18. ICT, e-government and e-governance: bits & bytes for public administration

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Abstract

This chapter identifies how electronic public service delivery has diffused in various public sector organizations in Europe. Three, in practice intertwined, sources of influence are identified: *opportunity* (the seemingly inevitable and autonomous impact of technologies), *inscription of normative structures* (the materialization of abstract ideas and rhetoric in specific types of information and communication technologies) and *enthusiasms* (the sometimes overstated beliefs, held by various stakeholders, that technology is the answer to all kinds of questions). The way these sources of influences work out in practice is demonstrated by discussing the diffusion of a specific type of electronic government, that is personalized electronic service delivery, in ten Dutch municipalities. The chapter is ended with reflections and directions for future research.

18.1 Introduction: the emergence of the 'e-gov'-phenomenon

Information technology and public administration are an odd couple. Students of information technology have long neglected arduous issues of public sector reform and public policy making. Likewise, public administration scholars have rarely paid attention to information technology beyond treating it pragmatically at the periphery of governments' core activities of policy making and policy implementation. Orlikowski and Barley (2001) have noted that the

flow of influence between social science and the academic discipline of information systems is notoriously lopsided, with social science having more influence on the field of information systems than the reverse. In the relation between the disciplines of public administration on the one hand and information systems on the other side, things may be even worse. If one browses through the references of any random article published in, let's say *the Journal of Public Administration Research and Theory, Governance,* or *Public Administration Review,* it is very unlikely that one comes across any article published in quite reputable information systems journals like *Management Information Systems Quarterly* or *Information Systems Journal.* The reverse situation, by the way, is unlikely to be different.

The situation of interdisciplinary negligence has resulted in somewhat overstated and polarized academic writings in both disciplines. A case in point here is one of the rare articles on topics at the crossroads of public administration and information technology in *Public Administration Review,* which is provocatively titled "Pessimism, Computer Failure, and Information Systems Development in the Public Sector" (Goldfinch, 2007). Goldfinch ends his surprisingly informal, yet anecdotal article by "above all, be pessimistic about information technology" (2007, p. 926). Seen from 'the other side' it is not uncommon for information systems academics to enthusiastically argue for administrative reform and public sector transformation made possible by technological opportunity, for the moment bypassing painstaking issues of political policy decisions and political or public accountability.

The situation of disciplinary negligence has changed somewhat since the advent of the admittedly voguish terms electronic government ("e-government") and electronic governance ("e-governance"). As for this moment we will not confine ourselves with definitional haggling

but rather refer to the phenomenon of 'e-gov' as the use of information technology to redesign information exchanges in and surrounding public sector organizations (see, for instance Homburg, 2008 for a more elaborate discussion). This definition emphasizes that the use of ICTs in government has moved from being a peripheral concern, to a topic that concerns the core activities of government, policy making and policy implementation, and that e-government is intrinsically linked to transformation and reform of governments.

In this chapter, we will address the question what the antecedents and current manifestations are of the e-gov phenomenon. In the remainder of this chapter, we review the literature and investigate the interaction between information and communication technology and its administrative and organizational context with respect electronic service delivery, i.e., the on-line delivery of public service (permits, payments) through electronic communication channels like websites, social media and apps on mobile devices. We end this chapter with general conclusions and outlooks with respect to how opportunity, ideas and enthusiasms are linked to specific manifestations of e-gov.

18.2 The shaping of 'e': a social shaping of technology perspective

Before exploring the manifestations of various forms and types of e-gov, we first explore the origins and causes of the e-gov phenomenon. Although this seems to be a trivial question, the answer might be more difficult than is apparent at first sight; it even gives rise to a philosophical debate which is customarily referred to as the 'technology debate'.

A first view on the origins of e-gov is that the emergence of e-gov has to do everything with technology itself. Many authors, when invited to reflect on information- and

communication technologies (ICTs) begin with mantra-like sketches of ubiquitous, revolutionary effects of microelectronics-based, digital 'smart machines' (Zuboff, 1988). For example, Burstein and Klein enthusiastically claim that "[t]here is no disagreement on the essentially revolutionary nature of the forces unleashed by the new technology" (1995: 254). Similarly, Tapscott has heralded the information revolution in glowing terms like "Today, we are witnessing the early turbulent days of a revolution as significant as any other in human history. A new medium of human communication is emerging, one that may prove to surpass all previous revolutions – the printing press, the telephone, the television, the computer – in its impact on our economic and social life" (Tapscott, 1995: xiii). Academic commentators have also speculated upon the advantages of ICT in terms of empowering individuals (Katz, Rice, & Aspden, 2001), increased levels of efficiency (Leavitt & Whisler, 1958; Scott-Morton, 1991) and the emergence of boundaryless, virtual organizations (Groth, 1999). Even more than in previous eras, ICTs, in the form of all kinds of smart machines, would appear to have *infused* our daily lives, organizations and societal structures (Bekkers & Homburg, 2005; Lips, Bekkers, & Zuurmond, 2004).

