Chapter 1
The Need for Analyzing e-Government Efficiency: An Introduction

Manuel Pedro Rodríguez-Bolívar

Abstract The question of e-Government has become one of the most important issues on political agendas today, and since the late 1990s, a number of countries have launched e-Government projects, with a particular emphasis on using ICT to provide electronic information and services to citizens and businesses. An analysis of literature review indicates that e-Government research has been focused on topics such as enhanced services, streamlined transactions, two-way communication, and greater transparency, but theoretical analysis and practical experiences regarding systems to measure impacts of e-Government implementation on the efficiency of public administrations remain without an appropriated answer nowadays. Therefore, there is a need for analyzing efficiency of e-Government implementations and for knowing the perception of main factors involved in e-Government projects regarding effects of e-Government projects into the efficiency of their work and decision-making processes.

This book, structured into three parts, seeks to contribute to the literature by filling the existing void and expanding knowledge in the field of efficiency of e-Government implementations for both public administrations and stakeholders. It provides understanding how e-Government efficiency could be measured and about the reasons why public managers and politicians are undertaking e-Government projects, as well as why stakeholders could be forcing public administrations in order to undertake e-Government projects.

1.1 Introduction

Increasingly connected citizens and stakeholders are demanding that governments be more transparent and deliver services more rapidly and efficiently. Ready access to information of public value, increased transparency in government operations,

M.P. Rodríguez-Bolívar (✉)
Department of Accounting and Finance, University of Granada, Granada, Spain
e-mail: manuelp@ugr.es

and a greater willingness to listen to citizens and secure their involvement are pivotal requirements for efficient, open, and responsive government.

In recent decades, governments around the world have been faced with rapidly growing challenges on how to make public service and administration transparent, effective, and efficient. Based on Coase (1937, 1960), Ciborra (2005) indicates that the implementation of the information and communication technologies (ICT) affects the type and effectiveness of governance structures in different conditions and consequently affects economic efficiency and the social costs of coordination. This implementation has helped meeting citizenry needs, enabling greater accessibility to public information and services (Martins 1995), together with greater interaction and individual participation in public management (Dunleavy et al. 2006; Taylor et al. 2007) and greater information transparency (Rodríguez et al. 2010).

In this context, the question of e-Government has become one of the most important issues on political agendas today, and since the late 1990s, a number of countries have launched e-Government projects, with a particular emphasis on using ICT to provide electronic information and services to citizens and businesses, combining the aims of increasing efficiency and becoming more customer responsive (Chen and Gant 2001).

These e-Government projects have been applied to ordering at least three kinds of processes (Ciborra 2005). First, it attends to the relationship between the administration and the citizen and the related re-engineering of the activities internal to the administration (Bellamy and Taylor 1998). A second level regards the way in which the boundaries between the state and the market are redrawn, by the creation of an electronic, minimal state, more transparent, agile and accountable (Heeks 1999). And finally, a third level deals with the purpose of aid policies aimed at introducing e-Government into developing countries, because it is thought that better accountability and improved transparency are the characteristics of good governance (United Nations Development Programme 2001).

This interest for implementing e-Government projects into governments has made scholars to undertake a bulk of research on e-Government topics in diverse academic disciplines and journals, including articles analyzing the relationship between ICTs and the organizational and institutional change in governments (Dunleavy et al. 2006), analyzing the evaluation of public policies (Coursey and Norris 2008), examining the benefits of e-participation (Edelenbos et al. 2009), studying the improved efficient delivery of public services (Caiden and Sundaram 2004), improving transparency and accountability (Piotrowski and Van Ryzin 2007; Rodríguez Bolívar et al. 2007), as well as improving interoperability (Landsbergen and Wolken 2001). In sum, these studies have mainly sought to highlight the possibilities of e-Government implementations and to show different experiences about e-Government projects (Yildiz 2007).

Because of the dramatic growth in e-Government projects and in e-Government research, a critical integrative review of research in e-Government could be useful in order to provide a broad view of the current state of e-Government research with the aim at locating the need for efficiency analysis into e-Government field of knowledge. In this regard, the next section of this chapter makes an overview of literature reviews about e-Government that have been undertaken in the last years into the field of e-Government.

