Land and Housing Analysis in Urban Management (Case Study: Miandoab)

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Abstract

Currently, the balance and stability between the price of land and housing, and income and cost as well as land and housing market analysis as an important managerial tool are essential goals of urban managers in developing countries. The methodology used in this study is practical survey by descriptive analysis using questionnaire. Data were analyzed by software SPSS and findings were analyzed by land value analysis system (ULVAS). The results from findings indicate that urban land and housing market are not stable and balanced.

Keywords: analysis, land and housing market, balanced land and housing price, ULVAS model

Introduction

Land market, capital market and labor are three main pillars of the economy. Efficiency and inefficiency of the land market, either directly or indirectly, influences the quality of two other markets and on the economy as a whole. The role of the land market in economic planning points to the fact that economic reforms of many countries started by land market reforms (Dowall, 1991). In Iran, the land market strongly influences economy, so that, 40% of the investments in Iran occur in the land and housing sector and 112 households live per 100 residential units (Firroz Zare & Borji, 2011). Hence, as the Statistical Center of Iran reports, urbanization increased from 68.5% in 2006 to 71.4% in 2011, unemployment rate went beyond 10% and inflation rate was reported 22.3% in May 2014. Considering the provided statistics, land market seems to play a major role in Iranian economy; accordingly, 1m² apartment in new cities costs nearly 1 million Tomans (Anon., 2014). Regarding the household income, this increase in price suggests disorganized system of land and housing price in Iranian cities. On the other hand, policies of Ahmadi Nejad concerning Mehr Housing Project could not balance and stabilize the land and housing market. By examining the factors effective on land and housing market relative to household income and cost, this study adopts a sustainable solution to stabilize and realize the price of land and housing in urban areas. The question is why the price of land and housing is instable and unbalanced to income and ability of citizens to buy houses and how much housing costs the household as well as what approached can provide stability, balance and sustainability in the land and housing market.

Various factors seem to instable the land and housing market, including failure to pay property taxes based on the actual price of land and housing, lack of comprehensive rules, state policies, high liquidity, decreased monetary value and eventually high profitability of land in short term. According to hypotheses, housing costs of households seems to be higher than 30%. If true, it suggests a severe turbulence in land and housing market. It seems that property taxes and increased in urban condensation can stabilize, balance and sustain the land and housing market to maintain balance in demand and supply chain of housing system.

The methodology used in this study is practical survey by descriptive analysis using questionnaire.
**Theoretical Background**

Land policy is a part of development policies. In developed countries, the role of land as the main part of development has been changed in recent century. In addition, the land was considered as a wealth in the feudalism era and as a commodity, rare resource and rare social resource in the periods of industrial revolution, rebuilding after World War and the information revolution (Parvinpour, 2009).

Lack of change in attitude towards land as a commodity rather than wealth can be a main reason of underdevelopment in Iran. Basically, as long as attitudes toward land as a capital commodity do not shift to asocial scarce resource as a basis for development (scarce resource), economic development is not possible, because rate of return on land has always been higher than in other markets and the economy based on industrial production will not form (ibid). The land is the largest capital, base and context of development in the city. Ownership, utilization and development of urban lands are different in various countries and based on their urban development management system. For example, the land is considered as a public property in some countries like England; however, the utilization depends on citizens. Sustainable development of the society requires optimal utilization of the land to ensure the economic efficiency, social fair and environmental preservation (Saraei, 2009).

