

Sustainability Paradox in Urban Megaprojects: Sustainability Assessment of Large Scale Projects in Mashhad

Elnaz Sarkheyli

Ph.D. in Urban Planning, Faculty of Art & Architecture, Tarbiat Modares University, Tehran, Iran

Mojtaba Rafieian¹

Associate Professor in Department of Urban Planning, Faculty of Art & Architecture, Tarbiat Modares University, Tehran, Iran

Ali Akbar Taghvaie

Associate Professor in Department of Urban Planning, Faculty of Art & Architecture, Tarbiat Modares University, Tehran, Iran

Received: 31 January 2016

Accepted: 4 July 2016

Extended abstract

1. Introduction

Megaprojects as extensive investment projects are increasing recently in large and metropolitan cities in Iran. The projects, mostly based on public-private partnership, are defined to stimulate urban development or provide necessary facilities and infrastructure. They are considered as tools to promote the city conditions at national and international levels. However, some theorists argue the negative consequences of the projects while explaining the risky, problematic, and deceiving side of the megaprojects. Many megaprojects have been constructed in Mashhad. The city, as a destination for many pilgrims and tourists, and a hub for commercial and industrial activities in the east of Iran, has considerable potentials for development and competitiveness. Mashhad's municipality encourages the urban projects based on public-private partnership in various ways due to its dependence on the revenues of construction work. While the projects are considered to provide better and modern services to facilitate, it seems that they have had a reverse effect by the saturation of built-up areas and commercial spaces in Mashhad. This paper tries to assess the effectiveness of megaprojects in Mashhad and their compatibility with urban context

through sustainability assessment of the projects.

Megaprojects are considered as urban catalysts according to the neoliberalism ideology. The recent generation of the projects is mostly brownfield developments related to tourism and sport facilities based on the public-private partnership approach. The globalization, regional competitiveness, and privatization along with the technological improvement have led to the boom of mega and large-scale projects in cities.

Megaprojects may result in the provision of public spaces, services or infrastructure improvement. However, the economic prosperity which the projects usually seek are incompatible with the local economy and may hurt it. They also change the physical identity and the existing urban structure while damaging the social capital with social segregation and exclusion. In addition, compared to the normal projects, the projects have considerable environmental footprints.

2. Methodology

Focusing on megaprojects in Mashhad, the present study analyzes the effectiveness of megaprojects through the concept of sustainability circles. The concept assesses the sustainability through four dimensions: economic prosperity, social improvement,

1. Corresponding Author, Email: rafiei_m@modares.ac.ir

physical and cultural vitality, and environmental resiliency. The main approaches to the research are case study and survey. The case studies include large-scale renewal projects (Great Project of Shohada Square and Majd Project) and brownfield development (Sepad Tourism Zone). The survey which was administered to 387 persons including the experts, residents, and businesses in or surrounding the projects. Alpha Cronbach was used to test the reliability of the questionnaire. Based on the result of the coefficient (0.94), the questionnaire proved to be reliable.

3. Results

The results show the megaprojects in Mashhad are far from the sustainability concept in almost all aspects. All projects have not been satisfactory which it can be related to opposites of these projects with previous owners, residents and tenants of their fields. Majd and Shohada projects have been shaped in distressed areas. Thus, they destroyed the buildings, and they changed the urban structure, the place identity, and the urban spaces in order to build modern areas. Also, the projects led to a lot of commercial and office areas which are more than the city demands, so many of which are not strong enough to result in economic prosperity. Sepad, in its reproduction has created some picturesque architecture, commercial and recreational complexes, and related public spaces. It has also addressed the demands of general pilgrims and tourists of Mashhad through widespread advertisements to attract the people's attention. Thus, Sepad has been more successful than other megaprojects regarding the economic and physical aspects.

4. Conclusions

Megaprojects in Mashhad are built to solve the challenges of distressed areas, mitigate traffic problems and provide modern services and infrastructure while they bring new challenges to the cities. The challenges

could be related to the nature of megaprojects and their conflict with sustainable development to some extent. As the projects inherently seek for the place promotion and social improvement through the creation of new urban spaces and the attraction of the more affluent citizens, they may damage the historical identity and the social capitals as well. The projects include extensive environmental footprints and change in the urban ecological system. In addition, although the projects may promote some economic indexes of competitiveness, they may result in the degradation of the local economy which is relied on the urban assets and the residents' skills.

