



Analysis of Modern Cities' Prosperity by Focusing on the Relationship between Small Demographic Centers and Metropolitan Centers and Improving Living and Service Standards in Metropolitan Areas

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Received: 01.02.2015; Accepted: 06.06.2015

Abstract. The unbridled and quick growth, the excessive density and concentration of population in mega cities have made these cities unable to continue a healthy urban life and in fact they are unable to provide their residents with necessary services. With the aim of reaching the economic and social balanced growth and controlling its unbridled growth and regarding the mentioned problems in the metropolitan areas, creation of new cities around big cities with a reasonable distance in order to decrease population and its attractions was suggested. The new city of Pardis about 35 km northwestern Tehran across the Ab-Anjirak lands has been developed in order to organize the settlement system, to absorb the population overflow of Tehran and alleviating Tehran challenges. This study tries to analyze whether Pardis City is successful, its performance to absorb the population overflow of Tehran City, the significant reasons for moving into this city and analyzing the former settlements of households living in this city now. Some demographic indicators were used for indicating the prosperity of Pardis City; a questionnaire was designed in order to analyze the reasons that encourage people to move in to this city. The results show that this city has failed to absorb the predicted population and inexpensive lands and housings are among the main reasons for why people tend to move to this city; however, analysis of the former settlements of its residents indicate that most people who have moved to Pardis were used to live in Tehran City already.

Keywords: Prdis New City, Tehran Metropolitan Area, Population Overflow, Living Standards

1. INTRODUCTION

According to the United Nations' studies, the world's population is growing faster than ever before: three people every second, more than 250,000 every day which in turn is a key factor for the increased urbanization. Based on the same studies, the developing countries are account for about 95% of the population growth; with the growing and overflow population is led to megacities and mother cities, so we witness the ever-increasing growth of mother cities in terms of population and of course their increasing problems. The new cities usually are founded with the aim of avoiding the unbridled development of big cities and absorbing their population overflow and also the potential immigrants. Iran is a developing country and the Prdis New City has been designed to achieve the mentioned objectives based on research, scientific and recreations, tourism applications and absorbing a predicted population. It was constructed around Tehran City in order to alleviate problems in Tehran Metropolitan Area. In accordance with the Iranian Higher Urban Development and Architecture Council's resolution, adopted on March 14, 1989, on the subject of positioning and population size of the Pardis New City, it s construction became legal and its development firm statute was approved on July 23, 1990. After new cities positioning studies, its location was chosen at the Tehran urban area. The

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Pardis New City is constructing about 35 km east of Tehran across the Tehran-Amol Transit Road. This road is among the main roads of the country which connects the Capital City of Iran into the main coastal cities of Ira across the Caspian Sea. Regarding the following considerations, the Ab-Anjirak Lands were chosen for construction of the Pardis New City with the capacity of 20000 residents:

- A good distance from Tehran City (about 35 km);
- Locating across one of the main roads of the country;
- Topographic elements which disconnect the area to Tehran;
- A low-density population which is less than the average density of the country counting the arid lands of the country;

A proper environmental condition along with natural landscapes. If the predicted plans are met in this city, it can host 200000 people in a land are of 2140 ha and there will be potential facilities to generate about 50000 jobs.

This study tries to assess the prosperity of Pardis New City in absorbing population until its comprehensive outlook horizon (2011) and also to study themost important reasons of movement to this city and to analyze the fact that how important was the research-scientific and tourism-recreational definition of the city to absorb immigrants to this city. Another target of the city is absorbing the population overflow of Tehran Metropolitan Area; hence the former settlements of the current residents of Pardis City have been considered. Various comments about the prosperity or failure of new cities by authorities who are responsible for constructing the new cities such as the Ministry of Housing and Urban Development, especially the New Cities Construction Company on the one hand and critics and experts of different fields on the other hand indicate the necessity of the current study. On the other hand, the metropolitan cities in the Third World states suffer from several problems and Tehran is not an exception to this rule. New cities around the megacities are constructed to solve the problem. Thus, assessing the success or failure of Pardis in terms of solving the problems of Tehran and new planning for megacities and development of new cities demonstrates the necessity of this study. The statistics published between 1996 and 2006 were used to analyze the Pardis performance in absorbing population; the statistics have been extracted through the standardized score model in terms of descriptive and analyzing standards; also a set of the standardized intervals were considered for determining this value.

