

# Analysis of Korean Housing Policy based on Policy Mechanism

In-Seok Yoon <sup>1\*</sup>, Hyun-Soo Lee <sup>1</sup>, Moonseo Park <sup>1</sup>

<sup>1</sup> Dept. of Architecture and Architectural Engineering, Seoul National Univ., #39-425, Gwanak-ro 1, Gwanak-gu, Seoul 08826, Korea

E-mail address: yoon92411@snu.ac.kr

## Abstract

As housing prices continued to rise over the past two to three years in Korea, the government implemented a strong demand restraint policy. This policy has been controversial since the announcement because the policies were similar in many respects to the policies that were implemented and failed 10 years ago. In recent Korean housing market, which the policy has implemented, housing prices fall down in some regions as the government has intended. However, in Seoul where the regulation was strong, prices are still rising despite policy. Based on same results, some of experts said policy was effective, the other side argues it adversely affects the market. This disagreement often arises from overlooking the systematic side due to allegations based on unilateral consideration (Hwang, 2013). The purpose of this study is to present the system dynamics model that can systematically elucidate changes in the housing market by policy and to analyze the effect of current housing policy in Korea. The scope of the study is limited to apartments occupying a large portion of the market and policy. The process of research is as follows: 1) Analysis of policy effect mechanism and Korea's current housing policy 2) Consideration of methodology for evaluation of housing policy 3) Theoretical background for housing market analysis 4) Policy analysis model development: system dynamics model 5) Policy evaluation

Housing policy can change the market conditions as a sum of market participants behavior changes. We can assume policy effect as abovementioned changes. From this context, it is possible to summarize the reason why the policy fails, even though the problem definition is correct, from the following four things mutually exclusively and collaborate exhaustively:

- 1) The policy targets do not behave as expected.
- 2) The policy targets behaved as expected but incorrectly expected the result.
  - 2-1) The sum of the behaviors of policy targets is beyond expectations.
  - 2-2) The sum of the behaviors of policy targets was as expected. However, the behavior of non-policy target creates different results.

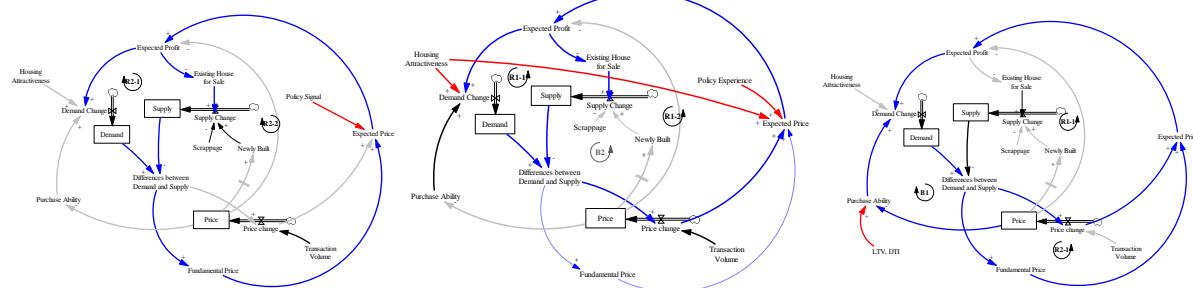
There are various types of market participants in the housing market, and it is difficult to know whether the problem of the market that the policy maker thinks is solved. Because the indicators such as the price alone do not fully capture the market change. Therefore, the goal of this study is to present a useful framework for analyzing these mechanisms and presented as a system dynamics model.

From the literature review, it is definite that the policy analysis model should reflect the problem definition and represent the behavior of market participants. Market participants are demand and supply, and their behavior can be defined as whether they are purchased or not, and sold or not, respectively. The characteristics of the housing market at this time are that 1) the buyer of a house can be a supplier at the same time, We used three major theoretical frameworks of housing market analysis to construct the model; Law of demand and supply, Expectation theory, and Dipasquale-Wheaton Model(DW model).

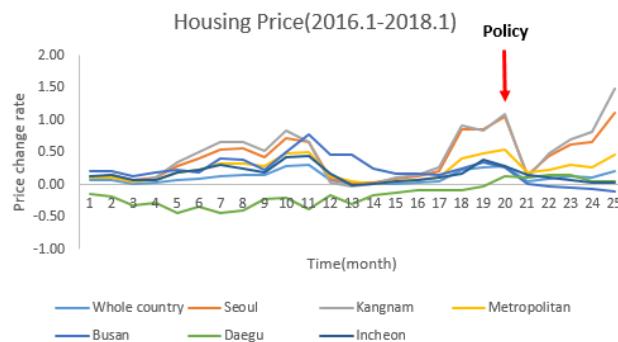
Based on the developed model, this study analyze policy effect in the Korean housing market as Figure 1. The results can be summarized in two ways. First, current policies can lead to regional polarization. Reinforced loops are operated in positive directions in areas with high residential attractiveness, making it difficult to see the effect of policy. This can make the gap wider between regions with low residential attractiveness. Secondly anticipated side effect is that it weakens

purchasing power of actual demand unlike the aim of government policy, which is to control speculative demand and protect actual demand. Financial regulation is an effective policy to stabilize housing prices, but it should also be taken into account that purchasing power of actual demand is also lowered. Especially, in the case of Seoul, where the housing attractiveness is high, the current policy may increase the price and make actual demand more hard to purchase the house. These analysis can be validated by recent statistics(Fig 2). Immediately after the implementation of the policy, at 21month, the rate of increase in price fell sharply. However, since then, the rise in prices in Seoul (especially in the Gangnam area) and the Seoul metropolitan area, where housing attractiveness is high, has recovered as much as the previous rise and graph show that it has surged in recent months.

The academic contribution of this study was to explain the various theories that were used to describe the housing market as a system. However, since the housing market is a system that interacts with the rental market, there is a limit to the fact that the rental market is not considered. Future research will be needed to develop a model that overcomes these limitations.



**Fig.1.** Policy Analysis with presented model in this study



**Fig. 2** Housing price of Korean cities for the past two years(2018, KB bank of Korea)

## REFERENCES

Hwang, S., Park, M., Lee, H., Lee, S., Kim, H. (2013), Dynamic Feasibility Analysis of the Housing Supply Strategies in a Recession: Korean Housing Market. Journal of Construction Engineering and Management, 139(2): pp. 148-160

Korean Ministry of Land, Infrastructure and Transport(MOLIT) (2017). “Housing market stabilization plan to protect actual demand and to curb short-term speculative demand” ([http://www.molit.go.kr/USR/NEWS/m\\_71/dtl.jsp?lcmspage=1&id=95079498](http://www.molit.go.kr/USR/NEWS/m_71/dtl.jsp?lcmspage=1&id=95079498)) (August. 2, 2017)

Colasante, A., Palestrini, A., Russo, A., Gallegati, M. (2017), Adaptive expectations versus rational expectations: Evidence from the lab, International Journal of Forecasting, 33(4), pp. 988-1006

DiPasquale, D and Wheaton, W. (1992), The markets for real estate assets and space: a conceptual framework. Real Estate Economics, 20(2): pp. 181-198