Journal of
Urban Social Geography
ISSN 2645-7784
© Department of Geography, Shahid Bahonar University of Kerman, Iran.

Editing of indicators to assess spatial equilibrium in Iran

Mahmoodi Mohammad Abadi, T[a, 1]., Ramesht, M.H[b]., Pourkhosravani, M[c]

[a] PostDoc Researcher, Shahid Bahonar university of Kerman, Kerman, Iran.

[b] Professor at Faculty of Geography and Planning, University of Isfahan, Esfahan, Iran.

[c] Associate Professor, Department of Geography and Urban Planning, Shahid Bahonar University of Kerman, Kerman, Iran.

Research Article

Extended Abstract

Objective: Land use is part of the general concept of development, which seeks macro-planning in the country, taking into account human societies, ideal dimensions, environmental capabilities and the system of applied activities. In such a way as to realize the progress of the inhabitants in establishing a civilization based on the frameworks of cultural knowledge of our society. in other words Land use is a colection of concepts, approaches, methods and tools needed for achieve the desired organization and spatial structure. one of the goals of land use is to achieve regional balance and strengthen national identity in Iran's space system. In this regard, achieving a clear definition of the concept of spatial equilibrium and the concept of national identity is very important. For this purpose, in the first stage, a clear definition of the concepts of spatial equilibrium and national identity must be provided. In the next step, indicators should be developed that are capable of continuous monitoring. This capability enables us to modify, control, and repair decisions in the regional space system before we face a major problem. It should be noted that the specific term "spatial justice" was not widely used until a few decades ago. And it can not be considered a geographical term. Rather, the correct translation of the concept of justice in the field of geographical knowledge is called balance in space. Which has always been emphasized as a principle in space science. It should be noted that the specific term "spatial justice" was not widely used until a few decades ago. And it can not be considered a geographical term. Rather, the correct translation of the concept of justice in the field of geographical knowledge is called equilibrium in space. Which has always been emphasized as a principle in space science. An important issue in this study will be the answer to the question of what variables can be defined in terms of spatial equilibrium in land use. Also, how can its changes be monitored and what is the relationship between social identity and spatial memory in Iran? In other words, the present study tries to define variables that can reflect the spatial equilibrium based on new concepts in the field of landscaping, and by using territorial and cultural information and applying the principles of spatial arrangement. Then quantify these definitions by formulating mathematical relations, data processing, processing, modeling, and evaluation.

Methods: Iran is the convergence of two supercontinents and one subcontinent. And its surface forms have been formed due to its location in this convergence. For this reason, many land features of Iran, including plateau, for roughness, diversity of morphotectonic landscapes, climatic features, geomorphic forms, formation systems, amazing sedimentary and mineral differences, etc., experience of multiple mountain phases, pebbles The extent of the continental shelf, and the multiplicity of plant and animal communities, the diversity of social ecosystems, and the spatial distribution of human societies are related

[1] Corresponding author at: Shahid Bahonar University, Kerman, Iran, P.C: 761896598, E-mail address: taybeh.mahmoodi@gmal.com (Mahmoodi Mohammad Abadi, T).

English Extended Abstract Open access Fultex paper in persian: DOI: 10.22103/JUSG.2021.2042

to its structural position.

The subject of this research in the field of land use studies and its foundations is based on phenomenological method. The objectives of this study are more focused on the issue of space and tracking and recognizing the factors that shape the identity of this space and cause its balance or imbalance. Based on this, first, the factors that form the identity of Iranian social organizations are attempted. In the second stage, the above factors and variables are defined in a framework called the conceptual model of spatial equilibrium in the field of basic land use. In terms of fundamental land use, the spatial equilibrium model is attributed to a concept called Bio Identity Crystalloid Capacity (B.I.C.C). In this model, the vital identity of crystals includes two criteria, natural factors and characteristics, and social factors and characteristics. In general, the following steps were taken to conduct the research:

- Step 1: Define the components that make up the biological identity capacity of crystals. Step 2: Convert components to quantitative variables.
- Step 3: Define and determine the unit of variables using allometric method.
- Step 4: Develop mathematical logic and the relationship of variables in defining spatial equilibrium indices.
- Step 5: Define optimal standards for spatial equilibrium indices.