1.1. Problem Statement

Regarding the statistics published for 2006, the Pardis City has not yet reached the predicted population for this year (i.e. 90000 people) and there is a considerable difference between the current population and what had been predicted in the outlook horizon (200000 people). This great difference may exacerbate the current situation of the city considerably; on the other hand, the Pradis New City can be defined as a middle city in the eastern side of Tehran urban area; however, demographic studies indicate a more than 257000 people must be considered as the population that would live in the strategic area of Pardis by 2021, if people move to this area automatically, which it is considerably more than a demographic capacity set for a city and a middle city. Research-scientific and tourism-recreational are two role that have been predicted for this city; because the city's performance will move beyond its physical borders and will impact its own influence area. Medical and telecommunication centers will be established in Pardis City; thus, the Pardis New City will become a center for science, experiment and technique of the urban area of Tehran and presumable the social research center of the country. Likewise, the tourist-recreational performance of the city will result in prosperity of certain activities such as hotelling, development of more restaurants and recreational and tourist centers across the pivot links it to Tehran. If Pardis becomes able to play a middle role in Tehran's urban hierarchical system and to organize administrative, political and commercial services in Easter Greater Tehran area, the one can be hopeful about the realization of its performance in

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the near future (Ziari, 2006: 158-160).

However, the current studies indicate that this city not only has failed to strengthen its middle role, but also, regarding its target to absorb the population overflow of Tehran, has failed to achieve what has been predicted. Regarding the low price of land and housing, Pardis has been emphasized and the fact that it has failed to play the role already has been defined for it (research-scientific and tourism-recreational) will encounter it with job generation problem; on the other hand it can be said that it will not have any other function that settlement for residents. With regard to objectives defined for development of the city, its problems can be summarized as the follows:

1. How successful has been Pardis in meeting its predefined targets to absorb population and in achieving the authorities' objectives?
2. Whether the current population of Prdis City has moved from Tehran to this city?
3. Whether consideration of a scientific-research and tourism-recreational role for this city was effective in absorbing population?

1.2. Objectives

The policy of development of new cities around Tehran, regarding the following objectives, was implemented:

1. A proper and planned distribution of population in Tehran urban area in terms of the population overflow from Tehran Metropolitan Area to new cities;
2. Decentralization of Tehran via transferring a number of its duties to the new cities, as the new cities can play a connecting node between small demographic areas and metropolitan areas;
3. Refining, improving and enhancing its living and service standards;
4. Preventing the unbridled raise of land and housing price and sprawls, destruction of agricultural lands around Tehran. New cities within the Tehran urban area have been positioned in order to meet the mentioned aims (Ziari, 2006- 153);

1.3. The general objective if this study

1. Performance appraisal of Pardis City in absorbing population of Tehran Metropolitan Area.
2. Analysis of the former sAettlement of the households living in the Pardis City;
3. Analysis of the most important reason of immigration of households to Pardis city.

1.4. Importance and Necessity of Research

Presently, there are different views about failure and prosperity of new cities; on the one hand we have governmental authorities such as the Ministry of Housing and Urban Development, and especially the New Cities Development Company, who emphasize the success of this initiative and are going to continue this policy; and on the other hand we have critics and experts of different fields, especially urban development experts, who have discussed about failure and inefficiency of this policy. In this condition, analysis of the performance of these cities and their outcomes seems necessary. Furthermore, metropolitan areas in the Third World states suffer from the following social problem. These problems recall the necessity of a new planning for metropolitan areas and development and creation of new cities as well as assessment of failure or prosperity of these cities:

1. The social control limits one would face already in the metropolitan areas have been vanished as the relationships among relatives, neighbors, friends have been influenced by the

social environment ruling over the city;

2. It must be recognized that the new cities are designed and developed through a close relation with the metropolitan areas, as their development will affect development or demise of the metropolitan areas.

3. Speaking about population density and unbridled growth of population in metropolitan areas of Iran, inevitable construction and development of new cities can be considered as a way to alleviate demographic and ecological crisis. Any sort of executive activity and operation to develop such cities must be proper to the social, economic and political requirements of the social system.

4. The metropolitan areas suffer from a substantial problem, which is overemphasizing economic problems and alterations, rather dealing with the cultural and social issues. A way to cope with social, economic, political and cultural problems in metropolitan areas is to design, develop and extend new cities around the metropolitan areas in order to absorb excessive population of metropolitan areas which in fact is the source of such problems (Mostafavi and Khabazian, 3).

1.5. Background

In various historical eras, cities have been developed with different goals across different parts of the world. They can be called new cities. Historically, the ability to develop new cities reflects the fact that human communities always are able to find new ways to cope with their problems (Qarakhlou, 2006, 1).