Abovementioned claims are consistent with a line of reasoning known as 'technological determinism' (MacKenzie & Wajcman, 1985). It views development of technology as a process that occurs independently, inevitably and autonomously, separate from politics, economics and power. Technological progress is, in this view, inevitable, and is only limited by scarcity of material resources. Note that although many technological determinists stress progress, more efficient and effective operations, increased democratic value in the way governments function, and in general, more open, transparent societies, such 'utopian' visions are not

necessarily a part of technological determinism. Beside these techno-optimists, there are also techno-pessimists who talk about the end of privacy and individual freedoms, increased potentials for surveillance and control by governments (and large corporations), and decreases in well-being (or inequalities in distribution of wealth among various groups in societies, the emergence of a digital divide that widens existing gaps in society).

Bekkers and Homburg have demonstrated that in national e-government policy documents of Denmark, the United Kingdom, the Netherlands, Australia and Canada, ICTs are depicted and talked about as an exogenous driving force, almost inevitably leading to a new and better, less fragmented and more responsive government (Bekkers & Homburg, 2007). The above rhetorical sublime of technological progress (Mosco, 2004) has led to equivalent speculations about the nature and challenges of 'e-gov'. For instance, the Organization for Economic Cooperation and Development (OECD) quite energetically promotes the use of ICTs in order to enable governments to reorganize their internal structures, focus more on citizens' demands and in general, increase their performance (OECD, 2003). In various European countries, national policies have been drafted in which a 'wired' government takes shape. The picture that emerges from these policies is that smart technology is transforming, or is about to transform, the fabric of our society, including the machinery of public administration and governance.

A second view on the origins of e-gov sees the way technology is designed, implemented and used more or less as the mirror image of historical forces, normative systems and managerial ideas. In this view, e-gov is intrinsically linked with values, norms, rules, beliefs and taken for granted assumptions, that are at least part of their own making, and that result in

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malleable technological structures, whose form can vary from context to context, and so can their consequences. Perhaps one of the most visible examples of technologies that are shaped and crafted according to overarching *normative structures* is the rhetoric that the New Public Management (NPM), which originated in the 1980s, had long been a paper tiger until the technology came available to actually transform governments structures and operations. In *The Economist* it was stated in the year 2000 that the 'once fashionable idea of reinventing government', is now finally being made possible by the Internet (Symonds, 2000). Although it may be tempting to down play the role of technology in crafting relatively abstract political ideas on how governments should function, it must be noted that nowadays, web-based interaction between public sector organizations (increasingly using mobiles) is an important platform of interaction between citizens and public sector organizations in the context of public service delivery. As such, the notion of customer orientation, one of the corner stones of the New Public Management ideology, has certainly materialized in the platforms (think of web portals, but also the use of social media) that are being used to make public services work. As such, the notion of an *interface* has extended from a purely technical notion to a more day-to-day notion of how web sites, social media and mobile devices more generally can be used to shape the way citizens interact with public administration, and vice-versa. But it is not only in the front office that we see how underlying managerial and political ideas have been implemented and inscribed into specific technologies. Also in the back office of public sector networks, we see how specific information infrastructures in social security, fiscal policy and the combat of terrorism, for instance, can be seen as specific technological artefacts in which the once abstract notion of a

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joined- up government (JUG; Ling, 2002; Pollitt, 2003) has materialized. Perri 6 (2004), for instance, has demonstrated how in French centralism, as well as in German central government administrative style, as well as in Dutch network approaches, 'e-gov' has served as the occasion to actually achieve a more coordinated administrative apparatus.

In short, e-gov can not only be seen as a materialization of technological progress, opportunity and sublime, but also as a series of artefacts that are crafted and shaped in accordance with underlying normative structures and managerial ideas.

