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Rational Expectation House Price Bubbles in Iran

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Abstract
Since the housing sector has an intricate relationship with other sectors of the economy, fluctuations in the price can be costly. Also, rising prices are either rooted in the underlying conditions of the economy or simply caused by the bubble, leading to different policies. Therefore, house price bubble can be considered as an early warning system to prevent adverse economic consequences. The present paper applies the theory of rational expectation bubble in the Iranian housing market during the years 2006-2020 using the Blanchard and Watson model. The theory implies that negative returns on house prices are less likely to occur if the bubbles exist. The risk assessment is, however, estimated by linear logistic function. The existence of bubble in housing market is confirmed based on 30 provinces.

Keywords: Price Bubble, Housing Market, Hazard Function.

JEL Classification: E44, R31, E49.

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1. Introduction

A distinctive characteristic of housing is that it is not only an asset (the land and residential units) but also a consumption good (in the form of housing services). (Nemati et.al., 2020) From point of view of households, housing is an important asset in Iran. Also housing sector's boom and recession play an important role in GDP because of the forward and backward linkages, so that about 120 fields are related to this sector. According to Islamic Parliament Research Centre of Iran, the housing contribution of GDP was about 6% in 2020. Over the 30 past years, there has been a sharp rise in housing price in Iran. If we include rental income and capital income, then the return on housing capital exceeds that for business sectors, which raises grave concerns regarding the possible existence of price bubbles. This is a major concern for policymakers as a bubble burst can have serious consequences for Iran's economy.

The house price bubble occurs when house price increases are not justified by the housing market fundamental factors. In fact, the sharp rise in housing prices can be called the house market bubble, which is expected to increase prices in the future and cause financial and economic losses. Through comparing the present value of houses with housing market prices we can test house price bubbles in as carried out in earlier literature. In this regard, how to calculate present value is the main debate in the literature. A popular method is to discount future cash flows (rental income), but this approach is not reliable. Future rental income is difficult to predict because rental income is affected by economic variables such as GDP and population density that continue to change over time. Furthermore, it is difficult to choose an appropriate discount rate for housing assets. Some researchers consider that house price increases should be explained by changes in economic fundamentals, such as income, construction costs, population and interest rates. House price bubbles are defined as deviations from those fundamentals. (Ren et al., 2012)

According to Keynesian economists, the emergence of the bubbles is due to their irrational and sentimentally behaviors to make a profit through speculative activities, which John Maynard Keynes refers to as animal spirits. But for some neoclassical economists, bubbles can also be rational. In fact, the emergence of asset bubbles does not mean that market participants have behaved irrationally and deluded themselves and have mistakenly evaluated the bubble prices of assets as the fundamental value of the assets and demand the asset as its fundamental value; Rather, they expect a sharper rise in asset prices and therefore expect the acquisition of capital gains on assets in the short term, and as a result they rationally join the bubble-making process.

Due to the devastating effects bubbles can have on economies, it is important for policy makers to understanding why and when asset prices can deviate from fundamental values. Historically, the issue of pricing bubbles is proposed for the first time in the seventeenth century and scientifically introduced in the US stock market from October 1929 to June 1932. In other countries, research has been conducted on price bubbles in securities markets, land, housing, and gold. First, the price bubble was examined by Schiller on the stock market in 1981, and then the scope of studies was to expand the price bubble in other assets. Batini & Nelson (2000) estimate the exogenous bubble effect in the UK currency market using econometric models from 1981 to 1998. The results show that when the exchange rate has a direct effect on inflation, the central bank's response to the exchange rate is satisfactory. Eschker (2005) confirmed the existence of housing bubble prices in Hammond, USA, using the P / E Ratio during 1989-2004. Kim and Lim (2016) examined the dynamics of the housing market in Korea. The results indicate that the bubbles are continuously accumulated by the beginning of 2000, reaching about 51 percent by the end of 2014. Using Granger causality probes and generalized analysis of the impulse response function, Hui and Yue (2006) investigates bubble prices for housing in Beijing and Shanghai during the period 1990-2003. The findings show that in 2003, there was a housing bubble in Shanghai that affected about 20 percent of the housing price, while in the same year there was no sign of a bubble in Beijing. Chen and Wu (2019) detect the housing price bubbles of eighteen OECD countries under assumptions of asymmetric adjustment and non-linearity through the momentum threshold autoregressive (MTAR) and exponential smooth transition (ESTR) approaches. The results of the modified Kilic (2011) and Park and Shintani (2005, 2016) tests are in line with the ESTR unit root tests, indicating that the bubble hypothesis is not confirmed. Bangura and Lee (2020) adopted a sub-city approach and deployed an array of methods to detect bubbles in different regions of Greater Sydney – western, inner-west, southern, eastern and northern – from 1991 to 2016, using Westerlund error correction-based panel cointegration, backward supremum augmented Dickey–Fuller (BSADF) procedure, and dynamic ordinary least square (DOLS) tests. The formal BSADF bubble tests reveal strong evidence of explosive price bubbles in Western Sydney. The DOLS results suggest that housing investment plays a major role in the build-up of housing bubbles in Western Sydney, supporting Shiller's Psychological Theory of bubbles which posits that bubbles occur via the speculative behavior of investors.

