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A public value perspective for ICT enabled public sector reforms: A theoretical reflection

Antonio Cordella *, Carla M. Bonina

London School of Economics and Political Science, Department of Management, Information Systems and Innovation Group, Houghton Street, London WC2A 2AE, UK

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ABSTRACT

The purpose of this paper is to offer a critical discussion of information system adoption in the public sector (often referred to as e-government) and to contribute to the debate by offering a public value perspective. The paper points to the public value paradigm as an alternative approach to studying ICT-enabled public sector reforms. This paradigm, we argue, proposes an alternative way of framing the nature of the problems faced when ICT enabled public sector reforms are initiated and studied. The public value perspective proposes a new and richer context in which to study and research these phenomena. It also calls for the redefinition of the ways we assess e-government in the context of public sector reforms. It is therefore seen as vital to evaluate the socio-political impact of ICT adoption in the public sector.

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1. Introduction

Governments' investments in public sector information systems have generally been directed towards enhancing efficiency and policy effectiveness as well as achieving broader democratic values (Bellamy & Taylor, 1998; Fountain, 2001a; Gil-Garcia & Pardo, 2005; Gronlund & Horan, 2004; Heeks, 1999; Kamarck, 2007). New public management (NPM)—explicitly or implicitly—has driven these investments in most countries around the world by proposing a cluster of ideas and practices that prescribe using private sector and business approaches in the public sector (Hood, 1991). Using core economic concepts, such as principal agent and transaction costs theory, NPM proposes public administration theories and practices whose ultimate objectives are to make the public administrative system more efficient, streamlined, and consistent (Hood & Lodge, 2006). The adoption of information systems is often conceived as a powerful solution to help in achieving these NPM reform goals. Information and communication technology (ICT) solutions are widely adopted to enhance private organizations' performance, by reducing the principal agent problem and transaction costs, and to streamline organizational activities by saving time and costs (Cordella, 2006; Picot, 1997). These results, which are the very basis of NPM reforms, are also expected when ICT is adopted in the public sector (Bekkers, 2003).

This paper reappraises the main trends in the literature on ICT-enabled public sector reforms, often labeled as e-government. The paper discusses different approaches to NPM and critically debates the implications the diverse formulations of NPM have on the adoption of ICT in the public sector. The work unfolds by questioning the NPM

approach to informing ICT enabled public sector reforms. This approach builds on frameworks developed to study ICT's impact in the private sector and downplays the public dimension of ICT enabled government reforms (Chadwick & May, 2003). To overcome the limitations of NPM for discussing the impact of ICT on the public sector, our paper proposes to focus on the notion of public value, following an emergent trend in the literature (Aberbach & Christensen, 2005; Bannister & Connolly, 2011; Cordella & Willcocks, 2010; Cresswell, Burke, & Pardo, 2006). Public value ideas account for the public and collective dimensions and impacts of public sector reforms, and that is why we argue that they therefore provide a more suitable approach than that of NPM to address the socio-political implications of ICT adoptions in the public sector.

In this paper we refer to ICT enabled public sector reforms and not generically to e-government, as there is no universally accepted definition of the concept of e-government (Yildiz, 2007). e-Government is in fact generically used to define any adoption of ICT to facilitate the daily administration of government and/or the production and delivery of government services to citizens through ICT (Moon, 2002; OECD, 2005; UN, 2001). Moreover, ICT enabled public sector reform better conforms to the object of our analysis. Thus, this paper critically assesses the relationships between public sector reform theories, such as NPM and public value creation, and the adoption of ICT in public sector organizations.

1.1. Background and aims of the paper

Public sector ICT enabled reforms are intrinsically embedded in combinations of political reforms and organizational changes, designed to enact, support, and drive a profound transformation in the organization of the public sector. Research in the field has so far prioritized the concept of ICT as a shortcut to increase public sector efficiency and improve internal administration and management capabilities (Andersen, 1999;

* Corresponding author. Fax: +44 207 955 7385.
E-mail addresses: a.cordella@lse.ac.uk (A. Cordella), c.m.bonina@lse.ac.uk (C.M. Bonina).

Andersen, Henriksen, et al., 2010; Chadwick & May, 2003; Dunleavy, Margetts, Bastow, & Tinkler, 2006b). Since the late 1990s, ICT adoptions in the public sector leverage by following private sector experiences. There is no doubt that for the public sector the success of private sector adoptions to streamline organizational procedures and support electronic mediated exchanges (e-commerce) has acted as a stimulus to radicate the engagement of ICTs within NPM reforms. This trend has become evident when the wide adoption of ICT in the public sector organization has followed technical and strategic solutions—imported from private sector experiences—to improve and rationalize administrative and managerial practices. This aligned well with the NPM prescriptions, which recommend these same objectives to modernize public sector administration. By focusing on these goals, research in public sector ICT enabled reforms has often marginalized to discuss the broader impacts ICT can have on public sector organizations and the services they deliver (Barca & Cordella, 2006; Cordella, 2007; Dawes, 2009; Fountain, 2001b). The limited focus on the effects of ICT on public sector reform is summarized by Danziger and Andersen (2002) and Andersen et al. (2010). On the basis of a substantial analysis of the leading publications in the information systems and public administration fields, they concluded that in the literature the most commonly identified impacts of IT on public administration are discussed in terms of efficiency and productivity of government performance. In line with these findings, ICT enabled public sector reforms have largely conceived the use of ICT as a further step in the re-organization of the public sector along the basic principles of efficiency gains and costs savings that have driven much private sector ICT adoption (Bekkers & Homburg, 2007; Bhen, 1998; Dunleavy, Margetts, Bastow, & Tinkler, 2006b; Heeks, 1999; Homburg, 2004; Osborne & Gaebler, 1992). Thus a vast literature has been produced to discuss the effects of ICT adoption at the different government levels (Asgarkhani, 2005; Contini & Cordella, 2007; Danziger & Andersen, 2002; Gupta & Jana, 2003; Melitski, 2003; Moon, 2002) and to benchmark countries against indices of ICT readiness (UN, 2001, 2003), as if a better score would lead to more effective transformation of government action.

