

# **High Housing Production under Less Regulated Market Conditions in Turkey**

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## **1. Introduction**

Annual housing starts have been over 500 thousand dwelling units in most years during the last two decades, and went up as high as 911 thousand in the year 2010 in Turkey, which are likely to be the highest in Europe. Although rapid rises in the mortgage credit use have occurred with decreasing inflation and interest rates by the year 2004 and the effects of the new mortgage legislation that was enacted in the year 2007, high housing production in recent years cannot be attributed to this factor only, as housing starts were also at the 500-550 thousand level during the 1993-1996 period when not many people were using mortgage credits in house purchase. High levels of housing production occur without noticeable policies addressed to demand or supply sides of the housing market. This implies that housing markets in Turkey operate under highly competitive conditions without much regulation by central and local governments. However, one of the outcomes of the less regulated housing markets is the great variation of housing starts among provinces of Turkey. Much less than needed number of dwelling units in accordance to the newly formed households are produced in certain provinces, whereas authorized housing production comfortably meets the need in many other provinces.

In this paper, after a brief discussion of housing policies in Turkey, results of the research that was undertaken in the eight sampled provinces in order to investigate the reasons behind the big variation of housing starts among provinces will be presented. It is found out that housebuilders produce more housing in the regions where they can sell easily and at relatively higher price, with respect to less affluent regions, although housing at greatly varying prices are supplied in every settlement. It is also found out that housebuilders have developed peculiar ways of producing and marketing housing in settlements where they have difficulties of selling dwellings that they produce.

## **2. Housing Market Interventions**

Housing policies as interventions to the housing market have been developed and implemented in almost every country. Sanitary laws, building regulations, legislation on mortgage institutions were some of the earlier forms of interventions that were introduced by the mid-nineteen century in industrializing countries. With planned development of urban areas housing developments also had to be undertaken in accordance to plans, building codes and regulations. Provision of social rented housing towards the end of the nineteenth century by local authorities was the beginning of a supply side intervention that became an important housing policy during the 20th century in many countries. Housing markets have been subject

to various policies, either directly addressed to the housing sector or indirectly effecting demand, supply and prices of housing through interventions on other sectors of the economy.

Housing policies have become a part of the welfare state policies in the 20th century that can be defined as governments having responsibilities in ensuring that everybody will have housing, education, health services, employment, social security and other social services at socially determined standards (Malpass, 2005). Provision of those goods and services is not under the responsibility of the state only. Various civil society organizations, firms and individuals have been increasingly taking part in their supply, particularly by the 1980s. Private sector has had the greatest share in housing supply, and the regulatory role of the state has been important in achieving efficiency in production and consumption as well as equity in distribution.

In the historical development of housing policies in Turkey, provision of mortgage credits from public funds at below market interest rates has been the most important *demand side policy*. As mortgage finance system could not be developed within the financial market during the early years of the Republic, a state owned bank was established in 1926 with the aim of providing mortgage credits. Its credits in early years that were limited in number due to shortage of funds were used by the bureaucrats in Ankara, which was declared as the capital city in 1923. Social Security Organization (SSO) began to provide finance for housebuilding by cooperatives by 1950 at 4-5 per cent fixed annual interest rate. As much as 233 thousand dwelling units were built by using SSO credits between the years 1950 and 1984, but the funds used for this purpose greatly lost value, as inflation was much higher than the mortgage interest rates during most of the years. The SSO had to stop providing finance in 1984, and a new fund was created by a law, which would be managed by an organization attached to the Prime Ministry, named as the Housing Development Administration (HDA). Implicit interest rate subsidy has been involved in credits provided by the HDA, the most important of which was between the 1984-1989 periods, when the fixed mortgage interest rates were set at 15 percent, 20 percent and 25 percent, according to the size of the dwelling unit and inflation rate varied between 29 and 69 percent. Consequently, 548 thousand dwelling units that were financed from that fund during that period enjoyed substantial amounts of unintended interest subsidies. Implicit interest rate subsidy decreased after the interest rate of credits from the Fund and repayments were indexed to the rate of increase of wages in the public sector in 1989. However the value of assets of the HDA continued to decrease, since most of its incomes were allocated to the National Budget by 1992, and the rate of wage increase in the public sector remained under the inflation rate during the years of economic crises and not much recovered later.

The governments that came into power following the 2002 election reduced and finally stopped in 2005 advancing new mortgage credits by the HDA. Cooperatives had been the main beneficiaries of the HDA credits that were paid with the progress of construction, as out of 1.051.000 dwelling units that were financed between the years 1984 and 2005 by the HDA, 944 000 of them were cooperative housing (Türel, 2010). HDA have been engaged in producing housing on publicly owned lands, most of which are sold to moderate-to-lower

income households with 15 to 25 percent down payment and 10 years repayment period. Selling HDA produced housing with as much as 85 percent credit at indexed interest rates to the public sector wage increase has become the primary demand side housing policy addressed to moderate-to-lower income households. Commercial banks have greatly increased their involvement in mortgage credits and have become the primary source of mortgage credits by the year 2004 with the fall of inflation and mortgage interest rates, as will be discussed below. A special law to regulate the market for mortgage credits was enacted in February, 2007, and banks have been able to operate in mortgage finance under safer conditions and people have now greater options in making decisions for mortgage credits. Currently, annual mortgage interest rates of commercial banks are about twice as high as the rates applied by the HDA. There is not any subsidy in Turkey for interest paid for mortgage credit of housing bought by a household for its own use. But for housing purchased to earn rental income, interest paid for the mortgage credit can be deducted from that part of the rent that is subject to income tax. Provision of subsidies for moderate-to-lower income families living in rental accommodation, which is a well known demand side policy that is implemented in many countries, has not also come to the agenda of governments until now.

Among the *supply oriented housing policies*, housing production by the HDA on publicly owned land has been the most important one during the last decade. Housing starts by the HDA since the year 2003 have reached 537 thousand dwelling units, which is about 11 per cent of national starts during the same period. Almost all the HDA produced housing is in the form of multi-story apartments, and their prices are generally below the market prices. All dwelling units that are produced by the HDA are sold to households who are nothomeowners. Neither public institutions nor civil society organizations provided social rented housing in Turkey.

The private sector in house building is supported by the reduced VAT to one per cent (instead of 18 per cent) when they sell housing that they produce having up to 150 m<sup>2</sup> net floor area. The Government has recently sent a bill to the parliament to change this incentive and apply different VAT rates according to the value of the dwelling unit, rather than according to the floor area.

Supporting housebuilding by cooperatives that produce owner occupied housing in Turkey had been the most important supply oriented policy by the middle of the 1930s. Public institutions and municipalities supplied land for cooperatives usually at lower than market prices. Cost recovery was not a consistently pursued consideration in infrastructure provision for cooperative housing projects. Cooperatives did not pay VAT for a long time and now pay only 1 per cent VAT in construction of their dwellings by contractors. Cooperative housing starts since 1966 reached 2,7 million until the end of 2011, which accounts about 18 percent of total starts. Government support for housebuilding by cooperatives greatly decreased since 2002, and consequently their share in housing starts has fallen under 10 per cent by 2004 and went further down to about 2 per cent in 2011.

The Urban Development Law that was enacted in 1985 and numbered 3194 has greatly affected housing production. Municipalities are empowered with plan making and approval rights by this Law. Decentralization in planning has led to great increases in planned areas, land development and housing production in many cities. Municipalities have to undertake land subdivisions as well in planned areas on their own decision. However some municipalities do not use this instrument to produce sufficient amount of land with planning permission for the production of housing, as will be explained below (Turel and Koc, 2008).

An important supply oriented policy was introduced by enacting the Building Amnesty Law in 1984 with the aim of managing transformation of unauthorized housing. The Law defines the process and required conditions of regularization and transformation of unauthorized built dwelling units. In recent years the HDA, in cooperation with municipalities, has been involved in the transformation of settlements that could not be transformed through the market process in accordance to that Law. In the realized projects, one or two story structures are replaced by multi-story apartments. Above mentioned housing starts by the HDA include transformation projects.

