

Achieving To Urban Sustainability in New Towns by Emphasizing On Smart Development (Case Study: Golbahar New Town)

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Abstract: In Iran, new towns are built and located near cities to absorb their overflow population. Golbahar new town was built near Mashhad metropolis to reduce demographic, economic, social and physical problems of Mashhad, but in practice considering its goals, the town has not been able to reduce the problems of Mashhad metropolis. In this study, the relationship between the effects of living conditions on social, economic and physical aspects on the repopulation process in new towns has been investigated from the citizens' perspective.

This research is based on Descriptive-Analytic and methods of data collection are "documents – Library and interview. The SPSS software for data analysis and Pearson correlation coefficient was used as well as. At first Fundamental data Collect by relevant centers such as Universities, organizations, institutions and research centers such as the Management and Planning Organization, etc.

Key Word: New town, urban sustainability, smart development, Golbahar new town

I. Introduction

Acute problems of urbanization led to new theoretical perspectives and solutions that have been reflected in national development policies. Building new towns has been proposed as one of the basic policies toward population growth and inflation in large cities. In different periods of history, new towns have been built around the world (Frank, 1972; 4). Building new towns in Iran goes back to past times; one can count many cities that were founded in a specified period (Piran, 1989; 126). In Iran, during the last three decades, the rapid growth of urban population has not been in proportion to the capacities of urban space facilities, and due infrastructure and required profession were not also provided. Since, spatial distribution of cities and population has not been based on a comprehensive plan which is in congruent with regional and provincial sectors, the issues resulted from the rapid urban population growth have become multifarious and convoluted. Consequently, issues like unaffordable housing, unemployment, and illegal housing are reflected as the thorniest issues of urban life of our country whose alleviation needs comprehensive planning and attempts (Ziari, 2000).

Therefore, building new towns was put on the government's agenda as a strategic approach to these issues. New towns are among the national issues, and the national issues could not be solved with regional perspective, rather dealing with them demands national resolution and support (Qarakhlu, 2006). Now, after more than two decades from passing the Act No. 108 328 (dated 1986,3,4) by Council of Ministers about new towns, 14 towns have been under construction and repopulation phase and 11 new towns are in the preliminary stages, under investigation or implementation plan. There are different statements about the success or failure of this program. Those responsible for this project, namely the authorities in the ministry of roads and urban development and especially New Towns Development Company insist on the success of this policy, and are determined to continue and extend this policy, on the other hands, critics and experts in various fields, especially in urban development have had various ideas about the inefficiency and failure of this policy. In such circumstances, analyzing the function of these cities and the results of this policy seems essential.

Considering the difficulties and problems that mainly rise in continuous development of metropolitan cities that are due to high and increasing demands for housing, providing the land needed for development inside the cities has practically been a thorny problem and charges high costs. New towns as the detached extensions have largely tackled the problem, and have been able to provide appropriate conditions for mass housing, and with mass production of land and urban services, they have managed to relatively control land price, and naturally reduce the land price in metropolitan cities as demand goes up. Despite the relative success in controlling the growth and development of metropolitan cities, new towns failed to realize their goals, their major shortcoming was their inability to absorb population (Gholamiyan, 2010). In this study, having evaluated

the living conditions of social, economic and physical aspects of new towns from the current residents' perspective, we tried to determine to what extent the living conditions of the new towns have influenced their repopulation. In other words, to what extent the living conditions provided in the new towns, have been effective in their relative success in achieving demographic goals?

II. Literature Review

- New urbanism

To the uninformed and imprecise, new urbanism is synonymous with smart growth, but there are significant differences. For one, they differ in origin. Whereas smart growth was launched from a community of environmentalists and policy planners, new urbanism was much more influenced by architects and physical planners. According to Bohl (2000), new urbanism is an umbrella term, encompassing the traditional neighborhood concepts of Andres Duany and Elizabeth Plater-Zyberk, the pedestrian pockets of Kelbaugh, the transit-oriented designs of Peter Calthorpe and Shelly Poticha, and the "quartiers" approach of Leon Krier. At the same time, new urbanism gathers its roots from the lineage of American city planning that includes Progressive Era town planning, the Garden Cities movement, and the regionalism of Lewis Mumford.

