

## analysis of effective factors in the inclusion of Tabriz metropolis

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### Introduction

Inclusive city approach seeks to increase citizens' access to urban services and infrastructure through targeted and accessible investments.

The city of Tabriz facing a major challenge in terms of the three basic dimensions of the inclusive city (spatial, social and economic inclusion); Because access to affordable infrastructure, land and housing (spatial dimension), the right to the city and participation in the urban management process (social dimension) and access to equal opportunities has become a major issue for urban development managers. Therefore, considering the issues and problems raised, the present study seeks to identify the factors affecting the inclusion of the city of Tabriz, to level the ten regions in terms of indicators.

### Data and Method

The research method is descriptive-analytical. The steps and methods of conducting research, can be summarized in three steps. In the first step, the Delphi method has been used to identify the key factors of inclusive city. In the second step, Vensim model was used to find the cause and effect relationship between key factors. Then, VIKOR model was used to identify areas in terms of having the characteristics of an inclusive city and their ranking.

### Results and Discussion

Based on the Delphi model, the key and influential factors on the formation of an inclusive city in the metropolis of Tabriz by thematic axes are presented in the table below. Table 1-1. Factors affecting the formation of an inclusive city in the metropolis of Tabriz

Axis

Key factors

Spatial scale

Local

National

International

Economic

Economic reconstruction

\*

Employment

\*

Informal employment

\*

Economic replacement

\*

Inclusive growth

\*

Distribution of opportunities

\*

Social

Migration

\*

Mobility

\*

access to information

\*

\*

Feeling of security

\*

Citizenship rights

\*

\*

Right to the city

\*

Smart City

\*

Sustainable Development

\*

\*

\*

Social Equality

\*

Quality of Life

\*

Social Justice

\*

\*

Environmental

Resilience

\*

\*

transportation planning

\*

Infrastructure

\*

\*

Environmental sustainability

\*

\*

Reduce water loss

\*

Make up for lost water

\*

Waste Management

\*

Natural quality of urban space

\*

Water saving

\*

Political

Governance

\*

\*

Innovation

\*

Stability

\*

\*

Political participation

\*

\*

political power

\*

\*

Spatial

Affordable housing

\*

Public spaces

\*

Spatial justice

\*

Land Use

\*

### **Source: Results of the author's studies**

After identifying the effective factors and confirming their relationship to the formation of the inclusive city, these factors were modeled through Vensim software. The purpose of this software is to find optimal solutions in different situations that need to be analyzed. This software has the ability to simulate the dynamic behavior of systems by identifying causal loops and finding leverage points. Then, in order to analyze the cause-and-effect relationship (factors extracted in the Delphi model), key factors were entered into the relevant software. Findings obtained from Vensim model, show the effectiveness of two factors of spatial justice and resilience in the inclusive development of Tabriz.

Then, in order to ranking the ten districts of Tabriz, the VIKOR model was used. Research indicators have been extracted according to the review of theoretical foundations and studies conducted in the field of inclusive city and urban sustainability. Therefore, after collecting the data and combining them, the raw data matrix of each criterion was defined in the study area. The decision matrix consists of options (rows) and criteria (columns). Our options are the ten districts of Tabriz metropolis and our criteria are 14 criteria that are given in the raw data table. The results of VIKOR model indicate that the comprehensiveness indicators of Tabriz city areas do not depend on the location of urban areas according to the north and south of the city. So that regions 9, 6, 2 and 8 have a good situation in terms of inclusive indicators. Areas 10, 1 and 4 are in the worst condition.

### **Conclusion**

The study of inclusive cities, requires study the city in all economic, social and spatial dimensions. Accordingly, the Delphi model was used to investigate the factors affecting the inclusiveness of the city of Tabriz. The results of the Delphi model show that the main factors of the inclusiveness of Tabriz city, can be divided into four main categories. Part of the factors is related to the economic situation of the city (or community) which includes economic growth, unemployment, land and housing prices and other economic and financial factors. Another part is related to structural issues, laws and regulations and general policies and even infrastructures and popular institutions that affect the formation of an inclusive city in the city of Tabriz. Social and environmental causes are other factors that affect the future of these developments. In order to identify the most influential factors and cause and effect relationships between factors, the Venice model was used. The results of Vensim model show that the two factors of resilience and spatial justice have the greatest impact on leading the city of Tabriz to inclusiveness. The results of VIKOR model show that the inclusive indicators of Tabriz city areas do not depend on the location of urban areas with respect to the north and south of the city. So that regions 9, 6, 2 and 8 have a good situation in terms of inclusive indicators and regions 10, 1 and 4 are in the worst condition.

**Keywords:** inclusive, inclusive city, Delphi model, VIKOR model, Tabriz city

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