Although valuable, the focus on efficiency, effectiveness, and economy in ICT enabled public sector reforms is limited, because it leads to research into the best practices and universal strategies for successfully implementing ICT, while downplaying the role of contextual dependent factors in shaping successful ICT projects and their implementation. Rather than concentrating on best practices and universal strategies for ICT reform programs, we argue that ICT developments in the public sector should therefore better acknowledge the complexity that is associated with their implementation and do a better job to address the social and political outcomes of their adoption (Aberbach & Christensen, 2005; Bozeman & Bretschneider, 1986; Cordella, 2007; Frederickson, 2000; Moore, 1995).

This paper deals with these issues head on. We begin the review by presenting the fundamental concepts of NPM and of "joined-up" government, which is discussed as a further step in public sector reforms driven by efficiency and productivity goals. We proceed to show how public sector ICT design and adoption has been informed by these public sector reform prescriptions. To do so, we review the dominant literature which discusses ICT enabled public sector reforms informed by the NPM and joined-up government. This literature shows a bias towards core managerial and economic aspects. This bias is the main reason why we find these approaches to be at least limited for the study of the public dimension of ICT enabled public sector reforms. Our analysis also shows that in this literature there is a common tendency towards what Orlikowski and Iacono (2001) have defined as the "tool view of technology," which considers the deployment of ICT in the public sector as a linear process of change which leads to more efficient and less costly organization management. This approach neglects to consider the political impacts associated with changes in public sector organizational practices (Cordella & Iannacci, 2010; Cordella & Willcocks, 2010) and the importance of looking at ICT as a mediator in public administration

transformation (Persson & Goldkuhl, 2010). We prepare the ground to discuss what we conceive to be the neglected dimension in the study of public sector ICT reform: public value creation. Conclusions follow.

2. Public sector reforms and the new public management fundamentals

NPM proposes a project of reforms to redefine managerial and governance practices in the public sector in line with objectives typical of market economics (Osborne & Gaebler, 1992). Positions of scholars differ in identifying NPM as a new paradigm in public administration (see for instance Barzelay, 2001; Gruening, 2001; Lynn, 1997), or as a specific governance strategy (Lane, 2000; Sørensen and Löfgren, 2007). Yet, despite the open debate regarding NPM's main attributes, the advent of NPM as the main driver of the public sector reforms has resulted in several ambitious targets such as to make the governments more responsive, accountable, transparent, and results-driven, as well as decentralized, efficient, and customer-oriented (Batley & Larbi, 2004; Currie & Guah, 2007; Gruening, 2001). In addition, governments have to achieve these goals with a much slimmer structure, as the pressure to downsize the state has been another indisputable characteristic of NPM (Gruening, 2001). These new objectives embed ideas that contrast with the traditional administrative practices, which have historically been driven by assumptions of bureaucratic efficiency, and also of democracy: the delivery of public services according to principles of impersonality, equality, and fairness (du Gay, 1994). NPM offers a new logic to drive the organization and governance of the public sector, and is associated with a fundamental change in the factors used to assess the actions of the public administration, not least a shift from effectiveness to efficiency (Pollit & Bouchaert, 2004).The most evident transformation proposed by NPM is to promote a public management culture which is results driven, where the efficiency of the management supersedes the need for effectiveness in the delivery of the public services (Self, 2000). It also suggests structural or organizational choices that promote devolution, disaggregation, and single-purpose organizations, decentralized through a wide variety of alternative service delivery mechanisms, including quasi-markets where public and private service providers compete for resources from policymakers.

In practice, the NPM agenda is pushed as the ideal process for creating a "slim State" with "slim Government" through "slim Management." The set of policies and guidelines provided by NPM are grounded upon a very clear idea of the nature of the problems faced by the public administration and the solutions needed (Cordella, 2007). Bureaucratic boredom and the high level of unnecessary interdependences between public organizations profoundly affect the efficiency of their performance. As a response, alternative organizational solutions are proposed that are associated with new targets to be focused on. Osborne and Gaebler (1992) describe this paradigm shift from bureaucratic government to an "entrepreneurial government" where, as proposed by the Clinton administration, it is necessary "to make a government that works better and costs less" in order to "run government like businesses." The "entrepreneurial government" is based on a profound shift in administrative practices, organizational solutions and objectives to be ideally achieved by promoting competition between service provider, measuring public agencies' performances focusing not on inputs but on outcomes, considering citizens as customers, and by preferring market to bureaucratic mechanisms (Osborne & Gaebler, 1992) (Table 1).

Despite the great expectations of the NPM reforms, the results of the adoption of these policies are at least questionable (Dunleavy et al., 2006b). The process of organizational change needed to achieve the aimed for results has in fact been more profound and complicated than expected (Peters & Pierre, 1998). More generally, such change not only demands a reorganization of public offices but also a profound re-definition of the logic underpinning their actions. It demands the reconfiguration of public servants' conduct around one universally

Table 1
Summary of NPM principles.

