*Electronic Government and Electronic Participation*
*E. Tambouris et al. (Eds.)*


*doi:10.3233/978-1-61499-570-8-209*

# Towards a "Balanced" Historical Assessment of E-government Research

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**Abstract.** This paper utilizes the Balanced Scorecard to provide a forward looking historical assessment of e-government research. The Balanced Scorecard provides an interesting and strategic lens through which to view e-government research. This paper identifies prominent e-government articles to highlight the financial, customer, internal process and organizational capacity elements of e-government research. This paper is not a traditional literature review; rather, it is a call for a more strategic approach to e-government research. As the field matures, the community should identify our mission and vision for e-government research and target our efforts accordingly.

**Keywords.** E-government, Balanced Scorecard, Literature Review

## 1. Introduction

Researchers in public administration have been exploring the role of technology in government for years. In 1926, Leonard White, a historian who specialized in public administration and later won the Pulitzer Prize for history, discussed the transformation of office equipment in the public sector. Before "e-government" emerged, researchers and practitioners identified ways to harness technological advancements for government services (Beard 1931).

This paper provides a forward looking historical assessment of e-government research over the last two decades. Although the discussion of information communication technologies (ICT) in government is centuries old (Bain 1937; White 1926), the focus of this paper is on the evolution of the "e-government" phenomenon. The remainder of this paper provides an overview of the evolution of the term e-government, a summary of the balanced scorecard, a review of e-government articles that are highly cited and published in the "Basket of Eight" IS journals, and recommendations for future research based on a "balanced" categorization of the e-government articles.

## 2. E-government

Researchers and practitioners are constantly conducting studies to assess government interaction with its constituents. Caudle et al. (1991) provides the first national survey of public managers' ratings of IS issues. The survey was administered in 1988 to high-

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level public managers in federal, state, and county agencies. A few years later, the United States National Performance Review coined the term 'e-Government' in 1993 (Alasem, 2009). Ten years later, Chadwick and May (2003) provide a compressive definition. They state "the principal features of e-government managerialism can be summarized as follows: a concern with the "efficient" delivery of government information to citizens and other groups of "users"; the use of ICTs to improve flows of information within and around government; a recognition of the importance of "service delivery" to "customers"; the view that speeding up information provision is, by itself, "opening up" government; a general absence of user resource issues, such as ability to receive and interpret information; and "control" and presentational professionalism (often termed "spin") as defining logics." Chadwick and May (2003) explore the genesis of the move towards "e-government" in the United States, Britain, and the European Union. They posit that "the democratic potential of the Internet has been marginalized as a result of the ways in which government use of such technology has been framed since the early 1990s. An executive-driven, "managerial" model of interaction has dominance at the expense of "consultative" and "participatory" possibilities (p. 271)." In the two decades since the term "e-government" was introduced, we have seen explosive growth in e-government research fueled by targeted efforts –special issues, RFPs, etc. - to increase the body of knowledge in this area.

Johnson and Ward (1972) describe "a citizen information system. Such a system (panel in type, neighborhood in orientation, public in character) is an important link in extending the notion of citizen participation in both policy and programs in a rapidly changing society." They raise the question "what kind of citizens' participation vehicles emerge in a society which is diverse, complex, technologically oriented and constantly and rapidly changing?

## 3. The Balanced Scorecard

The balanced scorecard is a "strategic planning and management system that is used extensively in business and industry, government, and nonprofit organizations worldwide to align business activities to the vision and strategy of the organization, improve internal and external communications, and monitor organization performance against strategic goals Anonymous (2014)." It was created by Kaplan and Norton (1992) to highlight the importance of both traditional financial metrics and strategic non-financial indicators. Hence the proposed performance measurement framework offers managers and executives a more 'balanced' view of organizational performance. The balanced scorecard includes four measurement categories: financial, customer, internal process and organizational capacity

According to Gartner Group, more than fifty percent of large firms in the United States firms utilize the balanced scorecard (BSC). An international study by Bain & Co ranked the balanced scorecard fifth on its top ten most widely used management tools around the world (Anonymous 2014). One of the major components of the BSC is the strategy map. "Strategy maps are communication tools used to tell a story of how value is created for the organization. They show a logical, step-by-step connection between strategic objectives (shown as ovals on the map) in the form of a cause-and-effect chain (Anonymous 2014)."

According to Van Grembergen (2005) the balanced scorecard can be applied to information technology. In this study, I use the balanced scorecard to evaluate e-

government research. This framework is well suited to this historical assessment. The Financial element refers to cost and time savings realized by e-government initiatives. The Customer is the constituent (citizen or business) that benefits from an e-government service. The Internal Process measure captures studies that evaluate e-government development, interoperability, etc. Finally, the organizational capacity refers to initiatives and studies that seek to advance e-government knowledge and tools.

## 4. Methodology

To identify the relevant articles published in the "Basket," I started with the articles published in Belanger and Carter (2012)'s review of e-government and the "Basket of Eight." Then, I searched for the term "e-government" in each individual basket journal via the Business Source Complete and ABI/INFORM Complete databases. Belanger and Carter (2012)'s review of the Basket included 30 articles. My search resulted in twenty-nine additional articles, for a total of fifty-nine articles from the "Basket of Eight." To identify the top 10 most highly cited articles, I searched for the term "e-government" via the Web of Science online platform. Future studies could use a more expansive search process (including electronic government, digital government, IT in the public sector, etc.). However, the purpose of this paper isn't to provide a comprehensive overview of the literature. The goal is to start identifying high-level trends in e-government research. The purpose is to provide an overview of e-government research as it relates to a useful strategic management tool: the balanced scorecard.

