

## **Urban vacant lands and sufficiency of infill growth policy in mega city of Tehran**

**Esmacil Aliakbari\***

Professor in Geography and Urban Planning, Payame Noor University, Tehran, Iran

Received: 05 June 2017 Accepted: 30 August 2017

### **Extended Abstract**

#### **Introduction**

Infill development policy is the process to create the new town and new methods of urban development by optimizing the land use in the cities. This policy in comparison with other inside and outside growth policy is more compatible with the framework of the sustainability. This is also much closer to the aim of sustainability. The main purpose of this paper is to recognize the quantitative and qualitative attributes of infill development fields and also the importance of infill development policy as a solution for planning and physical growth management in mega city of Tehran. Assumption of this paper based on the infill development policy provides sufficient conditions with growth planning in Tehran. This is based on magnificent consideration including sustainability, environment, network of global cities and demands for globalization. This is also adapted to prospect of long-term development and solution of development in structural and strategic comprehensive plan of Tehran. It is capable of developing the social, economic, physical and environmental attributes of Tehran. This paper does not want to present the technics and structures of infill development design, whereas it concentrate on the analysis of the different aspects of infill development policy in order to resolve the urban growth management and the details of its design and it can be very helpful to their improvement and rectification. There are main objectives of this paper. First, this research is to declare the fields of infill development for inner growth policy in Tehran; second, to examine the infill development policy as a sufficient policy in spatial growth management in Tehran; third, to explain the reasons for this sufficiency.

#### **Methodology**

The method of this research is analytical-descriptive based on urban case study. Main data have been gathered by documentaries of 2016. The data have been processed after categorizing based on the analysis unit of the study in the main features of infill development land. The level of analysis contains the urban districts and regions. The unit of analysis is main fields of infill development. These areas generally include the areas of empty texture (undeveloped lands) and landscaped areas or built-up spaces (developed or formerly developed) of the city in planning ready for urban rehabilitation. Study variables include development and renovation of reserve areas, empty and vacant land (small scale and large scale), worn out texture, industrial and workshop sites, outbound urban passenger terminals, barracks and military spaces and prison and airport uses.

---

\* Corresponding Author, Email: [aliakbariesmaeil@yahoo.com](mailto:aliakbariesmaeil@yahoo.com), Tel: +989123840594

### Results and discussion

A kind of transmission has occurred from outer perspective to create cities and separated new town for inner perspective based on infill growth. Now, there is a kind of mutual perception in infill development. The results of this research acknowledge that inner land in Tehran provides the necessary quantitative and qualitative conditions for infill development. The area of the land and the various prospect of the positional patterns of the urban vacant lands make it possible to advocate urban growth planning based on infill growth policy. In this case, more than 18 hectares of lands and infill development fields can cover 30% of Tehran, turn it into a capable city for applying the infill growth policy. Infill growth policy is adapted to prospect long-term development and solution of development in structural and strategic comprehensive plan of Tehran. About 26 percent of the infill development of Tehran is attributable to development reserve. The bare lands are empty and abandoned areas where can form Tehran's physical capacity in different areas for infill development. The area of these lands is 4776 hectares which includes 26.3 percent infill fields and 7.7 percent of Tehran's area. The other major group is the land and property estate which has been built with certain land use. This accounts for a total of about 48% of the infill development capacity of Tehran. These developed or previously developed (abandoned) areas are residential (mostly worn out and inefficient) neighborhoods, contexts of industrial, military, commercial or service sites. In general, they can be called "prone to infill development" through redevelopment (neighborhood and urban texture renewal and reuse of urban buildings and sites). With the exception of worn-out textiles which are often fine-grained and with a centralized pattern of placement (focusing on several parts of central Tehran) with a dominant private ownership, other land uses are generally owned by the public sector and by government in large parts. In addition, due to the distribution pattern and dispersion in urban areas especially deployment in the areas requiring intervention (Southern and Eastern zones), the sites are prone to redevelopment to increase per capita services and strengthen infrastructure, loading utilities and multipurpose urban functions in accordance with the needs of the areas and plans of large scale projects. In addition to urban management and some parts of municipal income related to construction activities, sufficiency of urban growth policy in Tehran can be improved through some factors including low limitation of density, unsaturated capacity of population density, social and demographical changes, concentration of national urbanism and social tendency to residence in inner regions of big cities, protection of periphery and importance of considering periphery in urban growth policy.

### Conclusion

Planning and urban growth policy is not a particular incidence with the purpose to decrease the concentration, eliminate the extra population, physical organization of the obtrusive land uses or recreation of old texture. The strategy is related to new and further developments, restoration of the spatial structures and urban life, and recreation of the cities. The importance of this fact is not only based on theoretical topics and major goals including sustainability, environment and transnational performance of city in regional and global cities, but it is also an essential issue with the respect to adaption of social demand, politics considerations and urban environment requirements. Thus, the decisions related to selection of the urban growth policy should not be only based on the economic prospect or the politics and environmental arguments. Because they must consider a collections of goals, conditions and provisions in geographical, environmental, social and cultural, political and practical, economic and livelihoods, physical and spatial and finally moral issues.