The primary *direct housing market intervention* in Turkey has been rent control. It has been implemented on the decisions of the Appeals Court on the maximum annual rate of increase in rents, as this had not been regulated by law until recently. In the year 2000 maximum rent increase was determined by Law as 25 per cent for only that year, as was recommended by IMF in connection to their economic stabilization program. In a recently enacted Law it is specified that rents can be increased as much as the rate of increase in the “Producers Price Index” during the preceding 12 months.

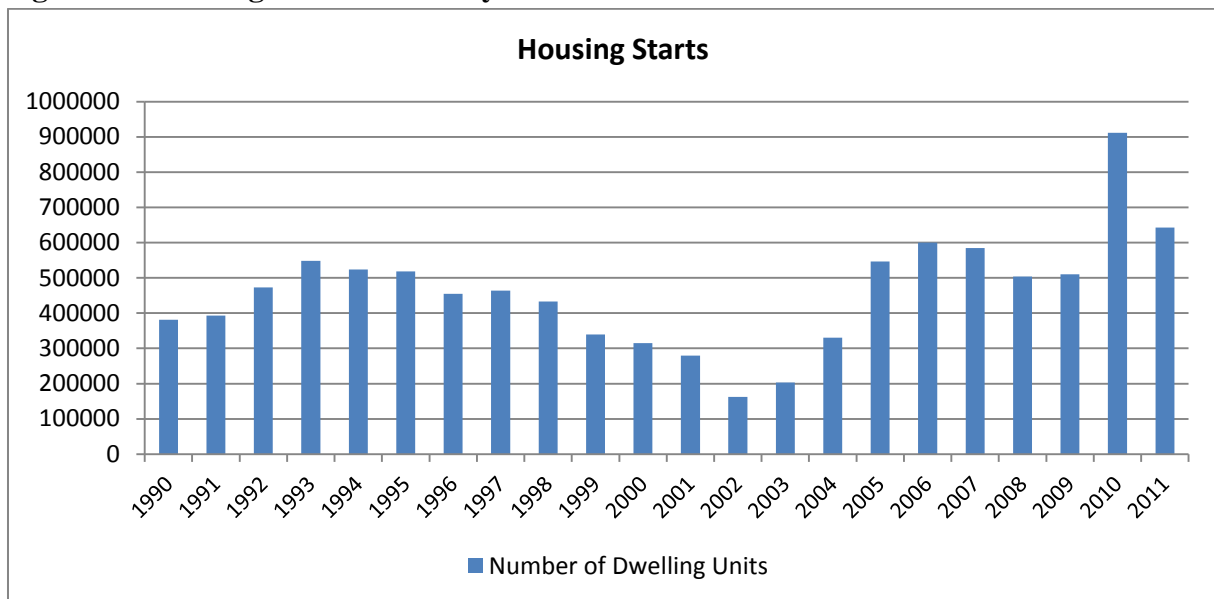
This short summary of housing policies implies that housing markets in Turkey operate under highly competitive conditions, without much regulation and incentives. With the exception of direct provision of housing by the HDA mostly for moderate-to-lower income households, which has been as much as 11 per cent of total starts, there is not any policy in effect to support low income households in housing acquisition and consumption. Transformation of unauthorized housing where many lower income households live as tenants further reduces the supply of affordable housing for those households. A solution to the affordability problem in the absence of demand side policies comes within the housing market, as housing is supplied at highly differentiated prices in spatially differentiated submarkets of cities. It was found out that price of a 3 bedroom and one living room centrally heated apartment flat could be bought from 30 thousand to 191 thousand Euro in different districts of Ankara (Alkan, 2011). This means affordable housing is produced for various income groups, with the exception of those at the lowest income category who cannot make any saving. It is remarkable that housing production has been particularly high in such a less regulated market, as will be discussed in the next section. It can be argued that production of housing for a large spectrum of income groups should be an important reason for high levels of housing output.

### 3. Housing Production in Turkey

#### 3.1. Housing Starts

Annual housing starts began to rise in 1990, exceeded 500 thousand dwelling units in 1993 and remained over that level during the following two years (Figure 1). The fall that began in 1996 continued until the year 2002, when housing starts were as low as 162 thousand dwelling units. This fall can be related to the effects of a much destructive earthquake that hit the north-western regions of the country in 1999, new building regulations that were introduced following the earthquake and a series of economic crisis during the 1999-2002 period. Recovery began in 2003, after the election that was held in the last quarter of 2002. Housing starts went over 500 thousand again in 2005, exceed 600 thousand in 2006 and remained over 500 thousand during the world financial crisis in the 2008-2009 period. Great rise of starts in 2010 to as high as 911,6 thousand was due to enlarging geographical coverage of building regulations from 19 to all 81 provinces. As new regulations involve additional cost in the preparation of housing projects, many housebuilders aimed to avoid those costs by getting construction permits for the projects that they plan to built in the following years before the regulations become applicable in their provinces. However housing starts have been 643 thousand in 2011 when the regulations are in effect everywhere, which implies that rising costs due to new regulations do not adversely affect housing production.

**Figure 1 – Housing Starts in Turkey Between the Years 1990 and 2011**



Source: Turkish Statistical Institute, Annual Construction Statistics.

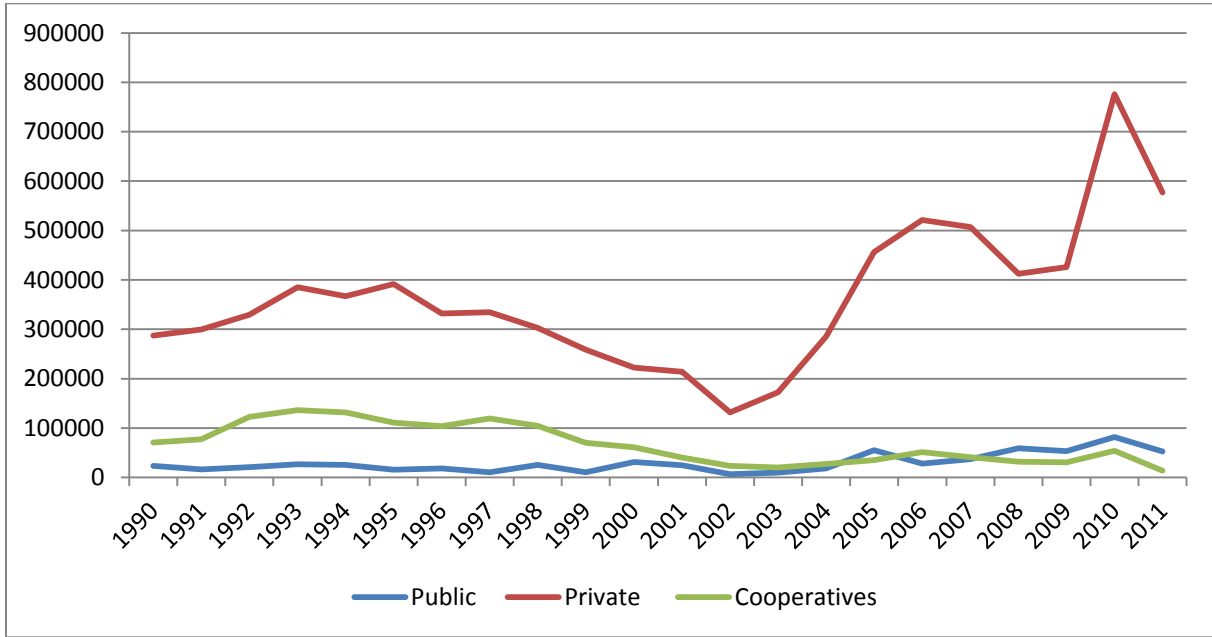
#### 3.2. Housing Starts by Producer Groups

Big rises in housing starts by the year 2004 appear to be mainly due to great increases in starts by the private sector (Figure 3). Previous peak of the private sector starts was in the year 1995 with 391 thousand. After the crisis period that reached the bottom in 2002, private sector

starts increased to 456 thousand in 2005, exceeded 500 thousand in the following two years and reached the all times peak, which is about 776 thousand. Private sector in housebuilding has been dominated by small-capital builders that produce mostly apartment housing on single parcels. In recent years moderate-to-large capital housebuilders have been increasing their share in housing supply as they produce housing on large tracks of land with many on-site amenities, including parking, sport facilities and the means to operate private guards. Consequently many of these estates are in the form of gated communities and supplied for upper income groups. There has been a steady increase in the share of the private sector in total starts from about 70 percent in the year 2000 to about 90 per cent in 2011 (Figure 3). It was within 70-76 percent level during the 1990s and increased to 80-90 percent level in the following decade. The rise in the share of the private sector has been at the expense of cooperatives, which are regarded as non-profit producers together with the public sector.

