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The Analysis of Metropolitan Housing Price and UGB in Iran: Application of Panel Data Technique in selected metropolises (Tehran, Isfahan, Shiraz)

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Extended Abstract

1-Introduction

Metropolitan housing development as an important economic sector not only affects level of macroeconomic activities directly in all countries but also macroeconomic development stimulates housing prices broadly. First, individual supply and demand in housing market is derived from utility and profit maximization and risk-return optimization. Then, equilibrium price and quantity is derived from intersection point of aggregate demand and aggregate supply. Special characteristics of housing market such as non- tradability and location-dependence distinguish its structure from other markets.

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2-Theoretical bases

Urban housing market studies have shown that rising urban income per capita increases housing prices in the long term. This observed fact is known as long-term equilibrium relationship between housing price and income. According to consumer theory, real income growth increases housing demand as a normal good. The growing demand ultimately increases housing prices.

An urban growth boundary, or UGB, is a regional boundary, set in an attempt to control urban sprawl by mandating that the area inside the boundary be used for higher density urban development and the area outside be used for lower density development.

By limiting the supply of developable land, critics argue, UGBs increase the price of existing developable and already-developed land. As a result, they theorize housing on that land becomes more expensive.

According to Ricardian theory of rent, urban land scarcity increases urban housing prices because of two reasons:

- Given the importance of land use as an input, increasing price of developable land can decrease construction of new houses in metropolises.
- Expectation formation and rising investment demand in urban housing and developable land market increases urban housing prices tow.

The relationship between liquidity and housing prices in oil-rich countries is usually explained in the Dutch disease framework. Housing is a non-tradable commodity, so rising foreign exchange earnings and increasing liquidity could be leaded to increase housing prices dramatically. Also, housing is demanded as an asset and investment demand in housing market could be explained by theory of portfolio.

3-Discussion

Research findings indicate steady decreasing trend of urban land per capita in metropolises of Iran due to legal restrictions and urban policies. Statistics also show that developable land per capita in Iranian metropolises is less than those in other countries.

Finally, the research model is evaluated using panel data technique (fixed effect) over the time period 1998-2009 based on data of the selected metropolises and after necessary tests. The results show that urban and macroeconomic policies affect metropolitan housing prices. Urban income per capita affects metropolitan housing prices positively and significantly. But the survey results show an inverse relationship between metropolitan land per capita and housing prices. Regardless of the origins of liquidity growth, effectiveness of liquidity on housing prices is confirmed in the study. Moreover, results illustrate destructive roles of some monetary and economic policies.

4-Conclusion

The results of the present survey indicate that:

Metropolitan policy makers can affect housing prices. If the population increases but new developable land is not allocated to new families, housing prices will increase. So, regional management is required to maintain a 20-year supply of land within the boundary. Moreover, macroeconomic variables such as income per capita and liquidity affect housing prices in the selected metropolises in Iran. Thus, research hypotheses are confirmed.

5- Suggestions

Results show that limited supply of developable land and decreasing trend of land per capita in the selected metropolitan areas increase housing prices according to demographic changes. While restrictive urban land policies is broadly adopted in Iran such that the last master plan for development in Tehran (adopted in 2007) has emphasized on controlling urban growth boundary as the first strategic objective, this survey represents the following recommended policies in order to control and decrease metropolitan housing prices according to the theoretical model and estimation results:

A-The study strongly recommends flexible policies related to the size of cities, flexible urban land management and land use rules. This suggestion considers population growth and raising household formation in Iran.

Maintaining of minimum developable land per capita for urban population is necessary which could be provided by the

construction of new towns, planning suitable UGB and etc.

B-This study strongly recommends low-rate liquidity growth to prevent increasing urban housing prices too.

Keywords: Metropolis, Housing price, Urban Growth Boundary (UGB), Monetary Policy, Panel Data, Land per capita

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