Aside from these discussions, condensation and housing prices in the area are a subject that experts express their disagreements around it. Meanwhile, it seems that one of the factors increasing the tendency for construction in a district is the revenue from the increase in housing prices. Besides, factors such as wages, price of materials such as cement and steel and costs that municipalities receive such as charges and condensation are effective in determining housing prices in the area. According to real estate experts, another factor with a greater effect is land prices. Factors of construction have relatively fewer effects than the rising land prices in determining the final price of houses in Tehran (Anon., 2014). While the hot debate of these days is government policy towards subsidizing, the rate of exchange and falling stock index, little is spoken of the anticipated changes in land and housing prices in the current year. However, the price of land and housing has been one of the issues affecting the household living, ignorance of which can be followed by unpleasant consequences. This has been neglected while 4 points, seemingly trivial but in practice very influential, are glaring in this year. First, prices of energy carriers increased. Rising fuel prices (petrol and diesel) in the first step directly influences the prices of construction materials and their transportation. On the other hand, the psychological burden of this may increase the price of other items which leads to re-raised price of building materials. Electricity price increases will influence the whole process of construction and will lead to increase in production costs which itself increases the land and housing prices. Second, subsidiaries were revised. After the recent recall regarding registration and withdrawal of subsidies, if the government makes a decision which is not consistent with psychological conditions of the society (even in consistence with the economic interests of the Iran), it will be likely to increase the price of goods and services, particularly the price of land and housing, suddenly. Third, murmurs of checking bank accounts, which has its own opponents and proponents. Proponents believe that this action reveals individual tax accounts and prevents money laundering and corruption. On the other hand, bank account checking causes negative psychological climate and it is likely to withdraw money of banks; in this case, the first markets which attract this money will be currency, gold, land and housing markets. In this context, the desire to invest in land and housing seems to be more than anything. Particularly, land and housing market has been reliable low risk market in the medium term in all the years after the Revolution. Compared to currency which is related to international agreements and gold which is linked to world prices, land and housing market seems to be low risk. However, stock market which
was in a good condition in terms of financial indicators is experiencing a descending trend in the last few months.

**Experiences of land and housing market analyses in Germany**

According to a report by Muller and Joker (2002) in the XXII International Congress in Washington, the actual value of land and its price transparency is a result of supply and demand. Based on this idea, transparency and accurate information on the regional and local land market balance the supply and demand chain. They suggest that urban development as a responsibility of German municipalities requires a considerable budget for planning, management and infrastructure. This process, from architecture to the building, causes an increase in price and value of the land in the desired range. Above all, a very accurate calculation of earnings and costs of municipalities for future development of urban lands. This, in itself, causes transparency in land prices. As Muller and Joker suggested, transparency in land market requires establishment of an independent public board to assess the detailed information of land in towns and cities (Muller & Joker, 2002).

**Experiences of land and housing market analyses in England**

Connellan (2004) studied the tax on land value in Britain using land value tax (LVT) policy. In fact, LVT is a general and particular term. In particular, LVT belongs to annual tax revenues; then, a certain amount of LVT is used for tax revenues of local governments. Originally, LVT is a wise effort for fair distribution of tax rate and collection of revenues by local governments. As the land value increases, the value of LVT increases. In general, implementation of LVT in England has improved infrastructures, transparency of land information and structural costs (Connellan, 2004).

**Results**

To analyze value of urban land and housing as well as the relationship between internal and external effective factors in Miandoab area, the urban land value analysis system (ULVAS) was used. The model was first developed by the author. In general, the structure of this model is composed of three steps. First, the balance or imbalance is measured between price of urban land and housing and household income and cost. For this purpose, four indicators are considered here. The first indicator considers the price of land and housing and rent over the past five years. The second indicator determines the number and type of land uses with the highest transaction during the last five years. The third indicator examines and compares areas where the rising cost of land and housing has been higher in the last five years compared to other land uses. The fourth indicator considers the rate and balance in supply and demand chain for urban land and housing. To understand the balance or imbalance between the value of land and housing, the housing should not cost the household for higher than 15%; otherwise, the prices are imbalanced in the urban land and housing market. The second step of ULVAS model involves analysis of factors involving on imbalance in actual value of land and housing compared to income and cost of citizens. By this step, factors are evaluated in two forms of economic and technical factors. Economic factors involves an approach in the national level and policies effective on urban land and housing area. This form analyses the inflation rate over the last five years, liquidity, economic growth rate over the last five years, changes in currency and gold market, commodity market, regional land and housing market and capital market. The technical factors involve discussions in local and regional levels, including analyses in land prices in the region and the city over the last five years, the price of materials, costs of human resources, tax for building permits and completion license, tax for branches, analysis of supply and demand chain for land and housing, analysis of spatial facilities and infrastructures on land and housing prices, analysis of urban land laws and their effects on preservation and turbulence in the land and housing market, analysis of transparency in information related to future land and
housing development by institutions involved in urban affairs and municipalities and finally analysis of land and housing databases. The third step of ULVAS model addresses policies, strategies and solutions to balance the land and housing prices to income and cost of citizens. The software SPSS was used to analyze the indicators of ULVAS model.