A third and for the moment final view on the origins of e-gov is that information and communication technologies result from forces of demand and supply on the market for ICT commodities (goods and services). Goldfinch (2007) has argued that the e-gov phenomenon can at least partly be attributed to what he refers to as various '*enthusiasms*' for large and complex investments in information and communication technologies by various stakeholder groups. A first enthusiasm identified by Goldfinch is idolization, a belief held by public officials and professionals that indicates that technologies can and should transform the business of government. Goldfinch argues that "public servants can get carried away with the excitement of it all, providing reports and projections for the benefits of new developments that verge on the fantastic" (2007, p. 921). A second enthusiasm is the myth of the technological fix (coined technophilia). Goldfinch states that many of those entering the ICT industry are, in common parlance, geeks, excited by technological progress, by means of which technological applications can become an end in itself. A third enthusiasm is what Goldfinch identified as 'lomanism' (drawing on Arthur Miller's prototypical salesman Willie Loman in *Death of a Salesman*), indicating the genuine or feigned enthusiasm of ICT sales representatives for ICT

company's products and the company's ability to develop new products and technologies in the futures; Goldfinch notes that "IT salespeople can be faced by an unusually responsive audience" (2007, p. 921). A fourth enthusiasm Goldfinch identifies is *managerial faddism*, a tendency of consultants and managers to enthusiastically embrace the newest managerial methodologies and fads, including the belief that most administrative problems can be fixed or prevented by improving management structures along the lines of new ideas, of which technologies are often a key element.

Goldfinch concludes that the abovementioned *enthusiasms* mutually reinforce one another in a vicious cycle, accounting for the proliferation of information and communication technologies in and surrounding public sector organizations. Being critical on the edge of cynical, Goldfinch lists various computer catastrophes to demonstrate the vicious cycle of enthusiasms, including the Wessex Health Authority's Regional Information Systems Plan and the air traffic support system in Swanson (UK).

In this chapter, we conceptualize e-gov as a phenomenon by means of which information relations in and surrounding public sector organizations are transformed and/or redesigned, following:

- technological *opportunity* and technological *developments* (thus taking into account technological determinism); but also

- technologies being *inscribed* by policy *ideas*, *values*, *rules* and *assumptions*; and

- how, at a more operational level, *enthusiasms* held by specific stakeholders fuel ICT investments.

We assume that it is the interplay between opportunity, ideas materializing into technologies, and enthusiasms held by people that has contributed to the phenomenon we call e-gov, and provisionally define such a view on the adoption and diffusion of technology as a 'social shaping of technology'-perspective (Williams & Edge, 1996; Homburg, 2008). Such a view acknowledges that 'e-gov' is both influenced by underlying normative or institutional structures (such as the New Public Management) as well as it recognizes that technology itself (sometimes through enthusiasms held by specific stakeholders) has the potential to affect, modernize and transform existing norms, values and taken-for-granted assumptions, following a technological determinist line of reasoning. E-gov, thus, is portrayed in a social shaping of technology-perspective, as both a technological as well as a social artefact.

A possible drawback of such a view is that on the one hand, the notion of information and communication technology remains rather abstract. It is not immediately clear what kind of technology is being reasoned about, what properties of technologies are important and how the technology is applied and implemented in specific contexts. Rhetorically, keeping technology abstract in the claim enables the focus to remain primarily upon desirable effects. In order to reason about the consequences of ICTs, it is necessary to open the ICT 'black box' implicit to many of the claims that try to envisage the future of e-gov. On the other hand, the perspective seems to assume ultimate technological 'malleability' and may underestimate the potential of technologies to challenge path dependent organizational and administrative structures.

In subsequent sections, we therefore apply the social shaping of technology-perspective on a more specific manifestation of e-gov: electronic public service delivery and investigate

whether and if so how current e-gov manifestations are linked with normative structures, ideas and assumptions.

18.3 E-gov as vehicle for services: diffusion of electronic public service delivery

18.3.1 Introduction: determinants and phases of e-gov

Central to the reform ideas at the corner stones of New Public Management and the emergence of communication technologies is the focus on client (or citizen) orientation. Not surprisingly, many definitions of e-government emphasize electronic service delivery as a main objective for e-government (for a review, see Yildiz, 2007), thus portraying e-government as "e-commerce for governments" (Wimmer, Traunmüller, & Lenk, 2001). In various adoption and diffusion studies, various determinants of the adoption of electronic service delivery have been identified (see table 18.1).

Table 18.1   Explanatory variables in e-government diffusion

Determinants of e-government adoption	Author(s)
City size	Moon (2002); Reddick (2004); Moon and Norris (2005); Norris and Moon (2005); Homburg, Dijkshoorn & Thaens (2013)
Citizen demand (perceived usefulness)	Holden et al. (2003); Reddick (2004); Gilbert et al. (2004); Horst et al. (2007)
Organizational structure	Moon (2002); Reddick (2004); Holden et al. (2003);

Geographic location	Holden et al. (2003); Reddick (2004); Norris and Moon (2005)
Managerial, financial and technological capacity	Reddick (2004, 2009); Moon and Norris (2005)

However, the adoption of e-gov is not necessary seen as a binary decision (an organization either or not offers public services through electronic channels); another view on e-gov as public service delivery is to look at what is often referred to as the maturity of the delivery channel (Coursey & Norris, 2008). Table 18.2 presents various types of interactions that may be enabled by technology, organized in various phases.

