E-GOVERNMENT ADOPTION AMONG BUSINESSES IN JORDAN

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ABSTRACT

It is widely acknowledged that electronic government presents a significant opportunity for businesses to compete alongside larger enterprises. For businesses in the developing world in particular, the opportunities afforded be e-government for competing in a global marketplace, are also attractive. However, it has also been observed that e-government poses a considerable challenge for businesses, particularly with regarded to the decisions that must be made about which of the available e-government application to adopt and to integrated into existing business operations. Hence, the issue of e-government in businesses attracts considerable research works in this area. This conceptual paper reports on the extensive review of prior studies pertaining to the e-government adoption among businesses.

Keywords: E-Government; E-Commerce; E-Business; Businesses; SMEs; Literature Review

INTRODUCTION

The revolution in ICTs has resulted in changes in many aspects of people's daily life around the world. This revolution has changed the way governments around the globe interact with their citizens, businesses, agencies, employees, and other stakeholders (Lee, 2010). These development and changes are the result of the uptake of electronic government or e-government (Raus, Liu, and Kipp, 2010; Elsheikh, Cullen, and Hobbs, 2007). The development and proliferation of e-government around the world has attracted the attention of researchers and information system professionals which becomes an important research subject (Siau and Long, 2006; Chen, Chen, Huang, and Ching, 2006).

Electronic government or e-government as some authors call it has become a pervasive global phenomenon in both industrialised and developing nations (Pacific Council on International Policy, 2002). E-government refers to the public sector uptake of technology applications to enhance services delivery to citizens, businesses, and other agencies, 24 hours a day, seven days a week (Seiferr and Bonham, 2004).

The general perception is that e-government uptake helps to reduce costs by making operations more efficient, serving citizens better and, reducing complex and over-stretched bureaucratic system (Basu, 2004). Therefore, the adoption of e-government has become a major for the policy planning by many countries which led to allocate significant amount of resources towards the implementation of e-government initiatives.

A broad definition of e-government is the use of ICT, particularly internet application by government to increase the availability of necessary information and services to citizen, business organisations and other institutions (Layne and Lee, 2001). Therefore, it is argued that enhancing economic development is one function of e-government. By using e-government technology, government can facilitates the delivery of and ease access to timely information and services to

businesses and therefore, can be one type of customized assistance used by government to promote the economy. Ideally anyone who can access the internet can access the information and services. Presumably e-government could be used to enhance developing countries economic development.

Joseph (2009) has highlighted the importance of the interaction between government and businesses via the web environment that he refers to it as G2B. The literature highlighted several advantaged of business organisation adoption of e-government. For example, reduce the amount of time and money that businesses must spend complying with rules and regulations (Awan, 2007). According to DeBenedictis et al. (2002), this can be done in five ways: providing information in one easy-to-access location; simplifying and streamlining reporting requirements; reducing the number of forms; making transactions (paying fees, obtaining permits) easier; and helping businesses understand what regulations apply to them, and how to comply with them. Together, these capabilities can have a significant impact on a business's bottom line. However, one of the most significant advantages of such adoption is the foreign direct investment (FDI) attraction as e-government service uptake by the business organisation helps in creating a suitable atmosphere for FDI. As reported by Kostopoulos (2006) most of these Arab countries including Jordan wanted to attract foreign direct investment (FDI) through transparency, accountability, and efficient public service towards the basic needs of individuals and businesses. In addition, the Jordanian government realized the need for implementing e-government in order to take the advantage of the opportunities offered by all trade agreements; Jordan would need more efficient, market-oriented customs regime in compliance with world trade organisation (WTO) requirements, capable of handling increased traffic at the borders while at the same time preventing the entry of pirated software (Tadros and assem, 2006). As such the Jordanian government has invested heavily in e-government initiatives for the last 10 years. However, it seems that little empirical evident have been proposed in the literature regarding the current stage and what influence business organisation in Jordan to adopt e-government from the demand side perspectives.

This paper could provide information to the Jordanian government for future policy planning purposes and to enhance the adoption of e-government in Jordan. The knowledge resulted from Jordan's experience in implementation of e-government could also be used by other nations which aimed to embarked on similar initiatives.

