

THE MOTIVATIONS FOR CHANGE TOWARDS E-GOVERNMENT ADOPTION: CASE STUDIES FROM SAUDI ARABIA

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Abstract

E-government is a new wave in the information revolution. More and more governments around the world pursue this phenomenon hoping to reduce costs, improve services for citizens and to increase effectiveness and efficiency in the public sector. E-government represents a fundamental change in the whole public sector structure, values, culture and the ways of conducting business. It is about a radical change within government and in the relationship between a government and its citizens. However, e-government adoption is surrounded by political, cultural, organisational, technological and social issues which must be considered and treated carefully to enable this transformation. Therefore, there is no universal model for e-government adoption which can be applicable for all countries to ensure success.

This paper aims to investigate the motivations behind the change towards e-government systems. In addition, the understanding of these motivations can help decision-makers appreciate the success and risk factors in e-government adoption. E-government characteristics therefore are discussed, and then the motivations for this change are investigated through empirical case studies from the Kingdom of Saudi Arabia.

Keywords: E-government, Transformation, Motivations, Saudi Arabia.

1 INTRODUCTION

The tremendous advances which are taking place in telecommunications technology and computer networks, especially the Internet, have affected our relationships with other individuals, with the business community and, more recently, with government (Castells, 1996; Rogerson and Fairweather, 2003; Howard, 2001). The e-government paradigm emphasises internal networking and external collaboration, by putting the full range of services that government agencies offer online for people so that these services can be easily reached (Dunleavy, 2002 and Moon, 2002). However, e-government adoption is more than a technological matter as it is influenced by many factors including organisational; human; social and cultural issues which are important forces and they relate to the nature of government itself and its responsibility in society (Holtham, 1992 and Carter; Belanger, 2004). In addition, the adoption of e-government systems requires time and a framework approach to adopt such system (Ebrahim and Irani, 2005).

E-commerce utilises the potential of Information and Communications Technologies (ICT) as a tool in the commercial sector. The public sector is now following a parallel course. Nevertheless, it is difficult

to apply results from e-commerce contexts to the world of e-government without considering the environment of implementation. Indeed, a number of experts have argued that the emergence of e-government is thus a fundamental transformation of government, which involves profound changes in the structure, process, culture and behaviour of the individuals in public sector (Prins, 2001; Howard, 2001, Irani et al, 2005). This is because the e-government paradigm includes changing the ways that government agencies carry out their work, and therefore the organisations in the public sector will face challenges in implementing this technology such as overcoming resistance to change; privacy; security and possibly a lack of top management support (West, 2004; World Bank, 2003). Therefore, the risk for e-government project failure is still there, if the policy makers and implementers pay less attention to such issues that influence this model. The current IS literature suggests that human and organisational issues are now more important and will become even more critical to the successful development and implementation of IS than they were in the past (Al-Mushayt et al., 2001; Cabrera et al., 2001 and Doherty et al., 2003)

E-government can be classified according to who is interacting with the government. A common classification is between government to business (G2B), government to government (G2G) and government to citizen (G2C). This paper argues that G2G is the crucial aspect in the adoption of e-government and change management is the mechanism to enable this remarkable transformation. In the light of the above this paper aims to highlight e-government as a fundamental transformational in the ways which government agencies carry out their work. It also discusses the differences between traditional information systems in the public sector and e-government projects. Finally, the motivations for the change towards the adoption of e-government are enumerated using Saudi Arabia as a case study. The rest of the paper is organized into four sections; e-government characteristics; research methodology; e-government background in Saudi Arabia and the motivations for changes towards e-government system.

2 E-GOVERNMENT CHARACTERISTICS

E-government enables the integration of the potential of ICT into the world of the public sector to deliver services and information easily to citizens and other parties online (Montagna, 2005, Ndu, 2004). However, its definition; the model of its stages and the requirements for its implementation are still open to debate. The following sections explain such issues.

2.1 E-government Definition

E-government includes two concepts: firstly ICT as the means of this transformation, and secondly government as the environment of implementation. In the context of e-government, Fountain (2003:5) defined ICT as "*the full range of information and communication technologies and applications currently used in digital and electronic government as well as those information technologies, systems and applications on the developmental horizon*", thus linking e-government directly with ICT to create a good opportunity for government to reinvention.

There are many definitions of electronic government due to the different perspectives of experts especially since the term itself is new in the field of knowledge. As a result, there is no one definition enjoying broad acceptance (Peristeras, 2003). In fact, some researchers use the terms 'e-governance' and 'e-government' interchangeably to describe the same issue, while for others they bear different meanings. Our starting point is that the concept of governance refers to a process whereby elements in society wield power and authority, and influence and perform policies whereas the term government refers to the organizations in the public sector (Ohler et al, 2004).

Ndou (2004) distinguished four major dimensions of e-government, namely e-administration, e-citizens, e-services and e-society. The following table represents some examples of e-government definitions from different angles.

Perspective	E-government Definition	Authors
Using technology for political reasons	The use of Information and Communication Technologies (ICTs), and particularly the Internet, as tools to achieve better government	OECD (2004)
Reforming public sector	The use of ICTs to improve the efficiency, effectiveness, transparency and accountability of government	World Bank Group (2004)
Change Management	The use of ICT in public administrations combined with organisational change and new skills in order to improve public services, democratic processes and strengthen support to the public policies.	European Information Society (2004:20)
E-government dimensions	E-government should be divided into four distinct areas of activity, namely e-democracy, e-service provision, e-management and e-governance.	Berri (2004)
Technology	Utilizing the Internet and the World-Wide Web for delivering government information and services to citizens.	United Nations (2003)
Relationships with partners	A government's use of technology, such as the Internet, to aid the delivery of information and services to citizens, employees, business partners, other agencies and other government entities	Layne and Lee (2001)
Political	E-government offers an opportunity for governments to re-organise themselves, get closer to the citizen and co-operate with a variety of societies.	Dunleavy (2002) (Caldow, 1999).