Organizational forms	Coordination mechanism	Target
Decentralization	Prices	Customers
Disaggregation	Incentivization	
Market	Competition	

appropriate benchmark or principle, and that principle is enterprise. This change is needed because, from the perspective of enterprise, bureaucratic forms of organizational governance are inefficient and ineffective as they fail to open up and incentivize people's personal involvement and ideals (du Gay, 1994), in contrast with the incentive mechanism typical of private organizations (Cordella, 2007).

3. Beyond NPM: joined-up government

In many countries, recent public sector reforms have moved away from the traditional NPM debate, which emphasized structural devolution, disaggregation, and single-purpose organizations, to propose a joined-up approach, which treats government as an integrated service delivery unit (Christensen & Lægried, 2006a; OECD, 2005). This trend, most evident in countries such as the U.K., Australia, and New Zealand —all NPM pioneers—is a response to the unexpected outcomes produced by the NPM reforms. Joined-up government (JUG) aims at overcoming the problems resulting from the government fragmentation and decentralization led by NPM. The joined-up approach is occurring in different formats, such as in the U.S., under the heading of "collaborative public management" (Agranoff & McGuire, 2003 ; O'Leary, Gerard, & Bingham, 2006) and as in the Gov 2.0 initiative. All these formats are, however, sharing the same goals: to reintegrate the government action disaggregated by NPM reforms.

The joined-up initiatives are, once again, actions taken to respond to the need for more efficient and effective public administration and to overcome the structural inefficiencies which the NPM reforms failed to solve (Christensen & Lægried, 2007). These initiatives are a response to the long lasting challenge of horizontal coordination in government organizations (Peters, 1998), which has undermined the effectiveness of governments across the world over the last two decades (Perri, 2004). Hence, a pertinent question is whether these initiatives are really new, or are simply a coherent response to answer the old question of government coordination and administration that is associated with every NPM initiative. The changes proposed by the initial NPM reforms and those associated with the new joined-up initiatives, do not differ in their underpinning logic regarding the organization and governance of public sector organizations (Christensen & Lægried, 2006b). Both suggest a fundamental change in the factors used to assess the actions of the public administration, not least a shift from effectiveness to efficiency (Pollit & Bouchaert, 2004). The joined-up perspective, however, better confronts the fact that governments' actions, programs, and laws always require the coordination of many different agencies at different levels in the public administration. To deliver services, public offices need to collaborate; the idea that policies could be enacted by a single agency acting alone has never been realistic (Perri, 2004). Joined-up government formulates an integrated approach to government coordination, which goes beyond the traditional silo structure of parallel bureaucracies, and essentially refers to the achievement of horizontally- and vertically-integrated public sector activity. By proposing an integrated approach, it seeks to alleviate conflicts and contradictions between different government policies and agency programs, to reduce repetition and duplication, and to increase the exchange of ideas and to enforce cooperation across the government to create "seamless" public services (Bogdanor, 2005; Perri 6, Leat, Seltzer, & Stoker, 2002; Pollit, 2003). As a response to the increased fragmentation caused by reform programs which focused on intra-organizational rationalization, disaggregation, and structural devolution, the joined-up approach focuses on coordination and

integration strategies (Mulgan, 2005). Even if this can be seen as a new approach to public sector management, attempts to coordinate government policy-making and service delivery across organizational boundaries are not new phenomena (Ling, 2002). The development of network relationships between public sector organizations either in terms of cooperative relationships among individual organizations (Levine & White, 1961; Warren, Rose, & Bergunder, 1974), or in terms of multiple interactions needed to deliver full cooperative service provision providers (Jennings & Ewalt, 1998), is a well known argument in organization and public policy research since the late 1960s (Provan & Milward, 2001).

Even though the more integrated strategy to public sector delivery does imply reliance on a broader theoretical elaboration rather than just drawing on economic drivers (Bogdanor, 2005), the joined-up initiatives do not question these fundamental drivers of the NPM ideology. In fact, in line with NPM, it insists on promoting a management culture for the public sector that, as in the case of the private sector, becomes results driven and focused on managerial efficiency in the delivery of public services (Self, 2000) (Table 2).

The attempted transformation of public administration along the line new public management and joined-up government, both relying on private sector evaluation techniques based on efficiency and performance measurements, has led to a reconsideration of the role of bureaucratic organization as a natural organizational structure for the public sector. One observation is merited. Traditional bureaucratic organizations add values of objectivity, equality, and impartiality in public service delivery. Let us restore the balance, and not automatically assume that public sector bureaucracies serve outmoded purposes and tend to be dysfunctional in their net effects. Bureaucracies are indeed organizational solutions adopted by democratic governments to guarantee the homogeneous implementation of the public policies and therefore to preserve impartiality in the administrative action (Cordella & Willcocks, 2010). The procedural nature of the public administration is thus the outcome of the need to enforce the impartial enactment of public policies and therefore represents an ultimate value for the society (Cordella, 2007).

4. ICT, NPM, and JUG

The relationship between ICT adoption and public sector reform theories is an important area of study to better understand the factors that steer and shape ICT enabled public sector reforms (Bekkers & Homburg, 2007; Madon, Sahay, & Sudan, 2007). Yet, e-government research has not extensively looked at this relationship. ICT in the public sector has mainly been discussed as a tool to help create new and better service delivery (Bekkers & Zouridis, 1999) by increasing efficiency and transparency, and improving the coordination of public administration procedures and management (Dunleavy et al., 2005a; Gupta, Dasgupta, & Gupta, 2008; Heeks, 1999). By making governments more accountable and transparent through a process of information rationalization, ICT has often been considered a valuable support for achieving the public administration reforms envisaged by the NPM trends—whether implicitly or explicitly (Barca & Cordella, 2006; Barzelay, 2001; Cordella, 2007; Currie & Guah, 2007; Homburg, 2004; Hood, 1991).

