

Compiling the Criteria and indicators of Smart City (Case Study: The Third Zone of Isfahan)

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Extended Abstract

1. Introduction

Nowadays the world's population is at an unprecedented level of urbanization. Most of the problems start with the tension of growing population. The rapid increase of population puts a great pressure on cities, especially metropolises. It endangers the needs of future generations and results in an increasing demand for services beyond the city's ability and capacity. Researchers and urban and regional planners in the West have proposed smart city theory in order to guide the use of electronic communication tools to solve urban problems by expanding the concept of electronic city.

City planners and urban managers would assume the idea of smart city as a new approach in urban planning and an unmatched solution to urban problems. Development indicators are an effective factor in targeting, planning and evaluating urban plans. The gap in identifying the development indicators has led to the evaluation of urban plans made without ensuring their validity. According to the extensive studies in the field of urban development, the regional dimension has not received much attention. The lack of smart city indices in line with the indigenous culture of the inhabitants which enables the spatial analysis of regional development is essential. Therefore, the present study is an attempt to identify the smart city criteria and indicators appropriate to the cultural conditions of Isfahan City (esp. the Third

Zone) in order to provide corrective actions for smart city.

2. Review of Literature

With regard to smart city indicators and their impacts on the process of the development of zones and the context to build a smart city, little research in this area has been done at the national level, while a great deal of various research has been carried out at the international level. Fallah and Esteghlal (2015) in an article entitled "A Review of Concepts, Indicators and Criteria of Smart City" believe that the construction of smart city is emerging to alleviate the problems generated by rapid urbanization. Eight important elements of smart cities are identified in the following: governance, energy, construction, transportation, infrastructure, technology, health care, smart citizen. This cannot be achieved without considering other influential factors such as culture. To rank smart cities in Europe, Giffinger (2007) measures seventy European cities based on 6 main dimensions, 31 criteria and 70 indicators.

3. Method

In this study, first, by examining the literature on different topics and perspectives in the field of smart city and global experiences, 85 indicators were developed in six dimensions of smart people, smart economy, smart living, smart mobility, smart government and smart environment. To check the cultural

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conformity of the indices and to ensure that the indices are selected in the best way for measurement through two indices called the content validity relative ratio (CVR) and the content validity index (CVI), which were judged by 30 experts (Isfahan Municipality of the Third Zone, ICT experts, Isfahan traffic and management experts, Deputy Research and Information Technology experts, Isfahan Deputy Research and Studies Experts, and professors). Of all the indicators based on the experts, then approximately 26 indicators were judged by the residents of the Third Zone. Finally, the mean scores of the two groups were analyzed using the statistical test of comparing the mean of two independent samples.

4. Results and Discussion n

In this study, 85 indicators were identified for analysis and evaluation based on six dimensions (people, mobility, governance, living, economics and environment) which have been frequently used in numerous sources; The CVR and CVI indices were evaluated and judged by experts and the degree of residents willingness of Isfahan third zone was evaluated, regarding some indices for cultural adaptation. From this point of view, among the indicators of smart economy, the index "percentage of the number of companies providing electronic services" has the highest rank and in the dimension of smart movement the highest rank is related to the index of "number of

fixed and wireless broadband subscriptions". From the dimension of smart people, indices of "citizens' awareness of urban issues" and "percentage of households with access to smart computers and phones" have the highest ranks, indicating that the most concern of the professionals is to involve people in urban issues and ICT skills. In terms of governance, the highest value is related to the index of "equipping the area with technology infrastructure", whereas the index of "residents' satisfaction with bandwidth quality" is the highest value from the dimension of intelligent life. Finally, the consensus among experts and residents using the test of mean comparison for two independent samples showed consensus, and 59 indicators were identified as appropriate indices.

5. Conclusion

The results of the study indicate that there is equality between the views of the two groups, and 59 out of 85 indicators were identified as suitable. Therefore, it is suggested that benchmarking studies and indices be carried out for other less developed, developed and underdeveloped areas of Isfahan so that we can achieve sustainability goals in a smart way in accordance with the conditions of each zone with careful planning.

Keywords: Development Indicators, Electronic City, Intelligent City, Smart City, Third Zone of Esfahan City

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