not met their objectives. According to Heeks (2003a) e-government initiatives in developing countries are 35% total failures, 50% partial failures, and only 15% successes. These numerous e-government initiatives failures during implementation deserves further study (Dada, 2006; Kaaya, 2004a; Peters et al., 2004).

According to Layne and Lee (2001), " e-government is an evolutionary phenomenon and therefore e-government initiatives should be accordingly derived and implemented". Challenges facing e-government implementation are external and/or internal (Lau, 2003) and several challenging factors facing e-government implementation have been identified by many researchers (Schwester, 2009; Lam, 2005). E-government goes through stages, and each stage has its implementation challenges. Reviewing the literature, it was found that not only are there a lack of studies in this area, but also there is a lack of research quality. Internal challenges are more important to understand than external challenges when implementing e-government initiatives.

In a research conducted by Irani et al. (2006), the authors concluded by arguing that the transaction stage is a critical one because it is the ultimate goal of e-government, and the integration process, agenda, and project rates of failure are beginning to occur here. Trying to uncover challenges and problems in this stage, the authors argued that organizational innovation and change are known to be complex phenomena and should be well understood during e-government growth and implementation. In fact, each e-government implementation stage is more complex than the previous. This leads to the important of analyzing the internal stakeholders' relationship and factors impeding e-government implementation.

In a study to examine the factors that most impede the adoption of e-government applications, Schwester (2009) categorized various numbers of sub-factors into three areas: financial, technical, and human resources. The International City/County Management Association (ICMA), New York, used surveys to collect data for this study. In the study, the author argued that some factors such as higher operating budgets, more full-time IT staff, political support, and technical hardware are more

likely to result in successful e-government implementation. On the other hand, he indicated that privacy and security issues are not significant barriers to e-government implementation. This leads to the fact that there are factors affecting e-government implementation, factors affect only adoption, and factors affect both implementation and adoption. The researcher concluded by claiming that socio-cultural understanding is ultimately needed to understand challenges impeding e-government implementation.

Al-Sebie and Irani (2005), argued that before customers and their government go to a full online integration, the e-government initiatives should pass through stages until they are considered sufficiently successful to offer information and services at a one-stop point of access. Their study was to propose a conceptual model for the transactional stage to overcome technical and organizational challenges. Using empirical case studies on two organizations resulted in the discovery of challenges that affect the efficient progress of the internal government initiatives and categorized them as: political, technical, economic, social or organizational. This study focused on the e-government initiative implementation from the technical and organizational perspective. Although, political dimension was mentioned as an important player in e-government initiative implementation, the study did not discuss the role and responsibilities of the political stakeholders.

In another study, Altameem et al. (2006) provided a conceptual model for successful e-government implementation. The researchers found six governing factors, seven technical factors, and eleven organizational factors that can affect e-government implementation. The authors identified twenty-four sub-factors and placed them in three categories: governing factors, technical factors, and organizational factors. The authors argued that various numbers of projects resulted in failure because of

emphasizing certain factors and ignoring other important factors. Accordingly, this study showed that there are different stakeholders related to e-government implementation. It also indicated that each stakeholder is influenced by a group of factors when implementing e-government initiatives.

A study by Lam (2005) identified seventeen challenges affecting e-government integration, and placed them in four categories: Strategy, Technology, Policy, and Organization. The researcher used in-depth semi-structured interviews as a method to collect data. He concluded that e-government integration is not just IT systems that talk to each other, but stakeholders should also be engaged in strategic planning and change management. It is a difficult and risky task to implement e-government as a major development because it involves many risk factors that could cause the project to fail (Evangelidis, 2004). This study pointed that e-government implementation is not possible without understanding the implementers (stakeholders) role and relationship.

In an analysis of success factors of e-government in developing countries, Shin (2008) reported that six factors have been identified: changes in work process, technical/human resources, organizational culture/values, vision/strategy/internal leadership, external/financial support, and laws/regulations/policies. The author unexpectedly found that *external/financial support and organizational culture/values* are negatively related to both the e-government readiness and the influence on the overall success of e-governments. Surprisingly, "this finding is incompatible with the earlier studies that pointed out the stakeholders' acceptance of innovative changes as an important factor for successful implementation of e-governments" the author said. The author concluded this study by agreeing with previous studies that changes in work process and technical/human resources are the important factors in developed

countries. Even though developed countries are different than developing countries in certain obstacles and needs, there are also differences in the developing countries in some capabilities and needs. In fact, this study emphasized that understanding internal e-government implementation issues are more important than the external.

In another study, Koh et al. (2008) introduced an e-government readiness model which was based on three levels: strategic, system, and data. The researchers applied their study on the municipal government of the city of Denton, Texas. Data was collected via a survey sent to all employees, 1104, but only 30.7% responded. Important stakeholders such as business owners and citizens were left out of the survey, and the study was based on a single organization. The author claimed that transforming an agency into a fully integrated, automated digital establishment is a daunting task, and the difficulty increases with the size of the agency. While its focal point is the Internet, successful e-government, like all other implementations, requires planning and coordination of goals, policies, processes, and technologies. The author concluded the study by stating "In system implementation, the agency must establish a mechanism to coordinate and integrate various e-government initiatives and to set up a data infrastructure that seamlessly connects different databases." This study suggested that stakeholders must work together to set goals, processes and policies in order to have a successful implementation.

When a public organization changes to e-government environment, it has to cooperate with the e-government administration agency to avoid conflict in infrastructures and services. Implementation of IS/IT systems during organizational change introduces some key high-level challenges (Weerakkody and Dhillon, 2008). These challenges are: resistance from employees, legacy systems constraints, cultural and political constraints, lack of senior management commitment, negative employee attitude and

resistance to change (Weerakkody and Currie, 2003; Weerakkody and Hinton, 1999; Willcocks; Mumford, 1994). Moreover, in an organization that is bureaucratic, functionally oriented, and legacy-system-driven, challenges will be more severe (Weerakkody et al., 2007). Hence, relationship between e-government political administration and public organizations is important to overcome obstacles and implement initiatives successfully.

E-government implementation in different countries implies different objectives and levels of transformation in public services (Weerakkody et al., 2007). Because e-government implementation challenges are both technical and non-technical, it is important to investigate the role of stakeholders, factors, processes and strategies. According to egov.infodev.org, "successful e-government is, at most, twenty percent technology and at least eighty percent about people, processes, and organizations." Many technical and none technical challenges are impeding e-government implementation process. In fact, successful e-government implementation will result if we better understand these key challenges in detail.

During the last decade, numerous frameworks addressing e-government implementation were developed. However, few of them addressed challenges facing e-government initiatives implementation. Regarding an action plan for any ICT implementation success, Gichoya (2005) stated "The best way to achieve maximum benefit for ICT implementation is to have all the factors for success with no occurrence of the factors for failure. However, in [the] real world that is not the case. Given such a situation, an action to increase the chances of success is required." Therefore, due to e-government initiatives high risk of failure during the implementation stages and change of management, an early, careful design should be presented.

Identifying factors and sub-factors for e-government implementation is very important and leads to implementation success. However, a high number of e-government initiatives are still unsuccessful (Heeks, 2003b; Pardo and Scholl, 2002; Scholl, 2003; Wang and Hou, 2010; Corradini et al., 2009b) which means that more studies are needed in this particular area. The complexities of implementing e-government initiatives in the public sectors are far more than just identifying technical and non-technical factors (Corradini et al., 2009b). For example, Carter et al. (2005) and Evans et al. (2006) highlighted the importance of involving stakeholders in the implementation of e-government. Moreover, Kamal et al. (2008) suggested that factors influencing different phases of implementation cycle process should be mapped together.

While extensively reviewing the literature, no holistic framework addressing the e-government initiative implementation from design to deployment could be found. Many researchers in the literature have focused primarily on the factors or stakeholders only. When implementing an e-government initiative it is very important to have a framework that guides practitioners through the whole process. The framework must identify the e-government internal stakeholders, factors and the development phases that an initiative goes through. Currently, there is a lack of studies analysing internal e-government initiative implementation in the literature.

In order to better understand e-government implementation, the researchers in the above studies tried to classify the factors into themes. Themes are either stakeholders or dimensions that affect the e-government implementation process. Trying to reduce the high number of e-government initiative failures is one of the aims of this study. Therefore, it is very important to understand the role of each internal stakeholder while implementing an e-government initiative and indentify the influencing factors

of every phase of the development. Currently, there is an absence of theoretical frameworks for internal e-government initiative implementation.

1.3 Research Questions

The aim of the study entails the following questions:

- Why most of e-government initiatives implementation still fails?
- Who are the responsible internal stakeholders to implement e-government initiative?
- What factors influence internal stakeholders and e-government initiative development?
- What are the implementation stages that each e-government initiative must go through?

1.4 Research Aim and Objectives

There are several requirements for building e-government initiatives such as technical, administrative, legal, and human resources which are often internal responsibilities of: political, government agencies and technical departments that are responsible for building e-initiatives. In this study, all responsibilities and challenges were allocated into three categories: political, organizational, and technological. This research will help speed up the e-government implementation process and decrease the high number of initiative failures.

The aim of this study is to identify the internal stakeholders and their responsibility when implementing e-government initiative and to explore the factors influencing the stakeholders at every phase of the implementation. Consequently, this thesis aims to:

Formulate a framework that guides decision makers when implementing e-government initiatives.

In order to achieve the above aim, the research objectives for this thesis are:

- To critically and comprehensively review the literature.
- To identify the role and responsibilities of the internal stakeholders intended to implement e-government initiative.
- To identify the factors that influence e-government initiative implementation.
- To identify the implementation phases, implementation cycle, of e-government initiative development.
- To conduct empirical case studies using qualitative methodology as a data collection technique for this study.
- To identify the importance and responsibilities of political, organizations, and technical departments when implementing an e-government initiative.
- To identify major factors influencing political, organizations, and technical departments during e-government implementation.

This research outcome is expected to:

- Improve the understanding of e-government initiative implementation.
- Help government officials to successfully implement e-government initiatives.
- Reduce the high number of e-government initiative failures.

1.5 Thesis Outline

The outline of this dissertation is based on the methodology proposed by Phillips and Pugh (2010) that consists of four elements: (a) background theory; (b) focal theory; (c) data theory and (d) contribution. Background theory, which is presented in chapter 2, concentrates on discussing the research area based on an extensive literature review. Next, the purpose of focal theory is to concentrate on developing a conceptual framework which is introduced in Chapter 3. Then, the data theory is concerned with issues such as: (a) developing an appropriate research strategy for this research (b) selecting an appropriate research method and (c) developing a research protocol. These issues are discussed in Chapter 4. In Chapter 5, the data theory also deals with the process of collecting and analyzing data. Finally, the novel contribution, presented in Chapters 6 and 7, are the results of this research.

Each of the seven chapters in this thesis addresses a specific part of the research. The outline of the thesis is illustrated in Figure 1.1 below, followed by brief paragraphs to explain each chapter in the thesis.

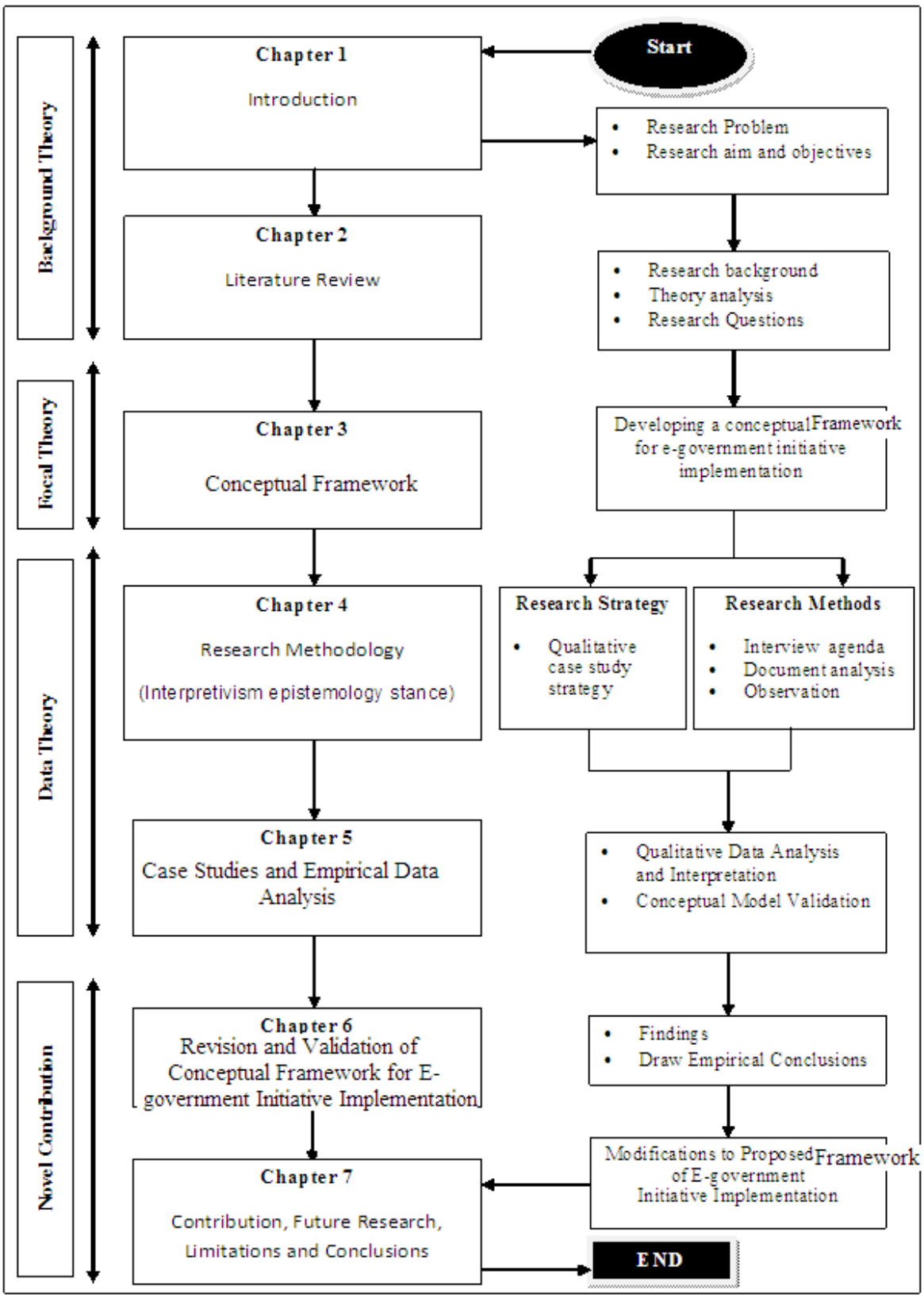


Figure 1.1 Thesis Outline

- **Chapter 1: Introduction**

  This chapter starts by providing a general introduction to the nature and intent of the research problem. It begins by providing the background to the research topic which is e-government implementation. This is followed by a description of the research methodology. Thereafter, the aim and objectives are stated along with a brief description of each chapter.

- **Chapter 2: Literature Review (Background Theory)**

  After presenting a brief introduction in chapter one about the area of this research and creating an outline of the thesis, a literature review on e-government initiative development is provided in Chapter 2. This chapter starts by providing definitions, classifications, and implementation stages of e-government. Moreover, details about main internal stakeholders, major factors and implementation phases of the e-government initiative are presented. This chapter then focuses on the implementation of e-government initiative and concludes that there is a lack of studies in the literature regarding the implementation framework for the e-government initiative.

- **Chapter 3: Developing a Conceptual Framework (Focal Theory)**

  The aim of this chapter is to present the theoretical conceptual framework which arose from the literature search reported in Chapter 2. A comprehensive framework for e-government initiative implementation in the public sector is proposed in this chapter. The conceptual framework outlines the main stakeholders, implementation phases and factors that might influence the e-government initiative development. The conceptual framework consists of three parts: stakeholders, factors and implementation phases. This conceptual framework can

be used by practitioners and decision-makers as a tool to help successfully implement e-government initiative. It can also benefit researchers in understanding the implementation process of e-government initiative.

- **Chapter 4: Research Methodology (Data Theory - One)**
  After completing the theoretical part, Chapters 2 and 3, this chapter presents the practical arena to test the proposed conceptual framework. In order to achieve the aim and objectives of the research, this chapter presents the approach of the research. It provides the research methodology, strategies, case study protocol, and units of analysis to investigate the empirical data. A detailed empirical research process roadmap is stated in Chapter 4. Finally, the chapter will discuss the validity and reliability of ethics in the empirical research.

- **Chapter 5: Case Study and Research Findings (Data Theory - Two)**
  After understanding all of the relevant issues for this research, this chapter then provides a description of the case studies conducted in three public organizations. This chapter offers an empirical analysis of these three case studies on the main issues of this research including: (a) the main stakeholders to implement e-government initiative and (b) factors influencing the implementation process as well as (c) the phases of the implementation. The outcomes derived from the empirical data analysis suggest some modifications to the proposed conceptual framework.

- **Chapter 6: Revised Conceptual Framework (Novel Contribution - One)**
  All of the empirical work conducted was analysed in this chapter. This chapter concludes the findings and describes the lessons learnt from the three case studies.

Based on the case studies and research findings in the previous chapter, this chapter considers suggested modifications to the e-government initiative implementation proposed conceptual framework.

- **Chapter 7: Conclusions, Contribution, Further Research and Limitations (Novel Contribution - Two)**

  This chapter aims to summarise the research presented in this thesis by presenting the main findings made while achieving the aims and objectives of the research. Thereafter, the statement of the contributions this research has made to knowledge and research novel are discussed, followed by recommendations that can benefit decision-makers including research limitations as well as future research potential areas.

Chapter 2: Literature Review

Summary

The aim of this chapter is to review and critically analyse previous studies in the area of e-government and its initiative implementation process. In this chapter, the author will critically review the following subsections: (a) e-government implementation, (b) definitions of e-government, (c) advantages of e-government online service, (d) e-government classifications, (e) stages of e-government implementation, (f) stakeholders of e-government implementation, (g) responsibility and challenges to implement e-government, (h) the relationship among government, organization and technology, (i) factors of e-government initiative implementation, (j) absence of framework for e-government initiative implementation, (k) summary.

2.1 E-government Background

2.1.1 E-government Implementation

The many advances and stability of the internet and the remarkable successful of e-business led and encouraged governments to consider implementing e-government (Willoughby et al., 2010a; Ho, 2002a). It is believed that the first to use the term e-government was Clinton-AL Gore administration's in 1993 (Luna-Reyes et al., 2010). Since then the idea of e-government has grown slowly through the provision of online information by some public organizations worldwide. In fact, e-government project is based on the use of modern information technology (IT) and the Internet (Al-Azri et al., 2010; Ho, 2002a) to link government organizations with each other, to exchange services among each other, and then serve the citizens and businesses (Shareef et al., 2010a; Charalabidis et al., 2010; Liu et al., 2011). In both speed and size, e-government initiatives implementation continued to increase presenting public agencies with several challenges and complexities (Obeidat and Abu-Shanab, 2010; Langford and Harrison, 2001).

E-government is a huge information system (IS) project to be built by government, and offers online services to businesses, citizens, employees, and government itself (Badri and Alshare, 2008; Arpacı and Arifoğlu, 2009; Valdés et al., 2011). E-government project needs huge investment and a long time to reach the stage where government can offer all its services online (Al-Soud and Nakata, 2010; Karunasena and Deng, 2011; Liu et al., 2010). Before the e-government project reaches its final implementation stage successfully, a revolution change in government must be made to management, work process environment, IT infrastructure, and legislations (Al Nagi and Hamdan, 2009; Isomäki and Liimatainen, 2008; Al Shehry et al., 2009). E-

government implementation started offering simple online services that gradually became complicated and expensive (Coursey and Norris, 2008; Belanger and Hiller, 2006). Currently, studies regarding e-government project implementation as a whole project are becoming rich in identifying factors and external/internal stakeholders (Mishra and Mishra, 2012; Rowley, 2011; Al-Busaidy and Weerakkody, 2011). However, most of the e-government initiatives are still considered a failure (Shareef et al., 2010b; Wang and Hou, 2010). Therefore, it is time for the researchers in the area of e-government implementation to shift their focus from studying the e-government as a whole project to the smaller e-government initiatives. E-government initiatives are the smaller projects that form the whole e-government project. Government officials and employees hold the full responsibility to implement e-government initiatives. Hence, focusing on e-government initiative from an internal perspective will lead to more successful implementation.

2.1.2 E-government Definition

There are many e-government definitions in the literature (Tohidi, 2011; Stanforth, 2010). However, as there are several perspectives of e-government such as technical, administrative, legal, commercial, and social, and because e-government is a new phenomenon to the world, there is still no standard definition for e-government (Yildiz, 2007; Norris, 2010b; Scholl, 2003).

"Wherever there are phenomena, there can be a science to describe and explain those phenomena....." (Newell et al., 1967)

Besides, there are several different e-government definitions in the literature from different researcher's perspectives (Tohidi, 2011; Almarabeh and AbuAli, 2010; Shareef et al., 2011). For example, the definition of e-government from the

Information Technology (IT) perspective is different than the definition from the perspective of economics, politics, etc. However, most researchers agreed that e-government is a tool to provide government services and information to citizens, businesses, and employees by using information technology and communication (ICT) (Yanqing, 2011; Al-Azri et al., 2010; Bhuiyan, 2010). According to Srivastava and Teo (2007), e-government is a system that continuously transforms public services using the information and communication technologies (ICTs) and the Internet to enhance operations for the benefit of citizens, businesses, employees, and other stakeholders.

In fact, e-government is a tool to shift business routine from traditional management style to a modern style that meets the growing needs of citizens, government agencies, and businesses (O'Donnell et al., 2003). E-government is the delivery of government services through a single point of access on the Internet; one-stop shopping (Willoughby et al., 2010b; Sagheb-Tehrani, 2010). According to Ho (2002a), the governments first act toward changing from traditional work in serving customers to the reinventing government procedures was started in the late 1980s. e-government is a reality because governments leaders looked at the internet as a potential tool not a threat (Silcock, 2001).

One widely accepted definition is, "E-Government refers to the use by government agencies of information technologies that have the ability to transform relations with citizens, businesses, and other arms of government" (Fang, 2002; Al-Azri et al., 2010). In addition, Muir and Oppenheim (2002) defined it as, "the delivery of [government] information and services online through the Internet or other digital means.'' In fact, most of the e-government definitions indicated that e-government is

merely electronic initiatives offered online to serve government customers such as citizens, businesses, employees, and other government arms. Some more definitions are outlined in the following table:

Authors	Definitions
Cook et al. (2002)	E-government has four dimensions in relation to major functions and activities of governments: e-services (delivery of government information electronically), e-management (use of ICTs to improve management and communication within and outside government structures), e-democracy (use of ICTs to enhance citizen participation in democratic activities), and e-commerce (online transaction of goods and services).
World Bank (2007)	Utilising ICT for changing and improving the relationship between government, citizens, businesses, and other government entities.
Bhatnagar (2002)	Sharing and delivering services to citizens and businesses for the purpose of reducing corruption, strengthening accountability, reducing time and cost, and increasing transparency.
West (2001)	"The delivery of government information and services online through the Internet or other digital means."
Deloitte Research (2000)	Using technology for delivering better services to the citizens, businesses, and employees.

Table 2.1 E-government Definitions: Source (Kanaan, 2009)

Ho (2002a) defined the e-government initiative as follows, “The initiative is to provide services and to empower citizens and communities through information technology, especially through the Internet.” Many studies have focused on e-government initiatives from different approaches (Alshawi and Alalwany, 2009). According to Torres et al. (2005), e-government initiatives are varied in scope, performance, and sophistication, and for two decades governments have been implementing e-government initiatives at municipal, state, and federal levels. Fortunately, the continued planning and implementing of large numbers of e-

government initiatives increases the understanding of the implementation process for future success (Rose and Grant, 2010).

2.1.3 Advantages of E-government Initiatives

As there are increasing levels of complexities and contradictions to implementing e-government initiatives (Apostolou et al., 2011; Obi and Iwasaki, 2010; Fedorowicz et al., 2010), the development of the evolutionary e-government initiatives brings many advantages to both government and its customers (Rokhman, 2011). E-government advantages are unquestionable (Warkentin et al., 2002). In view of the fact that goals and objectives of e-government initiatives are different, gained benefits will be different as well (Alshawi and Alalwany, 2009). Some new concepts were raised by e-government such as transparency, accountability and citizen participation in the government performance (Mohammad et al., 2009). Since e-government initiatives are evolutionary, the cost to develop them will be high. However, a tremendous amount of money will be saved in the long term (Kohlborn et al., 2010). All e-government initiatives will be offered in a single place, one-stop shopping portal. The most important advantages of e-government initiatives are:

1. To provide government services 24 hours a day, 365 days a year.
2. To raise efficiency and effectiveness of processes and procedures within the government sector.
3. To reduce corruption and administrative complexities, and increase transparency.
4. To raise the level of end-user satisfaction with e-services (government - citizen or business).
5. To link public sectors together under one umbrella: government – government.

6. Time and effort saving for e-government customers and those offering e-services.
7. Cost reduction to citizens, businesses, and government itself.

E-government initiatives keep the workflow among departmental and government organizations efficient, accurate and smooth, and will kill bureaucracy (Al Nagi and Hamdan, 2009; Zampou and Pramatari, 2011). Additionally, the public physical visit to the organization location will decrease greatly saving the organization space, time, effort, and money. Visiting only the one-stop shopping portal allows the public and the organization to communicate and perform the work accurately and efficiently. E-government initiatives were broken into categories to serve the public. These categories are illustrated in the following sections.

2.2 Classifications of E-government Initiatives

There are different stakeholders benefiting from e-government initiatives (Alshawi and Alalwany, 2009; Fang, 2002). E-government initiatives are the smaller parts forming the government online one-stop portal (Moon, 2002a). Each e-government initiative is intended to serve specific government customers. Unlike e-commerce, e-government provides electronic services to four types of customers (table 2.2): citizens, businesses, employees, and the government itself (Jayashree and Marthandan, 2010; Huang, 2010). Several studies explore the e-government categories interaction such as government-to-citizen, government-to-business, government-to-government, and government-to-employee (Daniels and Forman, 2002; Heeks, 2000). Governments, all over the world, are providing several online services to better improve operations, enhance administrative procedures, minimize cost, and reduce time of public services delivery (West, 2004a; Guo, 2010; Juell-

Skielse and Perjons, 2009). All internal and external stakeholders can affect and benefit from the e-government initiatives at the same time (Gil-Garcia and Martinez-Moyano, 2007; Rowley, 2011; Al Nagi and Hamdan, 2009). However, some of those stakeholders have greater influence on e-government adoption than implementation such as businesses and citizens (Gil-Garcia and Martinez-Moyano, 2007). On the other hand, internal stakeholders such as political, organizational and technological employees directly influence the development of e-government projects (Scholl, 2003; Tan et al., 2007).

E-government initiatives can be implemented at the state, organizational or departmental level to serve four government customers namely citizen, business, employee and other government bodies. In fact, there are increasing e-government service demands by both citizens and businesses (Chen and Gant, 2002; Raman et al., 2007). It is important for creating consistence online interaction and communication between government and its customers to implement e-government initiatives successfully from the early stages. Online government customers such as citizens, businesses, employees and government entities will benefit from the e-government initiatives offered at the one-stop portal via the Internet anytime and anywhere.

Types of E-government Initiative	
Categories	**Abbreviations**
Government to Citizen	G2C
Government to Business	G2B
Government to Employee	G2E
Government to Government	G2G

Table 2.2 E-government Initiative Categories

These categories play a major role in the implementation process of e-government (Seifert and Petersen, 2002; Bonham et al., 2001). When implementing e-government initiatives, beneficiaries can be classified in four major groups: G2G, G2C, G2B, and G2E (Shan et al., 2011; Hermana and Silfianti, 2011) and these categories are discussed in the following subsections.

2.2.1 Government to Citizens (G2C)

This is the e-government category (G2C) that includes all the interactions between a government and its citizens (Lee et al., 2005; Torres et al., 2005). Government to citizens deals with the relationship between government and citizens. This type of e-government initiative offers government information and services to citizens instantly and conveniently (Evans and Yen, 2006; Al Nagi and Hamdan, 2009; Rowley, 2011). G2C is one of the most important e-government categories. This type of initiative is the intended relationship between the government and the citizen to be posted in one place. It means that the government is responsible to provide citizens with online services and citizens can access it 24/7 (Curtin, 2006; Norris, 2010a; Rose and Grant, 2010; Shareef et al., 2009). The citizen can use these e-services to communicate with government and gain online services such as applying for a government service, renewing a driver's license, and paying traffic fines (Carter and Belanger, 2004; Reddick, 2005; Reinwald and Kraemmergaard, 2012; Sagheb-Tehrani, 2010). According to Ya Ni and Tat-Kei Ho (2005), this category is the primary goal of e-government. Under this category, Evans and Yen (2006) argued that improvement of education information, prison security, and e-voting are some of the benefits that government offer to citizens. Fortunately, this type of initiative will save citizens from waiting in line to accomplish a service.

2.2.2 Government to Business (G2B)

G2B is the e-government category that includes interactions between governments and businesses (Al Nagi and Hamdan, 2009; Rowley, 2011; Sagheb-Tehrani, 2010). This category of e-government activities consists of the relationship between government and the private sector (Lee et al., 2005; Rowley, 2011). G2B transactions include various services exchanged between the government and businesses including the dissemination of policies, notes, rules, and regulations (Torres et al., 2005; Evans and Yen, 2006). The services provided to the business include access to current information, renewing and obtaining licenses, registration of companies, and payment of taxes (Fang, 2002; Al Nagi and Hamdan, 2009). Services provided through G2B transactions help to develop small and medium-sized companies. Another goal is to simplify procedures for the application that would facilitate the approval of process requests for small and medium enterprises that would encourage the development of business (Chaijenkij and Corbitt, 2008). According to Evans et al. (2006), this category allow governments to do business online such as paying invoices, purchasing items, and gather better information to enhance decision making. Recently, G2B initiatives are receiving more attention because of the improvement in the transactions and low cost (Yong and Koon, 2005; Awan, 2007).

2.2.3 Government to Employee (G2E)

In literature, this category is the least discussed e-government category among researchers. The G2E initiative refers to the relationship between the government and its employees (Al Nagi and Hamdan, 2009; Ndou, 2004; Chourabi and Mellouli, 2011). Governments utilize G2E initiatives to improve their internal processes and

decrease administration costs across all public departments. G2E means giving employees access to training, e-mail, e-learning, and authorisations to access databases to gain information needed to complete services (Carbo and Williams, 2004; Ndou, 2004; Sharma and Gupta, 2004). The G2E category is a sub-set of G2G to improve the bureaucracy in the day-to-day functions and transactions with citizens (Seifert and Petersen, 2002). In addition, G2E initiatives allow employees to monitor and process their tasks.

2.2.4 Government to Government (G2G)

This type of e-government initiative is the most important and the backbone of the e-government project (Yong and Koon, 2005; Seifert, 2003). This Government to government (G2G) service delivery initiative allows the government to eliminating redundancy and duplication (Evans and Yen, 2005; Suh et al., 2010). This category means government departments and agencies deliver their services to each other, sharing databases and resources to enhance the efficiency and effectiveness of e-services (Lee et al., 2005; Torres et al., 2005). Public agencies can use G2G initiative to extract and share useful knowledge to reduce costs, speed up communications and improve strategic decision-making (Klischewski, 2011; Maluf and Bell, 2005).

This category of e-government will result in improving transparency and efficiency of transactions between public agencies (Flak and Nordheim, 2006; Hamza et al., 2011). G2G means government agencies depend on other government agencies to effectively provide online initiatives or just share knowledge internally (Hamza et al., 2011; Carter and Belanger, 2005; Reddick, 2004b). Therefore, public agencies must cooperate with each other by sharing responsibilities and facilities such as databases and other resources in order to offer e-government initiatives successfully.

From the above categorization analysis, there appear to be two types of stakeholders. Stakeholders are external, such as citizens (G2C) and businesses (G2B), and internal, such as employees (G2E) and government organizations (G2G). Studying external e-government categories is important to increase the adoption to these initiatives, while the internal categories are more important to understand the implementation process. Understanding the different relationships of these initiatives is important for their implementation. However, this implementation still faces many challenges and needs more theoretical and practical attention. There is a lack of studies in the literature describing how e-government initiative should be implemented. Holistic frameworks and frameworks are needed, for both researchers and practitioners, to identify the internal stakeholders (implementers) and the factors influencing the e-government initiative implementation at all stages. The following figure describes the e-government initiative's internal and external stakeholders.

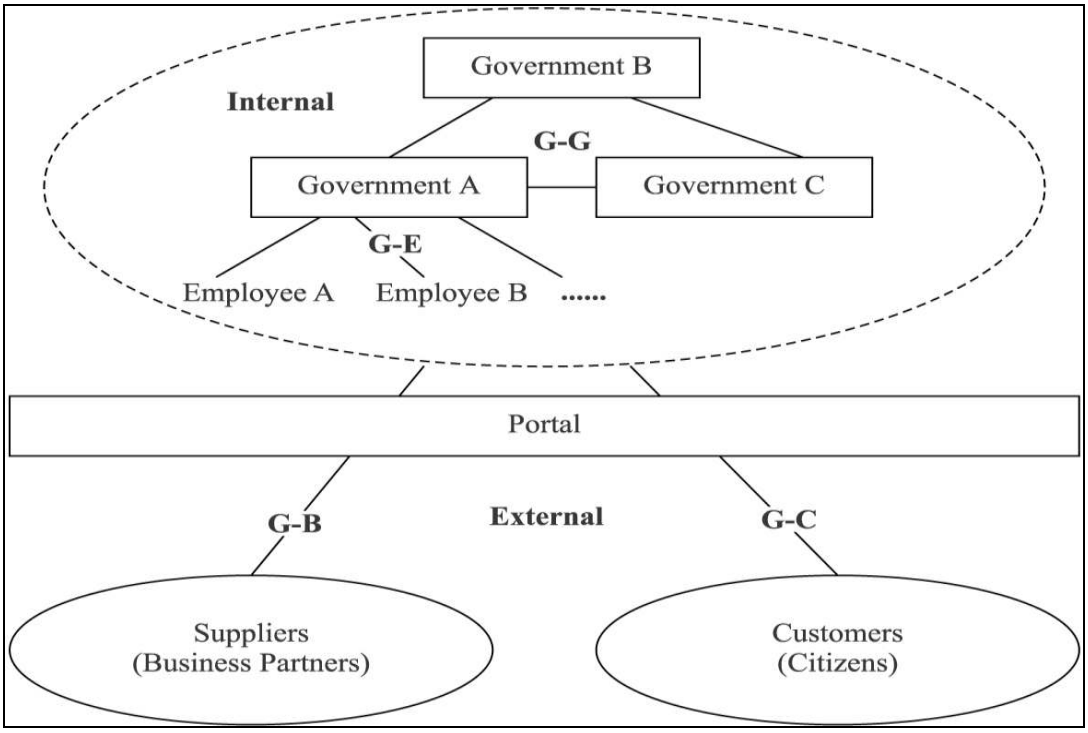


Figure 2.1: E-government Interaction Dimensions (Adapted:(Siau and Long, 2005))

2.3 Stages of E-government Implementation

Many researchers suggested various models for e-government implementation in the literature (Layne and Lee, 2001; Andersen and Henriksen, 2006; Bakry, 2004; Altameem et al., 2006; Ghapanchi et al., 2008). They, the researchers, were divided on how many stages e-government implementation should go through. This section reviews the proposed models for e-government implementation stages exist in the literature to understand the requirements and complexity of e-government initiatives at each of those stages. All models of the e-government implementation include stages starting with the first one where the government only offers basic information to the citizens and businesses, and ending with the stage that all the government services are offered online (Baum and Di Maio, 2000; Layne and Lee, 2001; Deloitte, 2000; Howard, 2001). Table 2.3 lists the e-government models' of implementation stages in the literature.

		Stages					
		One	**Two**	**Three**	**Four**	**Five**	**Six**
Models	**Baum and Di Maio (2000)**	Presence	Interaction	Transaction	Transformation		
	Deloitte Research (2000)	Information Publishing	Official Two-Way Transactions	Multi-Purpose Portals	Portal Personalization	Clustering of Common Services	Full Integration and Enterprise Transformations
	Layne and Lee (2001)	Catalogue	Transaction	Vertical Integration	Horizontal Integration		
	Wescott (2001)	E-mail and Internal Network	Enable Inter-organizational and Public Access to Information	Two-way Communication	Exchange of Value	Digital Democracy	Joined-up Government
	Ronaghan (2001)	Emerging Presence	Enhanced Presence	Interactive	Transactional Government	Seamless	
	World Bank (2002)	Publish	Interact	Transact			

	Howard (2001)	Publish	Interact	Transact			
	Dpepa (2001)	Emerging	Enhanced	Interactive	Transactional	Seamless	
	Chandler et al.(2002)	Information	Interaction	Transaction	Integration		

Table 2.3 Models of E-government Growth Stages

An e-government implementation stage is merely the maturity of e-government initiative sophistication of that stage. Therefore, the shift from one stage to another depends on how advanced the e-government initiatives are. E-government initiatives for every category can be seen in every e-government implementation stage (Hiller and Belanger, 2001). The table (2.4) below explains the four known types of e-government categories and e-government development stages by giving examples for each category in every stage.

	Stages of E-Government			
	1	**2**	**3**	**4**
Type	**Information**	**Communication**	**Transaction**	**Integration**
G2C	Description of medical services, benefits, dates of an election	Request and receive individual benefit information, receive election forms	Pay taxes online, receive election funds and disbursements	All services and entitlement
G2B	Regulation outline, posting requests for proposals (RFP)	Request classification or specs	Paying taxes online, receive program funds, agricultural allotment, online vouchers, payments	
G2E	Pay dates, holiday information	Request for employment benefit statements	Electronic paychecks	Employment applications, retirement information
G2G	Agency filing requirement	Request from local government	Electronic funds transfer	

Table 2.4 Summary of E-government Categories in every Stage (Adapted from Hiller and Belanger (2001))

Analysis and description of e-government implementation stages are presented in the following section.

2.3.1 Models of E-government Implementation Stages

There are many models of e-government implementation stages in the literature describing how e-government should be implemented. E-government implementation stages are becoming complex because initiatives are becoming complicated and sophisticated (Layne and Lee, 2001; Torres et al., 2005; Belanger and Hiller, 2006). All e-government initiatives together form the e-government project, located in a single place on the internet (Kaaya, 2004b; Sharma and Gupta, 2003; Wimmer, 2002a). An e-government project is merely a number of e-government initiatives that are connected together and put on a single website to serve government customers. Stages of e-government mean that initiatives go from basic to more advanced on-line services (Layne and Lee, 2001; Davison et al., 2005; Chen, 2002; Ho, 2002a). In the first stage, governments provide simple information to the public by establishing web sites, and the final stage is reached when full services are provided to the public on-line.

Layne and Lee (2001) proposed a widely-known framework for the evolutionary implementation of e-government, including the implementation stages of cataloguing, transaction, vertical integration and horizontal integration. The cataloguing stage requires public agencies to initially create static web sites to gain online presence. In this stage, public departments present one-way catalogued information services for citizens. Next, the transaction stage offers interactive services such as paying fines or renewing licenses. The transactions can be downloadable forms that need little intervention by government staff. The third stage is vertical integration when

integration is required between local and central agencies that exist within the same function. This stage aims to provide a seamless link between local and national databases that need to share a common information source in order to reduce redundancies of information stored about each citizen (Fernandes et al., 2001; Gant and Gant, 2002). The final stage requires horizontal integration across different levels and integration across different functions of government systems. This stage of integration will provide the 'one-stop portal' that completes the e-government project. According to Layne and Lee (2001), the benefits of e-government will be gained when full service integration is accomplished in the horizontal stage (see Figure 2.2). Adopting this e-government implementation approach will help reduce the challenge in achieving e-government (Al-Kibsi et al., 2001).

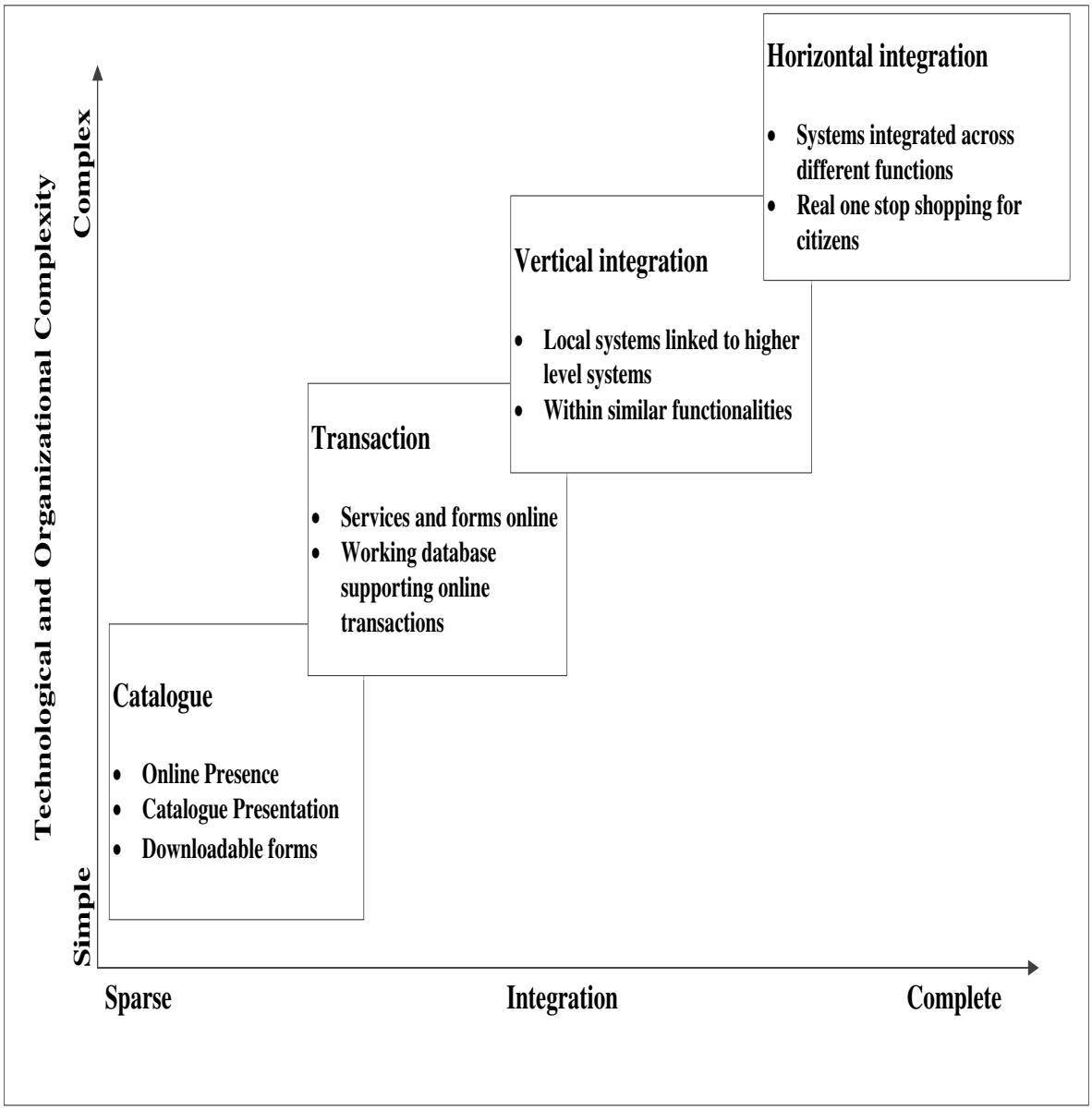


Figure 2.2 The Evolutionary Model for E-Government, Layne and Lee, (2001)

This model describes the process of e-government initiative implementation that moves from simple to complex. However, there are more e-government stage models in the literature describing how e-government development should be implemented and the following table (2.5) outlines the various stages.

Stage	Perception	Reference
Stage 1: Publish Stage 2: Interact Stage 3: Transact	1. Information about activities of government available online. 2. Citizens can have simple interactions with governments such as sending and receiving e-mail or chat online. 3. Full services transactions over the Internet.	Howard (2001)
Stage 1: Publish Stage 2: Interact Stage 3: Transact	1. Government provides information online to citizens. 2. Two-way communication between government and citizens using email or e-forms. 3. Allowing citizens to obtain services online in simpler, faster, and cheaper way.	World Bank (2002)
Stage 1: Information Stage 2: Interaction Stage 3: Transaction Stage 4: Integration	1. Government presents services online as a one-way communication. 2. Basic and limited interaction between government and citizens. 3. Transactions between citizens and government to buy services of value. 4. Integration of services between government agencies.	Chandler et al. (2002)
Stage 1: Cataloguing Stage 2: Transaction Stage 3: Vertical integration Stage 4: Horizontal integration	1. Making government information available online through web sites. 2. Citizens can interact with government electronically. 3. Integrating functions at different levels. 4. Integrating functions from separate systems.	Layne and Lee (2001)
Stage 1: Presence Stage 2: Interaction Stage 3: Transaction Stage 4: Transformation	1. Presenting web sites and providing basic information to public. 2. User interacts with agencies by email or by downloading and filling electronic forms. 3. Entire transaction can be completed by users online (e.g., license application and procurement). 4. Government provides full-scale services to the customers.	Baum and Di Maio (2000)
Stage 1: Emerging Stage 2: Enhanced Stage 3: Interactive Stage 4: Transactional Stage 5: Seamless	1. Online government presence officially established. 2. Government increases and updates information to be more dynamic. 3. Provides users with sophisticated levels of interaction with officials by using e-forms and email. 4. Users have the capability to complete transactions such as buying licenses and paying for services online.	Dpepa (2001)

	5. Government provides all kind of services across single and universal web site (one-stop).	
Stage 1: Information Stage 2: Two-Way Communication Stage 3: Transaction Stage 4: Integration Stage 5: Political Participation	1. Government simply posting information on its web sites. 2. Users communicate online with government (request and response) such as filling in forms and requesting information and services. 3. All transactions conducted online between governments and individuals. 4. Users can access all services via single portal similar to last two stages in Layne and Lee (2001). 5. Political participation such as voting on-line and surveys.	Hiller & Belanger (2001)
Stage 1: Information Publishing Stage 2: Official Two-Way Transactions Stage 3: Multi-Purpose Portals Stage 4: Portal Personalization Stage 5: Clustering of Common Services Stage 6: Full Integration and Enterprise Transformations	1. Each government department/agency creates a web site for one-way communication. 2. Customers can make electronic transactions such as paying taxes and buying TV licenses. 3. A single point (web portal) creation to enable customers to access and obtain government information and services. 4. Customers can customize portals according to their needs. 5. Government departments will disappear when the portals become better to speed up the process of delivery. 6. Structures of government departments will be changed; some departments will disappear while others become internally different.	Deloitte Research (2000)

Table 2.5 Stages Models of E-government Implementation

As it can be seen from the models described above that some researchers believe that e-government stages should be three where others believe they should be four, five, and even six stages. There is no e-government model that fits all countries due to the unique combination of circumstances, priorities and resources of each country (Hachigian, 2002; Basu, 2004; Im and Seo, 2005; Sagheb-Tehrani, 2010). Currently,

there is no agreed standard stages model among researchers as e-government is a new phenomenon and still maturing.

Numerous studies in the literature presented e-government stages models that all describe how the e-government implementation process should be done (Hiller and Belanger, 2001; Deloitte, 2000; Dpepa, 2001). Authors have divided the implementation models into stages. All stages begin in the same way, with the government starting to put basic information to its customers on-line in a one-way manner. The first stage is very simple, requiring organizations to create a web site to publish information for customers, such as what they need to bring to complete a specific service and/or providing an address (Reddick, 2005). This stage does not give advanced or extensive services to the citizens. However, it is important and gives the organization an early indication of how successful their services actually are. The process goes until e-government project implementation reaches its final stage where one-stop shopping is the goal of the e-government project (West, 2004b; Moon, 2002b; Ebrahim and Irani, 2005). Reaching this stage is not easy because e-government is a huge project that needs all government stakeholders to work together when providing any single e-service (Ebrahim and Irani, 2005; Irani et al., 2006). The entire e-government stakeholders' responsibilities are explained in the next section.

2.4 The Stakeholder Approach in E-Government

E-government stakeholders are external and internal (Rose and Grant, 2010; Detlor et al., 2010). It is important in e-government to understand and model stakeholder-to-stakeholder relationships (Scholl, 2004; Flak and Nordheim, 2006). It also is important to differentiate between the influence of the external and internal stakeholders on e-government initiatives. The role of internal stakeholders is very

important for e-government initiative implementation (Altameem et al., 2006; Sharifi and Manian, 2010; Rowley, 2011). While internal stakeholders are important for e-government implementation, numerous studies indicated that external stakeholders are important for adoption (Shareef et al., 2011; Rowley, 2011; Flak and Rose, 2005). To have successful e-government implementation, agencies are required to help employees understand their role and expectations as part of ICT-enabled processes (Field, 2003).

The definition of stakeholders is "any group or individual who can affect or is affected by the achievement of the organization's objectives" (Edward, 1984). According to Myers (1994) and Walsham (1993), IS implementation in general is more effective if the stakeholders and politics involved are understood. According to Tennert and Schroeder (1999), the stakeholder theory is appropriate for public sectors and also in e-government projects (Scholl, 2001; Pardo and Scholl, 2002). E-government is a huge IS/IT project, therefore, identifying internal stakeholders and understanding their role is very important when implementing e-government initiatives (Rowley, 2011). Many researchers agreed that a stakeholder's role is critically important to e-government initiative implementation (Scholl, 2001; Pardo and Scholl, 2002; Chan et al., 2003b). The study of stakeholder theory presented by Chan et al. (2003a) to analyse e-government initiative stakeholders highlighted that stakeholder's relationship is important in reducing conflict and assessing the process of e-government initiative implementation. Therefore, understanding stakeholder relationships is important to achieve the organizations objectives.

The implementation of Information Systems in government shows that there are direct or indirect impact by stakeholders when developing services for public sector (Perrott, 1996; Savage et al., 1991). There are many challenges faced by governments

including organisational, technologies and work processes (Al-Kibsi et al., 2001; Jorgensen and Cable, 2002). The political context as a dimension indicates that multiple agencies are involved in the implementation of e-government (Chan et al., 2003b). According to Li and Steveson (2002), the challenges to e-government implementation are not technical but social and cultural. The stakeholder theory has been presented to determine stakeholder requirements in e-government projects (Pardo and Scholl, 2002). In e-government initiative implementation, stakeholders relations should be managed to avoid risk of implementation process conflict (Rowley, 2011). Many studies in the literature described the categories of e-government stakeholders. The following table (2.6) summarise the stakeholders' categories.

	Source	Stakeholder categories
General categorizations	Heeks (2006b)	Non-profits, other agencies, citizens/customers, businesses, communities, government
	Mintzberg (1996)	Customers, clients, subjects, and citizens (constituents for e-government services)
	Orange, Burke, Elliman, and Kor (2007)	Politicians, staff, public, project managers, design developers, other government agencies
	UN (2008)	Public administrators, programmers, end-users, politicians
	Yildiz (2007)	Government, citizen, business, civil society
Special purpose categorizations	Beynon-Davies (2005)	Customers, suppliers, partners, employees (general)
	Flak and Nordheim (2006)	Regional council, regional partners, national and international policy makers, systems vendors, county governor, county municipality, citizens of municipality, municipal politicians, municipal administration, municipal service production units (for a local government project in Norway)
	Heeks (2003b)	Senior managers of the Epidemiology Service, Ministry of Health, internal users (managers health specialists, statistical specialists, information systems personnel), external users (in various ministries, local authorities, research institutions and international organizations), citizens (computerisation in a national Epidemiology Service in Central Asia)
	Irani et al. (2007)	Informed citizens (academic), elected representatives, local government staff, regional and central staff, others (VIEGO participants)
	Millard (2008)	Policy makers, researchers, practitioners, constituents as citizens and businesses (stakeholders in impact measurement)
	Tan et al. (2007)	Singapore government, IRAS (Inland Revenue Authority of Singapore), tax officials, taxpayers, employers (e-filing for tax initiative)

Table 2.6 Roles of E-government Stakeholders Identified by Different researchers (source: Rowley, (2011))

2.4.1 Centralized/ Decentralized Approaches in E-government

There are two types of e-government management approaches – centralized or decentralized (King, 1983; Basu, 2004; Aagesen et al., 2011; Janssen, 2005a; Ayyad, 2008). In another study, Seltsikas and van der Heijden (2010) argued that there are three types of approaches and named them the decentralized, the federal, and the centralized approach. In fact, every approach has its advantages and disadvantages. However, choosing an e-government management approach depends on the size, population and political form of each country (Sahli et al., 2009).

