



فصلنامه مدیریت شهری

(ویژه نامه لاتین)

Urban management

No.42 Spring 2016

■ 7 - 20 ■

Received 14 April 2014; Accepted 23 June 2015

## **Spatial analysis on the state of the housing market in Tehran**

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### **Abstract**

Like other economic markets, housing market is comprised of supply and demand dimensions and equality of supply and demand makes the housing market balanced. The aim of this paper is to investigate the characteristics of housing market of Tehran city and some deficiencies of this market with fundamental – applied methodology. The variable studied here is the saleable residential unit with minimum 50m<sup>2</sup> area which is obtained after statistical evaluations of housing price for many years and estimation of the loans and deposit of families in different income levels. Results reveal that problems of housing market can be attributed to lack of appropriate planning in housing building and supply (in quantity, area and geographic location), decreasing purchasing power of people various income levels as a result of misfit of increase in income and price of housing, low demand of families and finally, limited income groups for purchasing appropriate housing.

**Key Words:** *Housing market, Urban housing, Housing supply, Housing demand.*

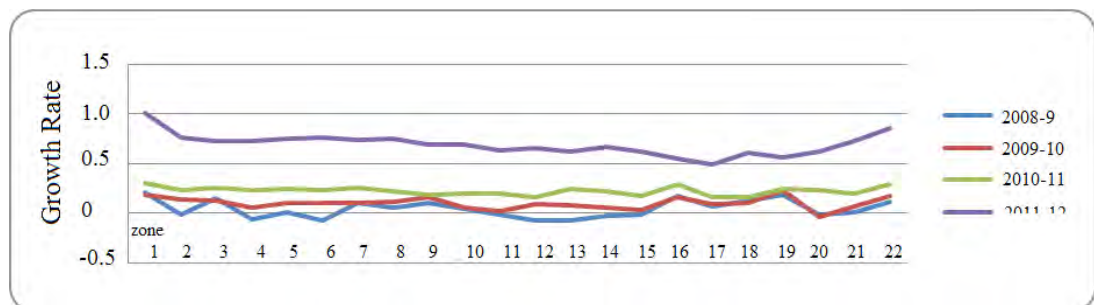
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## Introduction

Housing is considered as one of the most essential and sensitive parts of the socio-economic development plans (Azizi, 1999, 71). Housing is the smallest and minor form of the physical embodiment of the mutual relationship between human and environment and the most private living space (Masaeli, 2009: 28). Formation of housing follows cultural, climatic, economic and living factors as well as construction methods of the society (Moeini, 2008: 48). According to Rapport, cultural factor and perception of human from the world and life has a more pronounced contribution to the housing and organization of spatial divisions of it (Rapport, 1969, 47). In most of the cases, the most important factor contributing to the satisfaction of someone from living in a district is housing and its environmental conditions (Westaway, 2006, 187). Furthermore, as a unit for providing physical facilities or as an economic long lasting commodity which plays a social role as well, is like a set of services and an economic division (Bourne, 1981: 14). Add to these financial needs, representation of the socioeconomic status of people (Cater and Trevor, 1980: 38). An appropriate and suitable housing represents the general welfare of the society and unsuitable housing results in devastating consequences including diseases, promiscuity and corruption among young people of the society (Rangwala, 1998: 62). Economic factors, architectural style, indigenous language of the region, stylistic orientations, weather, geography and local traditions contribute to the de-

velopment of planning and design of housing in various places (Sendich, 2006:185). At the same time, housing is a major commodity and determines the social organization of the space which plays a pivotal role in formation of personal identity, social relations and collective goals (Short, 2006: 199). Therefore, one of the most important parts of urban planning is the planning for development of housing. According to WHO, housing is one of the most highlighted indices of physical development (Rafiei, 2000: 34). On the other hand, housing is of great importance as an asset and comprises 20-50% of the productive wealth of most of the countries (Azizi, 2004: 33). In developed countries, plans of housing development concentrate on qualitative improvement (Ghazi, 1995: 93). However, in developing countries, due to lack of sufficient resources, weakness of economic management, lack of a national comprehensive plan and rapid growth of the population, problems of supplying housing have a complex and multidimensional form (Woodfield, 1989: 5). In this regard, one of the important parts of most of the plans of housing is investigation of the state of urban housing market or in other words, the issue of supply and demand of housing. The problem of this sector can be generally correlated to the number, size, type and price of the shelter in various places of the city (Daneshpour, 2002: 2).

The problem of housing in Tehran has various aspects. One dimension of the housing problem in Tehran corresponds to increase in price of housing and exit of many of families



▲ Fig 1. rate of increase of housing price for 22 zones of Tehran, 2007-2012 (Iran statistical center, 2008-12)

from the housing market of the city and another one corresponds to lack of an appropriate housing for various socioeconomic classes which reside in various points of Tehran (same: 7). Results of statistics from 2008 to 2012 reveal that in this city, price of housing in various points increased continually (Fig. 1). Through investigation of the state of Tehran housing market, this paper intends to answer two questions: first, what are the characteristics of Tehran housing market and second, does conditions of this housing market is appropriate for all socioeconomic classes? Results of this work can assist urban planners to understand the issues and problems of urban housing market and modification of viewpoints and policies of the Tehran city about housing as well as other cities and metropolitans.