Table (1): examples of e-government broad and narrow definitions

2.2 E-government Evolution Life-cycle

A brief history of e-government indicates that, in the 1990s, many governments around the world adopted e-government solutions, ranging from simple web presence and one-way communication to two-way communication and transactions with citizens and businesses. Finally, this moved on to more integrated web presence and e-democracy (Moon, 2002; Ronaghan, 2002 and Layne and Lee, 2001). Many researchers have tried to understand the e-government phenomenon from an evolutionary point of view by dividing the e-government development process into many stages (Al-Dosary and King, 2004; Deloitte Research, 2001; Lyne and Lee, 2001 and Moon, 2002). In such cases, there is general agreement between scholars that the evolution of e-government should include essential stages such as publishing, transaction and integration. However, there are many differences between these models on the approaches and perspectives concerning the e-government life-cycle such as the technological perspective and the organisational perspective etc., as can be seen in Table (2).

Model and Author	Perspective	Stages
Deloitte Research (2000; cited in Silcock, 2001)	Eminence of web-based applications and portal technology	(1) Information publishing (2) Official, two way transactions (3) Multi- Purpose portals (4) Portal personalization (5) Clustering of common services, (6) Full integration and enterprise transformation
Howard (2001)	Capabilities of the web technology	(1) Publish (2) Interact and (3) Transact
Lyne and Lee (2001)	The degree of organisational and technological complexity and the degree of integration in terms of data and service delivery	(1) Cataloguing (2) Transactions (3) Vertical integration (4) Horizontal integration
Moon (2002)	Technological characteristics	(1) Simple information dissemination (one-way communication) (2) Request and response (Two-way communication) (3) Service and financial transaction (4) Integration (horizontal and vertical integration) (5) Political participation
Al-Dosary and King (2004)	The degree of organisational and technological complexity.	(1) Initial stage (2) Developing stage (3) Advanced stage (4) Optimal stage
Reddick (2004)	Technological characteristics	(1) Cataloguing of information online (2) Transactions
UN (2004)	Technological characteristics	(1) Emerging (2) Enhanced (3) Interactive (4) Transactional (5) and Seamless or fully integrated.

Table (2): Summaries of the stages of e-government models in the literature

In short, there is no agreement among scholars on the number of stages that e-government should pass through during its life-cycle and the requirements for moving from one to another. Some models emphasise that e-government should pass through all the preceding stages to move to the next higher one. Other argued that, public organisations might decide to skip over certain stages or to offer different services at varying stages of maturity. In light of that, understanding e-government evolution provides the implementer with a clear understanding of the issues that should be taken into consideration.

2.3 E-government and E-commerce

Some researchers have argued that e-government is a follow-on from e-commerce since both of them support the electronic mediation of transactions over potentially great distances and both also require consumer/citizen trust (Carter and Belanger, 2005; Gliber and Balestrini, 2004) because of the absence of face-to-face interaction. In addition, both are/can be based on Internet technology designed to facilitate the exchange of goods, services and information between two or more parties (Carter and Belanger, 2004). Therefore, utilizing ICT not only enables the private sector to reduce costs, increase profits and make their products more available to consumers, it can also help government agencies to improve the efficiency of their services, adopt a more customer-oriented approach, and save on operating costs, which becomes increasingly important under current economic conditions (Tung and Rieck, 2005). However, there are many differences between these paradigms, illustrated in the following table:

E-commerce	E-government	References
Refers to the commercial use of Internet technology to sell and purchase goods or services	E-government focuses on delivering their services to citizens without expecting profit.	Jorgensen and Cable, 2002
E-commerce deals with private sector with more freedom for doing their own business	E-government deals with the public sector which has many features including roles limited by legislation and complex accountability. Also, actions must be justified and objectives and outputs are difficult to state or measure	Holtham, 1992 and Carter and Belanger, 2004
E-commerce is allowed to choose its customers	E-government agencies are responsible for providing access to information and services to any citizen and the entire eligible population, including individuals with lower incomes and disabilities	Carter and Belanger, 2005
Decision-making can be centralized and easy to make a decision than public sector.	Decision-making authority is less centralized in government agencies than in businesses. This dispersal of authority impedes the development and implementation of new government services	Moon, 2002
Is designed to be accessible for whom able to achieve services.	The digital divide makes e-government task of providing universally accessible online government services challenging	Wilford, 2004 and Fountain, 2003
The commercial view is the main purpose for its adoption	The political nature of government agencies is a feature that distinguishes e-government from e-commerce	Warkentin et al., 2002
The goal is to obtain the profit and reduce the cost.	In a democratic government, public sector agencies are constrained by the requirement to allocate resources and provide services that are "in the best interest of the public"	OECD, 2004

Table (3) the main differences between e-government and e-commerce

It is important to realise the similarity and differences between e-commerce and e-government. This is because a lot of issues must be considered according to the environment of implementation. In addition, it is quite hard directly to transfer results obtained in other field, such as e-commerce, to the field of public sector without considering many issues such as social factors, organizational factors and human factors.

2.4 IT Projects in the Public Sector vs. E-government System

Many researchers are confused about whether or not e-government is an information system (IS) project. In this paper we argue that although e-government as a term can be classified under the discipline of information systems, there are significant differences between traditional IT projects in public sector and e-government as illustrated below. Even though IT projects represent one of the milestones towards building e-government, there are many further issues an e-government system must consider, such as cooperation between organisations and sharing the data and knowledge etc.

These characteristics of e-government include wide use of communication technology, smooth collection and processing of information, the development of communication mediums, the impersonal nature of the online environment, and the full benefit of using a high standard of technological infrastructure for transactions (Warkentin et al. 2002). The following table (4) shows us the main differences between these two models.