The approaches of e-government all focus on how to manage the stakeholders' relationships when offering online initiatives to the public (De Jager and van Reijswoud, 2008; Janssen, 2005b). The e-government relationships among government and stakeholders such as citizens, businesses, employees, and other governments are hierarchically transferred to control interactive collaboration (Seltsikas and van der Heijden, 2010).

Researchers, in literature, are still debating whether to adopt centralize or decentralize approach for better e-government initiatives management (Farooq et al., 2006; Janssen, 2005b; Homburg, 2004; Welch et al., 2010). One approach used for a country is not necessarily applicable to another country (Sahli et al., 2009). Each country must adopt the best approach that fits that country's needs and should be based on its characteristics (Sahli et al., 2009). It is important that all stakeholders understand centralized and decentralized approaches in order to effectively implement e-government initiatives (Janssen, 2005a). E-government initiatives require a significant amount of public funds as they are implemented (Esteves and Joseph,

2008). Therefore, successful e-government initiatives rely on the selection of the appropriate management.

According to Aagesen et al. (2011), the selection of decentralized e-government architecture leads to rapid development and adaptation at the local level, while centralized architecture leads to more standardization. Jaeger and Thompson (2003) argued that e-government with centralized management can reduce the cost of information and shrink communication. Other researchers believe that it can also increase the productivity, speed, and quality of service delivery (Garson, 2004; Gant et al., 2002; Wimmer, 2002a).

The adoption of an e-government implementation approach depends on the country's economic and political circumstances (Greenberg, 2006). Most of the governments have no plans or centralized policies to implement e-government initiatives (Pina et al., 2010). According to Heeks (2006a) and Sarantis et al. (2011), it is essential that a government chooses an appropriate approach because e-government initiatives implementation require flexibility and ability. The table below (2.7) shows countries and their adopted e-government approach.

E-government Approach	UK	USA	Iceland	Korea	Greece	Netherlands	Ireland	Australia
Centralized	✓		✓	✓	✓		✓	
Decentralized		✓				✓		✓

Table 2.7 Sample of Countries Adapting E-government Approaches (source: Mimicopoulos, 2004)

2.4.2 Front/Back Office in E-government Functioning

E-Government encompasses all activities carried out by public agencies as initiatives to carry out the tasks of government offered online (Moon, 2002b; Wimmer, 2002b). E-Government tasks have been divided into 'back-office' and 'front-office' responsibilities (Homburg and Bekkers, 2002). Indeed, both the front and back-office are equally important and requires similar attention because the front-office directly addresses the citizens' needs, while the back-office influences the front-office (Sahli et al., 2009; Kunstelj and Vintar, 2004). Hence, the failure to integrate the front and back-office systems is one of the biggest challenges to e-government (Belanger and Hiller, 2006).

According to Backus (2001), the two main tasks of the e-government development process should be understood. First, the internal task, back-office, of e-government is to focus on internal operations to increase the performance, efficiency and save cost on activities of government administration (Westholm, 2005; Kunstelj and Vintar, 2004). Interaction between governmental agencies to provide e-government initiatives is one example of the back-office operations. Hence, back-office tasks are the internal government-to-government operations. Second, the external task, front-office, of e-government should focus on satisfying the needs of the public by delivering services in a more professional and effective way using ICT efficiently (Kunstelj and Vintar, 2004; Schuppan, 2009; Marin et al., 2009). The one-stop shopping portal is the front-office of any e-government system.

The back-office complexity must be overcome if there is an e-government initiative that requires inter-agency processes (Sahli et al., 2009; Gottschalk, 2009). Therefore, while offering shared processes and services online, different public departments should control their back-office activities (Ferro and Sorrentino, 2010; Belanger and

Hiller, 2006). According to Field (2003), "Back-office is the internal operations of an organization that support core processes and are not accessible or visible to the general public."

Conversely, front-office refers to the interaction between government and both citizens and businesses (Lau, 2005; Gottschalk, 2009). Typical front-office tasks are the automation of services directly submitted across the Internet. The success of e-government front-office depends highly on the back-office processes and readiness (Kunstelj and Vintar, 2004). Therefore, government agencies are required to provide real-time responsiveness to the service offered to citizens and businesses in the front-office (Bekkers, 2005). As a result, for effective e-government initiatives, the gap between the front and back office must be bridged (Silcock, 2001). As in figure 2.3 the one-stop portal is the point where the government and customers (citizens, businesses, employees, and government itself) are connected together forming what we call e-government.

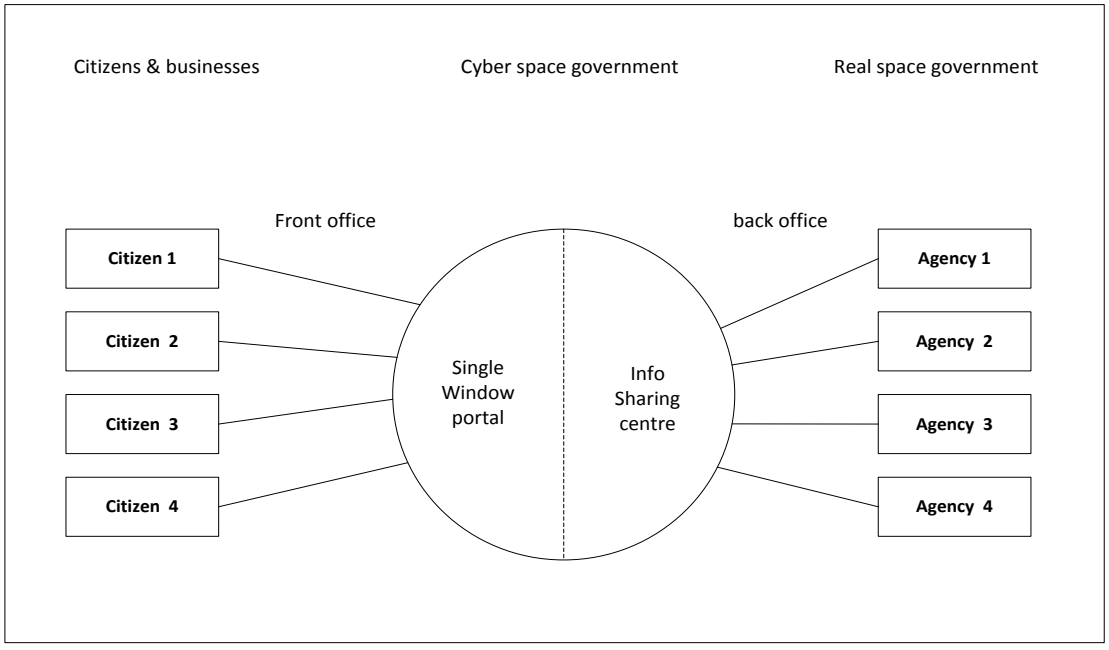


Figure 2.3 Front and Back Office of E-government Single Window (source: (Song, 2002))

With this in mind, this thesis focuses only on back-office stakeholders, factors and implementation process of e-government initiative development and the next section discusses this.

2.5 Factors Influencing E-government Initiative Implementation

The progress of e-government implementation is directly affected if governmental organizations are unable to successfully complete their e-government initiatives (Sarantis et al., 2009). According to a number of studies in the literature, many factors influence the implementation of e-government initiatives (Gichoya, 2005; Domínguez et al., 2011; Weerakkody et al., 2011a; Ghapanchi et al., 2008), factors which are both external and internal (Detlor et al., 2010; Shackleton et al., 2004). Due to the significantly change in size and scope of e-government initiatives, new initiative success may increase if the yield set of critical issues are considered (Rose and Grant, 2010). From the perspective of many researchers in the literature, there are several e-government implementation frameworks (Ebrahim and Irani, 2005; Ghapanchi et al., 2008). These frameworks were divided into themes and then the researchers appointed many factors for each theme.

As this study is focusing only on internal government stakeholder's role and responsibility to provide a successful initiative, it was found that only three internal stakeholders are responsible which are political, organizational and technical, see table 2.8. They must understand their responsibilities and duties when implementing a new e-initiative (De', 2005; Fedorowicz et al., 2010; Reinwald and Kraemmergaard, 2012; Kamal et al., 2011). There are various stakeholders related to the e-government

initiative. However, the success of e-government initiative implementation is dependent upon the political, technological, and organizational stakeholders (Ghapanchi et al., 2008; Esteves and Joseph, 2008; Altameem et al., 2006).

Stakeholders of E-government Initiative Implementation		
Political Stakeholders	Organizational Stakeholders	Technical Stakeholders

Table 2.8 E-government Initiative Internal Stakeholders

Understanding their role and responsibilities can lead stakeholders to be in a better position to implement e-government initiatives (Rowley, 2011; Chan et al., 2003b; De', 2005; Fedorowicz et al., 2010; Flak and Nordheim, 2006). As stakeholders are from different departments and/or government organizations, they all must work as one team especially on the e-government initiatives development that requires cooperation across governmental departments (Rose and Grant, 2010; Valdés et al., 2011). However, managing stakeholders is not easy as they have different roles, interests, and benefits (Rose and Grant, 2010). According to Ke and Wei (2004), centralized funding and control is the key to ensure that e-government program implementation throughout the various governmental organizations is in the right track.

A summary of the e-government stakeholder's responsibilities is given in the table (2.9) below:

Stakeholders	Roles and Responsibilities
Political Stakeholders	To lead the project with clear vision and effective strategy.
Organization Stakeholders	To change to, accept, and manage the new environment.
Technological Stakeholders	To develop initiatives and technically support them.

Table 2.9 Roles and Responsibilities of E-government Initiative Stakeholders

2.5.1 Political Factors

From policy perspective, many factors are influencing political stakeholders when implementing and managing e-government projects to ensure success (Vuksic et al., 2010). The central government is the top management and leadership of the e-government project and general supervisor of the initiatives implementation (Rose, 2004; Ma et al., 2005). Also, a responsibility of the government is to disseminate the sense of importance of the project to all staff, leaders and workers, to create a greater awareness, and to develop better implementation strategies (Ebrahim and Irani, 2005; Hoogwout, 2003; Chen et al., 2009). The nomination of a strong political leader with sufficient knowledge of information technology is one of the most important responsibilities of the government when implementing e-government project (Prybutok et al., 2008; Irani et al., 2005; Gil-Garcia et al., 2009).

In addition, the provision of adequate budgets to support the project financially is critically important through the support of institutions and the provision of technology infrastructure (Irani et al., 2005; Altameem et al., 2006). According to the literature (Bertot et al., 2010; Chowdhury et al., 2006), political desire and support lead to the increased success of an e-government initiative (Schwester, 2009). All stakeholders need legislations and regulations to organize the use of e-government initiatives

(Janssen et al., 2009; Melin and Axelsson, 2009); they are essential for e-government transactions to make them feel safe and trustworthy (Carter, 2008; Gil-Garcia et al., 2009). The political stakeholders and government management are responsible for providing legislations and regulations for all e-government transactions (Mnjama and Wamukoya, 2007; Gil-Garcia et al., 2009).

Factors influencing political stakeholders during e-government initiative implementation are shown in table 2.10 below. More discussions and details on these factors are presented in chapter three.

Stakeholder (1)	Factors	Resources
Political Stakeholders	Awareness/Strategy	(Chowdhury et al., 2006; Sang et al., 2009; Altameem et al., 2006)
	Leadership	(Chowdhury et al., 2006; Schwester, 2009) (Altameem et al., 2006; Ndou, 2004; Prybutok et al., 2008) (Seifert and McLoughlin, 2008
	Political Desire/Support	(Chowdhury et al., 2006; Mnjama and Wamukoya, 2007; Schwester, 2009)
	Financial/Cost	(Huang and Bwoma, 2003), (Bhatnagar, 2004), (Bhuiyan; Altameem et al., 2006)
	Legislations and Regulations	(Sahli et al., 2009; Altameem et al., 2006; Mnjama and Wamukoya, 2007)

Table 2.10 Factors Influencing Political Stakeholders

2.5.2 Technological Factors

Identifying and understanding technological factors are very important in ensuring the successful of e-government initiatives implementation (Hussein et al., 2007; Al-Sebie and Irani, 2005). With this in mind, one of the first responsibilities of the technical department in any organization is to make sure that those employees and technicians have the skills and ability to turn the institutional legacy system into a new one and to train the organization's employees on how to use the new system (Altameem et al.,

2006; Al-Sebie et al., 2005). Outsourcing or using the capabilities of the private sector when in-house employees are unable to complete any of the organization initiatives are required (Chen and Perry, 2003). Another duty is to ensure that there is enough efficiency and capability in the IT infrastructure to be able to cope with the transition to e-government and to give a detailed report to the senior management in the organization about any imbalance (Gil-Garcia et al., 2009; Al-Sebie and Irani, 2005). One more important responsibility is to monitor data protection, privacy and system security within the organization as it limit the growth of e-government if not managed correctly (Reddick, 2004a; Gil-Garcia et al., 2009; Al-Sebie and Irani, 2005). This can be done by applying methods of protection such as hardware and software assigned to deter/stop any external dangers such as viruses and spyware (Al-Sebie and Irani, 2005). The following table (2.11) shows the factors that influence technical stakeholders during e-government initiative implementation. Moreover, chapter three discusses these factors in more details.

Stakeholders (2)	Factors	Resources
Technological Stakeholders	IT Infrastructure	(Gichoya, 2005), (Tapscott, 1996; Gil-Garcia et al., 2009)
	IT qualified staff	(Huang and Bwoma, 2003), (Altameem et al., 2006)
	Legacy System (Hardware and Software)	(Lam, 2005), (Huang and Bwoma, 2003; Prybutok et al., 2008)
	Privacy and Security	(Huang and Bwoma, 2003; Gil-Garcia et al., 2009)

Table 2.11 Factors Influencing Technological Stakeholders

2.5.3 Organizational Factors

E-government services come through the work provided by public organizations (Fang, 2002; Ndou, 2004; Melin and Axelsson, 2009). The responsibility of the organization is to set strategies to change the way services are provided from the current legacy system to a new system, e-government, and to provide staff training and to cooperate with other departments in providing services (Al-Sebie et al., 2005; Gil-Garcia et al., 2009; Reddick, 2004a). Another responsibility is to cooperate with the initiatives developed by the technical department in giving them adequate time and information needed to design and implement service to be placed on the Internet (Sharifi and Manian, 2010; Fedorowicz et al., 2010). In order to kill the corruption that decreases e-government success, government officials are responsible to fight and reduce corruption (Ojha et al., 2008; Krishnan and Teo, 2012) by using reward and punishment system (Iqbal; Quah, 2010). The fear that technology replaces them, staff resistance to e-government is one potential problem to the governmental organizations during e-government implementation (Schwester, 2009; Shalini, 2009). in later stages of e-government implementation when all services are centralized in a one-stop portal, BPR become important (Layne and Lee, 2001). Di Maio (2006) and Joia (2004) argued that most of e-government initiatives failures have been attributed to the failure in business processes re-engineering. Factors influencing organizational stakeholders are listed in table 2.12 below. These factors also discussed in more details in chapter 3.

Stakeholder (3)	Factors	Resources
Organizational Stakeholders	Corruption	(Cho and Choi, 2005; Nour et al., 2008; Park, 2005; De', 2005; Ojha et al., 2008; Krishnan and Teo, 2012; Bertot et al., 2010)
	Business Process Re-engineering	(Weerakkody and Dhillon, 2008; Zarei and Ghapanchi, 2008; Al Shehry et al., 2009)
	Cooperation	(Altameem et al., 2006; Scholl, 2003; Aichholzer and Schmutzer, 2000), (Hu et al., 2006), (Fountain, 2001), (Ke and Wei, 2004), (Cohen and Mankin, 2002)
	Resistance to Change	(Ebbers and van Dijk, 2007), (Folger and Skarlicki, 1999), (Koh et al., 2006), (Norris, 1999), (Hiatt, 2006)
	IT Training	(Lam, 2005), (Huang and Bwoma, 2003), (Dada, 2006), (Heeks, 1999; Moon, 2002b; Ho, 2002b)
	Enforcement/Reward System	(Altameem et al., 2006), (Heeks, 2003b; Iqbal)

Table 2.12 Factors Influencing Organizational Stakeholders

2.6 Implementation Phases of E-government Initiative

Information systems (IS) and information technologies (IT) industries are growing fast (Hartman and Ashrafi, 2002). In organizations, IS/IT projects are implemented in phases and require good project management to avoid failure (Hartman and Ashrafi, 2002; Atkinson et al., 2006). In general, information systems are complex and many projects still fail most of the time (Garg et al., 2010; Pyster and Thayer, 2005; Hartman and Ashrafi, 2002). This is due to the ignorance of project management during implementation process, as well as many other factors (Ahuja et al., 2010). There are no standard methods for the development of IS projects. However, knowing the general three phases of development is essential to gain a deeper understanding of the e-government implementation process. The three phases—pre-implementation, implementation, and post-implementation—are the most commonly used approach in implementing IS projects (Kuruppuarachchi et al., 2002; Mandal and Gunasekaran,

2003; She, 2004; Beynon-Davies et al., 2004; Song, 2002; Nour and Mouakket, 2011; Ronchi et al., 2010). In addition, identifying interrelationship between stakeholders and project interactions and the critical factors affecting each phase are appropriate to achieve a successful implementation (Ahuja et al., 2010).

Like any IS project, the complexity of an e-government initiative brings with it high risks to the implementation process. Despite the different numbers of IS implementation phases introduced by many researchers, there are three general phases of IS/IT projects, namely pre-implementation, implementation, and post-implementation (Hustad and Olsen, 2011; Aloini et al., 2007; Bissessar, 2010). In order to have a successful e-government initiative implementation, all government authorities (stakeholders) involved in the project must know and understand their roles and responsibilities in all the three implementation phases. Currently, there is a high demand for good project managers because private and public organizations realized that their future depends on their ability to use the power of IS/IT systems in order to improve their daily business processes (Schwalbe, 2010).

In many e-government definitions, scholars have argued that e-government is basically the use of information and communication technology ICT in public organizations to offer online services to the public (Almarabeh and AbuAli, 2010; Tohidi, 2011; Rokhman, 2011). According to Dunleavy et al. (2011), “Government information systems are big business…”, and governments are spending billions on public sector IT operations. E-government initiatives depend on the use of all aspects of ICT systems and infrastructures (Jansen, 2005; Gichoya, 2005). An e-government initiative is also considered an information system project; however, its successful implementation involves many more issues than a normal IS system (Grimsley and Meehan, 2007). Hence, managing an e-government initiative implementation is

difficult and more complex than a traditional information system: it is a complex socio-technical system (Sarantis et al., 2011). The huge investments on e-government initiatives around the world (Angelopoulos et al., 2010) enhance the administrative role of government (Bhuiyan, 2010) and deliver better services to citizens (Verdegem and Verleye, 2009).

E-Government is becoming a high priority as a tool to offer a range of electronic government services (Al Nagi and Hamdan, 2009). In addition, it is a promising and widely used phenomenon (Justice et al., 2006). According to Marchionini et al. (2003), e-government is an "application of Information Technology to government service." Although Information and Communication Technologies (ICT) are the backbone for e-government, the technology alone is not enough to offer online government services to the public (Faniran and Olaniyan, 2009). Implementation of e-government initiatives are affected by many internal issues (Jaeger and Bertot, 2010; Sarantis et al., 2011). Internal stakeholders managing e-government initiative implementations are one such element. The roles, responsibilities, and relationships between internal stakeholders managing the e-government initiative implementation can affect its process during the design and implementation (Sarantis et al., 2010a). Moreover, there are factors directly affecting the successful implementation of ICT projects in e-government and the stakeholders managing and implementing them (Gichoya, 2005; Grimsley and Meehan, 2007).

Similar to any information system, e-government initiatives are managed and implemented in three phases. The initial step in any IS implementation process is to find leadership who has the minimum required technical and management skills. Then, stakeholders managing the implementation process should discuss all the issues that face each phase of the e-government initiative implementation. Internal

stakeholders' relationships are important, and each one must understand his or her roles and responsibilities to reduce any conflicts or resistance during the implementation cycle process (Ahuja et al., 2010). The project team should set up a plan for the project in the pre-implementation phase (Hustad and Olsen, 2011). An e-government initiative is an IS project, and its implementation also goes into the same three phases: pre-implementation, implementation, and post-implementation (Sharifi and Manian, 2010; Song, 2002; Venkatarayappa, 2004; Kertesz, 2003).

The pre-implementation phase is the first step in implementing an e-government initiative (Sharifi and Manian, 2010). Sharifi reported that it begins when a governmental department sends a request for proposal (RFP) to the IT department in the same organization. The first phase (pre-implementation) consists of some main aspects, i.e. find leadership for the project, provide an appropriate budget and capable IT infrastructure, upgrade any legacy systems, and follow the strategy. All government stakeholders responsible for implementing the e-government initiative must cooperate with each other to lead the project to its success (Somers and Nelson, 2001). Most of the responsibilities in this phase of implementation fall on the political stakeholders. Some of these aspects or responsibilities may continue from this phase to the implementation and/or the post-implementation phase (Forsberg et al., 2005). For example, the leader should continue to manage the project from the pre-implementation to the post-implementation phases (Somers and Nelson, 2001). However, his roles and responsibilities might change from one phase to another. Besides, any issues that need consideration in the next phase should start in this phase. In the pre-implementation phase, it is important to address the relationships and conflicts that might occur between stakeholders to ensure the success of the implementation process. Moreover, strategies and resources should be clear to the

stakeholders as well as the relationships between them in the pre-implementation phase.

Implementation is the second phase of the e-government initiative implementation cycle process (Sharifi and Manian, 2010). This phase starts right after completing the pre-implementation phase. This phase is the most critical one. The technological stakeholders in the public organization department are the most responsible in this phase(Reich and Benbasat, 2000). In this phase, e-government initiative should be constructed in the IT department or by their supervision, if outsourcing is involved. The IT department stakeholders and the business part in the same organization should work in close cooperation in this phase (Widerström, 2011). There are many important aspects in this phase such as BPR, resistance to change, corruption, punishment and reward system, and IT qualified staff. This phase ends after placing the e-government initiative online on the one-stop portal.

The final phase, post-implementation, starts after deploying the project (Sharifi and Manian, 2010; Widerström, 2011). This phase is critical and requires cooperation between the one-stop portal administration and the project beneficiary, the business part, to work together for the project success and end-user satisfaction (Yu, 2005). Important factors in this phase are IT training, privacy and security, and legislation. Responsibilities in this phase go to the organizational stakeholders, as they should manage their back-office processes after deploying the initiative online.

This research will try to uncover the interrelationships among the internal government stakeholders and the critical factors that emerge out of these interrelationships while managing the e-government initiative implementation. The implementation phases of IS/IT projects in the e-government development process were analysed to propose a

framework for the success of e-government initiatives. This framework should be valid for use in any e-government stage of growth.

2.6 Responsibility and Challenges to Implement E-government Initiative

E-government is a huge project that has to be implemented by the government and its institutions (Carter and Weerakkody, 2008; Hung et al., 2006). As a new phenomenon, public organizations are currently discovering how to implement and control e-government initiatives (Sarantis et al., 2011). Close exploration of the literature revealed that e-government implementation faces challenges that become complex and increase stage after stage (Langford and Harrison, 2001; Layne and Lee, 2001). As the goal of this research is to find out why e-government initiatives implementations are still failing in a large numbers, it is important to identify all parties responsible to implement e-government initiative together and understand their roles in every phase of implementation. The lack of capability in governmental organizations to develop online public initiatives directly reduces the effort to implement e-government (Sarantis et al., 2011). In general, implementation of IS/IT systems during organizational change is faced with some key high-level challenges (Weerakkody and Dhillon, 2008). These challenges include lack of awareness, legacy system constraints, cultural and political constraints, lack of senior management commitment, negative employee attitude, and resistance to change (Weerakkody and Currie, 2003; Weerakkody and Hinton, 1999; Willcocks; Mumford, 1994). In an organization that is bureaucratic, functionally oriented, and legacy-system driven, challenges will be more severe (Weerakkody et al., 2007). In fact, e-government transformation success will only result if we unmistakably understand these key challenges in detail. The success of e-government project implementation is

dependent on the internal stakeholders (Rowley, 2011; Sharifi and Manian, 2010). Many studies in the literature indicated that political role on e-government initiative implementation is very important (Heeks and Stanforth, 2007; Reddick and Frank, 2007; Bertot et al., 2010). The role of public organizations, owners of e-government initiatives, is important to successfully implement their online initiatives (Altameem et al., 2006; Al-Sebie and Irani, 2005; Sharifi and Manian, 2010). The technological stakeholders who are responsible to technically design, implement, support, and guide the development process of any e-government initiatives need to work side by side with the political and organizational stakeholders (Sharifi and Manian, 2010; Altameem et al., 2006; Rowley, 2011; Pardo et al., 2012).

2.7 The Relationship between Political, Organizational, and Technological Stakeholders

The relationships among internal stakeholders to implement e-government initiatives are critically important (Welch, 2012; Detlor et al., 2010; Sharifi and Manian, 2010). The various stakeholders' participation in e-government can ensure its long-term success (Rowley, 2011). Although the ultimate goal of e-government is to provide all electronic services through a single site on the Internet (Gajendra et al., 2012), the implementation of e-government does not go as planned for many governments in the world (Saxena, 2005). There are many failed initiatives because of the many challenges that paralyze or limit the continuity of the project implementation (Heeks, 2003b; Dada, 2006; Ndou, 2004; Sarantis et al., 2011). In fact, internal stakeholders' relationship and understanding each other role when implementing e-government initiative is considered critically important and will encourage commitment and co-operation (Irani et al., 2005). One such factor is security and privacy that leads to trust

among internal stakeholders when implementing e-government initiatives (Irani et al., 2005; Zhang et al., 2005). Trust is essential among stakeholders to implement e-government initiatives (Al-Omari and Al-Omari, 2006).

E-government initiative implementation challenges are different in each stage of the project (Layne and Lee, 2001). In order to reach every government goal, the final step of the e-government project, all internal stakeholders who are responsible to bring the e-government project to reality must work together closely with greater cooperation (Rowley, 2011; Sharifi and Manian, 2010). First, the government must know its role, which is to manage, support, fund, and guide the e-government project at all levels and stages. Acquiring a clear vision, the government must plan a precise and coherent strategy (Alshehri and Drew, 2010; Rabaiah and Vandijck, 2011; Ojo and Janowski, 2010). Second, the organization's role is to apply the government strategy and manage change in the new e-government environment (Rose and Grant, 2010; Obeidat and Abu-Shanab, 2010). Finally, the departments of technology, information systems or those inter-organizational technical staff who are responsible to design and implement e-government initiatives are responsible to help other departments re-engineer their business process (Jain and Kesar, 2011; Chen, 2010). The successful implementation of any e-government initiative depends on the expertise of the internal stakeholders (implementers) during the three development phases: pre-implementation; implementation; and the post-implementation (Sharifi and Manian, 2010). In fact, during the implementation stages of the e-government initiative, the stakeholders' roles and importance are changing (De', 2005). However, clarity of roles and responsibilities is essential for all government internal stakeholders (staff and organization) when participating in building initiatives across agencies or sharing information (Pardo et al., 2009; Lam, 2005). Figure 2.4 below illustrates how the

process of e-government initiative implementation flows between the internal stakeholders.

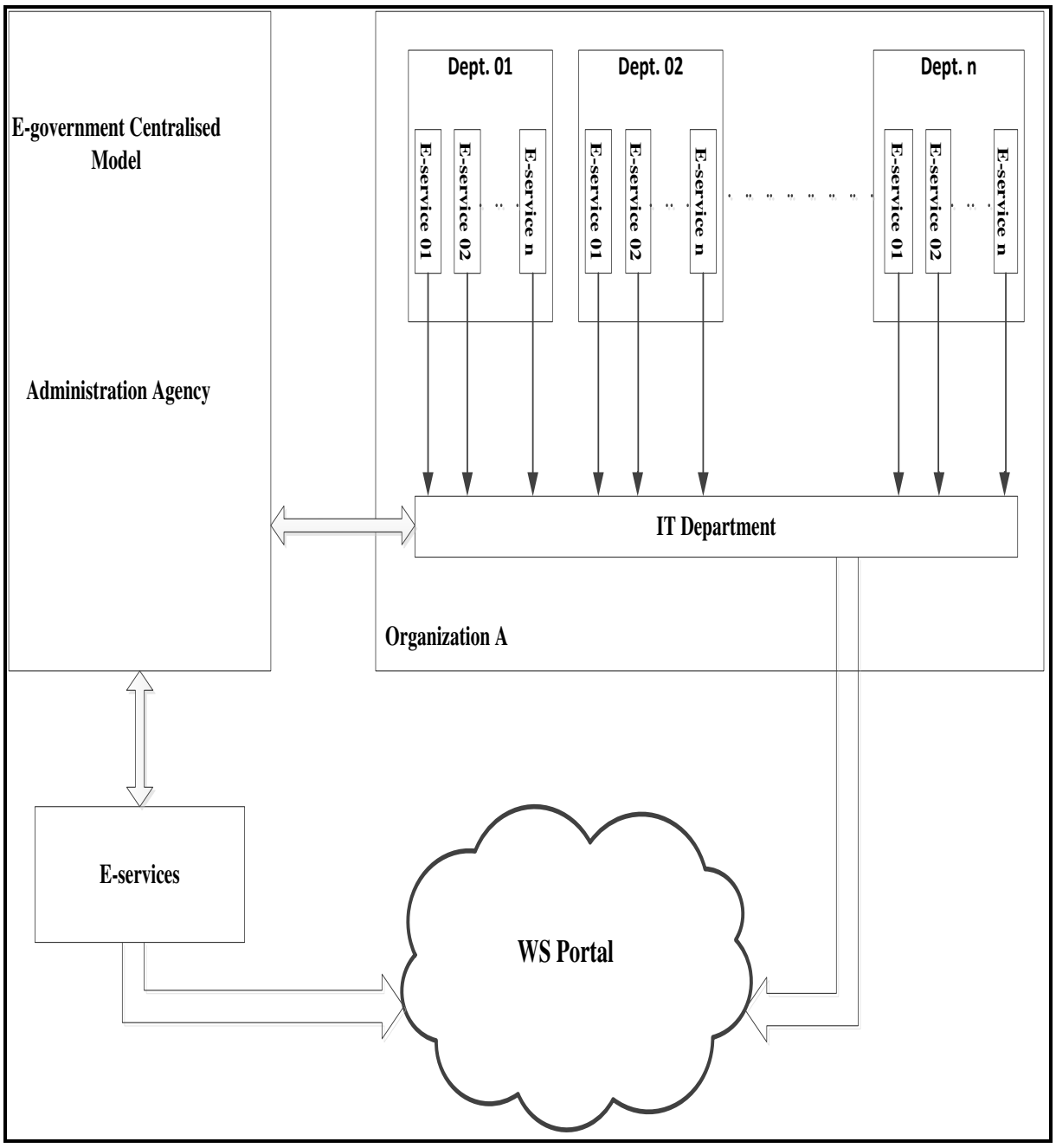


Figure 2.4 Internal Stakeholders Relationship

2.8 Absence of Framework to Implement E-government Initiative Internally

The development of e-government has significantly slowed down because of the lack of formal methods to manage and monitor e-government initiatives (Kunstelj and Vintar, 2004). Failures in e-government initiatives are more common than success and the reasons are many and varied (Sarantis et al., 2011). There is an urgent need for frameworks that guide policymakers and official officers in implementing e-government initiatives (Sarantis et al., 2010b). Therefore, guiding frameworks are now essential for both governments and research to avoid current and future challenges facing e-government implementation (Grönlund, 2010; Sagheb-Tehrani, 2010). There is no doubt that e-government internal initiative implementation is not easy as it requires full cooperation from the three main stakeholders (a) political administration, (b) organization departments, and (c) technological departments (Rowley, 2011; Altameem et al., 2006). It is very important to know what factors influence e-government initiative implementation internally (Detlor et al., 2010). Moreover, the phases of e-government initiative implementation are important and need to be studied within the government (Sharifi and Manian, 2010). Hence, implementing a complete initiative for specified government organizations requires a theoretical framework to guide internal stakeholders during phases of e-government internal initiative implementation (Rowley, 2011; Sharifi and Manian, 2010).

An extensive review of the literature revealed that all theoretical frameworks and models are presented to implement e-government project from top management perspective only. There is no complete framework or model for e-government internal initiative implementation from start to deployment. A management framework for e-government initiative implementation is a necessary tool for the stakeholders who plan, manage and work on it (Sarantis et al., 2011). Based on the information

collected from the studies critically analysed in this chapter; this research will build a new theoretical framework in the next chapter. The conceptual framework will be divided into three levels (a) the internal stakeholders, (b) the development phases and (c) the factors influencing the stakeholders in each development phase of the e-government initiative. This conceptual framework is described in Chapter 3, taking Chapter 2 information into consideration.

2.9 Conclusions

This chapter reviewed the normative literature to explore and identify research issues. Literature has shown a relative lack of studies in the internal e-government initiative implementation. The study found many gaps in the literature and insufficient information to implement e-government initiatives internally. One example, the internal stakeholders who were responsible for implementing the initiatives and their specific roles, was not precisely addressed. Moreover, the factors influencing each of those stakeholders are mapped in this study. Furthermore, the implementation phases that an e-government initiative must go through were not mentioned in the literature either. This research identified a gap in the literature, the absence of holistic theoretical framework for internal e-government initiative implementation. This framework clarifies the roles and responsibilities of the official stakeholders when implementing the e-government initiatives. It can be used in any of the e-government implementation stage as a guiding tool. As a result, this chapter establishes a background for the context of e-government implementation that reduces the confusion surrounding the internal implementation of e-government initiative and, hence, supports the researcher in developing a conceptual framework for this research. This research has discussed many issues related to e-government implementation;

starting by giving a brief history of e-government. Secondly, different definitions of e-government were presented. In fact, there is no standard definition among scholars and the definition of e-government is still debatable. The researcher then reviewed the categories that would benefit from the implementation of e-government. These categories are classified into four types of electronic interaction, namely government-to-citizen, government-to-business, government-to-government, and government-to-employees. The study identified that each category (stakeholder) has its own requirements, objectives and expectations during e-government initiative implementation. Fourthly, e-government implementation stages were discussed. Fifthly, internal stakeholders responsible to implement e-government initiatives were discussed including internal factors influencing e-government initiative implementation. The responsibilities of internal stakeholders to implement e-government initiative were discussed as were the relationships between the internal stakeholders. As result, some of the arguable issues including factors, stakeholders, initiative implementation phases were discussed to confirm that a framework for e-government internal initiative implementation is needed. Finally, the researcher found that there was no theoretical framework for the implementation of e-government internal initiative. For this research, the following chapter, Chapter 3, will construct and describe a conceptual framework in detail.

Chapter 3: Conceptual Framework for E-government Initiative Implementation

Summary

It has been made evident by reviewing the literature in the previous chapter that e-government initiative implementation process is not straightforward. As discussed in Chapter 2, there are limited studies in the literature analysing e-government initiative implementation process from the e-government internal stakeholder's perspective. After reviewing the literature critically, this research identifies that e-government initiative implementation is an important research issue that needs to be carefully studied and understood. Therefore, this chapter proposes a theoretical framework for e-government initiative implementation. The framework consists of three parts: (a) e-government internal stakeholders, (b) factors influencing initiative implementation, and (c) development phases of e-government initiative. The proposed framework can be used by government officials, in any implementation stage of e-government, in public organizations and administrating agencies when considering implementing an e-government initiative, and allows all internal stakeholders and researchers to better analyse and explore the implementation aspect of e-government initiative. The framework will clarify the roles and responsibilities of internal stakeholders during e-government initiatives implementation. The proposed framework requires an empirical validation by the researcher, which will be reported in Chapters 5 and 6 of this work.

3.1 Framework Background

This study proposes a framework for implementing e-government initiative successfully by connecting governmental organizations, political administration and technology stakeholders together. The framework consists of the identified internal stakeholders who will create (implement) the e-government initiatives, identified factors influencing each stakeholder, and identified three phases of development to implement the e-government initiative. The framework describes the internal workflow in order to picture the e-government initiative in a well defined, flexible and reusable way for achieving government interoperability of all involved stakeholders. The framework can be used for implementing the e-government initiative, in any e-government implementation stage, as a cost-effective and interoperable solution. The framework illustrates the roles and responsibilities of the internal stakeholders and the factors influencing them during the three phases of e-government initiative development.

3.2 Stakeholders of E-government Initiative Implementation

After the critical analysis to the literature presented in chapter 2, the development of e-government initiative, implementation cycle, depends on three internal stakeholders. The three internal stakeholders are the political stakeholders, technical stakeholders, and the organizational stakeholders. These three stakeholders are responsible for implementing e-government initiative successfully by working closely together. Clarity of roles and responsibilities among internal government stakeholders when implementing e-government initiatives can reduce resistance and lead to success (Lam, 2005). Also, clarity of roles and responsibilities are essential among

government stakeholders (staff and organizations) when implementing across-agencies initiatives or sharing information (Pardo et al., 2009). In order to implement e-government initiative successfully, internal stakeholders must understand their role and responsibilities (Rowley, 2011). Each stakeholder group should know and understand the factors influencing him/her during each phase of the e-government initiative development and to work accordingly.

Firstly, the political stakeholders, the e-administration agency and top government politicians, will lead the whole e-government project and build strategies to reach that goal. They also have to guide and support other governmental agencies to implement their e-government initiative by offering financial and set requirements for the initiatives that intended to be published online.

Secondly, the organizational stakeholders are the governmental agencies and departments that own the initiatives. The role of the public departments is to decide on which service is to be Business Process Re-engineering and transferred as an online service. One of the main public department's responsibilities is to re-engineer the business process of the service selected and to work in cooperation with the developer in the IT department to implement the initiative. In addition, they should be able to change the work structure and environment in the organization to be compatible with the e-government environment. It is also their responsibility to reduce change resistance and train the employees on the new electronic services.

Thirdly, the role of the technical stakeholders is to engage in a good relationship with both the political stakeholders and the public department's stakeholders to understand the workflow of the initiative to be implemented and the requirements for placing that initiative online. The responsibilities of the technical stakeholders are to implement the e-government initiatives requested by the public departments and train their

employees on how to use and manage it. They should also know what legacy systems need to be upgraded. Finding the IT qualified employees to implement the requested e-government initiative is one of the responsibilities of the IT department as well. The three internal stakeholders are the political stakeholders, technical stakeholders, and the organizational stakeholders. The following figure (3.1) shows the e-government initiative implementers and their relationship.

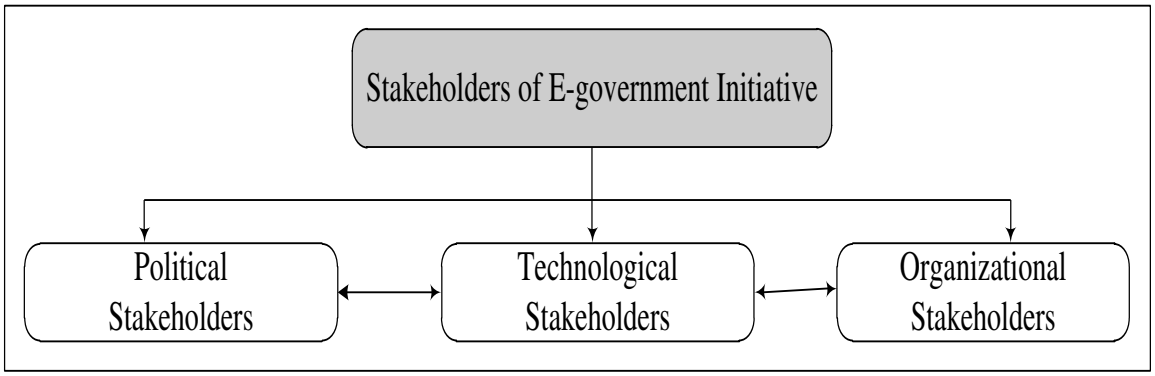


Figure 3.1 E-government Initiative Stakeholders

3.3 Factors Influencing E-government Initiative Implementation

After the identification of the internal responsible stakeholders and their role to implement e-government initiatives, it is important to identify the factors that influence stakeholders. For example, one of the first responsibilities of the technical department, in any organization, is to ensure that employees and technicians have the skills and ability to turn the institutional legacy system into a new one and to train the organization's employees on how to use the new system. Outsourcing or using the capabilities of the private sector when in-house employees are unable to complete any of the organization initiatives is another responsibility. Moreover, it is their duty to ensure that there is enough efficiency and capability in the IT infrastructure to be able to cope with the transition to e-government, and to give a detailed report to the senior

management in the organization about any imbalance. One more important responsibility is data protection and system security within the organization. This can be done by applying methods of protection such as hardware and software assigned to deter/stop any external dangers such as hackers, viruses and spyware. The factors influencing the political, organizational, and technical stakeholders will be explained in the next section and subsections.

Furthermore, this study has identified the factors that influence the implementation of e-government from previous studies in the literature. Since, this study is focusing only on the internal government factors that influence e-government initiative implementation, the research avoided the factors that do not relate to the aim of the study. The study then grouped the remaining factors and distributed them into the three identified stakeholders who are the political stakeholders, organizational stakeholders, and technological stakeholders.

Synthesizing and connecting stakeholders with their related factors gives the researcher a clear and deep understanding of the problem. It is obvious that there is a gap in the literature because all factors, internal and external, have been identified and explained but e-government initiatives are still failing in high numbers during and after implementation. While reviewing the literature, no study addressing the e-government initiative development phases was found. Furthermore, internal stakeholders did not map with their influencing factors during e-government initiative development. All studies focussed on the implementation stages and readiness of e-government project in general. Hence, shifting the focus from e-government implementation stages to initiative development phases and identifying the internal stakeholders and critical success factors for each phase will lead to more initiative success. Successful implementation of e-government initiatives lead to e-government

project success. This is the gap that this study will try to fill, and will be explained in the following sections and sub-sections.

3.4 Mapping Factors, Stakeholders, and Development Phases for E-government Initiative Implementation

Smaller projects 'initiatives' of the e-government management also go into phases of implementation. Internal project management team of e-government (managers) should work in close relationship to implement their initiatives. This research identified three implementation phases of the e-government initiative. In the first phase, the e-government initiative starts as a request from the public department, RFP (Request for Proposal) (Sharifi and Manian, 2010). The three stakeholders analyse the initiative and structure it before the technical stakeholders start implementing it. In the second phase, the technical department stakeholders implement the initiative either in-house or by seeking the help of outsourcing. In the third phase, the initiative is placed online in the one-stop portal. The following figure (3.2) illustrates the three phases of the e-government initiative implementation.

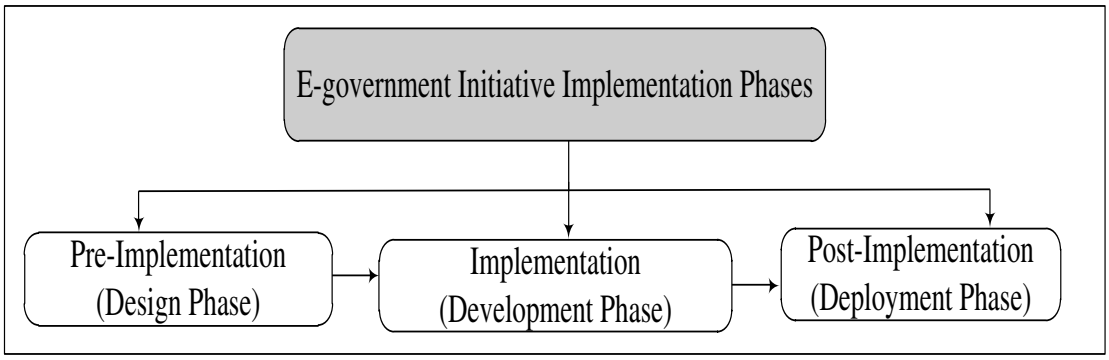


Figure 3.2 Implementation Phases of E-government Initiative

Implementing e-government initiative is much more than just identifying factors. Although factors are very important, initiative implementation process and

stakeholder's role and responsibility are the key to success. Every e-government initiative goes through an implementation process. There are three phases to any e-government initiative implementation. Each phase has its own critical success factors. It was found necessary to group these factors under the three stakeholders described above.

According to Baum and Di Maio (2000) it is not necessary to start e-government projects at the first stage and proceed to the final stage. When implementing e-government it is possible to skip stages either from its start or as it develops. However, this is not possible when implementing e-government initiative. E-government initiative implementation has three sequential phases and no phase can be skipped. Each phase encounters some factors that impede its progress. These factors come from the three initiative stakeholders: political, organizational, and technological.

This study identified the factors affecting each initiative implementation phase from the factors influencing each stakeholder to provide e-government officials with a clear view on the requirements of initiative from start to finish. In fact, researchers and decision-makers should look at the factors of e-government from the implementation phases not from the stakeholders' perspective in order to fill the gap relating to the high number of initiative failures. For example, it is important to know the factors influencing each e-government initiative development phase. This can reduce the complexity and shrink entanglements among stakeholders during the initiatives development. The table (3.1) below gives a summary of the factors influencing initiative implementation phases from the research perspective with a detailed explanation in the subsections below.

	Factors Influencing Stakeholders in each Initiative Implementation Phase		
	Pre-implementation (Design)	**Implementation (Development)**	**Post-Implementation (Deployment)**
Political Stakeholders	Leadership Awareness/Strategy Political desire/Support Financial		Legislations/Regulations
Organizational Stakeholders		Resistance to Change BPR Cooperation Enforcement/Reward system Corruption	IT Training
Technical Stakeholders	IT Infrastructure Legacy Systems Upgrade	IT qualified staff	Privacy and security

Table 3.1 Intersection of Stakeholders, Factors and Initiative Implementation Phases

3.4.1 Factors of Design Phase (Pre-Implementation)

Pre-implementation is the first phase, design, of any e-government initiative development (Sharifi and Manian, 2010). It starts as an idea or a need to provide an online service to customers. This phase started when a governmental department send an RFP (Request of Proposal) to the IT department in the same organization. There are political, organizational and technical factors critically important in this phase. The factors influencing this phase are outlined below.

3.4.1.1 Strategy and Awareness

The importance of strategy and awareness to e-government initiative development were highlighted by many studies in the literature. It is the responsibility of the

government top management, political stakeholders, to set strategies and spread the awareness of the e-government project among all the employees. Although both factors are necessary in all development phases, strategy and awareness are highly important in the beginning of any e-government initiative development. First of all, awareness of the benefit of e-government initiative is essential and has to be spread among employees at all levels in different agencies and departments. Then, a strategy of e-government goals must be shared at all levels (Lam, 2005). These two factors are critically important in the first phase, pre-implementation, of the e-government initiative development to strengthen commitment among all stakeholders and draw a clear roadmap to follow.

Furthermore, it is very important that all government staff, leaders, and employees have reasonable awareness of the e-government initiative and understand its benefits to all stakeholders. Spreading awareness about e-government initiative importance among all staff leads to a faster and more effective implementation and encourage collaborations. In fact, e-government implementation should be the goal of every single employee at all levels. E-government initiative success depends highly on the awareness of the programme (Dwivedi and Sahu, 2008). This has to be spread to all staff in the first phase of the development to increase chances of success.

A clear strategy, in the first development phase of the project, is one of the most important factors that lead to a successful e-government initiative development. Governmental early clear strategy can lead to smooth implementation of e-government initiatives. In fact, developing a strategy to achieve goals is very important in any project that involves change (Altameem et al., 2006). Early e-government strategy will allow a huge turnover from paperwork to digital means without change resistance. Strategy is highly important if an initiative require

collaboration between governmental agencies to successfully present an online service (Sang et al., 2009). It should continually encourage related public agencies to cooperate and continue the process of transformation and meet the tasks and time limit. Hence, a precise strategy to guide the e-government initiative development is critically important to prevent disparities in the process of development between government agencies. The strategy is a wider plan to implement e-government initiatives and has to be set by the government while the tactics are the smart steps of the implementation process by the organization.

3.4.1.2 Leadership

The complexity and scale of the changes that will take place during the e-government initiative development made it evident that involvement of a leadership is highly required. In fact, strong leadership can speed up the process of e-government initiative development and ensure success. When developing an e-government initiative, presence of leadership is necessary at all the development phases (Schwester, 2009). In addition, the role of the leadership varies from development phase to another. However, the role of the leadership becomes most important especially in the first phase of the e-government initiative development. Strong political leadership is critical to the success of e-government initiative implementation (Chowdhury et al., 2006). Strong leadership must control and support the projects at all levels of e-government initiative implementation stages from the bottom to the highest level. Leadership should help in reducing change resistance and enforce applying e-government strategy.

Effective leadership is one of the major factors contributing to e-government success, according to many studies in the literature (Altameem et al., 2006; Ndou, 2004;

Prybutok et al., 2008). One of the top challenges to the government as top management of the project is to find a strong political leader, with IT and management skills, who can lead the project to its success.

Strong and competent leadership can positively influence and increase the success of e-government implementation (Seifert and McLoughlin, 2008). However, e-government as a long-term project is directly affected by any political instability (Çayhan, 2008). The political and institutional instability, with frequent changes of governments, are considered a major challenge to e-government implementation (Basu, 2004).

3.4.1.3 Political Desire/Support

During the first development phase of an e-government initiative, political desire and support become essential. Top management must believe in the value of an e-government initiative, to all stakeholders, in the beginning and support it. Indeed, the political desire comes only after having awareness on how important is the initiative to both government and customers. The government's political support and insistence on transition to electronic government is very important in all stages of e-government initiative development.

Further, unbalanced political support in financial resources, BPR, and IT training can affect the initiative development process. Internal political desire and support from top government officials is necessary for achievement of e-government goals; in addition, political desire was ranked the most important factor to implement e-government initiative in Bangladesh (Chowdhury et al., 2006). It is common that most electronic initiatives were given limited budgets and time which cannot be met without the political support and guidance.

3.4.1.4 Financial/Cost

It is the political responsibility to present sufficient budgets for the e-government initiative in the per-implementation phase. Lack of funding is a major drawback to the realization of e-government (Huang and Bwoma, 2003). The lack of financial resources is considered an evident challenge to e-government initiative implementation (Bhuiyan; Altameem et al., 2006). According to the scope and scale of e-government initiative implementation, the cost is very dramatic; and the cost of e-government initiative implementation depends on building an in-house system, buying an existing package, or hiring an outsource to create it (Bhatnagar, 2004).

E-government requires spending huge amounts of money to build projects and train staff. E-government early stages do not need a lot of money; however, this is not true for the latter stages. Political stakeholders must know that spending on e-government-related initiatives will continue to grow stage after another. According to Lau et al. (2008), development in the back-office represents approximately 90% of e-government initiatives in the final phase of e-government system. However, the budget for every e-government initiative must be negotiated and agreed by the technical and political stakeholders before the implementation phase start.

3.4.1.5 IT Infrastructure

The first priority when implementing e-government initiative is to have a capable and reliable IT infrastructure (Gil-Garcia et al., 2009). IT infrastructure in particular is the responsibility of the technical stakeholders to make sure it is ready for the e-government initiative development prior to the implementation phase. IT infrastructure is all the hardware, software, and procedures needed to implement an IT

project. IT infrastructure is the backbone of e-government initiatives and must be ready by the time the initiative development is ready to start.