### Theoretical background

For ensuring consolidation of the social economy of the society, providing housing for everyone along with promotion of the national development is an essential issue for each country (Meshkini and Mir Kamali, 2007: 91). Moreover, housing is a materialistic item and a spatial quality which is responsible for supplying living, economic, social, family and psychological needs of people (Pour Mohammadi, 2010, 27). Most of the governments utilize housing planning in reaction to the significance of housing in the form of national, regional and urban planning (Ziari, Dehghan, 2003) and the main purpose of housing planning in national level is to make balance between supply and demand in the planned level (Zebardast, 2003: 18). Housing and its planning has attracted attention from various points of view in national and international levels. In this work, we note the most important of them. First viewpoint is the solely economic view- toward housing. This vision is liberalistic and leaves the problems of the housing to market mechanism as in the case of other economic issues and any interference of government will reduce the effi-

ciency of unseen hands (Dejkam, 1994: 255). From theories which are addressed in in this context, filtering theory can be noted which is based on the laws of supply and demand. In this theory, housing needs of the families are supplied through the process of filtering. This process is one through which housing units which were occupied before by a certain income level becomes accessible for families with lower incomes as a result of reduction in price (Abedini, 2010: 85). In general, this theory assumes that supply of even the most expensive housing units can be justified from social point of view since construction of new buildings leads to creation of a chain of movements (interurban migrations) whose result is the modification of housing conditions even for lower income levels (Daneshpour, 1999: 38). The second point of view is the method of planned economy in housing market in which profiting as the driver and target of activities in housing field is abandoned and housing sector becomes the non-separable part of the public, planning and economic management system and it is one of the general goals of socioeconomic development (Heydar Abadi, 2001: 9). One of the theories addressed in this context is the theory of city growth which was introduced by Rex in 1989 regarding cities of Britain and deals with the adaptability of Britain cities with other countries. According to this theory, the process of allocation of housing takes place with political as well as market mechanisms and present system is determined gradually and according to various factors. The third viewpoint corresponds to the housing of low income groups and includes three main plans. First is the plan which provides compensatory subsidiaries for single houses or residential complexes. Second, tax credits whose result is housings with low rents. Finally, supportive plans for construction of houses for lower income families can be noted. One of theories which was addressed in this field is the theory city of social-ist man. When private market is not present

and the process of allocation of housing has political rather than economic nature, this theory comes to play. The aim of this theory is to present a method for allocation of housing in such a way that housing zones are free from class differences (Daneshpour, 1999: 38).

Local planning of housing is performed in urban or suburban levels. Local housing planners can be viewed from two viewpoints. First viewpoint is distribution of goals and credits of national and regional plan in smaller geographical units. The second viewpoint refers to investigation of housing state in local levels and estimation of housing lands required for future housing development of the city as well as appropriate division of lands (Towfigh, 2003: 17).

Policy makers, proponents and opponents of the traditional development policies of the housing found out that construction of suitable and affordable housing for low income families is a key tool for achieving vital goals including economic success of families, welfare and happiness of children, intelligent growth and fair development. Evidences show that construction of house for low income families is a platform for employment, increase in incomes and financial security of them (Mills et.al, 2006). Research has shown that people who got aid for construction of housing benefited more from welfare plans of working compared to those who didn't get such an aid. Therefore, housing plan for increasing purchasing power can stimulate social programs corresponding to working and self-dependence (Newman and Harkness,

2000: 40-63).

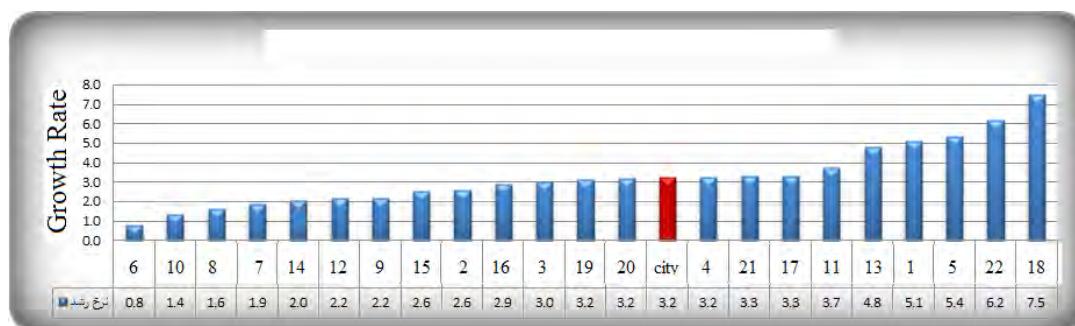
### Research methodology

The method of this work is descriptive – analytical whose geographical area is Tehran by its 22 zones. In this paper, state of housing market is first analyzed and evaluated through utilization of supply indices such as number and lack of housing units, size and per capita of housing units, price of housing and then, cash level of the society and its effect on housing sector and regarding demand, the level of effective demand is evaluated through computation of the ownership power in Tehran city. References of information are Iranian statistical center as well as municipality of Tehran during 2006-2012. Method of collection of data and information regarding theoretical framework is documentary observation and in analysis of data, descriptive – analytical method by means of Excel software is used.

### Results

Comparison of the number of housings units constructed in Tehran and its growth with lack of housing units during 2006-2012: statistic of the number of housing units reveals growth of this number during 2006-2012. Average growth of housing units for this city is about 3.2% while in 18, 22, 5 and 1 zones have 5.1-7.5% more growth compared to average of Tehran and zones 6, 10, 7 and 89 zones have 0.8-1.9% lower growth rate compared to average of Tehran (Fig. 2).

