

Governance in Smart Cities: A Comparison of Practitioners' Perceptions and Prior Research

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ABSTRACT

Many of the challenges to be faced by smart cities surpass the capacities, capabilities, and reaches of their traditional institutions and their classical processes of governing, and therefore new and innovative forms of governance are needed to meet these challenges. According to the network governance literature, governance models in public administrations can be categorized through the identification and analysis of some main dimensions that govern in the way of managing the city by governments. Based on prior research and on the perception of city practitioners in European smart cities, this paper seeks to analyze the relevance of main dimensions of governance models in smart cities as well as to identify differences among prior research and perceptions of practitioners regarding these dimensions. Results could shed some light regarding new future research on efficient patterns of governance models within smart cities.

KEYWORDS

Dimensions, Network Governance Literature, Smart Cities, Smart Governance

INTRODUCTION

The rapid transition to a highly urbanized population has transformed urban areas into complex social ecosystems, where ensuring sustainable development and quality of life are important concerns. Urban areas drive economic development and deliver many public services, such as education, healthcare and transportation; but they are also associated with environmental degradation, congestion, social exclusion, urban sprawl or economic decline (UN, 2016; European Commission, 2010; Alonso et al., 2017).

As a result, new forms of city management have taken place with the aim at working with civil societies in order to co-create solutions to these local challenges and city governments have developed strategies that rely on sophisticated information technologies (ICTs) in creative and innovative ways (European Parliament, 2014; Centre for Cities, 2014). Making cities smarter is something that nobody can be opposed to if it results in more open and more effective solutions to a broad range of societal problems. So, governments in smart cities are using the ICTs to improve political participation, implement public policies or providing public sector services. In this regard, many cities worldwide are adopting data science labs as key tools of urban governance. Others have focused their efforts in managing and regulating the city via information and analytic systems, which promotes a technocratic mode of urban governance –technocratic governance- (Kitchin, 2014). In any case, this use of new technologies is thought to have the potential to transform governance (Meijer et al., 2012), and therefore new and innovative forms of governance are needed (Innes & Booher, 2010).

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This new governance model for smart cities is what has been called as “smart governance” (Giffinger et al., 2007). Indeed, the concept of smart governance is used in this paper to describe the development of new forms of governance in cities labelled as “smart” as a result of their smart potential. This new form of governance cannot be only focused on a technocratic view of governance, because it is highly narrow in scope and reductionist and functionalist in approach and failing to take account of the wider effects of culture, politics, policy, governance and capital that shape city life and how it unfolds (Kitchin, 2014). By contrast, this governance model fits well within the public management perspective (Torfing, 2012) and it makes to think in the idea of the wider debate about decentralization of governance in the information age (Giffinger et al., 2007) and in another way of communication, interaction and provision of public sector services (Giffinger et al., 2007). Under this framework, solving societal problems is not merely a question of developing algorithms, ICTs or good policies for managing the city but much more a managerial question of organizing strong collaborations between government and other stakeholders (Torfing, 2012), which are strong into a smart city (Rodríguez, 2015a).

Therefore, governments in smart cities are called to play a key role in promoting and developing smart cities, using ICTs in creating interactive, participatory and information-based urban environments (Băţăgan, 2011), as well as in improving public services and the functioning of the administration (Deakin, 2012). However, governance within smart city contexts is often complex and governments are not always familiar with the options that this new position offers. Governments are expected to work more with networks in which they have less authority, while at the same time they are increasingly held accountable for performance and improved outcomes (Span et al., 2012). In this regard, the role of management is critical for effective network governance, especially regarding the handling of tensions inherent in each governance form (Provan & Kenis, 2008).

Based on the network governance literature (Kooiman, 2003; Kooiman et al., 2008) and in the co-production literature (Span et al., 2011), governance models in public administrations are patterns of forms of governance that can be categorized through the identification and analysis of some main dimensions that govern in the way of managing the city by governments. The adoption of different alternatives or positions in these governance dimensions could lead to different patterns in governing smart cities (European Parliament, 2014).

Nonetheless, despite the increasingly studies on smart cities recently published in international leading journals or books, to date, studies on smart governance have lacked consensus on approach to governance in smart cities. Also, there has not been a systematic effort to bring together what has been learned by academic research (theoretical and practical experiences) and real data about perceptions of relevant practitioners even though integrating theory, practice and real data has been identified as a key action for advancing public administration (Denhardt, 2011).

So, additional research is needed to advance public management research and knowledge about the various manners in which local governments can manage their network under ICTs environment (Van Slyke, 2007). In fact, variety in how cities are using ICTs and are being governed is necessary to construct sociotechnical theories of action appropriate for wicked problems (Goodspeed, 2015). This way, it could be interesting to analyze some main dimensions of governance models (see Table 1) and their presence in both prior theoretical and empirical research. With this analysis, governments could be aware of the possibilities they have in adopting a governance model into a smart city and the implications it has into their daily management of the city.

Therefore, this paper aims to analyze the relevance of these dimensions in the governance of smart cities based on academics and practitioners’ underpinnings. To achieve this aim, the paper will perform a literature review to make an overview of prior research to answer the following research questions:

1. **RQ1.** What relevance do these dimensions of governance models have in the prior literature regarding smart cities?

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