


Chapter 8

Smart Mobility in the Mediterranean Cities: The Externality Effects

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ABSTRACT

Smart mobility is linked to the ability to create transport efficiency in cities. Indeed, the increase of smart mobility within cities has a positive impact on citizens. The ability to create new projects related to smart mobility and its ability to involve the ecosystem, especially citizens, is part of urban planning in many countries and carries out this work. This study presents the urban projects in some Mediterranean cities and their impact on the externalities of smart mobility. The results show that the deployment of smart mobility has a positive impact on urban development and there is remarkable progress in connecting citizens, especially in cities where smart mobility is the result of investments in sustainable development. Based on the latest projects in smart cities in the Mediterranean and the Sustainable Development Goals for 2030, the study will help to evaluate urban projects but also to understand how cities increase the well-being of citizens.

INTRODUCTION

Nowadays, cities can be characterized as places of great change, facing challenges at multiple levels (Pego and Matos, 2019). Smart cities use technologies and data to increase efficiency, economic development, sustainability and quality of life for citizens in urban areas (Lai et al., 2020:290). A smart city consists of smart infrastructure, smart administration, smart policy, smart transportation, smart healthcare, smart agriculture, smart education, smart economy, smart environment, smart industry, smart energy, and smart feedback mechanisms that help to truly implement the concept of smart city ecosystem (Ahad et al., 2020:59). Smart city is a new and innovative concept due to the complexity of urban environment and the new challenges related to mobility, population, natural environment and other social aspects

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(NEMPANU et al., 2016:427). The theme of smart cities is the development of a wide range of activities to optimize the relationship between citizens and services. This means that smart cities are equipped with capacities to satisfy citizens. The smart city idea refers to new ways of organizing urban functions and urban life, which are assumed to shift production and consumption from global to local, production from competitive to collaborative, and the economy from a shareholder to a multiple stakeholder perspective (Öberg et al., 2017). In another sense, the performance of a city today depends not only on the endowment of hard infrastructure (physical capital), but increasingly also on the availability and quality of knowledge communication and social infrastructure (human and social capital) (Caragliu et al., 2011:65). In recent decades, the Urban Living Labs approach, in conjunction with the Smart City concept, has emerged as a way to conduct practical research with the various urban actors involved in co-innovation activities to address a wide range of social, economic, environmental and technological challenges (Pego and Matos, 2019). The indicators that emerge from the concept of smart city are: Demography, Social Aspects, Economic Aspects, Civic Engagement, Training and Education, Environment, Travel and Transport, Information Society, Culture and Leisure (Caragliu et al., 2011). Mobility in cities has become an important issue facing new challenges through the application of technology, digital information, multimodal mobility and infrastructure (Aletà et al., 2017). This means that there are mobility solutions for smart cities, namely reducing mobility costs, reducing air pollution, reducing noise pollution, reducing traffic congestion, increasing safety and improving the speed of mobility (Orlowski and Romanowska, 2019:118). Considering the emerging private-public initiatives in smart cities, the proposal of this chapter is to present the results of research on the impact of smart mobility projects on the innovation and development of smart cities in relation to the concepts of digital services, technologies, transport efficiency and intermodal mobility.

In this research, the following question was asked: How can the mobility projects promote the externalities in smart cities?

The research question was answered by achieving the research objectives:

1. consolidating the concepts relevant to the study based on a literature review on smart cities and smart mobility.
2. identifying the role of mobility projects and their impact in smart cities.
3. identification and selection of some mobility projects to be included in the case study.
4. analyse the externalities of mobility projects in terms of citizen wellbeing, mobility labs, mobility equity and low carbon emissions.

This chapter is divided into five sections, including this introduction to the research questions and main objectives. The second section, “Background,” introduces and discusses the concepts relevant to this study. The third section, “Methodology”, addresses the methodology used to achieve the research objectives and the strategies used to select the Mediterranean cities: Tirana (Albania); Dubrovnik (Kroatia); Paphos (Cyprus); Cairo- Smart city New Cairo (Egypt); Nantes (France); Trikala (Greece); Hadera (Israel); Valetta (Italy); BeitMisk (Lebanon); Tripoli (Libya); Kalkara (Malta); Casablanca (Morocco); Monaco (Monaco); Ljubljana (Slovenia); Barcelona (Spain); Sfax (Tunisia); Istanbul (Turkey). The results of the content analysis of the smart cities and their implications for the smart projects are summarized and discussed. Finally, future research and conclusions are presented in the fourth and fifth sections.

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