New cities have a multi-thousand history, from Mohenjo-daro, which has been developed more than 4000 years ago to the Greek city-states and from defensive cities in Renaissance era to utopian cities in 19th century and also from garden-cities in 20th century till now (Qarakhlou, 2006, 1).

In this regard, the Greek philosophers have analyzed the human life for years and have suggested their utopias. Aristotle and Plato, speaking about the new cities, have referred to self-reliance and the optimal size of the population. Designing imaginary new cities during Renaissance era was considered as a symbol of the mankind's intelligence and ability (Golany, 1979: 1). The end of industrial revolution era was followed by two theories: reformism and utopianism. For proponents of reformist theory, the spatial organizing of cities is interpreted in the framework of technological perspective and they do not deny its core and they argue that reconstruction of cities is done from their inside. The proponents of utopianism, in contrast, believe in developing imaginary cities against the industrial ones (Ziari, 1997: 8).

Therefore, designing new cities is the result of various theories which are extracted from the Ebenezer Howard's key theory. Inspired by the illusionist's thoughts, Howard proposed his theory. For him, the theory of garden-city was an option to encounter with the growing megacities' population, organizing and spatial distribution of population and industries. According to Howard, the aim of proposing garden-cities scheme was achieving functional structure, optimizing the population area size, employment and self-reliance, establishment of the green belt, optimal density and public ownership of land. He implemented two garden-city projects when he was alive (1928). As the result of revolutionary dreams of illusionists and reformists' ideas and adopting them with the British planning policies and other countries, the concept of new city was developed as a liberalistic opportunity to apply reforms and to offer a better way for experiencing the urban life (Ziari, 1988: 12).

Garnier's industrial city theory is another example that was implemented in 1919 in Lyon, France, in a small scale. Garnier was fascinated with the architectural form of a 20th-century city which is able to meet requirements caused by social and technical developments. Clarence Perry (1923) proposed the Neighborhood Unit Theory. Using this theory, Henry Ritt and Clarence Stein constructed the new city of Radburn in New Jersey, United States (Ebrahimzadeh and

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NegahbanMarvi, 2004: 158). The experiences resulted from Radburn City helped the policymakers of urban development area to generalize this idea to the other new cities; a comprehensive and pervasive planning was gained in this area through changing rules (Esfandiari, 1994: 88). Harvey Parloff used the New Continuous City theory to describe cities within the current cities. In fact, this model is developed alongside the mother-city and grand complexes to solve the problem of the residential aggregations; therefore, the aim of development of such cities is spatial organizing and decentralization of mother cities. This model has an intensive population density and is developed very quickly because it is located in the big cities area (Ziari, 1988: 43).

Gideon considers the new cities, that can absorb population overflow, as new settlements which are developed in order to improve the organizing status of the metropolitan areas through decentralization and distribution of population around them (Geography and Development Magazine, 2007: 7). Petercats, in the new urban development paradigm, refers to the new satellite cities as a plan and inseparable part of completing intra-city and revitalizing plan. Peter Hall and Colin Ward, Urban Development Strategies in the new Millennium, refer to the new cities as a proper solution in the regional level. Transit Oriented Development (TOD) can be another ring of the current urban development chain. Shin shows that new cities around Seoul play an effective role in balancing the population living in the metropolitan area through absorbing the population overflow of mother city. Moreover, Hugh and Lemm studies about new cities of Hong Kong indicated that these cities have been successful in decentralization of urban centers and absorbing the population overflow of the metropolitan areas. Various studies about new cities in Iran show that these cities have failed to play a key role in absorbing the overflow population of their mother city and there are very small population living there (Geography and Development Magazine, 2007:8).

However, the new cities, in terms of their modern concept, mostly are the result of industrial revolution and its reflection over the cities. On the other words, the industrial revolution and its consequences have been followed by extension of urbanization and the increasing growth of cities and big cities have experienced serious problems upon passing the development of industry and capitalism development era (Ziari, 1997: 97).

To answer these problems, initially the Howard's garden-cities problem was suggested for London which was suffering from the problems of the industry era. Using a technique including numerous details, Howard posed a strategy for solving the industrial city problems (Qarakhlou, *ibid*).

A broad range of studies have been organized on the new cities in the international level:

Planning and performance of Iranian new cities analyzed the Iranian new cities through two periods, before and after the Islamic Revolution of 1979 and the planning process of the Iranian new cities and their function. Another study, new cities and their practical challenges: Fouladshahr Experience in Iran analyzed Isfahan region and its new cities, the comprehensive plan of Fouladshahr and its development and practical challenges. It also deal with the fact that this city has a long way ahead to become a vibrant, excellent and self-assisting city. Another study, new city development in Jakarta Metropolitan Area: spatial differentiation perspective, in was concluded that in Jakarta region, the new city development strengthens the spatial differentiation for three reasons:

1. High-income and medium-income groups are polarized;
2. High-income groups occupy proper and safe areas;
3. Instead of municipality, developers run the city.