Similarly, to achieve integration and coordination among government agencies, ICTs have become a central element in the reinvention of governments' agendas and public innovation efforts (Borins, 1997;

Table 2
Joined-up and NPM principles.

Organizational forms NPM	Organizational forms "Joined-up"	Coordination mechanism	Target
Decentralization	Centralization	Prices	Customers
Disaggregation	Joined-up	Incentivization	
Market	Market	Competition	

Gruening, 2001; Hood, 1991; Kettl, 2005). The use of ICT appears as a transversal and crucial element in many of the key components identified in the NPM governmental reforms and in the joined-up initiatives, in particular. Indeed, ICT enabled public sector reforms have become embedded, as part of NPM political and managerial reforms, in many countries around the world (Cordella, 2007).

The effects of ICT on public administration and the services it delivers have commonly been debated by looking at what different technologies and their applications enable governments to do. Consequently, ICT enabled public sector reforms have been discussed as development processes which mimic the evolving nature of ICT (Gauld, 2009). Accordingly, we find literature which debates these reforms as a phenomenon that can be described in terms of its development phases (Layne & Lee, 2001; Norris, 2001; Torres, Pina, & Acerete, 2005). The different phases are proposed to highlight how new functionalities designed in ICT enable changes in the nature and organization of governments' activities. The discussion of these different phases may be helpful for understanding the evolutionary nature of the services supported by ICT in the public sector, yet it fails to explain the political and administrative logic which underpins every reform project in the public sector (Bannister, 2001; Peters & Pierre, 1998). The adoption of ICT in governments changes the way in which public offices organize and deliver services. These changes affect the nature or the means through which services are provided and therefore have political and administrative consequences (Cordella & Iannacci, 2010) that should not be overlooked. The changes brought about by these reforms need to be contextualized within the broader administrative and political climate within which they have been initiated. NPM provides ideas explaining the majority of the background of ICT enabled public sector reform initiatives (Chadwick & May, 2003; Cordella, 2007). Even if the link between NPM and ICT has been discussed from different perspectives (Homburg, 2004), the link between political and managerial dimensions of NPM and the ICT enabled reforms has not been extensively discussed yet. This link is, however, of fundamental importance for explaining the political impact of ICT based reforms in the public sector. In the case of NPM and ICT enabled reforms, different political and managerial logics can be identified. ICT can be mainly perceived as a tool to introduce a process of intra-organizational rationalizations of public offices and a "siloed" customization of public services by the individual administrations. However, ICT can also be conceived as a fundamental element to achieve integrated government services (Bannister, 2001), as stipulated by the joined-up reforms. The joined-up government approach prescribes inter-departmental collaboration and coordination to provide integrated service delivery to citizens and ICT designed to support and enhance these interdependences. In both cases, the ICTs are framed in public sector reform paradigms which, as previously discussed, build on the same NPM principles. ICT enabled public sector reforms and NPM are therefore deeply intertwined as they share the same aims and the same reform goals. The use of ICT in the public sector affects the chief characteristics of the classic public administration paradigm, in the same way as NPM techniques do. ICT, therefore, reshapes the production, coordination, control, and direction processes that take place within the public sector (Fountain, 2001a).

With the aim of improving the performance of public sector services, government agencies have made several efforts towards reorganizing their operations, processes, and functions. In order to improve their ability to provide citizens with the appropriate services and to reduce the costs of these services, governments around the world have invested in ICT to reorganize their work processes. These investments have either been aimed at improving the organizational processes needed to provide the services—this is the case with the initial NPM policies—or have changed the overall organization of the processes needed to provide the services, as in the case of the joined-up reforms. Following private sector practices, the public sector has envisaged ICT either as a tool to rationalize existing processes or as an instrument to foster a more profound re-engineering of public organizations. The rationalization of existing processes deals with front and back office practices and the outsourcing of public functions, while the re-engineering of the overall organization is concerned with the reconfiguration of interdependences and synergies among different government functions. In sum, this means that the policies that have informed the digitalization of public administration have been led by drivers which did not account for the implications that a change in the structure of public administration can have on the quality and value of the services provided. The implicit assumption is that a more efficient organizational procedure will automatically lead to better public service. As we argue in this paper, this connection is at least questionable.

5. Policy outcomes of ICT-enabled reforms: a public value perspective

As noted before, managerial values, as inspired by NPM, have been the major initiators of ICT use in government (Chadwick & May, 2003). Addressing the question of whether and to what extent ICT enabled public sector reforms are achieving the expected policy goals entails considering a broader set of values (Kearns, 2004).

