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Agile local governments: Experimentation before implementation

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ABSTRACT

This paper discusses how local governments can team up for joint service provision, be more adaptive towards new technological and organisational changes and introduce novel services following main industry trends (e.g. predictive analytics, autonomous vehicles and artificial intelligence). The conceptual approach is to use Public Value (PV) as the framework for the organisation and management of government performance, one of the most important successor 'paradigmettes' of the New Public Management (NPM). Based on the PV concept, the 'adaptive model' for local governments is introduced according to which each procured ICT solution is preceded by agile, open, bottom-up and experimental trial. This model is corroborated via recent empirical evidence from the case of Helsinki and Tallinn which was obtained by observing how city governments collaborate on joint innovation-lab-type structures and conduct agile trials in the field of smart mobility before traditional procurement.

1. Introduction

This project is interested in how ICT adds public value via agile methods. According to the modern-classic essay by Dunleavy, Margetts, Bastow, and Tinkler (2008), government information systems are a big business (costing up to 1% of GDP a year), for instance, the United Kingdom spends around £ 14 billion annually to public-sector IT operations. At the same time, not all government IT projects deliver public value (Luna-Reyes, Picazo-Vela, Luna, & Gil-Garcia, 2016). In this light, there is a logical need to analyse and propose digital government models, both theoretical ones and through best practices. These models are becoming more complex and they have to solve the challenges how (local) governments can become more experimental, adaptive and agile at the same time delivering public and social value through digital government projects.

In this paper, we argue that a Public Management concept that, after the fall of the New Public Management (NPM), is particularly suitable to frame this phenomenon is Public Value (PV), as it offers a high degree of freedom for innovative solutions and has great potential for establishing open ecosystems that are pronounced as important by the e-Government side itself (inspired by the classic essay on the death of NPM-long live digital-era Governance by Dunleavy, Margetts, Bastow, & Tinkler, 2006). Empirically, we will look at a novel process for introducing Intelligent Transport System solutions tested in two EU capitals, Helsinki and Tallinn. This process is unique as the typical one-city procurement is preceded by open, agile and cross-border trials with state-of-art technologies introduced via setting up two-city pop-up innovation structures for twelve months prior the procurement. The early empirical evidence indicates that it is possible for local governments to launch their own ICT solutions by having a higher level of technology, cross-border solutions and cooperation. We will analyse organisational, structural, managerial and procedural changes required to sustain and replicate this.

In order to achieve adaptive governance as proposed by Janssen and Voort (2016), organisations need to be able to deal with the changes and introduce more decentralised and bottom-up decision-making structures via mobilising more talents and participants. The main purpose of a private firm is to generate profit, but this is already inherently different in the public sector (Drechsler, 2005), which is crucial when evaluating the impact of ICT use in the public sector. Hence the focus on PV, which according to Moore (1995), is a broader understanding of a return or benefit than private value, adapted to the public sector for strategic management purposes. In other words, the aim of private managers is to create private (often monetary) value, whereas the aim of public managers it to create public (social) value (Luna-Reyes et al., 2016).

An increasing number of e-Government researchers (Cordella & Bonina, 2012; Karunasena & Deng, 2010; Kearns, 2004; Yıldız & Saylam, 2013; Yu, 2008) therefore recommend using PV in e-Government analysis, similarly to Public Administration scholars (e.g. O'Flynn, 2007). Nevertheless, the question remains how to do so, as PV as a theory remains necessarily fuzzy, or critically put, vague (Benington &

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Moore, 2011). This paper will offer one approach how to operationalise PV in e-Government research by building on the PV framework for e-Government by Kearns (2004) and Karunasena and Deng (2010) and deconstructing PV into high-quality services, achievement of outcomes and trust in public institutions. It does so by analyzing the cross-border setting of two European capitals (Helsinki and Tallinn) in depth by closely observing the agile approach for procuring ICT solutions for cross-border commuters. The sources of data for the qualitative case study include policy documents, project materials and interviews.

2. Literature review

Electronic government (or e-Government) is still a relatively novel concept. The term was widely unknown two decades ago but now is booming as there are academic programs on e-Government, specific conferences and journals solely devoted to this (Heeks & Bailur, 2007). On the other hand, the nature of e-Government is not static. According to Schelin (2003), before the introduction of the Internet and diffusion of personal computers, the main objectives of technology in government were improving the effectiveness of public administrators while increasing government productivity, e.g. the automation of mass transactions such as financial transactions using mainframe computers. After the Internet era, ICT is increasingly related to the way citizens and businesses interact with the government (non-tool view of technology). The next layer is an ICT-triggered change in the government on four layers: organisational, structural, managerial and procedural, as proposed by Gong and Janssen (2012). In parallel, agile methods, here defined as fast and responsive processes (Martini & Bosch, 2016), are introduced both for software development (e.g. Mergel, 2016) and for Open Government Data (e.g. Mcbride, Aavik, Kalvet, & Krimmer, 2018).