1.2 A Panoramic View of e-Government Research

A literature review is told to provide an excellent overview of the current state of the art and thus enable a profound analysis of the contribution and methodologies used in that particular research field (Rodríguez Bolívar et al. 2010). A bibliometric study of e-Government research published in ISI-listed journals has indicated that the presence of e-Government research is still scarce, with the articles published in this field only making up 2.75 % of all published articles, and the majority of these are in the field of Information Science and Library Science and are mainly published in a selective number of journals, concretely, in Government Information Quarterly, Public Administration Review, and American Review of Public Administration (Rodríguez Bolívar et al. 2010).

Nonetheless, there is a gradual increase in the research carried out in the field of e-Government over the last few years, especially regarding technological innovation and modernization in the management of public administration, e-Government program/project evaluation and policy analysis, deliberative democracy, and accountability, transparency, and dissemination of information (Rodríguez Bolívar et al. 2010). Indeed, the main research themes have been focused on these topics reflecting a transformation of management systems within public administrations, enabling enhanced services, streamlined transactions, two-way communication, as well as greater transparency in the management of public organizations and the disclosure of a greater volume of information on governmental websites due to the importance attached by governments to promoting e-democracy and to reducing political corruption (Shim and Eom 2009; Kim et al. 2009).

In the last years, there is a lively debate about the transformation in the delivering of public sector services (Osborne 2009, 2010) and the impact of technology impact of e-Government applications. In this regard, Heeks and Bailur (2007) conducted a research on the three selected sources were those identified as the leading e-Government-specific research outlets during the initial years of the twenty-first century are the following: the journals *Information Polity* (2002–2004) and *Government Information Quarterly* (2001–2005) and the conference proceedings for the *European Conference on e-Government* (2001–2005).

The analysis on e-Government performed by these authors regarding on technology impacts and impact causes suggests that almost all of the analyzed papers take a position that is more positive and more technologically determinist (Heeks and Bailur 2007). It seems to regard ICTs as a "good thing" for government, ignoring the evidence about downsides to technology and ignoring the evidence of the widespread costs of failure of e-Government. It could be explained because of the new authors that seem to be more optimists to e-Government implementation, on one hand, and the direct interest of the authors in showing e-Government projects as positivist because they had direct roles in the e-Government projects or services, on the other hand (Heeks and Bailur 2007).

In any case, a lack of theory regarding systems to measure impacts of e-Government implementation on the efficiency of public administrations remains without an

appropriated answer in the literature review. In this milieu, Heeks and Bailur (2007) concluded that the lack of engagement with theory can be explained by a focus on practice, and practical recommendations, which has been traditional in e-Government research (Heeks and Bailur 2007; Rodríguez Bolívar et al. 2010).

Therefore, because of the dramatic growth in the implementation and research on e-Government projects, in this book, we propose to pause and reflect on the efficiency analysis of e-Government projects to draw conclusions from that reflection about the ways to measure e-Government efficiency, experiences in e-Government efficiency, and possible future directions for e-Government research in this area.

1.3   e-Government Efficiency: An Unsolved Problem

As noted previously, recent interest in e-Government has been reflected in the large amount of research studies and projects reported in diverse academic disciplines and journals, highlighting the possibilities of e-Government implementations and showing different experiences about e-Government projects, convinced that ICT improves technical efficiency and accelerates productivity growth (Sung 2007; Thompson and Garbacz 2007).

Nonetheless, these e-Government implementations are usually not justified from an efficient analysis point of view by both governments and researchers, and it is difficult to know if these implementations are meeting stakeholders' demands regarding information transparency, rendering of online public services, or citizens' participation in public sector management. Also, it is difficult to assess the social and political impacts of e-Government systems. Indeed, many papers focused in describing different experiences about e-Government projects have demonstrated that not all e-Government projects have been successful implementations (Heeks 2002; Dada 2006).