Although valuable for assessing some of the aspects associated with the deployment of ICT in public sector organizations, the focus on efficiency, effectiveness, and economy appears limited as already discussed in literature (Bannister, 2007). This focus is mainly based on the search for best practices and universal strategies to successfully implement these programs, and marginalizes broader impacts of these reforms. Since ICT enabled public sector reforms involve the deployment of a complex ICT infrastructure to redesign public sector organizations, they face a number of risks in relation to implementation, project management, and policy (Fountain, 2001b; Heeks, 1999; Snellen & van de Donk, 1998), none of which can be managed on the basis of universal best practices and strategies. Accordingly, ICT developments in the public sector should pay more attention to the complexities of their implementation, with particular focus on the potential consequences of the transformation of the relationship between the citizens and the state regarding shared expectations about the actions of the government. The outcomes of public sector reforms in fact have an impact on social and political dimensions, which are not accounted for in private sector frameworks (Aberbach & Christensen, 2005; Bozeman & Bretschneider, 1986; Cordella, 2007; Frederickson, 2000; Moore, 1995). Yet, private sector ICT experiences have often been the models followed to reorganize the public sector along the basic principles of efficiency that govern the private sector (Andersen, 1999; Chadwick & May, 2003; Thong, Yap, & Seah, 2000).

A different approach to the problem emerges from studies that have looked at the socio-technical endeavors taking place around the deployment of ICT in the public sector in general and in public sector organizations in particular (Avgerou & Walsham, 2000; Contini & Lanzara, 2008; Danziger & Andersen, 2002; Fountain, 2001a, 2007). In these cases, ICT has been contextualized within the public sector environment, and a more specific explanation of the complexity of ICT enabled public sector reforms has been proposed.

Overall, we suggest that the analysis of the effects of ICT enabled public sector reforms, either positive or negative, should not solely focus on their impact on the direct economic exchange relationships and individual choices typical of private sector indicators—as suggested within the NPM trends—but rather on the collective preferences as indicated by the public value paradigm.

5.1. Public value paradigm

Public value ideas, have increased their popularity since Moore's (1995) seminal contribution (Iestyn & Shearer, 2011). Public value offers a refreshing perspective on the role of the state (Benington & Moore, 2011; Moore, 1995) and a fruitful alternative stream of research to better understand the nature and consequences of ICT enabled public sector

reforms. Moore's initial book, *Creating Public Value* (1995), was mainly concerned with creating a normative theory of what public managers *should do* to create public value given the particular circumstances they are immersed in. In general terms, the book covers three main issues: what the role of government is in society, what roles public managers have to play within governments, and what techniques and practices public managers need in order to develop their roles. Recently, there has been an increasing number of publications that are addressing the debate within the public administration field (Iestyn & Shearer, 2011). While within ICT in public sector research this cross-fertilization has been less prominent, there have already been valuable efforts to bring public value ideas in the field (see, for example, Bannister & Connolly, 2011; Cordella & Willcocks, 2010). It is therefore valuable to explore what insights the public value theory can provide to better understand the socio-political implications of ICT enabled public sector reforms.

The ideas on public value have had different understandings. Alford and O'Flynn (2009), for example, reviews the different meanings that has been associated with public value, ranging from a new paradigm in public administration to a useful narrative or a performance measurement. From a different perspective, Benington (2011) conceives public value as a theory guiding what he calls "networked community governance." In that sense, public value theory is to networked community governance what public choice is for the NPM (Benington, 2011). In this paper, we understand public value as a potential new paradigm to change the way we address ICT enabled public sector reforms.

The public value paradigm argues that individual preferences cannot be aggregated to reflect what society wants from the government. Citizens decide together via elected representatives what they value as a collective and these collective preferences reflect what is valuable when government's action is concerned. Therefore, public value is not necessarily defined by those who produce it—government organizations, private firms, non-profit organizations, or various other organizations—but rather by the citizens who collectively consume it (Alford & Hughes, 2008). Citizens value things not only because they personally receive a direct benefit from them. They also value them and other things for reasons that go beyond their individual self-interest. Citizens do not necessarily behave as customers as they do not *only* value what they consume. Citizens have visions, goals, and aspiration for the society as a whole that make them value collective (rather than individual) principles such as fairness, equality, care for the environment, or justice (Alford & Hughes, 2008).

From this initial discussion, a public value approach would entail new research opportunities as it provides an alternative stream to think about government activities, policy making, and service delivery which goes beyond the individual focus prescribed by NPM. Public value, in fact, can consist of multiple objectives, such as narrow economic objectives, broader outcomes, and the creation of and maintenance of socially shared expectations of fairness, trust, and legitimacy, whose definitions cannot be detached from the socially shaped context within which they are defined (O'Flynn, 2007).

Following the public value ideas, the identification of the problems to be solved and the right managerial solutions to do so, are not simply a matter of objective analysis. What is valuable is in fact registered in the desires and judgments of citizens, who can have different and conflicting preferences about similar issues, and moreover, who can shift and change their preferences over time (Alford & Hughes, 2008). The creation of public value is therefore closely linked to the perpetuation of public policies that aim to pursue the political mandate which citizens give to the government through the democratic process of elections.

The introduction of the notion of public value suggests a radical change in public sector management practices. Public value brings to the center of the actions of the government (and therefore of public administration activities) the search for a solution which guarantees the best possible cohesion between the expectations of the citizens and the

actual deliverables of the actions of the public administration. A public sector oriented to the creation of public value may prioritize management practices which have been designed on the basis of performance objectives centered around efficiency and economy (i.e., NPM spirit); but it may as well concentrate on practices looking at providing a fair, more equal and just society, all values for which performance indicators are very difficult to design. For the same reason, in the public value framework, politics is not only the initial input into the system of performance management (Stoker, 2006). Because of the nature of public value, politics cannot be disentangled from public management practices, aims, and strategies. Thus, public management is deeply intertwined with political processes and collective expectations so that new models of accountability, different from those based on narrow economic performance indicators, are needed. This shift requires a move towards contingent and socio-politically dependent indicators which are closely related to the public value the administration is expected to deliver (Moore, 1995). Many of the concepts embedded in public value ideas are ambiguous and unbounded as they are political and context-dependent. As a consequence public value cannot be defined universally or in absolute terms (Alford & Hughes, 2008), which does not mean they cannot be deconstructed, as we will argue afterwards.