In the developing countries, IT infrastructure is considered a big challenge to implement e-government initiatives (Dada, 2006; Ndou, 2004). One of the major factors for e-government initiative implementation failure is the poor IT infrastructure (Gichoya, 2005), and therefore, IT infrastructure plays a key role in the success of e-government initiative development. Inadequate IT infrastructure is particularly one of the major challenges and will seriously delay the implementation process of e-government initiative (Siddiquee, 2008). Consequently, the IT infrastructure capability is important to address the integration problems and then connect all governmental bodies. As a result, IT infrastructure has to be built during the pre-implementation phase of any e-government initiative.

3.4.1.6 Legacy System Upgrade (Hardware and Software)

During the pre-implementation phase, technological stakeholders must identify any legacy systems and upgrade it. Indeed, inflexible legacy systems are another challenge to implement e-government initiatives (Lam, 2005). In this phase, pre-implementation, legacy system upgrade could increase the costs of e-government initiative development. This is one of the most challenging factors during the initiative pre-implementation phase. Preparing for e-government and benefiting from new technology, organizations are aiming to replace legacy systems to improve their back-office operations (Huang and Bwoma, 2003).

Upgrading legacy systems will help securing government information against unauthorized access, and is one of the important factors in e-government initiative implementation (Altameem et al., 2006). Therefore, before starting the

implementation of any initiative all legacy systems must be upgraded in the pre-implementation phase. Further, the success of collaboration between government organizations relies on IT standards; incompatible or different hardware and software systems will lead to e-government initiative implementation failure (Altameem et al., 2006).

3.4.2 Factors of Development Phase (Implementation)

This is the critical phase where many important factors occur. In this phase, technical stakeholders are the most important players. Technical staff capability is the most important factor here as well as the organization management skills during the business process reengineering. Finance is also very important here to upgrade legacy systems and pay for any outsourcing involvement. Factors influencing this phase of the initiative implementation process are described in the following sub-sections.

3.4.2.1 Corruption

During the implementation phase, corruption is one of the factors that interrupted the speed of e-government initiative development. Corruption refers to all types of corrupt acts at the work environment. It is widely known that most governments around the globe are suffering from some level of corruption (Dreher et al., 2007). Corruption level in the public sector is decreasing sharply in countries where e-government exists. In April 1999, the Seoul Metropolitan Government launched an online system called OPEN (Online Procedures ENhancement for Civil Applications) to control corruption which worked well and reduced corruption as expected (Cho and Choi, 2005).

It is not right, as it widely believed, to wait for e-government final stage to reduce or eliminate corruption. Politicians in governmental organizations must fight corruption

during e-government initiatives development, especially in the implementation phase, to ensure the implementation success. E-government initiative can be affected by the leadership decision especially if IT developers need collaboration from the beneficial department. Hence, the e-government initiative will end up in failure if corrupt official resist cooperating (De', 2005). This problem is more severe and likely to happen if there is a need that two or more public organizations should work together for the success of one online e-government initiative.

3.4.2.2 Business Process Re-engineering (BPR)

BPR directly affects an initiative during the implementation phase and is the most important task that organizations should carefully focus on when shifting to e-government environment. Re-engineering business process for any initiative must be done in collaboration between the IT department and the beneficiary department. As developers in the IT department know how to turn traditional services to electronic services, employees in the beneficiary department know how to manage the business process. BPR is an important factor in e-government implementation and was introduced in the 1990s by (Hammer, 1990). He argued that business process reengineering triggers many changes in the organization such as job designs, organizational structures, management systems and anything associated with the process. Not just an important task, it is a complete change in the organization which requires a tremendous effort. Unsurprisingly, it is very difficult for any organization to turn off traditional ways of working and shift to a new one especially in electronically based services.

Reengineering the business process (BPR) for e-government initiative is going to be a huge turnover in the way governmental organization offers online services to

customers. Despite the different positions on BPR in the literature, it is a must and a major concern to e-government initiative development. One example of the challenges to BPR is employee resistance. Many people in the organization are afraid of BPR due to a loss of authority or control (Lam, 2005).

As a result, while implementing an online initiative it is very important to determine the beginning and end of each e-service, and is the responsibility of each department in the organization. Such clarification leads to the success of building this e-service and ease of implementing it by the technical working group. Finally, for BPR to be successful a strong cooperation with the technology department staff when building any initiative is critically important.

3.4.2.3 IT qualified staff

This is the most concern of the IT department especially in the implementation phase. Since they are the responsible group to develop the electronic service, IT qualified employees are the most important during the implementation phase of e-government initiative. However, lack of in-house technical skills required to shape initiatives is considered one major challenge to the e-government initiative implementation (Lam, 2005). Proper and adequate staffing in the IT department is essential and the responsibility of the organization (Huang and Bwoma, 2003). In general, lack of qualified technical staff is a problem for every government worldwide (Altameem et al., 2006).

High amounts paid by the private sector to attract qualified staff causes migration of these staff which leads to competition and e-government project delays. This competition, most of the time, perforce the government to seek for outsource

cooperation. Relying on in-house employees or seeking the outsource assist is the responsibility of the IT department, and vitally happened in the implementation phase.

3.4.2.4 Cooperation

All stakeholders' cooperation is important and required in every phase of the e-government initiative development. However, cooperation is most important in the implementation phase. Political and organizational stakeholders must cooperate with the technical stakeholders (IT developers) in order to successfully implement the e-government initiatives. During the implementation phase commitment of cooperation between all the stakeholders is critically important.

According to Hu et al. (2006), cross-agency cooperation has a great potential to transform the way that governments work, share information, and deliver services to external and internal clients, and is critical to the success of e-government initiative implementation. An agency's bureaucratic structure represents a key challenge in e-government initiative implementation and must be avoided. Therefore, any agency should effectively engage and interact with other agencies to achieve shared goals when implementing e-government initiatives. Further, respecting the interests and expectations of each participating agency and not challenging its existence or autonomy is also important for successful cross-agency collaboration in e-government (Fountain, 2001).

In a study to investigate the e-government initiative development in Singapore, Ke and Wei (2004) argued that agencies must see themselves as one organization that cooperates, shares information, and provides the general public or particular constituencies with better and integrated services in order to implement e-government initiatives in an effective and efficient way. Without developing effective cooperation

relationships between significant people from each organization, inter-organizational cooperation will not be successful (Cohen and Mankin, 2002).

3.4.2.5 Resistance to Change

Many studies in the literature indicated that resisting change among employees from all levels is common in e-government implementation. However, it is highly decreasing the process of developing e-government initiative in the implementation phase in particular. According to Ebbers and van Dijk (2007), the definition of resistance is the force that hinders or stops. Additionally, Folger and Skarlicki (1999) define resistance as "employee behaviour that seeks to challenge, disrupt, or invert prevailing assumptions, discourses, and power relations" (p. 36).

Resistance to change among employees during e-government initiative development is considered one of the major challenges. The establishment of e-government carries a lot of changes at the level of organizations, departments, divisions and tasks which require a change in management leadership and employees. Therefore, there will be resistance to change and this change applies to all corners of the organization and will grow steadily if not controlled.

In an empirical study to examine how people interact in an emerging e-government environment, the authors Koh et al. (2006) argued that e-government efforts will be less successful if an important group of stakeholders, the employees at all levels, do not "buy-in." in doing so, it is important to the organization to create an IT strategic e-government plan and to evaluate how strategic plans are developed, communicated, and integrated into the workplace environment. Finally, the authors, Koh et al., pointed out that employees do not place a high value on e-government initiatives without proper understanding of the importance of them. Moreover, resisting change

is the result of inadequate training among government employees who are not very well involved in using information technologies (Norris, 1999). Consequently, resistance to change is a result of:

- Fear of the unknown.
- Fear of being replaced by a machine and losing job.
- Not willing to give up some power and/or power loss.
- Disbelief of the benefit of technology and e-government.
- Fear of not using technology correctly or failing to learn.

A resistance model called ADKAR was introduced by Hiatt (2006), listing five building blocks that must be individually obtained to realize change successfully: awareness, desire, knowledge, ability, and reinforcement. He stated that it is the management's job to create an environment for people to go through these stages as quickly as possible to overcome resistance to change among employees.

3.4.2.6 Enforcement/Reward System

During e-government project implementation a reward system is important to motivate employees to participate and produce high-level work (Altameem et al., 2006). This is important particularly in the implementation phase. To guarantee employees participation, punishment and reward need to be applied by the top management. Heeks (2003) argues that enforcement on employees to use the system and participate in the e-government implementation reduces the chances of failure and leads to success. Hence, one of the biggest responsibilities of the organization is to give high priority to the project from the beginning to the end and encourage the employees to work accordingly. Consistently, giving the project a high priority is very important to ensure the success of the project in the long run. The key to

accomplishing this is to identify a strong political leader who has full political power to use the punishment and reward system.

In addition, it is very important to urge customers to use the online service rather than coming to the organization location. After the completion of the implementation phase of e-government initiative, the post-implementation phase starts when the initiative is deployed on the e-government online gate.

3.4.3 Factors of Deployment Phase (Post-Implementation)

This is the last phase of any e-government initiative development. It is a very important phase and needs to be adopted by employees who should always be committed to make it successful and act accordingly. It should be the termination of the traditional services offered. The leaders should give high priority to the online initiatives and enforce employees to use the new e-initiatives over the traditional one and to overtake any change resistance. Commitment to stick to the e-initiative being provided is very crucial at this stage by political, organization and technical stakeholders. However, organizational stakeholders bear more responsibility at the post-implementation phase to manage the online e-government initiatives.

Users might resist using the online service at the beginning due to human nature of not wanting to change or learn new things. However, sticking to the new online electronic services and encouraging citizens and businesses to use it will eventually lead to the success of the initiative (Valdés et al., 2011). Factors influencing the post-implementation phase are listed in the following sub-sections.

3.4.3.1 Legislations and Regulations

The rights of all the stakeholders related to the e-government initiatives can be identified and organized by legislations and regulations. Stakeholders need the

legislations to ensure their rights during the development phases of the e-government initiative. Although, it is important for all the development phases, legislations are most important in the post-implementation phase to increase adoption and success. The absence of legislation and regulations when implementing the e-government initiative is one of the major challenges that hinder the implementation of this vital project. Therefore, lack of trust among stakeholders is the result of absent or no clear legislations and regulations (Carter, 2008).

Making the environment to feel safe and trustworthy for e-government transactions regulations and legislation are essential. As a result, new legislation and regulations are needed for e-government because it is a new phenomenon (Altameem et al., 2006; Sahli et al., 2009). For example, digital signature is very important to control e-government security; therefore, a new law is needed to recognize digital signature as a tool to identify users. Laws governing the use of electronic services must be provided to ensure the rights of all parties and encourage them to use these online services.

3.4.3.2 IT Training

After deploying the new e-government initiative online, training the employees on the IT skills to adopt the new service is necessary. Hence, IT training in the post-implementation phase is most important and the responsibility of the organization. The government depends highly on the employees IT skills and their ability to provide the e-government (Ho, 2002b; Heeks, 1999; Moon, 2002b). According to Huang and Bwoma (2003), "training leads to job satisfaction." The rates of e-government projects' failures are greatly affected by the lack of training, skills, and change management efforts.

Moreover, technology must be developed in collaboration with local staff during project implementation to improve awareness of the project (Dada, 2006). According to numerous research in the literature (Heeks, 1999; Moon, 2002b; Ho, 2002b), lack of skills and training are a particularly significant problem in developing countries to effectively implement the e-government system. The problem is that after years of training, the leakage of employees to the private sector increase due to the high competition on the IT skilled staff.

3.4.3.3 Security and Privacy

Privacy and authentication issues are major concerns when implementing e-government initiative (Huang and Bwoma, 2003). Lack of trust is a significant factor that can decrease e-government initiative implementation. This is mostly occurred in the post-implementation phase. Hence, local agencies should employ trust-building strategies. Securing government information against unauthorised access is one of the important factors in e-government implementation (Altameem et al., 2006). Exposure of sensitive information to unauthorized internal and/or external individuals generates distrust which means external and internal stakeholders refrain from using electronic services. Security and privacy is the responsibility of the IT department and must be completed at the post-implementation phase.

With this in hand, distribution of the above factors to the related stakeholders at every phase of e-government initiative development could be the answer to the research question, and might lead to better and successful e-government initiative implementation in the future. The table below gives a complete picture of the e-government initiative phases, stakeholders, and factors of each stakeholder at every phase of implementation.

Finally, identifying the internal stakeholders who are responsible to implement the e-government initiatives as well as the factors influencing them and distributing these factors to the three development phases is important to understand the cycle process of the e-government initiative implementation. As a result, each stakeholder will know the roles, responsibilities and what factors influencing him/her at each implementation phase. Therefore, the above factors in each development phase under each related stakeholder are summarised in the table below.

3.5 Strategy for Validating Conceptual Framework in Fieldwork

The proposed framework needs to be tested and validated empirically. Hence, the next step of this research was to test and validate the framework in real life organizations. The detail of testing and validating information is discussed in Chapter 5. The three parts that need to be empirically tested and validated of the framework are the factors, the stakeholders', and the phases of development. Each factor was linked to the stakeholders that it was influencing. Then factors were again distributed to the three development phases. The result is that every stakeholder should know what factor influences him/her in which phase of the e-government initiative development.

The proposed framework (figure 3.3) consists of three steps to manage any e-government initiative implementation. This framework describes the cycle process that e-government initiative goes through internally. An e-government initiative starts when a governmental organization sends an RFP to the IT department in the same organization and ends when that initiative is deployed online in the government one-stop portal. As described by the framework below, managing an e-government initiative implementation should be done in three steps.

First, the study identified the important factors that influence those stakeholders during the implementation of the e-government initiative and linked each stakeholder with the related factors. The factors influencing e-government projects in all phases must be understood to have a straightforward implementation. Second, the study identified the internal stakeholders (implementers) and their roles and responsibilities in three phases of managing the implementation of e-government initiatives. Third, the study identified the three implementation phases of the e-government initiative that not have been previously studied in detailed aside from the pre-implementation phase, which was mentioned by (Sharifi and Manian, 2010). These three phases are the phases that any e-government initiative undergoes during development.

Next, the factors are distributed again to the three implementation phases of the e-government initiative. Each factor goes to the implementation phase that it affects the most. After mapping the factors to the three phases of implementation, each stakeholder will then know his or her role and responsibility in each development phase. This will enable the stakeholders to manage the e-government initiative effectively in all phases of implementation. Following this framework when implementing e-government initiatives will hopefully reduce the high failure rate of e-government initiatives.

In the third step, managers should discuss the requirements of the pre-implementation phase. Most of the responsibilities in this phase lie on the political stakeholders. Managers should also discuss the requirements of the implementation phase, which should be the responsibility of the technical stakeholders, mostly. The post-implementation phase, after posting the initiative on-line, should also be discussed so that its requirements can be understood. The responsibilities of the post-implementation phase are mostly on the organization stakeholders to manage their

online initiative and start serving the public. In all phases of implementation, internal stakeholders share responsibilities. However, roles and responsibilities change from phase to another. Stakeholders should be committed to cooperate with each other in all of the implementation phases (Grimsley and Meehan, 2007). It is important to know that there is no end for the e-government initiative management, and internal stakeholders should work as a team even after deploying the initiative.

In addition, this framework can be used by internal stakeholders as a tool to implement e-government initiatives in any stage. This framework should work in parallel with the theory of e-government stages of growth. Limitations encountered during testing, as well as validating this framework, are discussed in Chapter 4. The following conceptual framework will be empirically tested to justify its correctness, usability, and benefit.

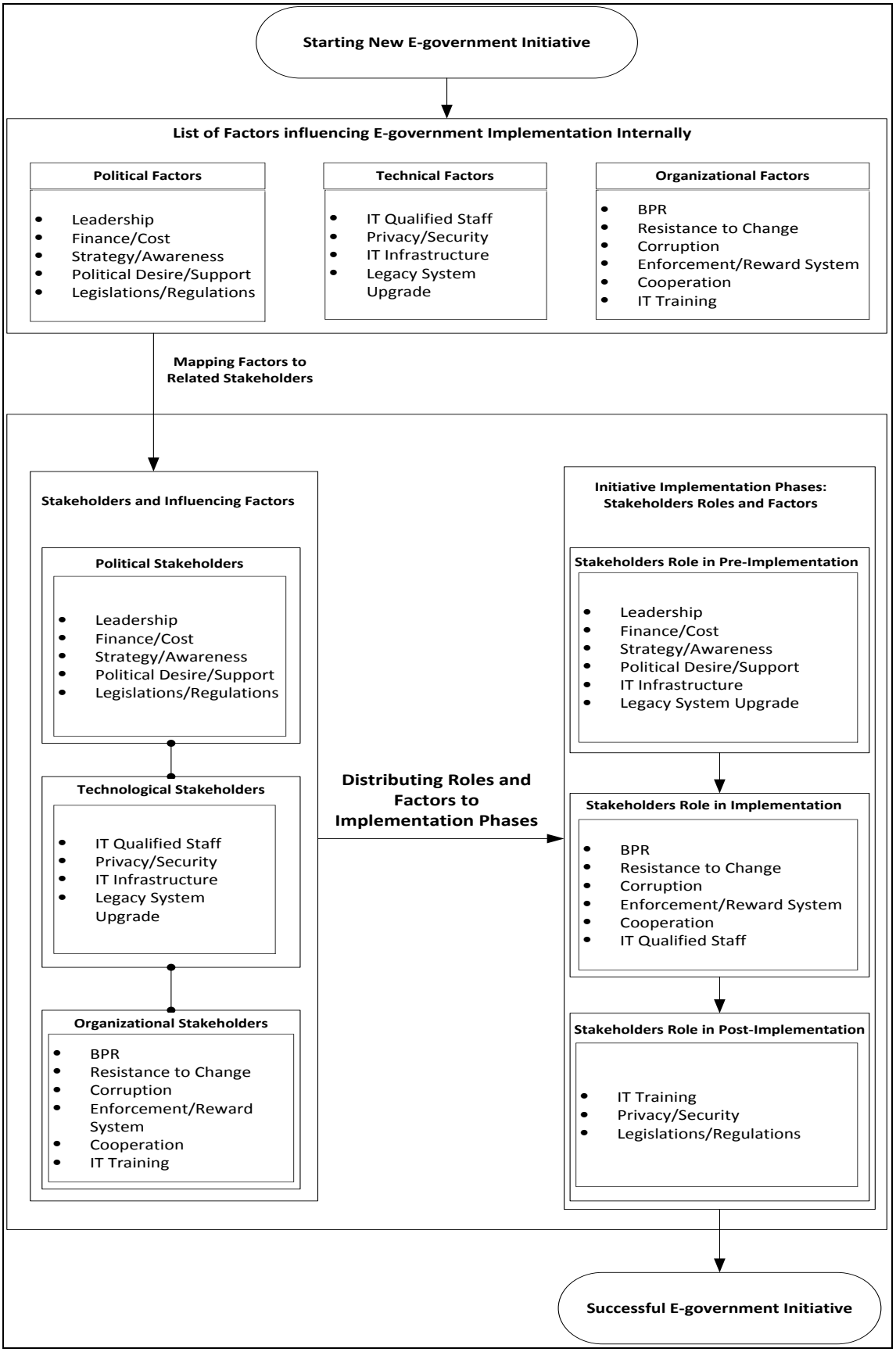


Figure 3.3 Conceptual Framework for E-government Initiative Implementation

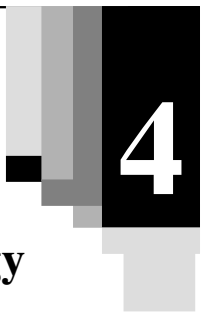
3.6 Conclusions

This chapter analyses the e-government literature from the researcher's perspective to establish a conceptual framework for e-government initiative implementation.

With the extensive critical analysis to the literature, the study analysed all the factors influencing the implementation process of the e-government. There were external and internal factors influencing the e-government implementation. Since the aim of this study was to find out why most of the e-government initiative implementation fails, the study then avoided the external factors and focused on the internal ones. After the identification of all important factors, the study critically analysed the internal stakeholders and their role in implementing the e-government initiatives. The result was that there are three important stakeholders responsible to implement e-government initiative namely the political, organizational and the technological stakeholders. Each factors was then mapped to the stakeholder that influencing the most.

With this in mind, the gap identified is the absence of theoretical frameworks for internal e-government initiative implementation. The research starts in synthesizing the framework by first analysing the stages of e-government model. Secondly, the factors that impede e-government implementation were identified and categorized into three stakeholder categories namely political, organizational, and technical. Thirdly, the study discovered the, novel (a), model which is the absence of initiative implementation phases. Finally, the research connected each, novel (b), initiative implementation phase with its factors and stakeholders.

Next, the research methodology, in Chapter 4 will be set to test and validate the proposed e-government initiative implementation framework.



Chapter 4: Research Methodology

Summary

The conceptual framework presented in Chapter 3 for e-government initiative implementation requires validation by empirical data to become a valid novel framework. The empirical data has to be collected from the fieldwork successfully. Hence, in achieving the aim of this research, the methods used for empirical data collection should be precisely described. To do so, this chapter provides a full description of the methodology, strategy and protocols selected for this study.

Then, the justification for selecting the interpretive research stance in this thesis is provided. Moreover, the adoption of a qualitative case study strategy for this study is also justified. The empirical research design explains the endeavour of this research from the beginning until drawing a conclusion. In conclusion, this methodology was translated to a case study protocol for data collection based on the research characteristics and requirement needs.

Understanding the philosophy behind research is very important as it opens the researchers mind to other possibilities such as enriching research skills and enhancing confidence to choose the appropriate methodology (Holden and Lynch, 2004).

Many disciplines use a different research approach. The goal of this chapter is to find the most appropriate research approach, research strategy and data collection techniques.

4.1 Selecting an Appropriate Research Approach

One of the major tasks for the researcher when conducting this research was selecting an appropriate research approach. Creswell (2009) stated that there are only three types of research methods: qualitative, quantitative, or a mixture of the two. According to Stake (1995) cited in Harling (2002), there are three main differences between quantitative and qualitative research. First, quantitative research is used to explain a phenomenon while qualitative research is used to understand a phenomenon. Second, in both research styles, the researcher's personal and impersonal role is different. Third, quantitative research is for knowledge discovery while qualitative research is used to construct knowledge.

Choosing an appropriate research approach is, no doubt, a big challenge to any researcher in any field, and Information System is no exception. Hence, choosing an appropriate research approach for an Information System (IS) research is difficult because it is a multi-disciplinary field. Therefore, the research question being asked should always be the base to choose the appropriate method (Malterud, 2001). No one approach is better than the other, but researchers decide based on the nature of their research. In order to reach any study aims, a researcher can use one research approach or a mix of two approaches if necessary. Table 4.1 below gives a brief summary of the quantitative and qualitative research approaches.

Research Approach	References	Research Approach	References
Quantitative • Use of mathematical and statistical techniques to identify facts and causal relationships. Samples can be larger and representative. Results can be generalised to larger populations within known limits of error.	Kaplan, (1964); Lincoln and Guba, (2000).	**Qualitative** • Determining what things exist rather than how many there are. Thick description. Less structured and more respective to needs and nature of research situations.	Bogdan and Taylor, (1975); Nissen, (1985).
Positivist • Belief that the world conforms to fixed laws of causation. Complexity can be tackled by reductionism. Emphasis on objectivity, measurement and repeatability.	Hirschheim, (1985); Klein and Lyytinen, (1991)	**Interpretivist** • No universal truth. Understand and interpret from researcher's own frame of reference. Uncommitted neutrality. Realism of context important.	Bogdan and Taylor, (1975).
Confirmatory • Concerned with hypothesis testing and theory verification. Tends to follow positivist, quantitative modes of research.	Ives and Olson, (1984).	**Exploratory** • Concerned with discovering patterns in research data and to explain/understand them. Lays basic descriptive foundation. May lead to generation of hypothesis.	Trauth and O'Connor, (1991).
Deduction • Uses general results to ascribe properties to specific instances. Associated with theory verification and hypothesis testing	Popper, (1963); Mintzberg, (1979).	**Induction** • Specific instances used to arrive at overall generalisations. Criticised by many philosophers of science but plays an important role in theory/ hypothesis conception.	Popper, (1963); Hirschheim, (1985).
Laboratory • Precise measurement and control of variables, but as expense of naturalness of situation, since real-world intensity and variation may not be achievable.	McGrath, (1984).	**Field** • Emphasis on realism of context in natural situation, but precision in control of variables and behaviour measurement cannot be achieved.	McGrath, (1984); Van Horn, (1973).

Table 4.1 Differences in Qualitative and Quantitative Approach (source: Missi, 2005)

There is much controversy in the field of scientific research as to which research approach is the best in various research issues. Many researchers tend to prefer quantitative research for the accuracy and ease of analysis and global credibility, and the possibility that any person can do it. On the other hand, other researchers tend to prefer qualitative research as it deals with various details accurately from different aspects of research and gives an indication that results are closer to reality than

numbers and quantities. Research should not be led methodologically; the methodology should be selected based on the consequences of the philosophical stance of the researcher and the nature of the phenomenon to be studied (Holden and Lynch, 2004).

Qualitative research is necessary and useful to explore organizational goals, processes, and failures in a new phenomenon (Skinner et al., 2000; Broom et al., 2009). Hence, the study adopted a qualitative approach as the general outline method for this research.

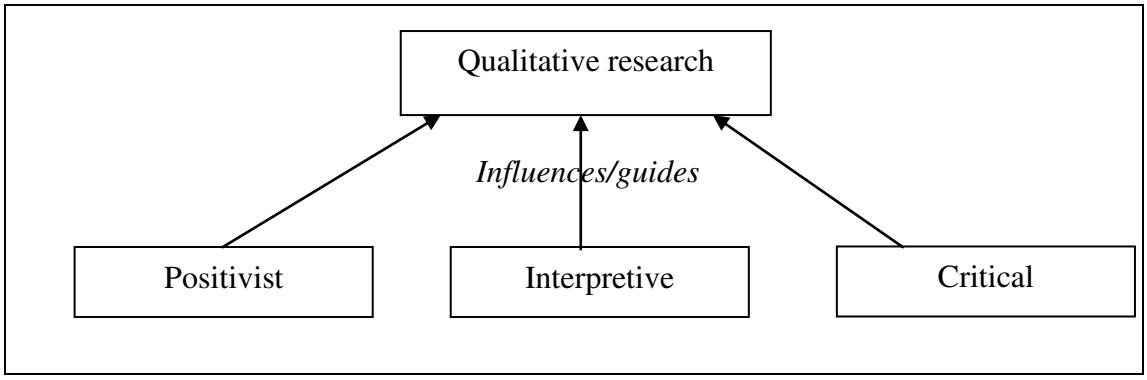


Figure 4.1 Underlying Philosophical Assumptions (source: Avison and Pries-Heje, 2005)

According to Orlikowski and Baroudi (1991), there are several philosophical approaches in IS research including: interpretivism, positivism, post-positivism, and critical. Positivist is a philosophy depends on measurable evidences which are independent of the observer. Positivist is the most commonly used among researchers. It is used to test theory by measuring properties to understand phenomena. For example, researchers use positivist to test hypothesis. On the other hand, critical as a philosophy use critique to gain knowledge such as focusing on the oppositions, conflicts and contradictions in contemporary society. Therefore, positivist and critical approaches are not suitable for this study because of the objectives of this thesis.

The interpretivism approach is used to understand the phenomena under investigation from the participants perspective who are involved directly with a particular phenomenon (Irani et al., 1999). This study seeks understanding of challenges facing political, organizational, and technological aspects when implementing e-government initiatives from internal stakeholder's perspective. Therefore, interpretivism epistemological stance is considered the most appropriate approach for this research. The following table 4.2 shows the strengths and weaknesses of using a qualitative research approach.

Strengths	References	Weaknesses	References
Researcher can study IS phenomena in their natural setting which little is known	Benbasat et al. (1987) Maykut and Morehouse (1994) Silverman (2000)	Sample size smaller than in other types of research which reduces generalisability, controllability and deducibility	Cornford and Smithson (1996) Lee (1991) Maykut and Morehouse (1994) Silverman (2000)
Allows researcher to generate theories from practice	Benbasat t al. (1987) Myers (1997)	Qualitative data predominantly textual with a richness that can be lost when aggregation or summarisation occurs	Lee (1991) Miles and Huberman (1994)
Allows researcher to investigate meanings given by specific audiences, and thus is able to address this issue to some extent.	Silverman (2000)	Interviews with participants can place considerable demands on time, making it difficult to recruit managers and others for whom time is often at a premium	Miles and Huberman (1994)
Allows barriers between researcher and user to be lowered	Benbasat and Stake (1995)	Collected data unstructured and unbounded	Lee (1991)
Allows researcher to have thick and close description of phenomena in context-specific setting	Benbasat and Stake (1995) Myers (1997) Silverman (2000)	Time-consuming in that researcher must spend lengthy amount of time involved with research in terms of data collection process and data analysis	Lee (1991) Miles and Huberman (1994)
Allows researcher to gain in- depth understanding of nature and complexities of processes	Benbasat et al. (1987) Maykut and Morehouse (1994) Silverman (2000)	Data open to a number of interpretations which can reduce accuracy of interpretation results	Cornford and Smithson (1996) Silverman (2000)

Table 4.2 Strengths and Weaknesses of Qualitative Research (Source: Ebrahim, 2005)

The next section will justify the use of qualitative research as a method chosen for this thesis by providing reasons that lead to make this decision.

4.2 Justifying the Use of Qualitative Research Methods

Qualitative research emphasizes deeper understanding of contemporary phenomena through communication with participants, documentation analysis, or observation (Flick, 2009). The study adopted qualitative research as a method for this study because of the necessity to gain deeper understanding on why e-government initiative fails in high numbers and what the causative factors are for the failure.

According to Campbell (1996) and Strauss et al. (1990) cited in Hoepfl (1997), there are a number of points that should be taken into account and considered when adopting this kind of research approach. The most important of these points are:

1. Those qualitative research methods that can be used to increase our understanding of any phenomenon or problem we do not know much about.
2. We can also use this type of research method to get views and opinions of different things that we do not know much about, or to get in-depth information which is difficult to gain via a quantitative method.

A qualitative research method is especially important in providing detailed explanation, interpretation and clear understanding of any problem or new phenomenon. It helps us to explore and understand problems or phenomenon through the new views, perspectives and experiences carried out by humans.

A qualitative research approach is interested in answering questions that begin with: why? how? and what?, while a quantitative method is interested in answering questions such as how many? and how much? There are significant differences between the two approaches that are summarized in Table 4.1.

Therefore, a qualitative approach is selected for this research for the following reasons:

1. Qualitative approach is concerned with the opinions, views and suggestions from human experience and inner feeling of individuals.

2. Qualitative approach describes the phenomenon as is, accurately.

3. Qualitative method uses data and information to build and develop concepts and theories that help us understand the phenomenon. It is an inductive style of building and developing of theories, while the quantitative approach is testing theories that already exist and are proposed. Quantitative method is a deductive style.

4. Data and information collection in a qualitative method are collected through a direct confrontation with individuals and groups by interviews, document analysis, or observation. Therefore, collection of data consumes a long time.

5. Qualitative approach requires us to use smaller but focused samples because of the nature of data and information collection which takes a long time; however, received data are accurate, in-depth, and focused.

4.3 Selecting an Appropriate Research Strategy

According to Yin (2009a) a case study is the most appropriate method if the form of questions being addressed are "how", "why", and "what"?, and the study is focusing on a contemporary phenomenon within a real-life context. Galliers (1992) outlined the case study as an attempt to describe the relationship which exists in reality, usually within a single organisation or a group of organizations. Therefore, it is necessary to

choose case study for this research as the most appropriate strategy. Justifying the use of a case study is outlined in the following sub-section.

4.3.1 Justifying Use of Case Study

Case study research investigates a contemporary phenomenon in its natural setting (Yin, 2009a). In the literature, many researchers indicated that case study research is a significant research strategy in the IS research area (Klein and Myers, 1999; Orlikowski and Baroudi, 1991). According to Yin (2009a) and Benbasat et al. (1987a), case study research is valuable in testing or developing new theory. It also has been a common research strategy, both deductive or inductive investigation, to search for in-depth understanding of complex phenomenon using multiple methods of data collection such as interviews, observation, and questionnaires, written materials and more (Yin, 2009a; Cavaye, 1996). According to Bryman and Bell (2007), a case study can be a single organization, a single event, or a single location such as a factory, production site, or office building etc. Case study is an ideal methodology when a holistic and in-depth investigation is needed (Tellis, 1997). Case study research is the most common qualitative method used in IS research (Yin, 2009a; Myers, 1997), particularly to develop and test new theory (Benbasat et al., 1987b). There are a number of reasons why the case study was chosen as a strategy for this research.

- E-government is a new phenomenon and case study is the best research method to explore phenomenon in a natural setting.
- Case study is the most appropriate method selection for studies addressing questions in the form "why", "how", and "what".

- Since e-government initiative implementation process is not well known, the use of case study research gives early exploratory investigations.
- Case study is advantageous if there is no strong theoretical base for the research (theory building research project).
- Data is collected by multiple means.

There is no standard definition in the literature for case studies. However, Benbasat et al. (1987b) generate a good definition from a group of sources (Stone, 1978; Benbasat, 1984; Yin, 1984; Bonoma, 1985; Kaplan, 1986) that is presented as:

> *A case study is a holistic inquiry that investigates a phenomenon in its natural setting, adopting multiple methods to collect information from single or few entities (people, groups or organizations). The phenomenon boundaries at the beginning of the research are not clearly evident and manipulation or experimental control is not employed.*

As a result, because the research questions in this study are of what type such as what factors, what stakeholders and what implementation phases of e-government initiative, the case study to follow in this research will be exploratory. In fact, exploratory case studies are appropriate for theory building as they are useful in developing theory that still at their early formative stages (Roethlisberger and Lombard, 1977). The information presented in Chapters 1, 2 and 3 indicated that there is limited research on e-government initiative implementation. Therefore, qualitative case study strategy is considered as suitable for investigating issues related to e-government initiative development.

On the other hand, case study research is obstructed by several challenges such as time consuming, skilled interviewer required if the interview was the main method,

small number of cases in which findings cannot be generalized. Generalization from qualitative research is still a debatable topic among researchers in the literature. Further, some researchers believe that biases may enter into the design and conduct of case study (Lubbe, 2004; Bryman and Bell, 2007; Voss et al., 2002). The bias considered as a risk while using the case study research; however, bias is overcome in this research by using data triangulation. There are four different types of generalizations from interpretive case studies: the development of concepts, development of theory, the drawing of specific implications, and contribution of rich insights (Walsham, 1995). Hence, the issue regarding generalizations is overcome by following (Walsham, 1995) suggested four types of generalizations that can be generated from interpretive case studies.

Based on the questions asked such as what, how, and why case study can be exploratory, descriptive or explanatory (Yin, 2009a). Case study is a descriptive examination that can explain complex instances through extensive description and contextual analysis (Davey et al., 1991). However, exploratory studies are useful to find out what is happening by searching the literature, interviewing focus group, observing or discussing employees in the field (Saunders et al., 2012). Case studies can be single or multiple designs (Yin, 2009a). Single and multiple case designs will be discussed in detail in the following section.

4.3.1.1 Single or Multiple Case Studies

Case studies can be single (holistic) or embedded (multiple unit of analysis), the decision is a central one to case study design. In case study research, it is particularly difficult to select which and how much fieldwork should be undertaken for the study under investigation. The number of case studies to be conducted depends highly on

how much is known about the phenomenon and how much information can be uncovered for including additional cases (Dyer and Wilkins, 1991). According to Yin (2009b), one to three cases is sufficient, as he argues that as far as an upper limit, the guiding principle has more to do with diminishing returns rather than expanding beyond a dozen sites . The empirical research in this thesis employed three case studies which are within the limits recommended by (Stuart et al., 2002; Yin, 2009b). The decision to conduct three case studies was because the proposed framework of e-government initiative implementation, discussed in Chapter 3, has three levels: factors, stakeholders, and implementation cycle process. A theme in each level of the framework was distributed to various organizations and departments. Therefore, it is part of the research question of this thesis to identify the factors that influenced the e-government initiative implementation, each phase of the development, and stakeholders. For example, responsible stakeholders are from the IT departments, beneficiary departments, and the state e-government administration agency. Hence, multiple cases will provide the study with more understanding to the phenomenon as the investigation may require moving from one organizational context to another.

Accordingly, the researcher selected three government organizations located in the State of Kuwait as multiple case studies; the Central Agency for Informatics Technology (CAIT), the Ministry of Finance (MOF), and the Public Authority for Applied Education and Training (PAAET). Three case studies will provide sufficient information and using another case would not contribute further significant data. In this thesis context, a multiple case study strategy has been adopted to study e-government initiative implementation.

4.4 Empirical Research Methodology

The general empirical methodology of this research is presented to accomplish its aim, objectives and research questions. The empirical research methodology in this study was based on three stages: (a) Research Design, (b) Data Collection, and (c) Data Analysis. The three parts will be discussed in the following subsections.

4.4.1 Research Design

After choosing the research method, research design is a specific outline to answer the research question. It is the detailed plan of the method being chosen to answer the study question. The first part of the empirical research methodology is the research design which will be used to guide and focus the research process. The research design will give the researcher a detailed plan that starts with a review of the literature about the research area under investigation. According to Yin (2009a), research design is a logical sequence of an action plan: collecting data, analysing, and interpreting evidence for getting from the questions to the conclusions. Figure 4.1 illustrates the major stages of research design in this work. The first three parts of the research: problem definition, research question, and theoretical framework were explained in Chapters 1, 2, and 3 respectively. This leads to a particular research area and identifies a research need. Next, a conceptual framework is developed to represent the intended empirical research which will need to be investigated through empirical studies. The intended empirical investigation passes through three primary stages: research strategy, research methods, and analysis techniques. It was found necessary for this research to use a multi-case study strategy through the employment of the qualitative research method due to the needs of an empirical study. The epistemological stance, Interpretivist, is determined and justified based on the data

required to validate the proposed framework, then the type of research methods is determined; in this case qualitative. The justification for choosing a multi-case study strategy is provided in sub-section 4.3.1.1 for the intention of theory building through the employment of qualitative research methods. The research design was then transformed into a plan of action or protocol (see Section 4.6). Research action (protocols) is an essential investigation tool for a number of reasons, including:

- To collect the targeted data by an understandable and manageable format.
- To insure that all the required knowledge was developed.
- To make sure that the research tracks a specific schedule and meets the target dates.
- To provide a map in which others might follow to accomplish similar conclusions.
- To place gathered data into a convenient format.

The qualitative research method was developed within the protocol to collect data as required for the unit of analysis. Open-ended semi-structured interviews are the main source of data gathering. The justification for using these types of interviews is detailed in sub-section 4.4.2.1. In addition to the interviews, several sources will be used to collect data such as documents, observation, reports and organisational websites.

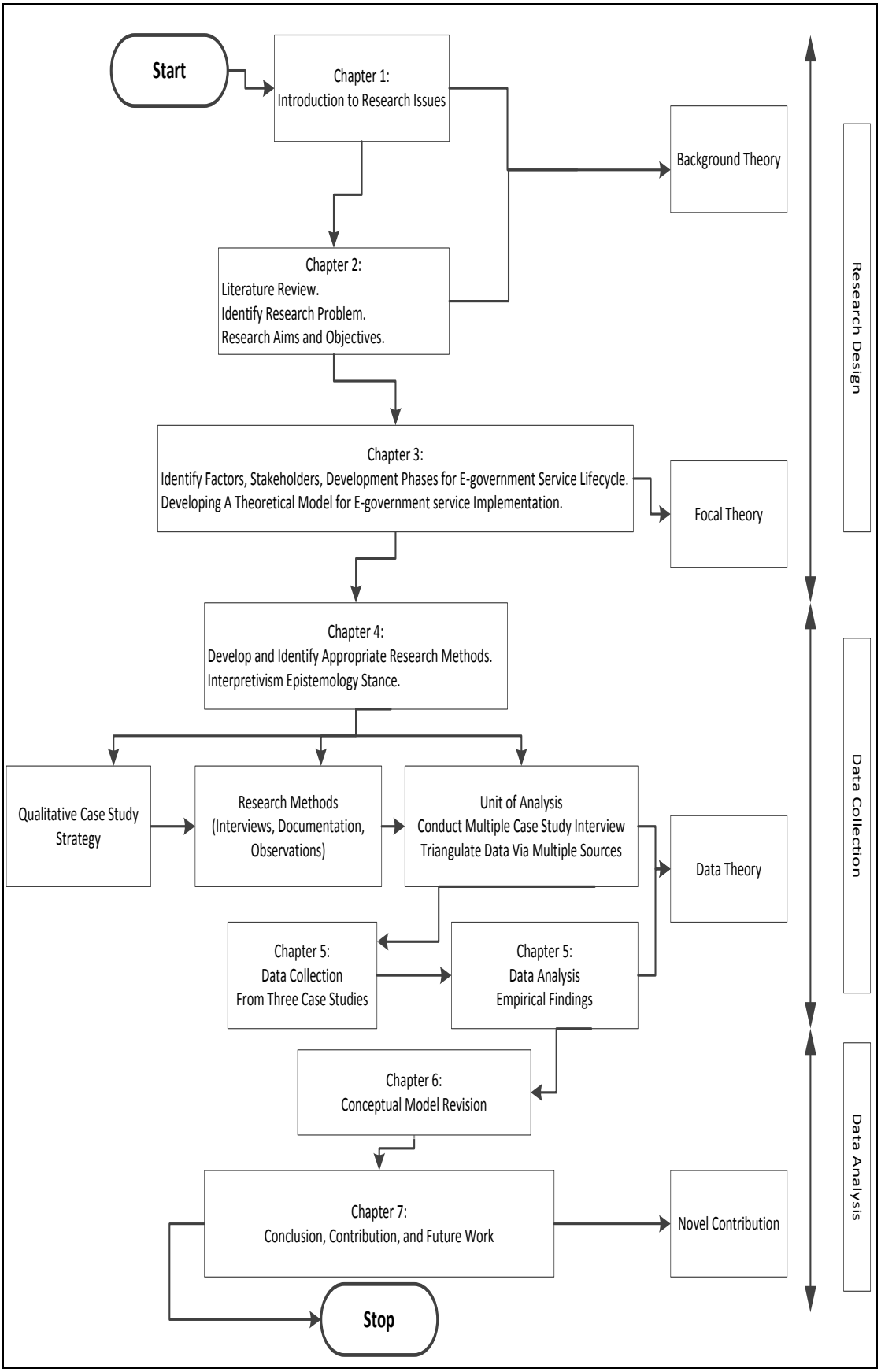


Figure 4.2 Empirical Research Methodology

4.4.2 Case study Data Collection

Qualitative data will be collected for this research through fieldwork. Data is usually collected in the form of interviews, documentation, and observation. Triangulation in data collection was to use different methods to study the same phenomenon which will provide stronger validation of theory building. According to Yin (2009a), there are six major sources of evidence commonly used in case studies: documentation, archival records, interviews, direct observations, participant-observation, and physical artifacts. Using multiple sources of data collection makes the conclusions and findings of research more reliable and consistent; The table 4.3 below shows the sources of evidence with their strengths and weaknesses (Yin, 2009a).

Sources of Evidence	Strengths	Weaknesses	Use of Sources in this Research
Documentation	• Stable–can be reviewed repeatedly. • Unobtrusive – not created as a result of the case study. • Exact–contains exact names, references and details of the events. • Broad coverage–long span of time, many events and settings.	• Retrievability-can be low • Biased selectivity, if collection is incomplete. • Reporting bias-effects (unknown) bias of author. • Access-many be deliberately blocked.	• E-government Progress Reports from each case organization under study. • White Papers. • Reference material and other websites. • Newspaper articles. • Brochure • organization structure, strategy, missions etc.
Archival Records	• [Same as above for documentation] • Precise and quantitative	• [Same as above for documentation] • Accessibility due to privacy reasons	• Organizational records • Project Blueprint • Service records • Case organizations records.
Interviews	• Targeted-focuses directly on case study topic. • Insightful-provides perceived casual inferences.	• Bias due to poorly constructed questions. • Response bias. • Inaccuracies due to poor recall. • Reflexivity-interviewee gives what interviewer wants to hear.	• Structured interviews. • Semi-Structured interviews. • Unstructured interviews
Direct Observation	• Reality-covers events in real-time. • Contextual-covers context of events.	• Time consuming. • Selectivity-unless broad coverage. • Reflexivity-event may proceed differently because it is being observed. • Cost-hours needed by human observers.	• Formal and informal meetings with the interviewees for additional insight.
Participant Observation	• [Same as above for direct observation]. • Insightful into interpersonal behaviour and motives.	• [Same as above for direct observation]. • Bias due to investigator's manipulation of events.	• Simple participation.
Physical Artifacts	• Insightful into cultural features. • Insightful into technical operations.	• Selectivity. • Availability.	• Infrastructure components (Hardware and software)

Table 4.3 Six Sources of Evidence: Strengths and Weaknesses (Source: Yin, 2009) and their Use in this Research

Due to time limitations the researcher will mainly consider two types of data collection: interviews and documentation. The two types of data collection are discussed in detail in the following sub-sections.

The selected cases illustrate the development process of e-government initiative. Immediately, these cases will be analysed from a comparative perspective. In all cases, the stakeholders, factors, phases of implementation are described. Data for the cases was collected through semi-structured in-depth interviews with development experts, conducted over a three-month period in 2011. Data from secondary sources including documentation and observations was also collected.

4.4.2.1 Interviews

Interviews are commonly used in qualitative research to collect in-depth data. According to Benbasat et al. (1987b), half of the case studies relied only on interviews to collect data; the other half collected data by multiple means. Interviews are one of the most important sources of information in a case study. There are three main forms of interview such as: structured, semi-structured, or unstructured (Bryman and Bell, 2007). The three major forms of interviews that have been discussed in the literature (Denzin and Lincoln, 2011; Miles and Huberman, 1994) are:

1. Structured interview: Questions should be well prepared before starting the interview and the researcher should ask specific questions that follow the interview agenda.
2. Semi-structured interview: This one is with predetermined questions asked of all respondents in the same manner and a sequence not fully specified in advance, with an open-ended format.

3. Unstructured interview: Questions have not been prepared previously, which leads to informal conversation initiated and guided by the researcher.

The researcher interviewed the participants at their office. 31 interviews were tape recorded and 4 (females) refused to be recorded due to cultural reasons. The interviews duration was one to two hours approximately. When interviewing individuals and groups, we can collect data in many different ways such as audio recording, video recording, or taking notes. The aim of interviews is to collect in-depth and accurate data about the phenomenon of interest from those interviewed. Interviews for this thesis will be semi-structured to gain as much information as possible from the participants being interviewed. Interviews were conducted solely with mid and high level management, all of whom have been directly involved in the e-government initiative implementation. In fact, it was considered essential to select a cross section of roles in the e-government initiative implementation to understand the views of stakeholders of different departments in the organizations. These stakeholders had an important role during the decision-making process and know the whole implementation cycle of the e-government initiative implementation. Interviewing these stakeholders increases and supports better understanding of the phenomenon.

Open-ended interview is the main data collection tool used for this research. According to Fielding and Lee (1991), interview is one of the most important sources in qualitative data collection. Interview is a method of collecting data in which selected participants are asked questions to find out what they do, think or feel (Collis and Hussey, 2009). According to Denzin and Lincoln (2011), interviews are considered as the primary tool of qualitative research for data collection process with

Yin (2009b) stating that interview is the most important source of data gathering in a case study.

Interviews were conducted with relevant staff from the research site identified as having an effect on the e-government initiatives implementation: managers in agency departments, IS/IT managers, development teams and staff that had a direct involvement in the development of e-government initiatives at the research site. The researcher determined the number of staff to be interviewed. According to Sarantis et al. (2010a), "Project managers, decision-makers and public administration employees are all too familiar with implementation and management…" and "….as the complexity and importance of e-Government applications increase." Therefore, the targeted sample of population has to be accurate and with the ones who can give the best answers to the questions being asked. According to Creswell (2012), the samples for grounded theory methodology should be 20-30 interviews and for phenomenology 5-25; Morse (1994) suggested 30-50 interviews for grounded theory methodology and at least six for phenomenology. Moreover, fifteen is the smallest acceptable sample for all qualitative research suggested by Bertaux and Bertaux-Wiame (1981). After studying 560 PhD theses, Mason (2010) came to the conclusion that the mean size for the "Sample Size and Saturation in PhD Studies Using Qualitative Interviews" was 31. As a result, interviews for this study were conducted with more than ten staff members, only managers and above levels, from many departments including the IT department in each case study. The total number asked to participate in this research was 41. Six refused to participate. Four out of thirty five refused tape recording only. Hence, the total numbers of participants in this study were 35 from three case studies.

All the interviewed interviewees were involved (political, organizational and IT stakeholders) in e-government initiative implementation either currently or

previously. All the semi-structured interviews took place at the interviewees' offices. Interview questions are located in Appendix B.

4.4.2.2 Documentation

Documents could be letters, memoranda, agendas, administrative documents, newspaper, web-site information, email or any written document that is related to the study. Documents are not always accurate; however, documents are very important when collecting case study data "because of their overall values" (Yin, 2009a).

Document analysis means to review or evaluate documents in order to develop more understanding and knowledge (Bowen, 2009). Documents are very important data collection sources when undertaking case studies, thus searches for relevant documents are important in any data collection strategy (Yin, 2009b). In this research, document analysis will be used in combination with the other qualitative research methods, interviewing and observation, to support and augment evidence from other resources.

Moreover, this study collected blueprint and reports that addressed the implementation of e-government initiatives which were prepared by the beneficiary departments, IT departments, and the e-administration agency "CAIT". These documents were used to verify the data gathered from other sources and reduced the interview time with managers by raising important points derived from documents.

4.4.3 Data Analysis

The final part of the empirical research methodology is the data analysis. There are many different qualitative data analysis methods and approaches (Gibbs, 2002). Data analysis is a complex task especially with qualitative data that is usually in a narrative

or textual form. Data analysis is not only a complex task but also time consuming and requires a researcher to be able to identify patterns and themes in the collected data. Empirical data derived from the case studies were triangulated and then analysed to draw empirical conclusions. The data collected in this research is qualitative in nature; and often the analysis methods are often not well formulated (Lubbe, 2004; Miles and Huberman, 1994). Although it may take many forms, the process of qualitative data analysis is non-mathematical in nature. In order to find and discover what is important, qualitative data should be divided into manageable units for synthesising and searching for patterns (Bogdan and Biklen, 2003).

The data analysis involved examining the meaning of people's words and actions because the interviews are the main data collection method in this study. Interviews were tape-recorded, transcribed in Arabic, and then translated into English prior to analysis. The same process was done by two private translation offices to avoid bias. On average, 70 pages of interview transcripts were collected from each case. Software called NVIVO version 8.0 for qualitative data analysis was used to help manage and analyse the data collected from the three case study organizations. Stakeholders were classified and coded to identify important role and relationship. Factors were analysed and coded to find influencing factor and its importance in each implementation phase. Each factor was given an important, less important or non important in each implementation phase based on the number calculated from the interviewees' opinions. Each interviewee was asked how important each factor in each implementation phase based on (1) highly important, (2) important, and (3) less important. The numbers were then calculated and each factor was identified as highly important, important or less important in each implementation phase based on the number given for the factor in that phase. The level of importance of each factor in

each implementation phase was given based on the 50% or over. Implementation phases were analysed to group and map stakeholders and their influencing factors during the implementation process. Empirical findings and evidence were then used to draw conclusions which then resulted in the formulation of the framework for e-government initiative implementation.

4.5 Data Triangulation

Case study is known as a triangulated research strategy. Data triangulation is used in this research to overcome the danger of bias that is usually linked to a qualitative research approach. The importance of triangulation arises from the ethical need to confirm the validity of the processes and overcome the potential bias by using multiple sources of data in case studies (Yin, 2009a). Triangulation is a method used by qualitative researchers to check and increase the validity and reliability concerns of the results (Shulman, 1994).