Therefore, there is a need for analyzing the way of measuring efficiency of e-Government implementations and the perception of main factors involved in e-Government projects regarding effects of e-Government projects into the efficiency of their work and decision-making processes. Under this scenario, this book seeks to make a critical view of e-Government developments from the perception point of view of stakeholders about e-Government projects and their effects. It explores if e-Government applications are introduced as a fad or they are introduced according to real demands from the citizenry.

To achieve this aim, the book is structured into three parts. The first one is addressed to analyze the measurement of e-Government efficiency from a theoretical point of view. The second part of the book seeks to analyze studies on perception of politicians and public managers on e-Government developments regarding e-Government projects and their impact on the improvement of government efficiency and the interaction with stakeholders, in particular, on the efficiency in the rendering of public services, in the legitimacy of the actions taken by public administrations, or in the information transparency. Finally, the third part of the book

examines studies on perception of stakeholders like citizenry, providers, and other stakeholders in e-Government developments regarding the improvement of public sector services, participation, or information transparency.

In this context, the first part of the book, composed by four chapters, focuses on understanding how e-Government efficiency could be measured. The first chapter, written by José-Rodrigo, put emphasis on the questions about the purposes and contributions of e-Government to societal improvement, which have been excluded from evaluation. With these insights and using systems thinking as a body of knowledge, three conceptual patterns of practice are defined to help stakeholders engage with evaluation activities and positively improve the influence of e-Government in society. On the other hand, Sanja Bogdanović-Dinić, NatašaVeljković, and Leonid Stoimenov, taking into account the growing open data initiatives in governments, present and apply a model for assessing data openness, which relies on eight open data principles established by the Open Government Working Group. Thomas Zefferer, Vesna Krnjic, Klaus Stranacher, and Bernd Zwattendorfer analyze usability and security issues as main requirements for efficient e-Government services and applications. And finally, Lasse Berntzen discusses efficiency of e-Government services both from the user perspective and the administration perspective. Therefore, this last chapter introduces the other two parts of the book.

The second part of the book includes four chapters that examine case studies on the perceptions of both public sector officials and politicians to know the efficiency of e-Government projects in order to improving the work into public administrations and to improving the relationship with stakeholders. Mark Liptrott discusses broad lessons from the UK pilot program of e-voting that resonate through the years with the potential to influence the voluntary adoption of e-Government policies. The discussion includes looking beyond the traditional role of evaluation to identify influences on policy adoption decision making. Gabriel Purón-Cid conducts a confirmatory factor analysis to uncover the multiple dimensions of e-Government efficiency from the perspective of implementers inside of government. On the other hand, Laura Alcaide-Muñoz, Carmen Caba-Pérez, and Antonio M. López-Hernández examine public managers' perceptions of e-Government efficiency, determined by means of a survey in this respect addressed to public managers in municipal governments in Andalusia. Finally, taking into account the possibilities of social media to communicate with citizens, Dennis de Kool analyzes the challenges, risks, and dilemmas of social media for Dutch civil servants.

Finally, the third part of the book includes five chapters that provide data on the perception of stakeholders like citizens and providers about e-Government developments. In addition, studies on a multistakeholders perspective are also included. In this regard, Tommi Inkinen and Maria Merisalo analyze stakeholder view on e-Government from the public sector management applying target group interviews from 15 representatives working on the "Electronic Services and Democracy" (SADe) program. Mark Deakin, Fiona Campbell, and Alasdair Reid explore the governance of the ICT-related developments responsible for transforming Manchester into a "digital powerhouse" and challenges the City's recently announced "Next Generation Digital Strategy." Ignacio Criado and David F. Barrero

analyze the demand side of e-Government in Spain profiling the features of the users of e-Government in Spain and the variables explaining their use of e-Government services. Gökhan İskender and Sevgi Özkan Yıldırım undertake a multidimensional quantitative study focusing on the opinions of external and internal stakeholders on the probable success factors that are assumed to be effective on the e-Government transformation success in Turkey. And finally, Sonia Royo, Ana Yetano, and Basilio Acerete analyze whether citizens are familiar with e-participation tools, what citizens and organizers think about the effectiveness of citizen participation, and, finally, whether there is a perceived effectiveness gap between online and offline (traditional) forms of participation.