In the private sector, the balanced scorecard is used to help companies link their mission and vision to financial and non-financial indicators of success. I posit that this scorecard can be used to evaluate diverse facets of e-government research and help the research community identify content areas that need more attention. Some studies could fit into more than one quadrant. I placed each study in the quadrant that is most relevant.

## 5. Selected Findings

The top 10 most highly cited e-government articles are presented below in table 1.

**Table 1.** Balanced Scorecard Strategy for the Top 10 Most Cited E-government Articles

| Rank | Author | Year | J | Balanced Scorecard Strategy |
|---|---|---|---|---|
| 1. | (Layne and Lee) | 2001 | GIQ | Organizational Capacity |
| 2. | (Moon) | 2002 | PAR | Financial |
| 3. | (West) | 2004 | PAR | Organizational Capacity |
| 4. | ( and Belanger) | 2005 | ISJ | Customer |
| 5. | (Ho) | 2002 | PAR | Internal Process |
| 6. | (Medjahed et al.) | 2003 | VLDB | Internal Process |
| 7. | (Heeks and Bailur) | 2007 | GIQ | Organizational Capacity |
| 8. | (Welch et al.) | 2005 | JPART | Customer |
| 9. | (Yildiz) | 2007 | GIQ | Organizational Capacity |
| 10. | (Norris and Moon) | 2005 | PAR | Organizational Capacity |

J=Journal; WOS = Web of Science; GS=Google Scholar
*All citations are as of October 2014

The Balanced Scorecard Mapping of the 10 most highly cited e-government articles includes one Financial article, two Customer articles, 2 Internal Process articles and five Organizational Capacity articles. Half of the top 10 most highly cited e-government articles address organizational capacity. The research community has focused on improving the e-government knowledge and skills and improving the tools and utilization of technological advancements to support ICT in the public sector. This focus on organizational capacity is logical given e-governments relative infancy. The most cited papers were published between from 7 - 13 years ago. Hence, this list is a reflection of the content that was initially very important to the field. The content covered in these articles has been an integral part of e-government growth and development. As organizational capacity increases, e-government research will also evolve and emphasize other areas of the balanced scorecard such as the customer (i.e. citizen) and internal processes. Currently, the financial benefits (e.g. lower costs) are frequently touted by proponents of e-government but seldom appear in research models.

Regarding the fifty-nine e-government articles published in the "Basket of Eight," zero are Financial, twenty eight focus on the Customer, fifteen address Internal Process and sixteen explore Organizational Capacity.

Perhaps this lack of focus on the financial benefits of e-government by the research community is due to 1) our focus on the societal benefits (e.g., increased citizen participation) and 2) the public sector provides not-for-profit services. Currently, only one of the top ten most highly cited e-government papers address the Financial quadrant of the Balanced Scorecard strategy map. Arveson (2014) posits that the fundamental metric for government performance is not financial; its mission effectiveness. He states "at any given time, some departmental missions may be more important than others for the needs of the country. The selection of the departmental mission priorities is an ongoing strategic planning responsibility (np)." However, given the recent financial challenges and budget cuts experienced in many agencies, the financial benefits of e-government are increasingly more important to practitioners.

## 6. Moving Forward

Bain (1937) states "technology creates and destroys groups; it modifies those that survive; these groups are the fundamental societal realities with which government must deal; more accurately, they are the very stuff of the political institution. They must become an integral, functional part of political organization. Men make machines, but they also are made by machines."

Watsell and White (2010) call for more research on public services. Persson and Goldkuhl (2010) posit that e-government is a synthesis between traditional bureaucracy and new public management. In light of the Balanced Scorecard Mappings and the extent literature, I recommend the following avenues for future research in each area.

### *6.1. Financial*

- Explore the value of e-government.
- Disseminate financial benefits and cost-savings to practitioners.

### *6.2. Customer*

- Determine what constitutes e-government success and/or failure. Identify metrics for success for diverse initiatives, levels of government and cultural norms.
- Identify the best ways to interact with a variety of stakeholders in a variety of contexts.
- Promote transparency via open government.
- Enhance the number and capabilities of smart cities.
- Utilize social media to increase citizen participation.
- Minimize the digital divide, especially as it relates to an aging population.

### *6.3. Internal Process*

- Utilize emerging trends in data analytics to identify trends, prevent fraud, and meet citizen needs.
- Ensure sensitive data is secure and explore the role of information systems security in the public sector.
- Develop systems that enable ubiquitous computing.
- Develop interoperable applications.

### *6.4. Organizational Capacity*

- Identify how "e" processes compare to manual processes? Does the "e" matter? What does it change? How does "e" change what matters? How can we avoid reinventing the wheel? We should learn from existing knowledge about manual processes. Don't assume that the earlier method was ALL bad. We should start by acknowledging what we know and then move forward.

- Leverage our knowledge to improve society. Unlike other disciplines (e.g. philosophy), understanding the phenomenon is not enough; we should also improve conditions (knowing vs. leveraging what we know).
- Account for culture and context when developing e-government policy.
- Understand how e-government links to other communities.
- Promote interdisciplinary partnerships. There is a need for more partnerships between IS and Public Administration, Computer Science, Psychology, and Agricultural Economics to promote diverse concepts such as, big data, IS security, green IS, social responsibility and the triple bottom line.

The aforementioned recommendations highlight a few of the possible avenues for future research. This paper is intended to contribute to the discussion on the past, present and future of e-government research. There are a few limitations to this study. Given that most of the highly cited e-government articles are 10+ years old, to identify current gaps in the literature researchers should supplement this commentary with a review of 2014 and 2015 e-government articles. In addition to reviewing journals, future research could incorporate findings from diverse sources including books, proceedings and dissertations. This paper does not provide an e-government literature. Instead, it explores a strategic mapping tool to provide a high-level overview of highly-cited e-government research.

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