The agenda of new urbanism is articulated in the charter of the Congress for the New Urbanism (CNU), founded in 1993 by a coalition of architects, planners, and environmental advocates. Today, the CNU has more than twenty-three hundred members in two countries and forty-nine states including (at least symbolically) former federal cabinet secretaries (such as Secretary of Housing and Urban Development Andrew Cuomo), former state governors (such as Maryland Governor Parris Glendening and Christine TOD Whitman), and former mayors (such as John Marquis of Milwaukee, who is now president and CEO of the CNU). Though the movement has drawn criticism from much of the architectural academy, the ideas behind the CNU's charter have been gradually integrated into the curriculum at the top planning and architecture schools. As of 2004, there were more than 210 new urbanism developments under construction or complete in the United States.

New urbanism principles operate on a number of scales: buildings, lots and blocks, neighborhoods, districts and corridors, and ultimately entire cities and regions. Like the principles of smart growth, new urbanism principles call for organizing Development in cities, towns, and villages that are compact, walkable, mixed-use, and transit-friendly and contain a diverse range of housing. But much more than advocates of smart growth, new urbanisms focus on physical form, arguing that changes in physical form are a necessary precondition for urban economic, social, and ecological change. Furthermore, more than advocates of smart growth, new urbanisms have confidence in the potential of market forces and call for removing regulatory obstacles to urban development on par with the need for reforming planning policies.

- Smart Growth

According to the Environmental Protection Agency (2004), smart growth is "development that serves the economy, the community, and the environment. It changes the terms of the development debate away from the traditional growth/no growth question to how and where should new development be accommodated." Toward this end, the U.S. EPA established in 1996, and continues to fund, a network of advocacy organizations dedicated to smart growth principles. Thanks in large to this network, smart growth is now part of the lexicon of planners, policy makers, and almost everyone with interest in urban and regional development. Though no two organizations define smart growth in precisely the same terms, the smart growth principles promulgated by the smart growth network have gained widespread recognition. These include the following:

- create a range of housing opportunities and choices;
- create walkable neighborhoods;
- encourage community and stakeholder collaboration;
- foster distinctive, attractive places with a strong sense of place;
- make development decisions predictable, fair, and cost-effective;
- mix land uses;
- preserve open space, farmland, natural beauty, and critical environmental areas;
- provide a variety of transportation choices;
- strengthen and direct development towards existing communities; and
- Take advantage of compact building design.

The logic of smart growth is based on four propositions:

- Whether its causes are economic forces, consumer preferences, or misguided public policies, the dominant form of urban development over the postwar period can be characterized as urban sprawl.
- Urban sprawl can be defined as development that is low density, unplanned, automobile dependent, homogeneous, and aesthetically displeasing.

- Urban sprawl has adverse effects on environmental quality, social cohesion, government finance, and human health.
- Urban sprawl, and its associated evils, can be mitigated by policies that promote compact urban growth, mixed land uses, bicycle and pedestrian friendly environments, public transit, urban revitalization, and farmland preservation.

- **New Town**

Term “new town” is interchangeable with “new community” in many cases. For the purposes of this study the following definition was found appropriate: “A self-contained development with a balance of commercial, educational, social, and cultural institutions that satisfies all the needs of families and individuals alike”. The following is a list of:

- Large scale planned community.
- Programmed to include a balance of housing, jobs, and services.
- A mixture of housing types.
- Created in response to clearly stated objectives