Factor	IT project	E-government
Features	Automate most activities of any specific organisation	Making most government services accessible online
Orientation	Specifically for clients' satisfaction	For citizens' satisfaction
Time	Specific time working	24/7 online access
Place	Specific location for use	Use anywhere
Outputs	Products output	Services
Main player	Managers, Systems developers, employees, clients	Governors- e-government developers, administrators, citizens, businesses and other governments
Size of project	Organisational project	National project
Relationship between Stakeholders	Direct and sometimes indirect with stakeholder	Direct and intensive relationship and interaction between stakeholders
Domain of work	Organisations	Institutions and the Public sector in the whole country at the end of project
Technology	Generally centralized automation (within a specific organisation)	Decentralized Internet-enabled services Applications Online re-engineering process
Driver	Transaction-driven	Internet Web services Interaction-driven
Application	Monolithic (homogeneous) application	Integrated (heterogeneous) application

Table (4): The main differences between e-government and IT projects in public sector

2.5 Transformation towards E-government

E-government is linked with the use of ICT such as computers, computer networks, the Internet, etc., to facilitate the provision of e-government products and services and to improve interaction between government and citizens and other parties (Kim and Lane, 2001; Fountain, 2001; Montagna, 2005). Eggers and Goldsmith (2004:32) in their book "Governing by Network" stated that: "*The era of hierarchical government bureaucracy is coming to an end. Emerging in its place is a fundamentally different a model which is called e-government in which government executives redefine their core responsibilities from managing people and programs to coordinating resources for producing public value*". In e-government initiatives, the transformational efforts usually encompass all the major organisational dimensions including strategy, structure, people, technology and processes as well as the principal external forces such as citizens, suppliers, partners and regulators (Farhoomand and Wigand, 2003; Tung and Rieck, 2005).

E-government represents a fundamental change and therefore, resistance to change from some stakeholders is possible. Wargin and Dobiye (2001) have argued that there are some reasons behind resistance to change namely: lack of skills to use the new technologies; people do not understand the 'big picture' and the application of the new technologies lead to a redefinition the organizational structures and the power distribution. Dent and Goldberg (1999) indicated that individuals are not really resisting the change itself but rather they may be resisting the loss of status, loss of pay, or loss of comfort. However, there are some models to treat problems associated with change, such as

Kotter's eight-step model for transforming organizations (Kotter, 1995) and Jick's ten-step model for implementing change (Jick, 1991). Table (5) below shows us some a fundamental change from traditional way to e-government system.

Factors	Traditional ways	E-government services
Mode of services	Service for citizens	Self service in many operations
Goal	Citizens in lines	Citizens on line
Expectation	Digital exclusion	Digital participation
Change	Paper intensive	Government on line
Management style	Transaction intensive	Knowledge management
Orientation	Production cost, efficiency	User satisfaction and control, flexibility
Leadership style	By rule and mandate and Command and control	Flexible management, inter-departmental teamwork, facilitation and coordination
Organisational structure	Top down, hierarchical	Innovative entrepreneurship, multidirectional network with central coordination, direct communication
Communication	Centralized, formal limited channels	Formal and informal, direct and fast feedback, multiple channels
Interaction	Documentary mode and interpersonal interaction	Electronic exchange, non face-to-face interaction
Process organisation	Functional rationality, vertical hierarchy of control.	Horizontal hierarchy, network organization, information sharing

Table (5) some Changes towards E-government adopted from (Ndou, 2004)

2.6 The Adoption Process

The diffusion of innovation can be defined as the “process by which an innovation is communicated through certain channels over time among the members of a social system” (Rogers, 2003:20). Rogers further points out (2003:21) that this innovation-decision process “can lead to either adoption, a decision to make full use of an innovation as the best course of action available, or rejection, a decision not to adopt an innovation”. The adoption is a single-point decision or an act. The Innovation Theory usually focuses on two groups of variables: those related to internal organisational attributes and those related to the external environment in which the organisation exists.

The implementation of an IT system goes through six stages: initiation, adoption, adaptation, acceptance, use, and incorporation (Kown and Zmud, 1987). Al-Turkey and Tung (1998) argue that the implementation as a process can be divided into two main stages: adoption as stage one and assimilation as stage two. The adoption process as suggested by Spence (1994) goes through five sequential steps as illustrated in Figure below.

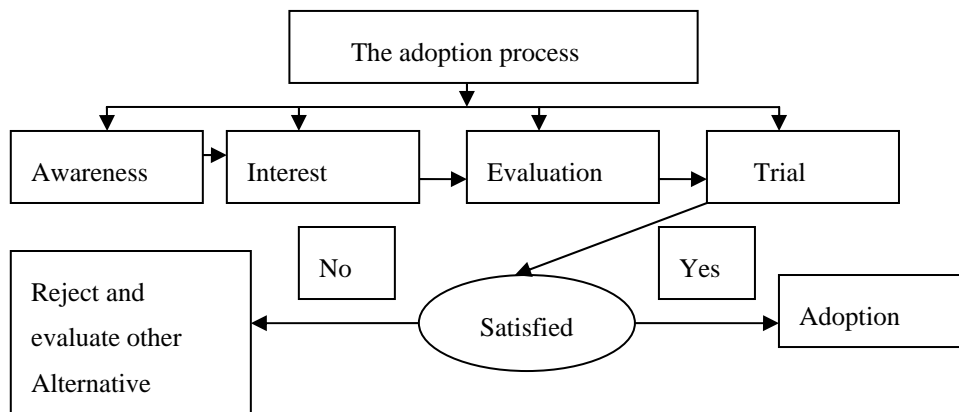


Figure (1) the adoption process: Spence (1994)

The adoption for this paper is the decision to utilize electronic services to share information with other government agencies and provide services to stakeholders and to make full use of information and communications technology as the best course of action available.