There are five types of triangulation namely: (a) data, (b) investigator, (c) theories, (d) methodologies, (e) and interdisciplinary triangulation (Flick, 2009; Janesick, 1999). Data triangulation involves the use of different sources of data (Denzin and Lincoln, 2011). Investigator triangulation is the use of several different researchers or evaluators (Janesick, 1999). Theory triangulation is to use multiple theoretical perspectives to interpret a single set of data (Denzin, 2009).

Methodological triangulation means the use of multiple methods, one approach is followed by another, to study a single problem and increase confidence in the interpretation (Denzin and Lincoln, 2011). The fifth triangulation is the interdisciplinary which is associated with the investigation of issues related with more than one disciplines (Janesick, 1999). From these definitions, Table 4.4 summarises

the implementation of triangulation used in terms of data, methodological, interviewee level and interdisciplinary to confirm the validity of the findings in this research.

Case Studies	Type of Triangulation	Sources
MoF	Data	• Interviews • Observations • Face-to-face Interviews • Website materials • Booklets • Newspaper
	Methodological	• Documentation analysis • Archival records • Interviews • Observations • website evaluation
	Interviewee Level	• Undersecretary Assistant • Departments Managers • IT Director • IT Managers • BPR Manager
	Interdisciplinary	• Management • Organization Departments • IT Department
PAAET	Data	• Reports • White papers • Interviews • Newspaper
	Methodological	• Documentation analysis • Interviews • website evaluation
	Interviewee Level	• Departments Managers • IT Director • IT Managers
	Interdisciplinary	• Organization Departments • IT Department
CAIT	Data	• Blue Print • Reports • White papers • Interviews • Pamphlets • Newspaper
	Methodological	• Documentation analysis • Archival records • Interviews • Observations • One-stop portal evaluation

	Interdisciplinary	• Management • Agency Departments • IT Department • Group Working Teams
	Interviewee Level	• General Manager (Undersecretary Assistant) • Deputies Undersecretary • Web Portal Manager • Network Manager • Security Manager • Projects Managers

Table 4.4 Types of Triangulation Used in this Research

The greatest advantage of using different sources of evidence in case studies is the development of converging lines of inquiry which makes any result or conclusion more convincing and accurate, and gives the investigator a wider range of understanding of the problem under study (Yin, 2009b).

In addition, face-to-face interview questions relating to the role of individuals, organizational background and general facts about the research question were asked. In order to obtain in-depth information and better understand the phenomena, these questions were open-ended to allow interviewees to report issues that had not been taken into consideration by the researcher during the design of the interview-agenda.

4.6 Case Study Protocol

A case study protocol is a tool that contains more than the survey instrument; it should contain procedures and general regulations that should be followed when using the instrument (Tellis, 1997). It should be created prior to the data collection phase, and is essential in a multiple-case study. As such, the case study protocol documentation will allow other investigators to repeat the same case study to reach the same results and conclusions. The set of questions to be used in interviews is considered the core of the case study protocol. It outlines the subject to be covered, states the questions to be asked, and specifies the required data during an interview (Yin, 2009b; Lubbe, 2004).

According to Yin (2009b), the protocol is a major component in asserting the reliability of the case study research, he also said that a typical protocol should have the following sections:

- An overview of the case study research (investigated: objectives, issues, topics).
- Fieldwork procedures of research (credentials and access to sites, sources of information).
- Case study research questions (questions that the researcher must keep in mind during data collection).
- A case study report (outline, format).

In this dissertation, the study followed the protocol outline suggested by (Yin, 2009b). This outline directed the empirical research in mapping the data collection in an efficient and reliable way. It helped the research, in field, to map the major tasks and procedures that would take place during the case studies in this research.

4.6.1 Case Study Overview

The case study overview should cover the background information and the substantive issues being investigated in order to assist the researcher focusing on the research topic, objectives and questions, being studied. It describes the perspectives of a case study that can help anyone who may want to know about the research (Yin, 2009a). This overview gives details of this research which leads the researcher to collect only the required data to study the e-government initiative implementation in the public sector, and help concentrate on the main questions during the interviews. These issues are the following:

- To identify the implementation process of e-government initiative that takes place in the case study organizations.
- To identify the internal stakeholders for the implementation of e-government initiative.
- To identify the political, technical, and organizational factors which influence the implementation of e-government initiative, and identify their validity with the conceptual framework (see Chapter 3).
- To identify the implementation phases of e-government initiative, e-service cycle process.
- To prioritise the importance of development factors on different phases of the implementation cycle process.

4.6.2 Fieldwork Research Procedures

After justifying the use of a case study approach (section 4.3.1) the researcher should examine the phenomenon in its natural setting and cope with real world situations during the data collection. According to Yin (2009b), since the researcher will be collecting data from people and organizations in their everyday situations, the fieldwork research procedures should be properly designed to avoid challenges such as the possibility of a respondent dropping out of the interview, organization documents may not always be accessible etc. However, these situations should not stop the researcher from collecting the required data.

This fieldwork research procedure of data collection leads the researcher to have explicit and well-planned multi-case study investigation, encompassing guidelines for coping with some unexpected events. This section of the case study protocol will focus on the procedures that will be employed during the multiple-case study of this research. They are as follows:

- To identify the appropriate case organizations.
- To select who should be interviewed.

- To identify appropriate data gathering research methods.
- To have adequate resources while in fieldwork including the tape recorder and note taking stationery.
- To create the interviews timetable.

4.6.3 Questions Addressed by Research

It is an important part of the case study protocol to develop and maintain a set of questions reflecting the research data collection (Yin, 2009b). The questions were developed, for the researcher not the interviewees, to remind the researcher and to allow concentration on the data that needed to be collected from the government officials. It is essential to collect this data to identify the internal stakeholders, factors and phases of the e-government initiative. It is important to understand the cycle process of the e-government initiative and the role of each stakeholder as well as the factors influencing them. These protocol questions are the key questions used by the researcher to focus on what the interview should address generally (Yin, 2009b; Lubbe, 2004). However, the question agenda (Appendix B) contains all questions needed to be asked during the interviews in all case studies for all the e-government officials. Table 4.5 summarises the research issues and their relevant key questions developed by the researcher.

Questions for Further Investigation by the Empirical Study	
Research Issues	**Questions**
Internal implementation stakeholders	• Who are the internal stakeholders responsible to implement the e-government initiatives?
Implementation Phases	• What are the different implementation phases of the e-government initiative cycle process?
Mapping of Factors	• What factors influence the e-government initiative at each phase of the implementation cycle process?

Table 4.5 Research Issues and Questions Addressed by the Empirical Study

4.6.4 Research Output Format

Creating a case study report is considered one of the most important and challenging parts within the case study protocol (Lubbe, 2004; Yin, 2009b). It is very important to identify the audience and compose the case study report before collecting and analyzing data (Yin, 2009b). With this in mind, the researcher designed Chapter 5 to present the empirical data analysis and report the output of the case studies empirical inquiry. Usually, case studies produced large amounts of data and documentation gathered during each case study visit. Therefore, in order to improve the quality of presenting the research output format, the researcher aligned each question within the interview agenda. The presentation of the case studies' findings in Chapter 5 contributed to the quality of the research output, as it focused on the development of an effective interview agenda to investigate the research issues.

4.7 Ethics in the Research

Ethics in empirical research is very important. Researchers should protect the rights of participants and inform them about the research procedure and risks before gathering data. The participants should know that the gathered data is going to be used for the benefit of the research and will remain confidential. They should be informed that their identity will remain anonymous throughout the research. The participants should accept to participate in the research and no data should be used without their agreement.

There are standards in ethics that must be met to keep the participants privacy protected. The rights of the participants should not be harmed in any way during the research. Also, the participants should be informed that they can end the interview at any time or not answer any question. In this research, approval to collect data in the

three case studies was received from top management before collecting the data and interviewing the participants. Since interview is the main method to collect data in this research, all the participants already know and accepted the steps below.

- Interviewee accepts to participate in the research understanding that the data will be used in the research.
- Interviewee was informed that his/her identity will always remain anonymous.
- Interviewee understands his/her right to end the interview at any time or not to answer any question.

4.8 Conclusions

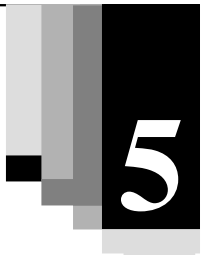
The aim of this chapter was to justify the use of an appropriate methodology for this thesis. This chapter presented the research methodology to be applied.

This thesis has employed a research strategy for the intention of theory building. The researcher has justified the use of an interpretive epistemological stance selected for this research, and data collected through qualitative research methods. A justification for the adoption of qualitative research methods was also presented in this chapter. The reasons behind this decision are based on the aim and objectives of this research that deals with building a conceptual framework for e-government initiative implementation. Qualitative research approach is more appropriate for the reasons explained in Section 4.2, qualitative research is a useful method to investigate little known phenomena like e-government initiative implementation, examine in depth complex processes of e-government initiative implementation by identifying development phases, factors, and stakeholders, and examine the phenomenon in its natural setting.

The research strategy that has been used in this research was discussed and justified in Section 4.3. The strategy was a case study to investigate the e-government initiative implementation process; it provides the researcher with the opportunity to investigate the phenomenon. Thus, the justification to use the case study as a strategy was explained in Section 4.3.1. In fact, multiple case studies are used within this research to increase the understanding of the e-government initiative implementation. The researcher selected three government organizations located in the State of Kuwait namely: the Central Agency of Informatics Technology (CAIT), the Ministry of Finance (MOF), and the Public Authority for Applied Education and Training (PAAET). Three case studies are enough since they provided sufficient information for this research.

Moreover, the use of research methods was outlined and discussed and the appropriateness of use of particular methods was provided. Consequently, choices of methods for data collection are used for this research including: interviews, documentation, observation, archival records and physical artifacts. After that, Sections 4.4 and 4.5 reported the: (a) empirical research methodology followed in this research and, (b) data triangulation respectively. Finally, Section 4.6 in this research presents the case study protocol.

Based on this protocol the researcher will use case study perspectives to allow others to relate their experience to the outcome of this research. Thus, the work presented in this thesis will provide a broader understanding of the phenomenon of e-government initiative implementation. This protocol can be used as an essential tool that acts as an action plan for the empirical inquiry.



Chapter 5: Case Studies and Empirical Data Analysis

Summary

This chapter aim is to validate and test the proposed conceptual framework for the implementation of e-government initiative. Empirical data collected from different case studies are described and analysed into two stages. Stage one is to understand the implementation phases of e-government initiative and the role and relationship of its stakeholders during implementation. Stage two is to identify critical factors of each implementation phase of the e-government initiative from the perspective of those stakeholders responsible for building it. The aims of this chapter are to identify who are responsible for e-government initiative and to identify the phases that e-government initiative goes through; next goal is to find out which factors are important in each implementation phase from the perspective of the three stakeholders: e-government project administrative, organization departments, and IT department.

As discussed in Chapters 2 and 3 of this dissertation, there is an absence of theoretical frameworks that focus on e-government initiative implementation. Contributing to knowledge in this area, the researcher selected three government case studies to be analysed empirically and to investigate the implementation process of e-government initiative. The researcher then proposed a novel framework that consists of

stakeholders, development phases, and critical factors that influence e-government initiative development. Although, there are differences between developed and developing countries in many aspects, this framework can be used by both.

The chapter begins with a discussion to identify the stakeholders responsible to build the e-government initiative. Phases that e-government initiative goes through have also been discussed. Then, identifying critical factors of each phase is the main aim of this study. Stakeholders, phases of development and critical factors of e-government initiative were identified in the conceptual framework proposed by the researcher in Chapter 3.

The three cases selected by the researcher in the state of Kuwait are sufficient to provide enough information for this research providing enough data to understand and reach the aims of this research.

5.1 Background to the E-government Initiative Implementation in the State of Kuwait

The evolution of Information Technology has had an impact on all countries throughout the world. Therefore, to improve citizen services and reduce cost, many governments decided to utilize the advance of ICT by creating new policies, standards and sophisticated IT infrastructure. Countries ambitions are to decrease bureaucracy, time and effort by transforming societies into “digital societies” where all transactions are performed online. Countries intend to achieve this goal by adopting the new promising phenomena called e-government. In Kuwait, the e-government initiatives are managed under the umbrella of CAIT, a state agency e-government project administration.

Turning a “Bureaucratic Government“ into an “Electronic Government".

Kuwait WS-portal

Kuwait is one of the first countries that decided to enter the era of e-government. Therefore, a decree issued by the Cabinet of Ministers forming the Kuwait e-government Committee was established and headed by the Prime Minister in the year 2000. Since that time, Kuwait has developed many e-government projects and cooperated with other countries. Kuwait signed two Memorandums of Understanding (MOU) on e-government cooperation with the government of the Republic of Singapore. The first MOU was signed in September, 2004, and the second was signed in 2005. The return benefit of the two MOU was the "E-government Blueprint" for the State of Kuwait. For two years Singapore served as an advisor to Kuwait on e-government matters.

The author of this thesis selected the State of Kuwait to collect empirical data from three case studies. Kuwait adopted a centralized e-government approach. Thus, the e-government administration agency was selected. Another two case studies were also selected to gain in-depth understanding to the e-government initiative development process.

5.2 Case Study One – Ministry of Finance (MoF)

5.2.1 Background to MoF

This case study was selected because they have already implemented e-government initiatives that are widely known and heavily used in the country. One important e-service that is used daily by citizens, businesses, and government organizations is called "TASDEED." TASDEED is an e-payment system that allows citizens and business to pay power and water bills, traffic, immigration, phone bills, legal fees and civil identification cards via the internet. This organization was also chosen because it is a leading government organization in e-government.

The Ministry of Finance is a government organization that is responsible for supervising the public treasury and state property (public and private), and on the areas of international economic cooperation, and monetary investment, projects and compensation packages, and also provides important services to:

- The hospitality of the public.
- Housing staff of the State.
- Services and financial systems.
- Integrated storage systems.
- Public procurement.
- And other systems mechanism of development of all financial sectors with the state.

The Ministry of Finance is also responsible for preparing a draft public budget and the preparation of the final accounts of the State and development of rules, implementation and follow-up monitoring and supervision of state revenues, including tax and stamp duties and expenses.

5.2.2 Stakeholders of E-government Initiative Implementation

This section aims to identify the stakeholders who are involved in the e-government initiative implementation process. According to the framework of this research (see Chapter.3), there are three government internal stakeholders responsible to implement any e-government initiative. These stakeholders must work together in order to provide a successful e-government initiative. From the first interview with an assistant undersecretary in the Ministry of Finance, stakeholders that are responsible to build the e-government initiative became clear as he reported:

> *"When working on the development of an online service, we work directly with the Department of Information Technology in our agency and they in turn contact the Central Agency for Information Technology." (Interviewee-A1-1)*

As stated in the proposed framework, in support of the above Assistant Undersecretary in the Ministry of Finance, the General Systems Development and Maintenance Manager agreed that there are three stakeholders responsible to build any type of e-government initiative in the country. He described the process from the design phase to the deployment phase of the e-government initiative. The researcher summarizes the interviewee saying:

> *"If one of the departments in the ministry asks us to develop an e-service, we study the possibility of implementing that initiative with them and with the Central Agency for Information Technology." (Interviewee-A2-1)*

First, if one of the public agency departments asks for and initiative development, the IT department implements that initiative and then gives it to the Central Agency for Information Technology for deployment. The Department of Information Technology develops the requested initiative in cooperation with the beneficiary department and the Central Agency for Information Technology. A manager in the IT department

agreed also that there are three stakeholders involved in the e-government initiative implementation process.

The Assistant Undersecretary of Expropriation for Public Welfare Department in this Ministry clarifies the process on how they build a new e-service and who they contact. He said that there is no direct contact between his department and CAIT. Also, he mentioned that they only contact the IT department before, during and after implementing an e-service. However, he agreed that relationships between the three stakeholders are essential. His comment was:

> *"If we want to convert one of our services to an e-service, first we send a request to the IT department. They contact the Central Agency for Information Technology to put the e-service on their one-stop portal." (Interviewee-A6-1)*

As described in the framework, the above interviewees from the MoF confirmed that there are three implementers, stakeholders, to any e-government initiative, and they are: CAIT, IT Department and the owner department of the e-service. Each stakeholder, implementer, has rights and duties in the e-government initiative implementation process. Stakeholders must work together and have close relationships in order to build and manage e-government initiatives.

5.2.2.1 Stakeholders Relationships

The relationship between all the three stakeholders, implementers, is very important to eventually have a successful e-government initiative. They must understand their roles and responsibilities from the beginning until it is deployed online. In fact, the relationship among all stakeholders is important before, during and after implementing an e-service. Stable stakeholder relationships during the three e-government initiative implementation phases lead to effective and better initiatives.

An assistant undersecretary in the MoF during the interview emphasized the stakeholders' responsibilities and how the relationship is important to construct any e-government initiative by saying:

> *"Any e-government initiative will never be successful if there is no full cooperation between the government responsible stakeholders at all times." (Interviewee-A1-2)*

The General Systems Development and Maintenance Manager in the IT department believe that stakeholder's relationships are important for the success of any initiative. The Director of the IT department also agreed that stakeholder's relationship is very important not just when designing and implementing an initiative but also after deploying those initiatives online. His comment was:

> *"There must be a close relationship and cooperation between all parties for the success of any e-government initiative. The Central Agency for Information Technology always cooperates with us. However, there is discrepancy of cooperation with departments in our agency and other government agencies." (Interviewee-A3-2)*

It appears that all interviewees have the same perceptions that stakeholder's relationship is very important, and close relationships between all parties is essential for the success of any electronic initiative. To understand these relationships in more detail, the researcher asked the interviewees to answer questions about the relationship of each stakeholder across agencies. The next sections describe these relationships.

5.2.2.1.1 Relationships between Organization Departments and IT Department

This subsection explores the relationship between other departments and the IT department in the same organization. According to this study proposed framework presented in Chapter 3, all departments in the agency must work closely with the department of IT to transfer their traditional service to online services. In interpreting

empirical data of this case study, both documentation and interviews, it appears that there are close relationships and cooperation between other departments and the IT department to implement e-government initiatives. The existence of a relationship was confirmed by the interviews below. At first, an Assistant Undersecretary said:

> *"Well, there is close cooperation between us. They build our e-services and they are the initiators in most cases." (Interviewee-A1-8)*

Through the interview with the Assistant Undersecretary of Expropriation for Public Welfare Department, the researcher read a provided document from the top management in the organization that emphasised communication and cooperation in this aspect between departments, encouraging them to send their experts to assist in the rapid transition to electronic government.

From the researcher observation, there is a good cooperative relationship between stakeholders in the organization that led to the successful development of e-government initiatives. However, there is a slight delay due to bureaucracy at work. Relationships between other departments and the department of IT work well with continuous cooperation with regard to building e-government initiatives. This has led the organization to develop more initiatives efficiently. In an interview with two managers from the Expropriation for Public Welfare Department, they said that:

> *"Yes, there is a good cooperative relationship between us, and this led to the successful development of e-government initiatives. But, there is a slight delay due to bureaucracy at work." (Interviewee-A7-8)*

The above interviews showed that there are strong relationships between the IT department and the other departments in the agency. The first step departments take to develop an e-service is to contact the department of IT. The department of IT is

responsible for helping other departments in their agency to transfer services from paper services to online services.

	Internal Stakeholders Relationship	
	IT Department	Departments
Department	Strong	weak

Table 5.1 Stakeholders Relationship in the MoF

5.2.2.1.2 Relationship between Agencies and CAIT

This sub-section explores the relationship between the public agencies and the e-government administration agency. Relationship between CAIT and other public agencies is very important. CAIT gives instructions and regulations that agencies must follow when developing online services. After deploying the initiative online, CAIT works as the front-office while agencies works as back-offices. Therefore, relationships between agencies and CAIT are very important all the time. It is of paramount importance for public organizations to cooperate with the CAIT because it is the entity responsible for all e-government initiatives offered through the web site portal of the state. A supportive comment came from the Director of the IT department as he said:

> *"Yes, there is a strong relationship between us. In fact, they are urging all agencies to speed up their work to shift to electronic delivery of services and to cooperate with them for that purpose." (Interviewee-A3-9)*

Close researcher observation revealed that here is a close collaborative relationship between IT department and the Central Agency for Information Technology because they are responsible for the one-stop portal. In fact, the IT department need to deal with CAIT constantly to publish their e-government initiatives. A negative comment

came from the Assistant Undersecretary of Expropriation for Public Welfare Department as he said:

> *"There is no cooperation between us and the Central Agency for Information Technology. Collaboration with CAIT can only be made through the Department of Information Technology." (Interviewee-A6-9)*

The lack of direct cooperation between organization departments and the Central Agency for Information Technology negatively affects the speed of e-government initiative implementation. A manager from the IT department believes that:

> *"We deal with CAIT closely because they are the agency that sets public policies and standards for the e-government projects. We coordinate with them to provide e-services. We are participating in their teams who are also asking our help in their work, which helps a lot in the success of e-government." (Interviewee-A10-9)*

From the above interviews, it appears that there are no direct relationships between public agencies department and CAIT. However, only IT departments in the public agencies have direct a relationship with CAIT. The public departments contact only CAIT through the department of IT in their agencies. According to the interviewees from public departments other than IT departments, the lack of a direct relationship with CAIT would greatly affect the e-service development and management.

	MoF	
	IT Department	Departments
CAIT	Strong	weak

Table 5.2 Relationship between MoF and CAIT

5.2.3 Phases of E-government Initiative Implementation

The researcher developed questions about the phases of any e-government initiative development phases. Questions were asked of the interviewees to validate the

proposed conceptual framework presented in Chapter 3. According to the framework of this study, there are three development phases of any e-government initiative: pre-implementation (design phase), implementation (development phase), and post-implementation (deployment phase). In order to understand the phases of e-initiative development in depth, the "How many phases" question was asked to managers in different departments in the MoF. Below are the answers of the question by the interviewees. The General Systems Development and Maintenance Manager in the IT department stated that:

> *"The first stage, after receiving the proposal of request, is to study our ability and possibility of implementing the initiative. Then, we build it in cooperation with the department that asked for that initiative. After building the initiative we give it to the central information technology to publish it on the state one-stop portal." (Interviewee-A2-3)*

In support of the three implementation phases presented in the proposed framework, the Assistant Undersecretary of Expropriation for Public Welfare Department in the MoF described the phases of e-government development as:

> *"There are three phases: the request Phase to perform the initiative, the implementation phase and the phase of putting the initiative on the state one-stop portal." (Interviewee-A6-3)*

Hence, when thinking of building a new online initiative, public organizations departments contact the Department of Information Technology at the same organization to ascertain their opinions on the possibility of building the initiative. After that, IT department contact the Central Agency for Information Technology to discuss the technical requirements for developing and putting the initiative on the one-stop portal. If needed, the beneficiary department asks for a budget to accomplish this initiative. The Department of IT, after receiving the budget, will then start

implementation and construction of this initiative. Finally, the initiative is placed on the portal site.

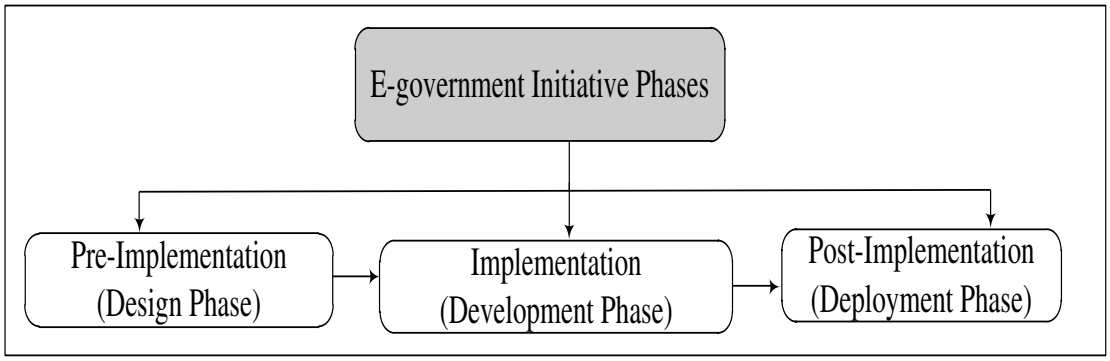


Figure 5.1 Development Phases of E-government Initiative

For more understanding of the e-initiative phases and who/how the e-initiative starts, a question was asked to the interviewees to define the starting point of the initiative. The answers to this question gives more clarification on where and who is the first initiator. It also gave good information on the first relationship between the stakeholders of e-government initiative. It seems that all the interviewees have the same answers. The Director of the IT department also agreed that:

> *"The first phase of the implementation of any e-service is when one of departments in the ministry asks us to convert one of their services to an e-service." (Interviewee-A3-5)*

In support of the IT Director, the Assistant Undersecretary of Expropriation for Public Welfare Department in the MoF described the phases of e-government development as:

> *"The first phase of developing an e-government initiative is when we send a request to the Department of Information Technology asking them to build a new e-service." (Interviewee-A6)*

The stakeholders believe that e-government implementation process should start from the organization department owning the initiative and move upwards to the IT department in the same organization, and then to CAIT. When asked about the most complex phase, the interviewees provided different answers. Some said the first phase while others said the second one is the most complex. Each interviewee answered the question from his department perspective, and to prove their answer the interviewees identified and explained the major factors that made the phase most complex. An Assistant Undersecretary believes that the most complex phase when developing an e-service is:

> *"First phase of e-initiative is the most complicated because it requires re-engineering and to obtain the appropriate budget." (Interviewee-A1-6)*

The analysis of the empirical data revealed that most of the stakeholders' hard work is in the first and second development phases. A manager in the IT department believes that most complex phase in the development process of an e-government initiative is:

> *"The most complex phase is the phase of implementation due to the lack of cooperation and the presence of errors in almost every business process re-engineering procedures and lack of technological skills among staff." (Interviewee-A4-6)*

	Phases of E-government Initiative Implementation		
	Pre-implementation	**Implementation**	**Post-implementation**
Difficulty	●	●	○

Table 5.3 Difficulty Phases of E-government Initiative Development in MOF

It seems that first and second e-government initiative development phases are both difficult. Managers from the Department of IT have the same perceptions that the second implementation phase is the most complex and important. However, the

managers from other departments argue that the first, pre-implementation phase is the most important and complex in the e-government initiative development process.

5.2.4 Implementation Cycle: Factors Influencing E-government Initiative Implementation

The three implementation phases are the implementation cycle to any e-government initiative development. In the next sub-sections, the researcher will identify the major influencing factors to each implementation phase.

5.2.4.1 Pre-implementation Factors: Design Phase

This is the first phase of the e-government initiative development. There are important factors to be considered in this phase and carefully accomplished. Factors of this phase must be met before entering the second phase. This phase is very important in the development process to build an e-government initiative. This phase starts after a public department, initiative owner, makes a decision to convert a service from manual to e-service. The factors of this phase are discussed in the following sections.

5.2.4.1.1 Leadership

The analysis results (table 5.5) derived from the interviews have shown that leadership is one of the most important factors at this phase to successfully develop the e-government initiative. Table 5.4 reveals that almost all of the interviewees agreed that the role of leadership is most important during all e-government initiative implementation phases and directly affect the implementation of the initiative especially at the design phase. The Assistance Undersecretary in the MoF reported:

> *"Of course, a strong leader is one of the most important factors that lead to a successful e-government initiative implementation. Without a good leader, at all levels, it would be very difficult if not impossible to do the job." (Interviewee-A1-16)*

The General Systems Development and Maintenance Manager in the IT department believe that a strong leader will guide the implementation of an e-government initiative to its success in less time. His comment was:

> *"Strong leader can ensure the success of e-government and make initiatives implementation faster." (Interviewee-A2-16)*

The Director of the IT department in support to the above manager said:

> *"The presence of a strong leadership can lead to rapid transformation and successful implementation of e-government and to overcome all the obstacles it might encounter." (Interviewee-A3-16)*

In agreeing with the framework, the above interviewees believe that a leader is very important for the success of the electronic projects. In fact, there are severe shortages in finding leaders to manage projects. There are too many projects, dispersed and overlapping requiring the presence of effective leaders for the success of projects and to reduce risks. A strong leader has direct impact on the success of e-government projects. Public organizations need leaders who are capable of managing the development process of e-initiatives. There are lacks of leaders who are able to ensure the success of electronic government initiatives in most government organizations. Strong leaders can successfully lead the transition to the e-government fast and with less loss.

5.2.4.1.2 IT Infrastructure

Based on table 5.5, interviewees share the same perception that IT infrastructure is most important during implementation and post-implementation of e-government initiatives. The e-government administration agency is responsible for building an IT infrastructure at the country level. The government organizations are responsible for

any software and hardware upgrade in their departments. They are also responsible for building the IT infrastructure on the agency level. IT infrastructure is considered the backbone of the e-government project. All public agencies are responsible for establishing or updating capable IT infrastructure that can handle transformation to e-government in their agencies. Although, IT infrastructure in this organization is advanced, rapid development of high technology always requires IT infrastructure to be updated. It is necessary to have a capable IT infrastructure to insure that e-initiatives are secured and reliable. The framework emphasized that IT infrastructure is important to implement e-government initiative; this is supported by the IT Director who said that:

> *"IT infrastructure is essential for the success of any electronic initiative at all levels of development." (Interviewee-A3-12)*

Another manager from the same department argues that:

> *"We have an IT infrastructure that can host all current and future e-services. But, there is a discrepancy between the state agencies. Some of them are IT infrastructure ready while some still needs to be updated. The lack of IT infrastructure leads to delays in the e-services implementation. Technology is no longer a problem at the present as it was in the eighties, but the problem is in the human side." (Interviewee-A5-12)*

A manager from the IT department indicated that:

> *"IT infrastructure is, no doubt, essential to the success of e-government. Hence, we are still working hard to complete the construction of the IT infrastructure." (Interviewee-A10-12)*

IT infrastructure in this case study is up-to-date and capable of turning the agency to an online agency. In terms of IT infrastructure, most of the departments in this agency are ready to shift completely to the e-government environment.

5.2.4.1.3 Financial/Cost/Budget

Table 5.5 show that financial is most important element in the per-implementation and implementation phases and less important in the post-implementation phase of e-government initiative development process. All interviewees agreed that this factor is very important to develop an e-government initiative. Almost all the interviewed managers agreed that they always receive any budget they require for any e-initiative intended to develop. However, all also reported that the delay of developing e-initiative in time is because of the bureaucracy in paper work that usually takes more than a year to receive the money for the e-service. The Assistant Undersecretary for general accounting in the MoF reported:

> *"The financial aspect is not an obstacle and we get all the required budgets to develop and delivery our e-government initiative. However, the problem lies in the long bureaucratic workflow which takes longer time to get the budget for any project. The workflow to get a budget for any e-project can take more than a year." (Interviewee-A1-15)*

The Director of the IT department reported that:

> *"In this respect, there are no problems because we get any budget we needed. But, there is a big problem in getting the budget in time because of the bureaucratic procedure which takes approximately up to a year." (Interviewee-A5-15)*

5.2.4.1.4 Strategy/Awareness

In interpreting the empirical data (table 5.5), it appears that interviewees all agreed to the importance of the strategy plan and awareness. However, they do not share the same perceptions regarding the way it should be implemented. For example, the Assistant Undersecretary for general accounting in the MoF reported:

> *"Yes, there are plans developed by the Central Agency for Information Technology to implement e-government. The strategy is clear and there is awareness of the importance of it among agencies*

> *which led to a remarkable improvement in the field of e-government." (Interviewee-A1-17)*

Further confirmation came from the Director of the IT department who added:

> *Of course there is awareness and interest in this regard not only have senior management, but the Amir, Head of the State, himself who urges cooperation and speed up in this aspect, which has the greatest impact on the success of the project. There is a big shift to e-government because of CAIT strategies. (Interviewee-A3-17)*

An opposing opinion came from the Assistant Undersecretary of Expropriation for Public Welfare Department in the Ministry of Finance who said:

> *"Strategy is important and already exists. But the problem lies in the management that should manage the project and create interest or a spirit of competition between the agencies. The administration is (planning, directing and control) and control does not exist here." (Interviewee-A6-17)*

Strategies and awareness at the highest levels are always required for e-government implementation to increase efforts which would speed up the work considerably. In Kuwait, there is a clear strategy and considerable awareness of e-government implementation. This is observed at the state level, especially after the formation of the Central Agency for Information Technology which should be an independent body with more powers and support.

5.2.4.1.5 Political desire/support

The political desire and support is a factor influencing the development of e-government initiatives. As shown in table 5.5, the interviewees agreed that this factor is very important and will greatly speed up shifting to e-government in less time, but only if it truly exists. Although, they were all united in the importance of this factor; they were divided as to its existence. Some of the interviewees did not refute its existence, but were expecting more from the top political leaders. Below, there are the

interviewee's opinions regarding the political desire and support to the e-government initiative development. In support of the framework on the importance of the political desire/support, an Assistant Undersecretary in the MoF said:

> *"There is a true political will and unlimited support which helped public agencies to rapidly convert to e-government." (Interviewee-A1-18)*

It seems that all stakeholders in this organization have the same perceptions regarding the political desire and support. Stakeholders agreed that top management in the organization were always urging the middle management to speed the process in implementing e-government initiatives. In addition, the stakeholders in the middle management (managers) reported that they are fully supported by the top management. The Director of the IT department said:

> *"In fact, there is a political will and full support to implement the e-government. The success of e-government depends entirely on the political awareness and full support for the implementation of e-government." (Interviewee-A3-18)*

One more manager from the department of IT believes that:

> *"Political support is very important and should help us overcome problems. The presence of a top management support is very necessary for the success of e-government." (Interviewee-A10-18)*

5.2.4.1.6 Legacy Systems Upgrade

There are no legacy systems to upgrade in this organization departments; all hardware and software are new and capable to develop e-government initiatives. As shown in table 5.5, the interviewees agreed that this factor does not exist. In fact, they were all happy with their systems. Some of the interviewees said that they might need to upgrade systems, but not at the present time. An Assistant Undersecretary in the MoF said:

> *"There is no need to upgrade our systems. We have systems that ready for e-government initiatives at this time." (Interviewee-A1-18)*

It seems that all interviewees in this organization have the same perceptions regarding the legacy systems upgrade. Interviewees agreed that their systems are new and less than ten years old. In addition, they reported that IT department regularly check the reliability of the existing systems. The Director of the IT department said:

> *"In fact, there are advanced systems ready for implementing e-government initiatives. The systems are new and need not to be upgraded." (Interviewee-A3-18)*

5.2.4.2 Implementation Factors: Development Phase

This phase is the second in the e-government initiative development. The implementation phase started immediately after successfully completing the first phase, explained above. Factors of implementation phase that influence the e-government initiative development were analysed in the subsections below.

5.2.4.2.1 BPR

As shown in table 5.5, interviewees agreed that BPR is most important during the implementation phase of e-government initiative. This factor, in particular, is one of the most important factors that stakeholders face. In fact, this organization (MoF) realized the importance of this factor during the implementation of e-government initiative and established a new department responsible for re-engineering all business processes in the agency. The main responsibility of the newly established department is to make the re-engineered business process ready for implementation and to avoid any mistake in the process. The researcher already interviewed the manager of the BPR department. The General Systems Development and Maintenance Manager in the IT department:

> *"Business process re-engineering is very important before starting the implementation of an e-government initiative and we face a lot of problems because of it." (Interviewee-A2-10)*

Business process re-engineering is a difficult task. An observation indicates that there is an authority responsible to re-engineer business process in this organization. They are doing their job properly, and this is very important to facilitate the implementation process of the e-services, quality and, therefore, success. In fact, there are problems in re-engineering the business process because of the lack of IT expertise among those who do the re-engineering in departments of this organization, leading to delays in the implementation of initiatives. As indicated in the framework, the business process of re-engineering is one of the most important factors that must be accurately set. Its importance can be seen when implementing an electronic service starts. The Head of First Public Systems Development and Maintenance, Head of Business Process Re-engineering and Auditing said that:

> *"We have a department specialized in business process re-engineering. They work side by side with other departments to complete the work as soon as possible and everything is going as planned." (Interviewee-A5-10)*

The Assistant Undersecretary of Expropriation for Public Welfare Department Reported that:

> *"We care about this aspect significantly. We are cooperating with the IT department to re-engineering our business process. BPR requires a lot of time and direct cooperation with the Department of Information Technology." (Interviewee-A6-10)*

5.2.4.2.2 IT qualified staff

According to the empirical data analysis (table 5.5), interviewees believe that this factor is important at the pre-implementation phase, most important at the implementation phase, and less important at the post-implementation phase.

Measuring IT qualification of government officials came from the same question that was given to all interviewees in all agency departments. Interviewees answered the question from their point of view. The author used the data collected to measure the level of IT skills in the IT department and other agency departments.

There are differences in technological capabilities between the staff in various departments in this organization. It becomes clear to the researcher in the field study that new the generation of employees is more familiar with the technology than senior employees. Therefore, there is always a lack of technologically expert employees. This is due to the intensity of competition with private sectors that acquire technology talented employees. In agreeing with the framework, a manager from the IT department reported that:

> *"In fact the number of employees is important but more important is the efficiency of the employee's and his ability to complete the required job. We always suffer from a lack of local talent in the field of information technology." (Interviewee-A2-19)*

The department of IT is managing institutional resources planning systems which were implemented last year in cooperation with the private sector. So, they need new staff and need training and rehabilitation of their current employees before they can do their job. The largest project that the IT department is now working on is the business process re-engineering. The first phase has been completed already, and they are currently working on the second phase. This project is one of five projects that the IT department are developing now at the level of the ministry. Also, they are now developing two projects at the state level; one of which is a central e-payment. This project can be accessed through the one-stop portal, but the database is located in the Ministry of Finance. These huge e-government initiatives need IT qualified employees. A manger from the department of IT claimed that:

> *"Yes, we have a sufficient number of staff, but IT qualified staff is always needed. There is a lack of IT qualified at the state level. We always seek help from the private sector. We fully depend on our staff to implement all our e-government initiatives. But, we use consultants from the private sector sometimes." (Interviewee-A10-19)*

5.2.4.2.3 Resistance to change

After analyzing the empirical data (table 5.5), it appears that all interviewees agreed that resistance to change is a challenging factor when developing an e-government initiative especially among officials who try to keep their powers. This factor is especially important in the implementation phase. The interviews below showed the effect of resistance to change on the e-government initiative development. An Assistant Undersecretary in the MoF said:

> *"In this contrary, I see that all the officials and staff are demanding the state to speed up the implementation of electronic services because it is more useful and convenient for them in their work and they are happy with." (Interviewee-A1-11)*

By observation, the researcher found that newly employed staff adopts e-government initiatives and accepts change faster than senior staff who resist change. In addition, a document provided by a manager during an interview shows that there are 37 causes of resistance to change, he said that they examine the reasons for the resistance and try seriously to ensure to override them for the quality of work and the success of the project. However, they are trying gradually because of the fear of staff transferring to the private sector. The Assistant Undersecretary of Expropriation for Public Welfare Department reported that:

> *"There are no problems so far because we are doing the transition gradually and with more training to avoid the big shock of rejection, or the slow in adoption. With the knowledge that most of our staff is young, this helps to smooth transition to the e-government." (Interviewee-A6-11)*

Two managers from the Expropriation for Public Welfare Department said:

> *"Our employees are all collaborative and attuned to work and there is no rejection of the real e-government adoption. They are demanding to speed on this side and eager to see it happening. Understanding of the technology has become widespread among all classes of people because of the iphone. Faith in technology has become much larger than the previous." (Interviewee-A8-11)*

However, at the time of implementation the e-government initiative, the initiative developers from the IT department face some resistance. Most of the resistance came from the top official of the beneficiary department. As an important factor mentioned in the framework, a manger from the department of IT claimed that:

> *"Yes, there is some resistance among some officials during implementation of e-government initiatives. The reason behind their resistance was either that they are trying to keep their powers, or fear for data security and privacy." (Interviewee-A10-11)*

5.2.4.2.4 Cooperation

Table 5.5 shows that interviewees agreed that cooperation at all phases of e-government initiative implementation are most important. Cooperation is very important and essential when developing an e-government initiative. The author asked questions to different interviewees from different departments to measure the level of cooperation among departments in the same agency including the IT department as well as departments in other agencies. Some e-government initiatives might require inter-agency, cross-agency or maybe no cooperation at all. From the following interviewees' answers, knowledge is gained in relation to understanding cooperation and points of strengths and weaknesses among public departments are identified. Commenting on how important is the cooperation came from an Assistant Undersecretary in the MoF, he said:

> *"True, the cooperation between institutions to provide e- services is critical to the success of any online service and we have a team works directly with the Central Agency for Information Technology to ensure proper functioning and to overcome any problems quickly. We also work closely with all institutions in the country. E-initiative would not be successful without full strong relationship and cooperation among all." (Interviewee-A1-7)*

	Cooperation		
MOF	**Strong**	**Acceptable**	**Weak**
Department to IT department	✓		
IT department to CAIT	✓		
Department to CAIT			✓
Department to Department		✓	
Department to other Agency Department			✓

Table 5.4 MoF Stakeholders Cooperation

5.2.4.2.4.1 Cooperation between Agency and other Agency

First, the researcher asked the interviewees about cross-agency cooperation regarding e-government projects. This is important to highlight and measure cooperation between public organizations when implementing an e-government initiative. Truly, the cooperation between government organizations to provide e- services is critical to the success of any initiative. A team works directly with the Central Agency for Information Technology to ensure proper functioning and to overcome any problems quickly. E-government initiatives would not be successful without full strong relationship and cooperation among all government bodies. One comment given by a manager in this ministry, as:

> *"We have a problem that every government institution considered itself as a stand-alone state and not caring with what others do. This is improper because the cooperation is very important for the success of e-government initiative implementation. But, when building an e-service that depends on cooperation of two organizations, it is clear that everyone should be committed to cooperate to assure the success of the e-initiative." (Interviewee-A2-7)*

A different opinion was reported from a manager from the IT department, he stated that:

> *"Cooperation is weak, and not at the standard required. There is a discrepancy between state institutions in this aspect. Lack of cooperation between agencies can cause some delay and perhaps sometimes initiative failure. Here, the role of the central agency for information technology that must have a political power to control work and communicate with everyone must come." (Interviewee-A4-7)*

The Assistant Undersecretary of Expropriation for Public Welfare Department in the ministry reported that they already have their e-service ready to be used. Unfortunately, they cannot use it because of the lack of cooperation they need from a department in another agency and also due to the lack of e-signature. His comment was:

> *"At present, there is no cooperation with other departments regarding e-services. We are in the process of developing our e-services. There will be a direct cooperation with other departments in some ministries, such as municipal and Kuwait savings Bank, but will be immediately after obtaining legal cover for the online E-Government transactions." (Interviewee-A6-7)*

By observation, current agency-agency cooperation is not at the required level. Cooperation between departments with respect to some e-initiatives is essential for the success of that initiative. Central Agency for Information Technology must get involved if there is refusal from departments to persuade them to cooperate. For example, the Civil ID Agency once stopped their sign-in system, which is the system used in the one-stop portal, to test the PKI system without notifying CAIT or any government organization linked to their system such as the MoF.

5.2.4.2.4.2 Cooperation between Department and other Department

Another type of cooperation is the cooperation between various departments in the same agency. This type of cooperation happened when information is needed to be

exchanged between two departments for an e-government initiative to be completed. Below are the interviewees' interpreted comments. The first comments came from an Assistant Undersecretary in the MoF, who reported that:

> *"Cooperation is weak and falls short to the required level for the success of e-government initiatives. There is always a problem we encounter. They do not understand the workflow of their services and where it should starts and end, "cycle process of any service" (Interviewee-A1-22)*

Cooperation between organization departments to converting a traditional service to an e-service is very important and helps in the rapid and successful transformation to achieve the desired goal. Cooperation exists but sometimes other priorities in a department prevent them from full cooperation with other departments. For example, if they have other works that are more important than an e-service to be linked, this will lead to delays in cooperation and then a delay in implementing the initiative in time. In fact, all departments cooperate with one another only because of the strong leadership in this agency. According to the documentation offered to the researcher, the organization is currently working to shift to an electronic Ministry, and departments must transform all the internal transactions in the ministry to be electronic. The project is called ECM 'Enterprise Content Management'. This project is among the projects that are on the e-government agenda for the current year 2011/2012. An opinion regarding department to department cooperation was reported by a manager from the IT department, he stated that:

> *"Yes, there is cooperation between us and it is very important to the success of e-initiatives and its continuity." (Interviewee-A4-22)*

A supportive argument came from a manager in the same department:

> *"Yes, there is significant cooperation between our department and other public agencies. However, there are differences with regard to cooperation of the officials because some of them are bureaucratic under the pretext of keeping rights. There is a disparity between the*

> *agencies in terms of responding to our request of cooperation due to the complexity of official's rights to the extent that it could take more than two months to respond officially." (Interviewee-A5-22)*

The Assistant Undersecretary of Expropriation for Public Welfare Department in the ministry reported that they already have their e-service ready to be used. However, they cannot use it because of the lack of cooperation they needed from another department in this agency. His comment was:

> *"There is no cooperation between us and any other department so far." (Interviewee-A6-22)*

5.2.4.2.5 Enforcement/Reward system

According to the interviewees (table 5.5), this factor is important and used to control and manage the work. They agreed that this factor is applied widely in their departments. An Assistant Undersecretary in the MoF said:

> *"Yes, this is the tool that helps ensure the success of electronic services and development." (Interviewee-A1-14)*

A manager from the IT department reported that:

> *"Yes, the use of this principle will lead to increase productivity significantly; it should be applied to everyone without distinction." (Interviewee-A2-14)*

The principle of reward and punishment is very important. However, managers in this organization apply it with caution and fear that the IT skilled staff could transfer to the private sector. The importance of this system is that it helps ensure the success of e-government initiatives. It is important to give the employees incentives that create motivation to accept change and transformation to the new work environment. In Kuwait, it is commonly known to the employees that there is reward after reward but punishment does not exist. An Assistant Undersecretary told me that he could not transfer one employee from one place to another because of the favouritism. Attention

must be paid to this aspect to implement e-government successfully. He said, in the past, we were involved in choosing our employees. Currently, employees are imposed on the department and cannot be held accountable. A manger from the department of IT reported that:

> *"We encourage everyone to cooperate and get them involved when implementing e-services to maintain adaptation. At the same time, punishment and reward system is very important and essential to the success of e-government. It must be applied because it leads to help the progress of work." (Interviewee-A10-14)*

5.2.4.2.6 Corruption

After analyzing the empirical data (table 5.5), it appears that all interviewees agreed that there is no corruption. This factor does not affecting the implementation of e-government initiatives. The interviews below showed that there is no corruption in the government developments. An Assistant Undersecretary in the MoF said:

> *"In this regard, I see that there is no corruption in all the departments in this organization the process to implement e-government initiative is rapidly increasing." (Interviewee-A1-11)*

By observation, the researcher believes that corruption does not exist in this organization a view supported by managers in their interviews. The Assistant Undersecretary of Expropriation for Public Welfare Department reported that:

> *"There is no corruption." (Interviewee-A6-11)*

5.2.4.3 Post-Implementation Factors: Deployment Phase

This is the final phase of the e-government initiative cycle process. This phase starts when the e-government initiative is deployed into the state one-stop portal. The one-stop portal is managed by CAIT, and the initiative owner department will be given access to operate their online service. There are important factors influencing this phase. In the next subsections the major factors for this phase are outlined.

5.2.4.3.1 Security and privacy

As shown in table 5.5 it appears that all interviewees have the same perceptions that security and privacy is a less important factor at the first and second phases of e-government initiative implementation. However, according to the collected empirical data, interviewees confirmed that security and privacy is most important at the deployment phase. Security and privacy is important for both service provider and citizens. Both users will not adopt an e-service that lacks security and privacy. Below are the answers of interviewees. First, the Assistant Undersecretary said:

> *"Yes indeed, Security is very important for us and is a major concern at all times." (Interviewee-A1-21)*

The responsible government entity of giving permission to access the online e-government initiatives are the Public Authority for Civil Information at the state level for all e-services provided through the one-stop portal. This system was supposed to be provided by the Central Agency for Information Technology but they didn't, and it has been accomplished by the public Authority for Civil information. The system was used to avoid conflict of project development and to save time especially when knowing that this system is consistent and effective. Before activating the security system, the use of online e-services was very weak and almost every institution provided their own security system individually. A manager from the IT department reported that:

> *"Security and privacy of data has always been our main concern. We care about the security and confidentiality of the data significantly. it is the most important factors when implementing the e-services" (Interviewee-A2-21)*

A manger from the department of IT also claimed that:

> *"Data security is very important after putting the e-service online and there must be strong security and privacy systems." (Interviewee-A10-21)*

5.2.4.3.2 IT Training

It appears from analysing the empirical data (table 5.5), both documentation and interviews, that IT training is most important at the post-implementation phase. Interviewees believe that all employees and also officials must take some training courses in IT skills. The importance of this factor can be seen at the e-service post-implementation phase. An Assistant Undersecretary in the MoF said:

> *"Yes, we are training our staff on any new e-initiative. Training is very important and lead to the successful adoption of e-government initiatives." (Interviewee-A1-20)*

There is a big change in the work environment as there are new systems being implemented. This leads to the need for employees to be trained continually. This task takes considerable time due to not being able to take in the experience quickly and due to the lack of user's seriousness. Lack of interest and follow-up from officials is another problem. It was seen that sometimes some of the staff are incompetent which leads to the need of doubling the efforts to prepare them for the new environment of e-government. The Assistant Undersecretary of Expropriation for Public Welfare Department reported that:

> *"IT skilled staff is essential and helps to speed the transition to electronic initiative when implemented. So we are interested to continue training for our staff on everything that is new in the field of technology." (Interviewee-A6-20)*

Two managers from the same department said:

> *"Staff training on the IT skills is very important and helps in the success of e-services. We have training courses throughout the year." (Interviewee-A8-20)*

Rehabilitation and training is very important. There must be plans of training to ensure the success of transformation.

5.2.4.3.3 Legislations/Regulations

According to the interviewees (table 5.5), this factor is most important after deploying the e-service. Interviewees emphasise that security and privacy are directly linked to the legislations. Therefore, the absence of legislations that organize online transactions will lead to distrust of the online services. According to interviewees, legislation is not needed during the per-implementation and implementation phases. It does not hinder the development process in the first and the second phases. It is only important when exchanging data and to legalize online transactions. An Assistant Undersecretary in the MoF said:

> *"Of course, everyone is keen to be protected with laws and regulations that control the use of electronic services. Issuing laws and legislations is to protect clients and preserve their rights. What is lacking now is the existence of e-signature law to legitimize all the services provided through the one-stop portal." (Interviewee-A1-13)*

Lack of legislation governing the use of e-services leads to fear of use and, therefore, failure. The most important factor that prevents using e-government initiative after deploying is the absence of laws governing and handling the use of e-services. The most important of these laws is the law of electronic signature and electronic crimes. Lack of these laws does not hinder the work to implement e-services. However, lack of legislation is preventing the use of e-services after implementation because of the lack of legal cover. Legislation regulating electronic transactions is very important and will help to accept use of e-services by both providers and end-users. The use of e-services needs to be protected by legislation and, unfortunately, these legislations

have not yet been issued. The Assistant Undersecretary of Expropriation for Public Welfare Department reported that:

> *"Our e-services are ready. However, we cannot use it completely because of the absence of laws governing the online transactions. Most important of these laws is the law of electronic signature that was not out yet." (Interviewee-A6-13)*

There is a direct impact of lack of legislation on the success of e-government initiatives. The government should speed up passing the laws governing electronic transactions. A manger from the department of IT reported that:

> *"We have e-initiatives that cannot be published due to the absence of laws regulating e-services. The most important law is the electronic signature which doesn't exist yet. Legislations will help in speeding up implementation and quick adoption of e-initiatives." (Interviewee-A10-13)*

5.2.4.3.4 Initiative priority

As shown in table 5.5, all interviewees believe that it is most important to give priority to the e-service over the paper service after deploying it. Interviewees reported that if the e-service is not given priority, employees will not adopt it. This will result in e-service failure. All interviewees agreed that this factor is very important in the post-implementation phase of the e-government initiative. An Assistant Undersecretary in the MoF said:

> *"In fact, a large proportion of the public tend to use the e-service when launched and those of course are the young people. We keep working on both manual and e-service to give opportunity to those who did not want or know how to use e-services to avoid any prejudice at work. But the priority is given to the online services." (Interviewee-A1-23)*

Some interviewees said that priority must be given to e-services and always encourage using them to help increase e-services successful. The Director of the IT department claimed that:

> *"Yes, the e-service is more important when deployed and will be given more priority." (Interviewee-A3-23)*

In an opposing opinion, another department manager reported that:

> *"We are working on both, but the priority is given to the manual because the e-service is still experimental." (Interviewee-A9-23)*

The researcher asked the interviewees about the importance of factors at each implementation phase of e-government initiative. Using Miles and Huberman's (1994) scale of less important (○), important (◉) and most important (●) Table 5.5 below provides the analysis of the factors in the three initiative implementation phases based on the views from the interviewees.