History has shown time and again that bubbles can lead to misallocation of resources in economies and that their burst can negatively impact real economic activity. a bursting bubble can cause the collapse of major financial institutions. (Wockl, 2019) Despite the great importance, few studies have been carried out on housing bubbles and the effect of macroeconomic variables has been ignored. Most of the empirical studies in Iran used standard stationary-based, Co-Integration based and Regime-Switching based tests for bubble detection in Iran. These models do not have the ability to search and detect any bubble, so that variation in the sample size, insufficient time series data, or the specific characteristics of a series, such as its high volatility, may affect the ability of such experiments to explore the price bubble. However, given the large role of macroeconomic variables and economic conditions in examining the existence of bubbles, the present paper bridges the gap and tests macroeconomic variables for housing bubble detection during 2006-2020.

In this paper, following Ren et al. (2012), a different method is employed to test the existence of rational expectation bubbles in Iran's housing market. The method used in this study was first proposed by Blanchard and Watson (1983). This is called a rational expectation growing bubble (hereafter growing bubbles) because they grow until they burst and then begin growing again. These bubbles grow because their returns must be comparative to the average returns of other assets. Growing bubbles are characterized by asset prices that continue to grow over time and returns that surpass the average capital return in the economy. These features match the dynamic path of Iran's house prices quite well over the past 30 years. There are two important assumptions in the classical model of growing bubbles tested in this research: representative agents and complete financial markets. In the literature, other theories of rational bubbles are examined by relaxing these assumptions. The sharp increase in housing prices can be called the bubble of the housing market, which is expected to increase in the future and cause financial and economic losses. Therefore, housing bubbles can be consulted as a primary warning system to prevent adverse economic consequences. In fact, the housing market is a major component of the country's economy, which directly affects economy.

Because the theory of rational expectation bubbles proposed by Blanchard and Watson (1983) can be applied to any risky asset, and as McQueen and Thorley (1994) derive their method based on this theory, their method can also be applied to house prices.

The remainder of paper is organized as follow: The second part deals with theoretical foundations and the model under study. In the third part, after describing the statistical data, the model presented in the second part is specified and evaluated. Finally, the paper concludes in the fourth part.

2. **Theoretical Model**

Some economists conceptualize bubbles as situations in which the price of the asset grows faster than the asset's fundamental value. Accordingly, to properly evaluate the presence of a bubble, we should compare the price of an asset to a measure approximating the stream of future dividends. In the case of stock prices, this is done by comparing prices or price indexes to earnings or earnings indexes; various measures of earnings can be used, such as current earnings, the average over the previous few years of earnings, or forecasts of future earnings. In the case of housing market, the comparison is typically between house price indexes and indexes on the amount charged to rent a similar house.

Ren et al. (2012), present a different method is employed to test the existence of rational expectation bubbles. The method used in this study was first proposed by Blanchard and Watson (1983). Blanchard and Watson (1983) proposed a definition of rational expectation bubbles based on the conditions of an efficient simple market which states that the expected return of a house purchase is equal to the required return.

$$E_t[R_{t+1}] = r_t \tag{1}$$

Where, $E_t[R_{t+1}]$ stands for the expectation framed for the optimal return for the period t+1, based on information generally available in time *t*. The return of owning a house during *t*, t+1 is R_{t+1} and consists of the capital gain from the variation in house prices and the rental income.

$$R_{t+1} \equiv \frac{p^*_{t+1} - p^*_t + d_{t+1}}{p^*_t} \tag{2}$$

Where p_t^* and p^*_{t+1} are the unobservable true values of housing in period *t* and t+1, and d_{t+1} is the rental income of the house at period t+1. After some rearrangement, the condition for a competitive equilibrium is:

$$p^*_t = \frac{E_t[p^*_{t+1} + d_{t+1}]}{1 + r_t} \tag{3}$$

During the iteration, the fundamental value of a house is defined as:

$$p^*_t \equiv E_t \sum_{i=1}^{\infty} \frac{d_{t+i}}{\prod_{j=0}^{i-1}(1 + r_{t+j})} \tag{4}$$