Results: Based on topographic maps of 1335, which are considered to be the oldest valid drawing documents about the water status of lakes and their extent, the equilibrium capacity was determined. Then a comparison was made with the quantitative components of 1395.

Physical context are summarized in environmental capacity. In other words, environmental capacity allometry is the ratio (VL / IA) or in other words the allometry of the surface of the glacial zone and the volume of the adjacent lake. Therefore, the equilibrium threshold of the environmental capacity component of each urban settlement is obtained using Equation (1).

$$\mathrm{IA} = -3\mathrm{e}-09(\mathrm{VL}^2) + 0/0087(\mathrm{VL}) + 74/674$$

The second group of factors that play a role in creating a Bio Identity Crystalloid are social factors, which is called Social Context, this factor is mentioned in the following three factors:

1- Time of Concentration
2- Form of the City Factor
3- Area Equilibrium Factor

The coefficient of time of concentration is calculated by the following equation:

$$TC = \frac{5}{3}L$$

$$L = {P_1}^{0.8}$$

$$L = \frac{(P_1)^{0.8} \times (S+1)^{0.7}}{(1900Y)^{0.5}}$$

$$S = \frac{1000}{CN} - 10$$

TC coefficient was extracted for thirteen cities in 1335. The two cities of Mashhad and Rey are in equilibrium in terms of access (time, 25-35 minutes) and other cities, since their access time is less than their equilibrium (less than 25 minutes), it is still possible to expand to the desired They have a range of equilibrium.

The Form of the City Factor shows the equilibrium of urban crystals in terms of geometric shape. And is calculated through the following equation.

English Extended Abstract Open access Fultex paper in persian: DOI: 10.22103/JUSG.2021.2042

$$FC = \frac{0.28(P_2)}{\sqrt{A}}$$

The results show that FC is not in equilibrium in any of the cities in the mentioned range and except for Kashan and Kerman cities where the value of this coefficient is beyond their equilibrium range, other cities can be expanded to reach this value.

Area-population equilibrium is the population capacity of cities with a cold civic identity. This coefficient is defined in terms of area and through Equation:

$$AE = \frac{2.14log(P_3)}{A^{0.3}}$$

After calculating the AE, in order to evaluate the status of organizational balance, the normal coefficient (AE) of Iranian cities in the period 1390 has been compared with the standard deviation of a city in the two periods of 1390 and 1335. In other words, a comparison and numerical evaluation of a city in relation to the total population of thirteen cities has been done.

Conclusion: The results of the research show that achieving the concept of spatial equilibrum and space identity can be defined and implemented through a complex eight-formula algorithm within the framework of two programs under a web-based processor; this allows digital comparisons of the two concepts in different regions of Iran. In other words, by developing these programs, it is possible to make an on-line evaluation for the extent to which developmental plans are implemented in the field of spatial equilibrum and their impact on social identities.

Keywords: Spatial Equilibrium, Access Coefficient, Shape Coefficient, Surface-Population Coefficient

Received: September 05, 2020 ***Reviewed:*** December 21, 2020 ***Accepted:*** March 07, 2021 ***Published online:*** March 21, 2021

Citation: Mahmoodi Mohammad Abadi, T., Ramesht, H.H., Pourkhosravani, M (2021). ***Editing of indicators to assess spatial equilibrium in Iran***. Journal of Urban Social Geography, 8(1), 267-286. **(*In Persian*)**

DOI: **10.22103/JUSG.2021.2042**

References:

Abazari Bashmi, M (1998). ***The dissolution of permanent marriage in Iran's civil law***. Tehran: Khayyam publication, 216 p. ***(in Persian)***

Asgari, A (2011). ***Space Statistics Analysis with ARC GIS***. Tehran: publication of Tehran Municipality's Information and Communication Technology Organization, 127 p. ***(in Persian)***

Asgharpur, M.J (2017). ***Multi-criteria decisions***. Tehran: Tehran University, 400 p. ***(in Persian)***

Azizi, M., Movahed, A., Sasanpour, F., Kordeh, N (2014). ***Analysis of Urban Poverty Situation (Case Study: Mahabad City)***. Quarterly of Sepehr Geographic Data, 23(90), pp. 60-69. ***(in Persian)***