	Case Study One – Ministry of Finance (MoF)	Per-implementation	Implementation	Post-Implementation
Factors	Leadership	●	●	●
	IT Infrastructure	●	●	●
	Financial/Cost/Budget	●	●	○
	Strategy/Awareness	●	○	◉
	Political desire/support	●	○	◉
	Legacy Systems Upgrade	○	○	○
	BPR	◉	●	○
	IT qualified staff	◉	●	○
	Resistance to change	◉	●	○
	Cooperation	●	●	●
	Enforcement/Reward system	◉	◉	◉
	Corruption	○	○	○
	Security and privacy	○	○	●
	IT Training	○	◉	●
	Legislations/Regulations	○	○	●
	Political Power	●	◉	●
	Scope	◉	●	●
	Documentary Cycle	●	●	○
	Initiative priority	○	○	●

Table 5.5 Validation of the Factors Influencing Development Phases of E-government Initiative in MoF

5.3 Case Study Two – Public Authority for Applied Education and Training (PAAET)

5.3.1 Background to Public Authority for Applied Education and Training (PAAET)

This case study organization was selected because it has many e-government initiatives. One of the large e-services is the system offered online to students to apply for PAAET colleges and register for courses as well as to check their grades online. Also, there is another e-service offered to the faculty staff to use all the facilities offered for the researchers and their students. Although this government organization is only recently offering e-services; it is very active in implementing e-government initiatives.

The Public Authority for Applied Education and Training (PAAET) was established on December 28, 1982, by law number (63). Through its two sectors, Education and Training, the goal of PAAET was to develop the national technical manpower and to meet human resource needs of the country. According to the PAAET web portal, there are Colleges & Institutes as well as special training courses.

- The applied education sector includes five Colleges, which offer several specializations:

    1. College of Basic Education
    2. College of Business Studies
    3. College of Technological Studies
    4. College of Health Sciences.
    5. The College of Nursing

- Besides the four colleges , there are 12 of training Institutes and centers such as:

    1. The Higher Institute of Energy
    2. The Higher Institute of Telecommunication and Navigation
    3. Industrial Training Institute
    4. Nursing Institute
    5. Constructional Training Institute
    6. Vocational Training Institute

PAAET is a government organization which offers education and training to students of different educational backgrounds. According to the UNESCO web site, PAAET has:

- Currently more than 39,000 students enrolled at the PAAET colleges and institutes.
- Number of faculty members in the college: 2,082
- Number of training staff in the institutes: 1,141

PAAET has a significant role in ensuring that the next generation of Kuwaitis have the capacity in terms of technical skills with the objective of developing and upgrading manpower to meet the challenge of the shortfall in technical manpower created by industrial and economic development of the country.

5.3.2 Stakeholders of E-government Initiative Implementation

Similar to case study one, this section aims to identify the internal stakeholders responsible and their role to implement e-government initiatives. The researcher met with managers from different departments in this case study. When asked about the stakeholders, implementers, of the e-government initiative, the manager from the Department of Scholarship and Cultural Relations said:

> *"I think that department of Information Technologies and the Central Agency for Information Technology are the builders of any e-service.....yes public agencies departments are responsible too." (Interviewee-B1-1)*

In another interview with the Director of the IT Department the answer was accurate and satisfies the framework presented in Chapter 3, as he said:

> *"They are three: Central agency for Information Technology, beneficiary department and the Department of Information Technology." (Interviewee-B2-1)*

To have another opinion the researcher also met with the Dean of admissions and registration and he reported that:

> *"Our department, department of computer or the private sector and the Central Agency for Information Technology." (Interviewee-B5-1)*

After identifying the internal stakeholders responsible to implement e-government initiatives, it is necessary now to see how important the relationship between the stakeholders is which is outlined in the next section.

5.3.2.1 Stakeholders Relationships

The Director of the IT department told the researcher that millions has been spent by the country on e-government projects that ended in failure or did not satisfy the customers' needs. He complained that each government organization is working individually unaware of what others are doing. This, he said, led to duplications in projects. One example was the projects of e-government authentication PIN that have been done twice by Public Authority for Civil Information (PACI) and Central Agency for Information Technology (CAIT). Interviewees agreed that the role of government internal stakeholders to implement e-government initiative is the key for successful. The manager from the department of scholarship and Cultural Relations said:

> *"The ongoing relationship and cooperation between stakeholders is very important to the success of any e-government initiative." (Interviewee-B1-2)*

The Director of the Department of Measurement and Evaluation and Professional Development said that:

> *"The success of any e-services depends on the strong relationship between all parties that have responsibility on online service." (Interviewee-B6-2)*

Stakeholders' relationship is very important to be strong and always close for the success of e-government initiatives. However, in this organization as the researcher observed, stakeholders' relationship is not as it should be. This is confirmed by many interviews with managers. The Director of the Department of Faculty members and

Training reported that relationships among internal stakeholders are still weak and ineffective, he said:

> *"The relationship is weak and there is no cooperation significantly." (Interviewee-B9-2)*

There are two types of stakeholders' relationship. First, is the relationship between the stakeholders in the same organization departments. The second is the agency to agency stakeholders' relationships. The researcher discussed the two types of relationships with the interviewees in the next subsections.

5.3.2.1.1 Relationship between Organization Departments and IT Department

Most of the interviewees in this organization said that they have no e-government services, or have online services not under the e-government project. This gave the researcher an indication that e-government initiatives in this organization are very few or do not exist. However, the interviewees agreed that stakeholders' relationship is important to implement e-government initiatives. Almost all of the interviewees said that there is no department to department relationship in regard to the e-government initiative. On the other hand, most of them reported that they have a relationship with the IT department. The manager of the Department of Scholarship and Cultural Relations said:

> *"Cooperation between our department and the IT department is very necessary because they are doing the biggest work of the transition to electronic environment." (Interviewee-B1-8)*

This organization is currently working on one big e-government project to be offered on the one-stop portal. The Dean of Admission and Registration reported that:

> *"Close relationship with the IT department is very important for the construction of e-initiatives. Therefore, we fully cooperate with them." (Interviewee-B5-8)*

The Director of the Department of Measurement and Evaluation and Professional Development said that:

> *"It is very important to cooperate with the IT department. However, our relationship is weak and cooperation between us is not as expected." (Interviewee-B6-8)*

The stakeholders' relationship (table 5.6) between this organization and the e-government administration agency (CAIT) is indeed important. Government organizations need to have a close relationship with CAIT to implement and manage their initiatives. This kind of relationship was reviewed with the stakeholders (interviewees) and will be discussed in the next section.

	Internal Stakeholders Relationship	
	IT Department	Departments
Department	Weak	weak

Table 5.6 Stakeholders Relationship in the PAAET

5.3.2.1.2 Relationship between Agencies and CAIT

CAIT is the e-government project leading agency in Kuwait. Although it was established in 2006, it is actively working to make e-government projects successful. However, there is no government organization that has a responsible team managing its e-government initiative. In fact, all government organizations contact CAIT through their IT departments. In an interview with the manager of the Department of Scholarship and Cultural Relations, the manager reported that they work directly with the department of IT, and do not have direct cooperation between them and CAIT, he said:

> *"There is no direct contact between our department and CAIT. We only communicate with the IT department in our agency then IT department communicate with CAIT." (Interviewee-B1-9)*

The Director of the IT Department's answer was:

> *"The relationship between us is very important and must be continuing directly and continuously." (Interviewee-B2-9)*

Due to the very limited e-government initiatives in this organization, the MOF departments to CAIT stakeholders' relationship is weak and ineffective. However, IT department relationship with CAIT is strong.

	MoF	
	IT Department	Departments
CAIT	Strong	weak

Table 5.7 Relationship between PAAET and CAIT

5.3.3 Phases of E-government Initiative Implementation

It appears that the interviewees almost all share the same perceptions regarding the e-government initiative implementation phases. They all agreed that there are three implementation cycle processes for the e-government initiative. The Director of the IT Department when interviewed said that e-government initiative implementation process must go through three phases before it can be placed online, he reported:

> *"The design phase, the implementation phase and then the deployment phase to put the e-service on the state web portal." (Interviewee-B2-3)*

The Dean of Admission and Registration supported that and he reported that:

> *"....yes there are three phases: Request phase from our department to the department of IT (construction phase), then the operation phase on CAIT e-gate." (Interviewee-B5-3)*

Electronic government initiative starts from the moment an agency department sends a request to the department of IT to build an online service for them, and then placed on the web portal of the State, which has to be supervised by the e-government administration agency. According to the framework proposed in this thesis, e-government initiative implementation passes in three phases: design or pre-implementation phase, and implementation phase and the deployment phase. Interviewees have agreed and validated this part of the framework.

During the interview with the Director of the IT Department, he said that the first phase is when an organization department asks to develop an electronic service for them. This was supported by the manager from the Department of Coordination of Special Courses when he said that it starts when they send a request to the department of Information Technology to build an e-service. Also, a manager from the Department of Measurement and Evaluation and Professional Development added that the first step in building an e-government initiative is to send a request from the department to the Department of Information Technology asking them to build an online e-service.

While discussing the complexity of the e-government initiative implementation phases, the manager of the Department of Scholarship and Cultural Relations said that the last phase of e-service development is the most difficult because of the problems in adopting and managing it. This is usually due to difficulty of use, non-existence of legislation or the lack of security and privacy. However, the Director of the IT Department believed that the implementation phase is the hardest because they are facing a shortage of IT qualified staff and also lack of cooperation between departments and us. Another manager from the IT Department said that:

> *"I think that implementation stage is the most complex and difficult, this is due to poor cooperation between government departments and department of IT and also many mistakes in the BPR." (Interviewee-B4-6)*

	Phases of E-government Initiative Implementation		
	Pre-implementation	**Implementation**	**Post-implementation**
Difficulty	●	●	●

Table 5.8 Difficulty Phases of E-government Initiative Development in PAAET

The critical analysis of the literature review in Chapter 2 revealed that there are factors influencing the e-government initiative stakeholders. The author of this thesis identified the factors and mapped each internal stakeholder with the influencing factors during the e-government initiative implementation process. In this study, the researcher discovered that there are three implementation phases to the e-government initiative. In the following section and subsections, the researcher remapped each factor according to its importance in each implementation phase of the e-government initiative.

5.3.4 Implementation Cycle: Factors Influencing E-government Initiative Implementation

All internal e-government initiative implementation goes through three development phases (see Chapter 3). These implementation phases are the process cycle to any e-government initiative implementation. The above sub-sections proved that any e-government initiative development must go through three phases: per-implementation (design phase), implementation (development phase), and post-implementation (deployment phase).

5.3.4.1 Pre-implementation Factors: Design Phase

This phase of e-government initiative implementation is the first phase. It usually starts when a department decides to transfer one of its traditional services to be an e-government online service. After the department decision to build a new initiative, the department sends a request to the IT department asking for their assistance. This phase is affected by many factors that influence the role of the stakeholders that have a responsibility to carry out the job. These factors are discussed and listed below.

5.3.4.1.1 Leadership

According to table 5.10, it appears that interviewees agreed that leadership is most important in the three e-government initiative implementation. The Director of the IT Department's answer was:

> *"Successful leader will help directly on the success of e-government initiatives, always." (Interviewee-B2-16)*

There is a severe shortage of qualified leaders and this is clear because there is no good progress in this organization. Leadership is the first factor that has a great effect on the success or failure of initiating e-government initiative, and it is clear that there is a lack of leadership now. The Dean of Admission and Registration reported that:

> *"True, leader is the key to a successful transition to successful e-government initiative implementation." (Interviewee-B5-16)*

A manager from the Department of Measurement and Evaluation and Professional Development added that:

> *"Quite simply, no successful leader, no successful project." (Interviewee-B7-16)*

Leadership is the primary factor for the success or failure of e-government initiative implementation.

5.3.4.1.2 IT Infrastructure

Table (5.10) shows that interviewees share the same perception that IT infrastructure is most important in all e-government initiative implementation phases. Documentation and researcher observations revealed that departments in this organization including the department of IT need to upgrade its IT infrastructure. The Director of IT Department answer was:

> *"Constant change and rapid development in technology lead to the importance to keep up with the evolution in IT." (Interviewee-B2-12)*

During the interview with the Dean of Admission and Registration, he said that PAAET has already signed a contract with the private sector to build a student registration online system for its colleges. The contract consists of building an advanced IT infrastructure needed for the system. He added, the technological infrastructure is of the most important elements for the construction of e-services and must be developed continuously. The Dean of Admission and Registration reported that:

> *"We are currently implementing a high technological infrastructure, and we constantly upgrading them due to their importance in the success of e-government initiatives." (Interviewee-B5-12)*

According to the Director of Research Department in PAAET, IT Infrastructure is very important for building e-services. She said that the more advanced IT infrastructure and development are the greater the chances of success in e-government initiatives implementation, she added that:

> *"Advanced IT infrastructure is necessary to the success of e-initiatives. We have plans to update our IT infrastructure in cooperation with the department of Information Technology in our agency." (Interviewee-B10-12)*

5.3.4.1.3 Financial/Cost/Budget

The interpreted empirical data (table 5.10) revealed that interviewees indicated that financial is most important in the pre-implementation phase and important in the implementation phase. The manager of the Department of Scholarship and Cultural Relations said:

> *"Budget is not an obstacle, we get what we want, but the delay in getting the budget is the only problem especially when there is an urgent initiative." (Interviewee-B1-15)*

The Director of the IT Department said that the upper management always offer the budget we need for our e-government initiative. However, the problem is in the amount of time that the documentation cycle takes before the budget is received, he reported that:

> *"Full budgets are always provided. But, the problem is in the bureaucracy that delays obtaining budget quickly which leads to a delay in the implementation of government e-initiatives." (Interviewee-B2-15)*

The slow governmental procedures to provide budgets adversely affect the speed of implementing e-initiatives. For example, a budget request for a specific project takes nearly a year to approve. According to a document provided to the researcher, there is now an attempt by the government to speed up the procedures for obtaining the budgets in shorter time and will be applied soon. According to the Director of Research Department in PAAET:

> *"Yes, the delay in disbursement of budgets required to complete e-services lead to delays or failure in delivery." (Interviewee-B10-15)*

5.3.4.1.4 Strategy/Awareness

Strategy and awareness for e-government initiative implementation are most important. Interviewees believe that awareness of the importance of the e-government initiative is important and this must be shown in a long term strategy. Table 5.10 indicates that interviewees agreed that strategy and awareness are most important to implement e-government initiative. The Director of IT Department answer was:

> *"There are no full awareness and understanding of e-government among leaderships at the top e-government project management level. Also, CAIT has no clear strategy to be employed." (Interviewee-B2-17)*

A manager from the IT Department said that:

> *"Yes, there is a clear strategy to be applied and there is consciousness too, but there are no permanent follow-up to all e-projects." (Interviewee-B4-17 April, 2011)*

By researcher observation, in this institution, work on e-government program is very weak and has no attention. Frankly, there is nothing clear about the work on the project of e-government at all levels of this government institution. According to the Director of Research Department in PAAET:

> *"I do not know about the work of e-government at the state level. But at the level of our agency, the strategy and awareness of the importance of e-government is very weak." (Interviewee-B10-17)*

5.3.4.1.5 Political desire/support

It appears from table 5.10 that interviewees share the same perception that political will and support is most important for the e-government initiative in the first and last phases of the implementation. They reported that there is political desire and support all the time. The Director of the IT Department's answer was:

> *"Yes, there is desire and support, the government has spent millions on electronic government projects and is still continuing." (Interviewee-B2-18)*

The Head of Operation and Technical Support reported that:

> *"Political leaderships have the will and provide full support for all needs of e-government projects, but following-up this program is weak." (Interviewee-B8-18)*

Political desire and support is essential; however, the middle management should be ready and able to implement e-government initiatives. The Director of the Department Faculty members and Training reported that:

> *"We hear that there is a desire and support from the top political leaderships to implement e-government initiatives, but the problem is in the middle management leaders responsible for the implementation." (Interviewee-B9-18)*

5.3.4.1.6 Legacy Systems Upgrade

It appears from table 5.10 that interviewees share the same perception that legacy systems upgrade is not needed for the e-government initiative implementation. They reported that there are few e-government initiatives implemented and the current maturity level of systems can hold more. The Director of the IT Department said:

> *"Yes, there are capable systems that need no upgrade to start implementing e-government initiatives. We have no legacy systems." (Interviewee-B2-18)*

The Head of Operation and Technical Support reported that:

> *"The Political leadership's support us for all needs to implement e-government projects, but we currently have new and reliable systems." (Interviewee-B8-18)*

According to the interviewees, upgrading the systems is not essential. The systems are ready and capable for e-government initiatives. The Director of the Department Faculty members and Training reported that:

> *"Our systems are regularly updated and upgraded if necessary. But, currently, we have systems capable to hold any e-government initiatives intended to be implemented." (Interviewee-B9-18)*

5.3.4.2 Implementation Factors: Development Phase

This is the second phase to implement e-government initiative. This phase starts after the completion and successful end of the first one, pre-implementation. The most responsibilities in this phase lay on the initiative developers in the IT department and/or the outsourcing. This phase is also affected by some factors that influence the stakeholders during implementation. These factors are discussed in the following sections.

5.3.4.2.1 BPR

According to the empirical data interpreted (table 5.10), BPR is especially most important at the implementation phase. All interviewees agreed that BPR has to be accurate and suitable for the e-government initiative intended to be implemented. Also, they reported that BPR must not be built on existing manual workflow steps. The Director of IT Department stated that:

> *"Process re-engineering incorrectly lead to the lack of success of the initiative. There are always mistakes in the process re-engineering." (Interviewee-B2-10)*

A manager from the Department of Coordination of special courses reported that:

> *"Yes, the lack of properly re-engineering procedures can affect the implementation of e-service successfully and correctly." (Interviewee-B3-10)*

BPR procedures must be done properly. It is necessary not to build e-service on the same previous system steps. For example, if there are seven steps in the workflow process it should not be programmed as is, but should reduce and eliminate unnecessary steps when building any online service. Procedures must be improved before starting implementation. Automation of procedures and quality in business process re-engineering is the basis for the success of any e-initiative implementation. In addition, lack of cooperation and lack of staff experience can lead to many mistakes in the business process re-engineering. A manager from the Department of Measurement and Evaluation and Professional Development added that:

> *"There were some difficulties, but our cooperation with the Department of Information Technology closely helped to overcome these problems." (Interviewee-B7-10)*

5.3.4.2.2 IT qualified staff

Most of the IT employees (table 5.10) in the IT department in this organization are only familiar with the mainframe systems. Also, there is competition between government and private sector over IT qualified individuals. This led to a severe shortage of IT employees in government organizations which caused delay in e-government initiative implementation. This also forced government departments to depend on private sector especially larger e-government initiatives. The Director of IT Department stated:

> *"There are varying levels, and we suffer from leakage of competencies which affects the work and make imbalances occur consistently." (Interviewee-B2-19)*

In the other departments, interviewees said that their employees IT skills are good enough to adopt e-government initiatives. The Director of the Department of Measurement and Evaluation and Professional Development said that:

> *"Our employees have the technological capabilities and ready for switching to e-government directly." (Interviewee-B6-19)*

A manager from the Department of Measurement and Evaluation and Professional Development added that:

> *"We have familiar staff with the information technology which greatly helps to adopt e-initiatives faster." (Interviewee-B7-19)*

5.3.4.2.3 Resistance to change

Resistance (table 5.10) to change is a common challenging factor when implementing e-government initiatives. Although there are limited e-government initiatives offered by this organization, interviewees reported that resistance to change is not an obsession except that few officials might resist in order to maintain power. The Dean of Admission and Registration reported that:

> *"We overcome this problem gradually to avoid the shock of change through getting them involved in implementation as well as providing financial benefits." (Interviewee-B5-11)*

A manager from the Department of Measurement and Evaluation and Professional Development added that:

> *"We put our staff at the status quo and tell them that this is the work from now on and we must accept the new situation. In fact, we do not have resistance to the contrary; there is happiness to convert to the electronic environment among our employees." (Interviewee-B7-11)*

On the other hand, many interviewees said that everybody is looking forward to seeing e-government initiatives implemented as soon as possible. Employees already know and are aware of the benefits that e-government initiative will bring to the work environment. The Director of the Department Faculty members and Training reported that:

> *"No resistance, everyone demand and wants to use e-service." (Interviewee-B9-11)*

5.3.4.2.4 Cooperation

Cooperation (5.9) between all stakeholders with regard to implementing e-government initiative is very important especially at the implementation phase. There are three kinds of cooperation, agency to agency, department to department, and agency to CAIT. In the following subsections, the researcher will investigate the cooperation among stakeholders.

	Cooperation		
PAAET	**Strong**	**Acceptable**	**Weak**
Department to IT department		✓	
IT department to CAIT		✓	
Department to CAIT			✓
Department to Department			✓
Department to other Agency Department			✓

Table 5.9 PAAET Stakeholders Cooperation

5.3.4.2.4.1 Cooperation between Agency and other Agency

Cooperation is a critical factor when developing an e-government initiative. Stakeholders must cooperate with each other to bring any initiative to reality. There are two types of cooperation; in this section agency to agency cooperation will be discussed. The Director of IT Department answer was:

> *"There is cooperation which is very important, but we look forward to more cooperation and transparency cross-agency to increase the work efficiency with regards to e-government initiative implementation." (Interviewee-B2-7)*

Currently, no agency to agency cooperation exists in this organization because there is no e-government initiative that requires such cooperation. However, some of the departments are in the process of planning to implement their e-government initiative that needs other organizations cooperation. The Director of the Department of Measurement and Evaluation and Professional Development said that:

> *"So far, we do not need cooperation between us. We have no e-services that require cooperation with other departments." (Interviewee-B6-7)*

The Head of Operation and Technical Support reported that:

> *"Currently, there is no cooperation due to the lack of e-services which require this. But if any, cooperation becomes very necessary in order to have successful online services." (Interviewee-B8-7)*

5.3.4.2.4.2 Cooperation between Department and other Department

This is an academic organization that has many professional people in various disciplines. However, there is no cooperation or relationships among the departments to implement e-government initiatives. The Director of the Department of Measurement and Evaluation and Professional Development said that:

> *"Cooperation is weak and does not rise to the level of our ambitions." (Interviewee-B6-22)*

According to the interviewees in the IT departments, departments are not willing to even think about e-government initiatives. Although the IT department offers their help in this regard, most of the departments refuse to cooperate. One reason that departments are not cooperating could be the frequent change of the departments' leaders. The Head of Operation and Technical Support reported that:

> *"Cooperation is very weak because of the reluctance of other departments and their unwillingness to build e-services." (Interviewee-B8-22)*

The Director of the Department faculty members and training reported that:

> *"There is currently no cooperation because there are no e-services require that." (Interviewee-B9-22)*

5.3.4.2.5 Enforcement/Reward system

According to table 5.10, interviewees agreed that this system is most important in the post-implementation phase. This system can be used to increasing workers participation and productivity. In observations, this system is not applied in most departments. Therefore, employees and also leaders are unwilling to take responsibilities and participate in new e-government initiative development. The manager from the Department of Scholarship and Cultural Relations said:

> *"Yes, this principle is important and we use it. It helps to succeed at work. There are excellent rewards for those who do not miss work and work hard." (Interviewee-B1-14)*

Until this system is applied truly, e-government initiatives will not be implemented the way they should be and progress will also be slow. The Director of IT Department stated:

> *"Yes, in my opinion, this is a very important principle which made the private sector is better than the public sector significantly." (Interviewee-B2-14)*

A manager from the IT Department said that:

> *"Yes, this system will greatly help in the successful implementation of e-government initiatives. However, we cannot apply it because of the widely spread nepotism in Kuwait" (Interviewee-B4-14)*

This principle is very important and helps maintain success in the work, but difficult to apply in Kuwait because of nepotism. This principle is not applied and will not be effective even if it is applied because of nepotism and cronyism that prevalent in all the state institutions.

5.3.4.2.6 Corruption

Most of the interviewees (table 5.10) in this organization reported that there is no corruption. Interviewees denied that there is corruption because all organizations activities are monitored by many governmental authorities and there is transparency in their work. This led to an increase in the e-government initiative implementation. The Director of IT Department stated:

> *"There is no corruption and the work on e-government initiative implementation was not affected." (Interviewee-B2-19)*

In addition, interviewees said that although there is less awareness of the importance of e-government initiatives, there is no proof of corruption in this organization. The Director of the Department of Measurement and Evaluation and Professional Development said that:

> *"I did not see any corruption in the departments of this organization." (Interviewee-B6-19)*

5.3.4.3 Post-Implementation Factors: Deployment Phase

This is the e-government initiative post-implementation phase. It is the phase when the initiatives are offered to the public online. In this phase, there are factors that directly affect the e-government initiative development. These factors are discussed in the following sections.

5.3.4.3.1 Security and privacy

According to table 5.10, interviewees believe that security and privacy are most important only at the post-implementation phase. The manager from the Department of Scholarship and Cultural Relations said:

> *"Of course, we care so much. I refuse to work on any online service that is not safe and confidential to be used." (Interviewee-B1-21)*

A manager from the IT Department said that:

> *"Security and confidentiality must be provided during the development of electronic services." (Interviewee-B4-21)*

In this aspect, security and privacy are the most important factors that lead to the failure of e-government initiatives if not securely provided because government departments and citizens will not use insecure e-services. After putting the e-service on the state website portal, its adoption and success depends greatly on the degree of security and privacy to data. The Director of the Department Faculty members and Training reported that:

> *"The security and privacy of data is essential. We will not use any online service if it is not highly secure." (Interviewee-B9-21)*

5.3.4.3.2 IT Training

IT Training on e-government initiatives skills is becoming apparently important for employees and leaders involved in the work. Table 5.10 reveals that IT training is most important at the post-implementation phase. The Director of the IT Department's answer was:

> *"There is of paramount importance for the technological skills training not only at the level of employees, but managers must be trained as well." (Interviewee-B2-20)*

Training will help create awareness among employees and increase participation in e-government initiatives. Training can lead to quick adoption and reduce resistance. The Director of the Department of Measurement and Evaluation and Professional Development said that:

> *"Attention must be paid to training because it is the secret and the key to success when providing e-services." (Interviewee-B6-20)*

In another supportive opinion, a manager from the Department of Measurement and Evaluation and Professional Development added that:

> *"Staff training is ongoing which is necessary because the work is constantly evolving, especially with the use of the latest technology and also our new entry into the environment of e-government." (Interviewee-B7-20)*

5.3.4.3.3 Legislations/Regulations

Interviewees (see table 5.10) reported that legislations are most important in the post-implementation phase. Many departments stakeholders are not willing to risk their rights and data privacy to use e-government initiatives that not protected by legislation. The manager from the Department of Scholarship and Cultural Relations said:

> *"Legislations and regulations are very important and help to speed building electronic initiatives and use them. Absence of laws means that we will reject e-service and will not use it." (Interviewee-B1-13)*

The Director of IT Department answer was:

> *"Legislations are very important because some departments refuse to use e-government initiatives because of the lack of legal cover. This is the role of CAIT to rush in working on this side." (Interviewee-B2-13)*

According to most of the interviewees, legislations are not important for the pre-implementation and implementation phases of the e-government initiative. The Head of Operation and Technical Support reported that:

> *"Laws and regulations governing online electronic transactions are not important to the design and implementation phases. But it is the most important factor of success after the deployment of the e-services." (Interviewee-B8-13)*

5.3.4.3.4 Initiative priority

Empirical data interpretation (table 5.10) stated that e-government initiative is most important in the post-implementation phase. Interviewees reported that giving priority to the online e-government initiative will increase its credibility and success. The Director of IT Department stated:

> *"We always give priority for e-government initiatives and insist on using it." (Interviewee-B2-23)*

Some interviewees said that they would continue working with the two systems in parallel for some time. However, the e-government initiative will be given the priority. The Director of the Department of Measurement and Evaluation and Professional Development said that:

> *"E-service has been completely adopted after giving an opportunity to work on the two systems for a period of 6 months." (Interviewee-B6-23)*

A different opinion suggests that e-government initiative must be given the priority immediately to help make it successful and force both employees and customers using it. A manager from the Department of Measurement and Evaluation and Professional Development added that:

> *"After placing the e-service on the website portal, it should be given the priority to help in its success. We are now using our electronic service only, and with 100% success." (Interviewee-B7-23)*

Before starting to map the factors on the initiative implementation cycle, the interviewees were asked how important the factor were to them and in what phase is

it important the most. The table (5.10) below provides the analysis of the factors in the three initiative implementation phases based on the views from the interviewees.

	Case Study Two – Public Authority for Applied Education and Training (PAAET)	Per-implementation	Implementation	Post-Implementation
Factors	Leadership	●	●	●
	IT Infrastructure	●	●	●
	Financial/Cost/Budget	●	◉	○
	Strategy/Awareness	●	◉	●
	Political desire/support	●	○	●
	Legacy Systems Upgrade	○	○	○
	BPR	◉	●	○
	IT qualified staff	◉	●	○
	Resistance to change	○	●	◉
	Cooperation	●	●	●
	Enforcement/Reward system	○	◉	●
	Corruption	○	○	○
	Security and privacy	○	◉	●
	IT Training	○	◉	●
	Legislations/Regulations	○	○	●
	Political Power	●	◉	●
	Scope	●	●	●
	Documentary Cycle	●	◉	○
	Initiative priority	○	◉	●

Table 5.10 Validation of the Factors Influencing Development Phases of E-government Initiative in PAAET

5.4 Case Study Three – Central Agency for Information Technology (CAIT)

5.4.1 Background to CAIT

The Central Agency for Information Technology, CAIT was selected as a case study because it is the Kuwait e-government administration agency. CAIT's Responsibilities - Decree 266 of 2006: the establishment of The Central Agency for Information Technology, with the following objectives and responsibilities:

- The development of plans and policies for Information Technology at a National Level.
- The supervision of the activities in executing the plans and projects for the Electronic Government in coordination with Ministries and Government establishments.
- The laying of the required standards and methodologies for information technology systems and equipment.
- The founding and management of the Kuwait Government online portal.
- The training of technical personnel working in Information Technology fields and developing their capabilities.
- Developing the public awareness of Information Technology and its uses in many aspects of the community.

In 2004, Kuwait signed a "Memorandum of Understanding" with the Government of the Republic of Singapore for the purpose of coordination in E-Government Project Implementation in the State of Kuwait. Singapore recommends that the State of Kuwait should adopt the centralized e-government approach because of the small size of the State and its political system. The first and immediate suggestion was to establish a central agency for information technology responsible of the e-government

project in general, and to be given full support and power from the government. The blueprint also suggests that Kuwait e-government has to be administratively centralized and e-initiative development decentralized. A centralized approach means the e-government project is managed by one public agency that should establish and control a one-stop portal. The Central Agency for Information Technology is the agency controlling Kuwait e-government project. All other agencies must work with CAIT to publish their e-service on the state one-stop portal.

In the centralized approach there are three government entities, stakeholders, who must work together to develop any e-government initiative. These stakeholders are the e-government project administration, IT department and other departments in organizations.

5.4.2 Stakeholders of E-government Initiative Implementation

In order to identify the e-government initiative implementers, the author of this thesis asked the interviewees to identify all those who are responsible to implement e-government initiatives in the State.

CAIT is responsible for the e-service after putting them on the one-stop portal, and various government departments are responsible for the transfer of services to electronic services with IT departments in their organizations. The manager of e-government web portal added that:

> *"The government organizations departments, their information centres and the Centre for Information Technology." (Interviewee-C4-1)*

The Manager of National e-projects and Planning Department reported that:

> *"CAIT, and the beneficiary department, and the IT centre in that agency." (Interviewee-C7-1 April, 2011)*

The Director General of CAIT said that:

> *"Departments in state institutions, and IT departments in the same institutions, and CAIT." (Interviewee-C8-1)*

5.4.2.1 Stakeholders Relationships

This section aims to measure the relationship among the stakeholders responsible for implementing e-government initiatives. All interviewees believe that stakeholders' relationship is important for implementing e-government initiatives successfully and efficiently. The Deputy Director General for Information Technology said that:

> *"There is a strong and continuous relationship, and this helps the success of the e-government initiatives implementation." (Interviewee-C1-2)*

Relationships between stakeholders are very important in all stages of e-government initiative development. The Team Leader of Technical Emergency in the IT department said that:

> *"If there are no cooperation and presence of a strong and continuous relationship between the three parties then we will not see any success to any online service." (Interviewee-C3-2)*

The Director General of CAIT said that:

> *"No success to any online service without an existence of a close collaborative relationship between all parties." (Interviewee-C8-2)*

It is very important to maintain a close relationship between all parties responsible for the construction of e-services from the beginning and even after placing the e-service on the one-stop portal. Cooperation and relationships must continue as long as the e-service exists.

5.4.3 Phases of E-government Initiative Implementation

Understanding the phases that e-government initiative implementation goes through is critically important for the success of the initiative. The manager of e-government web portal added that:

> *"First, a request to develop an e-service is sent to the information technology department from the beneficiary department at the same organization, and then the IT department in the same agency implements that e-service using our standards and specifications. We then place the e-service on the one-stop portal." (Interviewee-C4-3)*

The Operation Manager of Kuwait Information Network (KIN) said that:

> *"First, agencies departments send a request to their IT department in the institution itself to develop an online service. Second, the IT department then implements the e-service. Finally, IT department communicate with the Central Agency for Information Technology to put the e-service on the one-stop portal." (Interviewee-C6-3)*

It is important that each stakeholder knows their role and responsibilities during the implementation process of the e-government initiative. Stakeholders' relationship and cooperation is essential for any e-government initiative. The Director General of CAIT said that:

> *"We initially put the standards and specifications. Agencies follow our instructions to implement their e-services, and then we put them on the one-stop portal." (Interviewee-C8-3)*

The interviewees in this agency identified the implementation phases of the e-government initiative implementation. They reported that the first phase is when one government department asks the IT department in the ministry to implement an online service. After the IT department builds that e-service they should give it to the Central Agency for Information Technology to place it on the one-stop portal and manage it.

- **The Starting Point of E-government Initiative Implementation Process**

To understand the implementation phases of e-government initiative, the researcher asked the interviewees a question about the starting point of e-government initiative implementation process. The Manager of National e-projects and Planning Department reported that:

> *"It should be started from the beneficiary department first." (Interviewee-C7-5)*

It seems that all the interviewees agreed that most of the e-government initiatives should be started from the department that own the initiative. This means that awareness of the importance of the e-government initiatives must be spread among government organizations. A consultant of the higher management team said:

> *"It begins when departments of government agencies contact the department of information technology to request a construction of e-services." (Interviewee-C9-5)*

A Consultant from the Database Management Department reported that:

> *"It begins when one of the government departments sends a request to the IT department in the same organization asking for an online service development." (Interviewee-C10-5)*

- **The Hardest E-government Implementation Phase.**

For more understanding, the author of this thesis asked another question about the hardest phase of e-government initiative implementation. Each interviewee answered from his/her perspective. The interviewees answered the question differently. The Team Leader of Technical Emergency in the IT department said that:

> *"The final phase is the hardest and most important to the success of the e-initiative because of its sensitivity at the beginning and the need for continued cooperation between us and the beneficiary department." (Interviewee-C3-6)*

The Manager of Kuwait Information Network (KIN) said that:

> *"Implementation stage is the most difficult because it is long and you need the cooperation of all parties with the developers especially when testing the BPR." (Interviewee-C5-6)*

The Manager of National e-projects and Planning Department reported that:

> *"The first phase is the most difficult because public agencies must contact us first to take the standards and specifications to construct any e-service, and then to determine the appropriate budget and building the IT infrastructure." (Interviewee-C7-6)*

The differences in the interviewees' answers indicate that e-government initiative phases of implementation are all important. It has become clear that stakeholders must treat all phases of implementation equally. The Director General of CAIT said that:

> *"The implementation phase may be the most difficult because of the importance of the cooperation of all parties with the e-service developers." (Interviewee-C8-6)*

A Consultant from the Database Management Department reported that:

> *"Implementation phase is the most important because of the difficulty in finding IT skilled staff, and the importance of cooperation between government departments and those who are building e-services." (Interviewee-C10-6)*

5.4.4 Cycle Process: Factors Influencing E-government Initiative Implementation

The internal e-government initiative implementation goes through three development phases (see Chapter 3). The implementation phases are the cycle process to any e-government initiative implementation. The above sub-sections proved that any e-government initiative development must go through three phases: per-implementation (design phase), implementation (development phase), and post-implementation (deployment phase). In the next sub-sections, the researcher will identify the major influencing factors to each development phase.

5.4.4.1 Pre-implementation Factors: Design Phase

As described in the framework of this thesis, e-government goes through three development phases. Stakeholders are influenced by group of factors during e-government initiative implementation. According to the framework, these factors were distributed to the development phases according to their importance in that

phase. This phase is the first e-government initiative development phase. The factors of this phase discussed in the following sections.

5.4.4.1.1 Leadership

In interpreting the empirical data (see table 5.12) it appears that the interviewees almost all shared the same perceptions regarding the importance of leadership as the first and most important factor that influences internal stakeholders during all implementation phases of e-government initiative. In this agency, interviewees agreed that leadership is most important in all phases of initiative implementation. The Deputy Director General for Information Technology said that:

> *"Of course, the successful leader is a key factor for the success of any e-government project and at all implementation phases, and there is a strong need for electronic project leaders who are few in the world." (Interviewee-C1-16)*

The Manager of Kuwait Information Network (KIN) said that:

> *"Frankly, there is a severe shortage in the leadership of electronic projects at all levels in the country. Many of the current leaders lack the technological efficiency, which disrupts or lead to project failure or delay." (Interviewee-C5-16)*

Interviewees in this agency believe that many leaders lack technological skills and expertise in managing electronic projects. Leaders are needed at all phases of e-government initiative implementation. There is a severe shortage in the number of IT leaders, and this greatly affects the speed of the transition to electronic government. E-government projects in particular need leaders who are familiar with management skills as well as IT skills. In fact, there is serious shortage of leaders to manage e-government projects. The Director General of CAIT said that:

> *"Strong and successful leader is very important to the success of electronic projects, and we are offering annual sessions in London, Singapore etc for the top leaders in ministries to increase their*

awareness to accept transition to electronic government." (Interviewee-C8-16)

5.4.4.1.2 IT Infrastructure

One of CAIT's major roles is to supply an advanced infrastructure that is secure and reliable to connect the government organizations and departments to exchange information. According to CAIT documentation, in the last three years Kuwait spent millions on the Kuwait Information Network (Fig 5.2) which is now ready for use. Currently, all government organizations can access the KIN to offer their initiative and communicate securely. The Deputy Director General for Information Technology said that:

"IT infrastructure is the most important factor for building e-government. We have full uptime and the latest technological structure developed to link all the state institutions by the latest technology, but some government agencies IT infrastructure need to be updated." (Interviewee-C1-12)

CAIT have come to the readiness to link all the state institutions in an internal network fully secured (KIN). However, some of the institutions are still developing their technological infrastructure. The real e-government initiative implementation starts with a capable and advanced IT infrastructure (table 5.12). IT infrastructure is the backbone to the success of e-government initiative implementation. The Manager of Kuwait Information Network (KIN) said that:

"IT infrastructure is the backbone to implement e-government initiatives; it is in a sustained improvement at the state level." (Interviewee-C5-12)

The Director General of CAIT said that KIN provide a secure network infrastructure for the government entities and will improve the delivery of information and services. KIN will bring cost savings to the participating agencies and will bring more efficient methods of communication among agencies.

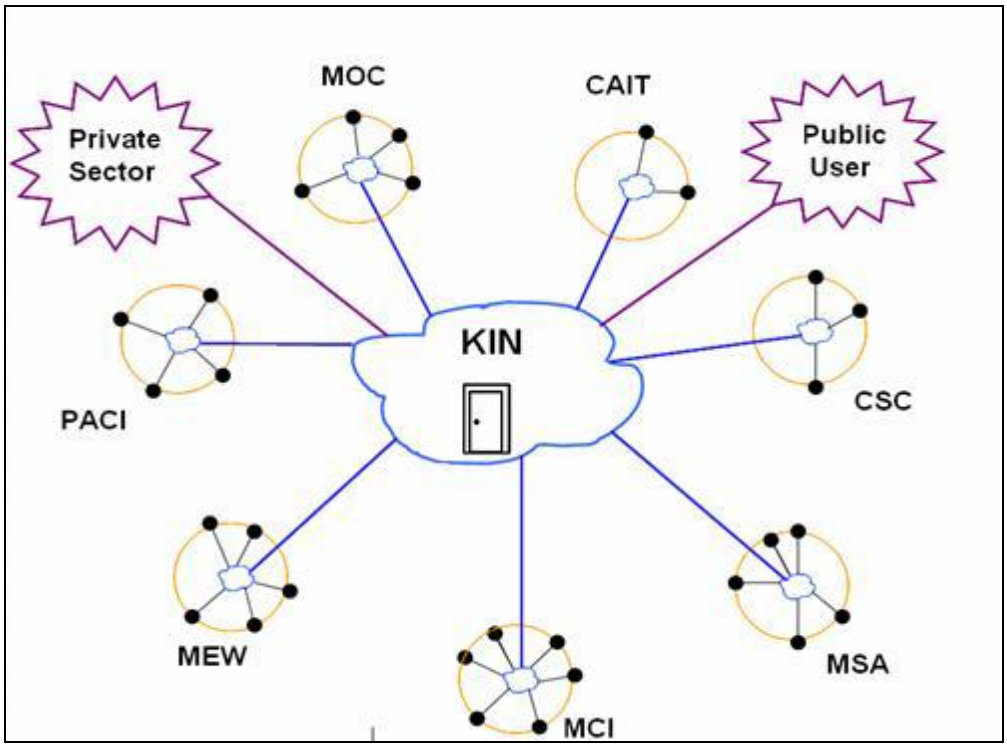


Figure 5.2 Kuwait Information Network (KIN)

As a new network, Kuwait Information Network (KIN) will enable Government Agencies (GA) to share information through a capable centralized secure voice and data network. In addition, it makes technical guidelines in areas that are relatively inarguable. KIN will also enable government agencies to share information securely at higher speeds and more cost efficiency. The shared network will improve the delivery of information and services to the State of Kuwait. KIN will be the Backbone network for the E-Government in Kuwait. It will also connect all the country networks to be the online G2G, G2C, and G2B services infrastructure. KIN infrastructure will allow applications distributed among GA computer networks to share and exchange information resources. In addition, whenever a new service is made available to any network that is connected to KIN, it can be made available to all other Government organizations.

5.4.4.1.3 Financial/Cost/Budget

As shown in table 5.12, all the interviewees believe that the finance for the e-government initiative implementation is most important in the first phase, less important in the second, and not important in the last phase. All interviewees including the interviewees in the previous case organizations agreed that the budget is eventually offered in full. However, the documentary cycle lasts longer than a year before it is received. All the interviewees have the same perception that this leads to a delay in implementing e-government initiatives in time. The Deputy Director General for Information Technology said that:

> *"Budgets are fully provided for any of the e-government projects, but the problem is in the long delay of the documentary cycle that might last for a year to get the budget." (Interviewee-C1-15)*

The Manager of the advisory services and technical support reported that:

> *"Yes, we had to postpone the building of some e-government projects due to the long delay in receiving budgets." (Interviewee-C2-15)*

The Director Manager said that there is a promise from the political leaders in the country to speed up the process of getting the budget needed in a shorter period of time. In addition, he claimed that failure to provide the required budgets in time especially for the state level projects would lead to delays in the implementation of e-government smaller projects. The Team Leader of Technical Emergency in the IT department said that:

> *"Eventually budgets are provided fully but the procedures for obtaining them, which extend to more than a year is leading to a delay in implementing e-government initiatives." (Interviewee-C3-15)*

5.4.4.1.4 Strategy/Awareness

According to the interviewees (table 5.12), awareness of the e-government initiative implementation is high in this agency. This agency was established to lead and administrate the e-government project at State level. Therefore, there are strategies already formulated to lead the e-government project to its successful conclusion. The Manager of Kuwait Information Network (KIN) said that:

> *"There is a clear strategy at the state level, but strategies are missing on the level of many government institutions, as well as awareness." (Interviewee-C5-17)*

The Manager of National e-projects and Planning Department reported that:

> *"Yes, there is awareness and a strategy on which we work; but work is slow because of the difficulty of dealing with other governmental entities." (Interviewee-C7-17)*

According to CAIT documentation, there is memorandum of cooperation between the Sate of Kuwait and Singapore to set strategies for implementing the e-government project in Kuwait. Singapore was elected because it is a world leading country in the area of e-government. The Director General of CAIT said that:

> *"We have a clear strategy in which we developed in collaboration with Singapore. There is awareness of the importance of our work on this basis, but there is lack of awareness at other institutions in the state." (Interviewee-C8-17)*

5.4.4.1.5 Political desire/support

Interviewees agreed that political desire and support (table 5.12) are highly important for the implementation of e-government initiatives. However, interviewees do not share the same perceptions regarding this factor in particular. The Manager of E-government Web Portal added that:

> *"No encouragement or support, frankly, by the government, but on the level of our leaderships there are full desire and support to implement the e-government initiatives." (Interviewee-C4-18)*

The Manager of Kuwait Information Network (KIN) said that:

> *"Yes, at the level of political leadership, there is a desire and full support to speed up work on the implementation of e-government." (Interviewee-C5-18)*

Other interviewees such as the Director General of CAIT believe that there is political desire and support. However, he thinks that political desire and support by the government should be greater, he said that:

> *"There is true political will and full support for the projects of e-government, but we need greater support." (Interviewee-C8-18)*

5.4.4.1.6 Legacy Systems Upgrade

In interpreting the empirical data (see Table 5.12), it appears that the interviewees all shared the same perceptions regarding the legacy systems upgrade as a non-existing factor that affects e-government initiative implementation. In this agency, interviewees agreed that there are no legacy systems to upgrade. The Deputy Director General for Information Technology said that:

> *"This is not a concern factor for the success of any e-government initiative since all our systems are new and complete." (Interviewee-C1-16)*

The Manager of Kuwait Information Network (KIN) said that:

> *"Frankly, all our systems are technically advanced and ready for any e-government initiative implementation. We have the most advanced IT systems in the region." (Interviewee-C5-16)*

Interviewees in this agency believe that systems are advanced to hold all e-government initiative implementation at State level. This agency was established in 2006. Since then E-government IT infrastructure has developed rapidly at State level. Now, the IT infrastructure is complete and ready. In fact, there are many e-government initiatives online. The Director General of CAIT said that:

> *"All our systems are new and advanced, there are no* legacy systems*." (Interviewee-C8-16)*

5.4.4.2 Implementation Factors: Development Phase

This is the second phase of e-government initiative development and is the phase where e-government initiatives are implemented.

5.4.4.2.1 BPR

Table 5.12 revealed that BPR is important in the pre-implementation phase and most important in the implementation phase. According to the interviewees, it is very important to do the business process re-engineering properly, and this therefore helps to successfully implement e-initiatives. BPR is the responsibility of the department requesting e-service in cooperation with the department of IT in the same ministry. The Team Leader of Technical Emergency in the IT department said that:

> *"Yes, there are problems in having precise business process re-engineering because of the lack of cooperation by government agencies or the inability to convert it to procedures that can be converted to e-services." (Interviewee-C3-10)*

The Manager of E-government Web Portal added that:

> *"BPR is one of the most prominent problems in the development of e-services." (Interviewee-C4-10)*

Business process re-engineering is very important and one cause of its failure is the exceptions which is not true with electronic services. Some officials want to make e-services by employing exactly the same steps as traditional paper work. BPR is one of the most important factors for building e-services. It is not applied properly in Kuwait because of overlapping functions among the various departments and institutions in the country. This has been confirmed by the report from Singapore. This issue has become political. A consultant of higher management team said:

> *"Yes, there are always problems in the business process re-engineering which can be seen as soon as the implementation of e-services begins." (Interviewee-C9-10)*

There are many problems because of failure to produce BPR procedures correctly which leads to delay in completion of e-initiatives or sometimes failure. BPR is one of the major factors for building an e-service correctly and successfully. But unfortunately, this factor receives a lot less attention and always has a lot of problems.