Therefore, this book is a convenient source of information on important developments regarding e-Government around the world and its effects on the meeting of stakeholders' needs and on the work of public managers/politicians. In this regard, it contributes to the literature by filling the existing void and expanding knowledge in the field of the accomplishment of expectations about e-Government applications for both public administrations and stakeholders. It provides understanding how e-Government efficiency could be measured and about the reasons why public managers and politicians are undertaking e-Government projects, as well as why stakeholders could be forcing public administrations in order to undertake e-Government projects. Therefore, this book could be of interest to both academics and policy-makers.

References

Bellamy C, Taylor J (1998) Governing in the information age. Open University Press, Buckingham

Caiden GE, Sundaram P (2004) The specificity of public service reform. Public Admin Dev 24(5):373–383

Chen YC, Gant J (2001) Transforming local e-Government services: the use of application service providers. Govern Inform Q 18(4):343–355

Ciborra C (2005) Interpreting e-Government and development efficiency, transparency or governance at a distance? Inform Technol People 18(3):260–279

Coase RH (1937) The nature of the firm. Economica 4(16):386–405

Coase RH (1960) The problem of social cost. J Law Econ 3:1–44

Coursey D, Norris DF (2008) Models of e-Government: are they correct? An empirical assessment. Public Adm Rev 68(3):523–536

Dada D (2006) The failure of e-Government in developing countries: a literature review. Electron J Inform Syst Dev Countries 26(7):1–10

Dunleavy P, Margetts H, Bastow S, Tinkler J (2006) New public management is dead-long live digital-era governance. J Public Adm Res Theory 16:467–494

Edelenbos J, Klok P-J, Tatenhove JV (2009) The institutional embedding of interactive policy making. Am Rev Public Adm 39(2):125–148

Heeks R (1999) Reinventing government in the information age: international public sector reform. Routledge, London

Heeks R (2002) e-Government in Africa: promise and practice. Inform Polity 7(2):97–114

Heeks R, Bailur S (2007) Analysing e-Government research: perspectives, philosophies, theories, methods, and practice. Govern Inform Q 24(1):243–265

Kim S, Kim HJ, Lee H (2009) An institutional analysis of an e-Government system for anti-corruption: the case of OPEN. Govern Inform Q 26(1):42–50

Landsbergen D Jr, Wolken G (2001) Realizing the promise: government information systems and the fourth generation of information technology. Public Adm Rev 61(2):206–220

Martins MR (1995) Size of municipalities, efficiency, and citizens participation: a cross-European perspective. Environ Plann C Govern Pol 13(4):441–458

Osborne D (2009) Delivering public services: are we asking the right questions? Public Money Manag 29(1):5–7

Osborne D (2010) Delivering public services: time for a new theory? Public Manag Rev 12(1):1–10

Piotrowski SJ, Van Ryzin GG (2007) Citizen attitudes toward transparency in local government. Am Rev Public Adm 37(3):306–323

Rodríguez Bolívar MP, Caba Pérez C, López Hernández AM (2007) e-Government and public financial reporting. The case of Spanish regional governments. Am Rev Public Adm 37(2): 142–177

Rodríguez Bolívar MP, Alcaide Muñoz L, López Hernández AM (2010) Trends of E-government research. Contextualization and research opportunities. Int J Digit Account Res 10:87–111

Shim DC, Eom TH (2009) Anticorruption effects of information communication and technology (ICT) and social capital. Int Rev Admin Rev 75(1):99–116

Sung N (2007) Information technology, efficiency and productivity: evidence from Korean local governments. Appl Econ 39(13–15):1691–1703

Taylor J, Lips M, Organ J (2007) Information-intensive government and the layering and sorting of citizenship. Public Money Manage 27(2):161–164

Thompson HG, Garbacz C (2007) Mobile, fixed line and Internet service effects on global productive efficiency. Inform Econ Policy 19(2):189–214

United Nations Development Programme (UNDP) (2001) Making new technologies work for human development. Human development report. Oxford University Press, New York

Yildiz M (2007) e-Government research: reviewing the literature, limitations and ways forward. Govern Inform Q 24(3):646–665