Baharoglu., d., Kessides, ch (2002). ***Urban Poverty, A Sourcebook for Poverty Reduction Strategies***. Macroeconomic and Sectoral Approaches, 2(16), pp. 123-159. ***(In English)***

Baker, J (2009). ***Meeting the Challenge of Urban poverty and Slums***. The World Bank. ***(In English)***

Duclos, J.Y., Araar, A.k (2006). ***Poverty and equity: measurement, policy and estimation with DAD***. Springer Science & Business Media, New York, 394 p. ***(In English)***

English Extended Abstract Open access Fultex paper in persian: DOI: 10.22103/JUSG.2021.2042

Ebrahimi Salari, T., Mohajeri, M., Deldar, F (2014). ***Relation of Poverty Caused by Unemployment and Divorce***. First National Conference on Production, Distribution of Income and Economic Justice, Semnan, Iran. ***(in Persian)***

Falahi, M.A., Deldar, F (2016). ***Survey of Factors Affecting Divorce in Iranian Provinces with Emphasis on Economic Factors***. Quarterly of Cultural-Educational of Women and Family, 10(34), 135-154. ***(in Persian)***

Habibpour Gattabi, C., Safari Shali, R (2009). ***A Comprehensive Guide Application to SPSS in Surveying Research (Quantitative Data Analysis)***. Tehran: Motefakkeran, 864 p. ***(in Persian)***

Hellerstein, J.K., Morrill, M (2011). ***Booms, Busts and Divorce***. Journal of Economic Analysis & Policy, 11(1), pp. 1-26. ***(in English)***

Kamali, A (2004). ***Women Double Poverty***. Quarterly of Social Welfare, 12(3), pp. 181-201. ***(in Persian)***

Moser, C., Gate, M (1996). ***House and Helen Cireia***. Working Paper, No.5, Washington, D.C.

Nasiri, M (2004). ***Poverty and Geography of Divorce in Tehran city***. Women's Strategic Studies (Former Women's Book), 7(26), pp. 82-112. ***(in Persian)***

Nasiri, M (2007). ***Geographical distribution of housing poverty and dispersion of divorced housewives in 22 areas of Tehran***. Quarterly of Social Welfare, 6(24), pp. 233-240. ***(in Persian)***

Rostaei, Sh., Ahad Nejad, M., Asghar Zamani, A., Zanganeh, A., Saeedi, Sh (2015). ***Evaluation of urban poverty in informal settlement Neighbourhoods of Kermanshah city using factor analysis model (Case study of Dolatabad and Shater Abad in 2006).*** Journal of Geography and Planning, 19(53), pp. 137-166. ***(in Persian)***

Roy, S (2011). ***Unemployment Rate and Divorce***. The Economic Record, 87(1), pp. 56–79. ***(In English)***

Sadeghi, H (1997). ***study economic difficulties of administrator household woman***. Tehran: Center for Women's Participation in the Presidential Administration. ***(in Persian)***

Safiri, Kh (1987). ***The evolution of family in Iran over the last thirty years***. Master's thesis of Sciences sociology with guidance from Dr. Gholam Abbas Tavassoli, Tehran: Tarbiat Modares University. ***(in Persian)***

Simler, K., Harrower, S., Massingarela, C (2003). ***Estimating poverty indices from simple indicator surveys***. In conference on Growth, poverty reduction and human development in Africa, Centre for the Study of African Economies, University of Oxford. ***(In English)***

Statistical Center of Iran (2018). ***Statistical blocks of Qaemshahr city in 2011***. ***(in Persian)***

Tavasoli, G.A (2003). ***Social participation in anomic society***. Tehran: Tehran University, 376 p. ***(in Persian)***

www.ghaemshahr.ir

Zanganeh, A (2010). ***Recognition the spatial pattern of urban poverty development using Geographic Information System (GIS) in Kermanshah city (1996-2006)***. Master's thesis of Sciences Geography and Urban Planning with guidance Dr. Akbar Asghari Zamani, Zanjan: University of Zanjan. ***(in Persian)***