

THE CRITICAL SUCCESS FACTORS FOR E-GOVERNMENT IMPLEMENTATION IN JORDAN

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ABSTRACT. The implementation of e-government initiatives has become one of the main goals of many countries around the world. However, e-government implementation is not straightforward. Projects encounter different problems, be it in developed or developing countries. Many studies have focused on failed e-government implementation, while some focus on the factors leading to success. This paper reports the Critical Success Factors (CSFs) that could spur the growth and success of e-government initiatives in Jordan. Ten key CSFs were identified using Nvivo and content analysis of 30 interviews with 30 managers from three Jordanian ministries. These CSFs have practical implementation and must be incorporated in e-government implementation plans.

Keywords: E-government implementation, Critical Success Factors, E-government initiatives

INTRODUCTION

E-government is a global phenomenon occurring in developed and developing countries (Misra, 2009). The technology behind government could improve the lives of as much as 80% of the global population in developing countries. Developed countries such as the United States of America, Canada, the United Kingdom, and Australia are considered leaders in e-government, and are now reaping majority of the initial gains of their early e-government implementation (Chen et al., 2006). E-Government is one of the results of the digital revolution that changed all aspects of daily life for people all over the world, especially in developing countries. According to Ndou (2004), many developing countries are recognizing the power of Information Communication Technology (ICT) to promote e-strategies and initiatives to address economic, social, technological, infrastructure, legal, and educational issues.

The differences in e-government implementation around the world indicate that countries seek different benefits and follow different objectives. Good e-government is evident when the administrative authority effectively enhances economic and political activities, thereby improving the management of the affairs of the country at all levels (Åkesson, 2008). E-government has two objectives, namely, those for internally focused processes (operations), and those for externally focused services. Its external objective is to provide services to the public, business, and other agencies anytime, without stopping or waiting in long queues, by simplifying interactions using various government online services. Its internal objective is to facilitate rapid, transparent, accountable, efficient, and effective public administration activities, resulting in significant cost savings per transaction for the government (Backus, 2001).

E-government initiatives, despite their successes and acceptance in the form of e-government systems, have not been fully implemented in many parts of the world, highlighting the difficulties in rolling out a fully functional system. Failed e-government initiatives are testament to the inability of implementation to achieve set goals. Few countries have achieved partial success in e-government implementation, and it is a widespread failure in many developing countries (Misra, 2009). The implementation of e-government initiatives has become one of the main goals of several countries. However, e-government implementation is not straightforward. Projects encounter different problems, and they are not implemented in developing countries. Many studies have focused on failed e-government implementation (Dada, 2006; Misra, 2009), while some focus on the factors leading to success (Al-Azri et al., 2010). This paper aims to determine the critical success factors for e-government implementations in Jordan.

RELATED WORKS

E-government is one of the most important features of the revolution of information and communication technologies (digital revolution) during the last decade. E-government has become popular focus for the government's efforts in many developed countries, and recently e-government initiative become priority for many governments of developing countries and spread amazingly quickly, as a means to reform and modernise governance (Eilu, 2009).

The implementation of e-government has the potential to improve the lives of 80% of the world's population living in developing countries (Chen et al., 2006; Chaijenkij, 2010). Therefore, e-government has become an effective tool for governance reform by developing countries to provide a better quality of life to citizens and businesses, increasing the transparency and improve the efficiency of government. Furthermore, the efforts of these countries are not only focused on the issue of digitalization in itself, but also on the reorganization of the government services and participation treated through ICT. This includes using electronic means such as internet technology to increase e-government influence efficiency to improve the relationship between private-citizen and the public sector through efficient and profitable delivery of information, and knowledge in 24 hours a day, 7 days a week, without waiting in lines (Schuppan, 2009).