Cooperative starts have been decreasing since the year 1993, and have fallen to about 14 thousand in the year 2011, which has been the lowest level since 1990. Their share was about 26 percent in 1992 and has come down to about 2 percent in the year 2011. The peak in cooperative starts was in 1993 with about 136 thousand dwelling units. The falls in cooperative starts coincided with the decreased and finally stopped credits from public funds, but cooperatives did not get much financial support from the HDA when they reached the peaks in 1992 and 1993 either. Inverse relationship between the rise in the share of the private sector and the fall of the cooperatives' share can be considered more significant than ceased credit support to cooperatives from public funds. With the increasing dominance of the private sector in housing supply, cooperatives have been facing great difficulties in finding land at affordable prices, as they are in increasing competition in the land market with the private sector.

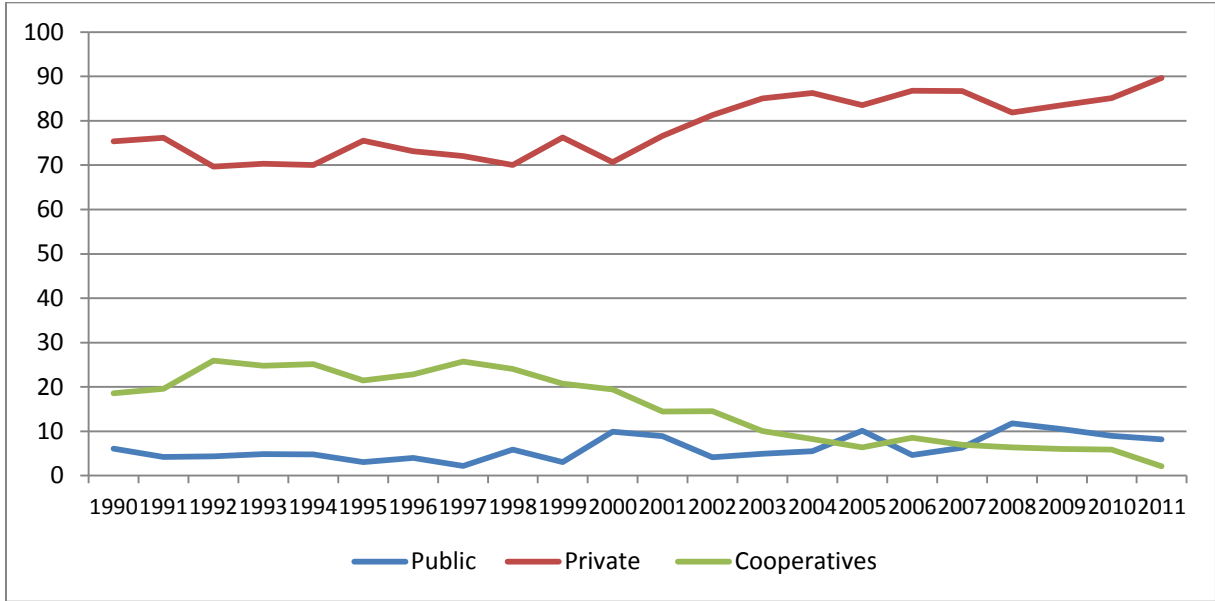
**Figure 2- Housing Starts by three Groups of Housing Producers (Number of Dwelling Units)**



Source: Turkish Statistical Institute, Annual Construction Statistics.

Cooperatives are also in competition with the public sector, which is the other non-profit housing producer in Turkey. HDA has increased its involvement in housing production by the year 2003, as explained above. Public sector has had higher share in housing starts than cooperatives since the year 2007 (Figure 3). HDA builds housing by developing publicly owned land, for this reason cooperatives have become unable to buy land from public institutions during this period.

**Figure 3- Percentage Shares of three Housing Producer Groups in Housing Starts**



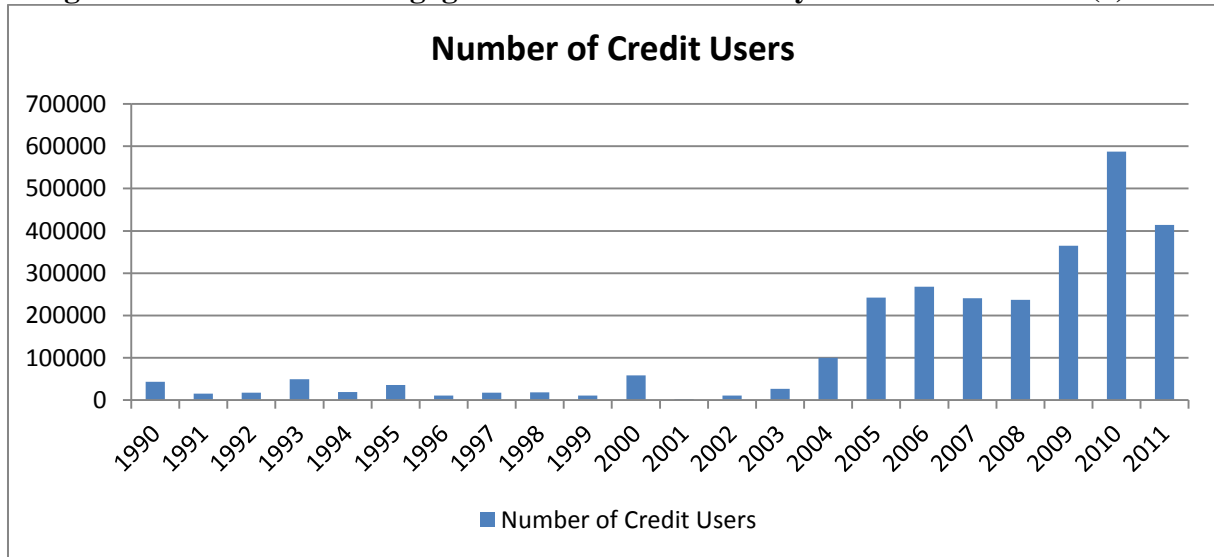
Source: Turkish Statistical Institute, Annual Construction Statistics.

**3.3. Mortgage Credit Use and Housing Production**

The number of mortgage credit users has been small until the mid-2000s, since inflation and interest rates were high during that period. Construction of some housing built by cooperatives was also financed during that period by the HDA (about 20-30 thousand dwelling units a year that reached at least 40 per cent completion level). The number of newly issued mortgage credits rose to 242 thousand in the year 2005, and remained within 242-268 thousand level until 2008. It appears that mortgage credit use was not effected from the world financial crisis during the years 2008-2009, as a big increase occurred in 2009, which was



**Figure 4 – Number of Mortgage Credits Issued Annually Between 1997-2010 (\*)**



Source: Association of Turkish Banks, Annual Consumer and Housing Credits

(\*) For the 1990-1996 period, difference from the previous year.