Therefore the shift from NPM to public value ideas provides a new and richer set of managerial objectives and practices to be followed by public managers. In the case of ICT enabled public sector reforms, this calls for a better understanding of the role that ICT can play in the production of public value—and not only as a means to achieve better financial outcomes as in the case where ICT is adopted to facilitate NPM reforms. The shift in the focus of public management when public value is concerned and the relationships between the NPM and the public value paradigm are summarized in the Table 3 below.

NPM can therefore be discussed, within the public value framework, as a subset of objectives which can contingently be perceived by citizens as part of a broader public value framework.

6. Discussion: public value and ICT-enabled public sector reforms

The dominant approaches to estimating the impact of public sector ICT policies are mainly based on evaluation frameworks developed to assess ICT impacts in the private sector. Most of these approaches look at efficiency driven performance measures, such as cost reduction and return on investment, and at managerial goal achievements, such as transparency and accountability, once again closely related to private sector economic standards (Moore, 1995). These approaches, however, neglect the fact that public sector strategies differ from private sector strategies because the former are driven by the overriding goal of creating public value, while the latter are aimed at creating private value (Moore, 1995). Private value can be estimated through financial measurements of profits, while public value is much more difficult to define, despite the all-too-many government-inspired documents on value-for-money already issued. Public value is related to the achievements of objectives set by government programs and the delivery of public services to the citizens. From the perspective of ICT deployment, putting public value creation as priority refers to embracing the information revolution as a means of improving governance and enhancing the democratic process (Brewer, Neubauer, & Geiselhart, 2006). Although implicitly and without direct reference to public value ideas, efforts have been made to design and deploy ICT solutions to enable a more trustful and responsive government and to make key, relevant, and reliable information available to citizens (Eppler, 2007). Just to mention a well-known example, ICT has been implemented to enhance participation and democracy, by opening new and innovative channels of participation (Jaeger, 2005) such as e-mailing, public deliberation on the internet and e-voting systems. The implementation of ICT in the public sector can be conceived as a tool to build public trust, to enhance confidence and to promote a more participatory citizen–government relationship, as well as a means for equitable ICT policies (Avgerou, Ciborra,

Table 3
Paradigm of public management.
Adapted from O'Flynn (2007) and Stoker (2006).

	Public value	New public management
Rationale	Public administration	Private management
Dominant focus	Relationships, politics enactment	Administrative rationalization, results
Definition of public interest	Collective preferences	Aggregated individual preferences
Performance objective	Multiple objectives, shifting over time	Management of inputs and outputs to ensure economy and responsiveness to customers
Dominant model of accountability	Multiple accountability systems	Upward accountability via performance contracts
Preferred system of delivery	Menu of alternatives selected pragmatically	Private sector or tightly defined arms-length public agency
Means	Fulfillment of multiple objectives	Competition
Ends	Fulfillment of social expectations	"Government that works better and costs less"

Cordella, Kallinikos, & Smith, 2005). Public sector ICT policies that have taken these goals at the core of their design are not yet common and emerged only recently. It is not surprising, though, that this has been the case, as the level of complexity increases when designing and assessing the consequences of these new technologies on broader policy outcomes.

In line with the public value framework, ICT deployments in the public sector have already been discussed in the light of their political and social impacts. Given that ICT is not neutral, but political, social, and controversial (Bekkers & Homburg, 2007; Fountain, 2001a), it alters the nature of the service delivered to the citizens as well as the means used to provide public services. Public value is not related *only* to the efficiency of the actions carried out by the public administration, but also to the effectiveness of the achievements of the government programs in relation to certain democratic outcomes. Moore (1995) points out that political power determines the actions of public administrations and therefore represents the collective aspiration. In democratic states fundamental values of the collective aspiration are values such as fairness, equity, and equality that cannot be evaluated in terms of economic returns for individual consumers but only as the outcome of political mandates and collective decisions of representative democratic institutions (Moore, 1995). Moore (1995) argues in favor of the techniques of program evaluation and cost-effectiveness, distinguishing these from cost–benefit analysis on the basis that they presuppose the "compelling collective purpose" of the outcome, rather than optimizing individual benefits across a range of competing alternative outcomes (Cordella & Willcocks, 2010). Kelly, Mulgan, and Muers (2002) observe that the new public management of the 1980s and 1990s relied upon applicability of management techniques and that government value ought to be created by following managerial, organizational, and financial practices used by private sector businesses. The authors assert that the consequence of these practices was an emphasis on narrow concepts of cost-efficiency and a downplaying of non-functional objectives that were difficult to measure. We would suggest that this tendency has become ingrained into how many public sector ICT initiatives have been designed and assessed in recent years.

Overall, we suggest that the analysis of the effects of public sector ICT policies needs to look not only at efficiency but also at the broader impacts regarding public value. Whilst efficiency may play a key role as an enabler of "good and better government" via front and back office reorganizations within the wave of public sector reforms, it is not the only goal that should be looked at. ICT does not *only* serve to achieve one set of values at a time as some of them can clash or even have cross-impacts on other values. For instance, inefficiency may harm citizen satisfaction in a customer-oriented culture, and hence decrease the government's legitimacy. On the other hand, a public sector ICT project with a focus on efficiency, may lead to an effective program and thus to an increase in public trust (Smith, 2010).