Controlled by a master developer (Pavlovich Howard, 2002). Spatial decentralization policy based on building new cities is one of the most straightforward patterns. Simply put, the original and still most weighty reason for building new towns in the minds of their advocates and pioneering experimenters was the necessity of reducing the concentration of people and workplaces in large towns, which otherwise cannot be relieved of congestion, disorder and squalor and rebuilt on a fully healthy, socially satisfactory, or efficient pattern. In this context, the idea of creating new cities has been attributed to the English people. In 1898, the public in Britain was concerned about the influx of the people to the cities, leading to densely populated urban areas as a result of evacuating rural regions. In such conditions, “Ebenezer Howard's solution seemed less troublesome, without relying on any kind of sudden and radical changes or revolution. He was aware of the attractions of metropolises for villagers; so, he aimed to mix the advantages of urban life with the beauty of villages, creating town gardens. Developed in definite distances

Around a metropolis, such towns have a green belt around, connected via fast public transportation vehicles (Austrufsky, 2008). Until World War II, only two satellite cities of Letchworth and Welwyn were built with thirty-five thousand inhabitants. Great Britain had a population of ten millions; but, despite the predictions of Howard, two newly built towns around London could not prevent population influx to the capital city of Great Britain. After World War II, the construction model, suggested by Howard, revealed its positive results, benefiting from governmental support. The pattern of new towns was adopted as a foundation for the organization and refinement of big cities. New towns can be planned and constructed in different models of satellite, independent, permanent, recreational and political-administrative types in Europe, America, Australia, Asia and Africa. Village garden, precinct garden, town garden, satellite town and New

Towns represent different international models that have been planned and constructed on the basis of the garden cities' conceptual framework, expanded globally (Ziari, 2006). In the third world countries, this theory was employed to enforce the strategy of decentralization, land use planning, establishing growth hub, regional development, transferring the office centers, spatial organization of small towns creating service hubs for rural areas, making centers for integration of village and reconstruction of demolished towns with various results. Totally, these towns were successful in providing housing for low-income households; but, their physical, social and economic structure was not consistent with local environment; therefore, they were considered luxurious and costly commodities that only caused the social imbalances. Even in some cases the slums were combined with the metropolises because they were designed according to local policies, overlooking the comprehensive national and regional strategies (Fatemi, 2010). In an article titled, «New town development in Jakarta Metropolitan Region: a perspective of spatial segregation», (Firman, 2004) concluded that the development of new towns in the Jakarta creates spatial differentiation for three reasons. First, it has polarized the average and well-paid groups, resulting in scattered mess of exclusive residential areas. Second, within the new towns themselves, middle and high class people occupied exclusively designed areas with the highest possible security. Third, in several new towns, urban development management is carried out by the developers instead of the city hall.