Middle fill growth policy is a multi-aspect and complicated issue. The reason why this the case is not only its comprehensive concept contains a wide range of urban properties and different goals and methods, but also its multi-aspect and controversial nature of planning by presence of numerous activists in this growth policy. As a result, any plans to prepare the infill growth action plan should be based on perception of social and cultural attributes of population, monitoring the demographic changes of urban residents, the size of available land parcels, action priorities, dynamism of nature restrictions and particularly adaption to the zoning of

those land uses compatible with urban zoning system. This system includes criteria and guidelines for urban infill growth policy.

**Keywords:** urban infill, infill growth policy, vacant lands, Tehran.

## References

1. Abdi, M. A., & Mehdi Zadegan, S., 2010, Development Process in Inner Urban Areas, Considering the Experiences of European Countries, Haft Shahr Press, No. 34-33, pp. 38-23.
2. Abdi, N., 2016, Explaining the Optimal Model of the Physical Expansion of Sanandaj City Based on Interdisciplinary Development Capacities and the Strategy for the Transfer of Developmental Rights, "Doctoral Dissertation, Supervised by Saeed Zanganeh Shahraki and Nafiseh Morsouzi, Department of Geography, Payame Noor University, Tehran.
3. Ali Akbari, E., 2016, New Towns and Towns, Payame Noor University, Tehran.
4. Ali Khazadeh, A.M., 1999, New Cities; From Ideal to Reality, Urban Quarterly Journal, Vol. 8, No. 29, 30, & 31, pp. 2-3.
5. Ali Akbari, E., ; Pourahmad, A., & Akbarnezhad Bayi, R., 2013, Functional regeneration of the old textural city of Babol with the approach of convergence with the new texture ", Environmental planning, Volume 6, Issue 21, Pp 1-18.
6. Azizi, M. M., 2014, Density in Urbanization, Principles and Criteria for Determining Urban Density, University of Tehran.
7. Azizi, M.M., & Shahab, S., 2012, Application of Transfer of Developmental Rights as a Implementation Mechanism for Urban Development Projects, A Case Study: Kashan, Urban Studies, No. 4, pp. 1-14.
8. Bair, A.N., Higgins, K., 2014, Environmental planning for land development, Guidelines for sustainable local planning and design, Fifth Edition, Translation by Seyyed Hossein Bahreini and Keyvan Karimi, University of Tehran.
9. Bright, E.M., 2014, The Rejuvenation of Forgotten Municipalities in America. Translated by Ahmad Zanganeh, Kazem Esmaeli, Bahareh Janeh and Abolfazl Zanganeh, Contemporary Works, Tehran.
10. Dadashpour, H., & Mohsenzadeh, S., 2012, Feasibility study on the use of the model of transfer of development rights for the use of agricultural land in Babolsar, Applied Geosciences Research, Vol. 12, No. 25, pp. 7-9.
11. Dadashpour, H.; Taghvaei, A.A., & Ghane, N., 2014, Investigating the capacity of intermediate expansion in urban endowment spaces; A Case Study: District 3 ,Region 2 of Yazd, Iran Islamic Studies, No. 15, pp. 78-63.
12. Fakhimi Sara, A., 2016, The role of fine-grained lands in the development of the inner city of Tehran's 10th metropolitan area, master's thesis, supervisor professor: Ismail Ali Akbari, Department of Geography, Payame Noor University of Tehran.
13. Iran Statistics Center.2016, Housing Leasing and cost in Urban Areas,2<sup>nd</sup> half year of 2016, Tehran, Iran.
14. Iranian Statistics Center., 2009, Population and Housing Census-2005, General outcomes of Tehran city, 22 areas, Tehran.

