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A study of the necessity for constructing new towns in Iran urban system

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Abstract

In different countries, new towns are constructed based on necessity and their functions. Nowadays, making new towns is not of course performed with the aim of realizing the notion of ideal habitation or Utopia, rather decentralization of large cities is its purpose and main goal. Nonetheless, this topic is differently viewed in Iran in comparison with other countries, and its utility and function in Iran is not the same as the real purpose of making new towns in the world. This article studies the country's population variations in recent decades and considers urban system of the country. It also analyzes the activities of new towns in recent years and eventually argues the necessity to make new towns in Iran. The agreement of this strategy with alternative ones, especially with the strategy of middle cities reinforcement, is argued as well.

Keywords: New towns, urban system, Iran, population

Introduction

During the early years after the Islamic revolution of Iran and occurrence of the imposed war, extensive migrations started all over the country. Many farmers came to cities progressively because of economic stagnation in villages resulted from land reform and waning of seasonal economy. In addition to farmers' migrations, there were widespread migrations from towns to large cities, mainly to the center of provinces. Configuration of the country's population was changed by these migrations which led to fast growth of urbanization in the country. According to these conditions and upon evaluating the trends, demographers predicted that the population of cities in Iran will double through the next 20 years (Miran, 2007).

Such a prediction could have different meanings for planners and decision makers; first, constructing towns through the next 20 years should be accomplished equal to present cities with regard to area, volume and space in order to reside applicant population, primarily the migrants. Second, composition of the country's population balance between city and village had a drastic change and through next years, city population would outweigh village population, therefore the problem required a specific planning approach. Third, lack of planning and foresight for the great number of migrants to cities would result in doubled pressure on large cities, occurrence of different cultural, economic and social side effects, occurrence of serious social abnormalities, and vanishing of large cities' identity (Ardeshiri, 2007).

Based upon the mentioned facts, during 1982-1992, Iranian ministry of accommodation formulated three significant strategies in order to encounter with problems of city population of the country (Ostrofski, 2000): a) Improving the texture of inner cities with the purpose of attracting population proportional to their capacities and preventing the evacuation of old textures, b) accommodation of city outskirts together with maintenance of agricultural land and bio-environmental resources, and c) constructing new towns. According to the above strategies, identifying the capabilities and restrictions, determination of requirements, and establishing the laws based on native and national merits, the first act for making new towns was proclaimed in 1986 and subsequently the New Towns Company was established in 1990 (Miran, 2007).

Improvement and renovation of inner texture of the existing cities for optimal exploitation of the city space has the highest priority among city extending methods. This model is also called "new town within a town". Such a notion indicates large-scale improvement, modernization, and revival of city core extension (Mohammad Rahmi, 1997).

In the case that improvement and renewal of inner texture of present cities is not sufficient for the increased city population, it is suggested to carry out continuous extension of these cities in places without any natural or artificial limits. In addition, when neither of the two mentioned suggestions satisfies the city extension requirements, it would be necessary to perform discontinuous extension of the cities (Ebrahim-Zadeh, 2003).

An issue of significance considering the population changes and fast increase in the number of citizens is the necessity to plan for population overflow and their accommodation. If no proper planning is achieved for their accommodation, the result would be cities with uncontrolled mushroom growth and it will be consequently inevitable to pay the large cost of solving the problems of these accommodation places and their resultant social abnormalities.

Population evolution of Iran

Considering the available statistics and accomplished estimates of the country's population from 1882 to 1922, the rate of population growth has been very low in Iran. This is attributed to natural inappropriate conditions, famines, and deadly infectious diseases. Low constant rate of population growth continued until 1922 while these conditions changed from 1927. An increase took place in population until 1957 and a growth rate of 3.1%

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maintained till 1967, whereas population controlling programs led to decrease in this rate in 1977 census. After Iranian Islamic revolution and applying new strategies with the aim of controlling the population, the mean annual growth rate had an increase and reached 3.9% in 1987 census. From 1992 to 2002, the population controlling strategies was executed again and resulted in decreasing the mean population growth rate to 1.6% during 1997 to 2007. Similar to population growth rate, the population number experienced low growth from 1882 to 1922 and reached from 7,654,000 to 9,707,000 persons. Afterwards, due to controlling fatality and improvements in health care which resulted from utilizing new equipments, the population number augmented very fast and ultimately reached 70,496,000 persons in 2007; in other words, population of the country has became seven times during recent eighty years (Table 1).

