Evaluation of Housing Performance of New Towns of Iran

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Background: Housing is an issue which has great influence on human being welfare and plays an important role in economic stability of family. In Iran, the share of housing cost accounts for 32.5% of total urban family cost, which can reach 70% for low-income families. Objective: The object of current research was to evaluate the housing performance of new towns in Iran (Hashtgird, Parand, Pardis, Baharestan, Majlesi, Binalod and Ramshar). The research method used in this research was descriptive-analytic. Results: The results showed that total average of housing realization, according to master plan anticipation, was 42.96% until 2011. New towns showed different performance from each other with respect to housing performance. Conclusion: In some of these new towns, housing realization is more than 100%; in others, it is less than 10%, which reflects the imbalance and lack of acceptance of new housing in the new towns of Iran country. Population problems can be mentioned as the main reason for this imbalanced realization of the housing in new towns.

INTRODUCTION

Housing is an issue which has high importance in human being welfare and plays crucial role in the improvement of families economic. This factor is a key social aspect, because poverty and economic insecurity are main causes of social and economic instability; and job opportunities, housing proximity to work place, and commuting costs are the main economic factors affecting housing. The first important aspect of housing is the need for a shelter. Like food, the need for shelter is a necessity for everyone. The first period of housing shortage in Iran occurred during lands reforms, growth of capitalism and emigration of villagers to cities; and the second period of housing shortage was resulted from oil price increase, centralist actions and overgrowth of cities due to weak regulations and policies toward private sector. After revolution, housing crisis continued to intensify due to inappropriate policies [1].

The housing problem in Iran can be felt by rapid increase in price of residential units and rent payment, especially in cities [2]. In Iran country, 32.5% of total urban family costs is allocated to housing cost, which can be over 70% for low-income families in metropolises, suggesting that a significant part of household income is spent on rent payment and mortgage payment [3]. Increase in urban population and the need to build new urban centers, which can accommodate the increasing population of big cities, have been the main reasons for construction of new towns [4]. In fact, new towns are constructed to solve the economic, social and environmental problems of big cities (including housing shortage), so that new towns were a response to overpopulation and economic activities of big cities [5]. New towns construction in Iran can be studied during two periods; before revolution and after revolution. After revolution, administrative activities of new towns started after the 1980s. No doubt, the long-term sustainable programs in urban planning and housing construction confirm new towns policy [6]. The rapid growth of urbanization in recent years, which is a result of increasing population, resulted in the construction of new towns; and understanding the way of construction and distribution of housing in these kinds of towns, as well as the way it works, will help to organize housing problems in the future. Since housing construction is the essence of cities, its identification and analysis can have significant effects on solving the problems of modern cities [7]. Housing is one of the developmental indicators and is one of the necessities of human. There has also been an increasing investment in housing of
new town. For these above-mentioned reasons and the importance of the object, this research was conducted to evaluate the performance of the housing in the new towns of Iran.

MATERIALS AND METHODS

After revolution, the project of new towns construction with forward planning was proposed by Ministry of Housing and Urban Development as a solution to the problems of metropolises in the late 1980s, and was approved by the government. Therefore, in different provinces of the country, construction of 17 new towns and further construction of 12 new towns in later years were started. These new towns constructed in Iran are: 1) Tehran province: Pardis, Hashtgerd, Parand and Andisheh. 2) Esfahan province: Baharestan, Majlesi and FolahShahr. 3) Khorasan Province: New Towns of Gulbahar and Binalood. 4) Azerbaijan Sharghi Province: Sahand new town. 5) Fars province: Sadra new town. 6) Bushehr province: New town of Alyshahr. 7) Markazi Province: New town of Mohajeran. 8) Hormozgan Province: New town of Alavi. 9) Khuzestan Province: New towns of Ramin and ShirinShahr. 10) Sistan and Baluchestan Province: Ramshar new town. With respect to unsuccessful policy of new towns in Iran and high sensitivity about the information of these towns, researchers were only able to obtain information about the housing of new towns of Pardis, Hashtgerd, Parand, Baharestan, Majlesi, Binalod and Ramshar. The results of housing performance in these new towns can be an indication of housing performance in new metropolises of Iran. In figure 1, location of Iran new towns can be seen. Due to the nature of the subject and studied parameters, the research method employed was “descriptive analysis” method. First, by referring to the documents and related projects, data related to anticipated housing of new towns was collected during different periods. Then, by using of various sources, referring to related agencies and companies and acquiring housing built in these towns in different periods, realization degree of housing in these new towns was evaluated. To map the location of new towns in Iran, ARC GIS software was used.