5.4.4.2.2 IT qualified staff

Interpreted empirical data (table 5.12) indicated that IT qualified staff are most important in the pre-implementation and implementation phases. By observation, most of the employees at CAIT are newly employed and lack IT professionalism. The Deputy Director General for Information Technology said that:

> *"We have IT staff, but there is unending lack of qualified staff due to severe competition with the private sector." (Interviewee-C1-19)*

Similar to other case organizations, this agency has a shortage of staff with the technological efficiency, but not in the numbers of staff. This is a permanent problem. The reason is that they do not choose their newly employed staff, rather they are imposed on them by the civil service commission agency. The problem is that projects are increasing more quickly and they cannot be kept up with by current staff. The Director General of CAIT said that:

> *"We suffer from the lack of sufficient IT specialists at the level of the State, such as specialists in data security and networks, etc." (Interviewee-C8-19)*

From researcher observation, IT qualified employees in all institutions need a lot of attention, even at CAIT. The Manager of National e-projects and Planning Department reported that:

> *"Frankly, the skills level of staff in terms of information technology is weak and does not rise to the possibility of switching to e-government." (Interviewee-C7-19)*

5.4.4.2.3 Resistance to change

All interviewees agreed, as shown in table 5.12 that this factor affects e-government initiative implementation in all its development phases. Interviewees described resistance to change as an important factor to deal with in the three initiative development phases. According to the interviewees, resistance to change comes from both employees and officials. The Deputy Director General for Information Technology said that:

> *"Rejection is often by some officials because they try to retain power and authority. But, the rapid development in technology makes the resistance lower." (Interviewee-C1-11)*

The Manager of Kuwait Information Network (KIN) said that:

> *"Yes, this is a problem we face when dealing with government agencies. They often refuse to cooperate with us, especially top officials." (Interviewee-C5-11)*

Interviewees share the same perception that resistance to change is considered one of the challenging factors to implement e-government initiatives. The Director General of CAIT said that:

> *"Yes, however we try to clarify the importance of the shift to e-government by alerting officials and also with continuous training as well as involving them in electronic projects." (Interviewee-C8-11)*

5.4.4.2.4 Cooperation

It appears from table 5.12 that all interviewees believe that cooperation among all stakeholders is most important. The cooperation between CAIT and other government organizations is essential. Government organizations should cooperate with CAIT for their initiative implementation and online management. Cooperation is most important at all initiative development phases. The Manager of E-government Web Portal reported that:

> *"Cooperation is very important and we are facing some difficulty in dealing with some departments in the country because of the lack of understanding of how e-service work. One of the main problems is changing in the e-services on the sites of the institutions without updating it on the one-stop portal." (Interviewee-C4-7)*

Complaining about poor cooperation from his agency and other government agencies, the Director General of CAIT added that:

> *"There is cooperation, but not easily. There are cooperative departments and other mostly uncooperative." (Interviewee-C8-7)*

Because CAIT is the administration agency of the e-government project, the departments in CAIT need to work in close relationship more often. The stakeholders in CAIT departments cooperate with each other all the time for the success of e-government initiatives. The Deputy Director General for Information Technology said that:

> *"Yes, we are working as a team to overcome any obstacles facing e-government program. This has led to significant development in e-government project in Kuwait." (Interviewee-C1-22)*

In supporting to the Deputy Director General, the operation manager of Kuwait Information Network (KIN) said that:

> *"Yes, we are working as one team and that helps a lot to do the work quickly and avoid many of the obstacles." (Interviewee-C6-22)*

	Cooperation		
CAIT	**Strong**	**Acceptable**	**Weak**
Department to IT department	✓		
Department to Department	✓		
Department to other Agency Department		✓	

Table 5.11 CAIT Stakeholders Cooperation

5.4.4.2.5 Enforcement/Reward system

In interpreting the empirical data (table 5.12), it appears that the interviewees agreed that enforcement/reward system is important in the first and second phase and most

important in the last phase. The Director General believes that this system is important, but does not need to be applied currently because the e-government project is improving at a good pace. The Director General of CAIT said that:

> *"This principle is not applied currently, and not needed now because of the commitment of all employees to do their jobs." (Interviewee-C8-14)*

The Team Leader of Technical Emergency in the IT department said that:

> *"This principle is very important to secure the acceptance and the shift of staff to the new electronic environment. But, unfortunately, it is not implemented in our organization." (Interviewee-C3-14)*

In fact, one of the biggest reasons this system is not applied is probably because the leaders fear that their employees might move to another organization or to the private sector. This was supported by a leader in the KGO Portal Team, as he said that:

> *"This principle is poorly applied because of the many reasons that prevent using it. One of those reasons is that we fear that applying it could leads to staff loss to the private sector or other ministries." (Interviewee-C11-14)*

5.4.4.2.6 Corruption

All interviewees agreed, as shown in table 5.12, that this factor doesn't affect e-government initiative implementation because it doesn't exist. Interviewees reported that the government is monitoring the work in the organizations to detect and prevent any corruption. The Deputy Director General for Information Technology said that:

> *"Rejection is often by some officials because they try to retain power and authority. But, the rapid development in technology makes the resistance lower." (Interviewee-C1-11)*

The Director General of CAIT said that:

> *"Yes, however we try to clarify the importance of the shift to e-government by alerting officials and also with continuous training as well as involving them in electronic projects." (Interviewee-C8-11)*

5.4.4.3 Post-Implementation Factors: Deployment Phase

5.4.4.3.1 Security and privacy

Table 5.12 reveals that the interviewees share the same perceptions regarding the importance of the security and privacy only at the post-implementation phase of the e-government initiative. All interviewees agreed that security and privacy is a very important factor. The Deputy Director General for Information Technology said that:

> *"Security aspect is very important to accept and use e-services at the level of government, business and individual." (Interviewee-C1-21)*

Security and privacy of data is very important for government agencies, businesses and citizens. Security and confidentiality of data is essential to the success of e-initiatives and helps to persuade the various departments in the institutions of the State that all e-services are protected and secure. CAIT have full security of the electronic services offered online through the national network of information (KIN) that has three layers of protection. A consultant of higher management team said:

> *"Security and data privacy are important to the successful of e-services and that happens after the implementation of e-initiatives." (Interviewee-C9-21)*

A consultant from the Database Management Department reported that:

> *"This aspect is very important, especially after the placing the e-service on the web portal." (Interviewee-C10-21)*

Lack of security and data confidentiality are the main causes for success or failure of e-government initiative after placing it on the state one-stop portal.

5.4.4.3.2 IT Training

It appears (see table 5.12) that training employees to gain IT skills is less important in the per-implementation phase. However, it becomes important in the implementation phase as it takes longer to train employees on IT skills. All interviewees agreed that

IT training is most important in the post-implementation phase for the success of the e-government initiative. One important challenging factor after training the employees on IT skills is the transfer of staff to the private sector. We have plans and training programs at State level to train officials and employees in all sectors of the State as well as citizens. They do this in cooperation with international companies in the field of IT such as Microsoft. The Manager of advisory services and technical support reported that:

> *"We train our staff continuously with assistance of international companies, and this takes a lot of time. The problem is in the leakage of significant number of them to the private sector after they gain experience." (Interviewee-C2-20)*

During the interview, the Manager of National e-projects and Planning Department said that IT should not be limited to employees only but also their leaders in work. It is important that employees and their leaders know how to perform the job and deal with the e-government initiatives. He reported that:

> *"Staff must be trained on the latest technology, especially the leaders, to keep pace with the rapid development and to ensure the best implementation of the e-services." (Interviewee-C7-20)*

5.4.4.3.3 Legislations/Regulations

As shown in table 5.12, legislation and regulations are only important in the post-implementation phase. Laws and legislation governing online transactions is one of the biggest challenges that face e-government initiative implementation. E-services must have the legal foundations for reliable use and to protect all parties. Delay in having laws will lead to a delay in the use of e-services, but not building them. During e-government initiative implementation, stakeholders need legislation that protects their rights when cooperating with each other. A delay in the development of laws is

because the legislative session in Kuwait takes a long cycle. The Manager of advisory services and technical support reported that:

> *"Delay in development of laws and legislation regulating online services leads to a delay in implementation or lack of desire to use e-services." (Interviewee-C2-13)*

A leader in the KGO Portal Team said that legislations are not needed in the pre-implementation and implementation phases of e-government initiative. However, it is most important for the post-implementation phase, especially the digital signature law, as organizational departments will not cooperate with each other in exchanging information in back office without legislations that assure rights and organize communications. He reported that:

> *"Laws and legislations on online transactions do not affect the construction of e-services. However, it has a direct impact on the adoption and use of those e-services after deployment." (Interviewee-C11-13)*

The CAIT legislation team has already completed a draft law on online transactions especially the digital signature that is required for the G2G transactions. According to CAIT documentation, the draft law was completed in 2005. However, it was not passed by the government or the parliament at the time of writing this thesis.

5.4.4.3.4 Initiative Priority

This factor was raised by most of the interviewees as an important factor at the post-implementation phase as it appears in table 5.12. They all believe that if the department owning the e-government initiative did not give priority to the initiative after deploying, then it will fail. The Team Leader of Technical Emergency in the IT department said that:

> *"To avoid failure, e-service should take priority immediately after deployment." (Interviewee-C3-23)*

The Manager of Kuwait e-government one-stop Portal, Kuwait Government Online (KGO), reported that in the past few years many of the initiatives ended in failure after deploying because they were given less priority. However, currently we see that most of the recent e-government initiatives are successful because government organizations are starting to give more priority to their online initiatives. She said that:

> *"Most of the beneficiaries' agencies give priority to electronic services immediately." (Interviewee-C4-23)*

To help make e-government initiatives successful after deploying it to the country web portal, she added that organizational departments should do the following:

- Give priority to e-government initiatives immediately.
- Inform customers (e.g. citizens).
- Encourage customers to use online e-service.
- Increase confidence by using online service in front of customers during visit.

In summary, the table 5.12 provides the analysis of the factors in the three initiative implementation phases based on the views from the interviewees.

	Case Study Three – Central Agency for Information Technology (CAIT)	Per-implementation	Implementation	Post-Implementation
Factors	Leadership	●	●	●
	IT Infrastructure	●	●	●
	Financial/Cost/Budget	●	◉	○
	Strategy/Awareness	●	◉	◉
	Political desire/support	●	○	◉
	Legacy Systems Upgrade	○	○	○
	BPR	◉	●	○
	IT qualified staff	●	●	◉
	Resistance to change	◉	◉	◉
	Cooperation	●	●	●
	Enforcement/Reward system	◉	◉	●
	Corruption	○	○	○
	Security and privacy	○	○	●
	IT Training	○	◉	●
	Legislations/Regulations	○	○	●
	Political Power	●	○	●
	Scope	●	●	●
	Documentary Cycle	●	◉	○
	Initiative priority	○	○	●

Table 5.12 Validation of the Factors Influencing Development Phases of E-government Initiative in CAIT

5.4.5 Summary of Findings from All Case Studies

The analysis of empirical data collected, interviews and documentation in this case study confirmed the accuracy architecture of the proposed conceptual framework of the e-government initiative development that the researcher synthesized from the literature. The key findings are illustrated below.

- **Stakeholders of e-government initiative implementation:**

The empirical data gathered from the case study revealed that there are three main stakeholders responsible to implement any e-government initiative. The three stakeholders are:

  - The political stakeholders:

    The role of the political stakeholders is to draw the strategy of the e-government project, and supervise the development process by providing the instructions and restrictions to the other stakeholders.

  - The Organizational stakeholders:

    The role of organizational stakeholders, agency departments, is to draw a plan for transferring their services into e-service. Each department should decide what services they want to transfer in collaboration with the IT department in their agency.

  - The Technical stakeholders:

    The role of the Technical stakeholders, represented by the IT department, is to help the departments turning their services into e-service by offering their expertise and guidance.

- Stakeholders Relationships are important
  - Relationship between Departments and IT Department
  - Relationship between Agencies and CAIT
- Phases of e-government initiative implementation:

The information derived from the empirical data revealed that there are three phases of any e-government initiative development. The development phases of the e-government initiative are:

- Pre-implementation: The Design Phase

  This is the first phase of e-government initiative development. In this phase, stakeholders study the requirements and ability to build the e-service. It starts when a department sends a request to the IT department asking for an e-service to be built. There are five major factors influencing this phase. These factors are: leadership, IT infrastructure, Financial, Strategy, and Political desire and support.

- Implementation: The Development Phase

  This is the second phase of e-government initiative development. It starts after the successful end of the first phase. Although all stakeholders must work together, the IT department are the most responsible in this phase. This phases major factors are: BPR, IT qualified staff, resistance to change, cooperation, and enforcement/ reward system.

- Post-Implementation: The Deployment Phase

  This is the third and final phase. This phase starts when the e-service is deployed on the state one-stop portal. The beneficiary department operates its e-services in close collaboration with the one-stop administration agency. The major factors influencing this phase are: security/privacy, IT training, legislations, and initiative priority.

In all phases, stakeholders must work in close relationship 24/7 in order to maintain a successful e-service.

5.5 Conclusion

This chapter has analysed the role of internal stakeholders, factors and the implementation process of e-government initiative development in three government case studies in the State of Kuwait, namely the CAIT, MoF, and PAAET. CAIT is the e-government project administration agency in Kuwait. MoF and PAAET are public organizations that are actively developing e-government initiatives. For this study, empirical data were derived from various sources such as interviews, documentation and observation from these case organizations.

The empirical data collected from the three case study organizations proved that the proposed conceptual framework which consisted of the stakeholders, factors and the development phases were appropriate for the research context. As a result, the case study findings showed that the factors proposed in the conceptual framework have influenced the stakeholders during the e-government initiative implementation phases since these factors were precisely identified by the researcher as influencing the process of e-government initiative implementation in all case organizations. However, the full assessment and the modification of the proposed framework and the associated factors will be elaborated on in Chapter 6. The conclusions of the empirical data presented in this chapter are summarised below:

- The factors investigated in the three case studies were divided into strong, weak, and new factors. Legacy system upgrade was considered weak factor in the three case studies except few interviewees from PAAET only. Cooperation was considered a strong factor in all case studies. All interviewees in the three case

studies agreed that privacy/security and legislation/regulations factors were considered strong factors only at the post-implementation phase. The scope of the e-government project and each initiative is a new strong factor discovered in the research. All the factors will be discussed in Chapter 6.

- The empirical findings revealed that e-government initiative implementation process has gone through three phases. As a result, the implementation phases need support and closer collaboration from various internal stakeholders. In fact, the case organizations faced cooperation problems and lack of stakeholder's relationship while working with other government bodies.
- The findings from the empirical study illustrate that there are factors influencing e-government initiative implementation. New factors facing e-government initiative implementation that were not included in the conceptual framework proposed in Chapter 3 were identified by the empirical data presented and explored in this chapter and will be considered in the revised conceptual framework in Chapter 6.
- The findings from the case study organizations confirm that the role of internal various stakeholders are important to implement e-government initiatives. The stakeholders must understand their role and responsibilities. A close relationship among the stakeholders is important for any e-government initiative implementation. The interviewees in all case organizations agreed that stakeholder's relationship is important; however, the relationships among stakeholders are weak during initiative implementation.
- The findings from the case study organizations indicate that government organizations have continued to develop e-government initiatives with lack of relationships among responsible stakeholders. The result is highly complex and disaggregated e-government initiative architecture and implementation processes.

- Empirical evidence extracted from the case organizations suggest that mapping factors and stakeholders in each initiative implementation phase to present a new theoretical framework is important for stakeholders to understand their roles and responsibilities.

Modifications to the e-government initiative implementation framework based on the empirical findings presented in this chapter are carried out in Chapter 6.

Chapter 6: Revision and Validation of Concept Framework for E-government Initiative Implementation

Summary

This chapter will describe and discuss the data collected from the empirical study, mainly interviews, to understand the factors influencing the e-government initiative implementation and the relationships, roles and responsibilities of the internal stakeholders during the pre-implementation, implementation and post-implementation phases. This study presented and discussed the conceptual framework proposed in Chapter 3 for e-government initiative implementation. The framework consisted of three parts: the factors, stakeholders, and the cycle process of the e-government initiative implementation phases. For that purpose, empirical data collected from three case study organizations were presented and analysed in Chapter 5. To meet the aim of this thesis, this chapter aim is to validate the proposed conceptual framework to provide a frame of reference that can be used as a guiding tool for government officials and a research background for researchers in the e-government area. Evidence revealed from the empirical study will be taken into consideration in this chapter to revise the conceptual framework presented in Chapter 3. Details about the revision of the framework are discussed in the following subsections.

6.1 Introduction

Chapter 1 highlighted the problem facing the e-government initiative implementation, and the necessity to investigate this area. It became clear to the researcher when reviewing the literature that a theoretical framework for internal e-government initiative implementation is missing and should be developed to guide the internal government stakeholders in implementing their initiative successfully. Chapter 2 suggested focusing on the factors, stakeholders, and the implementation phases to understand the cycle process of implementing an e-government initiative. Since e-government initiatives are haphazardly implemented, factors, stakeholders and implementation phases should be mapped together to form a new holistic framework that guides the internal government stakeholders to develop e-government initiatives to the public. These research issues were addressed in Chapter 3 and a conceptual framework presented to explain how the e-government initiative should be managed and implemented.

The three main parts of the conceptual framework proposed for empirical investigation are: (i) the factors influencing the implementation of e-government initiative, (ii) the stakeholders' roles and responsibilities to successfully build the e-government initiative, (iii) the implementation phases that the initiative goes through. Finally, these three parts have to be connected together to form a new framework for e-government initiative implementation. Chapter 4 then justified the research methodology that was selected to test the proposed conceptual framework. As a result, the research methodology was applied in Chapter 5 to assess the conceptual framework presented in Chapter 3.

To meet the aim of this thesis this chapter seeks only to validate and revise the conceptual framework for e-government initiative implementation based on the

empirical data collected and analysed in Chapter 5. This chapter will then present a novel conceptual framework for e-government initiative implementation.

6.2 Lessons Learned from Case Studies

This section aims to provide a summary of the main findings presented in Chapter 5. The researcher studied the area of e-government initiative implementation in the case studies to: (1) test and validate the factors influencing e-government initiative during implementation, (2) test and validate internal e-government initiative stakeholders, (3) test and validate implementation cycle process phases, (4) mapping the factors to their related stakeholders on each different phase of the implementation process cycle. As a result, few changes of the conceptual framework proposed in Chapter 3 will consider adding and removing factors influencing the e-government initiative implementation derived from empirical data presented in Chapter 5. Hence, this thesis offers a broader understanding of the phenomenon of e-government initiative implementation. These lessons might be helpful to researchers and internal e-government stakeholders.

The lessons regarding e-government initiative implementation derived from the empirical data are summarized as follows:

- Due to the absence of a framework to guide internal stakeholders when implementing e-government initiatives, the implementation process in case study organizations varies. Empirical data in Chapter 5 indicated that e-government initiatives implemented in each case organization are different.
- In all cases, interviewees agreed that it is essential for all internal stakeholders to work in close relationship with each other in order to have a successful e-government initiative during the implementation phases, and eventually a successful e-government implementation.

- Empirical analysis of cases indicated that complexity of the e-government initiative implementation process is increasing gradually, one initiative after another. This leads to the necessity of a new internal e-government initiative implementation framework that guides stakeholders for efficient and straightforward work.
- Empirical data supported the fact that three implementation phases were sufficient and consistent for the process of internal e-government initiative implementation. Internal identified stakeholders and factors influencing each stakeholder at each development phase were also supported by the empirical data with few changes.
- There is a severe lack of IT qualified staff in all cases that mean organizations seek support from external entities (outsource). In fact, there are enough numbers of IT staff, but they are not IT qualified to build e-government initiative in-house. This is a high risk that costs the organizations high investments for initiative implementation. In order to avoid this risk, the organizations must train their IT staff or employ new practitioners with IT skills.
- The mapping of factors on implementation phases can support better understanding of the factors influencing e-government initiative implementation. This is important as it can make the internal stakeholder's roles and responsibilities clear and straightforward during the process of implementation.
- Emphasizing the importance of factors and stakeholders at e-government initiative implementation phases can further enhance the implementation process. Previously, in literature, the importance of mapping stakeholders and

factors was not recognized during the implementation of e-government initiative. This mapping can assist internal stakeholders in realizing and understanding the factors influencing e-government initiative during the implementation process.

- Empirical analysis revealed that each interviewee from each case organization has a relatively different conception while mapping the factors and the important roles of stakeholders at each implementation phase. These differences in views illustrate that the interviewees' look to the factors influencing each stakeholder in each implementation phase differently. This gives validation and indication that the holistic framework presented in Chapter 3 was essential for e-government initiative implementation.

6.3 Findings and Revised Conceptual Framework for E-government Initiative Implementation

After completing the empirical data analysis that was presented in Chapter 5, the process to review and improve the proposed conceptual framework has become possible with those findings. In the following sections, this chapter will review the identified internal factors influencing e-government initiative implementation, then the role of internal stakeholders, and the suggested implementation cycle process phases. Finally, the review takes an overview of the three case study organizations and the process of the e-government initiative implementation.

6.3.1 Findings and Revised E-government Initiative Factors

In this section, the study presents the findings of e-government initiative implementation factors derived from the case studies conducted in three organizations during interview discussions. These findings confirm the validation of the identified

factors including the new factors that are derived from the empirical data, and factors not affecting e-government initiative implementation process. As reported in Chapter 5, analysis of the empirical data illustrate that the factors proposed for internal e-government initiative implementation have been validated in the fieldwork. The researcher also derived new influential factors from the empirical research. These new factors also played an important role in the implementation process in the case organizations. All factors influencing e-government initiative implementation that will be in the revised framework are discussed and listed below.

- ***Leadership***

All of the interviewees agreed that leaders who are capable of managing the development process of e-government initiatives are needed. There are lacks of leaders who are able to ensure the success of electronic government initiatives in most of the public agencies. This was supported by Norris et al. (2001) and Chan et al. (2011) who argued that lack of strong leadership is considered a major challenge to e-government initiative. Interviewees reported that there is lack of leaders capable to lead e-government initiatives in most of the government organizations. This challenging factor can be seen especially in the PAAET case organization. PAAET does not only lack capable leaders, but also frequent changes in leader's positions in departments made the implementation process move slowly.

All interviewees, see table 6.1, agreed that political leader role is most important in the first phase of the e-government initiative development and gradually decrease in the following phases of implementation. On the other hand, leaders in government departments become most important in the last phase when the initiative deployed

online. The IT departments' leaders' role is most important in the implementation phase to supervise the cycle process of the initiative implementation.

		Initiative Implementation Phases		
	Case Organisation	**Pre-Implementation**	**Implementation**	**Post-Implementation**
Leadership	MoF	⦿	●	●
	PAAET	⦿	●	●
	CAIT	●	⦿	●

Table 6.1 Importance of Leadership Factor in Case Organizations

- ***IT infrastructure***

According to the empirical study analysis, IT infrastructure is an important factor for e-government initiative implementation at the three implementation phases. Sang et al. (2009) and Alshehri et al. (2012) reported that IT infrastructure is considered a major important factor that influences the success of e-government initiative implementation. The study of case organizations as mentioned in Chapter 5 indicated that IT infrastructure is an important factor for e-government initiative implementation. All stakeholders agreed that they need a reliable IT infrastructure especially in the implementation and post-implementation phases of e-government initiative implementation. Capable and reliable IT infrastructure can lead to a successful e-government initiative implementation (Al Nagi and Hamdan, 2009). Although there are much incompatible hardware and software in government organizations, the advanced newly established Kuwait Information Network (KIN) has made all departments integration possible. KIN provide a high speed and secure network to connect organizations departments with CAIT.

The Ministry of Finance has a capable IT infrastructure that can host all current and future e-government initiative. However, there is a discrepancy between State

agencies. Some of them are IT infrastructure ready while some still need to be updated. Lack of IT infrastructure can lead to delays in the e-government initiative implementation (Sarantis et al., 2011). Technology is no longer a problem as it was in the eighties, but the problem is on the human side (Luo, 2009). IT skilled employees are considered to be part of IT infrastructure. IT infrastructure is, no doubt, essential to the success of e-government initiative implementation. Hence, public agencies are still working hard to complete the construction of the IT infrastructure. Table 6.2 below illustrates the importance of IT infrastructure at the three case organizations in each initiative implementation phase.

		Initiative Implementation Phases		
	Case Organisation	**Pre-Implementation**	**Implementation**	**Post-Implementation**
IT Infrastructure	MoF	○	●	●
	PAAET	○	●	●
	CAIT	◉	●	●

Table 6.2 Importance of IT Infrastructure Factor in Case Organizations

- ***Financial/Budget***

Although the three case study organizations vary in the number of e-government initiatives implemented, the analysis of empirical data indicated that all interviewees agreed that finance is an important factor for e-government initiative development especially in the pre-implementation. This view is supported by (Norris et al., 2001; Eddowes, 2003; Lee et al., 2011; Dwivedi et al., 2012) who argued that lack of finance is considered a barrier to develop e-government initiative. Although it takes longer time, most of the interviewees reported that they get the budget needed for any project eventually. However, the problem is in the long documentation cycle that sometimes takes more than a year before receiving the budget. The interviewees from

the three case organizations said that finance is important in or before the implementation phase.

Interviewees, table 6.3, complain about the delay in process to approve budgets for e-government initiative. They claim that providing financial support in time could lead to faster implementation and increase the number of e-government initiatives in less time. Interviewees suggested that bureaucracy in this routine must be changed.

		Initiative Implementation Phases		
	Case Organisation	**Pre-Implementation**	**Implementation**	**Post-Implementation**
Financial	MoF	●	◉	○
	PAAET	●	●	○
	CAIT	●	◉	○

Table 6.3 Importance of Financial Factor in Case Organizations

- ***Strategy/Awareness***

The interpreted empirical data outlined in Chapter 5 indicated that implementation of e-government initiatives depends on awareness and clear strategy which depends on plans with adequate political support at the highest level to ensure the implementation of these strategies. Strategy and awareness are important for e-government initiative implementation. This was supported by literature studies such as the researchers Park (2008) and Alhomod et al. (2012) who reported that strategy and awareness are important factors to implement e-government initiatives. E-government implementation is faced with many obstacles, noting that any major project is not free of constraints, especially the issue of implementing an initiative that needs clear implementation strategies.

Also, e-government initiatives may be doubly implemented by government organizations unintentionally (Kifle et al., 2009). Stakeholders from the case study

organizations reported that strategy is important almost in all phases of the e-government initiative implementation, see table 6.4. In general, e-government initiatives need clear implementation strategies (Pardo et al., 2012; Sarantis et al., 2011). Finally, e-government strategies must be spread to all government organizations to work according to them.

		Initiative Implementation Phases		
	Case Organisation	**Pre-Implementation**	**Implementation**	**Post-Implementation**
Strategy/Awareness	MoF	●	●	⊙
	PAAET	●	●	⊙
	CAIT	●	●	●

Table 6.4 Importance of Strategy/Awareness Factor in Case Organizations

- ***Political desire/support***

Political desire is important to support e-government initiative implementation (Kifle et al., 2009). The empirical evidence derived from the empirical data indicates that this factor is important for the e-government initiative implementation in the three case study organizations. This factor is in accordance with the literature (Hanna, 2011; Hassan et al., 2011) who reported that political desire is an important factor for e-government initiative implementation.

The interviewees in the three case study organizations, table 6.5, reported that there is political desire and support. However, there is no follow up to the e-government initiative implementation. This factor can be more effective if there is a clear strategy. Political desire and support has to be confirmed by routinely monitoring the implementation process of e-government initiative. Interviewees in CAIT suggest that

they should be given more political power over the government organizations to push them to speed up their e-government initiatives implementation.

		Initiative Implementation Phases		
	Case Organisation	**Pre-Implementation**	**Implementation**	**Post-Implementation**
Political desire/support	MoF	●	◉	●
	PAAET	●	◉	●
	CAIT	●	●	●

Table 6.5 Importance of Political desire/support Factor in Case Organizations

- ***Legacy Systems Upgrade***

Although this factor was discussed as an important factor by many researchers in the literature (Bannister, 2005), legacy systems were non-existent in the case study organizations. Hence, it is not an influencing factor when implementing e-government initiatives. The empirical data indicated that systems are new and do not need upgrade. This is because all the public organizations in the State of Kuwait had established new IT infrastructure after the gulf war in 1990.

When interviewing the interviewees, it become clear to the researcher that the IT infrastructure in all the case studies are up to date and capable in offering e-government initiatives. This is because most if not all the government organizations have built new IT infrastructures after the Gulf war. Therefore, legacy system upgrade is not considered an influencing factor in Kuwait during the e-government initiative implementation.

Table 6.6 indicates that legacy system upgrade is not influencing e-government initiative implementation in the three case studies.

		Initiative Implementation Phases		
	Case Organisation	**Pre-Implementation**	**Implementation**	**Post-Implementation**
Legacy Systems Upgrade	MoF	○	○	○
	PAAET	○	○	○
	CAIT	○	○	○

Table 6.6 Importance of Legacy Systems Upgrade Factor in Case Organizations

- ***BPR***

E-government initiative implementation success depends highly on the BPR (Alghamdi et al., 2011; Weerakkody et al., 2011b). According to empirical data derived from the case study organization, BPR is the one of the most important factors for e-government initiative implementation. This is in accordance of the literature (Anthopoulos, 2011; Reinwald and Kræmmergaard, 2011) who reported that BPR is an important factor for e-government initiative implementation. It can be seen from the interpreted empirical data in Chapter 5 that BPR is most important particularly in the implementation phase, see table 6.7. To achieve a successful BPR, there are important points to be considered such as:

1. BPR must be supported by top management.
2. IT department must supervise and be involved in every step of the project.
3. The working team must include the manager and employees who perform the actual work.
4. BPR must focus on beneficiaries (business part) needs.

In addition, BPR should go through the following steps:

- Identify Service
- Analyse Service
- Redesign Service (eliminate unnecessary steps)
- Re-engineering Approval
- Re-engineering Implementation

		Initiative Implementation Phases		
	Case Organisation	**Pre-Implementation**	**Implementation**	**Post-Implementation**
BPR	MoF	○	●	○
	PAAET	○	●	○
	CAIT	◉	●	○

Table 6.7 Importance of BPR Factor in Case Organizations

- ***IT qualified staff***

Empirical findings indicated that the availability of IT qualified staff in the case study organizations is an important factor that may constrain or facilitate the introduction of new e-government initiative. This is supported in the literature as researchers reported that IT qualified staff is an important factor for implementing e-government initiative (Dias, 2011; Al-wazir and Zheng, 2012). According to the empirical data, IT qualified employees are important in the implementation and post-implementation phases. The interpreted empirical data (Chapter 5) indicated that government institutions and the private sector are always in competition to attract and dominate IT professionals. However, government organizations resources are limited and cannot compete with the private sector (Ebrahim and Irani, 2005). The empirical data revealed that IT qualified employees leakage to the private sector is considered one of the challenging factors. According to the interviewees (table 6.8) in the case study organizations, this can be solved by introducing/applying a reward system in government organizations.

		Initiative Implementation Phases		
	Case Organisation	**Pre-Implementation**	**Implementation**	**Post-Implementation**
IT qualified staff	MoF	◉	●	◉
	PAAET	◉	●	◉
	CAIT	●	●	●

Table 6.8 Importance of IT qualified staff Factor in Case Organizations

- ***Resistance to change***

In Chapter 5 the empirical data revealed that resistance to change is a factor that influences the e-government initiative implementation. This is in accordance with the work of (Ahn and Bretschneider, 2011; Bigdeli and Cesare, 2011) who said that resistance to change is an important factor that can hinder the implementation of e-government initiative. Resisting change by employees or officials is usually because of lack of desire to learn new methods in performing daily work or because of privacy and data security reasons. Officials and employees always put obstacles forward when they are surprised by a new system that may change the work environment (Alshehri and Drew, 2010). However, this is not the case in the case study organizations in this study as many interviewees reported that there are only slight resistance by some officials at the beginning but most of the employees are willing to adopt e-government initiatives, see table 6.9. In addition, interviewees said that most of the resistance happened in the pre-implementation phase because stakeholders are worried about the security and privacy of data in their departments. Interviewees agreed that factors such as legislation and IT training can guarantee the smooth implementation of e-government initiatives without any resistance from managers or employees. In fact, stakeholders' cooperation and government policies in the implementation of e-government initiatives will also help to overcome the difficulties of resistance to change.

		Initiative Implementation Phases		
	Case Organisation	**Pre-Implementation**	**Implementation**	**Post-Implementation**
Resistance to change	MoF	◉	○	○
	PAAET	◉	◉	◉
	CAIT	◉	○	○

Table 6.9 Importance of Resistance to change Factor in Case Organizations

- ***Cooperation***

Empirical data analysis outlined in Chapter 5 shows that cooperation is an important factor for e-government initiative implementation. Literature supported this as Li et al. (2011) and Gascó (2012) reported that cooperation between stakeholders when implementing e-government initiative is essential for its success. Interpreted empirical data pointed out that cooperation must run through the government organizations for the implementation of e-government initiatives. The Memorandum of Understanding between the State of Kuwait and the Republic of Singapore emphasized on cooperation among stakeholders to implement e-government initiatives. This factor, in particular, is important for the three phases of e-government initiative implementation. Interviewees reported that relationship and cooperation between stakeholders are always necessary.

According to the empirical data, there are four types of cooperation. First, the cooperation between a government department and the IT department in the same organization, this is the initialization and the first step in the process of e-government initiative implementation. Second, the cooperation between an IT department and CAIT, in this step both stakeholders discuss the requirements for implementing the e-government initiative. Third, various government departments should cooperate with each other if cooperation is required for implementing an initiative (Almarabeh and AbuAli, 2010). Finally, a government department cooperate with CAIT after deploying the initiative on the Kuwait Online Government gate (KGO). In table 6.10, empirical data from the three case study organizations revealed that cooperation is important in the three phases of the e-government initiative implementation.

		Initiative Implementation Phases		
	Case Organisation	**Pre-Implementation**	**Implementation**	**Post-Implementation**
Cooperation	MoF	●	●	●
	PAAET	●	●	●
	CAIT	●	●	●

Table 6.10 Importance of Cooperation Factor in Case Organizations

- ***Enforcement/Reward system***

Enforcement and reward system is a factor that can help improve the implementation process of e-government initiatives. Studies in literature (Al-Salti and Hackney, 2011; Vigoda-Gadot and Beeri, 2011) supported this as an important factor for e-government initiative implementation. Empirical data revealed that although this factor is important for implementing e-government initiatives, it is not applied in most of the government organizations. One of the reasons, as interviewees said, is the fear of employee's leakage to other organizations or to the private sector. Also, interviewees reported that this system is not effective in Kuwait due to nepotism in the government organizations. However, this factor is important especially in the implementation and post-implementation phases, see table 6.11.

		Initiative Implementation Phases		
	Case Organisation	**Pre-Implementation**	**Implementation**	**Post-Implementation**
Enforcement/Reward System	MoF	○	●	●
	PAAET	○	●	●
	CAIT	◉	●	●

Table 6.11 Importance of Enforcement/Reward System Factor in Case Organizations

- ***Corruption***

Because interviewees believed that corruption doesn't exist, this factor does not affect the implementation of e-government initiatives. The empirical data, table 6.12, revealed that this factor did not exist in the case study organizations.

		Initiative Implementation Phases		
	Case Organisation	**Pre-Implementation**	**Implementation**	**Post-Implementation**
Corruption	MoF	○	○	○
	PAAET	○	○	○
	CAIT	○	○	○

Table 6.12 Importance of Corruption Factor in Case Organizations

- ***Security and privacy***

E-government initiative implementation success depends on the level of data security and privacy. Interpreted empirical data identified this factor as an important factor during e-government initiative implementation also studies identified this factor as an important factor (Aladwani, 2011; Palanisamy and Mukerji, 2011). CAIT claim that this is not an issue to be concerned with any more because they have just launched a secure network (KIN) that can be used by all government organizations. Since this is a new network, many of the interviewees had not heard about it. According to all interviewees, table 6.13, this factor is most important in the post-implementation phase. Analysed empirical data revealed that stakeholders will never adopt an e-government initiative that lacks security and privacy. Security and privacy can increase trust among stakeholders during e-government initiative implementation process (Almarabeh and AbuAli, 2010).

		Initiative Implementation Phases		
	Case Organisation	**Pre-Implementation**	**Implementation**	**Post-Implementation**
Security and Privacy	MoF	○	●	●
	PAAET	○	●	●
	CAIT	◉	●	●

Table 6.13 Importance of Security and Privacy Factor in Case Organizations

- ***IT Training***

Training on technology leads to better understanding of e-government and helps prevent resistance. Empirical data, table 6.14, revealed that IT training is an important factor for e-government initiative implementation not only for employees but also officials such as managers (Alshehri and Drew, 2010). This is in accordance with the literature (Abdallah and Fan, 2012; Manoharan, 2012) which identified this as an important factor. CAIT claim that they have trained many citizens and government employees. Also, they said that they are cooperating with world leading companies in the field of technology such as Microsoft to offer courses of training on technology knowledge. IT training should be intensive for the employees of the department that is implementing an e-government initiative. Although most of the employees already have basic IT skills, as shown from empirical data in Chapter 5, stakeholders believe that more training is required.

		Initiative Implementation Phases		
	Case Organisation	**Pre-Implementation**	**Implementation**	**Post-Implementation**
IT Training	MoF	○	●	●
	PAAET	○	●	●
	CAIT	◉	●	●

Table 6.14 Importance of IT Training Factor in Case Organizations

- ***Legislations/Regulations***

E-government initiative implementation requires legislation to protect both implementers and users. This factor was supported in the literature (Dwivedi et al., 2012; Wangwe et al., 2012) which reported that legislation is an important factor for e-government initiative implementation. Empirical data, table 6.15, indicated that legislation such as digital signature is especially important for the success of post-implementation phase; however, it does not affect the implementation process. Legislation leads to initiative adoption and ensure provider and user rights (Lee et al., 2011). According to the empirical data, legislations are not needed during the pre-implementation and implementation phases. Interpreted empirical data suggest that there are two important laws for e-government, the law of electronic transactions and computer crimes law.

The first law is the law of electronic transactions to be offered for the first time in the history of governments which equalize the ordinary paper work with online transactions.

In fact, it makes all electronic transactions such as government services provided to citizens online, contracts for buying and selling and is legal across the Internet (Gajendra et al., 2012). The second law is the Informatics Crimes Act which is intended to protect electronic transactions and bring privacy and confidentiality to the exchange of online information. This law is intended to punish those who penetrate, or attempt to penetrate networks, and punish any attempt at privacy violation, and protects the computerized information, whether government information or private information.

		Initiative Implementation Phases		
	Case Organisation	**Pre-Implementation**	**Implementation**	**Post-Implementation**
Legislations/Regulations	MoF	○	○	●
	PAAET	○	○	●
	CAIT	○	○	●

Table 6.15 Importance of Legislations/Regulations Factor in Case Organizations

6.3.2 Findings and Revised E-government Initiative Stakeholders

- **Organization Departmental:**

According to the empirical findings from MoF and PAAET, the stakeholders in the two organizations departments reported that they only contact the IT department stakeholders in their organizations to request a new e-government initiative. In addition, the role of the department's stakeholders is to identify the service that they want to transfer to be an online service, and also to reengineer the business process of that service. The organization departments' stakeholders' relationship is only limited to the IT department stakeholders.

- **IT Department:** According to the empirical findings, the IT members in IT departments are responsible to implement e-government initiatives in the case study organizations. The IT department stakeholders are the coordinators between the various organization departments' stakeholders and the e-government administration agency stakeholders to get the information and the agreement for implementing the initiative. The main role of the IT department stakeholders is to develop the initiatives

for the organizations departments. The IT department stakeholders' main responsibility is to develop the initiatives in-house or seek to outsource for help.

- **Administration Agency**: According to the empirical findings, since there are no e-government leading teams in the case study organizations, the administration agency stakeholder's relationship is limited to the IT departments in the public organizations. The role of the administration agency stakeholders is to agree on the budget requested for implementing an initiative and also to help the developers, IT department stakeholders, by offering some guidelines and initiative requirements in order to be posted online. They are also responsible for privacy/security and to lead the whole e-government system.

The relationship of the stakeholders during e-government initiative implementation is illustrated in figure 6.1 below.

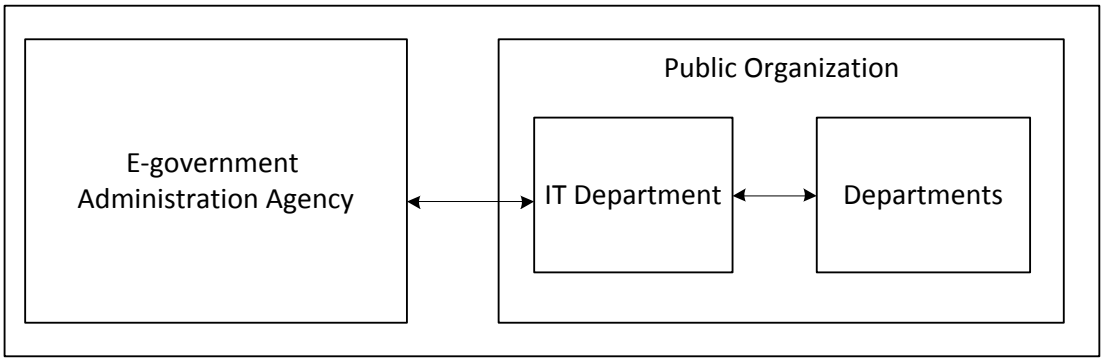


Figure 6.1 E-government Initiative Stakeholders Relationship

According to the empirical findings in the three case study organizations, there is a group of factors influencing each stakeholder, and are presented in the figure 6.2.

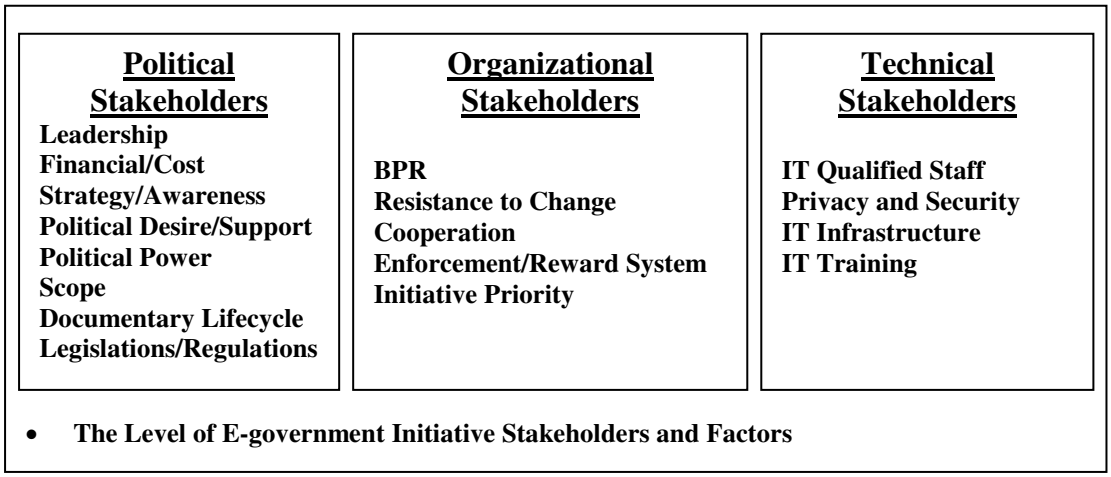


Figure 6.2 E-government Initiative Stakeholders and Influencing Factors

6.3.3 Empirically Revised Stakeholders and Influencing Factors

The empirical data analysis proved that there are three phases of implementation to e-government initiative. Stakeholders reported that the first phase (pre-implementation) has to be started by the beneficiary department. After the decision has been made by a department to convert a paper work service to an electronic one, this department contact the IT department in the same organization to discuss the ability and requirements for implementing that service. The IT departments then contact CAIT to ask for a budget and also discuss the specifications and standards to be applied on initiative implementation (implementation phase). The IT department implements the e-government initiative in-house or by outsourcing. After the initiative is implemented and tested successfully, the IT department sends it to CAIT to place it online. The third phase (post-implementation) is when the CAIT put the initiative on the country e-gate.

In addition, the factors influencing stakeholders were also distributed to the three phases of implementation. The researcher placed each factor in the phase where it affected the most with the result that each stakeholder will know what factor is

affecting him/her and in which implementation phase of e-government initiative. Each implementation phase with its related factors is shown in figure 6.3 below.

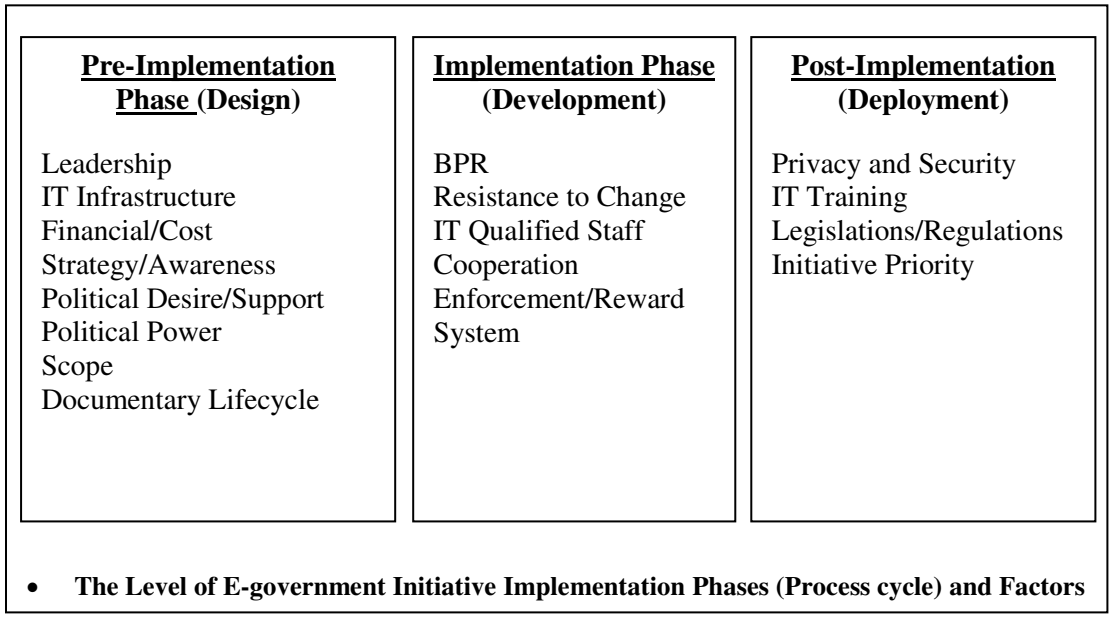


Figure 6.3 E-government Initiative Development Phases and Influencing Factors

6.3.3.1 Revising Existing E-government Initiative Development Factors from the Case Studies

In this section, the researcher revises the existing factors in Chapter 3 based on the empirical research conducted in the case study organizations. The table below shows the degree of the factors importance in each implementation phase and the stakeholders relationship needed for that phase.

During the interviews with the stakeholders in the three case studies, the researcher asked each interviewee to identify the relationships between the stakeholders during each implementation phase. Also, the researcher asked the interviewees to weigh the importance of factors in each implementation phase, see table 6.16.

Phases	Top Factors	Moderate Factors	Least Factors	Stakeholders Relationship
Pre-Implementation Phase	IT Infrastructure Cost Leadership Awareness/Strategy Political Desire/Support Scope Cooperation Political Power Documentary Cycle	BPR IT qualified staff Resistance to change Enforcement/Reward system	IT Training Legislates/ Regulations Initiative priority Security and Privacy	Departments – IT departments And IT Departments - CAIT
Implementation Phase	BPR Leadership IT qualified staff IT Infrastructure Scope Cooperation	Resistance to change Political Desire/Support IT Training Cost	Awareness/Strategy Initiative priority	IT Department - Department
Post-Implementation Phase	IT Infrastructure Data Security and Privacy IT Training Legislations Initiative priority Enforcement/Reward system	Leadership Political Desire/Support Cooperation Awareness/Strategy Scope	Cost BPR Documentary Cycle	Department - CAIT

Table 6.16 Classification of Factors Based on their Importance on the Initiative Implementation Phases

In the first phase, relationship of department to IT department and then IT department to CAIT is essential. In the implementation phase, the stakeholder's relationship is limited between the IT department and the business part department in the same organization. In the final phase of the e-government initiative implementation (post-implementation), the relationship should be stronger between the beneficiary department and CAIT.

6.3.3.2 New Factors Influencing E-government Initiative Implementation from the Case Studies

In this section, the study discusses the new factors identified by conducting empirical research in the three case study organizations.

E-government scope can be seen in the government one-stop web site portal and every single initiative. All government entities provide their e-services on that single web

site. E-government is a huge project that goes through development stages and initiatives. It is necessary to understand that there should be a scope of the government online electronic gate, the one-stop shopping portal, and a scope to every initiative and to work accordingly. E-government is a new phenomenon where many fields such as politics, management and technology look at it from their perspective. The Director General of CAIT said that:

> *"..... and there is another problem. We don't have a clear scope for the e-government projects. In fact, there should be a scope of e-government initiatives for each government organization and its departments. In addition, each e-government initiative scope must be identified before implementing it." (Interviewee-C8-14 April, 2011)*

The scope of the one-stop portal is the responsibility of top management. The government should have clear strategies and plans of the whole e-government project. They should create roadmaps for these projects and lead public agencies in the correct direction. The scope of e-government means taking into account all of the government activities in the real world, both in relation to public organizations and in relation to citizens and businesses, internal and external. It is important to examine the global scope of e-government, because the scope of government responsibilities typically increases with time (Evans and Yen, 2005).

The scope of individual initiatives is the responsibility of individual organizations. Organizations must give clear workflows to the developers who build the initiatives. Failing to clearly define an initiative's scope, from the start to end of business workflow, will lead to the project's failure. E-government services are offered to external and internal clients (Bhatnagar, 2004). External clients are citizens and businesses, while internal clients are government entities. The scope of e-government should be built gradually through the phases of implementation.

In summary, there are four types of scope in e-government implementation that must be identified and acknowledged during the per-implementation phase. These four types are scope of e-government e-gate, scope of online organization, scope of department, and scope of each initiative. It is the responsibility of stakeholders to identify these scopes for presenting better e-government. Hence, each scope must match the higher scope when implementing e-government initiatives. In this study, we identified this as a new factor and named it "nested scope."

Nested Scope: Nested Scope in e-government implementation is a new important factor empirically discovered by this research. For the level of e-government project administration, there should be a clear scope to the government itself and that should be represented in the one-stop portal of the country. Also, there should be a scope to each agency web site and its departments. Finally, any e-government initiative must have its clear scope of workflow process. Scope means the beginning to end process of workflow to any initiative and also the stakeholder's role in that initiative.

		Initiative Implementation Phases		
	Case Organisation	**Pre-Implementation**	**Implementation**	**Post-Implementation**
Scope	MoF	●	●	●
	PAAET	●	●	●
	CAIT	●	●	●

Table 6.17 Importance of Nested Scope Factor in Case Organizations

Political Power: The first new factor came from the case study on CAIT was "political power." The important of this factor came only from CAIT, see table 6.18. As an agency leading and administrating the e-government project on the level of the country, stakeholders in this agency emphasized that they need more political power

to enforce their strategy and the initiatives requirements needed to be met by public agencies when they start developing their initiative.

		Initiative Implementation Phases		
	Case Organisation	**Pre-Implementation**	**Implementation**	**Post-Implementation**
Political Power	MoF	◉	○	◉
	PAAET	◉	○	◉
	CAIT	●	●	●

Table 6.18 Importance of Political Power Factor in Case Organizations

Documentary Cycle: This is one of the new derived factors. The financial factor by itself is not a problem in case study organizations for the e-government initiative implementers. In Kuwait, they get the budget requested for any initiative. However, the bureaucracy in "documentary cycle" that lasts more than a year causes a long delay to implement e-government initiatives. Hence, documentary cycle is a new factor empirically discovered directly affecting the implementation process of e-government initiative in case study organizations which is most important in the pre-implementation phase table 6.19. This factor is different than bureaucracy mentioned in the literature. In Kuwait, there is one agency or higher committee that must approved the projects on the country level. According to the interviewees in the three cases, see table 6.19, this is not right and cause unnecessary delay.

		Initiative Implementation Phases		
	Case Organisation	**Pre-Implementation**	**Implementation**	**Post-Implementation**
Documentary Cycle	MoF	●	○	○
	PAAET	●	○	○
	CAIT	●	○	○

Table 6.19 Importance of Documentary Cycle Factor in Case Organizations

Initiative priority: This is one of the new derived factors. It became clear from the empirical analysis in Chapter 5 that initiative priority is important. At the final phase of an e-government initiative implementation, it is important that stakeholders give priority to the new electronic initiative over the traditional one in order to support it and increase its success. It is most important in the post-implementation phase.

		Initiative Implementation Phases		
	Case Organisation	**Pre-Implementation**	**Implementation**	**Post-Implementation**
Initiative priority	MoF	○	○	●
	PAAET	○	○	●
	CAIT	○	○	●

Table 6.20 Importance of Initiative priority Factor in Case Organizations

6.4 Revised Conceptual Framework for E-government Initiative Implementation

As discussed in Chapter 3, the proposed conceptual framework consisted of three parts, namely the factors part, the role of stakeholder's part, and the part of implementation phases, which represents the central part of the proposed framework. In Chapter 5, the empirical findings illustrate that the role of internal stakeholders, influencing factors, implementation phases, mapping of factors and stakeholders in each implementation phase had high importance during e-government initiative implementation process in the three case study organizations. Consequently, the researcher proposes that while exploring e-government initiative implementation process: (a) identification of influencing factors, (b) identification of internal stakeholders, (d) identification of implementation phases, (c) and mapping of factors and stakeholders on implementation phases provides a deeper understanding of e-government initiative implementation process. In doing so, the revised proposed e-government initiative implementation framework (Figure 6.4) will lead internal stakeholders to successfully implement e-government initiatives. This framework will

also help in reducing the high number of e-government initiative implementation failures.

After analyzing the empirical data, many changes were made to the framework.

On the other hand, two factors were considered less important or not exist empirically. These factors were the corruption and legacy system upgrade. Interviewees in the three case studies were certain that corruption does not exist in their organizations. In addition, legacy system in the case studies were up to date and ready for e-government except one new project, in PAAET, which is still in development; however, the manager said it will be completed in few months.

All the factors were mapped to the related different stakeholders according to the interviewees' perspective in the political, organizational and technical positions. Then, the factors redistributed to the three implementation phases of the e-government initiative as suggested by the interviewees. Each factor were positioned in one of the implementation phases were it becomes most important.