**Urban land value analysis system, ULVAS**

**Step I:**
The balance or imbalance in land and housing prices relative to income and expenditure of households

1. The current status of land and housing prices and rent during the past five years
2. Highest traded land uses in the last five years (including commercial, residential, barren land, etc.)
3. Comparison of areas in which land and housing prices increased over the past five years compared to other urban areas.

**Step II:**
Reasoning for lack of balance and stability in the price of land and housing

1. Economic factors in the national level including interest rate over the last five years, liquidity, economic growth rate over the last five years, changes in currency and gold market, commodity market, regional land and housing market and capital market
2. Technical factors including analyses in land prices in the region and the city over the last five years, the price of materials, costs of human resources, tax for building permits and completion license, tax for branches, analysis of supply and demand chain for land and housing, analysis of spatial facilities and infrastructures on land and housing prices, analysis of urban land laws and their effects on preservation and turbulence in the land and housing market, analysis of transparency in information related to future land and housing development by institutions involved in urban affairs and municipalities and finally analysis of land and housing databases

**Step III:**
Policies, strategies and new proposals in the form of strategic planning in order to improve the current situation of land and housing

**Figure 1: ULVAS model**

*The first step of ULVAS*

To implement the ULVAS model, the Miandoab with 1953 hectares in area and population of 123000 residents was divided into 18 neighbourhoods. To collect data containing value of land and housing and compare their prices over the past five years, there realtor firms were randomly selected from each neighbourhoods. The firms were asked to complete the 6-item questionnaire No.1. Then, the 8-item questionnaire No.2 was distributed among 112 respondents randomly selected among citizens. It is noteworthy that items and type of questionnaire could be different in each city relative to its population, area, culture and involvement of other public and private institutions in the land and housing affairs.

To examine the indicators and confirm the balance or imbalance in urban land and housing market relative to income and costs of citizens, the ULVAS model should be first measured in relation to income and costs of citizens. The main reason was to identify the purchasing power of
people against living costs. Thus, as the results from the items provided in the questionnaire No.2 showed, 84% of respondents believed that living costs versus their revenues considerably increased over the past five years.

![Figure 2: value of land and housing within the studied area](image)

As the figure shows, the neighborhoods 11, 12 and 14 are the most expensive areas than other neighborhoods. Therefore, the decrease in land value by certain policies noted at the end of the conclusion can reduce the price of these areas relative to income and expenditures of citizens.

However, tenants considerably contributed to reveal the imbalance in price of land and housing. Among respondents, 32% spent 35-50%, 46% spent 50-60%, 17% spent over 60% and 2% spent 20-35% of their revenues for rents. Given the above statistics and the average cost of housing in Miandoab (31%), citizens cost for housing two times more than the standard limit (15%). Thus, there is imbalance in land and housing market of Miandoab relative to income and expenditures of citizens.

![Figure 3: housing costs](image)
The second step of ULVAS

By confirming the imbalance in land and housing market relative to income and expenditures of citizens, the second step begins. In fact, the purpose of second step is to analyze factors disturbing the price of urban land and housing to increase the prices. In ULVAS model, it is better to analyze the factors in two economic and technical groups.

Economic and technical analyses

The economic analysis focuses on macroeconomic aspects in the national level and their effects on economy and welfare of different cities. These factors include inflation rate over the last five years, liquidity, economic growth rate over the last five years, changes in currency and gold market, commodity market, regional land and housing market, capital market and state policies regarding land and housing over the past five years. Based on the Statistics Center of Iran, inflation rate has been 24.2% in 12 months before July 2014 compared to the similar period in the previous year, which indicates 2% decrease in May 2014. President Rouhani seems to be successful in controlling and decreasing inflations. Reduction in inflation means controlled liquidity and successful policies effective on inflation. Meanwhile, the economic growth of Iran has been reported -6% in 2012 and -2% in 2013, which indicates the improved economic growth during recent years; President Rouhani has made promises to approach the economic growth toward a positive trend. Based on these predictions, if the economic growth positively grows, the unemployment will decrease; as a result, the liquidity will rise among newly employees to be able to purchase a house; however, under the condition that policies provided here to control the land prices are implemented correctly. Meanwhile, the unemployment rate has been reported 22.2% among 15-29 years old people during March 20, 2014 and June 21, 2014 (ibid). According to unofficial reports, unemployment rate will probably increase by 40% by March 20, 2015. The government has to act quickly; otherwise, Iran will encounter a big problem regarding economy, unemployment and dissatisfaction. During recent three years, the value of Rial decreased by 200% versus USA Dollar. A major part of imports and exports of Iran occurs based on USA Dollar; therefore, the value of currency can be one of the most important reason of increase in land and housing prices in Iran.

