

## Article

# From E-Government to Digital Era Governance and Beyond: Lessons from 15 Years of Research into Information and Communications Technology in the Public Sector

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## Abstract

In the study of public administration, e-government has been the focus of significant studies, and this number has been growing in recent years. This introduction to the virtual special issue of JPART on e-government highlights key contributions of selected JPART articles to the knowledge about information and technologies in government. In that sense, it presents a quick overview of e-government studies to all scholars in public administration. We observe that even though some highly important articles on e-government were published in JPART, the attention for this subject in this leading journal in public administration research is limited. We found only 10 articles, and the last article to focus on e-government was published in 2012. For that reason, this virtual special issue does not only present an overview of key findings from the past 15 years but also presents a call for more attention in JPART for systematic empirical analyses of e-government.

## Quick Update of E-Government Studies for all Scholars of Public Administration

The use of technologies in government has become “normal”: civil servants work most of their time with computers, all government processes are supported by computers, public services are carried out over the internet, social media are used to communicate with citizens, and big data provide the basis for new forms of government intervention. Government has become e-government. Government organizations spend large amounts of their budgets on information and communication systems and rely on these systems for their functioning. We cannot separate government processes from the technologies that are being used, and yet technology still has a rather limited position in our theoretical understanding of the public sector.

The emergence of information and communication technology (ICT) in the field of public administration has been understood as a central part of the process of modernizing public administration (Park

and Joo 2010). In a broad sense, e-government can be understood as the selection, implementation, and use of information technologies in the public sector and has been used as a strategy for administrative reform in the last two decades (Gil-Garcia and Pardo 2005). In the last two decades, e-government has generated an increasing volume of research literature (Alcaide-Muñoz et al. 2017). Most of these articles are published in specialized journals such as *Government Information Quarterly* and *Information Polity* but not all the analyses of e-government are of a technical nature. Previous studies (Grönlund 2004; Rodríguez et al. 2016) have highlighted that the e-government is a multi-disciplinary field of knowledge that has also resulted in interesting and relevant analyses in journals about public administration research.

Since 2003 some highly interesting articles have been published in JPART. This virtual special issue brings together 10 articles that provide a good overview of the scope of the field and the kind of knowledge that has

been produced in past years. The aims of this virtual special issue are (1) to provide a historical overview of studies into e-government, (2) to highlight which topics have been receiving attention, (3) to indicate how these findings relate to the broader field of studies in public administration, and (4) to identify an agenda for further research. Our overall ambition is to craft a better connection between the research into e-government and the broad study of public administration. ICTs are ubiquitous in the public sector, and scholars of public administration cannot ignore their impact. This virtual special issue presents a quick update for all scholars of public administration of e-government research: all the things you wanted to know about e-government and were afraid to ask!

### Fifteen years of E-Government Research Articles in JPART

The field of e-government studies has its roots in studies of the use of ICTs in the public sector that started in 1980s (for an overview, see [Snellen and Van de Donk 1998](#)), but the term itself is quite new. In this regard, research in Web of Science showed that the term e-government was first used in research publications in public administration in 2002 in an article by [Moon \(2002\)](#) in *Public Administration Review* (PAR). Since then, the topic has caught momentum, and 225 articles were published in public administration journals such as *PAR*, *JPART*, *Governance*, *American Review of Public Administration*, *Local Government Studies*, and *International Review of the Administrative Sciences*. At the same, we were surprised to note that the last publication on e-government in JPART dates from 2012. This indicates that e-government scholars have not found the way to this journal in the past years.

At the same time, the articles on e-government in JPART cover a highly interesting range of topics in public administration ranging from structural issues to performance and inclusiveness of decision-making processes. These topics highlight that studies of e-government are highly relevant for scholars who would not directly state that they have a strong interest in technology. This virtual special issue covers the following themes in e-government research that are certainly relevant to the broad community of scholars in public administration: citizen–government relations, the organization structure of government agencies, governmental performance, inclusiveness of policy-making processes, dissemination of innovation, and digital era governance (DEG). We will briefly introduce these topics to show how these studies in e-government are of great relevance to the broad community of public administration scholars.

