Chapter 7
E-Government Adoption and Proliferation Across Different Stages of Evolution

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ABSTRACT

Adoption by stakeholders is a key dimension of e-government success. Although some researchers have investigated the antecedents of e-government adoption by citizens, businesses, and other stakeholders, they have not studied the situation with regard to adoption and proliferation of e-government, as it progresses through various evolutionary stages. Assisted by relevant literature and authors' experience, this chapter constructs the likely scenarios of e-government adoption and proliferation through the different stages of evolution. It emerges that each stage of e-government is associated with unique challenges and opportunities with respect to e-government proliferation and adoption by stakeholders. The circumstances presented by the individual stages for adoption and proliferation of e-government and ways to promote stakeholders' adoption through those stages are discussed

1. INTRODUCTION

E-government, defined here as the use of information and communication technologies (ICTs) in the delivery of government information and services, today is central to public service delivery reform. It offers the prospect of radical improvement in the way citizens, businesses, and other stakeholders are served by their governments. In the past, even as governments in many countries tried to improve the delivery of public information and services, they faced budgetary and manpower constraints.

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Today those constraints can to a large extent be mitigated with the help of e-government, so that high quality public services can now be delivered in more cost-effective ways. Accordingly, governments world over are engaged in implementing e-government programs that seek to improve the state's interface with citizens, businesses, and others. But making a success of e-government projects is however not a simple affair, and such projects have in the past exhibited failure proneness (Heeks, 2003). It is important to state here, that a key success dimension of these projects is the enthusiastic reception and large scale usage of the same by citizens/ businesses. Indeed, issues related to e-government adoption have been studied by quite a few researchers (for reviews, see Ojha, Sahu, and Gupta (2009) and Titah and Barki (2006)). But those researches have not tried to study the adoption of e-government through the various stages of evolution. Here, the term *adoption* carries its usual meaning from technology acceptance literature i.e. time taken to switch to a new technology or the extent of usage (Davis, Bagozzi, & Warshaw, 1989; Venkatesh, Morris, Davis, & Davis, 2003). Further, no research has tried to study the situation with regard to proliferation of e-government through the different evolutionary stages. Here, the term *proliferation* implies expansion of e-government websites and services. This essay represents an initial effort to address the aforesaid gaps in knowledge.

The next two sections briefly visit the key models of e-government evolution and theories relevant to e-government adoption; this provides a theoretical background to the subsequent discussion on how the scenario of e-government proliferation and adoption might vary across the different stages or maturity levels. In addition, steps to encourage the adoption of e-government in the individual stages have also been included. And finally, the concluding remarks bring the paper to a close.

2. E-GOVERNMENT STAGE MODELS

E-government stage models predict and describe the evolution of e-government and therefore they occupy an important place in literature. The stage models that have been frequently cited in literature, surfaced during the years 2000 and 2001. Since there are significant overlaps between those initial models, for the sake of brevity only two of the early models are reviewed here, namely Layne and Lee (2001) and UN and ASPA (2001). In addition, three of the more recent models i.e. Andersen and Henriksen (2006), Capgemini (Capgemini, 2007) and Klievink and Janssen (2009) are also visited.

2.1 Layne and Lee's 4-Stage Model

Based on technical, organizational and managerial feasibilities, Layne and Lee (2001) have suggested that e-government is an evolutionary phenomenon, and they have posited a four-stage e-government growth model. The four stages are: (i) cataloguing, (ii) transaction, (iii) vertical integration, and (iv) horizontal integration. The *Cataloguing* stage involves online presence, catalogue presentation, and downloadable forms. *Transaction* stage includes services and forms online, and databases supporting online transactions. *Vertical Integration* implies that local systems are linked to higher level systems, within similar functional areas. And finally, the *Horizontal Integration* stage envisions that systems are integrated across different functions, thus making possible, an actual one stop portal for citizens.

2.2 United Nations and American Society of Public Administration's 5-Stage Model

UN and ASPA's (2001) model posits the following five (in ascending order) progressive stages of e-government evolution: (i) emerging, (ii) enhanced, (iii) interactive, (iv) transactional, and