Generally, megaprojects in Mashhad have not taken appropriate steps to economic prosperity, social improvement, place promotion, and environmental improvement. But, their wrong orientation and the lack of long-term vision in economic development have led to the saturation of commercial spaces and intensification of the building recession in Mashhad. The projects, also, delimit the probable trend of investment in other industries and entrepreneurship activities. In addition, although the projects have provided transit station, public parking, and streets, they put multiple pressure on urban networks, infrastructure including power, water, and sewage systems by overloading the built-up area.

In conclusion, megaprojects are inherently in conflict with sustainability and context-oriented development, especially, if they are defined based on an up-down decision-making process and lobbying exclusively between developers and urban managers.

There are forces in urban development arena that cause the continuation of megaprojects in large and even smaller cities in Iran. Therefore, the practical way to control and limit the forces and eliminate the negative impacts of megaprojects, would be the empowerment and legalization of the system of control along with supervising mega and large-scale urban projects. Using the sustainability factors, economic prosperity,

physical and cultural vitality, social improvement, and environmental resiliency are recommended as the conditions for the approval of megaprojects.

Key words: Megaprojects, Sustainability, Mashhad.

References (In Persian)

1. Department of Planning & Research (Moavenat Barnamerizi va Pazuhesh). (2004). Sanad e Cheshm Andaz va Estrategi Shahr e Mashhad ba Mehvariyat e Shahrdari Mashhad dar Ofogh 1404 [*The vision and strategies for the city of Mashhad (focusing on municipality) for 2025*]. Mashhad: Mashhad Municipality.
2. Farnahad (Consulting Firm). (2009). Cheshmandaz, ahdaf, rahbordha va siyasathae tosee shahri (tarhe Jame) e Mashhad [*Visions, goals, Strategies and policies of urban development (comprehensive plan) of Mashhad*] (3rd ed.). Mashhad: Urban Research & Planning Center for City Development (Nahad Motaleat va Barnamerizi Tosee va Omran).
3. Khakpour, B. A., & Bavanpoui, A. R. (2009). Barrasi va Tahlile Nabarabari dar Sotuhe Tosee Yaftegi Manateghe Shahr Mashhad [Review and analyzing the inequalities in development levels of Mashhad Regions]. *Knowledge & Development*, 16(27), 182-202.
4. Mohammadi, J., Zanganeh, M., & Abdoli, A. (2010). Sanjesh Shakhshaye Keyfiat Zendegi az Nazare Shahrvandane Shahre Mashhad [Assessing life quality indices from the viewpoints of Mashhad Citizens]. *Urban Management Studies*, 2(3), 97-117.
5. Pasandideh, Y. (2016, January). *Asibshenasi Nahve Modakhele dar Bafthaye Farsoude Shahri ba Tavajoh be Rouykardhaye Jameshenakhti, Nemoune Moredi Tarhe Majd Mashhad* [Pathology of intervention in distressed urban areas according to the sociological approaches, Case study: Majd project]. Paper presented at the Fourth International Congress in Civil Engineering, Architecture, and Urban Development. Tehran, Iran.
6. Pilehvar, A. A., & Pourahmad, A. (2004). Ravande Roshd va Tosee Kalan Shahrhaye Keshvar, Motalee Moredi: Shahre Mashhad [The trend of the growth and the development of the metropolitan cities: case study of Mashhad City]. *Geography Research Quarterly*, 36(48), 103-122.
7. Rafieian, M., & Pahlavan, S. (2015). Sanjesh va Arzyabi Tasirate Ijade Abarproj Shahri Almase Shargh Mashhad az didgahe Navahi Sokunati ba Model Electre [Measuring and evaluating the effects of the Almas Shargh megaproject in Mashhad from the viewpoint of the peripheral resident based on the Electre model]. *Iranian Architecture & Urbanism*, 6(9), 51-63.
8. Rahnama, M. R., & Asadi, A. (2015). Tahlile Tozie Fazayi Gheymate Maskan dar Shahre Mashhad [Analyzing of spatial distribution of the home price in Mashhad city]. *Geographical Research*, 30(1), 37-52.
9. Rahnama, M. R., & Zabihi, J. (2011). Tahlile Tozie Tashilate Omumi Shahri dar Rastaye Edalate Fazayi ba Model Yekparche Dastrasi dar Mashhad [Analysis of urban public facilities in direction of spatial justice by the integrated model of access in Mashhad]. *Geography and Development*, 9(23), 5-26.
10. Saedi Rezvani, H., & Noorian, F. (2009). Bazkhani Edalat dar Ejraye Tarhshaye Shahri Keshvar Nemune Meydan Shohada dar Mashhad [An understanding to the justice in implementing urban plans in Iran, Case Study: Mashhad Shohada Square]. *Human Geography Research*, 42(68), 85-102.
11. Yusefi, A. (2009). Taamoli bar Marzbandi Ejtemai Fazaye Shahri Mashhad; Tabaghebandi Manzelati Navahi Shahre Mashhad [A contemplation on social boundaries in Mashhad: Social classification of city districts]. *Social Science of Ferdowsi University*, 6 (2), 61-91.