Since growth of the number of housing units follow different conditions, it is better to compare this statistic with rate of lack of housing units in the same years. For investigation of

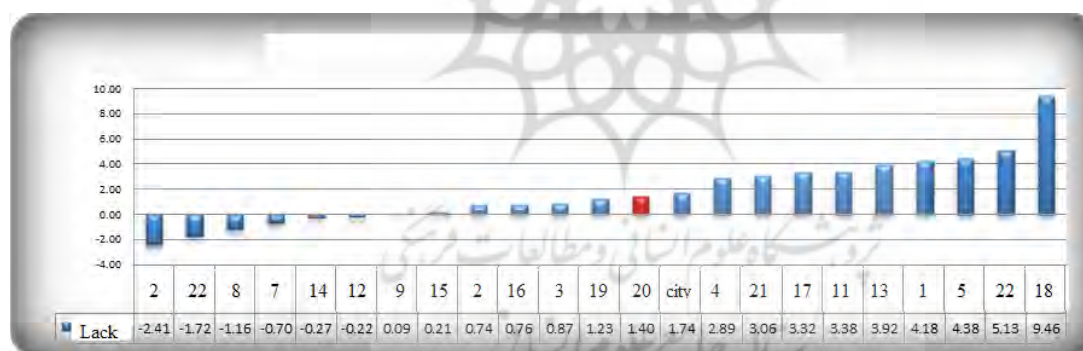


▲ Fig 2. growth rate of housing units for zones of Tehran during 2006-12 (Iran statistical center, 2006-12)

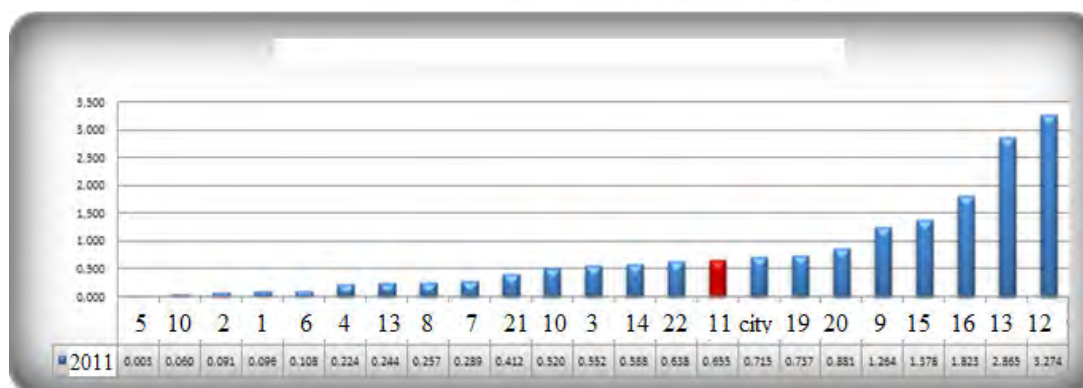
the lack of housing units, method of evaluation of index of lack of housing units is used. In this method, by comparison of the number of families with the number of available houses and based on a certain standard (usually a house for a family), lack of housing can be estimated. For better comparison of this index, percent of lack of housing units can be used (Raesi, 2000: 243). For Tehran, this index is evaluated and measured for each of 22 zones for 2006-12 years. Spatial analysis of the results in 2011 reveals those southern zones (18, 17, 16, 15, 20 and 19) and some central zones (9 and 12) with an index higher than 0.72 are seriously lacking housing units. On the contrary, in zones 5, 1, 2, 4 as well as 6, 7 and 8 zones in city center with index close to zero, lack of housing is in its minimum rate. It means that pattern of construction and distribution of housing in Tehran city has no specific relation with needs of social groups, facts of population growth as well as the method of loading of it in urban regions since south-

ern part of Tehran including zones 18, 17, 16, 15, 20 and 19 which have the index of lack of housing units compared to northern part, have more than 32% of Tehran population with a growth rate as much as 1.71% (Fig. 3 and 4).

Area of housing unit: area of housing unit which is obtained by dividing the overall area of units by the number of housing units represents another difference between south and north of Tehran metropolitan. That is, in northern zones 1. 3. 6. 2. 22. 5. 21 and 4, average area of housing is more than 89 m<sup>2</sup> and southern zones 10, 17, 15, 18, 16 and 19, average area of housing is less than 70 m<sup>2</sup> which are higher and lower than average of this index in Tehran as much as 88 m<sup>2</sup>. However, spatial distribution and difference in urban places is considerably lower than spatial differences of housing units which is affected by differences in family dimensions as well as population growth in urban regions (Fig. 5).