### Theme 1: E-government and citizen–government relations

The domain of citizen–government relations is an interesting because most frequently these relations are now mediated by technology. This means that we need to take the effects of this medium into account when we study accessibility of services and effects of public services on trust ([Vanderwalle 2004](#)). The topic of citizen–government relations was indeed most discussed in JPART, and we present four publications in the virtual special issue. An almost classic article on the changes in citizen–government relations because of the introduction of e-government is the article by [Thomas and Streib \(2003\)](#) on changes in services. They describe the normalization of e-government but also highlight an issue that is of continuous concern to e-government scholars: the digital divide. Although not frequently studied by public administration scholars, the lack of access to Internet and the limited technological skills of citizens are clearly affecting whether and how they use public services and how much value they obtain from them. These issues have not been solved yet, and they have serious implications for citizen–government relations, particularly for the provision of online information and services ([Helbig, Gil-Garcia, and Ferro 2009](#)). In addition, recent research has indicated that one of the main limitations in the use of online channels does not come only from the digital skills of citizens, but are also related to the “nature of the interaction” ([Ebbbers et al. 2016](#)): for simple tasks such as registration, online channels are preferred, and offline channels are preferred for complex tasks such as consultation. Another important article on citizen–government relations that we present in this virtual special issue of JPART is [Welch, Hinnant, and Moon \(2005\)](#) on e-government and trust in government. The authors highlight the importance of not only providing information but also facilitating interactivity—creating the opportunity to post comments and questions to the website and obtain answers to queries—to generate more trust among citizens. The need for more interactivity is also a common theme in e-government studies, but more recent applications seem to follow up on the findings from this research that more interactivity is called for. The topic of trust has been tackled more recently in a third article in this virtual special issue by [Morgeson, VanAmburg, and Mithas \(2011\)](#). This article shows how the research on the topic of trust has evolved, and presents an elaborate theoretical model of these relations and a nuanced understanding of the effects on trust: e-government may help improve citizens’ confidence in the future performance of the agency experienced but does not yet lead to greater satisfaction with an agency interaction or greater generalized trust in the federal government. The key—rather

cynical—insight here seems to be that technology is often a symbol of rational government rather than an instrument that actually improves interactions. Finally, Im et al. (2012) show how levels of citizen trust in government and compliance are affected by citizens' use of the Internet and also assess the impact of citizens' use of e-government on levels of trust in government and compliance. The results of their analysis suggest that the more time individuals spend on the Internet, the lower their degree of trust in government and the lower level of citizen compliance. Nonetheless, such negative effects of the Internet can be moderated through citizens' increased use of e-government. The overall conclusion of these publications is that the relation between technology and trust is not simple and straightforward, and e-government may enhance citizen trust, but this depends on a host of moderating and intermediating variables. E-government does not present a simple road to more trust in government.

#### Theme 2: E-government and the structure of organizations

A theme that was studied extensively before in the studies of ICT in government is the relation with the bureaucratic organization (Bovens and Zouridis 2002). Much research in 1980s and 1990s investigated how the structure of government was changing because of the introduction of new technologies in working processes. These studies indicate that new technologies may be a way to optimize bureaucracy by bringing all civil servants in a "virtual cage." In spite of this long research tradition, the first article on e-government and bureaucracy—Welch and Pandey (2007)—only appears in JPART in 2007. This article tackles a classic topic in the study of government bureaucracy, red tape, and highlights that the use of technology is indeed associated with a reduction in perceived red tape in government organizations. The findings of their study indicate that the effects of e-government on the internal organization may be more substantial than its effects on its external relations. The outcomes highlight that the study of bureaucratic organization cannot ignore these technologies since many—maybe even most—government organizations have been turned into "infocracies" (Zuurmond 1998). Rules and regulations are not enforced through forms and commands but through digital infrastructures, data systems, and algorithms that only allow certain types of behavior: red tape is disappearing, but that does not mean that more autonomy is being created. To put it in popular words, *Computer Says No!*