12. Zahedi Mahboob, A., & Malekabadi, S. I. (2013). Tahlil va Vakavi Tajrobe Modiriyat Behsazi va Samandehi Meydan Shohada Mashhad [Analysis and probe of rehabilitation management practice in Shohada Square, Mashhad]. *Haft Shahr*, 4(43,44), 121-134.

References (In English)

1. Altshuler, A., & Luberoff, D. (2003). *Mega-projects: The changing politics of urban public investment*. Cambridge, Mass: Washington, D.C. and Brookings Institution Press.
2. Dahl, R. A. (1961). *Who governs? Democracy and power in an American city*. New Haven: Yale University Press.
3. Douglass, M. (2005, May). *Globalization, mega-projects and the environment: Urban form and water in Jakarta*. Paper presented at the International Dialogic Conference on Global Cities: Water, Infrastructure and Environment, The UCLA Globalization Center, Africa.
4. Flyvbjerg, B. (2005). *Policy and planning for large infrastructure projects : Problems, causes, cures*. Washington, D.C: World Bank Publications.
5. Flyvbjerg, B. (2007). *Mega projects, policy, and planning*. Aslborg: Aslborg Universitet.
6. Flyvbjerg, B. (2012). Why mass media matter to planning research: The case of megaprojects. *Planning and Education Research*, 32(2), 169-181.
7. Flyvbjerg, B. (2013). Mega delusional: The curse of the megaproject. *New Scientist*, 220(2945), 28-29.
8. Flyvbjerg, B. (2014). What you should know about megaprojects and why: An overview. *Project Management Journal*, 45(2), 6-19.
9. Flyvbjerg, B., Bruzelius, N., & Rothengatter, W. (2003). *Megaprojects and risk: An anatomy of ambition*. Cambridge: Cambridge University Press.
10. Gellert, P. K., & Lynch, B. D. (2003). *Mega projects as displacement, UNESCO*. Oxford: Blackwell Publishing.
11. Jia, G., Yang, F., Wang, G., Hong, B., & You, R. (2011). A study of mega project from a perspective of social conflict theory. *International Journal of Project Management*, 29(7), 817-827.
12. Lehrer, U., & Laidley, J. (2009). Old mega projects newly packaged? Waterfront redevelopment in Toronto. *International Journal of Urban and Regional Research*, 32(4), 786-803.
13. Marrewijk, A. V. (2007). Managing project culture: The case of environ megaproject. *International Journal of Project Management*, 25(3), 290-299.
14. Marrewijk, A. V., Clegg, S. R., Pitsis, T. S., & Veenswijk, M. (2008). Managing public-private megaprojects: Paradoxes, complexity, and project design. *International Journal of Project Management*, 26(6), 591-600.
15. Orueta, F. D., & Fainstein, S. S. (2008). The new mega-projects: Genesis and impacts. *International Journal of Urban and Regional Research*, 32(4), 759-767.
16. Ryan, B. D. (2013). The metastasizing megaproject: Urban design and monstrous moral hybrids. In G. D. Cerro Santamaría (Ed.), *Urban megaprojects: A worldwide view* (pp.1-20). Bingley, UK: Emerald Group Publishing Limited.
17. Sager, T. (2011). Neo-liberal urban planning policies: A literature survey 1990-2010. *Progress in Planning*, 76(4), 147-199.
18. Scerri, A., & James, P. (2010). Accounting for sustainability: Combining qualitative and quantitative research in developing indicators of sustainability. *International Journal of Social Research Methodology*, 13(1), 41-53.

19. Zakharova, A., & Jager, T. (2013). *Stakeholder participation to improve societal acceptance for mega projects (A case study of the forum for the coal-power plant "Datteln 4" project)*. (Unpublished master's thesis). School of Business and Economics, Sweden.

How to cite this article:

Sarkheyli, E., Rafieian, M., & Taghvaie, A. A. (2018). Sustainability paradox in urban megaprojects: Sustainability assessment of large scale projects in Mashhad. *Journal of Geography and Urban Space Development*, 4(2), 25-41.

URL <http://jgusd.um.ac.ir/index.php/gud/article/view/53476>

ISSN: 2538-3531