

**E-government Research in the United States
(Pre-publication Copy)**

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1. Introduction

Governments engage in e-government activities to improve the effective and efficient delivery of information and services through the use of information communications technology (Codagnone & Wimmer 2007; UNPAN 2010). In general, the intent of e-government is to provide new opportunities and benefits to citizens, businesses, and governments around the world (Jaeger & Thompson 2003); serve as a necessary force for better governance (Gupta & Jana 2003); and create citizen-centered openness in government (Daniels 2001). E-government is entrenched as an accepted government activity with the potential to improve the effective and efficient delivery of government information and resources to citizens at different levels of government in many countries.

E-government research efforts assess e-government at an international level where research assessments include aspects of the U.S. e-government environment (Helbig, Gil-Garcia, & Ferro 2009; Wimmer, Codagnone, & Janssen 2008). Understanding e-government at an international level is important as nations increasingly share information; however, at a national level, countries develop sets of directives that guide how their governments apply e-government to provide their citizens access to government services and resources (McClure & Jaeger 2008). The need exists for each country to understand and improve the effective and efficient use of e-government for information exchange at an international level. The need also exists, however, for countries to improve the effective and efficient delivery of e-government services and resources to meet information needs of their citizens.

The purpose of this study is to understand how researchers assess the delivery of e-government services and resources to meet the needs of U.S. citizens. This study reviews scholarly publications to understand e-government research efforts as a field of study specific to the United States e-government environment. Study results reveal that researchers assess a broad

spectrum of e-government perspectives at the federal, state, and local levels; however, there are gaps in e-government research efforts across the different levels of government research, which indicate future areas of needed research. Results also find that a multitude of methodology approaches are used to assess perspectives; however, there are issues that include lack of or weak presentations of methodologies in publications and a “lack of clarity and lack of rigor about research methods” (Heeks & Bailur 2007). More research efforts are also needed that utilize multi-method evaluation approaches in data collection efforts (Bertot, Snead, Jaeger, & McClure 2006; Gil-Garcia & Pardo 2006) and more theory-based research is needed to help researchers understand the U.S. e-government environment (Bolivar, Munoz, & Hernandez 2010; Luna-Reyes & Gil-Garcia 2011).

2. U.S. E-government Research

The U.S. government information technology (IT) budget for 2011 is \$79.4 billion, which is a 1.2% increase from the 2010 budget, and approximately 10% of the IT budget is spent on e-government initiatives, which is nearly \$8 billion per FY year for 2010 and for 2011 (OMB n.d.). The private sector has long used IT to improve the effectiveness and efficiency with which it provides customer service; however, the U.S. federal government “has missed out on that transformation due to poor management of technology investments, with IT projects too often costing hundreds of millions of dollars more than they should, taking years longer than necessary to deploy, and delivering technologies that are obsolete by the time they are completed” (E-Government, Office of, n.d., para. 1). Typically, new e-government initiatives are not operationally efficient and many have not “generated the anticipated interest among users” (Baumgarten & Chui 2009, p. 26). Many federal e-government initiatives are not effective or efficient and research is needed to identify what works well, what does not, and how to improve implementation of the initiatives and increase public engagement.

Researchers assess a range of e-government perspectives to understand the effectiveness and efficiency of initiated, operationalized, and implemented e-government initiatives and the technology that enables e-government adoption and use. E-government perspectives include government initiatives and policies that guide e-government development and the initiation of e-government processes (Coglianese 2009; Dawes 2010; McCarthy & Yates 2010; McClure & Jaeger 2008), the ways in which governments manage, operationalize, and engage in e-government activities (Carrizales 2008; Jaeger & Matteson 2009; Ladner, Petry, & McCreedy

2008), the technology that enables operationalization and engagement (Ahn 2010; Moynihan 2008; Reddick 2011), and the implementation and presentation of government information and resources through websites for public interactions (Armstrong 2011; Baker 2009; Olalere & Lazar 2011).

Researchers also assess the results of multiple scholarly publications for specific e-government perspective topic areas as the means to identify and present common research aspects of a perspective. Efforts include identifying usability benchmarks to advance e-government performance (Baker 2009), understanding Internet information-seeking behavior for access to government records (Cuillier & Piotrowski 2009), development of an e-government evaluation framework using a classification of methodologies approach (Gupta & Jana 2003); and the use of grounded theory to analyze e-government initiatives (Lee & Kim 2007).

Researchers also assess multiple research efforts to identify gaps in the efforts and future needed efforts. In a write-up of the *E-government around the world: Lessons, challenges, and future directions* symposium, Jaeger and Thompson (2003) provide a list of issues addressed by symposium articles. One of the central points of the symposium is developing methods and performance indicators to assess services and standards of e-government. The authors identified a research gap in that “the limited amount of assessment of the ‘demand, benefits, and service quality’ of e-government initiatives ‘remains a major weakness’” (p. 391). Researchers of the European Union (EU) eGovRTD2020 project conducted an e-government research mapping effort that included gap analysis and found that “eGovernment by its very nature is a complex and multidisciplinary domain” with research conducted in many academic disciplines (Codagnone & Wimmer 2007, p. 4). The eGovRTD2020 study identified current and future gaps or areas of needed research efforts to advance e-government technology development in terms of future technology use goals and initiatives.

Yet another approach is to review scholarly works to understand the maturity level of e-government as a field of study. Norris and Lloyd (2006) analyzed the type and quality of empirical scholarly works available from the first known e-government-based articles through the end of 2004. Their content analysis included 12 descriptive categories (i.e. about the journal, type of article, about the author, theories and hypotheses, and others) and two qualitative categories that include adequacy of literature review and support for conclusions. Heeks and Bailur (2007) analyzed 84 e-government-based scholarly works along five primary aspects that

include perspectives on the impacts of e-government, research philosophy, use of theory, methodology and method, and practical recommendations. Research efforts such as these identify strengths, weaknesses, and gaps in researcher efforts, which researchers should address for e-government to mature as a field of study.

The intent of research that is conducted to understand e-government as a field of study is to gain an understanding of how researchers assess the complex and multidisciplinary aspects of the e-government environment. Research efforts assess a broad range of e-government perspectives such as policy, governance, technology, and websites; aggregate and assess research efforts by perspective topic areas; and review scholarly works to understand the maturity level of e-government as a field of study. Together these research efforts provide a profile of e-government research as a field of study. This study assesses scholarly publications where research efforts are specific to the U.S. e-government environment. Study results address research questions that include: how researchers assess the U.S. e-government environment; can the research efforts inform us about the process and state of U.S. e-government research; and what future areas of research are needed to understand the U.S. e-government environment as a field of study?