▲ Fig 3. index of lack of housing units for zones of Tehran in 2006 (Iran statistical center, 2006-12)

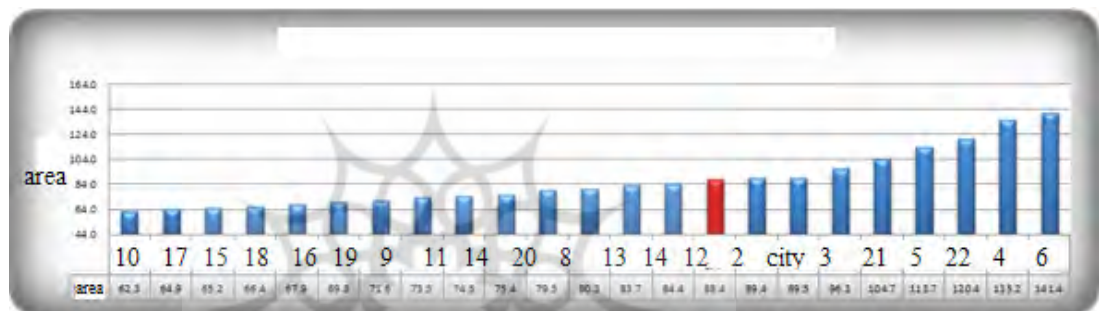


▲ Fig 4. index of lack of housing units for zones of Tehran in 2011 (Iran statistical center, 2006-12)

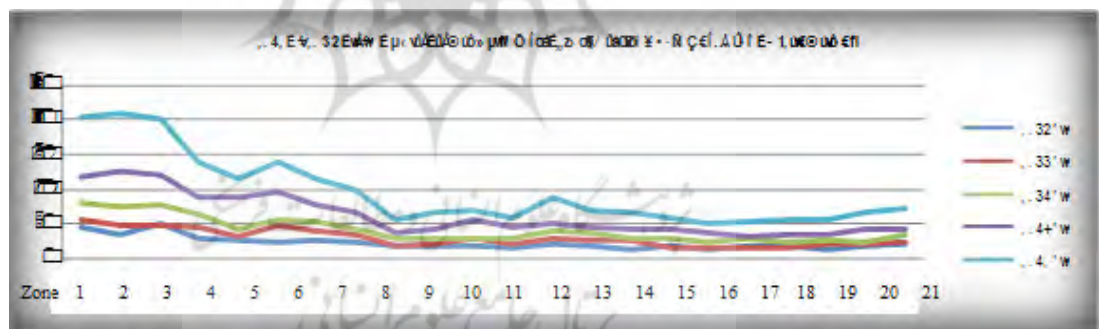
**Price and rent of housing:** information of the price of housing in Tehran is prepared by Iranian statistical center for Tehran 22 zones and is classified in three groups: 1) housing with highest average price, 2) housing with moderate price and housing with least possible price (Fig. 6 and 7). Housing with least average price includes those housing units which have inappropriate physical and geographical conditions for living. Investigation of the statistic of housing with maximum average price and moderate price in Tehran for 22 zones reveal the serious price difference between price in southern and northern parts

of Tehran. This difference in maximum average price is about 36.2 million RLS in 2008 and increased to 156.7 million RLS in 2012 (Fig. 8). Regarding housing with moderate price, investigations show that northern zones 1, 2 and 3 have highest prices and southern zones 15, 16, 17, 18, 19 and 20 have lowest prices. This difference intensified in recent years and approached from 22.32 in 2008, to 60.1 in 2012 (Fig. 8).

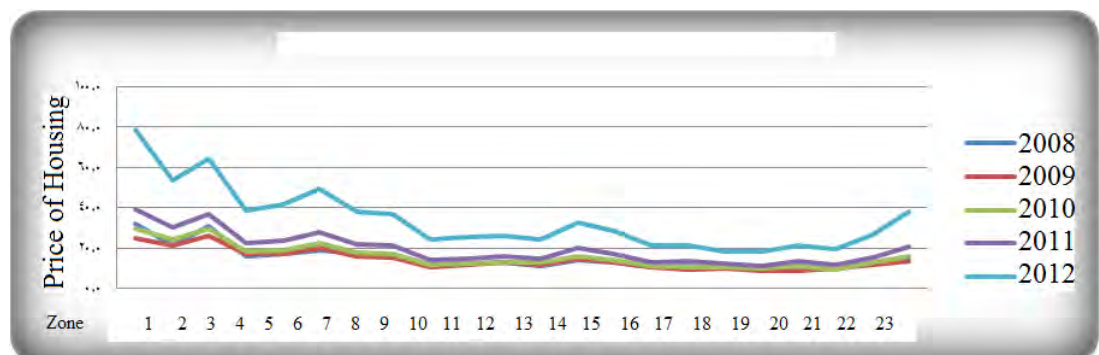
Housing with least average price shows no considerable difference among Tehran zones. However, price of such type of housing increased significantly in 2012.



▲ Fig 5. average area of housings for Tehran zones in 2011 Iran statistical center, 2006-12)



▲ Fig 6. Investigation of housing rent in Tehran (Iran statistical center, 2006-12)



▲ Fig 7. changes in price of housing for Tehran zones in 2008-12 (Iran statistical center, 2006-12)

Rent of house in Tehran always grows in accordance with price of housing. Investigation of housing rent in Tehran for different zones reveals that during 2011-12, rent of housing increased by 30%, 83% and 91% in zones 8, 4 and 21, respectively (Fig. 10).