The increasing focus on customer orientation and the transformation of the citizen into a customer and its relation to the government's legitimacy, serve to illustrate our point further. Fountain (2001b) explains this by referring to the so-called legitimacy paradox of public services; she suggests that customer service techniques and private sector tools applied to government may lead to increased political inequality, even when some aspects of service are improved (Fountain, 2001a). Cordella (2007) points out a similar concern—when governments implement reforms driven by a market logic, considering citizens as customers, they risk discriminating between citizens and failing to enforce the democratic values of impartiality and equality. Public sector reforms such as online one-stop shops can create disparities between those citizens who can access the online portals and therefore get better and quicker services and those who cannot access the service because of technological or knowledge gaps. This can be claimed to reduce equity since people without access to the internet are left behind. We believe that the implications of the digital divide are not trivial in this matter. If those that are actually "connected" to the internet can obtain better services via ICT, there is a risk of increasing political inequalities. Yet, we do not suggest here that governments should discourage creating online one-stop shops, but simply to highlight that ICT intervention may not necessarily be well balanced. The challenge, therefore, would be to increase the efficiency and responsiveness of governments in ways that strengthen democracy, rather than weakening it (Fountain, 2001b). The development of online and offline one-stop shops could be conceived as a policy aimed at mitigating the disparities between citizens who have and do not have access to the internet, therefore producing more public value.

6.1. Public value paradigm and e-government: the need for new indicators

Approaches to study the impact of ICT on public value creation and related indicators have already been proposed and discussed in the literature. For example, the Kearns (2004) approach identifies that ICT can create public value in three main areas: service delivery; outcome achievement; and trust in public institutions. The eGEP approach (Codagnone & Boccardelli, 2006) offers a similar alternative by suggesting to segment the impact of ICT on public value creation again on three main areas: efficiency: organizational value; effectiveness: user value; and democracy: political value. In both cases indicators can be identified to measure the impacts of ICT on public value creation (Heeks, 2006). Cresswell et al. (2006) offer even a more articulated and detailed set of indicators to measure the impact of ICT on public value creation. The authors suggest that ICT investments in the public sector can deliver benefits directly to citizens and can enhance the value of government itself as a public asset. As a consequence, a framework is proposed to study the value creation associated to public sector ICT investments.

All these approaches are based, however, on indicators defined to measure the direct or indirect impact of ICT adoptions in public sector administrative and economic performances. Hence, the social and political impacts of public value creation are measured in terms of improvement of administrative or economic performances in public administration offices.

Bonina and Cordella (2009) have suggested focusing on a particular set of narrow values: those that relate to conventional ideas about "good administration" (Hood, 1991). The authors suggest a framework that distinguishes between clusters of public values: those that are related to managerial practices and those related to democratic values. Within the managerial group of values, we have those parameters usually referred to efficiency, effectiveness, and a purposeful government. The democratic values, on the other hand, relate to equity, honesty and fairness of government outcomes. These values are not placed into dichotomy and mutually exclusive groups. Indeed, as discussed previously, some (rival) values may overlap. Therefore, when public value is concerned, the search for objective administrative measurements of the activities of public servants and public organizations is relegated to a secondary level. It becomes primary only when public value is defined by the citizens to be associated with the implementation of administrative reforms which optimize the administrative processes and performance.

The public value scorecard offers perhaps a more promising example of indicators designed to measure public sector performances in the light of public value creation. Public sector scorecard shifts the focus from financial measures to a set of non-financial measures that track the success in implementing an agreed upon strategy (Moore, 1995). The aim of the public value scorecard is to produce a performance measurement system for public sector managers that need a non-financial measure to indicate if they are investing financial resources effectively to create public value (Moore, 1995). In the context of public sector organizations, financial resources are therefore a mean to create public value, which is the ultimate end of the organization.

In sum, we argue that the creation of public value entails a multidimensional problem on balancing *competing* public values, rather than solely with the optimization of processes or procedures. As we propose in this paper, it emerges that we need a substantial change in the way we assess e-government. Scholars that have analyzed the effects of ICT on economic growth have already provided good arguments against using solely economic and financial indicators (Colecchia & Schedler, 2002; Srivastava & Teo, 2008). This argument is strongly reinforced when public value creation is considered: what further marks out the public value approach is that the impact of public sector ICT driven reforms on socio-political dimensions is seen as vital to the evaluation of ICT adoption in the public sector.

The use of performance indicators, widely promoted alongside the advent of the "Reinventing Government" reforms, does not address this challenge. These indicators are another prominent aspect of the results-driven culture, promoted by the NPM. Businesses do indeed have a long tradition of measuring performance in order to achieve better results (Behn, 2003). However, as extensively discussed in this paper, public sector drivers are not the same as those that govern the business world. Public sector organizations have multiple objectives and are pursuing actions so as to deliver a certain level of expected value to the citizens. Thus, despite their usefulness in certain areas of government (i.e., transparency and accountability) scholars have challenged whether performance measures can bring real improvements to the value of public services. For instance, Proper and Wilson (2003) conducted an overview of performance measures and studied their use in the fields of health and education in programs in the U.S. and the U.K. They found that, despite the wide usage of performance measures, "there is almost no evidence on whether these schemes improve the efficiency of the public service being delivered" (p. 265).