A study, analysis of the daily trips pattern of Hong Kong New City residents, it was concluded that despite the ideal assumptions on the planning principles of the new cities, the improper condition of jobs and schools in the new cities have led to daily commutes from new cities to the old ones. In his study, the population absorption trend of Sahand new city and the necessity of a comprehensive look at the settlement policies in the Tabriz urban area, Qorbani concluded that analyzing the suggested projects for Sahand City and comparing them with the visible facts in the Tabriz urban area indicates the shortages in realization of this project. Jadidi in his article, Positioning of the new cities in the framework of regional planning, has criticized positioning of new cities in Iran and believed that positioning must be implemented in the framework of regional policies, rather where land occupation is easier. Qarakhlou and Abedini in their article, Assessment of challenges and problems of new cities and their prosperity degree in Iran: New City of Sahanad concluded that Sahand City has not a successful performance, as Sahand, as a new dormitory city near Tabriz, sells its flats very slowly and without governmental allowances it cannot survive anymore. Mahdi Qarakhlou and MousaPanahandeh in their article, assessment of new cities' performance in absorbing population overflow of metropolitan area: new cities around Tehran, have dealt with new cities around Tehran using the Standardized card method. Their results indicate that four cities around Tehran (Pardis, Andisheh, Hashtgerd) which have been constructed and started to absorb population were not successful equally in this issue.

1.6. Hypotheses

According to the objectives of the research and regarding the theoretical framework, the main hypotheses of the study are defined as follows:

1. It seems that the performance of the Pardis New City in absorbing population is very poorly compatible with the primary targets and objectives predicted for the city.
2. It seems that most households living Pardis city have moved from Tehran.
3. It seems that the main reason for movement from Tehran to this city is inexpensive housing, rather its scientific-research and tourism-recreational approach.

1.7. Definitions

New City: new cities are planned communities which are developed in response to some predefined objectives. New city is a self-reliance community, with a certain population and area, certain distance from the mother city, its objectives are defined and also it enjoys all necessary facilities for an independent environment.

1.8. Data and Methods

Different methods such as statistical data analysis and quantitative techniques were used in this study for examining the mentioned hypotheses. For conducting field studies of this paper we used questionnaires which were filled with interviewees. Also, for analyzing the qualitative values of the study, certain quantitative intervals were considered.

1.9. Analysis of the findings

Table 1. Demographic information of Pardis New City.

Name	Distance from the mother city	Year of beginning	the predicted population by 2006	the realized population in 2006	the final predicted population for 2011
Pardis	35	1991	90000	58000	200000

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For assessing the prosperity of Pardis City in absorbing population, we need initially to consider a set of intervals: For convenience purposes, the following demographic indicators were considered to study how successful Pardis was in absorbing new population:

X1: the ration of settled population to the predicted population in 2006 x 100

This indicator shows the progress percentage in absorbing population.

X2: the ratio of the predicted population in 2006 to the final predicted population x 100

This indicator shows that the ratio of the predicted population in 2006 to the city's final population.

X3: The ratio of the realized population in 2006 to the final predicted population in the city's comprehensive horizon x 100

Table 2. The calculated indicators.

Indicator	Percentage
X1	64.44
X2	45
X3	29

With regard to the gained statistics and information and the measured indicators and considering intervals, it can be concluded that the Pardis new city had a medium performance in absorbing population, which was measured through X1 index; while comparing two indicators of X2 and X3 shows that according to the predictions it has been supposed that Pardis City reach 45% of its population by 2006; while the results of statistical assessments indicate that this city has reached only to 29% of its total population predicted in the horizon. As a result, regarding the considered intervals for analyzing the Pardis City success, it can be said that its performance in absorbing population is poorly compatible with the initial goals predicted for this city.

For analyzing the second hypothesis, most households living Pardis city have moved from Tehran, we needed to find information about former settlements of Pardis residents. For this reason, a questionnaire was devised to collect information from the new residents of Pardis. The cluster random sampling method was used, for this reason each area has been considered as a cluster; regarding their dividing system, any region was divided into several neighborhoods and was considered as a secondary cluster and regarding the relative population living in the city and number of residential units in that city, any secondary cluster was selected as the sample through systematic sampling of some residential units.