### Increase in liquidity and its effect on housing sector

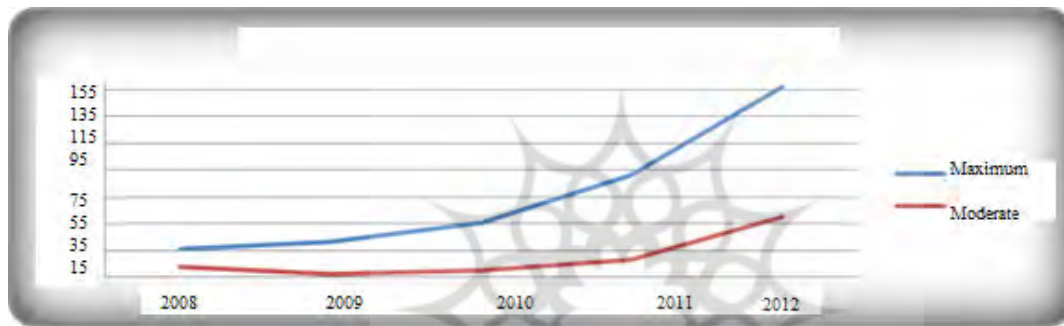
During 2008-2012, liquidity experienced increase in Iran (Fig. 11). Studies have shown that facilities allocated to housing and building sectors during 2002-2011, comprises about 60-70% of facilities allocated to all other sec-

tors in the same period. In other words, one of the reasons of increase in price of land and housing may be the growing increase in liquidity and flow of cash to housing and buildings sectors. Directing liquidity toward production sectors for the sake of making added value in accordance with growth in liquidity is one of the ways of preventing uncontrolled increase in housing price (Mohammadi, 2013: 180).

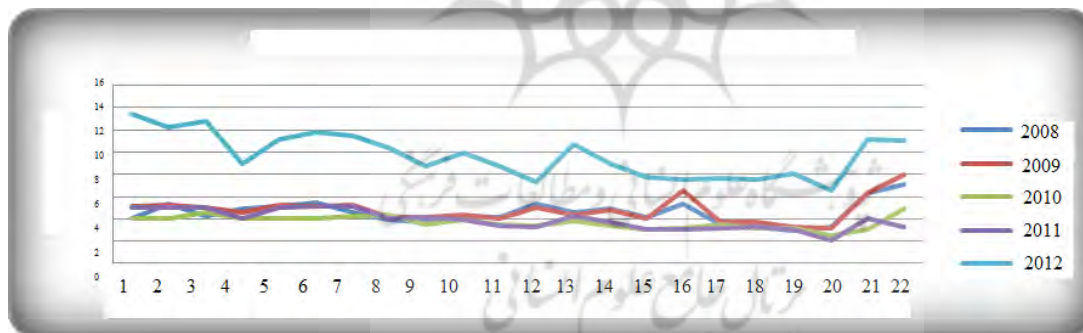
Research politico-economic quarterly, no. 293, liquidity and its details in Iran economy

### Estimation of ownership power in Tehran city

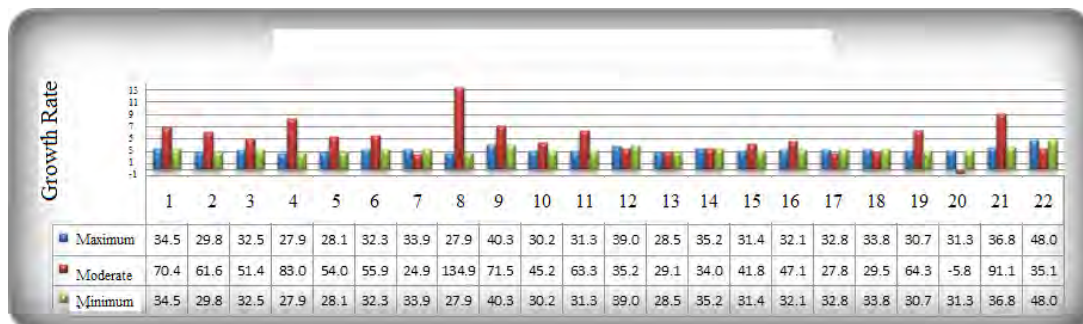
Ability of families for owning a house is a cri-



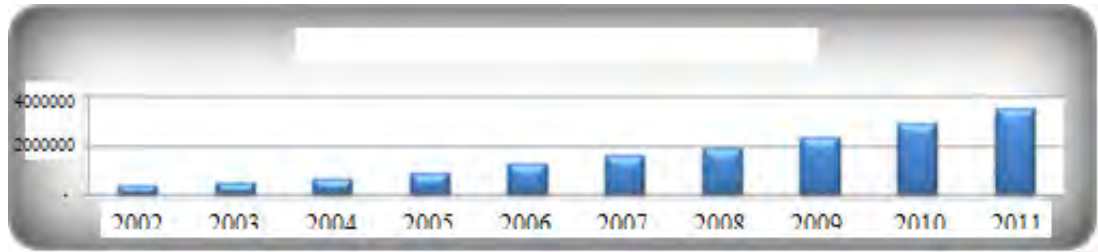
▲ Fig 8. difference of housing price for Tehran zones during 2008-2012 (Iran statistical center, 2006-12)



▲ Fig 9. changes in housing price for Tehran zones during 2008-2012 (Iran statistical center, 2006-12)



▲ Fig 10. growth of housing rent in Tehran zones in 2012-13 (Iran statistical center, 2006-12)



▲ Fig 11. liquidity rate during 2002-2011 (Billion RLs)

terion for evaluation of the pattern of supply and demand and a basis for estimation of the effective demand . To evaluate and estimate the index of housing which can be owned by different income groups according to available statistics for different zones, some steps are taken. First, basic assumptions are determined and then, area of the housings which can be owned by different income groups in 22 zones of Tehran is calculated and finally, results are investigated and analyzed.

