

## Evaluation and Analysis of Dimensions and Components of Tabriz Metropolis Resiliency\*

### Abstract

Nowadays, cities and communities have been established in places where are exposed to different disasters or due to technological progress are exposed to man-made incidents. The view to disaster management and urban management has been changed from response and mitigation to resilience and bounce back. Resilience is a new concept which was introduced by Hollings (1979) in ecology. This concept is used in uncertainties and unknowns and based on the latest definition of resilience in National Academy (2012) resilience is "the ability to prepare and plan for, absorb, recover from or more successfully adapt to actual or potential adverse events".

The objective of this study is to assess and analyze the resilience of Tabriz. Therefore, based on seventeen relevant studies including previous authors study, influential factors in urban resiliency were classified and categorized into seven dimensions and their related components. The dimensions are mitigation, infrastructure, physical, environment, socio-cultural, economic, and management which has been tried to be complete and comprehensive to cover all aspect of urban resilience. Then, the questionnaire was designed and distributed between 40 scholars and expertise of relevant fields such as disaster management, urban planning, social and economic sciences, civil engineering and environment studies. Each items of questionnaire was included of five sections from 1 (completely vulnerable) to 5 (completely resilience). It was asked them to specify the condition of Tabriz in each component. Finally, obtained results of questionnaire was analyzed and evaluated by SPSS. It was clarified that the mean of resilience in hazard mitigation is 2.3, in infrastructural is 2.18, in structural and physical is 2, in economic is 1.94, in environment is 2.23, in socio-cultural is 2.8, and in management is 2.16. The most resilient components of mitigation dimension are education and drills, governance role, and risk and vulnerability assessment. For infrastructural dimension, they are critical infrastructure, lifelines and urban facilities. Neighborhood coherence, land use and urban fabrics are the most resilient components of physical dimension. In economy, value of property, occupation and salary, and economic stability are more resilient components. The most resilient component of environment is biodiversity. Political stability is resilient component of management dimension. It is noticeable the entire mean of resilience for Tabriz is 2.23 (less than 3) which indicates inappropriate resilience condition of Tabriz based on experts' perspectives. The most proper dimension also is socio-cultural. In this dimension, beliefs, family structure, ideology and religion, ethnicity, attachment sense, cultural capital and social capital are resilient components.

It is obvious that Tabriz can be introduced as a resilient city whenever all components and therefore all dimensions of defined and proposed model are in a proper and suitable condition. Although, Tabriz is in better condition of socio-cultural dimension, the results of other dimensions and also entire resilience of Tabriz state vulnerability of the city. Therefore, authorities and managers of city should not ignore improper condition of other dimensions and they should move towards resilience improvement.

---

\* This Article is from chapter of doctoral dissertation of the first author entitled: "Evaluation and Analysis of Social Dimensions and Components of Tabriz Metropolis Resiliency"- Faculty of Architecture and Urban Planning, Tabriz Islamic Art University.