Table 3. Assessment of former settlements of households.

	Frequency	Percentage
Percentage	25	35.7
From Tehran City	32	45.7
Cities out of Tehran Province	13	18.5
Total	70	100

To test this hypothesis, analyzing information on former settlement of households indicate that about 81.4 and 18.5 percent of these households have come from Tehran Province and out of Tehran Province, respectively. Therefore, it can be concluded that most immigrants of Pardis City have come from Tehran City and Tehran Province, as the Pardis City can be considered successful in absorbing the population overflow of Tehran.

For testing the third hypothesis, movement from Tehran to this city is inexpensive housing, rather its scientific-research and tourism-recreational approach, the extracted data from the prepared questionnaire for Pardis City is summarized in the following table:

Table 4. Why households come to Pardis City.

The reasons of movement to Pardis New City	Frequency	Percentage
Inexpensive land and housing	30	42.8
Better living condition	11	15.7
Research-scientific and tourism-recreation functions of the city	10	14.3
Better working condition in Pardis	9	12.9
Better access to urban facilities	10	14.9
Total	70	100

For convenience purposes, several intervals are considered for making clear the main reason of movement and or ranking reasons of movement to the New city and these intervals are summarized in the following table:

Intervals for comparison	Interval degree (percent)
Not effective reason	0-20%
One of important reasons	20-40%
Among important reasons	40-60%
The most important reason	60-80%
The sole important reason	80-100%

Analyzing the findings shows that inexpensive land and housing in the new city of Pardis are amongst the most important reasons of movement to this city and other reasons have a little impact. Finally, in order to show variables in a better way, both hypotheses and results of the study are summarized as follows:

Num	Hypotheses	Variables Related	Assessment	Intervals for comparison
1	It seems that the performance of the Pardis New City in absorbing population is very poorly compatible with the primary targets and objectives predicted for the city.	The initial population and the predicted population in the horizon	this city's performance in absorbing new population is poorly compatible with what had been predicted for this city	Very low 0-25% Low 25-50% Medium 50-75% High (excellent) 75-100%
2	It seems that most households living Pardis city have moved from Tehran.	Former settlements of households living in the new city Frequency	percent of households living in the new city of Pardis who used to live in Tehran	already Very small 0-20% Small 20-40% A half of 40-60% Many of 60-80% Too many 80-100%
3	It seems that the main reason for movement from Tehran to this city is inexpensive housing, rather its scientific-research and tourism-recreational approach.	The reasons of households for coming to the new city Inexpensive lands	and housings in the new city were among the most important reasons	Not effective reason 0-20% One of important reasons 20-40% Among important reasons 40-60% The most important reason 60-80% The sole important reason 80-100

2. CONCLUSION

This study tries to analyze how success was the New City of Pardis in absorbing population, the main reasons of movement to this city and the former settlements of the current residents of Pardis City. Our findings show that this city was not successful in absorbing population; as it has only reached 29% of the predicted population in its outlook horizon and perhaps and full achieving the predicted population in its outlook horizon is a distant will. According to the data extracted from questionnaires distributed among residents of Pardis City, we know that inexpensive lands and housing was among the main reasons for moving here; as 30 people (42%) out of our 70-person statistical population gave a positive answer to this question. Only

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10 (14.3%) people referred to research-scientific and recreation-tourism functions of the city as the main incentive for their movement to Pardis City. Analyzing the former settlements of households indicate that 45.7% of households used to live in Tehran City already, while 35.7% of people have come from other townships around Tehran. Thus, it can be concluded that most residents of Pardis New City have come from Tehran who constitute 81.5% of the current residents of Pardis New City.

3. SUGGESTIONS AND SOLUTIONS

Generally it can be said that although Pardis New City has failed to achieve its predicted goals in terms of absorbing population, according to the findings of this study, it has been successful in absorbing the population overflow of Tehran though very slowly; thus for forming a new city we need:

1. Job generation and formation of services. If there are not enough services in the city, certainly never the predicted population will come to the city and the necessary demographic thresholds for service provision will never be developed. It does not let the city to meet what has been predicted for its development schedule.
2. It can be claimed that formation of a city needs national resolution and will, so if the authority of construction of new cities did not restricted to Ministry of Housing and Urban Development and the New Cities Construction Company and other institutions and organizations and disciplines such as geography and urban planning was allowed to cooperate, some better results would be gained.
3. Strengthening the role (research-scientific, tourism-recreation) that has been defined for the city and on the other hand strengthening the middle role of the city for forming some more balanced hierarchy in the country's urban system.

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