In line with the debate on value-for-money indicators, and given the multiplicity of goals and stakeholders that the public organizations confront, the use of performance schemes to design and evaluate public services remains highly difficult (Bannister, 2001). As no single performance indicator can adequately address all public actors' objectives (Proper & Wilson, 2003), focusing solely on the managerial values of government may challenge the pursuit of other competing values, such as equity and fairness. Whilst this debate has been mainly

applied to a broader range of public policies, it has also been present within the e-government literature reaching similar conclusions. After assessing 18 international e-government benchmarking schemes, Janssen, Rotthier, and Snijkers (2004) found that the reports differ in focus, approach and scope, thus leading to different performance measurements. All in all, understanding why measuring performance is important, and in which ways it should be done within the public sector remains crucial (Behn, 2003). Measuring performance is highly important, although we suggest that a wider range of indicators should be employed to analyze the value drivers in the relationship between the citizens and the state. The indicators need to account for social and political dimensions in public value creation and not only for performance measurements.

This call for a revised approach to address the effects of public sector reforms on public value creation which is not only grounded in theoretical reflection. Indeed, President Obama, in his inaugural speech, very clearly stated: "The question we ask today is not whether our government is too big or too small, but whether it works, whether it helps families find jobs at a decent wage, care they can afford, a retirement that is dignified," suggesting a clear call for a shift from cost–benefit analysis to the assessment of public value creation.

7. Conclusions

Through the paper we have shown that ICT enabled public sector reforms are complex phenomena that cannot be studied solely by drawing on private sector managerial models that essentially conceive of technology as an enabler. Even if most of the existing research has mainly been built on theoretical frameworks which downplay the socio-political context in which public sector ICT is deployed, there are good examples in the present and past literature, of contributions which have not followed this path. Danziger, Dutton, Kling, and Kraemer (1982), for example, looked at the impact of information technology on the distribution of power among organizational groups, such as politicians, administrators, financial experts and urban planners. They conclude that information systems have impacts which go far beyond those which have been discussed in the NPM literature since the '90s. Their contribution, in fact, concludes that ICT implementation in the public sector reinforces the prevailing structures of control and the prevailing biases within the government, highlighting the complexity of the impact of information systems on public sector organizations and outcomes. This complexity has, however, been at the margins of researchers' interests; they have instead favored an approach based on the consideration of ICT as a tool for public sector reforms to drive a predetermined process of change. This is well discussed in recent literature reviews in the field (Andersen et al., 2010; Danziger & Andersen, 2002; Heeks & Bailur, 2007; Yildiz, 2007). In other words, the vision which "considers IT merely one more resource, albeit a powerful and protean one, in the arsenal of politics-as-usual" (Danziger & Andersen, 2002) is still dominant in e-government research; and that the main focus of research in the field is still concerned with the managerial and economic aspects of adopting and deploying ICT in the public sector.

This paper offers a detailed review of this literature and identifies that NPM is the underpinning theoretical foundation that (implicitly) has informed the research domain of ICT enabled public sector reform. While reviewing this literature, the paper highlights the limits of this approach; it does not account for the social and political impacts of ICT enabled public sector reform. Based on a lively and growing debate within public administration scholars, we argue that the notion of public value can be a more fruitful channel to address the complex socio-political impacts of ICT adoption in the public sector. The ideas behind the public value framework propose considering public sector reforms as composite outcomes framed in multiple objectives, such as narrow economic objectives, broader outcomes, and the creation of and maintenance of socially shared expectations of fairness, trust, and legitimacy, whose effects cannot be detached from the social and political context within which they are defined.

ICT enabled public sector reforms are themselves infused with shifting political systems of logic, which can be conceived of as carriers of transient interests, molded by contingent visions and values which reflect the goals or aspirations of the society as a whole. Little wonder that the choice and design of ICT enabled reforms is often fraught with tension deriving from the mismatch between the transient values reflecting different political interests. Yet, the use of economic drivers to study, design, and assess the impact of ICT enabled public sector reforms, as infused by the NPM discourse, falls short to address the complexity that is always associated with the deployment of these reforms.

Our paper points to the public value paradigm as an alternative approach for studying ICT enabled public sector reform; it proposes an alternative way of looking at the nature of the problems faced when ICT enabled public sector reforms are initiated and studied. The public value paradigm suggests that the qualities of public sector organizations are assessed on the basis of their ability to deliver the expected value to the citizens and not only by their value-for-money ratio. The latter can be an expected value, but not necessarily the only and prevailing one. By putting the creation of public value at the center of government objectives, it becomes clear that the collective expectations, and the policies needed to accomplish these expectations, are complex in nature and not predefined. We have also outlined a number of valuable efforts to assess ICT enabled public sector reforms (and also e-government more generally) that can be useful to map empirical research. Yet, it remains a challenge to accumulate more empirical research on the area. We conclude, therefore, that an attentive consideration of the public value created by the government's action would seem to be a useful counterweight to the rhetoric of progress, modernization, transformative ICTs and new public management that has shaped public management practices over the last 20 years.

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Dr. Antonio Cordella is Lecturer in Information Systems at the London School of Economics and Political Science. His research interests cover the areas of e-Government, Economic Theories of Information Systems, and the Social Studies of Information Systems.

Carla Marisa Bonina is a PhD Candidate in the Information Systems and Innovation Group, Department of Management, at The London School of Economics and Political Science. Her PhD dissertation deals with the adoption of information systems in public organizations and public value creation. She has also conducted research in broader areas of internet policy and its social impacts, such as e-government, digital divide, mobile telecommunication for fostering development, and digital identity management.