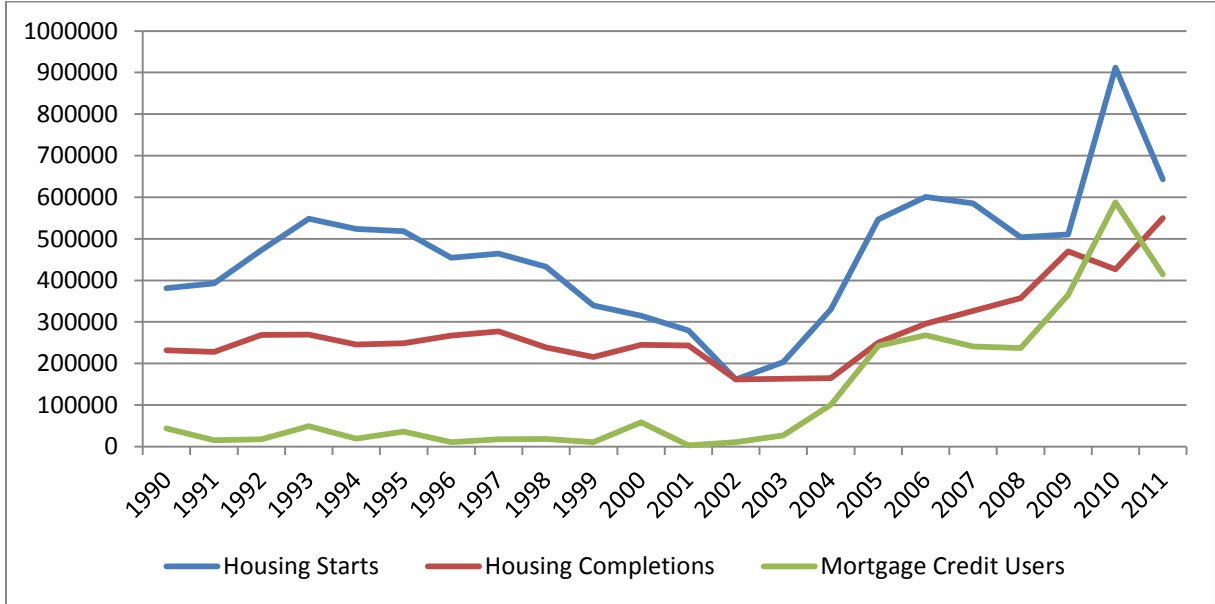
followed by the all times peak with 587 thousand in 2010. After the new Mortgage Law was enacted in February, 2000, banks have been able to operate under clearly defined conditions and borrowers have had many options, such as being able to choose either a fixed interest or variable interest mortgage. However, interest rates for mortgage credits are still high, with about 1 per cent per month on the average, which makes between 12 and 13 per cent annual interest rate. It appears that demand for mortgage credits is high, in spite of such high interest rates.

It can be expected to find positive relationship between the amount of housing produced and the number of mortgage credit users each year, although many people use mortgage credits to buy housing from the existing stock. The volume of housing production is best represented by annual housing starts (construction permits), rather than completions (occupancy permits) in Turkey, because many dwelling units had been used without getting occupancy permits by paying the fees to the related municipality until new articles were added to the Criminal Code by mid-2000s that defined punishments for all the people who are involved in this offence, including officials of public institutions who authorize connection of utilities to such dwellings. Figure 5 shows that occupancy permits were about half of the construction permits during the 1990s, exceeded 300 thousand in 2007, was over 400 thousand in 2009 and reached the peak with 550 thousand in 2011.

The annual number of mortgage credit users was too small during the 1990s when housing starts were high, as starts remained over 500 thousand between the years 1993 and 1996. There was also big difference between the number of occupancy permits and mortgage credit users each year during that period. With the rise in the number of mortgage credit users by the year 2005, the number of mortgage credit users was only 5 thousand less than housing completions at the end of that year, and exceeded housing completions in the year 2010. It

appears that housing production and output have increased together with mortgage credit use from 2004 onwards, but such a relationship did not exist during the 1990s when the level of housing production was also high. Therefore, it can be said that housebuilding industry in Turkey does not rely much on buyers who finance their housing purchase by using mortgage credits.

**Figure 5 – Annual starts, completions and the number of the mortgage credit users**



Source: Association of Turkish Banks, Annual Consumer and Housing Credits; Association of Turkish Banks, Annual Consumer and Housing Credits

**3.4.Housing Production and Housing Need**

Total housing starts in 22 years between 1990 and 2011 have been 10.118.250 dwelling units, and completions 6.145.136. These figures imply that housing for about 40,5 million population started to be built, and dwelling units for which occupancy permits have been issued (there have been downward bias in completion statistics, as mentioned above) could accommodate about 24,5 million population. Since total population increase during the same period has been about 18,3 million (including villages that are not included in construction statistics), housing starts in that period would be more than twice the amount that is needed on the basis of population increase only (without taking into account demolished residential buildings, dwellings that do not have some of the services and those that have been converted to a non-residential use, as well as holiday homes in housing starts and completions).

Although national housing starts have been very high under the conditions of less regulated housing market, starts per newly formed households show great variation between provinces. This ratio was as high as 2,21 in certain provinces between 1985-2000, whereas it went down to 0,25 in some other provinces. Housing deficit in provinces where the ratio has been below 1.00 was apparently being met by unauthorised built housing. In order to investigate the factors behind this phenomenon, first a macro level study covering all the provinces of Turkey

was undertaken. Quantitative estimation of demand and supply parameters are constrained due to the absence of officially published statistics on housing prices, construction costs and the amount of developed land in Turkey. In regression equations statistically significant coefficients with positives signs were estimated for variables representing, provinces where second home production is important, housebuilding cooperative membership per household, per capita GNP of the province and the number of dwelling units per household in the province in 1984, whereas negative coefficients are estimated for the variable representing population growth rate of the province (Türel, 2004).

In the second step, local studies were undertaken in eight sampled provinces (Appendix-1) with financial support from the Scientific and Technological Research Council of Turkey (Türel, Koç and Doğan, 2007). By focusing on provincial centres, data on land development were gathered from the municipalities, as the main hypothesis of the research was that the level of housing supply should be primarily related to the amount of land developed and supplied for housebuilding.

Table 1 shows housing starts per newly formed household in the eight sampled provinces between the years 1985 and 2000 as well as in their provincial centres during the 1985-2007 period. The ratios calculated for the 1985-2000 period for those provinces vary between 2.21 and 0.36. Excess supply of new homes is high in Antalya, Aydın, Bursa, Samsun and Denizli provinces. The first four of them have large stocks of holiday homes along their coastal lines, therefore some of the new housing built in these provinces are used mostly during summer holidays. Denizli, on the other hand, is both an industrial and agricultural province. The fragmented municipal structure around its provincial centre has led to increase the supply of land for housebuilding beyond the municipal boundaries as well within the adjacent area of Denizli Municipality. In three other provinces are from eastern and south-eastern regions of the country, namely Malatya, Gaziantep and Van, housing starts were less with respect to the numbers of newly formed households.

**Table 1- Number of Construction Permits per Newly Formed Household in the Sampled Provinces and Provincial Centres and the Population of the Provincial Centres**

Provincial Centres	Construction Permits per Newly Formed Household in the Province (*) (1985-2000)	Population of the Provincial Centre (Year 2000)	Construction Permits per Newly Formed Household in the Provincial Centres (1985-2007)
<b>Antalya</b>	1,47	603.190	1,28
<b>Aydın</b>	2,21	143.267	1,53
<b>Bursa</b>	1,22	1.421.126	0,61 (**)
<b>Denizli</b>	1,50	275.480	1,27
<b>Gaziantep</b>	0,64	853.513	0,50
<b>Malatya</b>	0,90	381.081	1,39
<b>Samsun</b>	1,52	363.180	0,99
<b>Van</b>	0,36	284.464	0,51

(\*) Rural settlements that do not have municipal administration with less than 2000 population and are not included.

(\*\*) For Bursa the ratio is for the 1985-2004 period due to boundary changes of the municipality in 2004.

Number of construction permits per newly formed household is also calculated for provincial centres (Table 1). Aydın has been the most successful city, like its province, in the supply of sufficient number of housing for newly formed households. It is located in a rich agricultural region on the south-west of Turkey. Its housing starts to newly formed households ratio was 2,04 during the 1985-2000 period, and excess supply appears to decrease during the economic crisis in the first half of the 2000s and that ratio became 1,53 by the year 2007. Aydın is followed by Malatya, Antalya and Denizli in starting to build significantly greater number of dwelling units for increased population. Malatya is located on the east-central part of Turkey, and its economy is dominated by the production of apricots. Antalya Province, located on the Mediterranean coast, is the major tourism destination of Turkey, whereas Denizli, being the eastern neighbour of Aydın, is one of the leading industrialized cities of Turkey.