Similarly, this paper is important to e-government consultants and IT vendors for designing, developing and supplying hardware and software that could enhance the effectiveness and efficiency of e-government service deliveries that will indirectly drive the uptake of e-government systems among citizens.

The knowledge from this paper could also extent the boundaries of e-government literature that can be shared by academics and researchers who are pursing research in this subject area.

REVIEW OF THE LITERATURE ON E-GOVERNMENT ADOPTION

Empirical suggestions of some e-government studies often differ with findings in the literature. Accordingly, lack of generalizability is frequently cited as one of the limitations in some empirical studies (Horst et al. 2007; Fu et al. 2006). For example, Deursen et al. (2006) makes an interesting observation despite similarities in Dutch and Scandinavian culture, welfare state, and

political system; the usage of e-government vastly differs in these countries. The adoption early of ICT and higher levels of awareness about the use of technology helped search for e-government success in developed nations (Sheridan and Riley 2006). In comparing, businesses in developing countries are far behind in adoption of ICT (Nikam et al. 2004). In Jordan, for example, e-government research is in its early stages (Elsheikh et al., 2007) and the level of change ICT would bring to the Jordan will be huge, can hardly afford to be left behind in harnessing the benefits of implementing e-government (Mofleh and Wanous, 2008).

A study conducted by Al-Qirim (2007) to examine the factors that influencing adoption and diffusion of e-commerce in developing countries to streamline its business processes and information flow to businesses in Jordan and to other international businesses interested in the Jordanian market. As result, positive relationships between innovation adoption and (relative advantage, compatibility, image, top management support, size and resources, quality of IS, and competition) and negative relationships between innovation adoption and (complexity, trialability, observability, cost, user involvement, product champion, suppliers buyers, and technology vendors). Al-Qirim (2007) highlighted different drivers and impediments to the adoption decision of e-commerce in one nongovernmental organisation (Jordan House of Commerce) in Jordan. However, this study was limited to an exploratory focus of issues surrounding e-commerce adoption and success in one nongovernmental organisation in a developing country. Looking at organisational factors such as perceived benefit, security, IT infrastructure, government pressure, business nature, organisation culture, top management support, financial recourse and examining their impact on the adoption decision process were not a focus in this study and, hence, they were left as potential future research areas. As such, future research can focus on extending this study to other organisation such as Amman Stock Exchange (ASE).

Study conducted by OECD (2003) examined several countries' experiences with implementing e-government including Denmark, Canada, Australia, Mexico, Germany, and the US. This study compared and evaluated the differences of implementing e-government among these selected OECD countries. In addition, they focused on the obstacles and challenges that should be overcome in order for e-governments to develop. The findings showed that the most important challenges facing governments today and in the future include lack of funds, overall costs, lack of accountability, shortage of skills, and difficulties of monitoring and evaluating e-government programs. While the OECD (2003) focused on the OECD countries, in the same year, Heeks (2003) conducted a study in order to examine the failure and success rates of e-government in developing or transitional countries. Results show that 85% e-government initiatives face a total or partial failure and only 15% were successful. Heeks (2003) provides potential reasons for such failure by highlighting the problem that often arises with developing countries which is that there is frequently a mismatch between the current and future systems, due to the large gap in the economic, cultural, physical, and various other contexts between the software designers and the place it is being implemented. The model has led Heeks (2003) to identify archetypes of situations where design reality gaps are common. These are summarized below:

- Hard-Soft Gaps: the difference between the actual technology (hard) and the social context (people, culture, politics etc.) in which it operates (soft).
- Private-Public Gaps: the difference between the private and public sectors means that a system that works in one sector often does not work in the other one.

- Country Context Gaps: the gap that exists when trying to use the e-government systems for both developed and developing countries.

As such, there is scope for further research in both the areas of failure and success of e-government in developing countries, and undoubtedly as more real world cases come forth, so will new interpretations.

THEORETICAL FOUNDATION

The foundation of many previous information system and innovation adoption studies were based on the theoretical frameworks derived from Fishbein and Ajzen's (1975) theory of reasoned action (TRA); Theory of Planned Behaviours (TPB) Ajzen's (1985); Davis' (1989) technology acceptance model (TAM); Rogers' (1983,1995) diffusion of innovation (DOI) theory; and Tornatzky and Fleischer's (1990) TOE model. While some of these theories are able to explain the organisation level of innovation adoption, other focused on the individual acceptance of new technology (see Table 1).

