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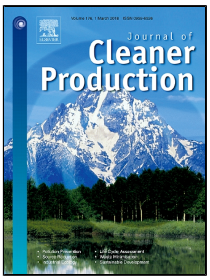

Smart City and Quality of Life: citizens' perception in a Brazilian case study

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Smart City and Quality of Life: citizens' perception in a Brazilian case study

Smart cities attract considerable attention from academics and urban planners mainly in the context of urban development policies. Based on technological innovations, smart cities are complex ecosystems that have the potential to improve urban livability, workability and sustainability through a network of people, processes and data. However, according to academics and urban planners the smart city concept favors technological products and solutions over end users and their quality of life. This perspective calls for an integrated analysis approach that considers the smart city as an organic whole, which encompasses objective and subjective quality of life domains (QOL). This paper aimed to evaluate the perception of quality of life in a smart city and to analyze the main elements of citizens' satisfaction with their home city. The research analyzed the city of Curitiba, in Southern Brazil, claimed to be a livable, green, and inclusive city and one of the ten smartest cities in the world. Interviews with 400 residents identified four main QOL domains: socio-structural relationships, environmental well-being, material well-being and community integration. The respondents' overall perception revealed their low satisfaction with the main elements that characterize Curitiba as a smart city. This finding calls for a better understanding of the planning and management of smart cities in conjunction with the QOL elements and their effects on citizens. The research provides some contributions to understand the interconnected facets of QOL domains in the Smart Cities context. From a smart city perspective, the research concludes that success within the domain of smart living can be achieved by providing the four factors revealed by the analysis. According to our results, meeting these criteria of success would improve citizen's quality of life, creating a stronger community within the city. Finally, the study provides relevant information for social researchers and urban planners by identifying factors that influence QOL perceptions and providing elements for political and academic debate.

Keywords: Smart City, Quality of Life, Citizens' perception, Curitiba.

1. Introduction

The 1987 Brundtland Commission's Report, 'Our Common Future', of the World Commission on Environment and Development (WCED) unveiled the need to break with a development paradigm focussed exclusively on economic aspects. The document discusses actions and strategies for sustainable development that ensure economic, social and environmental balance and equity (WCED, 2016).

The United Nations warns about the deadly clash between growing urbanization and climate change and unprecedented natural disasters caused by the huge impact of cities on the environment. The main challenge is that cities must act immediately to take measures to reduce greenhouse gas emissions and promote more environmentally sustainable and fair urban development (UNEP, 2016). Cities occupy only 4% of the Earth's surface, but consume 67% of energy and account for 70% of greenhouse gas (GHG) emissions (European Union, 2011).

Urbanization is expected to continue with around 60% of world population living in cities, in 2030 (UNEP, 2014). Almost all future population growth will be in urban areas – usually in expansion of slums (UNDESA, 2015) -, which enhance the key role of cities in addressing climate change.