There is at least 27 per cent difference between housing starts and the number of newly formed households in these four cities. Such high levels of excess supply may be due to replacement of much of the formerly built unauthorized housing stock by regular housing. Malatya is the only city among them where the ratio during the 2000-2007 period increased with respect to the 1985-2000 period. Relatively much lower rate of population increase in Malatya after the year 2000 (its population increased by only 5.5 per thousand between the years 2000-2007) compared to other cities is an important reason of this difference. Among the other four cities Samsun, which is located on a narrow strip of land on the Black Sea coast and has therefore land availability problem for urban development, has had decreasing housing supply since the year 2000, as its rate decreased from 1.05 to .99 after the year 2000. Bursa, being the most industrialized city in Turkey with 42 percent of employment in manufacturing in the year 2000, starts by the year 2004 there were about 3 regular dwelling units for five newly formed households. After the boundaries of the Greater Bursa Municipality were enlarged in accordance to the Greater City Municipality Act in 2004, housing starts have greatly increased (Türel, 2011). The difference in housing starts between two industrial cities Bursa and Denizli, can be related to the shortage of land for urban development within the boundaries of the Greater City Municipality of Bursa, which is further constrained by preservation decisions for large areas of high quality agricultural land within its municipal boundaries that limits land availability both for housing and industrial development. In Gaziantep (an industrialized city in the south-eastern region) and Van (which is close to the eastern border) construction permit for one dwelling unit has been taken for two newly formed households.

These findings indicate that, although in the less regulated housing market national housing starts and completions have been much greater than the number of dwelling units that are needed for the increased population in Turkey, there is an important regional mismatch between the need and supply. A macro level study has shown that demand factors, as related to GNP per capita are important determinants of this problem. In the local study the principal concern has been to investigate the effect of land supply on the level of housing supply in urban areas. The findings of the research on this question are summarized in the following sections.

#### **4. The Relationship Between Land and Housing Supplies**

There have been a number of studies that investigate the effects of the planning system on housing supply (Bramley et al. (1995), Bramley and Leishman (2005), Leishman and Bramley, 2005). Particular concern is whether planning restrictions on land development that reduce the supply of land and increase its price would adversely affect housing supply and cause housing prices to rise. Mayer ve Somervill (2000) found out positive answers to these questions in 44 U.S. metropolitan areas covering the 1985-1996 period. Bramley et al. (1995), by using the data collected from 90 districts in Britain, estimated positive coefficients for the variable “land with planning permission for housing in 1987” in regression equations for supply models. In a similar study Bramley and Leishman (2005), estimated positive coefficients for the variables “the stock of land with outstanding planning permission for private housing development” and “planning applications/permissions” variables by using a dataset for 98 zones in England and Wales. Pryce (1999) estimated positive relationship between the rise in land supply and housing supply and a more significant effect in this direction of the supply of land with planning permission for house building than the size of planned areas. Cheshire (2008) estimated greater income elasticities of demand for outer space of housing for Britain, compared to inner space, and indicated that under the conditions of constrained land supply, the rise in land prices would not be primarily related to population increase, but to income elasticities of demand for inner and outer space of housing. Cheshire ve Sheppard (2005) argued that due to supply constraints of land, as related to the planning system in Britain, high land price increases should be expected. In an empirical analysis they estimated that in constant prices housing prices rose by 3,5 fold, whereas land price increase was 11 fold since 1955 in Britain. Son (1998) found out that in Korean cities government regulations have been more an important reason in the emergence of shortages in land supply, compared to limitations due to natural factors.

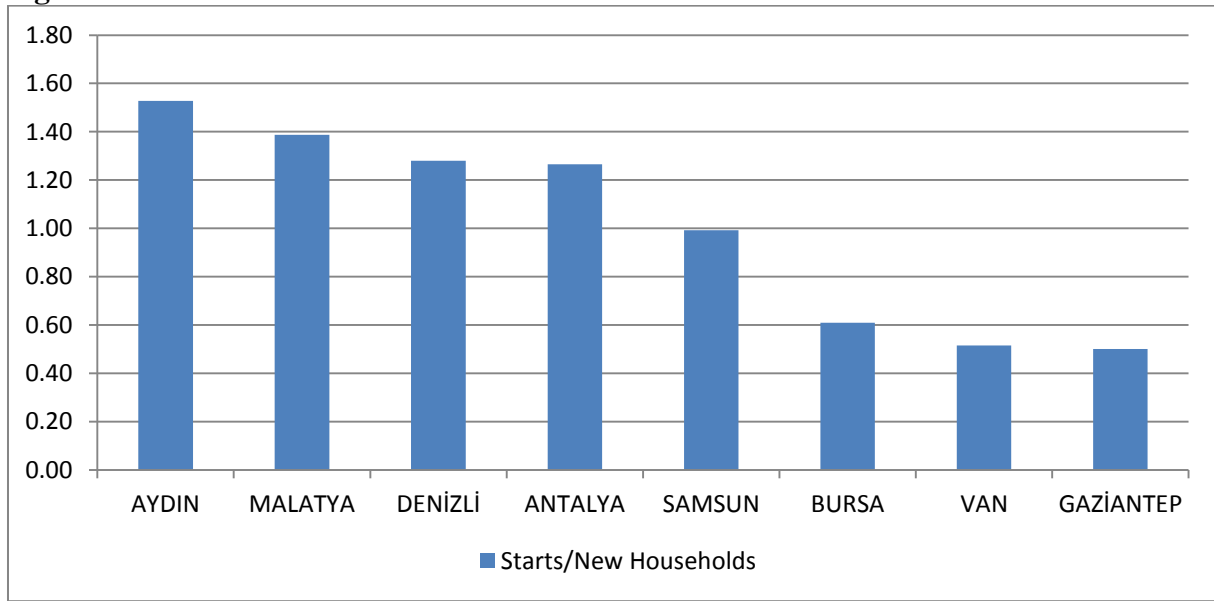
Urban land supply through subdivision of land within planned areas is not firmly regulated in the Urban Development Law in Turkey. Municipalities are empowered by the Article 18 of that Law to assemble cadastral land within the areas where implementation plans have been approved, make subdivision plans by allocating 40 per cent of the land for municipal and some public services and reallocate the new parcels created with the remaining land to the owners of cadastral parcels. But some municipalities do not want to be involved with subdivisions, as they regard it both financially and politically costly. There is not any sanction defined in the Law for the municipalities who do not undertake subdivision plans. Some municipalities do not make land subdivision at the right time so that occasional mismatch between the number of plots with planning permission and demand from housebuilders may arise. On the other hand, some municipalities leave subdivision plan making, including meeting its cost, to land owners or housebuilders in accordance to the article 16 of the Urban Development Law, and they only use their powers to approve prepared plans (Türel, et al.,2007). Supplying land in such a discrete form would not make plots with planning permission available for housebuilding in the land market, and this can be expected to lead to low level of housing supply.

The relationship between land supply and housing supply in the provincial centres of the eight sampled provinces was investigated in the local studies. Statistics, neither about the amount of land developed by municipalities nor the stock of land with outstanding planning permission for new housing development within municipal boundaries are available in Turkey. For this reason information and data on land development that begins with master plans, continues with implementation and subdivision plans and then with infrastructure provision have been gathered from planning and infrastructure departments of the municipalities. It is found out that although master and implementation plans cover large areas, therefore there is not any shortage of planned land in almost any city, there are important differences between cities in terms of the size of the subdivided land and the method that is used for subdivision.

The level of housing starts per newly formed household (the last column of Table 1) and the areas covered by subdivision plans that are prepared by the municipalities and divided by the number of newly formed households between the years 1985-2007 are shown by Figure 6 and Figure 7, respectively. Subdivisions that are undertaken by land owners or developers (later approved by municipalities) are not included, because statistics for that form of land development are not available in most of the municipalities. With the exception of Antalya and Denizli, which have almost the same ratio of Construction Permits to the number of Newly Formed Households, ranking of cities in Figures 6 and 7 are the same. Subdivision plans that have been made by two district municipalities of Antalya are taken into account in Figure 7, as in the third district where the highest priced housing in the city is produced and there is great demand for land for housebuilding, the municipality leaves subdivision plan making to land owners and housebuilders.

