Smartening strategies of Tehran Book Garden through Quantitative Strategic Planning Model (QSPM)

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Introduction

It is predicted that the rate of urbanization will increase to more than 70% of the world's population in 2050 (Nations, 2012). Currently, cities consume 75% of global energy and produce a large amount of waste (Ferraro & et al, 2013). Smart cities have risen due to the intelligent use of digital information, for example, in areas such as human health, transportation, energy consumption, education, knowledge transfer, and urban governance. (Trindade & et al, 2017).

Tehran Book Garden is the largest collection of books and scientific entertainment in the country, which is built on two floors with an area of 65,000 square meters and an area of 110,000 square meters in the lands of Abbas Abad.

The existence of such an important urban space in the center of the metropolis of Tehran and with its high number of visitors, the role and importance of planning in line with the vision of Smart Tehran, which achieves the five strategies of sustainable urban development, guiding innovation, citizen satisfaction, promoting participation, transparency of management and service systems. It is efficient and makes it bolder.

The current research, with the approach of making smart, tries to provide measures to make the book garden of Tehran in the cultural-tourism area of Abbas Abad, through the method of quantitative strategic planning (QSPM), which brings a favorable urban space for the citizens, and also with The principles of sustainable development are also harmonized. According to the mentioned goal, the main question for the research is what the strategies of Tehran Book Garden include and how they are prioritized. Also, during the research, the international criteria and indicators of the smart city are also discussed.

Methodology

The current research is descriptive-analytical in nature and practical in terms of purpose. The historicity of the research topic on one hand and its emphasis on case study on the other hand required that the combined method of library and field studies be used in compiling the required sources and information. Therefore, a part of the information was obtained through documentary methods and the study of Iranian-Islamic historical sources, and another part of the required information was obtained through field studies and through local observations and interviews with experts.

Based on this, after gaining knowledge of the interior and exterior of the Tehran Book Garden, the main research method, which is based on the use of quantitative strategic planning model, through expert opinions, points were given to the existing matrices and the three stages of information entry , adaptation and decision-making, which includes

matrices of evaluation of external factors (EEE), evaluation of internal factors (IFE) in the first stage, matrices (SWOT) and evaluation of internal and external factors (IE) in the second stage and in the last stage of the strategic planning matrix Quantitative (QSPM) was completed. After adopting and choosing the area of action and strategies

Appropriately, in the second stage, finally, the obtained strategies are scored and based on this, the prioritization of the strategies for making Tehran Book Garden smart is presented. In the said matrix, the information provided in the first stage is used to be able to evaluate and judge the types of applicable strategies that have been identified in the second stage, in an objective manner and without applying personal opinion. Quantitative strategic planning matrix specifies the relative attractiveness of various strategies. In this way, it provides an objective basis (without applying personal opinion) to choose specific strategies.

Results and Discussion

In the first stage, in the evaluation matrices of internal and external factors, each of the weaknesses, strengths, opportunities and threats collected through field surveys was given a weight or importance coefficient and a score by an expert.

In the second stage, four strategies of So, ST, WO, WT, which include 13 strategies, were obtained through the row-by-row observation of the cells of the SWOT matrix. In the next step of this stage, by crossing the dividing point of the sum of the scores of the two matrices of internal factors evaluation and external factors evaluation, which scored 2.743 and 2.726, respectively, it is determined that this divorce point is within the range of the fifth figure "Determining the type of "Strategy" is said to indicate the choice of conservative strategies.

In fact, at this stage, the types of implementation and realizable strategies were selected according to the conditions of the book garden.

In the last stage of the quantitative strategic planning matrix (QSPM), to each of the strategies selected in the previous stage (determining the strategic area and action), based on the factors raised in the matrix of strengths, weaknesses, opportunities and threats, and based on The degree of effectiveness/influence and realizability of that factor was given a score called attractiveness score by the expert. As a result of this research, the development strategy of comprehensive tourism and welfare systems with a score of 4.569 was obtained and selected as the most important and effective strategy to improve the intelligence of Tehran Book Garden. In the next place is the strategy of increasing diverse and smart transportation methods with a score of 3.511. In order, the next strategies for making the book garden more intelligent, from more to less important, the smart parking program, increasing the use of information and guide programs, increasing welfare services in the open space, and finally developing cooperative and exchange systems were obtained and determined.

Conclusion

In this research, the main purpose of which is to present smart strategies for building the Tehran Book Garden, a kind of strategic planning called quantitative strategic planning or QSPM model for short was carried out. In this research, the concepts, definitions, principles and dimensions of the smart city were first studied as the main approach in the goal of making smart. In the next step, the findings of the research, such

as the recognition of the location and characteristics of the study area and the knowledge of internal factors (strengths and weaknesses of the book garden) and external factors (opportunities and threats of the book garden) and then the formation of three-stage matrices in the hand-printed method came and was examined.

Based on this, the strategies of "developing comprehensive tourism and welfare systems" and "increasing diverse and smart transportation methods" were selected as the first priority and the most important and effective strategies for making Tehran Book Garden smart with 4.569 and 3.511 points, respectively. Also, the strategies of "smart parking program" and "increasing the use of information and guide programs" as the second priority, and finally the strategies of "increasing outdoor welfare services" and "developing cooperative and exchange systems" as the third priority of smartening strategies The book garden was obtained.

In this research, the presented strategies cover the six dimensions of the smart city, and therefore, this research can be used in order to achieve the goal of making smart in Tehran Book Garden.

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