Table 1. Population numbers and average annual country population based on year (Iran Headcount Center).

Year	Population	Average annual growth (%)
1927	7654000	0.6
1937	9707000	0.6
1947	12833000	1.4
1957	18955000	13.1
1967	25788000	3.1
1977	33708000	2.7
1987	49445000	3.9
1997	60055000	1.5
2007	70472000	1.6

Also, the urban population had noticeable changes owing to increased population and reached from 37.9% in 1967 to 68.46% in 2007. On the other hand, in addition to cities' population, increased number of towns functions as another effective factor in changes of city configuration and space system. Therefore, an imbalance has occurred in urban network in several parts of the country (Iran Statistics Center).

Regarding the official statistics, there were 272 cities in the country in 1967, which indicated a 36.7% growth compared to 199 cities in 1957. As a consequence of dominant issues in population flows, this number reached 373, 496, and 612, in 1977, 1987, and 1997, respectively. The gradual growth ultimately yielded 1016 cities in recent census in 2007 (Table 2).
are in preparation steps or passing the official steps (Rabbani, 2010).

It seems that such a growth in urban population will result in increasing urban population to be over 75% until 2022 and number of cities will exceed 1200. Accordingly, the New Towns Company was established with the purpose of management of constructing new towns, managing the master and detailed plans of new towns and their partitioned maps, supervision on preparation of making buildings and urban installations, their exploitation, partnership with juridical and actual persons, issuing construction permits and enforcing the rules and standards of making installations, maintaining the rights and enforcing the authority of government over estate-owned land, supervision and control over land and buildings, providing the requirements for attracting non-government applicants, and resource management for investment, and has carried out a number of activities along with the above-mentioned objectives (Tofiq , 2010).

Table 2. Population and country city numbers in general headcount between 1967 to 2007 years (Iran Headcount Center).

Year	Sum population	Urban numbers	City numbers	City growth rate	Urbanization rate
1967	25778000	9790	272	36.7	37.96
1977	33708000	15855	373	37.1	47.04
1987	49445000	26848	496	33	54.3
1997	60055000	36817	612	23.4	61.31
2007	70472000	48245	1016	66	68.46

History of new towns in Iran:

As stated above, the urban population of Iran reached from 38% in 1967 to over 68.6% in 2007 in 4 decades. In spite of efforts and strategies of government during this period in the field of urban network balancing, most of the country's population centralized in some large cities (Tehran, Isfahan, Mashhad, Tabriz, and Shiraz) and the total population of these five cities varied between 20-25% in different censuses, which indicates the centralization of population in large cities and arise of metro-poles in the country.

Problems associated with suburb and formation of unformed settlements without supervision on the one hand, and the necessity to program for improving the quality of citizens' life on the other hand, gave planning of new towns the highest priority among government programs.

Prior to occurrence of the mentioned issues, a number of new towns exist in Iran's history such as Persepolis, Neishabour and Soltaniyeh, which were established with the purposes other than population overflow (Piran, 1991,126).

Iran has experienced the appearance of new towns previous to Islamic revolution, which were constructed in different forms and for different objectives, such as: New organizational-industrial towns: Abadan, Andimeshk, Masjed Soleyman, Poulad Shahr, Piranshahr, Bandar-e-Shahpour, Aghajari, Zardnou, Sarcheshmeh, Alborz Industrial town, Saveh, Rasht, etc (Ziari, 1994). New military-political towns: Zahedan and Noushahr (Ziari, 2000). New towns reconstructed after earthquake: Qouchan and Salmas (Saeed-Niya,1989).

It worth mentioning that, configuration of these towns is in essence different from current new towns whose main purpose is attracting the overflow and decreasing centralization of large cities. In comparison, the above mentioned new towns were established owing to political or military reasons, or as major industrial centers.