The framework should be used by all the government internal stakeholders from political, organization and technical levels who are responsible or have direct role to implement e-government initiative. First, they should list all the factors and understand each one. Second, every stakeholder should know what factors influence him/her. Thirdly, stakeholders should also know in what implementation phase their role is important and needed. Following this proposed framework, e-government initiative implementation process will be straightforward and successful.

As shown in the framework, when starting a new e-government initiative, factors influencing the initiative implementation are political, organizational, and technological. These factors were distributed to the implementation phases. Each

factor mapped to the phase that it affect. By looking at the framework, each stakeholder should know his/her responsibilities and when his/her role is important.

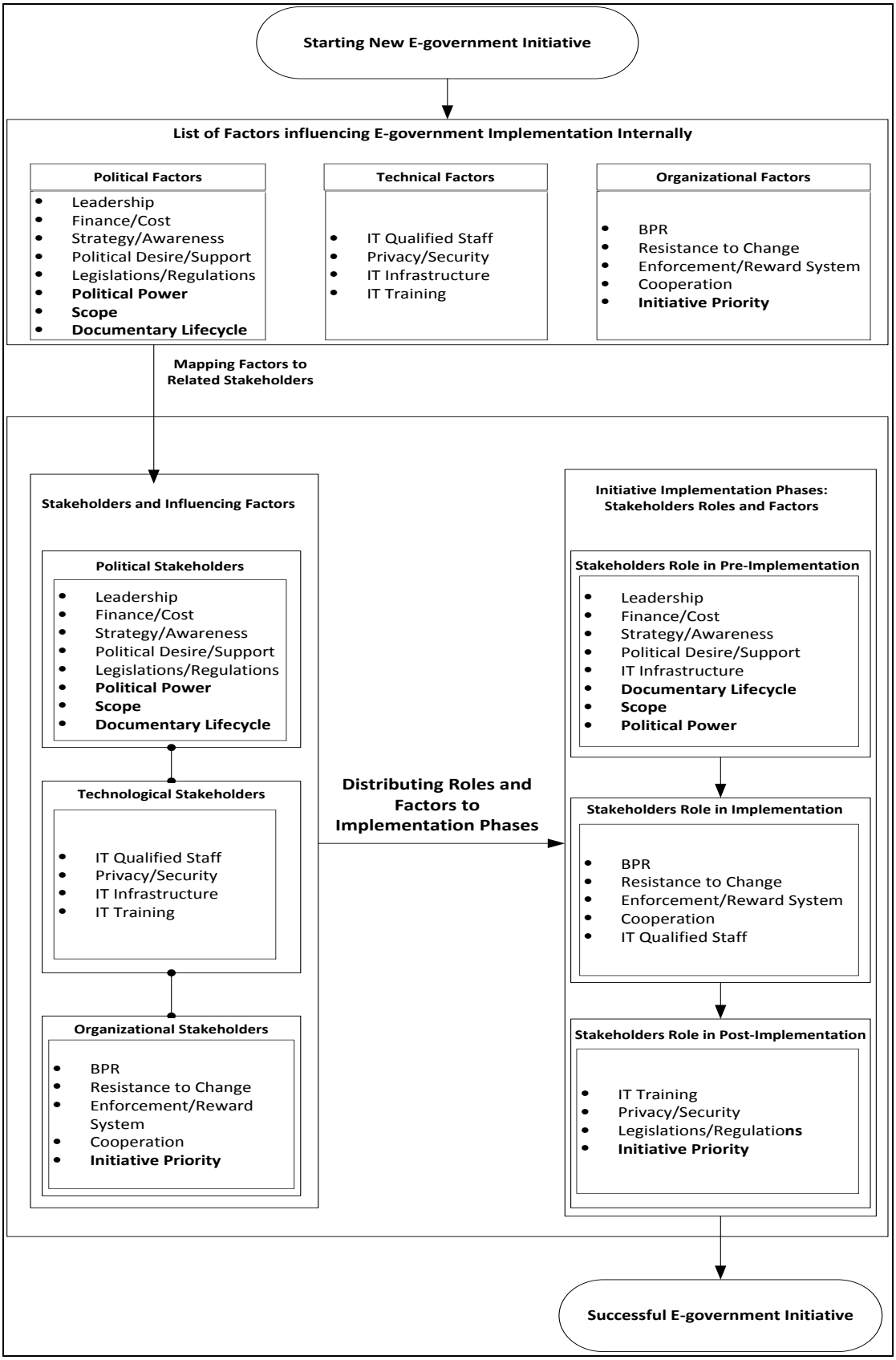


Figure 6.4 Factors, Stakeholders and Phases of E-government Initiative Implementation Framework (Revised Conceptual Framework)

6.5 Conclusion

This chapter presented a comprehensive discussion of key findings in this study. It has focused on the validation and revision of the proposed conceptual framework for e-government initiative implementation. Based on the empirical findings presented in Chapter 5, each part of the proposed conceptual framework discussed in this chapter has been tested and validated. All parts of the framework have been, analysed and justified in Chapter 5, and discussed in this chapter.

Empirical evidence derived from the analysis of three case study organizations, the CAIT, MOF, and PAAET, confirmed the importance of the framework as a guiding tool for the e-government internal stakeholders while implementing initiatives. However, empirical evidence revealed that there are additional new factors which should also be considered while implementing e-government initiatives and added to the conceptual framework proposed in Chapter 3. There are four new factors identified during empirical research that related to internal stakeholders in all three case study organizations. Instead, two factors in the proposed framework identified in the literature have been empirically shown as not important to the e-government initiative implementation. Stakeholder's role is important in all three case study organizations.

In the case of e-government initiative implementation, empirical evidence suggested that new implementation phases should also be considered while implementing e-government initiatives. Three phases were identified: pre-implementation (Design) phase, implementation (Development) phase, and post-implementation (Deployment) phase. In addition, implementation decision phase was also termed as investment phase. In support of this evidence a validated conceptual framework has been proposed in this chapter. The framework proposes that factors are linked to those

influencing stakeholders at each implementation phase. These factors are categorised as: (a) political factors; (b) organizational factors; (c) technological factors. In contrast, the validated and revised e-government initiative implementation framework is outlined as the following:

- E-government Internal Stakeholders (political stakeholders, organizational stakeholders, and technological stakeholders).
- Factors Influencing Stakeholders (political factors, organizational factors, and technological factors).
- Implementation Phases (pre-implementation, implementation, post-implementation).

For each implementation phase, there are specific factors influencing each of the stakeholders in the public organizations during the implementation of e-government initiatives.

Following the objectives in this research such as reviewing the literature and conducting an empirical work were successful and resulted in reaching the aim of this study. The aim of this research was to build and validate a framework to guide stakeholders implementing the e-government initiatives successfully. The framework that consisted of stakeholders, factors, and implementation phases was fund to be valid and reliable. All these parts of the framework lead to better understanding of how e-government initiative implementation should be carried out in public organizations. Thus, they contribute to better implementing e-government initiatives during implementation phases. The conceptual framework presented in Figure 6.1 focuses on the following:

- This framework is the first to explore and understand the role of most internal e-government stakeholders who are responsible to implement any e-government initiative.
- E-government internal stakeholders can use the conceptual framework as a process guiding tool to manage e-government initiatives implementation. In addition, researchers can use the revised conceptual framework to understand and analyses e-government initiative implementation.
- The framework incorporates three implementation phases. Empirical findings illustrate that the internal stakeholder's relationship during these phases are critically important for its success.
- New influential factors, such as political power, documentary lifecycle, initiative priority, and nested scope have been identified empirically.

Each interviewee was asked how important each factor in each implementation phase based on (1) highly important, (2) important, and (3) less important. The numbers were then calculated and each factor was identified as highly important, important or less important in each implementation phase based on the high number given for the factor in that phase. The level of importance to each factor in each implementation phase was given based on the 50% or over. As an illustration, the results are provided in the tables 6.21, 6.22, 6.23.

	CAIT: 11 INTERVIEWEES											
	PRE-IMPLEMENTATION			**IMPLEMENTATION**			**POST-IMPLEMENTATION**			**RESULTS**		
Factors	●	◉	○	●	◉	○	●	◉	○	PRE-IMPLEMENTATION	IMPLEMENTATION	POST-IMPLEMENTATION
Leadership	**11**	0	0	**10**	1	0	**8**	2	1	●	●	●
Strategy/Awareness	**11**	1	0	3	**9**	0	4	**7**	1	●	◉	◉
Political desire/support	**10**	2	0	1	2	**9**	2	**10**	0	●	○	◉
Financial/Cost	**11**	1	0	3	**9**	0	0	2	**10**	●	◉	○
Legislations/Regulations	0	2	**10**	1	4	**7**	**11**	1	0	○	○	●
Scope	**11**	1	0	**10**	2	0	**11**	1	0	●	●	●
Political Power	**12**	0	0	3	**9**	0	**8**	4	0	●	○	●
Documentary Cycle	**10**	2	0	1	**11**	0	0	2	**10**	●	◉	○
IT Infrastructure	**12**	0	0	**12**	0	0	**12**	0	0	●	●	●
IT qualified staff	**10**	2	0	**12**	0	0	1	**10**	1	●	●	◉
Security and privacy	0	2	**10**	0	4	**8**	**12**	0	0	○	○	●
Legacy System Upgrade	2	1	**9**	1	1	**10**	1	0	**11**	○	○	○
Resistance to change	1	**9**	2	1	**11**	0	4	**8**	0	◉	◉	◉
BPR	2	**10**	0	**12**	0	0	0	0	**12**	◉	●	○
Cooperation	**11**	1	0	**12**	0	0	**10**	2	0	●	●	●
Initiative priority	0	2	**10**	0	4	**8**	**10**	2	0	○	○	●
IT Training	1	3	**8**	2	**9**	1	**11**	1	0	○	◉	●
Enforcement/Reward system	2	**10**	0	3	**9**	0	**10**	2	0	◉	◉	●
Corruption	0	3	**9**	0	2	**10**	1	1	**10**	○	○	○

Table 6.21 Level of Factors importance in Case Study CAIT

	MOF: 12 INTERVIEWEES											
	PRE-IMPLEMENTATION			**IMPLEMENTATION**			**POST-IMPLEMENTATION**			**RESULTS**		
Factors	●	◉	○	●	◉	○	●	◉	○	**PRE-IMPLEMENTATION**	**IMPLEMENTATION**	**POST-IMPLEMENTATION**
Leadership	**12**	0	0	**10**	2	0	**8**	3	1	●	●	●
Strategy/Awareness	**10**	2	0	4	1	**7**	4	**7**	1	●	○	◉
Political desire/support	**10**	1	1	3	3	**6**	2	**9**	1	●	○	◉
Financial/Cost	**12**	0	0	**7**	5	0	1	1	**10**	●	●	○
Legislations/Regulations	1	0	**11**	0	4	**8**	**11**	1	0	○	○	●
Scope	3	**9**	0	**7**	3	2	**10**	1	1	◉	●	●
Political Power	**8**	4	0	2	**8**	2	**10**	2	0	●	◉	●
Documentary Cycle	**10**	2	0	2	**9**	1	0	2	**10**	●	◉	○
IT Infrastructure	**11**	1	0	**12**	0	0	**12**	0	0	●	●	●
IT qualified staff	2	**9**	1	**12**	0	0	0	3	**9**	◉	●	○
Security and privacy	0	3	**9**	0	4	**8**	**11**	1	0	○	○	●
Legacy System Upgrade	0	2	**10**	0	2	**10**	0	1	**11**	○	○	○
Resistance to change	3	**9**	0	**11**	1	0	1	4	**7**	◉	●	○
BPR	3	**8**	1	**12**	0	0	1	2	**9**	◉	●	○
Cooperation	**9**	1	2	**10**	2	0	**11**	1	0	●	●	●
Initiative priority	2	0	**10**	0	4	**8**	**10**	1	1	○	○	●
IT Training	1	3	**8**	3	**7**	2	**11**	1	0	○	◉	●
Enforcement/Reward system	1	**7**	4	4	**8**	0	2	**9**	1	◉	◉	◉
Corruption	1	3	**8**	1	2	**9**	2	0	**10**	○	○	○

Table 6.22 Level of Factors importance in Case Study MOF

	PAAET: 12 INTERVIEWEES											
	PRE-IMPLEMENTATION			**IMPLEMENTATION**			**POST-IMPLEMENTATION**			**RESULTS**		
Factors	●	◉	○	●	◉	○	●	◉	○	PRE-IMPLEMENTATION	IMPLEMENTATION	POST-IMPLEMENTATION
Leadership	**12**	0	0	**11**	1	0	**11**	0	1	●	●	●
Strategy/Awareness	**11**	1	0	2	**9**	1	**10**	2	0	●	◉	●
Political desire/support	**10**	1	1	0	4	**8**	**8**	3	1	●	○	●
Financial/Cost	**10**	2	0	1	**10**	1	0	2	**10**	●	◉	○
Legislations/Regulations	2	1	**9**	1	1	**10**	**11**	1	0	○	○	●
Scope	**8**	3	1	**8**	4	0	**9**	3	0	●	●	●
Political Power	**7**	4	1	3	**8**	1	**8**	3	1	●	◉	●
Documentary Cycle	**10**	2	0	0	4	**8**	0	1	**11**	●	○	○
IT Infrastructure	**11**	1	0	**12**	0	0	**11**	1	0	●	●	●
IT qualified staff	0	**10**	2	**11**	1	0	0	3	**9**	◉	●	○
Security and privacy	3	2	**7**	2	**9**	1	**12**	0	0	○	◉	●
Legacy System Upgrade	0	3	**9**	1	**10**	1	0	1	**11**	○	◉	○
Resistance to change	2	1	**9**	**10**	2	0	2	**10**	0	○	●	◉
BPR	2	**10**	0	**12**	0	0	0	1	**11**	◉	●	○
Cooperation	1	**11**	0	**11**	1	0	**10**	2	0	◉	●	●
Initiative priority	0	1	**11**	0	4	**8**	**10**	1	1	○	○	●
IT Training	3	1	**8**	2	**10**	0	**9**	3	0	○	◉	●
Enforcement/Reward system	0	2	**10**	1	**9**	2	**9**	1	2	○	◉	●
Corruption	0	1	**11**	0	1	**11**	0	1	**11**	○	○	○

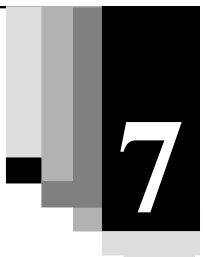
Table 6.23 Level of Factors importance in Case Study PAAET

Table 6.24 illustrates the importance of factors in each e-government initiative implementation phase.

Stakeholders	Factors	Case Organizations								
		CAIT			MoF			PAAET		
		Pre-Implementation	Implementation	Post-Implementation	Pre-Implementation	Implementation	Post-Implementation	Pre-Implementation	Implementation	Post-Implementation
Political Stakeholders	Leadership	●	●	●	●	●	●	●	●	●
	Strategy/Awareness	●	◉	◉	●	○	◉	●	◉	●
	Political desire/support	●	○	◉	●	○	◉	●	○	●
	Financial/Cost	●	◉	○	●	●	○	●	◉	○
	Legislations/Regulations	○	○	●	○	○	●	○	○	●
	Scope	●	●	●	◉	●	●	●	●	●
	Political Power	●	○	●	●	◉	●	●	◉	●
	Documentary Cycle	●	◉	○	●	◉	○	●	○	○
Technological Stakeholders	IT Infrastructure	●	●	●	●	●	●	●	●	●
	IT qualified staff	●	●	◉	◉	●	○	◉	●	○
	Security and privacy	○	○	●	○	○	●	○	◉	●
	Legacy System Upgrade	○	○	○	○	○	○	○	◉	○
Organisational Stakeholders	Resistance to change	◉	◉	◉	◉	●	○	○	●	◉
	BPR	◉	●	○	◉	●	○	◉	●	○
	Cooperation	●	●	●	●	●	●	◉	●	●
	Initiative priority	○	○	●	○	○	●	○	○	●
	IT Training	○	◉	●	○	◉	●	○	◉	●
	Enforcement/Reward system	◉	◉	●	◉	◉	◉	○	◉	●
	Corruption	○	○	○	○	○	○	○	○	○

Table 6.24 Summary of Importance Factors Influencing Stakeholders in Implementation Phases at Case Organizations

In the following chapter, the researcher presents the conclusions, contribution, limitation, recommendations for future research of this study.



Chapter 7: Conclusion, Contribution, Limitatio and Recommendations for Future Research

Summary

This chapter gives a summary of the thesis and draws conclusions derived from the literature and empirical findings. Afterwards, the novelty claimed in this dissertation will be summarised. Finally, this chapter concludes with the recommendations for future research in the area of e-government initiative implementation.

7.1 Introduction

To conclude this study, this chapter summarizes the findings of this research and discusses the implications and limitations, then gives directions for future research. The emergence of e-government research has developed in the Information System (IS) literature over the last two decades. An e-government project is more complex than any typical IS project (Seifert et al., 2002). In fact e-government is a large and forked project. Despite two decades of work on e-government, initiatives are still failing in huge numbers in both developed and developing countries (Dada, 2006). The normative literature has mostly focused on fundamental issues such as definitions, benefits, and implementation of e-government system in general. As a result, the implementation of e-government internal initiative has not been given adequate attention in the research literature leading to a number of voids and failures. It was obvious when reviewing the literature that governments worldwide are trying to implement e-service to the public; however, literature indicates that 60% to 80% of the e-government projects have failed in some way (UNDESA, 2003; Symonds, 2000). To date, the implementation of e-government initiatives has become an important strategic action plan for governments. However, there is a lack of studies focusing on e-government internal initiative implementation. There are many internal areas that affect the implementation of e-government initiatives such as factors, stakeholders, and the phases of initiative implementation process. This thesis started with an overview to the research problem in Chapter 1 aiming to develop a frame of references that outlines the implementation process of e-government initiative that identifies phases of implementation, stakeholders and influential factors that can be used to support the decision process in government administration and organizations.

Chapter 1 states the aim of this research which is to create a framework for e-government internal initiative implementation. In doing so, resulting in the development of a framework that will assist the government internal stakeholders in their decision making process for initiative implementation. Thereafter, the objectives are highlighted, then a general overview to the thesis outline provided.

In working to meet the aim and objectives of this thesis, Chapter 2 (background theory) started by reviewing the literature on e-government initiative implementation. The motivation was to understand and analyses the implementation of e-government initiative in the literature. In this chapter, the critical analysis of literature led the researcher to identify several limitations in the study of e-government initiative implementation. These limitations were the causes of the high rate of e-government initiative failure. The history, definitions and advantages of e-government have been addressed. Subsequently, an explanation of e-government categories was provided. In an attempt to understand the e-government implementation stakeholders, the author critically analysed the models of e-government implementation in the literature. Focusing on e-government internal initiative implementation, the internal stakeholder approach in e-government was discussed. The role of internal stakeholders, political, organizational and technological to implement e-government initiative has been explored. The factors influencing e-government internal initiative implementation has also identified from the perspective of each stakeholder.

Based on the literature review, the critical analysis of e-government initiative implementation was presented in Chapter 2. This analysis addressed the confusion and misconstruction of e-government internal initiative in government administration, organizations and technical issues by providing a better understating of the internal initiative implementation process. The significance of these factors is also that they

are part of a proposed framework that influences the implementation of e-government internal initiative. This chapter also addressed the relationship between the internal stakeholders: political, organizational and technological. In order to make a further contribution to the e-government literature, the researcher proposed different stakeholders and factors and categorized them into different phases of initiative implementation cycle process. This taxonomy can be used to help and support government stakeholders in better analysis and evaluation of e-government projects before, during and after the implementation process.

The aim of this research was to create a holistic framework for the e-government initiative implementation. In order to reach this goal, the researcher divided the study into three steps:

1. Step One (Factors): to identify the factors that influences the implementation of e-government initiative.
2. Step Two (Stakeholders): to identify the stakeholders who are responsible to build and manage the e-government initiative implementation and understand their roles.
3. Step Three (Implementation Cycle): to identify the e-government initiative implementation phases and understand its implementation cycle process.

Taking these three steps into consideration, in Chapter 3 the author constructed a conceptual framework to guide the e-government internal stakeholders implementing initiatives successfully.

In Chapter 3 (Focal Theory), the researcher analysed the normative literature to establish a conceptual framework for e-government internal initiative implementation by focusing on the investigation of the research issues that derived from Chapter 2. Chapter 2 indicated that there is a lack of studies regarding this issue, and the author

identified a gap in the literature which was the absence of holistic theoretical framework for e-government internal initiative implementation. To meet the aim of this thesis, the researcher concentrated on the e-government internal initiative implementation. Initially in Chapter 3 the researcher highlighted several previous studies illustrating different stakeholders and factors on e-government implementation.

The researcher investigated the role of internal stakeholders during e-government initiative implementation. An extensive literature analysis indicated that there is no literature study addressing e-government initiative, phases or implementation cycle process internally. Therefore, this indicates a gap in the normative literature. Then, the empirical researcher revealed that in some e-government initiative implementation phases some factors are related to one stakeholder and are not important to others, thus cannot influence other stakeholders during e-government internal initiative implementation process. As a result, factors and stakeholders need to be grouped in the context of e-government initiative implementation. In addition, the study classified the stakeholder's factors under each implementation phase of e-government internal initiative development. Based on the factors presented in Chapter 3, the researcher proposed the factors influencing e-government internal initiative implementation. These classified internal factors make a novel contribution at the conceptual level. Moreover, determining the role of internal stakeholders during e-government initiative implementation is considered another contribution to knowledge.

The researcher reported that none of the previous studies outlined in the literature on e-government initiative implementation attempted to investigate how the factors influence e-government internal initiative implementation on different phases of the

implementation cycle process. Moreover, there is no literature evidence that reports prioritising the importance of e-government initiative factors on different phases of the implementation cycle process. Thus, this indicates a gap in the normative literature. On further investigating the literature gap and enhancing the current research area, the researcher presented the implementation phases in Chapter 3. The author mapped all the factors identified on different phases of the implementation with the related stakeholders. The notion was to assist the e-government internal decision-makers to identify which factors may influence them while implementing e-government initiatives at different phases. The actual mapping of factors was carried out through empirical research in Chapter 5. In connecting the factors, implementation phases, and stakeholders together, the researcher proposed a holistic conceptual framework for e-government internal initiative implementation. These models collectively result in a novel comprehensive framework for the implementation of e-government initiative inside government organizations. This can help e-government internal stakeholders understand the implementation process and provide guidance on how to implement e-government initiatives. All of the above issues presented a contribution to the area of e-government implementation by expansion of knowledge needed for researchers and decision-makers regarding the e-government initiative implementation. The value of the provided conceptual framework is in providing an empirical guide for the stakeholders understanding the process of e-government internal initiative implementation. Finally, the conceptual framework proposed in Chapter 3 satisfies the aim of this dissertation reported in Chapter 1. The proposed conceptual framework was then empirically validated and revised in Chapters 5 and 6. The research methods used in this study were addressed in Chapter 4 (Data Theory) to empirically examine the development of e-government initiatives. The underlying

research assumptions that guide Information Systems research were extensively examined. Before selecting an appropriate research approach, many related issues were also discussed. The interpretive research approach was selected within a qualitative methodology as appropriate for this research, based on the issues discussed in the previous chapters.

This approach is useful for understanding emerging phenomena within their context because this study is exploratory in nature. Qualitative research can help IS researchers to understand human behaviour and action in social and organizational contexts to produce in-depth insights into information systems phenomena. Qualitative research was discussed, including the steps followed and their relevance to this research as well as to discuss research design in this study. A group of methods for empirical data collection were discussed with particular focus on those used within this research. Also, the selected data analysis method was discussed.

Chapter 5 (Data theory) uses a case study protocol to investigate the research issues identified in previous chapters, and reports the empirical evidence derived from three case study organizations. Three case study organizations were selected in the State of Kuwait, namely the Central Agency for Information Technology (CAIT), Ministry of Finance (MOF), and the Public Authority for Applied Education and Training (PAAET) to present in-depth empirical data. In Chapter 5, the research methodology outlined in Chapter 4 was used to test the conceptual framework. The chapter began with investigations of the e-government initiative factors and stakeholders, and reported that internal stakeholders played a key role in the implementation of e-government initiative through phases of implementation. Therefore, the researcher attempted to measure the process of internal e-government initiative implementation across the three government organizations. Empirical evidence derived from CAIT,

MOF and PAAET led to measure and validate the proposed conceptual framework. The researcher demonstrated the role of stakeholders and the importance of factors influencing stakeholders on different phases of the initiative implementation in each case study.

This enhanced the quality of the implementation process and placed factors in their specific factor categories. In fact, this provided all stakeholders with better understanding of the e-government internal initiative implementation process. The stakeholders and factors of each initiative implementation phase were identified and then categorized based on levels of importance. Identifying the importance of categorization of stakeholders and factors of e-government internal initiative can therefore be used as a frame of reference when government organizations attempt to implement a new e-government initiative. In doing so, the researcher has achieved the aim of this thesis as identified in Chapters 2 and 3.

Then, in Chapter 6 the empirical data derived from these case studies was used to demonstrate the lessons learnt from this research. Moreover, the proposed conceptual framework which consisted of the stakeholder's part, the factors part, and the implementation phase's part, was appropriate for the research context, the State of Kuwait, since these frameworks components were precisely identified by the researcher as influencing the process of e-government initiative implementation in all case studies. However, empirical evidence has indicated a number of new modifications to the proposed conceptual framework. These findings were discussed in Chapter 6 and used to revise and confirm the conceptual framework. The e-government internal stakeholders can use this framework as a decision-making and guiding tool during the initiative implementation process. The empirical research outcomes are explained in the following section.

Finally, this study has developed and empirically tested a theoretical framework for e-government initiative implementation in the context of the State of Kuwait. It presents a comprehensive discussion of the key findings in this research. The study provides a complete discussion of the analysis and findings based on the empirical evidence presented in previous chapters. This thesis contributed to the body of knowledge in both theoretical and practical.

- Theoretically, this thesis provided a framework that can be used by government organizations stakeholders when attempting to develop e-government initiatives, enabling them to better manage and implement these initiatives.
- This thesis provided a critical analysis of literature in stakeholders, influencing factors, and the e-government initiative implementation phases.
- Practically, this thesis conducted three empirical case studies in the State of Kuwait. These case studies describe how the e-government initiatives are implemented.
- Policy makers can use this study and the framework as a guiding tool to implement e-government initiatives.
- Managers can use the offered framework to guide them through the implementation phases that identify the roles and responsibilities of each stakeholder, influencing factors in each implementation phase.
- This framework is suitable for the managers and implementers in Kuwait.
- This framework can be used in the GCC countries similar to Kuwait) culture, size, population, political structure).
- In fact, this framework might be useful for countries adopting centralized approach in e-government.

7.2 Research Findings

The main outcomes derived from this research are summarized below:

- The literature review in the e-government implementation area revealed that there is an absence of theoretical framework addressing the implementation process of e-government internal initiative. The reason behind this is that e-government is still a relatively new research area. Therefore, there is a need to propose a conceptual framework for e-government internal initiative implementation.
- In addition, the critical analysis of the normative literature revealed that e-government initiative implementation is not straightforward. This led the researcher to identify several limitations in the area of e-government internal initiative implementation.
- One important finding identified by the researcher from the critical analysis of the normative literature is the lack of studies regarding the role of internal stakeholders during e-government initiative implementation. Many internal stakeholders at all levels in public organizations do not understand their role while implementing e-government initiatives.
- The relationship among the internal stakeholders is another important issue for the implementation of e-government initiative. Moreover, the literature indicates that each internal stakeholder is influenced by specific factors during the implementation.
- The practitioners should the framework proposed here which will prevent struggling to implement e-government initiative successfully and will make the process straightforward.

- There is a lack of e-government internal initiative implementation understanding among internal government stakeholders at all levels in public organizations. This has been confirmed while conducting empirical research in three case studies in the State of Kuwait.
- In an attempt to address these voids; the author analysed the normative literature in combination with empirical data in Chapter 5 to propose a theoretical framework for e-government internal initiative implementation. This framework was then examined and revised based on empirical data analysis.

7.3 Contributions and Research Novelty

The individual elements of the contributions provided by this work led the researcher to propose novel contributions in the area of e-government. From the contextual information presented in Chapters 1, 2 and 3, to the research methods presented in Chapter 4, through the design and conduct of case studies reported in Chapters 4 and 5 and, finally, to the presentation and analysis of empirical data in Chapters 5 and 6 it can be said that the work offered in this thesis has made a novel contribution to the area of the e-government initiative implementation, and has expanded the boundaries of knowledge. Hence, in addressing the gap in the literature regarding e-government initiative implementation, and developing an empirical framework that outlines the internal implementation process, the researcher proposed and then empirically confirmed the following particular novel contributions.

- Novelty in investigating, validating and identifying various groups of internal stakeholders involved in the e-government initiative implementation, with emphasis on their roles and responsibilities.
- Novelty in investigating, validating and identifying factors that influence the internal stakeholders during the implementation of e-government initiative.
- Novelty in investigating, validating and identifying new e-government initiative implementation phases.
- Novelty in mapping factors and stakeholders on the implementation phases.
- A Novel Framework for e-government initiative implementation. This framework is the central contribution of this research based on empirical work that provides a comprehensive roadmap for e-government initiative implementation. This framework integrated a set of parts, namely the factors that influence the e-government initiative implementation process, internal stakeholder's part, and the implementation phase's part. In addition, the proposed framework provides the internal stakeholders with a clear guideline while implementing e-government initiative.
- All integrated parts of this framework have been empirically tested, validated and modified to contribute a novel conceptual framework for the implementation of e-government initiative (e. g. internal stakeholders, factors, and initiative implementation phases). The researcher suggests that factors of each implementation phase can be used by stakeholders to build an understanding before implementing e-government initiative. Finally, this conceptual framework can be used as an implementation tool for e-government initiative implementation.

The contribution and research novelty of this thesis is summarised in Table 7.1.

Research area	Existing research	Contribution of this research
E-government Stakeholders	E-government external/internal Stakeholders in general	The identification of the e-government internal stakeholders groups, their roles and views regarding e-government initiative implementation.
E-government Factors	Factors affecting e-government project in general.	The identification of factors influencing each internal stakeholder who is responsible during e-government initiative implementation. Factors distributed and mapped to each stakeholder, then each stakeholder with his influencing factors linked to each e-government initiative implementation phase.
E-government implementation Stages	Models of e-government implementation stages	Proposing an internal implementation framework for e-government initiative implementation.
Mapping factors and stakeholders	Identified factors and stakeholders in general, no mapping.	Mapping internal stakeholders with their influencing factors at each initiative implementation phase.

Table 7.1 Research contributions

7.4 Research Limitations

Every research that deals with new phenomenon has some limitations and this research is no different.

- The first limitation for this study has been the time factor and difficulty of data collection. This study adopted the qualitative research method. In order to obtain in-depth and accurate data about the phenomenon, the researcher interviewed only managers and above levels in three case studies. Therefore, since a PhD research had to be completed within 3 – 4

years, the level of detail obtained particularly from the case studies would have been greater if more time was allocated for the empirical work. This would have added further value to the study.

- As reported in Chapter 4, this research adopted only qualitative methods for collecting the data for this study which might be affected by some degree of bias. Besides, these methods do have inherent limitations, such as being time consuming because the researchers time management was affected by the process of data collection and analysis.
- Although rich contextual data is possible to be generalized if qualitative research methods were used, limitations are still exist because of the small sample of the selected population case studies, individuals and/or groups being studied.
- Another limitation in this research was the restricted access to the sensitive data regarding budgets, top management policies, and future strategies. Also, there were difficulties of meeting with the managers because many appointments were repeatedly cancelled.

7.5 Recommendations for Future Research

The following recommendations are made for further research:

- The presented framework for internal e-government initiative implementation was based on three case study organizations located in the State of Kuwait. Since Kuwait is a relatively small country with a low population, and single centralized government level, with no multiple levels of government such as city, or local (decentralized), this research was conducted for the first time because the framework did not previously exist. Therefore, in order to extend

the generalization and contribution of this framework, the researcher recommends validating this framework in different contexts such as in multiple government levels (decentralized).

- Due to the limitation of time and resources, the researcher was unable to test all available factors in the literature that could influence the implementation process of e-government initiative. Therefore, it would be an important proposition to further study uncovered implementation factors, and to classify these factors into two categories, critical success factors or critical failure factors.
- This research has found the e-government initiative implementation is an important issue. Thus, it is recommended that a large-scale survey questionnaire is conducted in future study on employees in lower levels, instead of using interpretive epistemology.
- Another important recommendation is to validate the revised holistic e-government internal initiative implementation framework. This will provide support to internal stakeholders in understanding the e-government initiative implementation process.

References

Aagesen, G., van Veenstra, A. F., Janssen, M. & Krogstie, J. (2011). The Entanglement of Enterprise Architecture and IT-Governance: The Cases of Norway and the Netherlands. *System Sciences (HICSS), 2011 44th Hawaii International Conference on, 4-7 Jan. 2011. 1-10.*

Abdallah, S. & Fan, I. S. (2012). Framework for e–government assessment in developing countries: case study from Sudan. *Electronic Government, an International Journal,* **9,** 158-177.

Ahmad, M. & Othman, R. (2006). Implementation of electronic government in Malaysia: The status and potential for better service to the public. *Public Sector ICT Management Review,* **1,** 2-10.

Ahn, M. J. & Bretschneider, S. (2011). Politics of E-Government: E-Government and the Political Control of Bureaucracy. *Public administration review,* **71,** 414-424.

Ahuja, V., Yang, J., Skitmore, M. & Shankar, R. (2010). An empirical test of causal relationships of factors affecting ICT adoption for building project management: An Indian SME case study. *Construction Innovation: information, process, management,* **10,** 164-180.

Aichholzer, G. & Schmutzer, R. (Year). Organizational challenges to the development of electronicgovernment. *In*, 2000. 379-383.

Al-Azri, A., Al-Salti, Z. & Al-Karaghouli, W. (2010). The successful implementation of e-government transformation: A case study in Oman. *European, Mediterranean & Middle Eastern Conference on Information Systems.* Abu Dhabi, UAE.

Al-Busaidy, M. & Weerakkody, V. (2011). E-government services in Oman: an employee's perspective. *Electronic Government, an International Journal,* **8,** 185-207.

Al-Kibsi, G., De Boer, K., Mourshed, M. & Rea, N. P. (2001). utting citizens online, not in line.

Al-Omari, H. & Al-Omari, A. (2006). Building an e-Government e-Trust Infrastructure. *American Journal of Applied Sciences,* **3,** 2122-2130.

Al-Salti, Z. & Hackney, R. (2011). Factors impacting knowledge transfer success in information systems outsourcing. *Journal of Enterprise Information Management,* **24,** 455-468.

Al-Sebie, M. & Irani, Z. (2005). Technical and organisational challenges facing transactional e-government systems: an empirical study. *Electronic Government, an International Journal,* **2,** 247-276.

Al-Sebie, M., Irani, Z. & Eldabi, T. (2005). Issues relating to the transaction stage of the e-government system. *Electronic Government, an International Journal,* **2,** 446-459.

Al-Shehry, A., Rogerson, S., Fairweather, N. B. & Prior, M. (Year). THE MOTIVATIONS FOR CHANGE TOWARDS E-GOVERNMENT ADOPTION: CASE STUDIES FROM SAUDI ARABIA. *In:* eGovernment Workshop 2006 Brunel University, West London, UB8 3PH.

Al-Soud, A. R. & Nakata, K. (2010). Evaluating e-government websites in Jordan: Accessibility, usability, transparency and responsiveness. in Progress in Informatics and Computing (PIC), 2010 IEEE International Conference on, 2010, pp. 761-765.

Al-wazir, A. A. & Zheng, Z. (2012). E-government Development in Yemen: Assessment and Solutions. *Journal of Emerging Trends in Computing and Information Sciences,* **3**.

Al Nagi, E. & Hamdan, M. (2009). Computerization and e-Government implementation in Jordan: Challenges, obstacles and successes. *Government Information Quarterly,* **26,** 577-583.

Al Shehry, A., Rogerson, S., Fairweather, N. B. & Prior, M. (2009). The Key Organisational Issues Affecting E-Government Adoption in Saudi Arabia. *International Journal of Electronic Government Research (IJEGR),* **5,** 1-13.

Aladwani, A. (2011). Determinants of e-Government Success in Kuwait.

Alghamdi, I. A., Goodwin, R. & Rampersad, G. (2011). E-Government Readiness Assessment for Government Organizations in Developing Countries. *Computer and Information Science,* **4,** p3.

Alhomod, S. M., Shafi, M. M., Kousarrizi, M. R. N., Seiti, F., Teshnehlab, M., Susanto, H., Almunawar, M. N., Tuan, Y. C., Aksoy, M. S. & Batawi, Y. A. (2012). Best Practices in E government: A review of Some Innovative Models Proposed in Different Countries.

Almarabeh, T. & AbuAli, A. (2010). A general framework for e-government: Definition maturity challenges, opportunities, and success. *European Journal of Scientific Research,* **39,** 29-42.

Aloini, D., Dulmin, R. & Mininno, V. (2007). Risk management in ERP project introduction: Review of the literature. *Information & Management,* **44,** 547-567.

Alshawi, S. & Alalwany, H. (2009). E-government evaluation: Citizen's perspective in developing countries. *Information Technology for Development,* **15,** 193-208.

Alshehri, M. & Drew, S. (2010). Challenges of e-government services adoption in Saudi Arabia from an e-ready citizen perspective. *Education,* **29,** 5.1.

Alshehri, M., Drew, S. & Alfarraj, O. (2012). A Comprehensive Analysis of E-government services adoption in Saudi Arabia: Obstacles and Challenges. *Higher education,* **6,** 8.2.

AlSobhi, F., Kamal, M. & Weerakkody, V. (2009). Current state of e-services in Saudi Arabia: the case of intermediaries in facilitating government services in Madinah city.

Altameem, T., Zairi, M. & Alshawi, S. (2006). Critical Success Factors of E-Government: A Proposed Model for E-Government Implementation. *Innovations in Information Technology, 2006***,** 1-5.

Andersen, K. V. & Henriksen, H. Z. (2006). E-government maturity models: Extension of the Layne and Lee model. *Government Information Quarterly,* **23,** 236-248.

Anthopoulos, L. (2011). An Investigative Assessment of the Role of Enterprise Architecture in Realizing E-Government Transformation. Chapter of the book Enterprise Architecture and Connected E-Government: Practices and Innovations, edited by Pallab Saha, IGI Global.

Apostolou, D., Mentzas, G., Stojanovic, L., Thoenssen, B. & Pariente Lobo, T. (2011). A collaborative decision framework for managing changes in e-Government services. *Government Information Quarterly,* **28,** 101-116.

Arpacı, I. & Arifoğlu, A. (2009). E-transformation and technological innovation in Turkey. *European and Mediterranean conference on information systems (EMCIS).* İzmir, Turkey.

Atkinson, R., Crawford, L. & Ward, S. (2006). Fundamental uncertainties in projects and the scope of project management. *International Journal of Project Management,* **24,** 687-698.

Awan, M. A. (2007). Dubai e-Government: An Evaluation of G2B Websites. *Journal of Internet Commerce,* **6,** 115-129.

Ayyad, M. (2008). e-government informatics. *Proceedings of the 2nd international conference on Theory and practice of electronic governance.* Cairo, Egypt: ACM.

Backus, M. (2001). E-governance in Developing Countries. *IICD Research Brief,* **1**.

Badri, M. A. & Alshare, K. (2008). A path analytic model and measurement of the business value of e-government: An international perspective. *International journal of information management,* **28,** 524-535.

Bakry, S. H. (2004). Development of e-government: a STOPE view. *Int. J. Network Mgmt,* **14,** 339-350.

Bank, W. (2007). http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTINFORMATIONANDCOMMUNICATIONANDTECHNOLOGIES/0,,contentMDK:21398058~pagePK:210058~piPK:210062~theSitePK:282823,00.html.

Bannister, F. (2005). E-government and administrative power: the one-stop-shop meets the turf war. *Electronic Government, an International Journal,* **2,** 160-176.

Basu, S. (2004). E-government and developing countries: an overview. *International Review of Law, Computers & Technology,* **18,** 109-132.

Baum, C. & Di Maio, A. (2000). Gartner's four phases of e-government model. *Stamford, Ct., Gartner Group,* **21,** 12-6113.

Baumgarten, J. & Chui, M. (2009). E-government 2.0. *McKinsey Quarterly,* **4,** 26-31.

Bekkers, V. (2005). The governance of back office integration in e-government: Some dutch experiences. *Electronic Government***,** 12-25.

Bélanger, F. & Carter, L. (2008). Trust and risk in e-government adoption. *Journal of Strategic Information Systems*.

Belanger, F. & Hiller, J. S. (2006). A framework for e-government: privacy implications. *Business Process Management Journal,* **12,** 48-60.

Benbasat, I. (1984). An analysis of research methodologies. *The Information Systems Research Challenge***,** 47-85.

Benbasat, I., Goldstein, D. & Mead, M. (1987a). The case research strategy in studies of information systems. *MIS quarterly,* **11,** 369-386.

Benbasat, I., Goldstein, D. K. & Mead, M. (1987b). The case research strategy in studies of information systems. *MIS quarterly***,** 369-386.

Bertaux, D. & Bertaux-Wiame, I. (1981). *Biography and society: The life history approach in the social sciences*, Sage publications Thousand Oaks.

Bertot, J. C., Jaeger, P. T. & Grimes, J. M. (2010). Using ICTs to create a culture of transparency: E-government and social media as openness and anti-corruption tools for societies. *Government Information Quarterly,* **27,** 264-271.

Beynon-Davies, P. (2005). Constructing electronic government: the case of the UK inland revenue. *International journal of information management,* **25,** 3-20.

Beynon-Davies, P., Owens, I. & Williams, M. D. (2004). Information systems evaluation and the information systems development process. *Journal of Enterprise Information Management,* **17,** 276-282.

Bhatnagar, S. C. (2002). E-government: lessons from implementation in developing countries. *Regional Development Dialogue,* **23,** 164-175.

Bhatnagar, S. C. (2004). *E-government: from vision to implementation: a practical guide with case studies*, Sage.

Bhuiyan, M. (2010). E-government applications in Bangladesh: status and challenges. *The Proceedings of the 4th International Conference on Theory and Practice of Electronic Governance (ICEGOV), 25-28 October 2010, Beijing, China. www.icegov.org.* ACM, 255-260.

Bhuiyan, S. E-Government in Kazakhstan: Challenges and Its Role to Development. *Public Organization Review***,** 1-17.

Bigdeli, A. Z. & Cesare, S. (2011). Barriers to e-Government Service Delivery in Developing Countries: The Case of Iran. *Emerging Themes in Information Systems and Organization Studies***,** 307-320.

Bissessar, A. M. (2010). The Challenges of E-governance in a Small, Developing Society: The Case of Trinidad and Tobago. *Comparative E-Government***,** 313-329.

Bogdan, R. & Biklen, S. (2003). Research for education. Boston: Allyn & Bacon.

Bonham, G., Seifert, J. & Thorson, S. (Year). The transformational potential of e-government: the role of political leadership. *In*, 2001.

Bonoma, T. V. (1985). Case research in marketing: opportunities, problems, and a process. *Journal of marketing research***,** 199-208.

Bowen, G. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal,* **9,** 27-40.

Broom, A., Cheshire, L. & Emmison, M. (2009). Qualitative Researchers' Understandings of Their Practice and the Implications for Data Archiving and Sharing. *Sociology,* **43,** 1163.

Bryman, A. & Bell, E. (2007). *Business research methods*, Oxford University Press, USA.

Campbell, T. (1996). Technology, multimedia, and qualitative research in education. *Technology,* **28**.

Carbo, T. & Williams, J. G. (2004). Some Determinants of User Perceptions of Information Quality on the World Wide Web. *Electronic Journal of e-Government,* **2,** 94-105.

Carter, L. (2008). E-government diffusion: a comparison of adoption constructs. *Transforming Government: People, Process and Policy,* **2,** 147-161.

Carter, L. & Belanger, F. (2004). The influence of perceived characteristics of innovating on e-government adoption. *Electronic Journal of e-Government,* **2,** 11-20.

Carter, L. & Belanger, F. (2005). The utilization of e-government services: citizen trust, innovation and acceptance factors*. *Information Systems Journal,* **15,** 5-25.

Carter, L. & Weerakkody, V. (2008). E-government adoption: A cultural comparison. *Information Systems Frontiers,* **10,** 473-482.

Cavaye, A. L. M. (1996). Case study research: a multi-faceted research approach for IS. *Information Systems Journal,* **6,** 227-242.

Çayhan, B. (2008). IMPLEMENTING E-GOVERNMENT IN TURKEY: AComparison OF ONLINE PUBLIC SERVICE DELIVERY IN TURKEY AND THE EUROPEAN UNION. *EJISDC,* **35,** 1-11.

Chaijenkij, S. & Corbitt, B. (2008). Motivating Dynamics Toward e-Government Policy and Implementations. *4th International Conference on eGovernment.* RMIT University, Melbourne, Australia: Academic Conferences Limited, 71.

Chan, C., Pan, S. & Tan, C. W. (2003a). Managing Stakeholder Relationships in an e-government project.

Chan, C., Pan, S. & Tan, C. W. (2003b). Managing Stakeholder Relationships in an e-government project. *AMCIS 2003 Proceedings***,** 98.

Chan, C. M. L., Hackney, R., Pan, S. L. & Chou, T. C. (2011). Managing e-Government system implementation: a resource enactment perspective. *European Journal of Information Systems,* **20,** 529-541.

Chandler, S., L., E. G. & Emanuels, S. (Year). Transformation not automation. *In*, 2002. Academic Conferences Limited, 91.

Charalabidis, Y., Markaki, O., Lampathaki, F., Mantzakou, I. & Sarantis, D. (2010). Towards a scientific approach to e-government research'. *tGov Workshop.* Brunel University, West London.

Checkland, P. (1991). From Framework Through Experience to Learning: The Essential Nature of Action Research. *In:* Nissen, H. E., Klien, H. K. & Hirschheim, R. (eds.) *Information Systems Research: Cotemporary Approaches and Emergent Traditions.* (North Holland), Amsterdam, The Netherlands: Elsevier Science Publishers B. V.

Chen, A. J., Pan, S. L., Zhang, J., Huang, W. W. & Zhu, S. (2009). Managing e-government implementation in China: A process perspective. *Information & Management,* **46,** 203-212.

Chen, H. (2002). Special Issue Digital Government: technologies and practices. *Decision Support Systems,* **Vol. 34 No. 3, pp. 223-7**.

Chen, Y.-C. & Perry, J. (2003). Outsourcing for E-Government: Managing for Success. *Public Performance & Management Review,* **26,** 404-421.

Chen, Y. C. (2010). Citizen-centric e-government services: understanding integrated citizen service information systems. *Social Science Computer Review,* **28,** 427-442.

Chen, Y. C. & Gant, J. (2002). Transforming local e-government services: the use of application service providers. *Government Information Quarterly,* **18,** 343-355.

Cho, Y. & Choi, B. (2005). E-government to combat corruption: the case of Seoul Metropolitan Government. *International Journal of Public Administration,* **27,** 719-735.

Chourabi, H. & Mellouli, S. (2011). e-government: integrated services framework. *Proceedings of the 12th Annual International Digital Government Research*

Conference: Digital Government Innovation in Challenging Times. College Park, Maryland: ACM.

Chowdhury, H. G., Habib, M. W. & Kushchu, I. (Year). Success and failure factors for e-Government projects implementation in developing countries: A study on the perception of government officials of bangladesh. *In*, 2006. 3-5.

Cohen, S. G. & Mankin, D. (2002). Complex collaborations in the new global economy. *Organizational Dynamics,* **31,** 117-133.

Collis, J. & Hussey, R. (2009). *Business research: A practical guide for undergraduate and postgraduate students*, Palgrave Macmillan.

Cook, M. E., LaVigne, M. F., Pagano, C. M., Dawes, S. S. & Pardo, T. A. (2002). Making a case for local e-government. *Center for Technology in Government, Albany, New York*.

Corradini, F., Polzonetti, A. & Riganelli, O. (2009a). Business Rules in e-Government Applications. *Electronic Journal of e-Government,* **7,** 45-54.

Corradini, F., Polzonetti, A. & Riganelli, O. (2009b). Holistic development of online public services. *In:* ACM (ed.) *3rd International Conference on Theory and Practice of Electronic Governance, ICEGOV 2009.* Bogota.

Coursey, D. & Norris, D. F. (2008). Models of e-government: Are they correct? An empirical assessment. *Public administration review,* **68,** 523-536.

Creswell, J. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*, Sage Publications, Inc.

Creswell, J. W. (2012). *Qualitative inquiry and research design: Choosing among five approaches*, SAGE Publications, Incorporated.

Curtin, G. G. (2006). Issues and Challenges: Global EGovernment/E-Participation, Models, Measurement and Methodology. *E-Participation and EGovernment: Understanding the Present and Creating the Future*.

Dada, D. (2006). THE FAILURE OF EGovernment IN DEVELOPING COUNTRIES: ALiterature REVIEW. *EJISDC,* **26,** 1-10.

Daniels, M. & Forman, M. (2002). E-government strategy, simplified the delivery of services to citizens. *Office of management and budget*.

Davey, L., ERIC Clearinghouse on Tests, M. & Evaluation (1991). *The application of case study evaluations*, ERIC Clearinghouse on Tests, Measurement, and Evaluation.

Davison, R. M., Wagner, C. & Ma, L. C. K. (2005). From government to e-government: a transition model. *Information Technology & People,* **18,** 280-299.

De Jager, A. & van Reijswoud, V. (2008). E-Governance in the Developing World in Action. *The Journal of Community Informatics,* **4**.

De', R. (2005). E-Government Systems in Developing Countries: Stakeholders and Conflict

Electronic Government. *In:* Wimmer, M., Traunmüller, R., Grönlund, Å. & Andersen, K. (eds.). Springer Berlin / Heidelberg.

Deloitte, R. (2000). *At the Dawn of e-Government: The Citizen as Customer*, Deloitte Consulting, New York.

Denzin, N. (2009). *The research act: A theoretical introduction to sociological methods*, Aldine De Gruyter.

Denzin, N. K. & Lincoln, Y. S. (2011). *The Sage handbook of qualitative research*, Sage Publications, Inc.

Detlor, B., Hupfer, M. E. & Ruhi, U. (2010). Internal factors affecting the adoption and use of government websites. *Electronic Government, an International Journal,* **7,** 120-136.

Di Maio, A. (2006). Moving from e-government to government transformation. *Business Issues***,** 1-3.

Dias, G. P. (Year). Local e-government information and service delivery. *In*, 2011. IEEE, 1-6.

Domínguez, L. R., Sánchez, I. M. G. & Álvarez, I. G. (2011). Determining factors of e-Government development: A Worldwide national approach. *International Public Management Journal,* **14,** 218-248.

Dpepa, U. N. (2001). Benchmarking e-Government–A Global Perspective. *USA, United Nation-Division for Public Economics and Public Administration-American Society for Public Administration*.

Dreher, A., Kotsogiannis, C. & McCorriston, S. (2007). Corruption around the world: Evidence from a structural model. *Journal of Comparative Economics,* **35,** 443-466.

Dunleavy, P., Margetts, H., Bastow, S. & Tinkler, J. (2011). Digital era governance: IT corporations, the state, and e-government. *OUP Catalogue*.

Dwivedi, P. & Sahu, G. P. (2008). Challenges of E-government Implementation in India. SIGeGov Publications.

Dwivedi, Y. K., Weerakkody, V. & Janssen, M. (2012). Moving towards maturity: challenges to successful e-government implementation and diffusion. *ACM SIGMIS Database,* **42,** 11-22.

Dyer, W. G. & Wilkins, A. L. (1991). Better stories, not better constructs, to generate better theory: a rejoinder to Eisenhardt. *The Academy of Management Review,* **16,** 613-619.