2.7 Reasons for the adoption of E-government

Many researchers have mentioned different reasons for the adoption of e-government (Gupta and Jana, 2003; Jaeger, 2003; Relyea, 2002; Ebrahim and Irani, 2005; Fairweather and Rogerson 2002; Tung and Rieck, 2005; Layne and Lee, 2001; Moon, 2002; OECD, 2004 and The World Bank, 2003). These reasons can be classified into political, economic, social, technological and managerial reasons. For instance on the political side, e-government can increase citizen participation in political processes; building trust between citizens and their government by improving the government's image and perhaps facilitating democratic elements by enabling voting online.

Economic reasons include cost reductions for both the government itself and the adopter of e-government services. According to a report for the National Electronic Commerce Coordinating Council (2000), government agencies can save up to 70 percent of their costs by moving their services online (United Nations, 2001). The social benefits of e-government include better delivery of government services. It can make learning and education available for citizens and offer citizen empowerment through access to information. Moreover, services can be more readily brought to all citizens across the country, particularly those with special needs and the elderly by enabling citizens to obtain government information through a single portal at any time and from any location equipped with Internet access. The managerial reasons behind the adoption of e-government include reforming the public sector, leading to more efficient government management with increased accountability and transparency. This can help reduce corruption and prevent many (but not all) of the human errors that manual processing entails. For employees and managers it can bring convenience and efficiency

By way of contrast to these many claimed benefits, a number of studies have argued that e-government has not yet fulfilled this promise. The UN Global E-Government Survey (2003) proposed a normalized 'Web Measure Index' to evaluate the aptitude of 191 governments to employ e-government as a tool to inform, interact, transact and network (United Nations, 2003). This survey found that the average government reaches only a level of 25.5% on the index score of the highest ranking governments, with only seven governments reaching 75% and above. In addition, according to Accenture's study (2005) of e-government initiatives in 22 countries, the average e-government's maturity was 48%, with only two countries reaching 60% or above (Accenture, 2005). Furthermore, some researchers point out that the provision of e-government services is still far from reaching full effectiveness (Mocon, 2002; Reddick, 2004; Wescott, 2002) while a number of researchers argue that many issues such as privacy and security remain as barriers for e-government (Wilford, 2004; Ndu, 2004). In addition, some argue that e-government is worthy of support, but many issues must be addressed during its implementation. For instance Rogerson (1997) enumerates a number of principles for electronic services in the UK that will ensure social responsibility in e-government implementation: the principles of choice, confidence of data, accessibility to allow all citizens to obtain the services, and public funds protection.

The above section has discussed the main issues that surrounded by e-government system including its definitions, stages and the main features that distinguish e-government as a new phenomenon. However, there is still a lack of studies in relation to the motivations for adopting this system in developing countries. Therefore, the rest of this paper aims to fill some gaps about this issue supporting by an empirical research.

3 METHODOLOGY

This research will focus on the key factors that effect e-government adoption within the public sector in Saudi Arabia, including the motivations for change. There are a number of reasons why a qualitative approach is appropriate for this kind of study. E-government is a new phenomenon. Ebrahim et al (2003) argue that research into models of e-government adoption needs an exploratory method to identify the required technological and organisational issues which appropriate for particular country's circumstances. According to Zikmund (1994) and Yin (2003), exploratory research is initial research conducted to clarify and define the nature of the problem and to clarify ambiguous areas. In addition, Al Turki (2002) has indicated that a country such as Saudi Arabia in which religion and traditions go through all aspects of the society, it is essential for researchers to be aware of the cultural characteristics and the values of the research environment. According to Struabe (2003) and Hofsted (1997) individuals in traditional societies embrace conservative values and rarely challenge the status quo nor question existing norms and practices, particularly in the work place. According to Taih (2001 :199) and Al Saim (2004: 39) Arabic societies, in general, and public sector employees, in particular, are reluctant to participate in any academic survey, fearing that what they convey could be misinterpreted or distorted and used against their individual interest.

Case-study analysis is a well known approach for exploratory study (Eisenhardt, 1989 and Lam, 2005). The use of a single case study to identify factors that affect e-government adoption within the public sector in Saudi Arabia was considered to be too limited an approach to be appropriate for this study. Multiple case studies might have been more able to generate a diverse set of factors affecting e-government adoption than the use of a single case study (Lam, 2005); In addition, semi-structured interviews were employed as a primary data technique for this phase of study. This exploratory study takes a practical approach to investigating the key factors that affect the adoption of e-government in Saudi Arabia by using suitable methods to seek those who have significant experience of working on e-government projects or have good knowledge about this topic. People who work in e-government teams in Saudi Arabia are an excellent source because they are qualified and they have experience in both e-government and the public sector in the Kingdom of Saudi Arabia (KSA). The second source is independent experts who work in the academic field or in the private sector. Additionally, case studies was used which focuses on IT managers and top managers in two significant organisations that had made good progress in adopting electronic services.

This approach enabled the researcher to obtain in-depth the views and experiences of knowledgeable individuals who are intricately involved in e-government. Yin (2003) notes that interviews of this nature tend to reach a point of data saturation after interviews with about eight individuals. It was decided that there should be between 12 and 20 interviewees involved in the study. The larger set would help reduce the data bias problematic to qualitative research of this nature (Stake, 1995 and Lam, 2005) and increase the reliability of the research findings. Bias was also reduced by the fact that the interviewees were not exposed to the same part of the e-government project, and had had experiences on different sub-projects. In addition, triangulation data were used such as observation and documentary analysis.

4 E-GOVERNMENT AND THE KINGDOM OF SAUDI ARABIA

This section offers some brief information about the Kingdom of Saudi Arabia (KSA) which is the main focus on this study and will highlight the main characteristics of its e-government initiative.

4.1 Location, Population, Economy and Culture of Saudi Arabia

The Kingdom of Saudi Arabia is situated in the Southern-Eastern part of the Asian continent. It occupies 2,240,000 square kilometres (about 865,000 square miles) (The Saudi Network, 2005). According to the Central Department of Statistics in the KSA, the total population reached 26,417,599

in mid-2005, compared with 24.06 million in mid-2004, reflecting an annual growth rate of 2.9 percent; approximately more than half of the population is under the age of 20 (Saudi National Population, 2005). The Kingdom is a monarchy as the nation is ruled by a royal family although there were some municipal council elections late in 2004 at a local level.