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Table 3. Settled population until 2008 in new towns (http://ntoir.gor.ir).

No.	New town	Population acceptance ability	Population predict until 2010	Population until 2008	Population settlement in first half of 2007	Sum
1	Hashtgerd	500,000	100,000	16,119	881	17,000
2	Andishe	132,000	100,000	75,676	446	76,122
3	Pardis	200,000	100,000	25,717	4283	30,000
4	Parand	150,000	50,000	7500	500	8000
5	Baharestan	500,000	110,000	50,000	10,000	60,000
6	Poolad Shahr	500,000	110,000	90,000	1120	91120
7	Majlesi	140000	30000	4200	50	4250
8	Golbahar	400,000	40,000	7364	23	7387
9	Binalood	113,000	10,000	264	3387	3651
10	Sadra	200,000	45,000	17,325	659	17,984
11	Sahand	100,000	45,000	15,389	603	15,992
12	Mohajeran	60,000	30,000	14,500	200	14,700
13	Alishahr	100,000	25,000	7384	3090	10474
14	Ramshar	65,000	2000	100	0	100
15	Ramin	120,000	0	0	0	0
16	Alavi	100,000	1000	120	0	120
17	Shirin Shahr	110,000	2000	0	0	0
18	Amir Kabir	100,000	0	0	0	0
19	Siraf	120,000	0	0	0	0
20	Ivanikey	50,000	0	0	0	0
21	Pars (Liyan)	120,000	0	0	0	0
Sum	3,880,000	800,000	331,658	25,242		356,900

After Islamic revolution, based on enactment of the cabinet in 1986, construction of numerous new towns was enacted and in 2008, this number reached 21 new towns. The sum of population capacities of these towns has been 3,880,000 persons and according to predictions of the fourth development program, these towns should accommodate 800,000 persons until 2010. These towns have so far accommodated 356,900 persons up to first half of 2008. This means that, 44.6% of the fourth development program's objective has been accomplished in population attraction. The maximum population among new towns was accommodated by Poulad Shahr around Isfahan with 90,000 persons and Andishe around Tehran with a population equal to 75,000 persons. With regard to the latest census, other new towns had populations less than 25,000 persons. (Table 3).

Function of new towns from start until first half of 2008

The accomplished activities in construction of residential units were carried out by cooperative companies, mass construction, and individual parts, where a number of these projects were completed and the rest are yet in progress. Mass constructors, cooperative companies, and individual parts have gained 47%, 39%, and 13.9% of construction portion in new towns, respectively.

Altogether, 275,342 residential units were constructed or are yet in progress. Besides, 7,654 non-residential service units were completed and 5,422 of such units are in progress till the first half of 2008. In other words, 13,076 non-residential units and 275,342 residential units were completed or are in progress in new

Table 4. Down activations in construction of house in new towns until 2008 (http://ntoir.gor.ir)

Sum	Singular		Mass construction		Cooperative		New town	No.
	Completed	Under construction	Completed	Under construction	Completed	Under construction		
47,363	640	796	2582	18,139	8150	17,058	Hashtgerd	1
24,056	1704	930	2840	1010	13,318	4191	Andishe	2
29,299	95	184	615	11,669	9778	6948	Pardis	3
29,196	600	140	8054	16,416	869	3117	Parand	4
32,000	6654	6641	10,621	2965	3507	1612	Baharestan	5
48,452	3888	2494	14,847	7924	13,514	5785	Poolad Shahr	6
1954	174	116	66	1268	0	330	Majlesi	7
8545	852	462	1217	2257	1370	2387	Golbahar	8
1355	12	71	196	388	2	686	Binalood	9
24,835	3153	2802	2265	11,727	1309	3579	Sadra	10
12,034	783	1750	1949	5311	705	705	Sahand	11
6714	2155	100	1490	412	1380	1380	Mohajeran	12
8324	473	730	1329	913	692	692	Alishahr	13
149	0	0	123	26	0	-	Ramshar	14
250	0	0	0	148	52	52	Alavi	15
0	0	0	0	0	0	-	Ramin	16
816	0	0	0	816	0	-	Shirin Shahr	17
275,342	21,183	17,214	48,194	81,389	54,719	52,643	Sum	

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towns of the country, which are as a whole 288,418 fulfilled units.