Ebbers, W. E. & van Dijk, J. (2007). Resistance and support to electronic government, building a model of innovation. *Government Information Quarterly,* **24,** 554-575.

Ebrahim, Z. & Irani, Z. (2005). E-government adoption: architecture and barriers. *Business Process Management Journal,* **11,** 589-611.

Ebrahim, Z., Irani, Z. & Sarmad, S. (Year). Factors Influencing the Adoption of E-Government in Public Sector. *In*, 2004.

Eddowes, L. A. (2003). The Application of Methodologies in e-Government. *Electronic Journal of e-Government***,** 114-25.

Edward, F. R. (1984). Strategic management: a stakeholder approach. *Boston: Pitman,* **46**.

Esteves, J. & Joseph, R. C. (2008). A comprehensive framework for the assessment of eGovernment projects. *Government Information Quarterly,* **25,** 118-132.

Evangelidis, A. (2004). Frames–a risk assessment framework for e-services. *Electronic Journal of e-Government,* **2,** 21-30.

Evans, D. & Yen, D. C. (2005). E-government: An analysis for implementation: Framework for understanding cultural and social impact. *Government Information Quarterly,* **22,** 354-373.

Evans, D. & Yen, D. C. (2006). E-Government: Evolving relationship of citizens and government, domestic, and international development. *Government Information Quarterly,* **23,** 207-235.

Fang, Z. (2002). E-government in digital era: concept, practice, and development. *International Journal of The Computer, The Internet and Management,* **10,** 1-22.

Farooq, M. K., Shafay, S. & Mian, M. A. (2006). Devolution of e-Governance among Multilevel Government Structure. *Innovations in Information Technology, 2006. 1-5.*

Fedorowicz, J., Gogan, J. L. & Culnan, M. J. (2010). Barriers to Interorganizational Information Sharing in e-Government: A Stakeholder Analysis. *The Information Society,* **26,** 315-329.

Fernandes, D., Wilpen, G. & Krishman, R. (Year). ServiceNet: An agent-based framework for one-stop E-Government services. *In*, 2001.

Ferro, E. & Sorrentino, M. (2010). Can intermunicipal collaboration help the diffusion of E-Government in peripheral areas? Evidence from Italy. *Government Information Quarterly,* **27,** 17-25.

Field, T. (2003). *The e-government imperative*, Publications de l'OCDE.

Fielding, N. & Lee, R. M. (1991). *Using computers in qualitative research*, Sage Publications Ltd.

Flak, L. S. & Nordheim, S. (Year). Stakeholders, contradictions and salience: An empirical study of a Norwegian G2G effort. *In*, 2006. IEEE, 75a-75a.

Flak, L. S. & Rose, J. (2005). Stakeholder governance: adapting stakeholder theory to e-government. *Communications of the Association for Information Systems,* **16,** 31.

Flick, U. (2009). *An introduction to qualitative research*, Sage Publications Limited.

Folger, R. & Skarlicki, D. P. (1999). Unfairness and resistance to change: hardship as mistreatment. *Journal of Organizational Change Management,* **12,** 35-50.

Forsberg, K., Mooz, H. & Cotterman, H. (2005). *Visualizing project management: Models and frameworks for mastering complex systems*, Wiley.

Fountain, J. E. (2001). *Building the virtual state: Information technology and institutional change*, Brookings Inst Pr.

Gajendra, S., Xi, B. & Wang, Q. (2012). E-Government: Public Participation and Ethical Issues. *Journal of E-Governance,* **35,** 195-204.

Galliers, R. (1992). *Information systems research: Issues, methods and practical guidelines*, Blackwell Scientific.

Gant, D. B., Gant, J. P. & Johnson, C. L. (2002). *State web portals: Delivering and financing e-service*, PricewaterhouseCoopers Endowment for the Business of Government.

Gant, J. P. & Gant, D. B. (2002). Web portal functionality and state government e-service. *Proceedings of the 35th Annual Hawaii International Conference on System Sciences, 2002. HICSS.* .

Garg, A., Goyal, D. P. & Lather, A. S. (2010). The influence of the best practices of information system development on software SMEs\&\#58; a research scope. *Int. J. Bus. Inf. Syst.,* **5,** 268-290.

Garson, G. D. (2004). The promise of digital government. *Digital government: Principles and best practices***,** 2-15.

Gascó, M. (2012). Approaching E-Government Interoperability. *Social Science Computer Review,* **30,** 3-6.

Ghapanchi, A., Albadvi, A. & Zarei, B. (2008). A framework for e-government planning and implementation. *Electronic Government, An International Journal,* **5,** 71-90.

Gibbs, G. (2002). Qualitative data analysis: Explorations with NVivo.
Gichoya, D. (2005). Factors Affecting the Successful Implementation of ICT Projects in Government. *Electronic Journal of e-Government,* **3,** 175-184.
Gil-Garcia, J. R. & Martinez-Moyano, I. J. (2007). Understanding the evolution of e-government: The influence of systems of rules on public sector dynamics. *Government Information Quarterly,* **24,** 266-290.
Gil-Garcia, J. R., Soon Ae, C. & Janssen, M. (2009). Government information sharing and integration: Combining the social and the technical. *Information Polity: The International Journal of Government & Democracy in the Information Age,* **14,** 1-10.
Gottschalk, P. (2009). Maturity levels for interoperability in digital government. *Government Information Quarterly,* **26,** 75-81.
Graham, O., Alan, B., Tony, E. & Ah Lian, K. (2007). CARE: An Integrated Framework to Support Continuous, Adaptable, Reflective Evaluation of E-Government Systems. *International Journal of Cases on Electronic Commerce,* **3,** 18.
Greenberg, S. R. (2006). State E-Government Strategies: Identifying Best Practices and Applications. Report for the Congressional Research Service. Citeseer.
Grimsley, M. & Meehan, A. (2007). e-Government information systems: Evaluation-led design for public value and client trust. *European Journal of Information Systems,* **16,** 134-148.
Grönlund, Å. (2010). Ten years of e-government: The 'end of history'and new beginning. *Electronic Government***,** 13-24.
Guo, Y. (2010). E-Government: Definition, Goals, Benefits and Risks. *International Conference on Management and Service Science (MASS). 1-4.*
Hachigian, N. (2002). Roadmap for E-Government in the Developing World: 10 Question E-Government Leaders Should Ask Themselves.
Hammer, M. (1990). Reengineering work: don't automate, obliterate. *Harvard Business Review,* **68,** 104-112.
Hamza, H., Sehl, M., Egide, K. & Diane, P. (2011). A conceptual model for G2G relationships. *Electronic Government***,** 285-295.
Hanna, N. K. (2011). E-Transformation as an Integrating Strategy. *Seeking Transformation Through Information Technology***,** 1-19.
Harling, K. (2002). An overview of case study. *Retrieved August,* **4,** 2007.
Hartman, F. & Ashrafi, R. (2002). Project management in the information systems and information technologies. *Management Journal,* **33,** 5-15.
Hassan, H., Shehab, E. & Peppard, J. (2011). A Framework for E-Service Implementation in the Developing Countries. *International Journal of Customer Relationship Marketing and Management (IJCRMM),* **2,** 55-68.
Heeks, R. (1999). *Reinventing government in the information age: International practice in IT-enabled public sector reform*, Routledge.
Heeks, R. (2000). Government data Understanding the barriers to citizen access and use.
Heeks, R. (2003a). Causes of e-Government Success and Failure: Factor Model. *Institute for Development Policy and Management, University of Manchester*.
Heeks, R. (2003b). *Most egovernment-for-development projects fail: how can risks be reduced?*, Institute for Development Policy and Management.
Heeks, R. (2006a). *Implementing and managing eGovernment: an international text*, Sage Publications Ltd.

Heeks, R. (Year). Understanding and measuring egovernment: international benchmarking studies. *In*, 2006b. Citeseer, 27-28.

Heeks, R. & Stanforth, C. (2007). Understanding e-Government project trajectories from an actor-network perspective. *European Journal of Information Systems,* **16,** 165-177.

Hermana, B. & Silfianti, W. (2011). Evaluating E-government Implementation by Local Government: Digital Divide in Internet Based Public Services in Indonesia. *International Journal of Business and Social Science,* **2**.

Hiatt, J. M. (2006). *ADKAR: a model for change in business, government, and our community*, Prosci.

Hiller, J. S. & Belanger, F. (2001). Privacy strategies for electronic government. *E-government***,** 162-198.

Hirschheim, R. (1985). Information Systems Epistemology: An Historical Perspective. *In:* Mumford, E., Hirschheim, R., Fitzgerald, G. & Wood-Harper, A. T. (eds.) *Research Methods in Information Systems.* (North Holland), Amsterdam, The Netherlands: Elsevier Science Publishers B. V.

Ho, A. T.-K. (2002a). Reinventing Local Governments and the E-Government Initiative. *Public administration review,* **62,** 434-444.

Ho, A. T. K. (2002b). Reinventing local governments and the e-government initiative. *Public administration review,* **62,** 434-444.

Hoepfl, M. (1997). Choosing qualitative research: A primer for technology education researchers. *ournal of J Education,* **9**.

Holden, M. T. & Lynch, P. (2004). Choosing the appropriate methodology: understanding research philosophy. *The marketing review,* **4,** 397-409.

Homburg, V. (2004). E-government and NPM: a perfect marriage? *Proceedings of the 6th international conference on Electronic commerce.* Delft, The Netherlands: ACM.

Homburg, V. & Bekkers, V. (2002). The back-office of e-government (managing information domains as political economies). *cooperation and conflict***,** 1666-1674.

Hoogwout, M. (2003). Super pilots, subsidizing or self-organization: Stimulating E-government initiatives in Dutch local governments. *Electronic Government***,** 1072-1072.

Howard, M. (2001). e-Government Across the Globe: How Will" e" Change Government? *Government finance review,* **17,** 6-9.

Hu, P. J., Cui, D. & Sherwood, A. C. (Year). Examining cross-agency collaborations in e-government initiatives. *In*, 2006.

Huang, K. (2010). The relations and interactions of E-government and e-commerce. *International Conference on Educational and Network Technology (ICENT), 527-530.*

Huang, Z. & Bwoma, P. O. (2003). An overview of critical issues of E-government. *Issues of Information Systems,* **4,** 164-170.

Hung, S. Y., Chang, C. M. & Yu, T. J. (2006). Determinants of user acceptance of the e-Government services: The case of online tax filing and payment system. *Government Information Quarterly,* **23,** 97-122.

Hussein, R., Karim, N. S. A. & Selamat, M. H. (2007). The impact of technological factors on information systems success in the electronic-government context. *Business Process Management Journal,* **13,** 613-627.

Hustad, E. & Olsen, D. H. (2011). Exploring the ERP pre-implementation process in a small-and-medium-sized enterprise: a case study of a Norwegian retail company. *European Conference on Information Systems. Recuperado de* *http://is2.lse.ac.uk/asp/aspecis/20110007.pdf*.

Im, J. J. H. & Seo, J.-W. (2005). E-government in South Korea: planning and implementation. *Electronic Government, an International Journal,* **2,** 188-204.

Iqbal, M. S. Can E-governance restrict the Relationships between Stakeholders of Corruption? An Empirical Study of a Developing Country. *Korea University, South Korea*.

Irani, Z., Al-Sebie, M. & Elliman, T. (Year). Transaction stage of e-government systems: identification of its location and importance. *In*, 2006.

Irani, Z., Elliman, T. & Jackson, P. (2007). Electronic transformation of government in the U.K.: a research agenda. *European Journal of Information Systems,* **16,** 327-335.

Irani, Z., Ezingeard, J., Grieve, R. & Race, P. (1999). A case study strategy as part of an information systems research methodology: a critique. *International Journal of Computer Applications in Technology,* **12,** 190-198.

Irani, Z., Love, P. E. D., Elliman, T., Jones, S. & Themistocleous, M. (2005). Evaluating e-government: learning from the experiences of two UK local authorities. *Information Systems Journal,* **15,** 61-82.

Isomäki, H. & Liimatainen, K. (2008). Challenges of Government Enterprise Architecture Work–Stakeholders' Views. *Electronic Government***,** 364-374.

Jaeger, P. T. & Bertot, J. C. (2010). Designing, implementing, and evaluating user-centered and citizen-centered e-government. *International Journal of Electronic Government Research (IJEGR),* **6,** 1-17.

Jaeger, P. T. & Thompson, K. M. (2003). E-government around the world: lessons, challenges, and future directions. *Government Information Quarterly,* **20,** 389-394.

Jain, V. & Kesar, S. (2011). E-government implementation challenges at local level: a comparative study of government and citizens' perspectives. *Electronic Government, an International Journal,* **8,** 208-225.

Janesick, V. J. (1999). A journal about journal writing as a qualitative research technique: History, issues, and reflections. *Qualitative Inquiry,* **5,** 505-524.

Jansen, A. (2005). Assessing E-government progress–why and what. *NOKOBIT***,** 1504-1697.

Janssen, M. (2005a). Centralized or decentralized organization? *In National Conference on Digital Government Society Research of North America, 2005. 247-248.*

.

Janssen, M. (2005b). Managing the development of shared service centers: stakeholder considerations. *Proceedings of the 7th international conference on Electronic commerce.* Xi'an, China: ACM.

Janssen, M., Chun, S. & Gil-Garcia, J. R. (2009). Building the next generation of digital government infrastructures. *Government Information Quarterly,* **26,** 233-237.

Jayashree, S. & Marthandan, G. (2010). Government to E-government to E-society. *Journal of Applied Sciences(Faisalabad),* **10,** 2205-2210.

Joia, L. A. (2004). Developing Government-to-Government enterprises in Brazil: a heuristic model drawn from multiple case studies. *International journal of information management,* **24,** 147-166.

Jorgensen, D. J. & Cable, S. (2002). Facing the challenges of e-government: A case study of the City of Corpus Christi, Texas. *SAM Advanced Management Journal,* **67,** 15-21.

Juell-Skielse, G. & Perjons, E. (2009). Improving E-Government through Benefit Analysis and Value Modeling. *Computer Software and Applications Conference, 2009. COMPSAC '09. 33rd Annual IEEE International.*

Kaaya, J. (Year). The emergence of e-government services in East Africa: tracking adoption patterns and associated factors. *In*, 2004a. ACM New York, NY, USA, 438-445.

Kaaya, J. (2004b). Implementing e-government services in East Africa: Assessing status through content analysis of government websites. *Electronic Journal of e-Government,* **2,** 39-54.

Kamal, M., Themistocleous, M. & Elliman, T. (2008). Mapping factors influencing EAI adoption in the local government authorities on different phases of the adoption lifecycle. *European and Mediterranean Conference on Information Systems (EMCIS2008).* Dubai, UAE.

Kamal, M., Weerakkody, V. & Irani, Z. (2011). Analyzing the role of stakeholders in the adoption of technology integration solutions in UK local government: An exploratory study. *Government Information Quarterly,* **28,** 200-210.

Kaplan, A. (1964). *The Conduct of Enquiry: Methodology for Behavioural Research,* California, USA, Chandler.

Kaplan, R. S. (1986). The role for empirical research in management accounting. *Accounting, Organizations and Society,* **11,** 429-452.

Karunasena, K. & Deng, H. (2011). Critical factors for evaluating the public value of e-government in Sri Lanka. *Government Information Quarterly*.

Ke, W. & Wei, K. K. (2004). Successful e-government in Singapore.

Kertesz, S. (2003). Cost-benefit analysis of e-government investments. *JF Kennedy School of Government. Harvard University, Cambridge*.

Kifle, H., Low, P. & Cheng, K. (2009). e-Government Implementation and Leadership–the Brunei Case Study. *Electronic Journal of e-Government Volume www. ejeg. com,* **7,** 271-282.

King, J. L. (1983). Centralized versus decentralized computing: organizational considerations and management options. *ACM Computing Surveys (CSUR),* **15,** 319-349.

Klein, H. K. & Myers, M. D. (1999). A set of principles for conducting and evaluating interpretive field studies in information systems. *MIS Quarterly: Management Information Systems,* **23,** 67-94.

Klischewski, R. (2011). Architectures for Tinkering?: Contextual Strategies towards Interoperability in E-government. *Journal of theoretical and applied electronic commerce research,* **6,** 26-42.

Koh, C. E., Prybutok, V. R., Ryan, S. & Ibragimova, B. (2006). The importance of strategic readiness in an emerging e-government environment. *Business Process Management Journal,* **12,** 22-33.

Koh, C. E., Prybutok, V. R. & Zhang, X. (2008). Measuring e-government readiness. *Information & Management,* **45,** 540-546.

Kohlborn, T., Weiss, S., Poeppelbuß, J., Korthaus, A. & Fielt, E. (2010). Online service delivery models: an international comparison in the public sector. *Australasian Conference on Information Systems.* Brisbane, Australia.

Krishnan, S. & Teo, T. S. H. (2012). Moderating effects of governance on information infrastructure and e-government development. *Journal of the American Society for Information Science and Technology,* **63,** 1929-1946.

Kunstelj, M. & Vintar, M. (2004). Evaluating the progress of e-government development: A critical analysis. *Information Polity,* **9,** 131-148.

Kuruppuarachchi, P. R., Mandal, P. & Smith, R. (2002). IT project implementation strategies for effective changes: a critical review. *Logistics information management,* **15,** 126-137.

Kwon, T. H. & Zmud, R. W. (1987). Unifying the fragmented models of information systems implementation. *Critical issues in information systems research***,** 227-251.

Lam, W. (2005). Barriers to e-government integration. *Journal of Enterprise Information Management,* **18,** 511-530.

Langford, J. & Harrison, Y. (2001). Partnering for e-government: Challenges for public administrators. *Canadian Public Administration,* **44,** 393-416.

Lau, E. (2003). Challenges for E-Government Development, 5th Global Forum on Reinventing Government. *Mexico: Organization for Economic Co-Operation and Development (OECD),* **5**.

Lau, E. (2005). E-Government and the Drive for Growth and Equity. *Proceedings of the Conference from E-Gov to I-Gov. Retrieved October 5, 2012 from http://belfercenter.ksg.harvard.edu/files/lau-wp.pdf.*

Lau, T. Y., Aboulhoson, M., Lin, C. & Atkin, D. J. (2008). Adoption of e-government in three Latin American countries: Argentina, Brazil and Mexico. *Telecommunications Policy,* **32,** 88-100.

Layne, K. & Lee, J. (2001). Developing fully functional E-government: A four stage model. *Government Information Quarterly,* **18,** 122-136.

Lee, C., Chang, K. & Berry, F. S. (2011). Testing the Development and Diffusion of E-Government and E-Democracy: A Global Perspective. *Public administration review,* **71,** 444-454.

Lee, S. M., Tan, X. & Trimi, S. (2005). Current practices of leading e-government countries. *Commun. ACM,* **48,** 99-104.

Li, B., Shi, L. H., Liu, J. P. & Li, Y. X. (2011). Informatization management and practice for flood prevention service work oriented E-government. *Science of Surveying and Mapping,* **36,** 184-186.

Li, F. & Steveson, R. (Year). Implementing E-Government strategy in Scotland: current situation and emerging issues. *In*, 2002. Academic Conferences Limited, 251.

Liu, C. N., Huang, Y. Y. & Pan, Q. (2011). A study on technology architecture and serving approaches of electronic government system. *Intelligent Computing and Information Science***,** 112-117.

Liu, Y., Zhou, C. & Chen, Y. (2010). Customer satisfaction measurement model of e-government service. *Service Operations and Logistics and Informatics (SOLI), IEEE, 419-423.*

Lubbe, S. (2004). The development of a case study methodology in the information technology(IT) field: a step by step approach. *Computing Reviews,* **45,** 565.

Luna-Reyes, L. F., Pardo, T. A., Gil-Garcia, J. R., Navarrete, C., Zhang, J. & Mellouli, S. (2010). Digital Government in North America: A Comparative Analysis of Policy and Program Priorities in Canada, Mexico, and the United States. *Comparative E-Government***,** 139-160.

Luo, G. (2009). E-government, people and social change: A case study in China. *The Electronic Journal of Information Systems in Developing Countries,* **38**.

Lyytinen, K. & Hirschheim, R. (1987). Information systems failures\—a survey and classification of the empirical literature. *Oxford Surveys in Information Technology.* Oxford University Press, Inc.

Ma, L., Chung, J. & Thorson, S. (2005). E-government in China: Bringing economic development through administrative reform. *Government Information Quarterly,* **22,** 20-37.

Malterud, K. (2001). Qualitative research: standards, challenges, and guidelines. *The Lancet,* **358,** 483-488.

Maluf, D. & Bell, D. (2005). Towards G2G: systems of technology database systems. *Aerospace Conference, 2005 IEEE.*

Mandal, P. & Gunasekaran, A. (2003). Issues in implementing ERP: A case study. *European Journal of Operational Research,* **146,** 274-283.

Manoharan, A. (2012). A Study of the Determinants of County E-Government in the United States. *The American Review of Public Administration*.

Marin, A., Vlaicu, C., Vita, A., Dobre, C. & Cristea, V. (2009). An e-Framework to Optimize Public Administration Services. *Second International Conference on Developments in eSystems Engineering (DESE), 233-239.*

Mason, M. (2010). Sample Size and Saturation in PhD Studies Using Qualitative Interviews. *2010*, **11**. URL: http://www.qualitative-research.net/index.php/fqs/article/view/1428/3027.

Melin, U. & Axelsson, K. (2009). Managing e-service development–comparing two e-government case studies. *Transforming Government: People, Process and Policy,* **3,** 248-270.

Metaxiotis, K. & Psarras, J. (2004). E-government: new concept, big challenge, success stories. *Electronic Government, an International Journal,* **1,** 141-151.

Miles, M. B. & Huberman, A. M. (1994). Qualitative data analysis: An expanded sourcebook. 1994. *Beverly Hills: Sage Publications*.

Millard, J. (2008). eGovernment measurement for policy makers. *European Journal of ePractice,* **4**.

Mintzberg, H. (1996). MANAGING GOVERNMENT GOVERNING MANAGEMENT. *Harvard Business Review,* **74,** 75-83.

Mishra, A. & Mishra, D. (2012). E-government: exploring the different dimensions of challenges, implementation, and success factors. *ACM SIGMIS Database,* **42,** 23-37.

Mnjama, N. & Wamukoya, J. (2007). E-government and records management: an assessment tool for e-records readiness in government. *Electronic Library, The,* **25,** 274-284.

Mohammad, H., Almarabeh, T. & Ali, A. A. (2009). E-government in Jordan. *European Journal of Scientific Research,* **35,** 188-197.

Moon, M. J. (2002a). The Evolution of E-Government among Municipalities: Rhetoric or Reality? *Public administration review,* **62,** 424-433.

Moon, M. J. (2002b). The evolution of e-government among municipalities: rhetoric or reality? *Public administration review***,** 424-433.

Morris, D. F. & Moon, M. J. (2005). Advancing E-Government at the Grassroots: Tortoise or Hare? *Public Administration Review,* **65,** 64-75.

Morse, J. M. (1994). Designing funded qualitative research. *In Norman K. Denzin & Yvonna S. Lincoln (Eds.), Handbook of qualitative research (2nd ed., pp.220-35). Thousand Oaks, CA: Sage.* .

Mumford, E. (1994). New treatments or old remedies: Is business process reengineering really socio-technical design. *Journal of Strategic Information Systems,* **3,** 313-326.

Myers, M. (1997). Qualitative research in information systems. *MIS quarterly,* **21,** 241-242.

Myers, M. D. (1994). A disaster for everyone to see: an interpretive analysis of a failed IS project. *Accounting, Management and Information Technologies,* **4,** 185-201.

Ndou, V. (2004). E–Government for developing countries: opportunities and challenges. *EJISDC,* **18,** 1-24.

Newell, A., Perlis, A. & Simon, H. (1967). Computer Science. *Science,* **157,** 1373.

Norris, D. F. (1999). Leading edge information technologies and their adoption: lessons for US cities. *Idea Group Series In Information Technology Management***,** 137-156.

Norris, D. F. (2010a). e-government... not e-governance... not e-democracy not now!: not ever? *Proceedings of the 4th International Conference on Theory and Practice of Electronic Governance.* Beijing, China: ACM.

Norris, D. F. (2010b). E-Government 2020: Plus ça change, plus c'est la meme chose. *Public administration review,* **70,** s180-s181.

Norris, D. F., Fletcher, P. D. & Holden, S. H. (2001). Is your local government plugged in? Highlights of the 2000 electronic government survey. *Washington, DC: International City/County Management Association*.

Nour, M. A., AbdelRahman, A. A. & Fadlalla, A. (2008). A context-based integrative framework for e-government initiatives. *Government Information Quarterly,* **25,** 448-461.

Nour, M. A. & Mouakket, S. (2011). A Classification Framework of Critical Success Factors for ERP Systems Implementation: A Multi-Stakeholder Perspective. IGI Global.

O'Donnell, O., Boyle, R. & Timonen, V. (2003). Transformational aspects of e-Government in Ireland: Issues to be addressed. *Electronic Journal of e-Government,* **1,** 23-32.

Obeidat, R. A. & Abu-Shanab, E. A. (2010). Drivers of E-government and E-business in Jordan. *Journal of Emerging Technologies in Web Intelligence,* **2,** 204-211.

Obi, T. & Iwasaki, N. (2010). Electronic governance benchmarking: Waseda University e-gov ranking. *Proceedings of the 4th International Conference on Theory and Practice of Electronic Governance (ACM New York, NY, USA ©2010, 2010).* ACM.

Ojha, A., Palvia, S. & Gupta, M. (2008). A model for impact of e-government on corruption: Exploring theoretical foundations. *Critical thinking in e-governance***,** 160-170.

Ojo, A. & Janowski, T. (2010). A whole-of-government approach to information technology strategy management. *ACM Digital Library, Digital Government Society of North America(2010), 72-81.*

Orlikowski, W. & Baroudi, J. (1991). Studying information technology in organizations: Research approaches and assumptions. *Information systems research,* **2,** 1-28.

Palanisamy, R. & Mukerji, B. (2011). Security and Privacy Issues in E-Government. *E-Government Service Maturity and Development: Cultural, Organizational and Technological Perspectives***,** 236.

Pardo, T., Burke, B., Gil-Garcia, J. & Guler, A. (2009). Clarity of roles and responsibilities in government cross-boundary information sharing initiatives: Identifying the determinants. *Paper presented at the 5th International Conference on E-Government (ICEG).* Boston, MA.

Pardo, T. & Scholl, H. (Year). Walking atop the cliffs: Avoiding failure and reducing risk in large scale e-government projects. *In*, 2002. IEEE, 1656-1665.

Pardo, T. A., Nam, T. & Burke, G. B. (2012). E-Government Interoperability Interaction of Policy, Management, and Technology Dimensions. *Social Science Computer Review,* **30,** 7-23.

Park, H. M. (2005). A Cost-Benefit Analysis of the Seoul OPEN System: Policy Lessons for Electronic Government Projects. *Proceedings of the 38th Annual Hawaii International Conference on System Sciences, January 3-5, 2005, Computer Society Press.*: IEEE.

Park, R. (Year). Measuring factors that influence the success of E-government initiatives. *In*, 2008. IEEE, 218-218.

Perrott, B. E. (1996). Managing strategic issues in the public service. *Long Range Planning,* **29,** 337-345.

Peters, R. M., Janssen, M. & van Engers, T. M. (Year). Measuring e-government impact: existing practices and shortcomings. *In*, 2004. ACM, 489.

Pina, V., Torres, L. & Royo, S. (2010). Is E-government Leading to more Accountable and Transparent Local Governments? An Overall View. *Financial Accountability & Management,* **26,** 3-20.

Prybutok, V. R., Zhang, X. & Ryan, S. D. (2008). Evaluating leadership, IT quality, and net benefits in an e-government environment. *Information & Management,* **45,** 143-152.

Pyster, A. B. & Thayer, R. H. (2005). Guest Editors' Introduction: Software Engineering Project Management 20 Years Later. *Software, IEEE,* **22,** 18-21.

Quah, J. S. T. (2010). Combating corruption. *Jon S.T. Quah, in (ed.) Public Administration Singapore-style (Research in Public Policy Analysis and Management, Volume 19), Emerald Group Publishing Limited, pp. 171 - 198.*

Rabaiah, A. & Vandijck, E. (2011). A Strategic Framework of e-Government: Generic and Best Practice. *Leading Issues in E-Government***,** 1.

Raman, M., Kaliannan, M. & Yu, C. M. (2007). E-business and E-government: Issues and Challenges in Malaysia. *Information Technology Journal,* **6,** 428-434.

Reddick, C. G. (2004a). Empirical models of e-government growth in local governments. *E-service Journal,* **3,** 59-84.

Reddick, C. G. (2004b). A two-stage model of e-government growth: Theories and empirical evidence for US cities. *Government Information Quarterly,* **21,** 51-64.

Reddick, C. G. (2005). Citizen interaction with e-government: From the streets to servers? *Government Information Quarterly,* **22,** 38-57.

Reddick, C. G. & Frank, H. A. (2007). The perceived impacts of e-government on US cities: A survey of Florida and Texas City managers. *Government Information Quarterly,* **24,** 576-594.

Reich, B. H. & Benbasat, I. (2000). Factors that influence the social dimension of alignment between business and information technology objectives. *Management Information Systems Quarterly,* **24,** 81-114.

Reinwald, A. & Kraemmergaard, P. (2012). Managing stakeholders in transformational government — A case study in a Danish local government. *Government Information Quarterly,* **29,** 133-141.

Reinwald, A. K. & Kræmmergaard, P. (2011). MANAGING STAKEHOLDERS IN TRANSFORMATIONAL GOVERNMENT:–A CASE STUDY IN A DANISH LOCAL GOVERNMENT. *Government Information Quarterly*.

Roethlisberger, F. J. & Lombard, G. F. F. (1977). *The elusive phenomena: An autobiographical account of my work in the field of organizational behavior at the Harvard Business School*, Harvard Business School Pr.

Rogers, E. M. (1995). *Diffusion of innovations*, Free Pr.

Rokhman, A. (2011). E-Government Adoption in Developing Countries; the Case of Indonesia. *Journal of Emerging Trends in Computing and Information Sciences,* **2,** 228-236.

Ronaghan, S. (2001). Benchmarking E-Government: A Global Perspective.

Ronchi, S., Brun, A., Golini, R. & Fan, X. (2010). What is the value of an IT e-procurement system? *Journal of Purchasing and Supply Management,* **16,** 131-140.

Rose, M. (2004). Democratizing information and communication by implementing e-government in Indonesian regional government. *The International Information & Library Review,* **36,** 219-226.

Rose, W. R. & Grant, G. G. (2010). Critical issues pertaining to the planning and implementation of E-Government initiatives. *Government Information Quarterly,* **27,** 26-33.

Rowley, J. (2011). e-Government stakeholders—Who are they and what do they want? *International journal of information management,* **31,** 53-62.

Sagheb-Tehrani, M. (2010). A model of successful factors towards e-government implementation. *Electronic Government, an International Journal,* **7,** 60-74.

Sahli, N., Mellouli, S. & Jabeur, N. (Year). Survey on e-government approaches: which approach best fits my Government? *In*, 2009. IEEE, 1-8.

Sang, S., Jeong-Dong, L. E. E. & Jongsu, L. E. E. (2009). A Study on the Contribution Factors and Challenges to the Implementation of E-Government in Cambodia. *JOURNAL OF SOFTWARE,* **4,** 529.

Sarantis, D., Askounis, D. & Smithson, S. (2009). Critical appraisal on project management approaches in e-Government. *7th International Conference on ICT and Knowledge Engineering, 44-49.*

Sarantis, D., Charalabidis, Y. & Askounis, D. (2010a). A Goal Oriented and Knowledge Based E-Government Project Management Platform. *System Sciences (HICSS), 2010 43rd Hawaii International Conference on.*

Sarantis, D., Charalabidis, Y. & Askounis, D. (2011). A goal-driven management framework for electronic government transformation projects implementation. *Government Information Quarterly,* **28,** 117-128.

Sarantis, D., Smithson, S., Charalabidis, Y. & Askounis, D. (2010b). A critical assessment of project management methods with respect to electronic

government implementation challenges. *Systemic Practice and Action Research,* **23,** 301-321.
Saunders, M., Lewis, P. & and Thornhill, A. (2012). *Research methods for business students*, Pearson Education Ltd.
Savage, G. T., Nix, T. W., Whitehead, C. J. & Blair, J. D. (1991). Strategies for assessing and managing organizational stakeholders. *The executive***,** 61-75.
Saxena, K. (2005). Towards excellence in e-governance. *International Journal of Public Sector Management,* **18,** 498-513.
Scholl, H., Fidel, R., Liua, S., Paulsmeyer, M. & Unsworth, K. (2007). E-Government Field Force Automation: Promises, Challenges, and Stakeholders. *Electronic Government***,** 127-142.
Scholl, H. J. (Year). Applying stakeholder theory to e-government: benefits and limits. *In*, 2001. Citeseer.
Scholl, H. J. (2003). E-government: a special case of ICT-enabled business process change. *System Sciences*.
Scholl, H. J. (2004). Involving Salient Stakeholders Beyond the Technocratic View on Change. *Action Research,* **2,** 277-304.
Schuppan, T. (2009). Structural Change Through E-Government: Local Experiences from Germany. *Handbook of Research on Strategies for Local E-Government Adoption and Implementation. Comparative Studies. Hershey. S***,** 17-36.
Schwalbe, K. (2010). *Information technology project management,* Canada:, Course Technology Ptr.
Schware, R. (2005). *e-Development: From excitement to effectiveness*, World Bank Publications.
Schwester, R. (2009). Examining the Barriers to e-Government Adoption. *Electronic Journal of e-Government,* **7,** 113-122.
Seifert, J. & Petersen, R. (2002). The promise of all things e? Expectations and challenges of emergent electronic government. *Perspectives on Global Development and Technology,* **1,** 193-212.
Seifert, J. W. (2003). A primer on e-government: Sectors, stages, opportunities, and challenges of online governance. *Congressional Research Service, The Library of Congress.* DTIC Document.
Seifert, J. W. & McLoughlin, G. J. (2008). State e-government strategies: Identifying best practices and applications. *E-Government in High Gear***,** 1.
Seltsikas, P. & van der Heijden, H. (2010). A taxonomy of government approaches towards online identity management. *In: 43rd Hawaii International Conference on System Sciences (HICSS-43 2010), IEEE Computer Society, pp.1-8, January 2010, Koloa, Kauai, HI, USA.*
Shackleton, P., Fisher, J. & Dawson, L. (2004). Internal and external factors impacting in e-government maturity: a local government case study. *Journal of information technology cases and applications,* **6,** 36-50.
Shalini, R. T. (2009). Are Mauritians ready for e-Government services? *Government Information Quarterly,* **26,** 536-539.
Shan, S., Wang, L., Wang, J., Hao, Y. & Hua, F. (2011). Research on e-Government evaluation model based on the principal component analysis. *Information Technology and Management,* **12,** 173-185.
Shareef, M. A., Archer, N., Kumar, V. & Kumar, U. (2010a). Developing fundamental capabilities for successful e-government implementation. *International Journal of Public Policy,* **6,** 318-335.

Shareef, M. A., Kumar, U., Kumar, V. & Dwivedi, Y. K. (2009). Identifying critical factors for adoption of e-government. *Electronic Government, an International Journal,* **6,** 70-96.

Shareef, M. A., Kumar, V., Kumar, U., Chowdhury, A. H. & Misra, S. C. (2010b). E-Government Implementation Perspective: Setting Objective and Strategy. *International Journal of Electronic Government Research (IJEGR),* **6,** 59-77.

Shareef, M. A., Kumar, V., Kumar, U. & Dwivedi, Y. K. (2011). e-Government Adoption Model (GAM): Differing service maturity levels. *Government Information Quarterly,* **28,** 17-35.

Sharifi, M. & Manian, A. (2010). The study of the success indicators for pre-implementation activities of Iran's e-government development projects. *Government Information Quarterly,* **27,** 63-69.

Sharma, S. K. & Gupta, J. N. (2003). Building blocks of an e-government: A framework. *Journal of Electronic Commerce in Organizations (JECO),* **1,** 34-48.

Sharma, S. K. & Gupta, J. N. D. (2004). Web services architecture for m-government: issues and challenges. *Electronic Government, an International Journal,* **1,** 462-474.

She, I. C. (2004). ERP life cycle implementation, management and support: implications for practice and research. *System Sciences, 2004. Proceedings of the 37th Annual Hawaii International Conference on.*

Shin, S. (Year). Implementing e-government in developing countries: its unique and common success factors. *In*, 2008. American Political Science Association.

Shulman, J. (1994). The Editorial Imperative: Responding to Productive Tensions between Case Writing and Individual Development.

Siau, K. & Long, Y. (2005). Synthesizing e-government stage models- a meta-synthesis based on meta-ethnography approach. *Industrial Management & Data Systems,* **105,** 443-458.

Siddiquee, N. A. (2008). E-Government and Innovations in Service Delivery: The Malaysian Experience. *International Journal of Public Administration,* **31,** 797-815.

Silcock, R. (2001). What is e-government. *Parliamentary affairs,* **54,** 88.

Skinner, D., Tagg, C. & Holloway, J. (2000). Managers and research. *Management Learning,* **31,** 163.

Somers, T. M. & Nelson, K. (2001). The impact of critical success factors across the stages of enterprise resource planning implementations. *System Sciences, 2001. Proceedings of the 34th Annual Hawaii International Conference on.* IEEE.

Song, H. J. (2002). Prospects and limitations of the e-government initiative in Korea. *International Review of Public Administration,* **7,** 45-53.

Srivastava, S. C. (2011). Is e-government providing the promised returns?: A value framework for assessing e-government impact. *Transforming Government: People, Process and Policy,* **5,** 107-113.

Srivastava, S. C. & Teo, T. S. H. (2007). E-Government Payoffs: Evidence from Cross-Country Data. *Journal of Global Information Management,* **15,** 20-40.

Stake, R. E. (1995). *The art of case study research*, Sage Publications, Inc.

Stanforth, C. (2010). Using actor-network theory to analyze e-government implementation in developing countries. *Information technologies and international development,* **3,** 35.

Stone, E. F. (1978). *Research methods in organizational behavior*, Scott, Foresman Glenview, Il.

Strauss, A., Corbin, J. & Lynch, M. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*, Sage Newbury Park, CA.

Stuart, I., McCutcheon, D., Handfield, R., McLachlin, R. & Samson, D. (2002). Effective case research in operations management: a process perspective. *Journal of Operations Management,* **20,** 419-433.

Suh, J. H., Park, C. H. & Jeon, S. H. (2010). Applying text and data mining techniques to forecasting the trend of petitions filed to e-People. *Expert Systems with Applications,* **37,** 7255-7268.

Symonds M (2000) Government and the Internet, survey Economist 355, 24 June.

Tan, C. W., Pan, S. L. & Lim, E. T. K. (2007). Managing stakeholder interests in e-government implementation: lessons learned from a Singapore e-government project. *International Journal of Electronic Government Research,* **3,** 61-84.

Tapscott, D. (1996). *The digital economy: Promise and peril in the age of networked intelligence*, McGraw-Hill New York.

Tellis, W. (1997). Introduction to case study. *The Qualitative Report,* **3**.

Tennert, J. & Schroeder, A. (1999). Stakeholder analysis. *American Society for Public Administration*.

Tohidi, H. (2011). E-government and its different dimensions: Iran. *Procedia Computer Science,* **3,** 1101-1105.

Torres, L., Pina, V. & Acerete, B. (2005). E-government developments on delivering public services among EU cities. *Government Information Quarterly,* **22,** 217-238.

UNDESA (2003) E-government as a 'free lunch'? Development Administration106 , 6-8.

United, N. (2008). United Nations e-government survey 2008; from e-government to connected governance. *Reference and research book news,* **New York, 2008**.

Valdés, G., Solar, M., Astudillo, H., Iribarren, M., Concha, G. & Visconti, M. (2011). Conception, development and implementation of an e-Government maturity model in public agencies. *Government Information Quarterly,* **28,** 176-187.

Venkatarayappa, R. B. (2004). *Structurational analysis of e-government.* Master Thesis, National University of Singapore.

Vigoda-Gadot, E. & Beeri, I. (2011). Change-Oriented Organizational Citizenship Behavior in Public Administration: The Power of Leadership and the Cost of Organizational Politics. *Journal of Public Administration Research and Theory*.

Voss, C., Tsikriktsis, N. & Frohlich, M. (2002). Case research in operations management. *International Journal of Operations and Production Management,* **22,** 195-219.

Vuksic, V. B., Pozgaj, Z. & Milanovic, L. (2010). E-government policy and implementation in Croatia. *32nd International Conference on Information Technology Interfaces (ITI), 423-428.*

Walsham, G. (1993). *Interpreting information systems in organizations*, John Wiley & Sons, Inc.

Walsham, G. (1995). Interpretive case studies in IS research: nature and method. *European Journal of Information Systems,* **4,** 74-81.

Wang, H. & Hou, J. (2010). An integrated approach to developing a successful one-stop portal e-government. *3rd IEEE International Conference on Computer Science and Information Technology (ICCSIT) (7), 2010, pp. 511-414.*

Wangwe, C. K., Eloff, M. M. & Venter, L. (2012). A sustainable information security framework for e-Government–case of Tanzania. *Technological and Economic Development of Economy,* **18,** 117-131.

Warkentin, M., Gefen, D., Pavlou, P. & Rose, G. (2002). Encouraging citizen adoption of e-government by building trust. *Electronic Markets,* **12,** 157-162.

Weerakkody, V., Baire, S. & Choudrie, J. (Year). E-government: the need for effective process management in the public sector. *In*, 2006. IEEE, 74b-74b.

Weerakkody, V. & Currie, W. (2003). Integrating business process reengineering with information systems development: issues & implications. *Lecture notes in computer science,* **2678,** 302-320.

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,** 1-16.

Weerakkody, V., El-Haddadeh, R., Sabol, T., Ghoneim, A. & Dzupka, P. (2011a). E-government implementation strategies in developed and transition economies: A comparative study. *International journal of information management*.

Weerakkody, V. & Hinton, C. M. (1999). Exploiting information systems and technology through business process improvement. *Business Change and Re-engineering,* **6,** 17-23.

Weerakkody, V., Janssen, M. & Dwivedi, Y. K. (2011b). Transformational change and business process reengineering (BPR): Lessons from the British and Dutch public sector. *Government Information Quarterly,* **28,** 320-328.

Weerakkody, V., Janssen, M. & Hjort-Madsen, K. (2007). Integration and Enterprise Architecture Challenges in E-Government: A European Perspective. *International Journal of Cases on Electronic Commerce,* **3,** 13-35.

Welch, E., Pandey, S. & Yavuz, N. (2010). Modeling the Relationship Between Web-Site Effectiveness and Service Quality. *Advances of Management Information Systems,* **17,** 256.

Welch, E. W. (2012). The relationship between transparent and participative government: A study of local governments in the United States. *International Review of Administrative Sciences,* **78,** 93-115.

Wescott, C. G. (2001). E-Government in the Asia-pacific region. *Asian Journal of Political Science,* **9,** 1-24.

West, D. M. (2001). State and federal e-government in the United States, 2001. D. West.

West, D. M. (2004a). E-government and the transformation of service delivery and citizen attitudes. *Public administration review,* **64,** 15-27.

West, D. M. (2004b). E-Government and the Transformation of Service Delivery and Citizen Attitudes. *Public administration review,* **64,** 15-27.

Westholm, H. (2005). Models of improving e-governance by back office re-organisation and integration. *Journal of Public Policy,* **25,** 99-132.

Widerström, T. (2011). *Customers IT Governance maturity: Successful implementation of IS.* Thesis, University of Linköping.

Willcocks, L. (Year). False promise or delivering the goods? Recent findings on the economics and impact of business process reengineering. *In*.

Willoughby, M., Gómez, H. & Lozano, M. (2010a). Making e-government attractive. *Service Business,* **4,** 49-62.

Willoughby, M., Gómez, H. G. & Lozano, M. Á. F. (2010b). Making e-government attractive. *Service Business,* **4,** 49-62.

Wimmer, M. & Krenner, J. (2001). An integrated online one-stop government platform: the eGOV project. *IDIMT-2001, Universitatsverlag Trauner, Linz***,** 329-337.

Wimmer, M. A. (2002a). A European perspective towards online one-stop government: the eGOV project. *Electronic Commerce Research and Applications,* **1,** 92-103.

Wimmer, M. A. (2002b). Integrated service modelling for online one-stop government. *Electronic Markets,* **12,** 149-156.

Ya Ni, A. & Tat-Kei Ho, A. (2005). Challenges in e-government development: Lessons from two information kiosk projects. *Government Information Quarterly,* **22,** 58-74.

Yanqing, G. (2011). The Potential Opportunities and Challenges of E-Government. *International Conference on Management and Service Science (MASS), 1-4.* IEEE.

Yeo, K. T. (2002). Critical failure factors in information system projects. *International Journal of Project Management,* **20,** 241-246.

Yildiz, M. (2007). E-government research: Reviewing the literature, limitations, and ways forward. *Government Information Quarterly,* **24,** 646-665.

Yin, R. (1984). Case study research. Beverly Hills. *Beverly Hills, Calif.: Sage Publications*.

Yin, R. (2009a). *Case study research: Design and methods*, Sage Publications, Inc.

Yin, R. K. (2009b). *Case study research: Design and methods*, Sage Publications, Incorporated.

Yong, J. S. L. & Koon, L. H. (2005). E-government: Enabling public sector reform. *E-government in Asia: Enabling Public Service Innovation in the 21st Century. Singapore: Times Media***,** 3-21.

Yu, C. S. (2005). Causes influencing the effectiveness of the post-implementation ERP system. *Industrial Management & Data Systems,* **105,** 115-132.

Zampou, E. & Pramatari, K. (2011). An Approach to the Assessment of the Environmental Impact of E-government Services. *ECIS 2011 Proceedings. Paper 213.*

Zarei, B. & Ghapanchi, A. (2008). Guidelines for government-to-government initiative architecture in developing countries. *International journal of information management,* **28,** 277-284.

Zhang, J., Dawes, S. S. & Sarkis, J. (2005). Exploring stakeholders' expectations of the benefits and barriers of e-government knowledge sharing. *Journal of Enterprise Information Management,* **18,** 548-567.

Appendix A: Acronyms

MOU : memorandum of Understanding

IT : Information Technology

IS : Information System

E-government: Electronic Government

WS : Web Site

BPR : Business Process Re-engineering

CAIT : Central Agency for Information Technology

MoF : Ministry of Finance

PAAET : Public Authority for Applied Education and Training

PACI : Public Authority for Civil Information

CSC : Civil Service Commission

KGO : Kuwait Government Online

ICT : Information and Communication Technology

KIN : Kuwait Information Network

RFP : Request for Proposal

B

Appendix B: Interview Agenda

The interview questionnaire is divided into 3 sections. The questionnaire aims to address the following sections:

QUESTIONS

A: To identify stakeholders of E-government Initiative Implementers.

B: To understand E-government Initiative Implementation Phases.

C: To identify the factors influencing e-government initiative implementation.

D: To mapping Stakeholders and Factors to Each Related Initiative Lifecycle Phases.

Case A: "Name of Agency" - Q&A Interviewee 01 "Name"		
When implementing a new e-government initiative, who is involved in the implementation process?	**ما هي الاطراف التي تشارك في عملية التنفيذ عند العمل علي تطوير خدمة الكترونية جديدة؟**	**Q1**
		A1
How do you rate the relationship with each stakeholder?	**كيف تقيم العلاقة بين جميع الاطراف؟**	**Q2**
		A2
How many phases do an e-government initiative implementation goes through?	**ما هي المراحل التي تمر بها مبادرة الحكومة الالكترونية؟**	**Q3**
		A3
What are the major critical factors for each phase?	**ما هي اهم العناصرالمهمه و المؤثرة علي كل مرحلة من مراحل بناء مبادرات الحكومة الالكترونية؟**	**Q4**
		A4
How do you start the first phase of e-government initiative implementation?	**كيف تبدأ اول مرحلة من مراحل بناء مبادرة الحكومة الالكترونية؟**	**Q5**
		A5

What is the most complex phase of e-government initiative implementation?	ماهي المرحلة الاكثر تعقيدا عند تطبيق احد مبادرات الحكومة الالكترونية؟ ولمادا؟	Q6
		A6
How important is the cooperation between your organization and other public organization when implementing new e-government initiative?	ما هي اهمية التعاون بينكم وبين الجهات الحكومية الاخري لانجاح مبادرات الحكومة الالكترونية؟	Q7
		A7
How would you value the relationship between your department and the department of IT?	كيف تقيم اهمية العلاقة بين ادارتكم وادارة تقنية المعلومات؟	Q8
		A8
How do you value the relationship between your agency and the Central Agency for Information Technology?	كيف تقيم اهمية العلاقة بينكم وبين الجهاز المركزي لتكنولوجيا المعلومات؟	Q9
		A9
Have you encountered problems to re-engineer business process? In which phase is it important?	هل واجهتم مشاكل عند اعادة هندسة الاجراءات لتحويلها الي خدمات الالكترونية؟	Q10
		A10
How do you deal with resistant to change among your staff when implementing e-government initiative?	كيف تتعاملون مع مقاومة الموظفين للتغيير عند تطبيق مبادرات الحكومة الالكترونية؟	Q11
		A11
How would you describe the importance of IT infrastructure to implement e-government initiatives?	كيف تصف اهمية البنية التكنولوجية التحتية لبناء مبادرات الحكومة الالكترونية؟	Q12
		A12
How do legislations and regulations affect the implementation of e-government initiatives?	كيف تأثر القوانين والتشريعات علي تطبيق المبادرات الحكومية؟	Q13
		A13
Do you depend on the principle of reward and punishment to require staff implement and adopt e-government initiative?	هل تعتمدون مبدأ الثواب و العقاب لإلزام الموظفين علي تقبل و تنفيذ مبادرات الحكومة الالكترونية؟	Q14
		A14
Do you face problems in obtaining the required budget to implement e-government	هل توفير الميزانيات يعتبر عائق امام انجاز الخدمات الالكترونية؟	Q15

initiatives?		
		A15
How important is leadership to implement e-government initiatives?	هل تؤمن ان وجود قائد ناجح يساعد علي ضمان التحول الي الحكومة الالكترونية ونجاح مبادراتها؟	Q16
		A16
Are there a clear strategy and awareness to implement e-government initiatives?	هل هناك استراتيجية واضحة ووعي لدي القائمين علي اعمال الحكومة الالكترونية؟	Q17
		A17
How would you rate the support level from top management toward e-government implementation?	هل لمستم الرغبة لدي القيادة السياسية و الدعم الكامل لتطبيق الحكومة الالكترونية؟	Q18
		A18
How would you describe the qualification level of your staff in terms of IT skill?	هل لك ان تصف مستوي الموظفين و كفاءتهم من ناحية القدرات في تكنولوجيا المعلومات؟	Q19
		A19
How would you describe the IT training in your organization?	هل لك ان تصف لي عملية تدريب الموظفين علي تكنولوجيا المعلومات في مؤسستكم واهميتها في تطبيق الحكومة الالكترونية؟	Q20
		A20
Does security and privacy aspect important for you? In which phase?	هل الجانب الامني و سرية البيانات مهم بالنسبة لكم؟	Q21
		A21
What is the cooperation level between your department and other departments in your organization with respect to e-government initiative implementation?	هل هناك تعاون بين ادارتكم والادارات الاخري في مؤسستكم فيما يخص تطبيق الحكومة الالكترونية؟	Q22
		A22
After the deployment of a new e-service, do you give it priority over the traditional one?	بعد وضع الخدمة الالكترونية علي موقع البوابة الالكترونية هل تعطي الاولوية للخدمة الالكترونية علي حساب النظام اليدوي القديم؟	Q23
		A23
Do you have a special team leading e-government implementation?	هل لديكم فريق يختص بمتابعة وقيادة اعمال الحكومة الالكترونية ؟	Q24
		A24
Any Comments?	هل لديك اي اضافات تود ذكرها؟	Q25
		A25