Area	2,240,000 square kilometres
Population	26,417,599 including 5,576,076 non-nationals
GDP	GDP / purchasing power parity - \$310.2 billion.
Gov. organisations	350
Public sector labour	1.2 M
Telephones - main lines in use	3,7 million (2005) Diffusion 16.2%
Telephones - mobile cellular	9,2 million (2005) Diffusion 40%
Internet users	2.3 million (2005) Diffusion 10.1%
Natural resources	petroleum, natural gas, iron ore, gold and copper

Table (6) Facts about KSA

The economy of Saudi Arabia is oil-based. This is because the Kingdom has the largest reserves of petroleum in the world and ranks as the largest exporter of petroleum (World Fact Book, 2005). Accordingly, the Saudi government, through the public sector, plays a major role in the Kingdom's economic activity (Al-Farsy, 2003).

There are many aspects that characterize Saudi's culture such as religion, the tribal system, its regime and modernisation. Historically, Saudi Arabia has occupied a special place in the Islamic world because it is home to the two Holy Mosques for Muslims (Al-Farsy, 2003). Saudi's culture is nature, religious and Islam plays a central role in defining this culture, acting as a major force in determining the social norms, patterns, traditions, obligations, privileges and practices of society (Al-Saggaf, 2004:8). At the same time the tribal system is clearly apparent in Saudi society. While it is similar to other countries with strong kinship and tribal traditions, these forces still affect an individual's place in society and might influence their success or failure, both in the traditional and in the new areas of activity (Vassiliev, 2000).

However, the Saudi government supports modernization in all aspects of life in Saudi society and so, for this reason, the government has imported expertise from all over the world to support the transformation of Saudi Arabia to a modern country. Saudi Arabia has conserved albeit in a new form, many values of Arab and Islamic civilization and the traditional system of power and government while, at the same time, adopting Western technology, a market economy, a modern state education system, and health-care and other public sector services (Vassiliev, 2000, Al-Sudari (1995:9). According to Hofstede's study, national culture affects organisational culture and these issues are therefore important considerations when developing and implementing e-government in the public sector in Saudi Arabia. For example, the effect of culture can be illustrated in the adoption of the Internet, which was introduced in Saudi Arabia in late January 1999 after a long period of discussion and consultation among the Saudi authorities. Finally, a huge filter system was set up in Riyadh in conjunction with an American company. The reason for having such a filter system was that the Saudi authorities had serious concerns about the arrival of undesirable material (for example pornography) on home computer screens and also for other cultural, religious and political reasons (Al-Saggaf, 2004).

4.2 Information Technology (IT) and the Internet in Saudi Arabia

Information technology is now playing an essential role in the economies of many nations and, as a result, the government of the KSA has given it top priority. For instance, IT applications have spread rapidly to cover many sectors to enhance productivity and advance performance in the fields of finance, industry, commerce, education, government and health care (Al-Tawil et al., 2003; Al-Turki, 1998; Al-Sudairy, 1994). In spite of this, Information Technology in Saudi Arabia is still a relatively young technology, if compared to some developed countries like the USA, the UK, Japan and Canada.

The Saudi government actively encourages and promotes the utilization of Information Technology systems in the economy through its own consumption and its import, trade and industrial activities. These policies encourage public and private organisations to adopt and implement modern and advanced IT systems (MOP, 1995). As a result, the utilization of IT systems in some sectors in KSA, namely in the banking, oil and petrochemical sectors, is considered to be among the most advanced in the world (Abdul-Gader, 1990).

However, IT diffusion in a country like Saudi Arabia is a very complex process and is often associated with many problems. These problems are not only scientific and technical but also, and possibly more importantly, cultural, educational, economic, political and social (Al-Sudairy, 1994). According to Al-Turki and Tung (1998) the major problems faced by many organisations in Saudi Arabia concerning the use of IT are: insufficient top management support, lack of IT planning, lack of qualified human resources and insufficient training. In addition, some of the most common problems associated with computerisation in KSA are the shortage of an adequately trained workforce, language barriers and a lack of co-operation between organisations (Namlah, 1982; Shidma, 1988; Hamade, 1995). However, some of these studies were conducted in 1995 and so it is necessary to reconsider whether or not these factors remain barriers that hinder the adoption of e-government in KSA; this is considered in this research.

Regarding the internet use in KSA, there are more than 2 million Internet users in KSA, which is about 10% of the total population (Alriyadh, 2005). In relation to its effect in Saudi Arabia, A recent study, carried out by Al-Tawil et al. (2003) indicated that the Internet has brought a new dynamic global platform to Saudi society, education and the economy. It has also addressed the Kingdom's issues and concerns for achieving ubiquitous education at all levels. Nevertheless, the technology and applications that would benefit from the Internet are still very much in their initial stages and have yet to mature (Sadiq et al., 2003).

4.3 E-government Initiative

The IT National Plan in KSA reflects the key interest of the government in supporting the transformation towards e-government. However, to translate these principles and regulations into reality, more effort is needed. For this, e-government initiatives were launched as part of the country's overall information technology plans in 2001 and this focused on ICT as a tool for reforming public organisations (Saudi Computer Society, 2004). The main objectives focused on three areas, namely e-readiness, the e-society and IT training. In light of this, in 2003, the Saudi government created "Yesser", the e-government programme designed to achieve continuous growth and development within government (MICT, 2004).

The main objectives of this programme were to enhance the productivity of public organisations; to provide government services to citizens and businesses in a simple and convenient way; and to provide necessary information in a timely and highly accurate style (Saudi Computer Society, 2004). Alsabti (2005:5), one of the heads of e-government team, indicated that e-government is the major vehicle for transforming the public sector into part of the information society. The main objective for this project (Yesser) is to enable and facilitate this transformation by supporting governmental organisations in term of methodologies, data, standards and knowledge, as the figure (2) shows.