Where p_t has two components: true value (p_t^*) and bubble (b_t), so that $p_t = p_t^* + b_t$. this shows that market price can be derived from the fundamental value by a rational expectative bubble factor if b_t satisfies:

$$E_t[b_{t+1}] = (1 + r_t)b_t \tag{5}$$

Equation (5) will hold as the necessary condition for the bubbles in the competitive equilibrium which indicates that as long as the b_t evolves over time and provides the optimal return of r_t,, the agents in the economy are willing to hold houses with price bubbles .

ε_{t+1} is used to define the unexpected price changes of the house according to McQueen and Thorley (1994). Since $p_{t+1} = p^*_{t+1} + b_{t+1}$ both the unexpected changes in the true value and the unexpected changes in b_{t+1} can affect ε_{t+1} . Thus, $\varepsilon_t = \mu_{t+1} + \eta_{t+1}$,where μ_{t+1} and η_{t+1} are the unexpected changes for the true value and the bubble, respectively. The unexpected change in the true value is defined by:

$$\mu_{t+1} = p^*_{t+1} + d_{t+1} - (1+r_t)p^*_t \tag{6}$$

The unexpected change in the bubble is also defined as:

$$\eta_{t+1} = b_{t+1} - (1+r_t)b_t \tag{7}$$

Suppose that $\boldsymbol{\mu_{t+1}}$ follows a symmetric distribution with zero mean. We assume symmetry assumption because we believe the true value has the mean-reversion property. In addition, we assume that b_t follows a two-point discrete distribution. The bubble component of b_t is associated with the probability of $\boldsymbol{\pi}$, in the house price for the next period. b_t will be removed with the probability of 1-$\boldsymbol{\pi}$ and a_0 is left. In order to hold the equilibrium condition in Eq. (3), b_{t+1} must satisfy the following condition:

$$b_{t+1} = \begin{Bmatrix} \frac{(1+r_t)b_t}{\pi} - \frac{1-\pi}{\pi} a_0 withprobability\, \pi \\ a_0 withprobability\, 1-\pi \end{Bmatrix} \tag{8}$$

Assuming π>1-π ,that implies π>1/2. This is reasonable because it empirically shows that the probability of bursting the bubble is negligible, regardless of the type of assets. In other words, if the bubbles persist, the realized value is larger than that its value when it burst. So, we have:

$$\frac{(1+r_t)b_t}{\pi} - \frac{1-\pi}{\pi} a_0 \succ a_0 \geq 0. \tag{9}$$

By substituting $\boldsymbol{\eta_{t+1}}$ with Eq.(8), we have:

$$\varepsilon_{t+1} = \begin{Bmatrix} \mu_{t+1} + \frac{(1-\pi)}{\pi}[(1+r_t)b_t - a_0] withprobability\, \pi \\ \mu_{t+1} - (1+r_t)b_t + a_0 withprobability\, 1-\pi \end{Bmatrix} \tag{10}$$

Equation (10) shows that if the bubbles persist from t to t + 1, the expected abnormal return is positive and equal to $\frac{1-\pi}{\pi}[(1+r_{t+1})b_t - a_0$. If the bubbles burst, the expected abnormal return is $-(1+r_{t+1})\,b_t + a_0$, and it must be negative because the efficient market conditions requires that the expected value of abnormal return is zero. As the probability of persistence of larger is more likely than bursting, the probability of observing negative abnormal returns will be smaller than ½. And if the bubble exists, it decreases with b_t . If the price does not have a bubble, the probability of observing negative abnormal returns must be equal to ½. Consequently, when we observe a set of positive returns, it means that the bubble components persist and accumulate during the period. We define the probability of observing the negative abnormal return as follows.

$$\lambda_{t+1} \equiv prob[\varepsilon_{t+1} \prec 0] \qquad (11)$$

Which can be expressed as:

$$\lambda_{t+1} = \pi F\left[-\frac{(1-\pi)}{\pi}((1+r_t)b_t - a_0\right] + (1-\pi)F[(1+r_t)b_t - a_0]. \qquad (12)$$