Jordan is one of the developing countries in the middle east. E-government in Jordan is a national initiative program that started with the ascension of King Abdullah II to the throne of the Hashemite Kingdom of Jordan in February 1999. Jordan has taken some major steps towards transforming the country into the electronic age so that it could become a player in the international ICT field. E-government initiative is very promising for Jordan to move forward in the twenty-first century to enable them to bridge the gap between themselves and their more developed counterparts within the region. The government of Jordan is currently leaping up the e-government readiness rankings, although its maturity level is not at a European level yet. It aims at this stage to become the Singapore of the region in the adoption of new ICTs and utilizing these innovations in all spheres of its growing life (Elsheikh et al, 2008). The Jordanian government is currently working within a special vision to be able to provide essential e-government services for social and economic development through improved access to government information. The Jordanian government hopes that this transformation will introduce change in government services delivery. Thus, the Jordanian government began a main long-term initiative to implement e-government (Mohammad et al, 2009).

Despite the potential benefits of e-government implementation, many e-government initiatives in developing countries are still in their primitive strategic phase of implementation (infancy) (Ebrahim & Zahir, 2005). As a result, numerous studies have showed that a large

proportion of initiatives to implement e-government around the world did not succeed in achieving its goals, where e-government is still facing many challenges as it is in development process (Almarabeh & AbuAli, 2010; Nkwe, 2012). Developing countries, such as Jordan are one of these countries that are facing some key challenges and barriers that would contribute to e-government implementation failure.

There are, in fact, an overall agreement on the existence of the need for further study to understand the real reasons behind these failures, as many governments have started to take into account the e-government implementation main problems and barriers (Ebrahim and Irani, 2005). Despite the high percentage of e-government projects that failed to reach its target level internationally, the world is witnessing a global agreement that recognizes that there is still a possibility of e-government initiatives to meet all the objectives. This is possible if the e-government project implementer have a better understanding better understanding of the obstacles and challenges faced, and then work on ways to overcome these obstacles (Almarabeh & AbuAli, 2010).

There are numerous barriers and challenges of e-government implementation that lead to decelerate and complexity in implementing e-government initiative in developing countries, (Ndou, 2004; Nkwe, 2012). Researchers have classified e-government barriers for developing countries into many categories, for instance strategy, technology, policy and organisation (Lam, 2005). However Obeidat & Abu-Shanab (2010) have added one more barriers which is legal and human. Ndou (2004) on the other hand has categorized e-government barriers to ICT infrastructure, policy issues, changes in management and constraints in partnership and collaboration. In addition, Kanaan (2009) in his research has classified the barriers to technical, national, social and organisational.

In addition to these barriers and challenges, there are several critical success factors that have been identified. These CSFs are closely related to the accomplishment rate of e-government initiatives in the developing countries. The concept of CSF was introduced by Rockart in the late 1970's and is a powerful mechanism to determine and ensure the success of any organization.

This paper discusses the study conducted to list the CSFs for e-government implementation in Jordan. Jordan is one of the few countries in the Middle East region that has started to implement e-government as a new technology based service in order to improve government services provided to citizens, Although it is still early for e-government to take root in most Arab states (Salem, 2006; Abdalla.s, 2012), it is vital that the important CSFs to be identified in order to ensure the success in the e-government implementation processes. The Arab world constitutes 5% of global population. However, most Arab countries are considered less developed in all aspect economically, socially, and politically. To investigate this issue meticulously, this study has examined CSFs that could spur the growth and success of e-government initiatives in Jordan.

METHODOLOGY

Deductive approach has been used in this research to explore the CSFs for e-government implementation from the point of view of Jordanian managers and decision-makers. Abdelghaffar et al., (2003) has recommended a top-down approach for identifying CSF's since it can derive specific confirmation about certain hypothesis through the literature and empirical finding. This research methodology has four phases that aims to identify the CSFs for e-government implementation in Jordan, which involve; a) investigate the existing models and success factors for e-government implementation, b) preparation process, c) execution

process and d) data analysis process. The detail information about our methodology is shown in Figure 1.