1st stage, determination of basic assumptions: assumptions made for estimation of the ownership power are as follows:

a. Financial resources of housing are supplied through two ways; housing loan and deposition of family.

c. Minimum area of the housing is 50 m<sup>2</sup> .  
c. Initial capital (prepayment) for supplying housing is determined as much as 30 years of deposition of the family (length of working period of someone).

d. Maximum deposition of no group is more than 40% of income.

e. Each family allocates monthly housing expenditure to payback of the loan.

f. Housing loan is considered as the normal facilities of banks with 18% interest rate and 15-year payback.

2nd stage, estimation of the area of housing: housing area which can be owned by different income levels in Tehran and its different zones during 2008-12 is performed in four steps:

- Estimation of housing loan: amount of loan received by families is determined based on their monthly housing price by assuming that each family allocates its monthly expenditure of housing to payback of the loan (table 1). This method is used by Iranian banks for calculation of the interest

$$F = \frac{B \times E}{\gamma + \frac{a \times (\gamma + B)}{\gamma \times \gamma}}$$

where, F is the amount of loan, B is the period of payback of the loan, a is the bank interest rate and E is the monthly installment of the loan.

- Estimation of family deposition: deposition of families in different income levels is calculated by Comports equation and based on the rate of deposition of families during 30 years for supplying housing as follows (Ziari, 2010: 11):

$$Si = Ci \times K \times a^{b \times Yi}$$

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
2008	75.4	99.1	116.6	141.5	159.4	184.3	205.8	232.3	307.5	454.0
2009	78.3	106.7	124.0	145.1	163.7	186.5	209.8	230.3	294.5	431.8
2010	89.8	117.8	140.0	161.7	186.8	210.6	233.7	282.6	334.9	597.9
2011	113.1	151.7	173.2	197.6	226.8	248.7	281.5	329.3	411.1	691.2
2012	137.5	169.3	199.4	224.5	265.3	298.2	344.9	389.6	519.9	960.8

▲ Table 1. calculation of the amount of loan for different income levels during 2008-12; Iranian statistical center, results of demographics of urban families expenditures and incomes, 2008-12



where,  $S_i$  is the deposition of  $i$ th group,  $K$  is the constant of maximum deposition,  $C_i$  is the amount of income in different income levels,  $a$  and  $b$  are constant values and  $y_i$  is the income of the family in  $i$ th group.

Parameters  $a$  and  $b$  are estimated as follows. First, Comports curve passes a point with average coordinates which approaches the deposition of income groups and this value is set for Iran cities as much as 0.15 (Fakhraei, 2009: 36). Then, maximum deposition of no income group must exceed 40% of its income ( $k=0.4$ ). according to above assumptions, Comports equation will be solved and deposition factor and finally annual deposition of families during 2008-12 will be evaluated (table 2).

3rd stage, estimation of the purchasing power: housing purchasing power refers to the amount of money each family can pay for a house. This amount is estimated for different income groups by sum of the amount of loan and deposition for purchasing house during 2008-12 in Tehran (table 3).

4th stage, fitting purchasing power with price of housing: to fit purchasing power of people in different income groups with price of housing and estimation of the housing ownership power, percent of families who are able to purchase a house with at least 50 m<sup>2</sup> area is calculated and also, groups of 22 zones of Tehran which have such an ability during 2008-12 were recognized.

### Results of fitting purchasing power and housing price

Investigation of changes in power percent of different groups in 2008-12 period in Tehran and its various zones based on different types

of housings illustrates that:

- Housing with maximum price: purchasing power of various groups for purchasing these houses is continuously decreasing (table 4) and it has following characteristics (table 5):
  - Limited groups have the ability to purchase the housing with maximum average price in Tehran.
  - For northern parts of Tehran, only 10th group and for southern parts, groups 8, 9 and 10 groups have the ability to purchase houses with maximum average price.
  - Purchasing power of groups decreased significantly during 2008-12 so that during 2008-12, groups with high income lost their ability to purchase houses with maximum average price in zones 1, 2 and 3.
  - According to income resources defined in assumptions, groups 1-7 don't have the power to purchase house with above said price in Tehran.
- Iranian statistical center, results of demographics of urban families' expenditures and incomes, 2008-12
- Housing with moderate price: in this type of housing, statistics and information show that purchasing power of income groups increase relatively increase until 2011 and significantly decreased in 2012. Characteristics of the effective supply and demand in this type of housing are as follows (table 5):
  - Only groups 6-10 have the power of purchasing these housings and groups 1-5 are not able to purchase these houses.

Purchasing power of these groups increased relatively during 2008-11 but declined considerably in 2012.