Table 1
Applicable Theories

Theories (Author)	**Factors**	**Usage**	**Selected Articles Using the Theory**
Diffusion of innovation (Rogers, 1995)	Relative Advantage Compatibility Complexity Trialability Observability	Acceptance of any new innovation Such as e-initiative, computer, internet	Korteland and Bekkers, 2007; Carter and Belanger, 2005; Fu et al., 2006; Schaupp and Carter, 2005
Technology-Organisation-Environment (Tornatsky and Fleischer, 1990)	Technology Organisation Environment	Adoption of a technology or innovation such as e-government , mobile, PDA, e-commerce, internet banking	Al-Qirim et al., 2007; Mohamad and Ismail, 2009; Ramdani et al., 2009; Wang and Ahmed, 2009
Technology Acceptance Model (Davis, 1989)	Perceived Usefulness (PU) Perceived Easy Of Use (PEOU)	Acceptance of innovation of technology such as mobile, e-initiative, PDA, e-vommerce, internet banking	Trkman and Turk, 2009; Colesca, 2008; Carter and Belanger, 2005; Dimitrova and Chen, 2006; Gilbert et al., 2004; Horst et al., 2007; Lau et al., 2008; Carter, 2008. Walczuch et al., 2007; Wang et al., 2006
Theory of Planned Behaviours (TPB) Ajzen's (1985)	Attitude toward Using (A) Subjective Norm (SN) Perceived Behavioral Control (BC)	Improved the predictability of intention in various health-related fields such as condom use, leisure, exercise, diet	Horst et al., 2007; Warkentin et al., 2002.
Theory of Reasoned Action (TRA) Fishbein and Ajzen's (1975)	Attitude Toward Behavior (A) Subjective Norm (SN)	Most use in medical innovation such as dieting, condom, limiting sun exposure	Trkman and Turk, 2009; Napoli and Ewing, 2000;

Rogers's theory of DOI with combination with TOE framework would provide a useful theoretical framework to explain the organisation adoption of any e-initiative in general and e-

government among business organisation in particular (Mohamad and Ismail, 2009; Ramdani et al., 2009; Lippert and Govindarajulu, 2006).

The theatrical foundation for this paper is based on the Roger's DOI theory combined with TOE framework. The reasons for using DOI theory in combination the TOE framework is that the later has is able to describe the organisation adoption of innovation among business firms by considering the external factors, DOI is used in the present paper as it take into consideration the organisational and the technological factors.

To gain a comprehensive view on what factors may shape the adoption of e-government, the TOE framework by Tornatzky and Fleischer (1982), will also be adopted. The TOE framework identifies three aspects of an organisational's factor that influence the process by which it adopts and implements a technology innovation. These dimensions are technology factors, organization factors, and environment factors. A review of the success factors of e-government literature would suggest that the technology-organization-environment (TOE) framework (Tornatzky and Fleischer, 1990) is an appropriate starting point to our research.

The technological factors describe the characteristics of the innovation in question as well as the organization's internal technological landscape (Tornatzky and Fleischer, 1990). For the purpose of our research, relative advantage, compatibility, security, and IT infrastructure will be examined.

The organisational factor represents the different mechanisms, structures and characteristics that influence the propensity of adoption and assimilation of an innovation (Tornatzky and Fleischer, 1990). The organizational attributes included are the top management support, financial resources, organisation culture, and business nature which are important to IT implementation in organization.

The Environment factors examined the organisation's external landscape (Tornatzky and Fleischer, 1990). For the purpose of our research, competition pressure, government pressure will be examined.

The impact of e-government will be examined using the non-financial approach. It will be examined in terms of impact on operational efficiency, effectiveness and other non-financial measures.