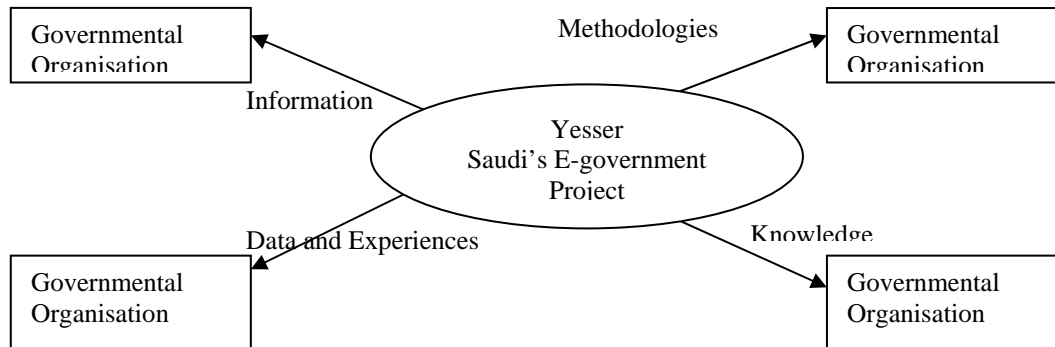


Figure (2) Approaches for Saudi National project

Regarding e-government initiatives among organisations in the public sector, there are many projects in Saudi Arabia that have implemented e-government activities in a variety of ways. However, these efforts are at the initial stage and are not, as yet, working together. Thus, the new project, Yesser, aims to make these projects work co-operatively. The following table (7) shows some examples of initiatives within the public sector in the KSA.

Project	Description of the main objectives
E-Payment Gateway “Sadad”	Building the e-payment gateway to: <ul style="list-style-type: none"> • Facilitate G2B and B2B electronic payments. • Include G2C in future.
Smart Cards	Issuing national ID cards using smart card technology. This system: <ul style="list-style-type: none"> • Has a computer chip for storing personal identification information and thumbprints, as well as medical and driving records. • May also hold digital certificates.
MOI (Ministry of Interior) Portal	This citizen portal. <ul style="list-style-type: none"> • Provides 20 services electronically, including passports, birth certificates, drivers’ licenses, etc. • Offers 100 kiosks.

Table (7) some example for e-government initiatives among public sector in KSA. Adapted from Alsabti (2005: 9) and Al- Smmary (2005:6)

5 MOTIVATIONS FOR GOVERNMENT TO ADOPT E-GOVERNMENT

The adoption of e-government requires that all public sector organizations are empowered to carry out their activities electronically (organizational level). It is only after these organizations' electronic-based activities are considered satisfactory that e-government can said to be ready for proper adoption and implementation at the national level. However, the national government is required to create an enabling environment (such as the provision of ICT infrastructure for the whole country) for public sector organizations to implement the electronic services of their activities. The two levels of

government structures, organizational and national, are equally important for a successful e-government project.

The empirical research represented that there are many motivations or reasons behind e-government adoption in Saudi Arabia both at national and organizational level. These include economic, geographic, political, managerial, social and cultural reasons. As a result these forces work as motivations for Saudi's government to change towards e-government paradigm making a lot of preacher on organizations to prepare them self for this transformation.

5.1 Economic Reasons

Meeting economic goals is an important issue for any government endeavour as every country places a premium on attracting good investment, which in-turn provides jobs for its people and helps the economy to grow. The Saudi economy is oil-based. Therefore, one of the most important reasons for e-government adoption is economic. For example, Yesser, the Saudi's e-government program, emphasises "*Increasing return on investment (ROI)*" as one of the cardinal reasons for e-government adoption (Yesser, 2006:1). The country's 2005 National Plan also stresses that "*the Kingdom's government has given special attention to information technology because of its effective role in boosting state economies*" (National Plan, 2005:6). All participants in this study have indicated to the economic motivation for e-government adoption. It is not surprising therefore when one of the country's e-government team members stated:

"E-government will create an enabling environment for investment to bloom and to reduce the dependency on petroleum especially with the Kingdom's membership of the World Trade Organisation (WTO) which facilitates investment opportunities".

Another motivation for the adoption of e-government by public sector organisations is cost reduction. This point was confirmed by many interviews. For example a senior manager in one of ministries said:

"Yes, we need electronic government for economic, social and security reasons. We need it for the purpose of efficiency in terms of cost reduction, fairness in meeting citizens' demands and reduction in fraud and over-crowdedness".

These points were echoed by another member of the e-government team. He said,

"E-government will enhance the level of productivity in the public sector as it streamlines and improves service delivery procedures which lead to savings in efforts and cost".

In line with the literature, this goal was an essential reason for e-government adoption (Lee and Kolsaker, 2004; World Bank, 2004, Ebrahim et al., 2003; Irani and Love, 2001 and Bonham et al., 2001).

5.2 Geographical Reasons

Saudi Arabia is a big country. Its size about 2, 24 million Km² which makes it, one of the biggest countries in the Middle East. Another issue related to the area size is the size of the public sector in Saudi Arabia. To provide the services to citizens in different parts in Kingdom, there are 350 organizations in the public sector in Saudi Arabia each with its budget. This reason was one of the motivations for Saudi government to adopt electronic services- in order to reduce the cost and to connect the local government with the central effectively. Many interviews indicated to this reason, fore example one of the independent experts commented on these issues and said,

"Yes there is need for electronic government for the following reasons one of them is geographical factor". He continued "*This is due to the large size of the Kingdom and areas are far from each other. So, electronic government is best way to connect those areas"*.

It can be understood that the size of the country is an important reason for seeking electronic solutions to communication between local and central government as well as to make service more accessible for citizens in different parts of the country. However, in reality this goal is still far from realisation. According to one of participants in the study,

"In my opinion we have sometimes a beautiful plan and strategy but, how we can see this plan implement in the real life I can see that we have gap between planning and implementation".