#### Theme 3: E-government and performance

One of the key promises of e-government is better government performance, but the empirical evidence

for this promise is scarce. For this reason, the article by Lim and Tang (2007) in this special issue fills an important gap in our knowledge about the effects of e-government. This article investigates the performance of environmental decision making. The authors conclude that e-government may help, but its success depends on the quality of technology and of leadership: e-government initiatives contribute to local governance performance, but their impacts vary, depending on website quality and entrepreneurial leadership of public managers. This article highlights that studies of technology in the public sector identify a key role for leadership and one could argue that studies of leadership in the public sector should take a stronger empirical focus on leadership in an information age. Recent work by Van Wart et al. (2017) provides a strong indication of the relevance of this type of study. Analyses of ICT projects in the public sector suggest that in the absence of leadership these projects may not result in better performance but instead in huge expenses of public money without any considerable gains (Anantatmula 2010). Strong leadership and the existence of a previous network are key components in creating an effective project team, a good balance of relationships, as well as results and process orientation in e-government projects (Luna-Reyes and Gil-Garcia 2011). Technological systems present an opportunity to enhance government performance but only when strong leadership ensures the proper usage of technological opportunities.

#### Theme 4: E-government and the inclusiveness of policy-making processes

Citizen participation in decision-making processes is another core topic in the study of public administration (Arnstein 1969; Fung 2006). Participation is not only deemed desirable from a democratic perspective but also from an instrumental perspective since citizens can bring in new knowledge. An important problem for citizen participation is the transaction cost: organizing meetings to provide the opportunity for citizens to engage in decision making can be quite costly. These transaction costs are also a problem for citizens since it means that they need to travel to a government agency or another location on a free evening if they want to participate. In this respect, technology can be important since it can reduce the transaction costs of citizen participation both for government and citizens. Even though the use of ICTs may generate new problems of inclusiveness (i.e., the digital divide), e-government also promises more openness and the inclusion of more actors in policy-making processes by facilitating digital access. This promise is tested by the article by Rethemeyer (2006) that we present in this virtual special issue, and his findings are rather sobering.

He finds that electronic central discussion networks were primarily populated by actors who were already entrenched in positions of structural power within the network. He concludes that the Internet appears to reinforce existing patterns of authority and influence. Lowering the transaction costs of citizen participation through the use of ICT apparently does not result in broader forms of citizen engagement.

#### Theme 5: Dissemination of e-government innovations

The next topic that is presented in this virtual special issue on e-government is the dissemination of innovations. This is not such a classic topic in the study of public administration as the other three topics, but it relates well to the rapidly expanding literature on innovation in the public sector (De Vries, Bekkers, and Tummars 2016). One could even argue that for this topic it is technological developments that have stimulated scholars of public administration to study changes in a different manner, but now this frame has been applied to study a broad set of social innovations with the diffusion of state lotteries as the classic example (Berry and Berry 1990). Theories about the diffusion of innovations have found their way into public administration theory and present an important set of explanations for policy changes. The article by Jun and Weare (2011) in this virtual special issue of JPART fits this line of research since it focuses on the institutional motivations underlying innovation. They find that externally oriented motivations such as the search for legitimacy vis-a-vis peer organizations appear more influential than internal factors such as bureaucratic politics. In sum, the diffusion of e-government innovations seems to be driven mostly by the desire to conform to expectations of the outside world of a high tech government that uses new technologies.

#### Theme 6: Structural transformation of governance in a digital age

The two final articles—Dunleavy et al. (2006) and Fishenden and Thompson (2012)—that we present in this virtual special issue of JPART are quite different from the previous articles. These articles do not present specific empirical investigations but a broad, sweeping analysis of how governance and public services changes in what they call “the digital era.” In that sense, the article written by Dunleavy et al. (2006) can be positioned in the tradition of other articles that have tried to explore changes in policy frames from traditional public administration to public management (Dunleavy and Hood 1994) and, more recently, from new public management to new public governance (Osborne 2010). These analyses, however, focus on changing ideas about governance but pay little, or