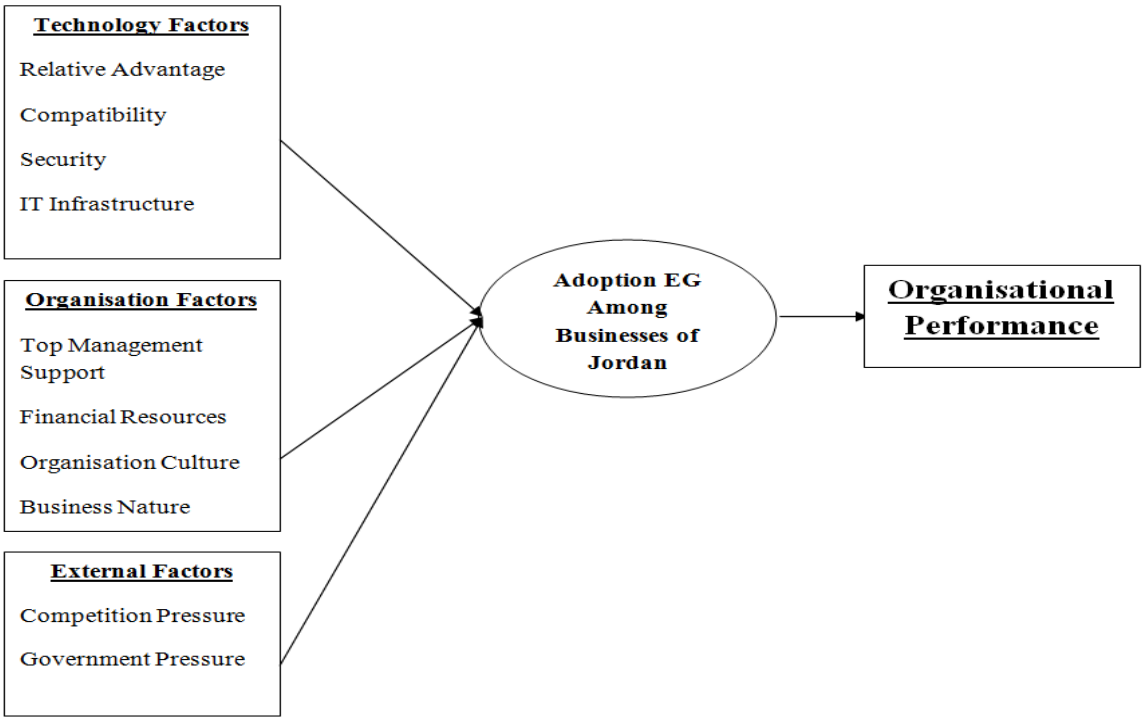

Figure 1

Trend of Research on EG among Businesses

METHODOLOGY

The proposed paper will be a quantitative study using the survey approach. The population comprised of users of e-government applications in Jordon. A suitable sampling frame will be identified. Random sampling approach will be adopted for this research with the aim the findings from this study can be generalized to the population at large.

The instruments will be adapted from previous studies specifically instruments related to identify the drives and impacts of e-government. However, new instrument will be developed specifically to measure the uptake which reflects the status of e-government in uptake Jordon.

The data collected will be analysed using Statistical Package for Social Science (SPSS). Both descriptive and inference statistics will be conducted to provide answers to the research questions.

CONCLUSION

This paper examines prior studies on e-government practice among businesses. The review mainly concentrates on selected aspects specifically the major themes, underlying theories, research approaches, and context of study. This article, therefore, ends with several conclusions. Firstly, prior studies mainly attempt to explain adoption e-government and the extent of it uses. However, limited studies investigate the e-government subsequent impacts to firm performance,

particularly at business process level. Secondly, Innovation-related theories dominated most of the previous works such as Diffusion of Innovation Theory and Technology-Organisation-Environment (TOE) framework. Hence, deploying other theoretical perspectives such as marketing, entrepreneurial or strategic management in future researches promise useful outcome. Finally, the digital divide is currently exists between developing and developed countries. Hence, more studies especially comparative studies between developing countries and between developed and developing countries would bring new perspective to our current understanding of e-government. In summary, despite the rigorous studies on the issue of e-government and businesses, there are still wide opportunities that remain unexplored in this promising research domain. It is worth recognizing the limitation of this paper. Authors do not claim that the review covers all existing research works on this specific area but we believe that the articles included somehow represent the actual research pattern.

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