Only 9th and 10th groups have the

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
2008	28.5	78.6	122.6	173.2	234.2	314.2	420.9	596.9	931.8	2496.5
2009	29.7	80.9	131.2	187.0	253.7	341.3	462.7	659.7	1019.8	2310.5
2010	34.7	93.8	152.6	215.5	286.6	373.9	500.3	706.4	1112.2	2853.2
2011	60.8	162.6	251.6	350.7	461.8	596.8	782.4	1068.8	1585.6	3328.0
2012	98.1	262.5	404.9	547.9	712.5	917.3	1187.2	1586.6	2313.0	4976.0

▲ Table 2. calculation of the amount of deposition of families in different income levels during 2008-12; Iranian statistical center, results of demographics of urban families' expenditures and incomes, 2008-12

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
2008	103.8	177.7	239.1	314.7	393.6	498.5	626.8	829.2	1239.2	2950.5
2009	108.1	187.5	255.2	332.1	417.4	527.9	672.5	890.0	1314.4	2742.3
2010	124.6	211.6	292.6	377.2	473.4	584.5	733.9	989.0	1447.1	3451.0
2011	174.0	314.3	424.8	548.3	688.6	845.5	1063.9	1398.1	1996.7	4019.2
2012	235.6	431.8	604.4	772.3	977.8	1215.6	1532.1	1976.2	2832.8	5936.8

▲ Table 3. calculation of the purchasing power of families in different income levels during 2008-12; Iranian statistical center, results of demographics of urban families' expenditures and incomes, 2008-12

Housing with maximum price	Housing with moderate price	Housing with minimum price	
2008	19.1	31	77
2009	16	36	79
2010	11.4	36	89
2011	9.5	42.3	94
2012	9	37	83

▲ Table 4. percent of income groups which have the power to purchase housing with at least 50 m2 area in Tehran (2008-12)

ability to purchase house in northern part of Tehran including zones 1, 2 and 3 and groups 6, 7 and 8 are mostly able to purchase housing in southern and central part of Tehran.

- Housing with minimum price: referring to statistic of such type of housing, we find out that except 1st group, other groups experienced relative increase in purchasing power during 2008-12 but their purchasing power declined seriously in 2012 (table 4). Characteristics of supply and demand for this type of housing are as follows (table 5):

- Except 1st group, other groups have the power to purchase such type of housing.
- Purchasing power of groups increased relatively during 2008-11 and decreased significantly in 2012.

#### Summary and conclusion

In this paper, it was attempted to estimate the purchasing power of different income groups of various zones of Tehran for purchasing housing. Though in this work, a series of assumptions are made and families may have other income resources such as heritage, since the purpose of this paper was to investigate the trend of developments not exact calculation of purchasing power of income groups, aforesaid assumptions can be used in this regard. By evaluation of the above noted issues and evaluation of the results corresponding to

purchasing power of various income groups, five general characteristics can be noted for housing market of Tehran:

- 1.Lack of a certain plan for construction and supply of housing with respect to size, area and geographic location
- 2.Excessive growth in housing price for various reasons such as increase in liquidity and failure to direct it toward production sectors
- 3.Decreasing trend of purchasing power of income groups due to misfit of increase in income and housing price
- 4.Lower effective demand of various income groups and decreasing trend of purchasing housing with maximum and moderate average prices particularly in northern parts of Tehran
- 5.Limited number of income groups with the ability to purchase appropriate housing with maximum and moderate average price

These five characteristics reveal low capacity of Tehran housing system to meet various needs of difference socioeconomic groups of residents. In other words, characteristics of the supplied housing is not only far from the effective demand of income groups, but also this distance experienced relative increase as time passes. As such, a scope of housing in Tehran metropolitan must be designed and prepared by the main purpose as increase in

Groups with purchasing power in 2012			Groups with purchasing power in 2011			Groups with purchasing power in 2010			Groups with purchasing power in 2009			Groups with purchasing power in 2008			Zone
Min	Mod	Max	Min	Mod	Max	Min	Mod	Max	Min	Mod	Max	Min	Mod	Max	
4-10	10	-	2-10	9-10	-	2-10	10	-	3-10	9-10	-	3-10	10	10	1
3-10	9-10	-	2-10	9-10	-	2-10	9-10	-	4-10	9-10	10	4-10	9-10	10	2
4-10	10	-	2-10	9-10	-	3-10	9-10	10	3-10	9-10	10	3-10	10	10	3
3-10	8-10	-	2-10	8-10	-	2-10	8-10	10	3-10	8-10	10	4-10	8-10	10	4
3-10	9-10	-	2-10	8-10	-	2-10	8-10	10	3-10	8-10	10	4-10	9-10	10	5
3-10	9-10	-	2-10	8-10	-	2-10	9-10	10	3-10	9-10	10	4-10	9-10	9-10	6
3-10	8-10	-	2-10	8-10	10	2-10	8-10	10	4-10	8-10	10	3-10	9-10	10	7
3-10	8-10	10	2-10	7-10	10	3-10	8-10	10	3-10	8-10	10	3-10	8-10	9-10	8
2-10	7-10	9-10	2-10	6-10	9-10	2-10	7-10	10	3-10	6-10	9-10	3-10	7-10	9-10	9
3-10	7-10	10	2-10	6-10	10	2-10	7-10	9-10	3-10	7-10	9-10	3-10	7-10	9-10	10
2-10	7-10	10	1-10	6-10	10	2-10	7-10	10	3-10	7-10	10	3-10	8-10	9-10	11
2-10	7-10	10	1-10	6-10	10	2-10	7-10	10	3-10	7-10	9-10	4-10	8-10	8-10	12
3-10	8-10	10	2-10	7-10	10	2-10	8-10	10	3-10	8-10	10	3-10	8-10	9-10	13
3-10	7-10	10	2-10	7-10	10	2-10	7-10	10	3-10	7-10	10	4-10	8-10	9-10	14
2-10	7-10	10	1-10	5-10	10	2-10	6-10	10	3-10	7-10	10	3-10	7-10	8-10	15
2-10	6-10	10	1-10	6-10	10	2-10	6-10	10	4-10	6-10	8-10	4-10	7-10	9-10	16
2-10	5-10	9-10	1-10	5-10	9-10	2-10	6-10	9-10	2-10	6-10	8-10	2-10	7-10	9-10	17
2-10	5-10	9-10	1-10	5-10	9-10	2-10	6-10	10	2-10	6-10	8-10	2-10	7-10	9-10	18
2-10	6-10	9-10	1-10	6-10	9-10	2-10	6-10	10	2-10	6-10	8-10	2-10	7-10	9-10	19
2-10	5-10	9-10	1-10	5-10	9-10	1-10	6-10	10	2-10	6-10	9-10	2-10	6-10	8-10	20
3-10	7-10	10	2-10	5-10	10	2-10	7-10	10	4-10	7-10	9-10	4-10	7-10	9-10	21
3-10	7-10	10	1-10	7-10	10	3-10	8-10	10	5-10	8-10	9-10	2-10	8-10	9-10	22

