Chapter XI
Diffusion of Innovation and Capability Theory in the Context of E-Government

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ABSTRACT

E-government (EG) enables governments to provide citizens easier and electronic access to information and modernized services through personal computers, kiosks, telephones, and other resources. Information and communication technology (ICT) is the prime driving force of EG. Therefore, before implementing an EG project, it is vital to investigate the capability of developing countries to adopt ICT and research the impact of adopting ICT in that society. The authors argue that the purposes of implementing EG can only be accomplished and the full benefits of EG realized if a majority of the population of developing countries has the ability to adopt ICT, the main driver of EG. Therefore, it is essential for policy makers of developing countries to study the adoption capability of ICT of citizens prior to launching EG. Otherwise, there is the strong possibility that EG projects could not accomplish the purpose of its implementation and could fail to reduce the digital divide, establish equal rights for all citizens, and promote good governance.

INTRODUCTION

Over recent years, information technology (IT) has experienced an unprecedented degree of change, enabling the transformation of the basic mechanisms of public administration and business. This transformation is accelerated and supported by computer-based applications to the management processes (Miers, 1996). The emergence of the Internet as a general communication channel has also opened the opportunity for E-government (EG) and E-commerce (EC) to be globalized. The adoption and extension of IT is now a major concern in many countries. According to Lanvin (1995), the development of global technology infrastructure is imperative to help both developed and developing countries improve the image of business organizations and exploit the global market substantially (Wilson, 2001). It plays a significant role in the present information- and knowledge-based market by planning, generating, managing, and transmitting information in the most effective way. Modern IT provides easy access and availability across the countries and invites potential customers by providing the necessary information through the Internet. Therefore, the global proliferation of technology is the backbone of global EG and EC. However, the sphere of the scope of EG is much wider than EC. Alternatively, EC is only a fragmented part of EG. EG is about complete relationships with both the public and private institutions and the foundation of our next-generation states and communities. Understanding what citizens and businesses want and how government, the private sector, and other institutions will be integrated is the vital function of EG. Transformation and reengineering of public institutions require new discourses about policy issues and political realities and their impact on the satisfaction of different stakeholders (Sakowicz, 2007). The EG model should also encompass the evolution of ICT, the reformation of public administration, and the integration of stakeholders. Therefore, EG has a

much wider, more extensive, and more exhaustive application of ICT than does EC.

EG refers to government's use of IT to provide and exchange information and services with citizens, businesses, and other stakeholders of government. It is a tool to transform and reengineer public sector work through the use of ICT (Schware and Deane, 2003). It enables government to provide citizens with easier and electronic access to information and modernized services from anywhere in the world through personal computers, kiosks, telephones, and other resources (Banerjee and Chau, 2004). This suggests that citizens, for example, no longer need to claim services in person over the counter. EG involves using ICT to deliver public services through digital channels. Throughout the world, governments are realizing the potential of placing traditional government services online. However, varying degrees of complexity, failure, and success in the process have been observed from different parts of the world. Different EG implementation results (Heeks, 2002; Ho, 2002; Moon, 2002) show that strategic development of EG initiatives can be very complex, which demonstrates the difficulties of transition to EG.

Previous experiences also demonstrate that the proper implementation of EG is very complex and depends on many different factors. Moreover, since its main mission is citizen driven, its implementation, development, and performance should be such that it meets the criteria and facilitating factors that enable citizens to adopt this modern technology-driven government system—EG. In this connection, the diffusion of innovation (DOI) theory can be a powerful instrument to investigate the facilitating factors for adoption of ICT-based EG by citizens (Carter and Bélanger, 2005; Moore and Benbasat, 1991; Rogers, 1995; Tornatzky and Klein, 1982). EG should also overcome the initial resistance of citizens, be culturally sensitive, and change the way different stakeholders of EG relate to each other. One potential concern in this aspect is the digital divide. Does a majority

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