even no, attention to the changes in the core technologies of governance: the systems for processing information and communication. Dunleavy et al. (2006: 467) stress the importance of these changes in the use of technologies in government: “We set out the case that a range of connected and information technology-centered changes will be critical for the current and next wave of change, and we focus on themes of reintegration, needs-based holism, and digitization changes. The overall movement incorporating these new shifts is toward “DEG,” which involves reintegrating functions into the governmental sphere, adopting holistic and needs-oriented structures, and progressing digitalization of administrative processes. This perspective challenges the perspective on collaborative or networked governance that emphasize external relations and indicate how functions are being integrated in and between government organizations. Following up on this line of argument but extending it to include the growing role of private platforms, Fishenden and Thompson (2012) argue that the future of public services will be shaped increasingly by the evolution of global, Internet-enabled, digital platforms. On one hand, the use of open standards and architectures will allow the government to become technology- and vendor-agnostic, freeing it from its overdependence on proprietary systems and suppliers. On another hand, over time, open standards, and increased market choice will drive both innovation and progressive convergence on cheaper, standard “utility” public services. These two features will be combined to create a powerful dynamic situation, driving disintegration of traditional “black boxed” technologies and services, and their aggregation around citizens’ needs in the form of services. They conclude that it is of the utmost importance to build understanding and literacy within government about the links between standard platforms and innovation currently being demonstrated in other commercial environments. These two articles challenge some of the other research in the sense that they stress that sometimes we as scholars of public administration miss out on the larger transformations since we study only specific issues.

#### Overall Patterns and the way Forward

The overall findings of these articles are optimistic, but in a nuanced way, the findings highlight that e-government can contribute to trust of citizens in government, to the reduction of red tape, and to better government performance if the technology is right and if moderating factors such as managerial leadership and openness for interaction are strong. At the same time, the articles also debunk the idea that e-government will result in radical improvements. In addition, the effects on democratic engagement are rather sobering since

no further inclusion of actors is found. In most of the articles, the effects are limited and contextual. The only articles that describe a radical change are the reflective articles on DEG by Dunleavy et al. (2006) and by Fishenden and Thompson (2012).

These 10 articles highlight how e-government studies provide insights in the changing realities of government in an information age where websites—and now social media—have become dominant channels of communication between public organizations and the world outside. At the same time, the studies also work as an X-ray for studying public administration (Taylor 1998). The articles focus on classic topics such as social equity, trust, bureaucratic coordination, red tape, and quality of decision-making but provide interesting new insights by studying these topics from the perspective of e-government. The implementation of ICT in government organizations, for example, highlights that strong desire to control civil servants and to ensure that their actions are in line with government policies. And the use of ICT for citizen participation shows that many government officials seem to think that transaction costs are the key barrier to participation: each citizen wants to participate when the costs are low enough. The idea that citizens may not be motivated to participate is often not acknowledged in approaches to e-participation, and this shows underlying assumptions.

An important contribution of the articles published in JPART on e-government to the broader field of e-government studies is their quantitative nature. The domain of e-government studies tends to be dominated by case studies, and there are many examples of analyses of specific IT-projects in government. These case studies certainly have their merit but also their limitations in terms of the generalizability of the studies. The emphasis on solid quantitative work in JPART can help to bring the field of e-government studies to a higher level. A shortcoming of the studies published in JPART, however, is that none of the studies presented international comparative analyses, but strength is their rigorous use of statistical methods to develop robust knowledge about e-government and its impacts.

A final observation is that the number of articles published on e-government in JPART is still limited. E-government scholars tend to publish their articles in specialized journals such as *Government Information Quarterly* and *Information Polity*. There is a need for additional studies that embed the field of e-government studies better in research in public administration. The impact of technology on the public sector is substantial, but it is still neglected in many current studies of changes in public administration (Meijer 2007). For this reason, we hope to see more publications on various aspects of e-government in the coming years.

## Selected Articles From JPART

Dunleavy, Patrick, Helen Margetts, Simon Bastow, and Jane Tinkler. 2006. New public management is dead—Long live digital-era governance. *Journal of Public Administration Research and Theory* 16: 467–94. doi: 10.1093/jopart/mui057.

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