F(.) is the cumulative density function of unexpected changes in the fundamental value μ_{t+1}. Partial derivative of λ_{t+1} with respect to b_t

$$\frac{\partial \lambda_{t+1}}{\partial b_t} = -(1-\pi)(1+r_t)[f\,(-\frac{(1-\pi)}{\pi}((1+r_t)b_t - a_0)) - f\,((1+r_t)b_t - a_0)] \qquad (13)$$

Where $\pi > 1/2$ and symmetric f(.) around 0 leads to $\frac{\Delta\lambda_{t+1}}{\Delta b_t} < 0$. Therefore, there is lower probability of observing unexpected negative price changes with the increase in the bubble. As McQueen and Thorley (1994) stated, when bubbles are enlarged, they dominate the fundamental values. The probability of unexpected negative price changes is low and occur primarily when the bubbles burst. We tend to be more careful on the rates of return. If the abnormal return rate is equivalent to the following equation:

$$e_{t+1} \equiv \frac{\varepsilon_{t+1}}{p_t} \qquad (14)$$

Then, the probability of $[e_{t+1} < 0]$ is equal to the probability of $[\varepsilon_{t+1} < 0]$. So,

$$\frac{\delta prob[e_{t+1} \prec 0]}{\delta b_t} \prec 0$$

The theoretical model suggests that if the bubble components continue to exist There will be a smaller probability of observing negative abnormal return rates in the assets, which grow continuously with abnormal return rates. Therefore, we need the necessary condition for the existence of the bubbles: the probability of negative abnormal return rates reduced with the number of periods observed in the positive abnormal returns. If we use h(T) to indicate the hazard rate of abnormal return rates and T to indicate the number of positive abnormal return rates (or duration of the period), the requirement for the bubble existence will be:

$$\frac{\delta h(T)}{\delta (T)} \prec 0 \tag{15}$$

$$h(T) = prob(e_t < 0 | e_{t-1} > 0, e_{t-2} > 0, \ldots, 0 e_{t-T} > 0, e_{t-T-1} < 0)$$

In this paper, to overcome the lack of observations, we set the model according to panel data.

The rate of the real return of house in province *i* at period *t* is calculated as follows:

$$R_t^i = \frac{(p_t^i + d_t^i)}{p_{t\_1}^i} - 1 \tag{16}$$

Where p_t^i andd_t^i denote the price and rental income in province *i* at time *t*, respectively.

$$e_t^i = R_t^i - E_{t\_1}(R_t^i) \tag{17}$$

Where e_t^i is the unexpected return rate in province *i* at time *t* and $E_{t-1}(R_t^i)$ denotes the expected house return rates at time *t* using the information available t-1. Then, the house returns estimate is obtained by the following model:

$$R_t^i = \beta_0 + f_i + \sum_{j=1}^{k} \beta_j x_{j,t-1}^i + e_t^i \tag{18}$$

Where f_i is unobservable characteristics of province *i* and $X_{j,t-1}^i$ is the j-th factor in province *i* at time t-1. e_t^i stands for the regression residual and measures the unexpected return rate. Then, we count the run lengths of the 30 provinces and combine them to estimate the hazard rate with a linear –logistic function as:

$$h_t = h(t) \equiv \frac{1}{1+e^{-\alpha-\beta t}} \tag{19}$$

Then, we maximize the log-likelihood function:

$$L(\theta) = \sum_{t=1}^{\infty} N_t \ln h_t + M_t \ln(1-h_t) + Q_t \ln(1-h_t) \tag{20}$$

Here, N_t is the count of completed runs of length *t* in the sample, and M_t and Q_t are the count of completed and partial runs of length greater than *t*. The necessary condition for existing bubbles is:

$$\frac{\partial h_t}{\partial t} \prec 0 \tag{21}$$

This leads to $\beta < 0$.

3. Data and Empirical Results

Following Ren et al. (2012), unemployment rate, population, GDP, bank deposit interest rates (one-year deposits), stock indices, and price-rate ratio have been used as explanatory variables. Also, the data on the purchase price of the residential unit and the rental price per square meter of the residential unit are used to calculate the real return on housing. The data were collected through Iran Ministry of Road and

Urban Development, Statistical center of Iran and the Central Bank of Iran's websites. Our panel data includes provinces during 2006-2020, where the number of observations is 450. Cross-section dependence test, Unit Root, and Kao Residual tests were used for data as reported in tables 1, 2 and 3, respectively. As Table 1 shows, we strongly reject the null hypothesis of no correlation at conventional significance levels. According to table 2, the nonstationary hypothesis of the variables is not rejected. Therefore, we consider the hypothesis of a long-term relationship through Kao test. According to Table 3, the result of this test confirms the existence of a long-term relationship.

