


Chapter 1

A Triple Bottom Line Analysis of the Smart Cities Projects in GCC Countries

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ABSTRACT

Cities are tackling their economic, social, and environmental challenges through smart city solutions. To demonstrate that these solutions achieve the desired impact, an indicator-based assessment system is needed. This chapter presents the process of developing CITYkeys performance measurement systems for target setting and monitoring. This European smart city indicator framework was developed by analyzing cities' needs, existing indicators, and gaps. The current research sets out to review several indicators, KPI, and performance measurements, along other indicator frameworks on the case studies involving the conceptualisation, development, and monitoring of smart cities in Lebanon and in Malta for comparative purposes. For this purpose, a mixed methods approach was adopted, whereby both interviews and structured surveys were used to collect primary data pertaining to the analyses of the respectively investigated smart cities.

INTRODUCTION

Agenda 2030 was a movement cautioned by the United Nations in 2015, which began with Kofi Anan's initiative. Now, we consider that the main aim is to reach to the 2030 goals in terms of Sustainable de-

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velopment, based on specific synergies among them and whether attaining them is possible, or feasible in the current state (Pradhan et al., 2017; Youness, 2017, Mathers & Deonandan, 2018). Although the SDGs developed from the MDGs (millennium development goals), the sustainable development goals aim to reach sustainability by the next decade, and one way to do this is through introducing «smart cities» (Bosch et al., 2017, Pradhan et al., 2017, Youness, 2017, Mathers & Deonandan, 2018). They refer to novel ways of organizing city functions and urban life, which believed to move production and consumption from global to local, manufacturing from competitive to collaborative, and from business from a shareholder to a multiple-stakeholder point of view. (Bosch et al., 2017)

Most scholars defined «smart» as «attainable». This means utilizing all accessible resources and technological means in a smart and synchronized way to develop urban centers that are incorporated, inhabitable, and maintainable (Bosch et al., 2017). One of the main objectives of this study, through SDG 11, is to guide the GCC and cities in attaining sustainability, since presently, the capacity in aiding in running smart cities worldwide exists. Like the ECCP that launched the Mediterranean Smart Cities adopted a strategy in allocating resources, knowhow, and practice. As a result, this is a calculated cooperation generated as a «Smart Planning Forum» aiming to work for «sustainable communities» in the Region, based on working towards the SDGs they need to work on to attain this stage (Bosch et al., 2017).

Best practices in several countries in Europe and the Middle East, including GCC countries share some practices related to economic development in states such as Italy, Spain, Hungary, Finland, Lebanon, Turkey and Jordan (Okoye, 2017). Five other countries, excluding Romania could also be investigated in the future for the application of such practices, inasmuch as they are tied to SDGs. This chapter will include some recent investigations on these through general overviews on these practices through the available literature, and tie them to the SDGs (Pradhan et al., 2017; Youness, 2017; Mathers & Deonandan, 2018).

As our study focuses on the GCC cities, we choose the Arabian Peninsula as our study ground in selecting several potential candidates like Doha (Qatar), Dubai, Abu Dhabi, Sharja or Al Ain (UAE), for the benefit of developing novel concepts of urbanization in the Arab World (Digital UAE, 2021). We will document on how successful European cities in became were in becoming sustainable, and how recently, through comparison to Lebanon and Malta or in other cities in the region, this concept became «en-vogue» (Bosch et al., 2017).

In order to pursue our study to completion, the following three hypotheses, derived from the seven aforesaid questions, are as follows:

H0: No relationships between smart city development and lifestyle enhancement

H1: Positive relationships between smart city development and lifestyle enhancement

H2: Negative relationships between smart city development and lifestyle enhancement

LITERATURE REVIEW

A *Smart City* is a city that efficiently mobilizes and uses available resources for propel, planet, prosperity and governance. *People*: Improving the quality of life of its inhabitants, commuting workers students, and other visitors. *Planet*: Improving its resource efficiency, decreasing its pressure on the environment and increasing resiliency. *Prosperity*: Building an innovation-driven and green economy. *Governance*: Fostering a well-developed local democracy. (Bosch et al., 2017). Smart cities, however were an old concept, as it started in the twentieth Century (Geddes, 1915)

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