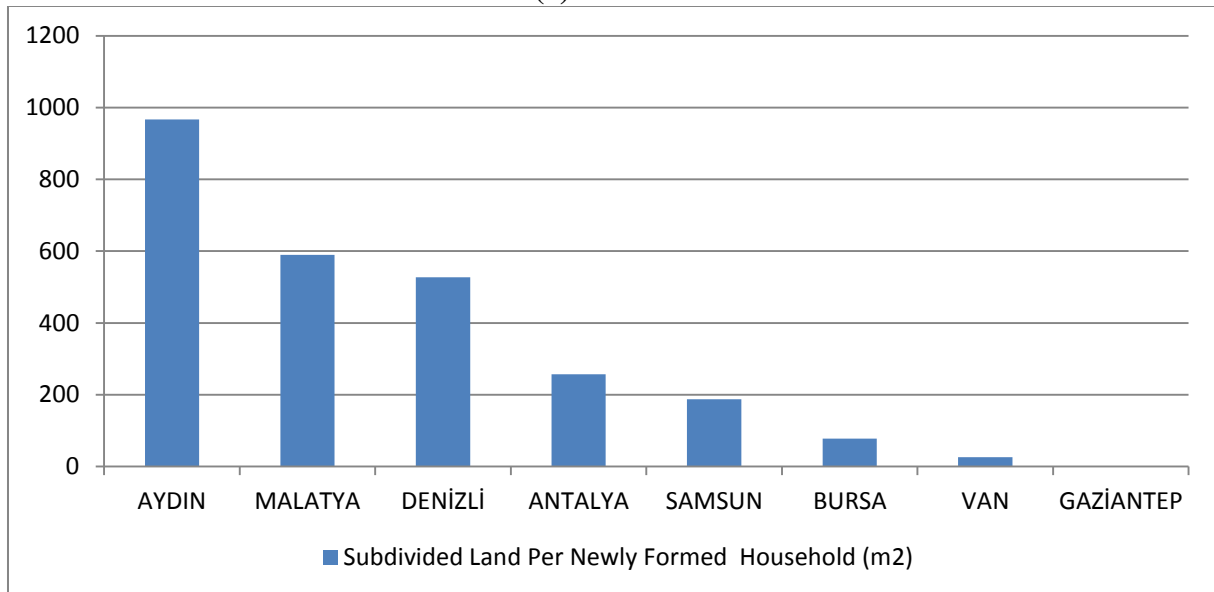
Among the municipalities of other seven cities, Aydın, has the largest area of subdivided land, which implies that the highest amount of supply of plots with planning permission among the eight cities is consistent with the production of the greatest number of dwelling units per newly formed household. Malatya is the second in both Figure 6 and Figure 7, which is followed by Denizli and Samsun. Bursa, Gaziantep and Van are the worst performing cities in housing production. The land shortage problem for urban development in Bursa until the boundaries of the Greater City municipality were increased in the year 2004 was mentioned above. District municipalities of the Greater City Municipality of Gaziantep are not involved in subdivision in accordance to the Article 18 of the Development Law and the Municipality of Van only recently subdivided a small amount of land, as much as 140 hectares. As plots with planning permission to build housing are not available to buy in these cities, housebuilders spend a lot of time to convince owners of cadastral land within planned areas to sell their land to them or let them to subdivide and pay for the land with an agreed number of dwelling units after construction is finished. Paying for land by the produced flats is a usual practice in the acquisition of land for housebuilding in Turkey. This is preferred by landowners, as it regarded as an asset transfer and land owners do not pay tax for the dwelling units that they get in this way unless they sell within five years.

**Figure 6 - Housing Starts Per Newly Formed Household in the 1985-2007 Period in Eight Provincial Centres**



Source: Building Construction Statistics (annual), Turkish Statistical Institute.

**Figure 7 - Subdivided Land per Newly Formed Household by the Municipalities of Eight Provincial Centres between 1985-2007 (\*)**



(\*) Subdivisions undertaken and financed by land owners themselves and approved by municipalities are not included.

Source: Information gathered from the municipalities.

These results support the hypothesis that there should be positive relationship between the amount of developed land (land supply) and housing supply. In cities where municipalities use their legal instrument (Article 18 of the Development Law) to undertake land subdivisions, large number of plots are available in the land market and housing in sufficient

number for increasing population is produced. Since in local studies it is found out that infrastructure provision does not cause any bottleneck in housing development in any of those cities, supply of subdivided land (plots) becomes the principal factor that affects the level of housing supply with respect to the number of newly formed households.

The results of local studies also reveal that subdivision of land by land owners (and builders) (in accordance to the Article 16 of the Development Law) is not an efficient substitute of carrying out subdivisions by municipalities themselves. As cadastral land owners within planned areas would have monopolistic privileges when subdivisions are not undertaken by municipalities, this would be in contradiction with the less regulated competitive market structure of housing in Turkey. Consequently it can be concluded that insufficient amount of housing is produce in cities where competition in their land markets is absent.

## **5. Housing and Land Prices in the Provincial Centres**

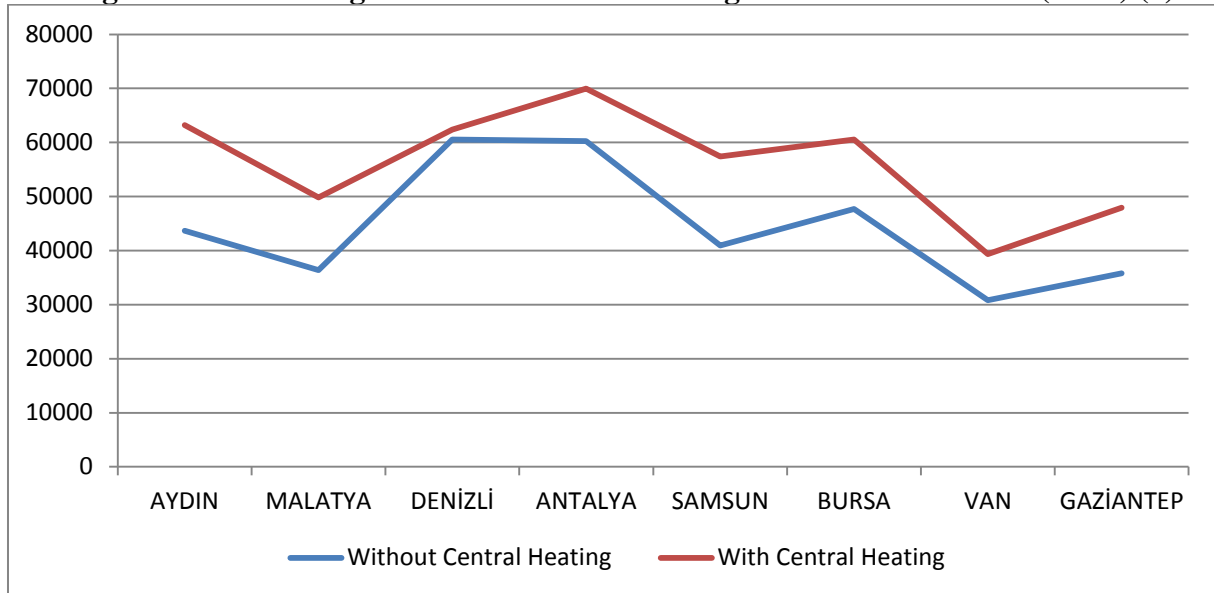
The level of land supply in an urban area is expected to affect land and housing prices. Since officially gathered and published property price statistics are not available in Turkey, housing and land prices in the eight cities are obtained from an interview survey with estate agents. Averages of the estimates by the interviewed estate agents for specific types of dwelling units and land are accepted as market prices. Land prices are expected to reflect, first, the amount of land supplied with respect to the level of demand, second, price of housing, which should be determined by the characteristics of demand and supply in each city. In cities where land is in short supply due to land development policies of local authorities or physical restrictions on development, such as topographic limitations or land preservation decisions, competition for the available land will be high and this would raise its price level. On the other hand, higher demand for housing in a particular city due to migration, demographic factors or the average income level of population, would also lead to higher housing and land prices.