Table 5. Down activations in construction of non-inhabited buildings in new towns until 2008 (http://ntoir.gor.ir).

Completed								Under construction								New town	No.
Sum	Other	Healthful	Official	Service	Traditional	Cultural	Educational	Sum	Other	Healthful	Official	Service	Traditional	Cultural	Educational		
410	2	2	56	1	325	3	21	532	1	2	84	9	431	1	4	Hashtgerd	1
1406	12	10	14	107	1219	10	34	369	3	1	1	1	356	4	3	Andishe	2
1053	16	8	5	5	993	9	17	858	23	1	2	18	805	3	6	Pardis	3
577	2	2	2	10	543	4	14	491	1	1	1	0	480	5	3	Parand	4
955	26	32	42	142	614	56	43	357	0	23	5	153	159	7	10	Baharestan	5
1979	23	17	16	27	1829	23	44	865	5	1	45	43	755	12	4	Poolad Shahr	6
117	5	2	3	9	88	4	6	213	10	1	0	2	192	4	4	Majlesi	7
377	124	3	11	12	209	3	15	141	84	1	1	0	50	1	4	Golbahar	8
72	16	0	1	7	44	1	3	42	32	1	0	4	0	4	1	Binalood	9
299	36	2	46	8	191	6	10	971	35	11	93	11	797	14	10	Sadra	10
77	2	1	5	4	47	4	14	232	5	0	0	0	221	1	5	Sahand	11
180	6	6	7	18	118	9	116	159	0	1	0	8	150	0	0	Mohajeran	12
131	3	3	9	10	90	5	10	97	2	0	0	0	92	2	1	Alishahr	13
15	7	2	0	2	0	2	2	32	2	0	1	0	28	1	0	Ramshar	14
5	0	0	2	0	0	1	2	3	0	0	0	1	0	0	2	Alavi	15
0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	1	Ramin	16
1	0	0	0	1	0	0	0	58	0	1	0	7	7	1	4	Shirin Shahr	17
7654	280	90	219	364	6310	140	251	5422	204	45	233	257	4561	60	62	Sum	

It is noteworthy about non-residential projects that a large number of these projects have commercial use and constitute 83.1% of all non-residential projects. Other projects and activities are mainly devoted to services and official uses (Table 4 & 5).

Land preparation for new towns

According to statistics published by New Towns Company, about 12,277 hectares of land were prepared in the first half of 2008, mainly performed in Sadra new town around Shiraz with an area of 1795 hectares. Also around Tehran, 13.59, 10.32, 6.74 and 9.35 km^2 of land have been prepared in Parand, Hashtgerd, Andishe and Pardis, respectively. Thus, 4000 hectares of land have been prepared around Tehran and offered for transfer.

Sahand new town around Tabriz with a prepared area of 10.35 km^2 is another important new town in the country. Isfahan as the country's second metropole has prepared lands with area of 12.64, 10 and 2.45 in Baharestan, Poulad shahr and Majlesi, respectively, whose sum of land is 24.91 km^2 (Table 6).

Analysis of new towns' objectives and evaluation of their success or effect on urban system

As previously mentioned, construction of new towns was fulfilled with the aim of decentralization and controlling the population overflow from metropolis and their executive operations have been continued in the last two decades. Nonetheless, of great importance are evaluation of the effects of huge investment in new towns on their urban system, and how successful are these towns in attracting population.

It is concluded from Table 1 that, approximately 3,880,000 persons were considered for 21 constructed or in construction new towns and it is estimated that until 2010, roughly 800,000 persons will be settled in these new towns. Even so, based upon the census, this population has been 356,900 persons until first half of 2008, which is even lower than half of the intended population to be settled by the end of the fourth development program.

