

# Chapter 14

## A Process Model for Successful E-Government Adoption in the Least Developed Countries: A Case of Bangladesh

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### ABSTRACT

*Least developed countries (LDCs), have been struggling to find a workable strategy to adopt information and communication technology (ICT) and e-government in their public sector organizations. Despite a number of high-level initiatives at national and international levels, the progress is still unsatisfactory in this area. Consequently, the countries are failing to keep pace in the global e-government race, further increasing the digital divide. This chapter reports on an exploratory study in a least developed country, Bangladesh, involving a series of focus groups and interviews with key stakeholders. A lack of knowledge and entrenched attitudes and mindsets are seen as the key underlying contributors to the lack of progress. The analysis of the relationships among the major barriers to progress led to a process model, which suggests a pathway for e-government adoption in an LDC such as Bangladesh. The chapter introduces important directions for the formulation of long-term strategies for the successful adoption of ICT in the public sector of LDCs and provides a basis for further theoretical development.*

### INTRODUCTION

Public Services in this era are increasingly experiencing a transformation in their work processes, modes of delivery and internal and external communications by virtue of Information and Communication Technology (ICT) applications. This

use of ICT is commonly termed *e-government*, the primary objective of which is “to improve the activities of public sector organizations” (Heeks, 2004, p.1). eGovernment has revolutionized traditional systems and added new dimensions to the functioning of modern government to provide the best service for its citizens and to improve its

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internal efficiency. eGovernment is also closely linked to the global transition to a knowledge-based society (KBS) that modern governments are aiming for. However, e-government in many least developed countries (LDCs) is in its infancy, with failure in the initial adoption and use of ICT in the public sectors hampering advances in e-government (Heeks & Bhatnagar, 2001). LDCs are distinguished by the Economic and Social Council of the United Nations in terms of three criteria: (1) low national income (gross national income per capita under US\$905), (2) weak human assets (health, nutrition and education) and, (3) high economic vulnerability (instability of agricultural production and exports, inadequate diversification and a small economy) (UNOHRLLS, 2011). Forty eight countries are currently recognised as LDCs.

Our study investigates two research questions to advance work in this area:

*First, what underlying issues are most critical for e-government adoption in an LDC and how are these issues interrelated? Second, how can e-government adoption be facilitated in this context?*

The research has practical significance because it focuses on a particularly important sphere of e-government. The three spheres of e-government include; (i) improving the government processes, that is, G2G (government-to-government or e-Administration); (ii) connecting citizens, G2C (government-to-citizens or e-Services); and, (iii) building external interactions, G2B (government-to-business) (Backus, 2001; Heeks, 2004). The focus of this study is on the first sphere, the improvement of the internal government processes with ICT. Improvements in this sphere have the maximum potential to achieve greater benefit for LDCs. Being the largest user of an IT system, the public sector in an LDC can play the leading role in ICT diffusion throughout the country and can exert the greatest influence through its policies and regulations (e.g., Flamm, 1987; Nidumolu et al., 1996).

The original motivation for the study was provided by the lead author's involvement for a number of years in the public sector in Bangladesh and the problems encountered there. These experiences led to the belief that it was important to focus on G2G, at least as much as G2C, despite a common misconception that e-government is mainly about delivering government services over the Internet (Allan et al., 2006; Dawes, 2002a). This narrow vision of e-government does not take into account the "behind-the-scenes first-order changes" (Scholl, 2005, p.7) and the variety of government activities that occur within and between the government agencies. Thus, this focus fails to recognize the essential use of technologies other than the Internet. In many LDCs, universal access to the Internet and citizen-centric services may be far out of reach—for example, in Bangladesh the Internet penetration rate is 1.3%, (ITU, 2009)—yet there may still be scope for substantial improvements in the internal G2G processes, with significant outcomes in terms of improving productivity, efficiency and transparency. Evidence for the importance of G2G relative to G2C is provided in the Australian case, where only 38% of the population use online services to contact the government, despite 71% of household having Internet access. Yet Australia holds one of the leading positions in the world e-government rankings (8<sup>th</sup>) and the public sector efficiency index (3<sup>rd</sup>), with the bulk of the internal government processes being driven by ICT (AGIMO, 2009; ITU, 2009; Afonso et al., 2007; UN, 2010).

The study has further significance, because it contributes to theory in an important area. Walsham and Sahay (2006) noted the wide range of theories drawn upon in a survey of research on ICT in developing countries. These theories include structuration theory (as in Liu & Westrup, 2003; Walsham, 2002), actor-network theory (as in Braa et al., 2004; Stanforth, 2006) and institutional theory (as in Avgerou, 2002; Silva & Figueroa, 2002). The range of theories employed is not surprising, given the extent of the

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