Heeks (2003:1) has emphasized on the importance of this point directly as one of the problems that face e-government projects in developing country and might be lead to e-government failure totally or partially *"in developing country ... the oversize gaps between project design and on-the ground reality which known as design-reality gaps"*. However, there are still other factors that driven to this project to success which will be discussed in other part of this research.

5.3 Social and Culture Aspects

Saudi Arabia is a religious society where the religion of Islam is reflected in different aspects of social life. In addition, cultural issues manifests clearly in the workplace and in the street. As a result, it can be said that the government takes cognizance of these facts in providing services to the citizens. For example; the adoption of new technology enables more Saudi women's work and their access to government services. Some participants have pointed to these issues for instance, an independent expert said,

"In view of the fact that there is no free-mixing between men and women at many places of work, technology provides a solution for interactions through the Internet".

However, it is necessary to emphasize that technology is just a tool. The danger in seeing use of this tool as an objective is that the tool will be used but the benefits needed will not result.

Another motivation of this sort is that more than two million pilgrims come to Saudi Arabia every year from different parts of the world and therefore all government agencies collaborate to provide services for them effectively. For this reason e-government systems can provide good solutions for the complex services required at this particular period of the year. A respondent opined:

"We have special circumstances in the Kingdom of Saudi Arabia. For example there are more than 2 million pilgrims who perform the Hajj annually at the same time and in specific places. Therefore, all organs of the state cooperate and coordinate to serve these visitors. Thus e-government system will provide them with high quality of services by facilitating the government agencies collaboration in this work"

Another example, the tribal system plays an important role in the work place as some government officials are fond of giving preference to their relatives while discharging their official responsibilities even though this act is against their workplace ethics. The empirical study reflected these issues. One of the interviewees commented:

"E-government systems will eliminate this kind of corruption- such as helping a relative in the work place.... this will be something from the past because you can not doing so without the permission of system".

It can be said that e-government in Saudi Arabia is needed for cultural reasons. However, it is important to understand that an e-government system is not a magical tool to solve the public sector's problems. Thus, a lot of work must be done to make such a system work effectively including retraining of the manpower within the public sector.

5.4 Reforming the Public Sector

According to the empirical study reforming the governmental sector was one of the motivations for adopting an e-government system. This is through increasing productivity for organizations in the public sector. For example one of the e-government team members said:

"yes there is a serious need for e-government I see it as a beginning of reform because it improves the country's service delivery to both individual citizens and private sector establishments".

From view points of many participants on this study, it can be seen that the Saudi government is keen to solve bureaucratic problems by using electronic means and this objective can be clear from its strategy for e-government. However, one independent expert commented on this issue and he said

"If we are doing our work correctly there is no need for e-government. The problem is that we use this technology to overcome our problems in reality especially in public sector where the organisations do not do their work effectively in traditional ways"

In Fact, there are some problems in the public sector that need to be solved before implementing an e-government system.

In line with the literature review many governments worldwide are developing and implementing strategies to deliver e-government services to citizens and businesses online in order to support the modernization of the public sector (Heeks, 2003 and Jones and Crowe, 2001).

5.5 Technical Reasons

The adoption of e-government in the public sector can lead to widespread improvement in ICT architecture and improve skills for employment. This empirical study reflects this motivation in terms of interest to utilise ICT and to learn new skills in dealing with this technology. For example, one the IT managers in a ministry commented on these issues and said:

"I can't understand why we should continue with manual methods which waste a lot of time and effort whereas these tasks can be carried out within seconds with computer systems i.e. e-government".

It can be understood that advances in technology have attracted the government to imitate the private sector to improve services and their operation. According to a respondent,

"E-government will enhance the use of ICT within organizations; employees will learn new skills to deal with this technology. In addition the citizens by that time will be familiar enough to use this technology".

This result corroborates some of the views discussed in the literature. For example, Atkinson and Ulevich (2000) argued that e-government at all levels might enhance and update their own internal computer system and communication. To conclude, it is clear that Saudi organizations with financial support had made progress in terms of IT infrastructure and there are still significant differences between these organizations and their public sector counterparts in the use of technology.

5.6 Demographical Factors

More than 60% percent of Saudi population is under 25 years old. This was mentioned by some participants as an important factor to push towards e-government as these young people are likely to be more interested in using technology. One of the e-government team said:

"a large proportion of the population are young and they use mobile phones and computers and they are in need of good services".

It can be seen that there is a good chance to involve more people to deal with e-government services in Saudi Arabia; but there is still a significant risk of a digital divide in society and even among

employees in public sector because there are still a large number of people and employees that are still not computer-literate.

5.7 Political Reasons

Political support is an important issue in e-government projects because e-government is about a national project. It is about government business where the public sector discharges the responsibility of government towards citizens and business. In addition, establishing e-government projects might cost a lot of money. Therefore, there is no doubt about the importance of this factor. Accordingly, In Saudi Arabia, the supreme Royal Decree (number 7/B/33181, dated 7/9/2003) included a directive to the Ministry of Information and Communication Technology to formulate a plan for providing government services and transactions electronically (Yesser, 2005:2). This study shows the importance of political support. For instance one of the e-government team members said:

"The direction of the country is towards the use of electronic government. King Abdullah issued a royal decree backed by the decision of the council of Ministers on the use of electronic services to improve the services following the steps of other advanced countries".

In that light, on 27/3/2006, the Council of Ministers issued important legislation regarding the implementation of e-government. It includes details about government information and data and about e-government applications. For example, on e-government applications, the council mentioned some important points (SCOM, 2006):-

- Each government entity shall use e-mail and e-communication media in performing its activities
- Each government entity shall minimize reliance on traditional methods in providing government services as per the conditions and phases of implementing the e-government applications therein.
- Each Government entity shall set a detailed plan for transformation and implementation of e-Government interoperability.