Besides collectivity problems, it is of importance to point out that the urban population of the country was over 48 million persons in 2007, while only 7.9% (3.8 million persons) of this population will be settled in new towns. On the other hand, the decision was to settle 1.6% of this population in these towns by the end of the fourth development program; thus by calculating the present population of these towns, only 0.7% of the urban population of the country could be settled in new towns.

The key question is that, excluding the construction of new towns, could any other strategy be a proper alternative in order to attract and settle this 0.7% of urban population?

Contemplating the urban system and considering the factors effective on the migration from small cities and villages, a much better strategy could be adopted for solving the country's urban network problem. Intermediate and small cities are potentially appropriate alternatives for replacing new towns and this strategy has been emphasized in national macro-plans. In spite of this, pure modeling from conditions of European countries was carried out in making new towns. Consequently, it is nowadays reasonable to conclude that, construction of new towns in Iran has not been a successful policy.

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Conclusion

Based upon the statistics published by the World Bank in 2007, the percentage of urban population has been 75%, 43% and 41% for developed countries, developing countries, and Asian countries, respectively. This is while 69% of Iran's population was settled in cities in the same year. What is observed in developed countries as urban percentage higher than 75% is completely different from the approximately 70% urban percentage in Iran. It seems that unlike the former, urbanity in Iran is more similar to urbanism rather than urbanity in its real sense. The results achieved from analyzing the available statistics and censuses of the country indicate fast growth of urban population which hence leads to an increase in urbanity in recent decades. The chief mechanisms contributing to increase of urbanity in Iran are commonly considered as natural growth, migration from village to city, village to town transformation, and confluence of city outskirts to the city. The total number of Iran's population and its urbanity percentage has always increased during previous years. According to reports of the census in 2007, the total population of the country was 70,496,000 persons, which comprised of 48,245,000 persons (68.5% of total) being settled in cities, and 22,251,000 persons (31.5%) being settled in villages. The analyzed data indicates the fast growth of urbanity in recent fifty years. Such data also specifies the fact that, urbanity percentage has doubled and the urban population of the country has grown eight times compared to its value in fifty years ago.

Table 6. Land preparation from start until end of 2008 (http://ntoir.gor.ir).

No.	New town	Land preparation (*10,000 m^2)	(%)
1	Hashtgerd	1032	8.41
2	Andishe	674	5.49
3	Pardis	935	7.62
4	Parand	1359	11.07
5	Baharesta	1264	10.1
6	Poolad Shahr	1000	8.15
7	Majlesi	245	2
8	Golbahar	946	7.71
9	Binalood	327	2.66
10	Sadra	1795	14.6
11	Sahand	1035	8.43
12	Mohajeran	840	6.84
13	Alishahr	500	4.07
14	Ramshar	34	0.28
15	Alavi	56	0.46
16	Ramin	40	0.33
17	Shirin Shahr	213	1.73

The average growth rate of urban population was 2.26% from 1927 to 1937 and its maximum value belongs to the time period from 1947 to 1987 which was over 5% in these years. It should be noticed that, the growth rate of total population of the country was high too, and the urban population growth was to a great extent normal. From 1987, the decreasing average of total population growth rate coincided with a decrease in the average growth rate of urban population which reached 2.74% from 1997 to 2007. It is noteworthy that, the average of village population growth rate has become negative in the mentioned years, which mainly results from either migration of villagers or transformation of villages to cities. The policy of constructing new towns with the purpose of balancing urban system continued in recent two decades and 21 new towns were approved and established. These towns were unsuccessful in attracting the population and only 0.7% of the country's population was settled in them. It was however expected in past decades that, the population load of large cities would decrease and be transferred to new towns.

Summary of the results from analysis of urban population variations and strategies of constructing new towns: Drastic growth of urbanity and settlement in cities from 1977; Lack of appropriate strategies about anomalous growth of large cities in the country; Mere modeling from the strategy of constructing new towns in Europe without considering the Iranian culture; Failure of the strategy of constructing new towns in attracting the population; Appropriateness of reinforcing intermediate towns instead of investing in the construction of new towns; Ineffectiveness of the newly constructed towns on urban system balance of the country and its different regions; Dormitory function and lack of identity of new towns.

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