Table 18.2 Types of electronically mediated front office interactions between government and society

Phase / form	Author(s)
1. Emerging presence (public sector organizations display tasks, activities)	Reddick, 2004; Ronaghan, 2001
2. Enhanced presence (public sector organizations display available services)	Layne & Lee, 2001; Ronaghan, 2001; Hiller & Bélanger, 2001; Reddick, 2004
3. Interaction (allowing two-way communication between	Baum & DiMaio, 2000; Ronaghan, 2001; Hiller & Bélanger, 2001; Reddick, 2004

governments and citizens or businesses)	
4. Transactions (public sector organizations allowing completion of requests on-line, seemingly without human involvement from the side of government)	Baum & DiMaio, 2000; Layne & Lee, 2001; Ronaghan, 2001; Hiller & Bélanger, 2001; Reddick, 2004
5. Integrated service delivery (allowing handling of requests involving various organizations)	Baum & DiMaio, 2000; Layne & Lee, 2001; Ronaghan, 2001; Hiller & Bélanger, 2001; Reddick, 2004
6. Personalized service delivery (with which registered characteristics of businesses and citizens are used to tailor services to individual needs and requirements)	Pieterson, Ebbers, & Van Dijk, 2007; Homburg, Dijkshoorn & Thaens, 2013

Note that with more advanced levels of maturity ('higher' phases), the 'e-gov' phenomenon changes from a front office issues (what is being displayed on the website) to a combined front office – back office issue, involving multiple departments and even networks of organizations. Alfred Tat-Kei Ho (2002) concluded that most US cities had, over time, transformed their Web

presence from an administrative-oriented portal design (reflecting bureaucratic logic of a variety of functionally differentiated departments, phase 1) to user-oriented portals (phases 2 & up). Furthermore, responses by city Web masters indicated that many city officials had abandoned a departmental mentality in Web management (phases 5 and up). Donald Norris, on the other hand, noticed that most municipal Web sites offer information services (up to phase 3), but few transaction services (phase 4 and beyond). Moreover, Norris concluded on the basis of survey data of American local authorities that services that horizontally or vertically span various authorities, are notably lacking (Norris, 2005). Although the stage model approach originates and figures quite prominently in the American e-government literature, Andersen and Henriksen (2006) have demonstrated that is is quite recognizable in the European context as well.

Obviously, in the Western world and possibly beyond, e-gov is being used to break down departmental barriers, but collapsing interorganizational boundaries still results in many problems. Sharing information across organizational boundaries, however, is far from an operational, neutral issue, neither in the private sector (Williams & Edge, 1996;) nor in the public sector (Homburg, 2000). Both the information systems literature as well as the public management literature report formidable difficulties in actually achieving interorganizational information integration and joined-up government (Millard, Iversen, Kubicek, Westholm, & Cimander, 2004; see also Van Os, 2011; Van Os, Homburg & Bekkers, 2013). Millard et al conclude that "One of the clearest conclusions emerging from the present study is that state structures, and institutional, legal, regulatory and cultural factors, can be extremely important in determining the nature, cost and success of eGovernment. (…) Different countries across

Europe need to develop their own paths as each has unique identities, cultures, legal systems and institutional structures" (Millard et al., 2004, p. 61).

18.3.2 Five factors influencing adoption at a meso level

The way technological opportunity, ideas and enthusiasms affect decisions to either or not adopt e-gov can be illustrated by a study on the adoption of a relatively mature form of e-gov by Dutch municipalities (Homburg, Dijkshoorn & Thaens, 2013). In this study, the authors traced back the decision-making regarding public service delivery in five municipalities that offered personalized electronic service delivery with five municipalities that did not offer personalized e-gov, controlling for size of municipality. Homburg, Dijkshoorn and Thaens identified five factors that in combination explain the adoption of personalized e-gov: perceived pressure, organizational search activities, activation triggers, framing, social activation. These factors reflect technological opportunity as well as ideas and enthusiasms by organizational stakeholders. These factors are discussed below.