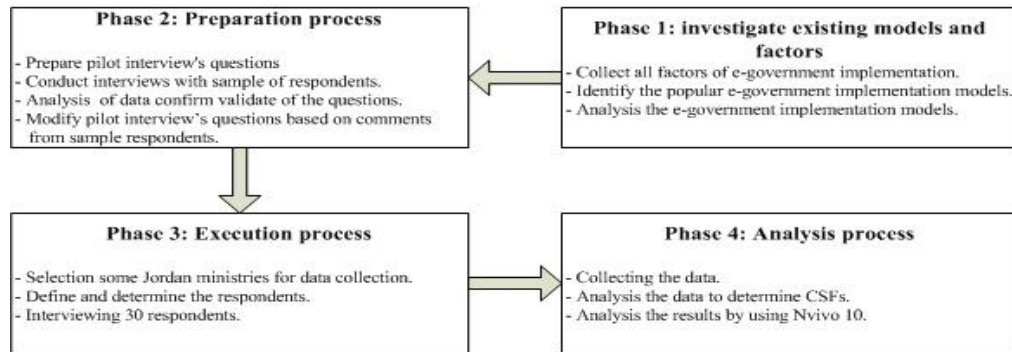


Figure1. The Phases to Determine CSFs for E-government Implementation

As shown in Figure 1, the first main phase is to investigate the existing models in order to determine the general critical factors for e-government implementation. Preparation process, on the other hands, includes designing and constructing interview questions, developing pilot test and, modify and analysis pilot interview questionnaire based on comments from respondents. The third main phase is the execution process, whereby this stage includes selection of the respondents from some Jordan ministries, and interviewing the respondents. The last phase is the analysis process, in which we collect and analyse the data to investigate the CSFs that are related to the success of e-government implementation.

This research aims to discover numerous critical success factors that have influence on managing and implementing the e-government initiative in Jordan. The interview was conducted with 30 people from different background consisting of management, senior managers and decision-makers in Jordan ministries. Each of these respondents has served in e-government implementation projects for a minimum of 2 years. An informal, semi-structured interview style has been used as a medium to collect data for this research, as this approach is flexible because it allows the researcher to raise new questions during and throughout interviews (Yin, 2003).

DATA ANALYSIS AND FINDINGS

This section presents the results and discusses the outcome of this research. The main aim is to identify and logically harmonized initial CSFs for e-government implementation based on data collected from Jordan ministries. The qualitative research analysis software NVivo has been utilized to construct and manage the data that have been collected from all the interviews. NVivo was selected as it supports the researcher in qualitative research.

Data collected from managers and decision makers in Jordan ministries, to help generate realistic issues and constrains around the current development, success factors and practices of initiative e-government that have been performed by these ministries. Furthermore, it gives a comprehensive overview of the real situation for the implementation of e-government in Jordan ministries. This study was conducted in three ministries - Ministry of Labor, Ministry of Information and Communication Technology and Ministry of Education. These ministries are selected as: Ministry of Labour has been selected taking into account the relationship between the government and business (G2G); Ministry of Information and Communication Technology is selected as they have enabled technology usage amongst government ministries (G2G); and the Ministry of Education was selected as the activities of this ministry is mainly between government and citizens to exchange information (G2C)

The CSFs for e-government implementation differs from one country to another. The results prove that there are three main factors that determine the success of e-government implementation in Jordan, which include the organization factors, technology factors and people factors. Among these three main factors, there are 10 critical success factors identified from this study, as show in Table 1 and listed here.

- **Funding:** e-government initiatives around the world require funding to start the e-government projects. Furthermore, it is a requirement for the continuation of e-government implementation. The importance of funding is essential in providing excellent service to citizens through excellent service delivery mechanisms.
- **IT Infrastructure:** in providing e-government services through components of Information and Communication Technology, that is able to support and enable the implementation of e-government services composed of infrastructure application server environment and its security, data and content management tools, application development tools, operating systems and hardware. These IT infrastructure are the backbone of e-government implementation and key factor for success.
- **Policy and Legal Issues:** new legal issues continue to arise through e-government implementation process. E-government is a relatively new idea and the country have very little legal background in this area as with other countries. As a result of this, the implementation of e-government requires the development of new laws and policies, through a series of legislative changes.