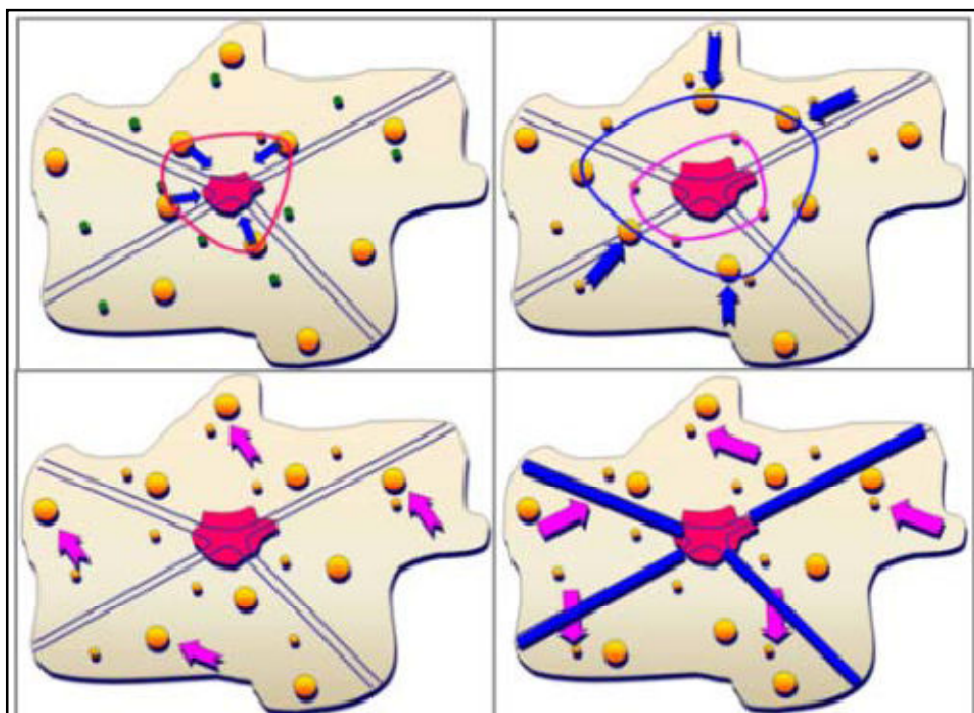


Fig. 1 The process of settlement development in the theory of Joseph Hylhorst.

III. Research Method

This research is based on Descriptive-Analytic and methods of data collection are "documents – Library and interview. The SPSS software for data analysis and Pearson correlation coefficient was used as well as. At first Fundamental data Collect by relevant centers such as Universities, organizations, institutions and research centers such as the Management and Planning Organization, etc.

IV. Studied Area

Golbahar new town with latitude of 37, 36 and longitude of 59, 14 and the average height of 1250 m above sea level, is located in the plain between the mountains of Hezar Masjid and Binalood, 45 km northwest of Mashhad at Mashhad-Quchan road. Golbahar urban area is 4,000 hectares and its design follows a linear-checked organization. The planned area includes two urban zones and four regions. The first zone includes some parts of the downtown, construction of eleven neighborhoods and two region centers were anticipated, and the central core of Golbahar new town was formed in this zone, and the resettlement program have been made for one hundred and ten thousand people. The second zone included ten neighborhoods and two regional centers and major downtown was designed in line with the first zone downtown extension, and this zone was also planned to accommodate one hundred and fifteen thousand people. Cultural, religious, sport, and recreational applications and the like were also predicted based on the comprehensive plan (Mehrazan Consultant Engineers, 1998).

In 2011, this town had a population of nearly 13371. In terms of political divisions, center of Golbahar district is located in Chenaran County, and in terms of urban management, it is administered by Golbahar New Town Development Company (Golbahar Bakhshdari, 2011). Studies of Golbahar new town, as the first satellite town of Mashhad were initiated in 1987, in 1992 the construction process began and from 1995 the repopulation and accommodation began (Noriyan and Shayeste-Paydar 2007).



Fig .2 . position of Gholbahar new town

V. Finding

First hypothesis

According to table 1, the amount of "P" is 0.009.also, it is less than 0.05.on the other hand, the average of second indicator is 0.000 and it is less than 0.05. So, data aren't normal .thus, should be used from Spearman correlation coefficient.

Table 1: Kolmogorov-Smirnov test of data normalization

Kolmogorov-Smirnov Test			
		Smart development	Urban sustainability
N		70	70
Normal Parameters ^{a,b}	Mean	2.4673	2.1673
	Std. Deviation	.32805	.32080
Most Extreme Differences	Absolute	.124	.159
	Positive	.104	.159
	Negative	-.124	-.081
Test Statistic		.124	.159
Asymp. Sig. (2-tailed)		.009 ^c	.000 ^c

Table2: Analyzing relation between hypothesis indicators

The correlation of coefficient is 0.596. So the correlation is positive. Also, Sig (2tailed) is less than 0.05. Thus, there is oriented relation between indicators.

Second hypothesis

According to table 3, the amount of "P" is 0.009.also, it is less than 0.05.on the other hand, the average of second indicator is 0.001 and it is less than 0.05. So, data aren't normal .thus, should be used from Spearman correlation coefficient.