1. Pressure on adoption decisions

Respondents in municipal organizations reported perceived expectations of citizens as the most important source of influence on adoption decisions regarding personalized e-government services. As one alderman phrased it:

> *"… a clamor for service provision, less bureaucracy, transparency: that is external pressure, as I perceive it. (…) Just because society does not tolerate other kinds of organizational behavior …" (Alderman)*

Another kind of influence that was mentioned quite frequently was the existence of benchmarks with which the presence of municipalities is exposed. Multiple respondents indicated that low performance resulted in questions from for instance city councils members, especially when neighboring or otherwise comparable municipalities scored considerably higher ('fraternal rivalry'). As a manager of service provision explained:

"To score is felt to be important among municipalities. How often is your municipality being mentioned in professional journals, are you in the Top 3…. that is considered to be very important" (Manager of service provision)

The fact that municipalities keep a sharp eye on benchmarks and rankings sometimes results in somewhat perverse incentives to adopt personalized services, like one respondent reported.

"Our decision to implement personalized service delivery was due to our low ranking … Our alderman wanted to improve our ranking, and we found out that we could improve our ranking quite easily by implementing a Personalized Internet Page … and so we did" (Project manager).

Together, these sources indicate that (institutional) pressure affects adoption of e-gov in line with existing literatures on isomorphic pressure (DiMaggio & Powell, 1983; Ashworth, Boyne & Delbridge, 2009; Lai, Wong & Cheng, 2006) on adoption of innovations.

2. Organizational search

One consequence of institutional pressure as reported by respondents is that municipalities, once confronted with pressure, start scanning their environments for relevant knowledge and experiences (see also Levinthal & March, 1982; Tidd, Bessant & Pavitt, 2009). As one respondent indicated:

"One member of our support staff made an inventory of associations staff members are participating in, and she managed to compile a list of three or four pages…" (Manager of service provision)

Respondents reported that pressure did not directly result in new connections with other organizations, but rather that organizational pressure resulted in more intensive contact with forums and associations (for instance, the Public Service Provision Managers' Association, the Association of Dutch Municipalities, but also outreach programs like GovUnited) one was already participating in. Forums in general relate to outreach organizations or – programs; companies refer in most cases to banks and publishing houses, but also to consultancy firms. Alliances refer to pre-existing forms of cooperation between municipalities.

3. Activation: moderation between pressure and organizational search

Although respondents indicated that organizational search activities follow up on institutional pressure, from the case study so-called activation triggers (Kim 1998; Zahra & George, 2002) can be identified that result in episodic changes (Tyre & Orlikowksi, 1994). Activation triggers in municipal e-government development include disasters affecting municipal organizations (in the Dutch situation, the explosion of a fireworks factory in the city of Enschede triggered a political crisis and in the subsequent reorganization, personalized e-government services were

seen as a opportunity to help shape the new organization), but also merger of municipalities and the appointment of new senior managers or politicians. These occasions do not by themselves induce organizational change but rather amplify the pre-existing impact of pressure on organizational search activities.

4. Framing

According to Sahlin and Wedlin (2008; see also Silva & Hirscheim, 2007), knowledge and ideas cannot simply be transfused from one organization to the other; rather, ideas, concepts and knowledge is repacked and re-embedded (Isabella, 1990; MacDonald, 1995; Sahlin & Wedlin, 2008). In the field study, it was observed that ideas and chunks of knowledge were completely differently framed by various adopters. Personalization was sometimes framed as a precursor of an organization being a service champion (enabling actually citizen-centric service delivery), a means for achieving efficiency ("If the processes are well-organized, I am convinced that in the long run we can do without large number of members of staff" (Alderman)), image ("We think that we, being part of a high technology region, are obliged to modernize our service delivery", Head of Customer Relations Department), and control ("Now the focus is on the front office … but in the near future we intend to reengineer processes in the back office as well, as to simplify and speed up processes…" (Project Manager Service Delivery).

5. Social Integration

Translation, transfusion and repackaging of knowledge and ideas does not take place in a vacuum, but is a social integration process in which specific actors play a role (Czarniawska &

Sevon, 2005; see also Powlowski & Robey, 2004). The actual transformation and transfusion of knowledge and ideas regarding personalization takes place through exchange of staff among municipalities, but also by the activities of (internal) innovation champions that actively 'pitch' innovations, as well as by activities of external knowledge brokers.

> *"John Doe, of Consulting Inc , that is a remarkable character. He has access to senior management levels, where normally no one understands the potential of modern ICTs. But he is able to come up with brilliant applications, stories and examples…" (Program manager)*

18.4 Conclusions

In this chapter, we have analyzed the antecedents and manifestations of a contemporary phenomenon we have admittedly voguishly called 'e-gov': the redesign of information relations in and between public sector organizations using contemporary information and communication technologies, such as web-based systems, social media, and mobile infrastructures. We have adopted and described a so-called social shaping of technology-perspective, indicating that the adoption and diffusion of e-gov is to be explained in terms of:

- (technological) *opportunity*, accounting for the powerful influence of new technologies that affect and change the institutions we live by;
- ways in which existing ideas and normative structures are *inscribed* in specific technologies, accounting for how institutions affect technologies, and how in various contexts, various technologies can be observed; and

- *enthusiasms*, accounting for the 'agency' of human activities, argumentation, persuasive pressures and sometimes politicking in the adoption and diffusion of technologies.