![Fig. 1: Spatial position of Iran new towns relative to metropolises. Drawn by researchers.](image)

### 3. Results:

1-3. Evaluation of housing performance of Hashgterd new town:

New town of Hashgterd is located 65 kilometers west of Tehran city, and 25 kilometers west of Karaj city. It is also located in the north of Tehran-Ghazvin highway and has access to other communication paths such as Tehran-Ghazvin old way and west railway line. In the near future, connection of Tehran railway project to Hashgterd town will connect this town to Tehran subway network in 20 minutes [8]. In table 1, anticipated housing and housing realization for new town of Hashgterd during different periods are seen.

### Table 1: Rate of housing realization of Hashgterd new town.

<table>
<thead>
<tr>
<th>Year Title</th>
<th>1996</th>
<th>31/6/1999</th>
<th>2003</th>
<th>2006</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticipated housing</td>
<td>8260</td>
<td>7035</td>
<td>27958</td>
<td>36400</td>
<td>72950</td>
</tr>
<tr>
<td>Housing realization</td>
<td>42481</td>
<td>34099</td>
<td>17258</td>
<td>10985</td>
<td>7300</td>
</tr>
<tr>
<td>Realization percentage</td>
<td>58.23</td>
<td>93.67</td>
<td>61.72</td>
<td>156.14</td>
<td>88.37</td>
</tr>
</tbody>
</table>

[9, 10, 11, 12] & Authors’ calculation.

The housing situation in new town of Hashgterd shows 58.23 percent realization until 1390. The rate of housing realization in new town of Hashgterd during various years represents different situations in different periods, so that housing realization showed an increase from the year of 1996 to 1999, and even it was better than anticipated in 1999 but it reduced from 1999 to 2003. Housing realization had better performance from 2003 to 2006 so that it was 93.67 percent, but the speed of housing realization in new town of Hashgterd showed reduction compared to master plan anticipation during the years of 2006 to 2011.
2.3- Evaluation of housing performance of Parand new town:

The new town of Parand as one of the new towns of Tehran is situated 40 km southwest of Tehran on the way to Saveh. The town is intended to provide residence for the staffs of Imam Khomeini International Airport, create a balance in the settlement pattern of Tehran, establish an appropriate environment to draw in the extra population of Tehran and offer an alternative to unsystematic settlements [13]. In Table 2, anticipated housing and housing realization of Parand new town, based on master plan, are listed.

Table 2: Rate of housing realization of Parand new town.

<table>
<thead>
<tr>
<th>Title</th>
<th>Year</th>
<th>Anticipated housing</th>
<th>Housing realization</th>
<th>Realization percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2006</td>
<td>10769</td>
<td>14823</td>
<td>137/64</td>
</tr>
<tr>
<td></td>
<td>2011</td>
<td>14089</td>
<td>14559</td>
<td>103/35</td>
</tr>
</tbody>
</table>

Housing realization in this new town was far from anticipated housing so that housing realization was 137.64 percent in 2006. Although housing realization during the years of 2006 to 2011 followed reduced trend, it showed the realization of 103.33 percent in 2011, which is higher than anticipated housing.

3.3- Evaluation of housing performance of Pardis new town:

The new town of Pardis is in 25 km east of Tehran, on the Tehran-Amol transit route. The major population centers around the new town of Pardis are including Roudehen, Boomehen, Abali and Damavand.

In the east part of Tehran city, new town of Pardis plays the role of middle town. In terms of service role, both the scientific research and recreational tourism are predicted for this town because town performance will cross the physical boundaries and will affect its sphere of influence. Medical research and communicative centers will be established in Pardis new town, thus new town of Pardis will turn into scientific, technical centers of Tehran urban area and probably social research of Iran [15].