Housing prices are obtained for four room apartment flats located on the second floor of recently built apartments, and Figure 8 presents averages of prices estimated by interviewed estate agents for apartment flats with or without central heating in moderately priced districts. Distribution of housing prices between cities has many similarities with the performance of cities in meeting housing need. Among the four successful cities in terms of producing more housing than the number of newly formed households, Aydın, Denizli and Antalya have the higher price levels than the rest of the cities. Antalya, being the principal tourism centre of Turkey, and its population has been increasing rapidly due to jobs created in tourism related services as well as migration of retired people to settle there. The average price level in the second most successful city, Malatya, is at the fifth rank, which can be interpreted as reflecting excess supply of housing in this city where the rise in demand has remained low due to small increase of population since the year 2000, as explained above. Bursa, which is the most populated city among the studied ones, has higher price levels than Malatya and Samsun. This can be interpreted as consistent with the supply gap in Bursa, due to lower housing starts per capita in this city compared to Malatya and Samsun. This result can also be related to the positive relationship between city size and the average housing price, as



confirmed in many cities around the world. The least successful cities in housing production, namely Gaziantep and Van have also lowest average price levels among the eight cities. Lowest housing prices in Gaziantep and Van coincide with the absence of subdivided land by the municipalities in these cities. Lowest price levels in the cities where construction permit for one dwelling unit is taken for about two newly formed household would not be an expected result. The supply gap for regular housing should have caused prices to rise compared to price levels in cities where more housing is produced with respect to the number of newly formed households. Lowest price levels in Gaziantep and Van should be due to low purchasing power of population in these cities, although statistics about the purchasing power of households in cities are not available for most of the urban areas in Turkey.

**Figure 8: Prices of Four-room Flats on the Second or Third Floors of Apartment Housing located in Average Priced Districts of the Eight Provincial Centres (Euro) (\*)**



(\*) Cities are placed in descending order according to the number of housing starts per newly formed household between the years 1985-2007.

Source: Results of the interview survey with estate agents, 2007.

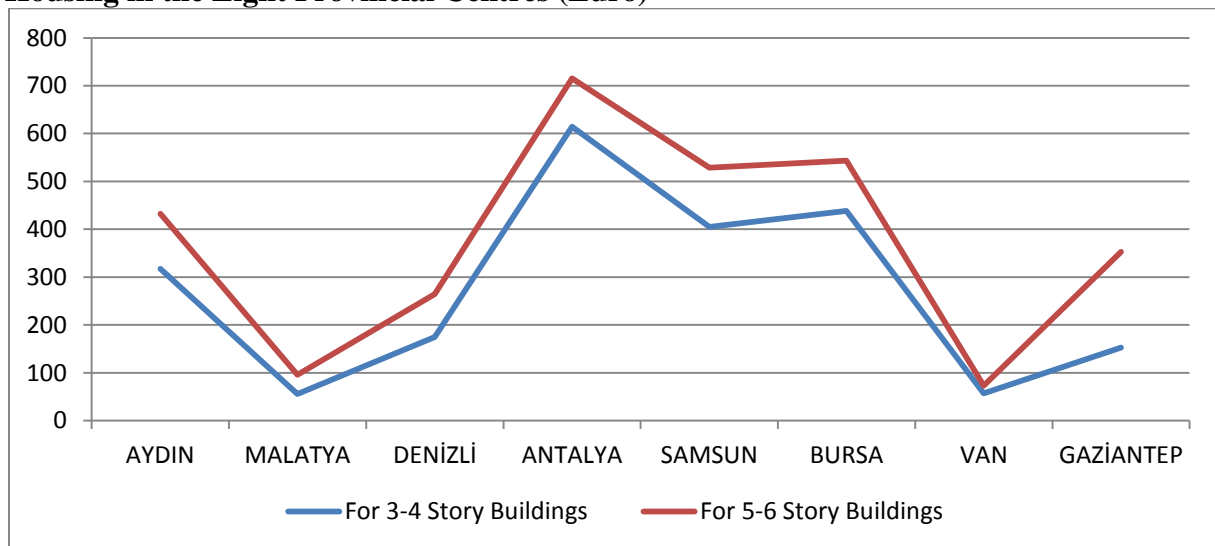
These graphs can also be interpreted as supply curves of the two housing types in Turkish cities. As cities are placed in descending order in housing starts per newly formed household in Figure 8, the shapes of these two curves are in fact upward sloping, which imply that housing production is less in cities where housing prices are lower, compared to cities where housing prices are higher. Housing starts per newly formed household increase with the rise of the price level, and demand factors appear to be primary determinants of housing prices in cities. This may also indicate the importance of the investment aspect of demand in cities where housing prices are high.

The averages of land price estimates by the interviewed estate agents are presented in Figure 9 for plots with planning permission to built 3-4 or 5-6 story apartment housing in each of the eight cities. The shapes of these graphs have similarities with those for housing prices. The

highest land price levels also are obtained for Antalya, which can be related to high demand for housing, in terms of both the number of dwelling units and the purchasing power of population, as well as relatively short supply of subdivided land by district municipalities there. Second and third highest land prices are obtained for Bursa and Samsun, which are characterized by constraints on developable land; in the former due to preservation of agricultural land and the mismatch between the size of land within municipal borders and demand for land due to high population growth, and in the latter because of topographic factors. The price levels of land in Aydın, Malatya and Denizli, are lower than the land price levels of Antalya, Bursa and Samsun. This is an expected result, as in the former three cities subdivided land areas by the municipalities are greater, compared to the latter three cities. The lowest land price is in Van, where very small amount of land subdivision has been undertaken by the Municipality. Lowest land prices in this city can also be related to the lowest housing prices among the eight cities.

The evaluation of housing and land prices in the eight cities can be concluded that, shortage in housing supply does not lead to higher average price of housing in cities; on the contrary, housing supply is higher in higher priced cities. Demand factors should be responsible for lower housing prices in less housing produced cities. Land prices, on the other hand, are related to housing price levels, as well as to the level of supply of land by subdivisions carried out by the municipalities.

**Figure 9: Price of Land with Planning Permission for 3-4 and 5-6 Story Apartment Housing in the Eight Provincial Centres (Euro)**



(\*) Cities are placed in descending order according to the number of housing starts per newly formed household between the years 1985-2007.

Source: Results of the interview survey with estate agents, 2007.

## **6. Land Acquisition and Marketing of Produced Housing by Housebuilders**

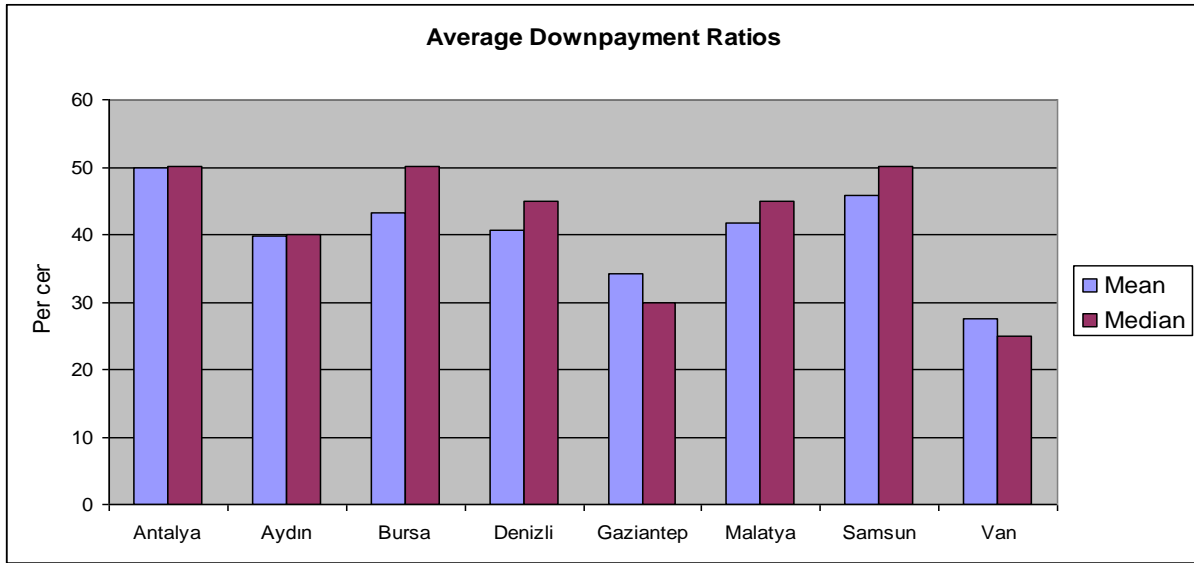
In order to find out whether there are differences in the ways in which housebuilders in the eight provincial centres acquire land, produce and sell housing, an interview survey was carried out with the sampled housebuilders. Most commercial (speculative) housebuilders in Turkey produce housing without purchasing land in advance as mentioned above, but acquire land by making deals with landowners on how to pay for land with housing produced when construction is finished. This form of land acquisition enables housebuilders to start building with small amounts of capital, but increases the risk of bankruptcy and reduces the possibility of gaining speculative profit.