15. Kari, F., 2017, Understanding of the physical-spatial changes of rural-urban areas around the metropolitan area of Karaj, Master's thesis, Supervised by Mustafa Taleshi, Department of Geography and Urban Planning, Department of Geography, Payame Noor University, Tehran.
16. Mangan, S.P., 2011, Social exclusion and problematic areas in Europe, urban renewal management, translation of the mystic of Aghavi Moghaddam, University of Tehran.
17. McCarthy, J. , 2011, Partnership, Urban Planning and Renewal, Translated by Mohammad Hadi Khalil Nejadi, University of Tehran.
18. Mir Moghaddami, M., ; Mohammadi Khabazan, S., ; Ershad, L., & Ismailiyan, J., 2012, Urban Design Guidelines of Residential Areas in Urban Outfitted Texture with Inner Development, A Case Study: Tehran 19th District, Road Research Center, Housing And Urban Development, Ministry of Roads and Urban Development, Tehran.
19. Nastaran, M., & Ghodsi, N., 2015, Identification of areas subjected to inter-expansion development in inefficient areas of urban centers, A Case Study: Isfahan, Urban Research Journal, Volume 6, Issue 20, pp. 68-51.
20. Panahi, L., & Faraji Rad, A.R., 2011, Analysis of the role of villages located in the city limits in the development of the city of Karaj from land reform so far, Rازه Nahan Publication, Tehran.
21. Raffaqi, M., & Parsipour, H., 2014, Investigating the Intra-Textural Development Capacity in Old Towns, A Case Study: Bojnourd ", Sixth National Conference on Urban Planning and Management, with emphasis on components of Islamic city, Mashhad.
22. Rafieian, M., ; Barati, N., & Aram, M., 2010, Estimating the Capacity of Development of Unused Spaces in the City of Qazvin with an Emphasis on the Intermediate Development Approach, Architectural and Urban Design, No. 61, pp. 61-45.
23. Rahimi, A., 2013, Evaluation and Modeling of Spatial-Physical Development with Emphasis on Intermediate Development, .A Case Study: Tabriz Metropolis, Ph.D. Dissertation, Supervised by Mirandar Sadr Mousavi, Department of Geography, Tabriz University.
24. Saeedi, A., & Hosseini Sadegh, S., 2007, Integration of Metropolitan Rural Settlements by Looking at Tehran Metropolitan Area, Geography, Vol. 5, No. 12 & 13, pp. 7-7.
25. Saeedi, A., ; Afrakhteh, H., ; Azizpour, F., & Mahmoudi, S.K., 2014, Metropolitan Creep, Attachment and Conflict of the Physical-Spatial Material, A Case Study : Darband-Kashan (Shomal Tehran), Geography, Year 12, No. 41 , Pp. 7-42.
26. Saremi, H.R., 2013, A Study on development from within the city of Boroujerd, Urban Management, seventh year, No. 32, pp. 310-299.
27. Sayfuddini, F., ; Pourahmad, A., ; Ziari, K.,; Dehghani Elovar, S. N., 2013, A Study of the Bases and Barriers to Growth of City in the Middle of Cities .A Case Study: Khorram Abad ", Land Planning, Volume 5, Issue 2, Pp 26-241.
28. Shafiee Sabet, N., 2014, Tehran Metropolis and Agricultural Instability in the Perimeter Villages, Environmental Facility, Volume 7, Issue 24, pp. 145-162.
29. Shaykhi, H.,; Zakkhraiqi, K. & Mansouri, S., 2013, Investigation of Supernatural Boroujerd City and Its Internal Development Strategies, Urban Planning and Research, Vol. 4, No. 15, Pp 56-37.
30. Soleimani, M., ; Tullayi, S., ; Zangnee, A., & Ahmadi, M., 2015, Dispersion and Internal Development Capacity of Saghez City ", New Attitudes in Human Geography, Seventh Year, No. 3, pp. 144-123.
31. Statistics Center of Iran., 2017, Selection of the results of general census of population and housing 2016, Tehran.
32. Tehran City Study and Planning Center., 2012, General Plan of Tehran, Strategic-Structural Development Plan of Tehran City, Main Document, Tehran Municipality.

33. Tehran University of Management Studies and Planning., 2015, Writings on Urban Development of the City, Center for Study and Planning, Tehran, Tehran.
34. Washington Municipal Services and Research Center.2017, City Development, Strategies to Create Resilient Neighborhoods (Essentials and Strategies). Translated by Taher Parizadi, Ahmad Zanganeh and Hamid Reza Talhabi, Contemporary Works, Tehran.
35. Ziyari, K., ; Pourahmad, A., & Hamzhepour, R., 2015, Identification and Investigation of the Potentials and Land Capabilities with Emphasis on Intermediate Development, Case Study: Sardasht City, Urban Management Studies, Volume 7, Issue 24, pp. 98-98.
36. Cambernet Network Report, 2006, Sustainable Brownfield Regeneration, Nottingham: University of Nottingham.
37. Cooper, M., 2012, urban infill and brownfields redevelopment program, American planning association, sustainable cities institute.
38. Environmental protection agency-EPA.,(2011), brownfields showcase community fact sheet,retrieved on-3 Jan 2011-,available at:[http://www.epa.gov/brownfields/success/showcase/sc\\_milwaukee.htm](http://www.epa.gov/brownfields/success/showcase/sc_milwaukee.htm)
39. Fanfang, C., 2007, Recovering urban land: A framework to improve brownfield redevelopment practices, case of Shenzhen, China, international institute for Geo – information science and earth observation Enscheda, the Netherland.
40. Kaza, N., & cooper, M., 2012, Challenges of urban infill, program American planning association, sustainable cities institute.
41. Paull, E., 2008, energy benefits of Urban infill, brownfields for the city of Beijing cities, 12(3),149-162.
42. Roper,R., 2006,Vermont brownfields redevelopment handbook, department of economic and Environmental conservation.
43. Wurtzler,G., & Diluigi,D., 2007, Brownfields,greenfields and grayfields;environmental issues real state,retrieved on-26.