There is a keen interest from political leaders for the utilization of the e-government system to reform the public sector, to reduce costs and to provide high quality services to citizens. Although there are always a lot of regulations in a developing country, these regulations are often ineffective in reality (Heeks,2003). This is because there are many barriers in the public sector to impede acting on these rules. One of the independent experts commented,

"Yes we have political support, but there is no follow up for e-government implementation in other words the e-government team can not force ministries to change towards e-government at a specific time".

By reviewing Saudi e-government strategy and according to many participants in this study, it can be said that there is a clear support for e-government adoption in the public sector in Saudi Arabia, but there is an argument about change management to achieve this target. In some aspects this indication for improving government image was mentioned in literature review. In contrast, there is no indication for facilitating the democratisation process in Saudi's project comparing with literature review (such as Moon, 2002; OECD, 2004 and The World Bank, 2003).

5.8 Regional Comparisons

There is a good progress in terms of e-government implementation in many Gulf region countries such as Qatar, Bahrain, the United Arab Emirates and Kuwait. Saudi Arabia is the biggest country in the region and another member of the Gulf Cooperation Council. Therefore, it should be in a good position to automate its public sector activities in line with its neighbours'. One of the independent experts commented:

"the citizens look to the neighbouring Golf states and see how they have made good advances in terms of electronic services - take Dubai as an example ... we are the biggest country in the export of oil it is a shame to be late in this issue".

5.9 Citizens' Expectations

The empirical study shows us that the e-government project in Saudi Arabia was built to meet citizens' need. This side of the argument was clear from the e-government strategy in Saudi Arabia and from many participants in case studies. For instance one of e-government team commented on that and said:

"Increment of citizen awareness, for example currently citizens look to the quality of life is not only the cost. This puts pressure on the government and public sector to improve its service".

It can be seen that one of the main objectives for creating Yesser program was to meet citizen's needs. This goal was confirm from participants and from the e-government strategy in Saudi Arabia. This result consistent with many researchers claims (such as Ebrahim and Irani, 2005; Fairweather N and Rogerson 2002; Tung and Rieck, 2005; Layne and Lee, 2001; Moon, 2002; OECD, 2004 and The World Bank, 2003).

To summarise this section, it is clear that there are many motivations behind the adoption of e-government in Saudi Arabia as can be seen in the following model (4). That motivations work as forces to adopt e-government system and put a lot of pressure in organizations in the public sector to change towards electronic services. However, there are still many factors that might impede this transformation and therefore, must be considered in e-government adoption.

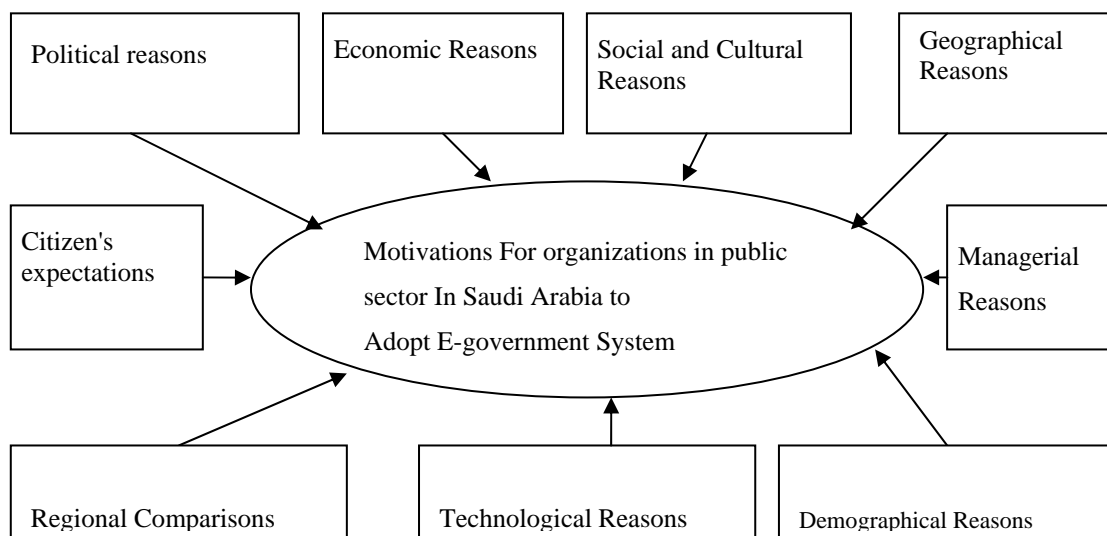


Figure (3) The Motivations for E-government Adoption.

6 CONCLUSION AND FUTURE WORK

E-government presents many challenges if the public sector is to utilize the potential of ICT in conducting its business. Nonetheless, e-government is a relatively new research area. As a result, its stages, definition, and requirements are all still open to debate. Despite the rapid implementation of e-government, there is no universal model that can be applied in all countries. This is because each country has its own circumstances which reflect its environment, including factors such as the economic, political, cultural and social systems which might influence the adoption of e-government

in the target country. The paper presented an overview of e-government characteristics, including its definition, stages and the differences between e-government and some related concepts. The motivations for change towards e-government are various, including political, social, economic, cultural and managerial reasons. These motivations for change towards e-government system represent the milestone for the acceptance of this model. The e-government project is at an initial stage in Saudi Arabia and therefore, considering the motivations behind adopting this model provides a good understanding of factors that might affect e-government systems in developing countries. Each country is unique in its conditions and the policy makers and developers of e-government projects must take into consideration these motivations to be aware of the factors that might facilitate or hinder e-government adoption. This paper helped to fill some gaps by providing insights into the phenomenon of e-government from the perspective of a developing country, the Kingdom of Saudi Arabia, using an empirical study. Therefore, policy makers and developers should stress on change management as a vital in managing such a project at both organizational and national levels, in order to enable this transformation. However, this research is still in progress. We hope in due course to be able to report the key factors which effect e-government adoption in Saudi Arabia.

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