

Chapter 52

Citizen Participation in Smart Sustainable Cities

Ezgi Seçkiner Bingöl

Nigde Omer Halisdemir University, Turkey

ABSTRACT

Citizen participation and sustainability are two main concepts used in the definitions in the smart city literature. Citizen participation is often used within the context of improving good governance in smart cities. Its relationship with sustainability is seldomly discussed. This study analyses the relationship between the concepts of smart city, smart sustainable city, and citizen participation, and discusses how citizen participation is shaped in smart sustainable cities. In light of this analysis, seven types of citizen participation mechanisms are studied. The findings of the study reveal that sustainability in smart cities is only considered within the framework of environmental matters, while citizen participation is only considered as a mechanism aimed at supporting good governance. The study recommends using these participation mechanisms to highlight other aspects of sustainability such as securing comprehensiveness, alleviating poverty, promoting gender equality and to focus on other aspects of citizen participation such as real participation and democratic effectiveness.

INTRODUCTION

This study examines how citizen participation is shaped within the scope of the smart sustainable city phenomenon. The triad made up of citizen participation, smart city, and sustainability is analysed in detail in light of the following research questions:

- What is the relationship between smart cities and smart sustainable cities?
- What is the link between sustainability and citizen participation?
- What is the significance of citizen participation for smart sustainable cities?
- How should citizens be involved in smart city services and city management? How can citizens be involved in participation processes in real terms?

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- Which citizen participation mechanisms are suitable for smart cities? How these mechanisms should be utilised to ensure citizen participation and sustainability?

In the first part of this study, the smart sustainable city concept is examined by conducting a literature review. The concept of sustainable development and the understandings of sustainability of smart cities are compared, and the elements on which smart cities focus in terms of sustainability are presented. In this part of the study, the relationship between smart sustainable cities and smart cities is explained. In the second part of the study, conceptual definitions regarding citizen participation are addressed, and citizen participation and sustainability are studied in the context of smart cities and urban inclusion. In the third part, seven types of citizen participation mechanisms that might be feasible to implement in smart sustainable cities are reviewed in terms of their contribution to sustainability and convenience in smart cities, recommendations on how these mechanisms should be operated are listed under the conclusions and recommendations, and an overall summary of the findings of the study and inferences on how citizen participation will be shaped in smart cities is presented.

BACKGROUND

Citizen participation is a key element of various definitions for smart cities. Several studies in the literature assert that citizens are the most significant actors of smart cities (Lim et al., 2018; Hollands, 2008; Craglia & Granner, 2014). Essential components of smart cities are said to be technology, governance, economy, environment and actions of smart and well-informed independent citizens (Giffinger et al., 2007; Yigitcanlar & Baum, 2008; Caragliu, 2009; Gudes et al., 2010). Some European Commission programs like FP7-ICT and CIP ICT-PSP characterise smart cities as citizen-centric open innovation environments (Schaffers et al., 2011, p. 431).

Koseoglu and Demirci (2018, p. 40) define smart cities as those which uses solutions provided by information and communication technologies to design cities, provide local services, and develop policies based on principles of participation, openness, and sustainability with a focus on people. Smart city, then, is a concept that aims at ensuring sustainability and liveability to accelerate bureaucratic processes by combining information and communication technologies and Web 2.0 technologies with other organizational and planning efforts, and that introduces innovative solutions to address city-specific problems (Topetta, 2010). Smart city is an umbrella concept that incorporates smart urbanism, smart economy, smart and sustainable environment, smart technology, smart energy, smart mobility, smart healthcare, and a range of related subtopics (Jasrotia, 2018, p. 46).

It can be argued that smart sustainable city concept is a broad interpretation of “smart city” concept (see *virtual city and digital city in Graham & Aurigi, 1997*); *information city, intelligent city, smart city* (Lee et al., 2014; Anthopoulos, 2017) that became popular in the literature by the end of 1990’s. The concept of smart sustainable city came about as a response to growing criticism on the sole focus of ‘smart cities’ on its technology dimension, despite the need for smart city practices to comprehensively address environmental, humanitarian, social and cultural dimensions as well. Do the definitions for smart cities really cover all these dimensions, nonetheless? An increasing emphasis on the concepts of ‘smart people’ and citizen participation as substantial elements of smart sustainable cities can be observed recently (Hollands, 2008; Craglia & Granner, 2014; Castelnovo et al., 2015; Lim et al., 2018; Dinc &

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