![Graph](image-url)

Figure 4: responds of citizens for reasons of increase in land and housing prices

By the survey on the reason for increase in price of land and housing in Miandoab, most of the people believed that the main reason for increase in land and housing price is its high profitability. In the survey, 53.1% of the respondents preferred to invest on land and housing sector. Whereas, the World Bank states: the housing sector is one the important economic sectors in Iran.
forming 40% of the investments. Capitals of the housing sector involves 8% of the GDP and 12% of the value added in Iran. According to this report, 11.3% of the employees work in the housing sector. According to the World Bank, the high rate of inflation, low purchasing power, low productivity and high rate of unemployment are the most important economic problems of Iran in relation to housing sector development. Significant increases in population and the young population structure requires a development in the housing sector. According to this report, the household condensation in residential units is 1.12%; that is, 112 households live per 100 residential units, which is in a low level in terms of international standards. Iran lacks a comprehensive, inclusive and transparent system to provide the housing sector with facilities (Firroz Zare & Borji, 2011).

In relation to macroeconomic policies in the area of land and housing, consider the Mehr Housing Project proposed by Ahmadi Nejad, former president, which was adopted to encounter the increasing price of land and housing in those years. According Asghari Mehr Abadi, the Deputy Minister of Roads and Urban Development, the national Mehr Housing project has built 2320000 apartments in 2014, out of which 660000 apartments lacked water network, 675000 lacked electricity network and 716000 apartments lacked gas network and sewage system. In this regard, unwillingness of citizens to live in Mehr Housing apartments is notable. Among 112 respondents, only 12% are willing to live in these apartments; in contrast, 77% are not. Moreover, 11% of respondents were neutral in relation to living in Mehr Project apartments. According to above, Mehr Project was a failure in both provision of the primary amenities and attraction of population, despite the fact that 1 m² Mehr Project apartment cost 440000 Tomans.

The factors influencing the dropped stock index from 88000 to 73000 during the last 8 months include limitation in foreign investments, illegal foreign investments, coordination between bank deposits proportional to inflation, sukuk transactions, Kish exchange market, Lack of coordination between fiscal and monetary policies, constant sectional changes affecting the investment policies, severe economic dependence on oil, the direct effect of exchange rate fluctuations on stock trading, unknown systematic risk, unimportant role of capital market in attracting liquidity, lack of planning on the expansion of investment in Iran, failure to allow foreign direct investment, time limit for trading, lack of transparency and lack of information on the activities of the stock market and closure of stock symbols for a long time. Therefore, people will tend to invest in a reliable market for returns. Meanwhile, the land as a sustainable profitable market can attract the liquidity; this leads to bubble price growth in the land and housing market.

**Conclusion**

According to results from findings using ULVAS model, the land and housing price is not balanced relative to income and expenditures of citizens. The Miandoab city was hypothetically divided into 18 neighborhoods among which the neighborhood 11, 12 and 14 had the highest growth in price over the last five years. On the other hand, the questionnaire No.1 completed by realtors indicated that nearly 68% of their clients were selling and 32% of them were buying houses. Therefore, the land and housing market of Miandoab experiences recession in addition to inflation. How this can be solved? The first policy is to legislate tax laws on property based on actual prices. Accordingly, owners of lands and houses are obliged to pay taxes on 2% of their land and residential units annually. This law seems to be able to prevent sudden increase and decrease in land prices. It is noteworthy that the amount of 2% of the actual price is optional and the mayor can decrease or increase this amount only by agreement of the City Council members. The second policy is to give the lands with 2000m² in area to the privatization sector in order to construct highly condense residential unites to balance the supply and demand chain. For example, the municipality can attract investors by required incentives to construct 20-story residential towers.

Openly accessible at [http://www.european-science.com](http://www.european-science.com)
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