We have identified the various components of this explanation in a study of diffusion and adoption of a specific type of e-gov, personalized electronic service delivery, among municipalities in the Netherlands, and we have concluded that opportunity in the sense of (isomorphic) pressure, ideas (organizational search), and enthusiasms (activation and framing) are indeed important explanatory variables for the diffusion and adoption of e-gov.

These findings raise a number of questions for further research. First, direction and source of institutional pressure (horizontal, vertical or mixed) may depend on different in centralized, decentralized or decentralized unity state regimes, in Europe and beyond. Comparative research is needed to reveal differences and similarities in this respect. Second, the resource-based view on the firm literature (Winter, 1987; Zahra & George, 2002) has indicated that the so-called appropriability regime (the extent to which organizations are risk averse, or willing to accept ambiguities inherent in framing) moderates the relation between framing and eventual adoption of innovations.

Third, in this chapter we have focused on electronic service delivery as an empirical e-gov phenomenon. At this moment, in current policy there is a lot of talk about open data and big data. These manifestations of e-gov may have their own opportunities, ideas and enthusiasms, which need to be addressed in further research. Once empirical manifestations of open data and big data become readily available, further research is needed to address the

antecedents and manifestations of existing ways in which open data and big data are actually applied in public administration.

References

P. 6 (2004) 'Joined-Up Government in the Western World in Comparative Perspective: A Preliminary Literature Review and Exploration', *Journal of Public Administration Research and Theory,* 14, 103-138.

K.V. Andersen, H.Z. Henriksen (2006) 'E-Government Maturity Models: Extension of the Layne and Lee Model', *Government Information Quarterly,* 23, 236-248.

R. Ashworth, G. Boyne and R. Delbridge (2009) 'Escape from the iron cage? organizational change and isomorphic pressures in the public sector', *Journal of Public Administration Research and Theory*, 19, 165-187. doi:10.1093/jopart/mum038.

J. Barney (1991) 'Firm Resources and Sustained Competitive Advantage', *Journal of Management*, 17, 99-120

C.H. Baum and A. DiMaio (2000) Gartner's four phases of E-government model. (No. 317292). http://www.gartner.com//id=317292, date accessed 9 September 2016.

V.J.J.M. Bekkers and V.M.F Homburg (eds.) (2005) The information ecology of E-government: E-government as institutional and technological innovation in public administration, 2nd edn (Amsterdam: IOS Press).

J.C. Bertot, P.T. Jaeger, J. Grimes (2010) 'Using ICTs to create a culture of transparency: E-government and social media as openness and anti-corruption tools for societies', *Government Information Quarterly*, 27, 264-271.

D. Burstein and D. Klein (1995) *Road Warriors: Dreams and Nightmares along the Information Superhighway* (New York: Dutton).

D. Coursey and D.F. Norris (2008) 'Models of E-government: Are they correct? an empirical assesment', Public Administration Review, 68, 523-536.

B. Czarniawska and B. Sevon (2005) *Global ideas: How ideas, objects and practices travel in the global economy* (Copenhagen: Copenhagen Business School Press).

P.J. DiMaggio and W.W. Powell (1983) 'The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields', *American Sociological Review,* 48, 147-160.

D. Gilbert, P. Balestrini and D. Littleboy (2004) 'Barriers and benefits in the adoption of e-government', *International Journal of Public Sector Management*, 17, 286-301.

S. Goldfinch (2007) 'Pessimism, Computer Failure, and Information Systems Development in the Public Sector', *Public Administration Review*, 67, 917–929. doi:10.1111/j.1540-6210.2007.00778.x.

L. Groth (1999) 'Future Organizational Design', in L. Groth (Ed.), *Future Organizational Design* (Chicester: John Wiley & Sons), 325-344.

V. Gurbaxani and S. Wang (1991) 'The Impact of Information Systems on Organizations and Markets', *Communications of the ACM*, 34, 59-73.

A.T. Ho (2002) 'Reinventing local governments and the E-government initiative', *Public Administration Review*, 62, 434-444.

S.H. Holden, D.F. Norris and P.D. Fletcher (2003) 'Electronic government at the local level', *Public Performance & Management Review*, 26, 325-344.

