Chapter 42
Tackling the ICT Infrastructure Gap for the Successful Implementation of E-Government Projects

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ABSTRACT

This article describes how the promised transformative reform agenda of e-government is challenged particularly due to the lack or non-availability of adequate ICT infrastructure and finances to successfully develop and implement e-government projects around the world. The One Belt One Road (B&R) strategy spearheaded by the Chinese Government has been identified as a potential funding source for e-government projects through ICT infrastructure investment. Adequate ICT infrastructure investment in member countries under the Belt and Road initiatives could reduce the huge ICT infrastructure gap hampering the execution of e-government programs. This article, therefore, recommends the formation of the Belt and Road ICT Infrastructure Investment Fund (B&R ICT Infrastructure Fund) under the OBOR strategy to allow member countries to source funds for the execution of e-government projects. This will not only drastically increase the completion/success rate of e-government projects but also translate into improved public service delivery and enhanced government interaction—engagement—with citizens and businesses.

INTRODUCTION

Information and Communication Technologies have been employed by Governments around the world to address the numerous challenges confronting public administration of state and public institutions. This has been done through the development and implementation of e-government projects as a transformation tool to undertake major public administration reforms in the public sector. E-government is the application of the right ICTs in the public administration of state institutions with a goal to transform

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the delivery of public service delivery and promote greater interaction between the public-sector organizations and the citizenry and businesses. According to the World Bank e-government is the use by public sector institutions of information and communication technologies such as Wide Area Network, the Internet, and mobile computing to transform and enhance interactions with citizens, businesses and other parts of government (World Bank, 2015). These technologies according to the World Bank has the potential to ensure better delivery of government services to citizens, improved interactions with businesses, empower citizens through information sharing and ultimately the creation of most efficient government management processes (World Bank, 2015). It is also considered as the use of ICT to encourage the government and it public sector agencies to be more accessible, effective and accountable (Wangpipatwong, Chutimaskul, & Papasratorn, 2009). E-government could also be seen as the strategies, organizational forms and processes employed through the potential of ICT to improve access to and delivery of government services and information to citizens, businesses, government employees and other arms of government (Kefallinos, Lambrou, & Sykas, 2009).

E-government implementation can ensure increased information accessibility, improve government and public-sector performance and efficiency, reduce costs, enhance the competitiveness of government agencies, greater transparency, and visibility of sector agencies (Ciborra, 2005). The adoption of e-government could also promote the use of ICT in the public sector through e-skilling of the sector and boost of e-commerce activities (Ciborra, 2005). The implementation of e-government initiatives in the public sector has been largely occasioned by the success and uptake of e-commerce in the private sector (Navarra & Cornford, 2005). E-government has the potential to provide citizens with a transformative service electronically through ICT (Al-Busaidy & Weerakkody, 2009; Carter & Bélanger, 2005; Guijarro, 2007; West, 2004).

The implementation of e-government initiatives by the government to bring about the expected transformative reforms in the public sector is confronted with a mirage of challenges. These challenges could range from the nature and complexity of the ICT employed to the inadequate patronage of e-government by citizens, business, and institutions (Zhao, José Scavarda, & Waxin, 2012).The main challenges identified in e-government development includes cultural barriers (Margetts & Dunleavy, 2002), Infrastructure (Ciborra, 2005; Dada, 2006; Economic, 2010; Maumbe, Owei, & Alexander, 2008), resources (both financial and human resources) (Maumbe et al., 2008; Mofleh & Wanous, 2008), Socio-economic barriers (Barzilai-Nahon, 2006; Riggins & Dewan, 2005), security and privacy (Kor, Orange, Elsheikh, Cullen, & Hobbs, 2008; Warkentin, Gefen, Pavlou, & Rose, 2002) and E-integration (Al-Busaidy & Weerakkody, 2009; Guijarro, 2007; Kaylor, 2005). Amongst these identified challenges and barriers, the infrastructure gap is considered as the major barrier hampering the successful development and implementation of e-government projects around the world. It has been established that the lack of ICT infrastructure and financial resources contribute largely to the poor development of e-government initiatives in developing countries (Ciborra, 2005; Dada, 2006; Economic, 2010; Heeks, 2003; Maumbe et al., 2008).

The objectives of this research paper are to; first, critically examine the challenges hampering the successful development and implementation of e-government around the world with particular focus on the lack of ICT infrastructure. Secondly, examine and discuss how the One Belt One Road (OBOR) initiative championed by the Chinese Government could help address this major ICT infrastructure gap hindering the successful development of e-government as a tool to drive crucial public-sector reforms and improve public service delivery. While studies have explored the lack of finance and ICT infrastructure as major challenge of e-government implementation, they however fall short of providing amble