Table 3: Rate of housing realization of Pardis new town.

<table>
<thead>
<tr>
<th>Title</th>
<th>Year</th>
<th>31/6/1999</th>
<th>2003</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticipated housing</td>
<td>1996</td>
<td>7077</td>
<td>10110</td>
<td>13901</td>
</tr>
<tr>
<td>Housing realization</td>
<td>1996</td>
<td>12180</td>
<td>18000</td>
<td>18795</td>
</tr>
<tr>
<td>Realization percentage</td>
<td>1996</td>
<td>172/10</td>
<td>178/04</td>
<td>135/20</td>
</tr>
</tbody>
</table>

There has been a growing trend in housing realization of Pardis new town from 1996 to 1999 so that it was 158.49 percent in 1999, a number more than anticipated housing. With housing realization of 70.52 percent in 2011, it showed a reduced trend from 1999 until 2011. Although housing realization was not successful according to the anticipated plans, it showed better performance in comparison to the population at the same year, and can certainly meet the requirements of residents’ housing and even part of next residents of this town.

4.3- Evaluation of housing performance of Baharestan new town:

Baharestan is a new planned town situated 15 km south of Isfahan and north of Lashtar mountains along Isfahan-Shiraz road. Baharestan town as the biggest housing project in Iran and the first new town after revolution was constructed to plan logical distribution of Isfahan population and prevent the destruction of Zayandeh-Rood agriculture lands [17].

Table 4: Rate of housing realization of Baharestan new town.

<table>
<thead>
<tr>
<th>Title</th>
<th>Year</th>
<th>31/6/1999</th>
<th>2003</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticipated housing</td>
<td>1996</td>
<td>6700</td>
<td>11425</td>
<td>19930</td>
</tr>
<tr>
<td>Housing realization</td>
<td>1996</td>
<td>7500</td>
<td>18108</td>
<td>14920</td>
</tr>
<tr>
<td>Realization percentage</td>
<td>1996</td>
<td>111/94</td>
<td>158/49</td>
<td>74/86</td>
</tr>
</tbody>
</table>

Housing realization trend of Baharestan new town contains positive and negative growth over various periods of years, so that housing realization growth during the years of 1995 to 1999 was positive; and housing built with realization of 135 percent in 1999 was more than anticipated housing. Whereas, during years of 1999 to 2011, the rate of housing realization reduced until it reached 53.47 percent in 2011.

5.3- Evaluation of housing performance in new town of Majlesi:

The new town of Majlesi as the third new town of Isfahan located 65 km southwest of Isfahan along Isfahan-Khuzestan road. In addition to creation a place to house extra population of Isfahan, the other aim of Majlesi new town construction was to provide an accommodation for workers of Foolad-Mobarakeh and other
side industries, which located near this town. The central square of town with area of 8000 M, which constitutes the central core of the town and includes cultural, religious and social services, was copied from Isfahan NaghsheJahan square [8].

Table 5: Rate of housing realization of Majlesi new town.

<table>
<thead>
<tr>
<th>Title</th>
<th>Year</th>
<th>Anticipated housing*</th>
<th>Housing realization</th>
<th>Realization percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1996</td>
<td>6000</td>
<td>2000</td>
<td>33/33</td>
</tr>
<tr>
<td></td>
<td>2011</td>
<td>54000</td>
<td>2302</td>
<td>26/4</td>
</tr>
</tbody>
</table>

[19, 10, 12] & Authors’ calculation.

About the housing of Majlesi new town, the results showed that housing situation is inappropriate and unsatisfactory. Housing realization of Majlesi town reduced from 1996 to 2011, so that housing realization rate reduced from 33.33 percent in 1996 to 4.26 percent in 2011.

6.3- Evaluation of housing performance in new town of Binalood:

New town of Binalood was aimed to house parts of Mashhad population, prevent the growth of fake jobs in Mashhad work market and attract industry investments [20]. New town of Binalood is located 55 km southeast of Mashhad and south of beautiful mountain of Binalood. The new town of Binalood encompasses parts of old and new routes of Mashhad- Tehran and Abrisham road. Moreover, Mashhad- -Tehran railway lines pass through south of town [21].