V.M.F. Homburg (2000) 'Politics and property rights in information exchange', *Knowledge, Policy and Technology*, 13, 13–22.

V.M.F. Homburg (2008) *Information systems and public administration: Understanding e-government* (London: Routledge).

V.M.F. Homburg and V.J.J.M. Bekkers (2005) 'E-government and NPM: A perfect marriage?' in V. J.J.M. Bekkers and V.M.F. Homburg (eds.), *The information ecology of e-government: E-government as institutional and technological innovation in public administration* (Amsterdam, Berlin, Oxford, Tokyo, Washington, DC: IOS Press), 155-170.

V.M.F. Homburg, A.J.D. Dijkshoorn and M. Thaens (2013) 'Diffusion of personalised services among Dutch municipalities: evolving channels of persuasion', *Local Government Studies*. DOI: 10.1080/03003930.2013.79589.

V.M.F. Homburg and V.J.J.M. Bekkers (2012) 'E-Government and NPM: A Perfect Marriage?' in P.L. Hupe and M. Hill (eds.), *Public Policy (Library of the Public Sector)* (Los Angeles/London: SAGE), 275-294.

V.M.F. Homburg and A.D. Dijkshoorn (2011) 'Diffusion of Personalized E-Government Services among Dutch Municipalities: An Empirical Investigation and Explanation', *International Journal of E-Government Research,* 7, 21-37.

M. Horst, M. Kuttschreuter and J.M. Gutteling (2007) 'Perceived usefulness, personal experiences, risk perception and trust as determinants of adoption of e-government services in the Netherlands', *Computers in Human Behavior*, 23, 1838-1852.

Q. Hu, C. Saunders and M. Gebelt (1997) 'Research report: Diffusion of information systems outsourcing: A re-evaluation of influence sources', *Information Systems Research*, 8, 288.

L. Isabella (1990) 'Evolving interpretations as a change unfolds - how managers construe key organizational events', *Academy of Management Journal,* 33, 7-41. doi:10.2307/256350.

L. Kim (1998) 'Crisis construction and organizational learning: Capability building in catching-up at hyundai motor', *Organization Science*, 9, 506-521.

K. Lai, C.W.Y. Wong and T.C.E. Cheng (2006) 'Institutional isomorphism and the adoption of information technology for supply chain management', *Computers in Industry,* 57, 93-98. doi:10.1016/j.compind.2005.05.002.

K. Layne and J. Lee (2001) 'Developing fully functional E-government: A four stage model', *Government Information Quarterly*, 18, 122-136.

H.J. Leavitt and T.L. Whisler (1958) 'Management in the 1980s', *Harvard Business Review,* 36, 41-48.

D.A. Levinthal and J.G.A. March (1981) 'A Model of Adaptive Organizational Search', *Journal of Economic Behavior and Organization*, 2, 307-333.

T. Ling (2002) 'Delivering joined-up government in the UK: Dimensions, issues and problems', *Public Administration*, 80, 615–642. doi:10.1111/1467-9299.00321.

S. MacDonald (1995) 'Learning to change - an information perspective on learning in the organization', *Organization Science*, 6, 557-568. doi:10.1287/orsc.6.5.557.

D. MacKenzie and J. Wajcman (eds.) (1985) *The Social Shaping of Technology: How the Refrigerator Got ITs Hum* (Milton Keynes: Open University Press).

J. Miljard, J.S. Iversen, H. Kubicek, H. Westholm and R. Cimander (2004) *Reorganisation of government back-offices for better electronic public services--European good practices (back-office reorganisation)* (Brussels: EU DG Information Society).

M.J. Moon (2002) 'The evolution of E-government among municipalities: Rhetoric or reality?', *Public Administration Review*, 62*,* 424-433.

M.J. Moon (2002) 'The evolution of E-government among municipalities: Rhetoric or reality?', *Public Administration Review*, 62, 424-433.

M.J. Moon and S. Bretschneider (1997) 'Can state government actions affect innovation and its diffusion?: An extended communication model and empirical test', *Technological Forecasting and Social Change,* 54, 57-77.

M.J. Moon and P. deLeon (2001) 'Municipal reinvention: Managerial values and diffusion among municipalities', *Journal of Public Administration Research and Theory*, 11, 327-352.

M.J. Moon and D.F. Norris (2005) 'Does managerial orientation matter? The adoption of reinventing government and e-government at the municipal level', *Information Systems Journal*, 15, 43-60.

M.J. Moon and D.F. Norris (2005) 'Does managerial orientation matter? The adoption of reinventing government and e-government at the municipal level', *Information Systems Journal*, 15, 43-60.