Interviewed housebuilders were asked about the ownership of land, on which they build housing. In Gaziantep 63 per cent, in Samsun 59 per cent and in Antalya 58 per cent of the interviewed housebuilders do not build on land that they own. This ratio is 50 per cent in Van, and under 50 per cent in other four cities, with 44 per cent in Aydın, 36 per cent in Malatya, 32 per cent in Denizli and 31 per cent in Bursa. These results may indicate that in cities where land supply is restricted due to the absence of land subdivisions by municipalities, or land preservation decisions or the topographic limitations, relatively less housebuilders build housing on lands that they own. However low ratio among housebuilders in Bursa where land supply is also restricted, would suggest the importance of another factor, which is the variation of the amount of accumulated capital in the hands of housebuilders by cities. Housebuilders appear to invest on land some of the capital that accumulates in their hands. It appears that housebuilders in the comparatively more affluent western provinces possess greater capital and consequently own more land than eastern provinces.

Housebuilders do not borrow from banks to finance housing construction in Turkey. House buyers also predominantly rely on their own savings and wealth in purchasing housing, since housing finance in affordable conditions had not been available until the mid-2000s, as mentioned above. Housebuilders have had to create affordable conditions to buyers of housing that they produce. Selling by instalments is the most common marketing strategy of housebuilders. Downpayment ratio and the number of months that they accept buyers pay the balance of the debt in instalments are the most important conditions that define affordability. Lower downpayment ratio and extending instalments into long periods of time increase the affordability for buyers, but it incurs financial cost to housebuilders that may lead to decreased profitability of projects.

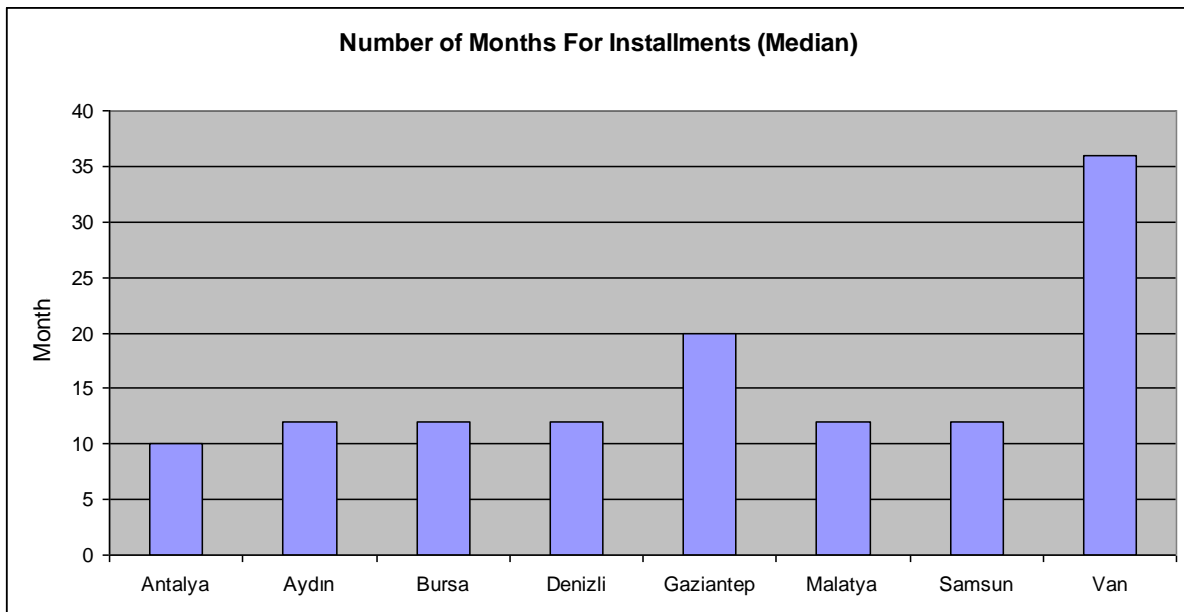
Average downpayment ratios are the lowest for Gaziantep and Van, and they are between 40 and 50 per cent for other cities (Figure10). Antalya, Bursa and Samsun have slightly higher averages than Aydın, Denizli and Malatya. Aydın has a lower ratio compared to the ratios of other cities, except Gaziantep and Van. This may be due to difficulty of selling housing under the conditions of excess supply in Aydın.

**Figure 10. Average Downpayment Ratios that Housebuilders Accept in Selling Housing by Instalments**



Source: Interview survey with housebuilders,2007

**Figure 11. Median Number of Months for Instalments that Housebuilders Accept to Sell Dwelling Units that they Produce**



Source: Interview survey with housebuilders, 2007.

Median number of months for instalments exhibits a similar distribution as downpayments (Figure 11). Housebuilders accept instalments to be paid in 36 months in Van, 20 months in Gaziantep, 10 months in Antalya and 12 months in other cities, on the average. It appears that in the least successful cities in meeting housing need, housebuilders can sell housing by accepting lower downpayment ratios and longer periods for instalments, compared to other

cities. These unfavourable conditions for housebuilders, combined with low housing price levels would reduce the profitability of their business. Low profitability in housebuilding in these cities would make housebuilding less attractive to enter for new producers, which could be one of the reasons of low levels of production with respect to the need.

## **5. Concluding Remarks**

Housing has been produced at much greater numbers with respect to the need, as defined with respect to the population increase in Turkey. High production levels occur under less regulated market conditions. Among small number of policies addressed to demand and supply sides, the most noticeable one are, lower VAT rate (one per cent instead of 18 per cent) applied when new dwelling units, which have lower than 150 m<sup>2</sup> net floor area, are sold by their producers, and production of housing by the HDA on publicly owned land, which are sold to households who do not own another house with 15-25 per cent downpayments and at lower than market interest rates. The former one is about to be changed, as the Government sent a draft Bill to the Parliament, which keeps VAT reduction only for dwelling units that were began to be built by the end of May, 2012, and the HDA housebuilding starts have been 11 per cent of total starts since the year 2003, which are much less than the number of moderate-to-lower income households who need support for housing acquisition. There is neither any social rented housing provision nor subsidies for low income households living in rental accommodation. A cap for the rate of increase of rents in private rental accommodation has been defined by the Appeals Court decisions until a recently enacted Law specified the maximum rate as the inflation rate. A popular policy of supporting housebuilding cooperatives has been left in the 2000s with increasing dominance of the private sector in housebuilding.

Although high numbers of housing are produced nationally, there has been great variation in starts per newly formed household among the provinces in Turkey. Local studies in the eight sampled provinces have shown that the level of housing starts is positively related the amount of subdivided land by the municipalities, which supports the well known hypothesis about this relationship. It appears that urban land markets could not operate under competitive conditions where land subdivisions are not carried out by municipalities so that great amount of plots with planning permission is not supplied to the market. It is also found out that housing prices are high in most of the cities where housing starts are greater than the number of newly formed households. This implies an upward sloping housing supply curve and the importance of demand factors, most notably purchasing power of households.

Housebuilders produce housing under highly difficult conditions in cities where land is not subdivided by the municipalities and purchasing power of households is low. They have to convince the owners of cadastral land in planned areas to release land for housing development. They also have to provide affordable conditions for the buyers of housing that they build. Capital accumulation and the growth of housing supply by the private sector under these conditions are highly difficult. Housebuilders are producing housing at highly different price levels price levels in urban areas where housing output is high, and this provides a

solution for the affordability problem for many households. But in cities where housebuilders are constrained due to land supply and low purchasing power problems, their effectiveness in producing affordable housing are also constrained.

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#### **APPENDIX-1: SAMPLED PROVINCES**

