Chapter VII
A Framework for Understanding Returns from E–Government[1]

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ABSTRACT

Though policy makers and governments are interested in understanding the returns from e-Government implementation, there are relatively few empirical studies that analyze this aspect. Using secondary data from 99 countries and the IT impact literature as the guiding theoretical perspective, we examine the returns from e-Government in the form of national performance. We do this by initially examining the relationship of e-Government development with the first order government process efficiency parameters (resource spending efficiency and administrative process efficiency). Subsequently we examine the association of these first order efficiency outcomes with the two second order dimensions of national performance (reduction of social divide and business competitiveness). Our initial analysis reveals a significant association between "e-Government development" and "resource spending efficiency" and also between "e-Government development" and "administrative process efficiency". For the second order model, we find that the relationship between "administrative process efficiency" and "reduction of social divide" is not significant. Further, we conducted a post-hoc analysis which revealed that the relationship between "administrative process efficiency" and "reduction of social divide" is fully mediated through the "national business competitiveness". Hence, "business competitiveness" emerges as an important variable for realizing the "reduction of social divide". Through this research, we make some important contributions and offer implications for researchers, practitioners and policy makers.

INTRODUCTION

E-Government can be defined as the use of information and communication technologies (ICTs) and the Internet to enhance the access to and delivery of all facets of government services and operations for the benefit of citizens, businesses, employees and other stakeholders. In recent times, e-Government has generated a lot of interest among researchers. Studies on e-Government can be roughly classified into three broad areas: e-Government development and evolution (Kunstelj & Vintar, 2004; Layne & Lee, 2001; Srivastava & Teo, 2004; 2007a; Tan & Pan, 2003), e-Government adoption and implementation (Koh *et al.*, 2005; Li, 2003; Melitski *et al.*, 2005) and the impact of e-Government on citizens and businesses (Banerjee & Chau, 2004; Srivastava & Teo, 2007b; West, 2004). Though research in all the three identified areas is important; governments, policy makers, practitioners and academics are often intrigued by the *returns* from e-Government. The facts that research on e-Government impact is still in a nascent stage, and its relationship with national performance has not been adequately addressed in previous research, are the prime motivators for this research.

The link between information technology (IT) investments and organizational performance, termed as IT payoffs or returns, has been researched by numerous scholars (Brynjolfsson & Hitt, 1996; Devaraj & Kohli, 2003; Melville *et al.*, 2004). The practical relevance of IT impact continues to motivate researchers for investigating the relationship between IT and performance (Srivastava & Teo, 2008). Although IT impact research continues to be a major component of information systems (IS) research, relatively few studies have been conducted to gauge the relationship of e-Government with national performance. Past research on the e-Government impact has highlighted some of the benefits it offers for citizens, businesses and governments. E-Government has not only helped in improv-

ing service delivery (Kibsi *et al.*, 2001; Von Haldenwang, 2004; West, 2004) and increasing democratization (Von Haldenwang, 2004; West, 2004), but has also helped in reducing corruption and increasing government transparency (Banerjee & Chau, 2004; Cho & Choi, 2004; Von Haldenwang 2004; Wong & Welch, 2004). Most e-Government returns variables investigated in past studies are intermediate process variables, which may eventually impact the national performance (Barua *et al.*, 1995). But this link has not been clearly examined in the current e-Government literature. In our study, we address this gap by conceptualizing the relationship between e-Government development and national performance, mediated through intermediary return variables. We construe national performance as consisting of two dimensions: *reduction of social divide* and *business competitiveness*. Further, we posit that e-Government development impacts government process efficiency (*resource spending efficiency* and *administrative process efficiency*), which in turn impacts national performance on the two construed dimensions. Through our research, we investigate the relationship between e-Government development and first order impacts, and consequently the linkage between first order efficiency variables and higher order performance variables (Barua *et al.*, 1995; Melville *et al.*, 2004).

Further, most e-Government studies are either conceptual (Kibsi *et al.*, 2001; Layne & Lee, 2001; Warkentin *et al.*, 2002; Wimmer, 2002), or case studies (Heeks, 2002; Lee *et al.*, 2005; Li, 2003; Srivastava & Teo 2005). Though, e-Government literature also has some theoretically grounded empirical survey studies (Phang *et al.*, 2005; Bretschneider, 1990), such empirical studies are relatively few and are often limited to analyzing a particular e-Government implementation within a country (Kaylor *et al.*, 2001; Norris & Moon, 2005; McNeal *et al.*, 2003; Moon, 2002; West, 2004). Cross-country and country level empirical studies are very few (for example, Wong & Welch, 2004;

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