Table 3: Kolmogorov-Smirnov test of data normalization

Kolmogorov-Smirnov Test			
		Smart Development	Social life
N		70	70
Normal Parameters ^{a,b}	Mean	2.4673	2.3190
	Std. Deviation	0.32805	0.37509
Most Extreme Differences	Absolute	0.124	0.142
	Positive	0.104	0.142
	Negative	-0.124	-0.099
Test Statistic		0.124	0.142
Asymp. Sig. (2-tailed)		0.009 ^c	0.001 ^c

Table 4: correlation between indicators

Correlations			
		smart development	social life
smart development	Pearson Correlation	1	0.251 [*]
	Sig. (2-tailed)	0.000	0.036
	N	70	70
social life	Pearson Correlation	0.251 [*]	1
	Sig. (2-tailed)	0.036	0.000
	N	70	70
*. Correlation is significant at the 0.05 level (2-tailed).			

The correlation of coefficient is 0.251. So the correlation is positive. Also, Sig (2tailed) is less than 0.05. Thus, there is oriented relation between indicators.

VI. Conclusion

A new town is an independent community with a certain population, area, and distance from a metropolis, has predetermined planning, specific goals and also enjoys all necessary facilities required for an independent environment (Ziari, 2000). In various historical periods, there have been many towns around the world that were constructed with "different objectives" and one can call them "new towns". Greek philosophers have review the status of human life over the years and have suggested their ideal cities. Aristotle and Plato have spoken about optimal population size and the new towns' self- reliance. In the Renaissance, imaginative designs of new towns were considered as evidence of intelligence and human ability (Golany, 1979). After the Industrial Revolution, two theories of reformism and utopianism were advanced. Reformists believed that the spatial organization of towns should be within the technological framework and did not deny its totality, they also believed that the improvement and modernization of towns happens from inside. Utopianisms believe in imaginary towns as opposed to industrial ones.

Thus, the plan of new towns has its roots in various theories, and Ebenezer Howard is its main theorist. Howard's theory was inspired by utopianism thoughts. Howard believed that the theory of "garden city" is a way for dealing with population growth in large cities, organization and spatial distribution of population and industry. He claimed that the goals of building garden cities are to create a functional structure, optimize population size and area, employment and self-reliance, development of green belts, optimum density and public ownership of land. He implemented two plans of garden cities (1928) before his death (Hall, 1992). As a result of revolutionary dreams of utopianisms and reformist ideas of Howard and their compliance with national planning policies in the UK and other countries, the notion of new town was accepted as a liberal opportunity for reform and providing a better way for urban life.

- To provide urban infrastructure and equipment (telephone, gas, public parking, parks, green spaces, etc.) in an equitable distribution in Golbahar new town to reduce citizens' problems, improve their status and increase their willingness to remain in the town;
- To create employment opportunities in different sectors especially commercial sector, to build small industrial areas near the new town to remove its role as a dormitory and turn it to an independent and self-sustaining town;
- With regard to the ownership of lots of lands, it is proposed to construct centers that are not available in Mashhad, for example places for motorcycle and car races, etc.;
- To provide suitable public transportation and communication infrastructure for fast, comfortable and safe travelling to Mashhad metropolis for instance through development of railroad;
- To provide various services in Golbahar new town so that people may not have to commute to Mashhad metropolis, and reduce pendulum migration of residents to downtown;
- Efficient management of land and housing markets;
- To implement the principles of modern urban planning and urban design in beautification of the urban appearance with the participation of citizens;
- To build a cemetery to give Golbahar new town an identity;
- To build educational and cultural centers for women, since the head of most households are working in Mashhad and just spend the night in the new town.
- To build recreation, cultural and sport centers for young people, if there are not enough leisure facilities, sport and education centers for the youth, they would have no interest in living in the new town, and would prefer to live in their metropolitans despite all its other issues and assume a position for themselves;
- Better utilization of capital and facilities together with the cooperation of related state organs to support private sector and local investors to construct industrial and manufacturing units for entrepreneurs so that they can attract young jobseekers and fulfill the role of the new town;
- To provide and maintain security as the infrastructure of development in any location, especially in Golbahar new town seems necessary;

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