▲ Table 5. groups with the ability to purchase housing with at least 50 m2 area in 22 zones of Tehran according to types of housing, maximum price, moderate price and minimum price during 2008-12; (Iranian statistical center, results of demographics of urban families' expenditures and incomes, 2008-12)

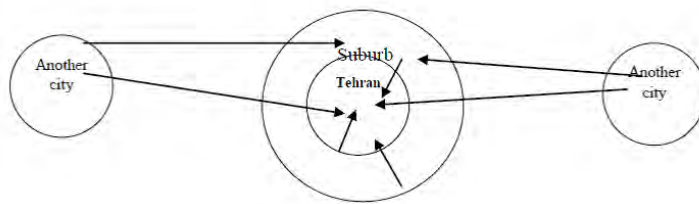
Goals		Policies
Minor	Major	
Increasing pervasiveness of the housing (residential) system of the city for meeting needs of various socioeconomic groups of residents	Adaptation of construction pattern of houses with purchasing power of families	Definition of pattern of construction of housing according to family purchasing power Giving loan for construction according to construction pattern Discount in interest of loans for construction of houses according to construction pattern Facilities of payback of loans of construction of housings according to construction pattern Discount and installment of construction of housings according to construction pattern Applying tax rises for housings which don't follow construction pattern Discount and installment of municipal tax of constructions according to construction pattern Discount and installment of infrastructure for constructions according to construction pattern
	Increasing supply of renting houses	Modification of renting regulations for encouraging owners to rent their houses Giving loan for construction of houses for renting Facilities for payback of loans of construction of houses for renting Discount and installment of tax for construction of housings for renting Applying tax discount and exemption on income made by renting of houses Taxing empty houses Discount and installment of municipal tax of construction of houses for renting Discount and installment of infrastructure for construction of houses for renting Discount in purchasing land for construction of houses for renting

▲ Table 6. major and minor goals and policies of increasing purchasing power of families in Tehran to meet needs of different groups

pervasiveness of the housing (residential) system of the city for meeting needs of various socioeconomic groups of residents. Table 6 proposes some minor and executive policies of such scope.

Another issue which is noticed in housing sector overtly and covertly is the way liquidity flows in housing sector particularly in Tehran metropolitan. In other words, owing to inflation rate and increase in housing price in Tehran and purchasing power of families for housing with minimum price and to prevent decrease in their purchasing power, they purchase housing with lowest price in Tehran or

housings located outside legal limits of Tehran or near Tehran and when they achieved an appropriate purchasing power, they sell their house and purchase another appropriate one. Therefore, families which have a constant income with constant increase during their working period, will no longer able to purchase an appropriate house in Tehran and hence, they have to migrate to other cities or margins of Tehran or reside in inappropriate houses. As a result, these groups need support and public planning in housing sector. On the other hand, as a result of increase in liquidity during 2002-2011 and direction of 70% of



▲ Fig 12. flow of liquidity in housing sector

facilities to national commercial divisions, services and specifically, housing and construction, price of housing experienced growing increase and this matter is more intensified in Tehran due to its highlighted political, economic, social and cultural place and hence, investment in housing sector and in Tehran has economic attractions owing to low level of investment risk and is of great importance throughout these years and even a lot of families who lived in other cities and population centers of the country invested in this sector due to attractiveness of investment in housing sector of Tehran and this matter resulted in increase in demand and accordingly, increase in price of housing in Tehran (Fig. 12).

### Conclusion

In general, it seems that in Tehran, according to theory of filtering, housing sector follows supply and demand regulations. That is, public institutions have no interference in this sector and as stated earlier, in these housing systems, even the most expensive housing units can be socially justified since new construction leads to formation of a series of population movements (interurban migrations) whose result is change in housing conditions for lower income groups whereas in Tehran, these policies not only failed to improve the housing conditions for lower income groups, but also according to obtained results, an extensive portion of the society which comprises mainly 1-6 income groups, faced serious decline in purchasing power and as a result of continuous increase in housing price are not able to have housing inside Tehran limits while a society needs activity of all socioeconomic groups to achieve a balance and meet its demands.

Furthermore, sufficient attention must be paid to private sector and monitor and control its activities in housing field. In addition, planning must be performed in housing sector by public sector and with the aim of empowering groups with low levels of income. It must be noted that these plans must be accompanied with high level of accuracy and least growth in liquidity in housing sector.

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