Table 6: Rate of housing realization of Binalood new town.

<table>
<thead>
<tr>
<th>Title</th>
<th>Year</th>
<th>Anticipated housing</th>
<th>Housing realization</th>
<th>Realization percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2009</td>
<td>12017</td>
<td>1416</td>
<td>17/78</td>
</tr>
<tr>
<td></td>
<td>2011</td>
<td>15679</td>
<td>1484</td>
<td>9/46</td>
</tr>
</tbody>
</table>

[22, 21, 12] & Authors’ calculation.

Reduction in housing realization in Binalood new town during years of 2009 to 2011 shows the inappropriate situation of housing in this town, which can be due to the lack of its ability in absorbing and housing extra population from Mashhad and lack of suitable urban services.

7.3- Evaluation of housing performance in Ramshar new town:

Ramshar new town is located 35 km southwest of Zabol city and near the Sistan desert. Communicative road of Zabol-Zahedan passes adjacent lands of Ramshar town. The distance from Ramshar town lands to Zahedan, capital of Sistan and Baluchestan Province, is 180 km. Zabol development faced some problems such as threatening by Hamun Lake and Sistan River overflow, ruined buildings, agricultural lands located in east, south and west parts of the city preventing development of the city and other regional and environmental problems. Under these circumstances, Ramshar new town project was designed as a center to absorb some of the next population in order to solve the aforementioned problems [23].

Table 7: Rate of housing realization of Ramshar new town.

<table>
<thead>
<tr>
<th>Anticipated housing</th>
<th>Housing realization</th>
<th>Realization percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>5559</td>
<td>149</td>
<td>2/68</td>
</tr>
</tbody>
</table>

[24, 12] & Authors’ calculation.

As it can be seen in table 7, the rate of housing realization in Ramshar new town in the year of 2011 was 149 housing units, which shows realization of 2.68 percent. Performance situation of housing units and population of Ramshar new town with realization rate less than 3 percent is not good, indicating lack of success of this town in housing development. In table 8, new towns are compared based on their performance in housing and population realization in 2011.

Table 8. Rate of housing and population realization of new towns according to master plan anticipations in 2011

<table>
<thead>
<tr>
<th>New town</th>
<th>Hashtgerd</th>
<th>Pardis</th>
<th>Parand</th>
<th>Baharestan</th>
<th>Majlesi</th>
<th>Binalood</th>
<th>Ramshar</th>
<th>Average of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Realization of housing</td>
<td>58/23</td>
<td>70/52</td>
<td>103/33</td>
<td>53/47</td>
<td>4/26</td>
<td>9/46</td>
<td>1/48</td>
<td>42/96</td>
</tr>
</tbody>
</table>
Fig 2: Rate of realization of housing and population of new towns in 2011.

Based on data presented in table 8, total average of housing realization in new towns surveyed at the end of 2011 was 42.96 percent. While, total average of population realization in these new towns at the same year was 16.91 percent, which shows vacant extra housing units are more than population.

Conclusion:
According to the results of this research, it was determined that total average of housing realization in new towns studied at the end of 2011 was 42.96 percent, which is an average performance. On the other hand, studied towns showed different situations from each other in terms of housing performance. In some of these new towns, housing realization was over 100 percent, while it was less than 10 percent for other towns, indicating lack of balance and acceptance of housing in new towns of Iran. This factor can intensify the imbalanced regional development in Iran. The highest rate of housing realization in new towns studied until the year of 2011 was due to new towns around Tehran, in which new town of Parand with realization rate of 103.33 percent placed at the first rank. Of the most important reasons for higher rate of housing realization in new towns around Tehran can mention to specific conditions of Tehran city, population explosion and high amount of investment. The rate of housing and population realization in new towns of Binalood, Majlesi and Ramshar was less than 10 percent, which can be owing to the lack of anticipated population realization in these towns and long distance of these towns from mother cities. In general, it can be concluded that higher performance of population realization resulted in the improvement of housing in new towns and vice versa.

REFERENCES