V. Mosco (2004) *The Digital Sublime: Myth, Power and Cyberspace* (Cambridge: The MIT Press).

National Audit Office (2002) *Better Public Services through e-government* (London: National Audit Office).

D.F. Norris and M.J. Moon (2005) 'Advancing E-government at the grassroots: Tortoise or hare?', *Public Administration Review*, 65, 64-75.

D.F. Norris and M.J. Moon (2005) 'Advancing E-government at the grassroots: Tortoise or hare?', *Public Administration Review*, 65, 64-75.

OECD (2003) *The E-Government Imperative* (Paris: OECD).

W.J. Orlikowkski and S.R. Barley (2001) 'Technology and Institutions: What Can Research on Information Technology and Research on Organizations Learn From Each Other?' *MIS Quarterly*, 25, 145-165.

G.S van Os (2011) 'The challenge of coordination: Coordinating integrated electronic service delivery in Denmark and the Netherlands', *Information Polity*, 16, 51-61.

G.S. van Os, V.M.F. Homburg and V.J.J.M Bekkers (2013) 'Contingencies and Convergence in European Social Security', in I.M. Miranda and M.M. Cruz-Cuhna (eds.), *Handbook of Research on ICTs for Healthcare and Social Services: Development and Applications* (IGI Global), 268-287.

W. Pieterson, W. Ebbers and J. van Dijk (2007) 'Personalisation in the public sector: An inventory of organizational and user obstacles towards personalisation of electronic services in the public sector', *Government Information Quarterly,* 24*,* 148-164.

C.P. Pollitt (2003) 'Joined-up government: A survey', *Political Studies Review*, 1, 34–49. doi:10.1111/1478-9299.00004.

C.P. Pollitt, S. van Thiel, V.M.F. Homburg (2007) *The New Public Management in Europe: Adaptation and Alternatives* (Basingstoke: Palgrave MacMillan).

C. G. Reddick (2004) 'Empirical models of E-government growth in local governments', *E - Service Journal,* 3, 59-84.

C.G. Reddick (2004) 'Empirical models of E-government growth in local governments', *E - Service Journal*, 3, 59-84.

C.G. Reddick (2009) 'Factors that explain the perceived effectiveness of E-government: A survey of united states city government information technology directors', *International Journal of E-Government Research*, 5, 1-15.

S.A. Ronaghan (2001) *Benchmarking E-government: A global perspective* (New York: United Nations Division for Public Economics and Public Administration and American Society for Public Administration).

K. Sahlin and L. Wedlin (2008) 'Circulating ideas: Imitation, translation and editing' in R. Greenwood, C. Oliver, K. Sahlin and R. Suddaby (eds.) *Organizational institutionalism* (London: Sage), 218-242.

L. Silva and R. Hirschheim (2007) 'Fighting against windmills: Strategic information systems and organizational deep structures', *MIS Quarterly, 31*, 327-354.

M. Symonds (2000) 'The next revolution', *The Economist*, 355.

D. Tapscott (1995) *The Digital Economy: Promise and Peril in the Age of Networked Intelligence*. (New York: McGraw-Hill).

A. Tat-Kei Ho (2002) 'Reinventing local governments and the e-government initiative', *Public Administration Review*, 62, 434–444.doi:10.1111/0033-3352.00197.

J. Tidd, J. Bessant and K. Pavitt (2009) *Managing innovation* (Chichester: John Wiley & Sons Ltd).

P.S. Tolbert and L.G. Zucker (1996) 'The Institutionalization of Institutional Theory' in S. R. Clegg, C. Hardy, Y. Walter, R. Nord (eds.), *Handbook of Organization Studies* (Thousand Oaks, CA: Sage), 175-190.

M.J. Tyre and W.J. Orlikowski (1994) 'Windows of opportunity - temporal patterns of technological adaptation in organizations', *Organization Science*, 5, 98-118.

V. Weerakkody, C.G. Reddick (2013) *Public Sector Transformation: Experiences from Europe and North America* (London: Routledge).

R. Williams and D. Edge (1996) 'The social shaping of technology', *Research Policy*, 25, 865–899. doi:10.1016/0048-7333(96)00885-2.

M. Wimmer, R. Traunmüller and K. Lenk (2001) 'Electronic business invading the public sector: Considerations on change and design', in *Proceedings of the 34th Hawaii International Conference on Information Systems*.

M. Yildiz (2007) 'E-government research: Reviewing the literature, limitations, and ways forward', *Government Information Quarterly*, 24, 646–665. doi:10.1016/j.giq.2007.01.002

S.A. Zahra and G. George (2002) 'Absorptive capacity: A review, reconceptualization, and extension', *The Academy of Management Review,* 27, 185-203.