Nonetheless, most e-Government researchers agree that the concept of e-Government is vague as well (e.g., Aldrich, Bertot, & McClure, 2002; Bretschneider, 2003; Yildiz, 2007). There is no single, widely agreed upon definition (Halchin, 2004). In the current paper, e-Government is defined as “the use of ICTs, and particularly the Internet, as a tool to achieve better government” (OECD, 2003). The impact of e-Government at the broadest level is simply better government by enabling better policy outcomes, higher quality services, greater engagement with citizens and by improving other key outputs identified (Field, Muller, & Lau, 2003). A related concept is e-Governance which refers to the whole system involved in managing a society, including beside government institutions, also companies and voluntary organisations and citizens (Grönlund & Horan, 2005).

Similarly, digital government can be defined as the use of IT applications in government (Luna-Reyes et al., 2016). Yet by and large, and seeing how the word is actually used, it is just a newer, more fashionable synonym for e-Government. Adaptive governance originally stems from socio-ecological systems that can respond to rapid changes in the environment (Wang, Medaglia, & Zheng, 2017). With no agreed-upon definition, there seems to be consensus regarding the main characteristics of adaptive governance, introduced by Janssen and van der Voort (2016): decentralised decision-making, mobilisation of capabilities (internal/external), wider participation and adjustments to deal with uncertainty. Wang et al. (2017) introduced three types of adaptive governance: polycentric, agile and organic, in other words, claiming that agile governance is a part of adaptive governance. In the ICT domain, agile software development aims to make development processes fast and responsive, minimising the time between identification of a customer need and delivering a solution (Martini & Bosch, 2016).

The concepts of digital government, adaptive governance and agile governance are usually (if often implicitly) interlinked but not the same (see Fig. 1). This paper assumes that digital governance is the broadest concept while agile government the most narrow, although this is debatable. Zhang and Kim (2016) point out that digital government's

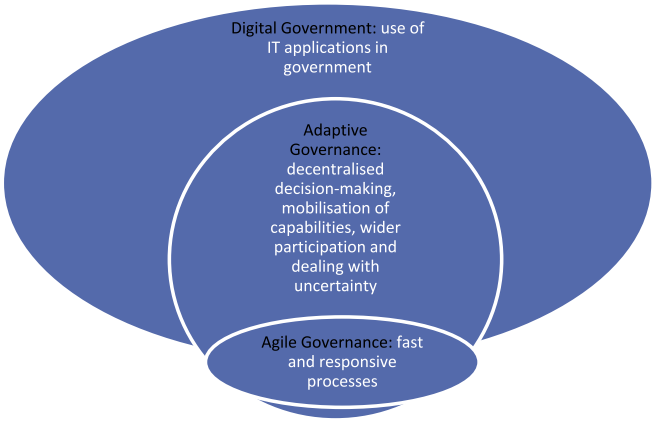

Fig. 1. Main concepts: digital government, adaptive and agile governance.

causal relationships are troubled by uncertainty. In reality, wicked problems also stand for adaptive and agile governance and largely influence their relationships. In other words, Fig. 1 is not static but dynamic and can be redrawn numerous times, with different scales and from different standpoints.

It has become commonplace to argue, according to authors such as Janowski, Pardo, and Davies (2012), that governments can no longer achieve public goals by themselves alone, but that they have to work through networks of state and non-state. Arguably, this was never different, and already Max Weber regards this as a truism (Kattel, Drechsler & Karo, 2018), the argument has currently entered the front of the state once again, and it is true that ICTs help to connect actors to the network and to build, manage and sustain relationships between them (Janowski et al., 2012).

One often associates the concept of “traditional” administration with Max Weber (although now, functionally it is NPM that is traditional). But the genesis of today's Public Administration is perhaps best described by Pollitt and Bouckaert (2017), as the result of a process like geological sedimentation, where new layers overlie but do not wash away the previous one. They describe a long list of different models and approaches to public sector management, including for our post-NPM time such ‘paradigmettes’ as joined-up government/whole of government, the Neo-Weberian State, and not least, the PV.

The question is how all this fits into the understanding of e-Government. In the literature, it has been often linked to the NPM, as claimed by many e-Government scholars (Alford & Hughes, 2008; Allen, Juillet, Paquet, & Roy, 2001; Cordella, 2007; Cordella & Bonina, 2012; Heeks, 2002; Yıldız & Saylam, 2013). The classic piece by Dunleavy, Patrick; Margetts, Helen; Bastow, Simon; Tinkler (2006) was instrumental in debunking this myth, however, and since then, an increasing number of scholars (Alford & Hughes, 2008; Cordella & Bonina, 2012; Yıldız & Saylam, 2013) argue for using specifically PV instead.

NPM is often presented as a “one-size fits all” view of the world (Alford & Hughes, 2008; Hood, 1991) that should not be suggested for local governments (Matheus & Janssen, 2017). Alford and Hughes (2008) propose that the next movement in public management should be “Public Value Pragmatism,” which is principle-bound regarding ends but pragmatic in means, in contrast to NPM which is seen as universal. Cordella and Bonina (2012) introduce PV as a paradigm shift from NPM to address ICT-enabled public sector reforms. According to them, this would change the weight of analysis of ICT implementation in the public sector from merely direct economic and management relationships in the direction to collective preferences (see also Table 1). In principle, PV can prioritise effective and efficient management practices but it may also focus on values of fairness, equality and just society.