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E-Government Diffusion:
Evidence from the Last Decade

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ABSTRACT

The use of technology to offer goods and services by governments to citizens has been a growing phenomenon in the last decade. Many projects have been recorded across nations in an effort to encourage the adoption and diffusion of e-government. However, these studies have been rather isolated project reports than a comprehensive global picture. This study examines the e-government diffusion across 192 countries in the last decade. The panel data obtained is analyzed to evaluate the current state of e-government diffusion. Evidence in the last decade suggests that the difference in e-government diffusion is wider from country to country, than from year to year, within the same country and that country-specific effects account for these differences. The authors discuss the implications of these findings.

Keywords: *Communication Technology, E-Government Adoption, E-Government Diffusion, E-Participation, E-Readiness, Human Capital, Information Technology, Infrastructure*

INTRODUCTION

E-government diffusion is an international phenomenon. Literature on e-government in the last decade overwhelmingly suggests that e-government initiatives have been on the rise across many nations. In 2005, the United Nations (UN) World Summit leaders, as a part of their commitment to a peaceful, just and prosperous world put forward the vision for:

…building a people-centred and inclusive information society, putting the potential of information and communication technologies at the service of development and addressing new challenges of the information society (United Nations World Summit, 2005).

Since then, countries have augmented efforts e-government efforts across the world. In 2002, the UN produced a report entitled, "Bench-Marking E-government: A Global Perspective" which has become a global benchmark for e-government. The UN continues to gather global data almost yearly to assess the state of e-government spread in its Member States. Efforts in e-government diffusion in UN Member States could be thought of as being consistent with the overarching objectives of the UN's

Millennium Development Goals set forth by the international community.

Initiatives on e-government development have the potential to empower citizens, pull them closer, and even involve them in the decision-making that drives government policies through feedback. Because of this, information and communication technologies are often seen as tools for social and economic empowerment (Kozma, 2005). E-government has been defined as the use of information technology to enable and improve the efficiency of government provided services to citizens, employees, businesses and agencies (Bélanger & Carter, 2008). It has as its goal to deliver government services to citizens in an effective and efficient manner.

Governments from around the world, therefore, have been acquiring technologies to facilitate the interoperation of these processes and to improve their relationships with their citizens. Spending on electronic government systems and services has been rapidly increasing (Peristeras, Mentzas, Tarabanis, & Abecker, 2009).

The Cluster Competitiveness Group (2007) predicted that the compound annual growth rate of e-government spending for European countries and their local governments will increase to 14% from 2006 to 2011. Another report (E-Governance, 2005) projected that government spending on ICT in the Asia-Pacific region, excluding Japan, was expected to grow at a five-year compound annual growth rate of 8.7% to reach $31.7 billion by 2010. In 2010, the Middle East and African nations ICT spending by governments was estimated to increase to 10.7% by 2011 (Wood, 2011). Though these statistics are on government ICT spending as a whole, e-government investments are clearly a portion of it.

Despite the investment of these huge amounts of resources in e-government, very few governments have succeeded in these projects (Hackney, Desouza, & Chau, 2008; Peristeras et al., 2009). In a study of 40 developing and transitioning countries, Heeks (2003) reported that only 15% of e-government projects were completely successful; while 50% were considered partially unsuccessful. The results seem to be better in developed countries; nevertheless, usage is still minimal. In one survey administered in the United States, 72% of respondents indicated that they used e-government systems primarily as information-gathering sources than actual interaction centers (Barr, 2007). Similarly, Webber et al. (2007) reported that U.S. and Canadian citizens saw government portals as information sources rather than transaction hubs. They conclude that only 25% used e-government portals to conduct transactions such as completing and submitting online forms. In the United Kingdom, Kinder (2010) argues that while e-governments have known some success in process costs reduction, service delivery to citizens remains slow.

Notwithstanding, the use of e-government systems is expected to rise albeit not equally across countries. Globally speaking, the average usage of these systems by citizens is about 30% but when it comes to specific countries such as Canada this rate is over than 51% (Kumar, Mukerji, Butt, & Persaud, 2007). Hence, the rate of e-government diffusion can be expected to increase in the coming years more than ever. This could be a result of the potential advantages that these systems possess. In spite of this anticipated growth, the investigation of the adoption and diffusion of e-government has been rather limited to a few isolated projects, devoid of a comprehensive and global picture. Basically, previous studies' conclusions on e-government have been based on case studies in specific countries at specific points in time (Deakins & Dillon, 2002; Ke & Wei, 2004) rather than from a multi-national perspective. A notable exception is a recent study by Lee, Chang and Berry (2011) who examined the growth of e-government and e-democracy in 131 countries. This study however, was cross-sectional in nature with emphasis on the differences between e-government and e-democracy development.

This study explores e-government diffusion in 192 countries across four time periods between 2003 and 2010. It seeks to answer two main research questions: (1) what is the global outlook of e-government diffusion in

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