Table 1. 10 Critical Success that Highly influence e-government Implementations.

Factors	Number of Research Sources	Number of References	List of Sources
Funding	29	123	Lam(2005); Al-Rashidi (2010)
IT Infrastructure	30	121	Al-Sobhi et al (2010); Karunasena (2012)
Policy and Legal Issues	28	93	Altameem et al(2006), Lusa & Sensuse, (2011)
Awareness	30	73	AL-Kaabi (2010),
Top Management Support (Political Support)	28	67	Schwester (2009);
User Computer Efficacy	29	62	Lam & lee (2005); Karunasena (2012)
Reward System	25	61	Heeks (2005); Altameem et al(2006),
Resistance to change	27	55	Lam (2005); Al-Rashidi (2010)
Vision & strategy	29	54	Al-Rashidi (2010); AL-Kaabi(2010)
Training	27	45	Al-Rashidi (2010)

- **Awareness:** awareness in e-government refers to aggressively marketing the benefits of e-government services to users in the rural and urban areas. Raising awareness of e-government is the beginning (initial stage) of the e-government implementation is one of the method to avoid resistance and spur growth of e-government to success.
- **Top Management Support (Political Support):** support and commitment from senior management is important and is required throughout the implementation in

order to provide and allocate sufficient resources. Support also motivates the team to work harder in creating new ideas to speed up the processes and to face obstacles such as resistance to change.

- **User Computer Efficacy:** the ability of users to use and cope with new technology such as access the Internet and the skills needed by citizens to use technologies must be increased. The citizen's skills are classified into two types: (1) skills needed by citizens in order to obtain e-government services and information literacy; and (2) technology skills that are used to solve problems, make decision, to gather and disseminate information.
- **Reward System:** e-government is a new concept for citizen. The e-government should provide incentives for stakeholder to support these new systems. Employees will be more willing to give their time and effort to e-government initiative if top management recognize and appreciate their contribution. Therefore, the reward system motivates participation at high-level of works.
- **Resistance to Change:** resistance to change by older users is always a concern. Users should understand the benefits of the new procedures to implement e-government. The reasons of resistance to change are that users fear from new technology and its impact on their lives.
- **Vision & strategy:** the clear vision & strategy for any e-government is a key factor in implementing e-government. Successful e-government requires clear vision and strategy to lead and support the implementation processes that would enable the implementation e-government goals.
- **Training:** training is a critical element for successful e-government initiatives that needs to be incorporated within the implementation of e-government to improve the overall implementation of e-government. Training is associated with encouraging citizens to accept and use e-government by helping them to use computer and Internet applications. This will lead to the increase diffusion of e-government services into societies from the government side and also will affect the adoption rate of e-government from the citizens' side.

CONCLUSION AND FUTURE REMARKS

This paper has discusses the critical success factors of e-government implementations in Jordan. Four phases have been used to identify the CSFs for e-government implementation, which involved; a) investigate the existing models and success factors for e-government implementation, b) preparation process, c) execution process and d) data analysis process. It consisted of a detailed review of literature several general factors that related to e-government development have been recognized. 10 CSFs in relation to e-government implementations in Jordan where identified and these are funding, IT infrastructure, policy and legal issues, awareness, top management support (political support), user computer efficacy, reward system, resistance to change, vision & strategy and training. Understanding these factors is critical for the progression of the field in both academia and practice, for example; to understand what drives the success of e-government initiatives, to form the foundation for deriving performance measures related to e-government development, and to support the design and deployment of shared service structure and governance. Therefore, providing a strong foundation of CSFs for further research in e-government implementation is very essential. All of these ten aspects are important to be aware of and managed in order to ensure the success of e-government initiatives in developing countries.

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