ELSEVIER

Adoption of ICT in a government organization in a developing country: An empirical study

Babita Gupta [a,*], Subhasish Dasgupta [b,1], Atul Gupta [c]

[a] *School of Business, California State University Monterey Bay, Seaside, CA 93955, USA*
[b] *Information Systems and Technology Management Department, School of Business,*
George Washington University, 2201 G Street, NW, Suite 515, Washington, DC 20052, USA
[c] *O/O PCCF, Aronya Bhawan, Gurkha Basti, P.O. Kunjanban, Agartala, Tripura (W) 799006, India*

Abstract

eGovernment initiatives all over the world endeavor to integrate Information and Communication Technologies (ICT) to transform delivery of government services to their stakeholders by improving quality of services, accountability and efficiency. In this study we explore adoption of ICT to enhance government-to-employee interactions in a government organization in a developing country. We examine this adoption behavior by utilizing the Unified Theory of Acceptance and Use of Technology (UTAUT) that provides an integrative view of user acceptance. We found that performance and effort expectancy, social influence and facilitating conditions all positively impact the use of the ICT. We did not find a significant moderating effect of gender on these relationships.
© 2008 Elsevier B.V. All rights reserved.

Keywords: Information and communication technology adoption; eGovernment; UTAUT model; Developing country; India

1. Introduction

In recent years, growth of the Information and Communication Technology (ICT) has had a substantial impact on the way local, state and national governments function. Information and Communication Technology (ICT) refer to technologies such as the Internet, Intranets, Extranets, ERP and other such technologies that cover the spectrum from basic infrastructure implementation to technologies that improve services and operations in an organization. Use of ICT in government, popularly known as eGovernment, is on the rise with 19% of all government organizations worldwide offering online services (West, 2005). eGovernment is described as the use of technology to enhance access to, and delivery of, government services to benefit citizens, business partners and employees at local, municipal, state and national levels (Grant and Chau, 2005; Gronlund and Horan, 2005; Ke and Wei, 2004; Turban et al., 2002). eGovernment has been defined using var-

---

* Corresponding author. Tel.: +1 831 582 4186; fax: +1 831 582 4251.
E-mail addresses: babita_gupta@csumb.edu (B. Gupta), dasgupta@gwu.edu (S. Dasgupta), akphayre@yahoo.com (A. Gupta).
[1] Tel.: +1 202 994 7408; fax: +1 202 994 4930.

ious perspectives. Tung and Rieck (2005) defined it as the use of ICT to enhance public administration processes. Lee et al. (2005) described eGovernment with respect to mainly building better government-to-consumer (G2C) interactions, akin to the function of Customer Relationship Management (CRM) in the business sector. Ke and Wei (2004) described eGovernment as the use of Internet technology to enable greater interaction between government organizations and its citizens.

Digital government or eGovernment, often used interchangeably, is not just putting public services online – it is about government harnessing information technology in order to remain relevant in a more interactive and informational era (Tapscott and Agnew, 1999). Based on the interactions of a government organization with other stakeholders, eGovernment has been classified as interactions with internal clients and citizens (G2C), government-to-business (G2B), government-to-internal employees (G2E), government-to-other institutional government organizations (G2G) and citizen-to-citizen (C2C) (Carter and Belanger, 2003; Tan et al., 2005). Carter and Belanger (2003) emphasized the use of ICT to improve efficiency and access to government services across all stakeholders in G2C, G2E, G2G and G2B services.

eGovernment implementation can result in significant benefits such as improved efficiencies, greater access to services, greater accountability, transparency and citizen empowerment (Lam, 2005; Tung and Rieck, 2005), lowered costs and time for services (Bhatnagar, 2000; Gilbert et al., 2004), strategic advantages such as improved decision making through streamlining of information, enhanced knowledge sharing and organizational learning, improved interactions with citizens, other government organizations and businesses and industry, leveraging market forces for better relationships between government and private sectors, and greater ability to effect organizational change management (Grant and Chau, 2005; Tung and Rieck, 2005; Zhang et al., 2005). Tolbert and Mossberger (2006) reported that increased use of eGovernment by citizens also lead to increased trust in local government and also in positive attitudes towards eGovernment processes.

Thus eGovernment in a broader perspective encompasses all the key factors of governance – better delivery of government services to citizens, improved interaction with business and industry, employee and citizen empowerment through access to information, and more efficient management, i.e., the use of ICT to transform delivery of government services. ICT is an integral part of successful eGovernment implementation including G2G.

Prattipati (2003) reported that there is wide variance in the adoption of e-governance and use of online government services among countries. Highest use of government online services in 2002 was in Sweden (57% of the population) and lowest use country was Hungary (3%), while India was third lowest (5%). Singapore, which is currently rated as third among all nations in eGovernment ranking (Misra, 2006), is actualizing USD (US Dollars) 14.5 million savings in benefits (Ke and Wei, 2004; Lee et al., 2005).

Recent eGovernment research has focused more on economically developed countries than on developing countries. Most developing countries continue to have poverty alleviation and building of social and technological infrastructure as a priority (Bhatnagar, 2000). Also, developing countries typically have a larger percentage of rural population compared to economically developed countries which present additional difficulties in ICT infrastructure layouts and scaling up of eGovernment initiatives. Chen et al. (2006) noted that despite key differences in technological and social aspects of developed and developing countries, most developing countries have followed best practices and strategies used in eGovernment implementation in developed countries. They summarized the differences between eGovernment in economically developed and developing countries, developed a conceptual framework to analyze implementation strategies in each and demonstrated these using USA and China as a representative country from developed and developing countries, respectively. They highlighted that lessons learned from eGovernment implementations in developed countries could not be transposed to developing countries with complete success.

This study focuses on studying the factors that lead to adoption of ICT in a government organization in a economically developing country. We use India as a representative of developing country in the Southeast Asian region. As we note from Table 1, India's profile as a developing country is close to two other countries, Pakistan and Sri Lanka, in the region in terms of ICT use and Internet use penetration.

The National Association of Software and Services Companies (NASSCOM) in India estimated that the e-governance market in India in 2002 was USD 300 million (Giving e-Governance, 2003). In 2005, the market grew to USD 693 million and is expected to further grow to USD 935 million by the end of 2006 (http://www.digitalopportunity.org, 2006).