Table 1: Cross-section dependence test

test	Statistic	d.f.	Prob
Breusch-Pagan LM	1373.867	435	0.00
Pesaran scaled LM	30.81346		0.00
Pesaran CD	24.68727		0.00

Table 2: The Ime- Pesaran- Shin Panel Unit Root Test Results

Variable	Statistic	Prob
R	-1.40	0.08**
RR	6.32	1.000**
INV	-1.32	0.09**
INF	-1.32	0.09**
SR	8.23	1.000**
GDP	7.49	1.000**
PR	2.30	0.98**
POP	4.32	1.000**
UNEM	-8.96	0.00*

* denote the variable is stationary at the 10 % level

** denote the variable is non stationary at the 10 % level

Table3: The result of Kao Residual Co integration test

Prob.	T statistic
0	-5.05

The results of the Chow test in Table 4 show that the model should be estimated with pooled data. Also, the hypothesis of the existence of a common intercepts and slope among the sections is confirmed.

Table 4: Identification Test

	Prob.	Statistic
Chow Test	0.59	0. 91

So, we estimate the following model:

$$R_{i,t} = \alpha_0 + \alpha_1 RR_{i,t} + \alpha_2 INV_{i,t} + \alpha_3 INF_{i,t} + \alpha_4 SR_{i,t} + \alpha_5 GDP_{i,t} + \alpha_6 PR_{i,t} + \alpha_7 POP_{i,t} + \alpha_8 UNEM_{i,t} \quad , \ i=1,\ 2,\ \ldots,\ 30 \qquad t=2006,\ \ldots,\ 2020 \qquad (22)$$

Where R represents the real return on housing, RR is the interest rate on deposits, INV is investment in housing, and INF, SR, GDP are inflation rate, stock index, the growth rate of gross domestic product (per capita), respectively. PR is price-rate ratio, and POP and UNEM denote population growth rate and unemployment rate.

In this regard, the real return on housing is dependent on the variable, and the other variables introduced are independent variables. The real return on housing is comprised of two parts: Expected Returns and Unpredictable Returns, which we expect to measure the expected return on the real return on housing by the independent variables in the model. In addition, we consider the amount of the remainder of the model as unexpected return. The results of model estimation are presented in Table 5.

Table 5: The results of model estimation

Variable	Prob.	Coefficient
C	0.26**	1.67
RR	0.58**	0.06
INV	0.37**	-0.89
INF	0.14**	-0.01
SR	0.07**	-1.69
GDP	0.65**	-4.00
PR	0.00*	0.70
POP	0.98**	3.62
UNEM	0.06**	0.02
		f-statistic=61.85 prob=0.00

∗ denote significance at the 5 % level
∗∗, denote insignificance at the 10 % level

The results of coefficient analysis and probability of each variable indicate that the effect of bank deposit interest rate, private sector investment, inflation rate, stock index, gross domestic product growth rate, population and unemployment rates on the real rate of housing are insignificant.

Liquidity turnover between housing-bank is much stronger than liquidity fluctuation between housing-housing and housing-dollars. Nevertheless, the negative relationship between the real rates of return on housing following the positive rate of interest on deposit is not observed in the study. This is due to the increase in housing fluctuations. At the peak of the housing fluctuation, as the prevailing behavior of economic activists, whether the applicants for both housing and investors, have turned to property purchases, the high interest rate have not been so successful in liquidity absorption. Therefore, there is no significant relationship between the interest rate on bank deposits and the actual cost of housing.

The variable price-rate ratio positively influences the actual return on housing. As we pointed out, housing returns consist of two components of rent and income resulting from house price changes, and the rate of return on housing varies with the change of these factors. According to the results, with a one percent increase in the price-rate ratio, the real yield of housing increased by 1.003, and by decreasing this variable, the actual returns fall. After extracting the residuals from the estimate of Eq.22, we tried the linear-logistic function of the hazard rate where

$$N = \alpha + \beta . T \qquad (23)$$

Here, N denotes the number of periods with unexpected positive returns and T represents the time. After estimating the linear-logistic hazard function, the beta mark will be confirmed by estimating the existence or absence of a bubble in the housing market. Table 6 shows the results of the linear-logistic hazard function estimation.

Table 6: The linear-logistic hazard function estimation

Method:ML-Ordered Logit		
Variable	Coefficient	Prob
T	-0.7	0.0029
LR statistic :9.07 Prob.(LR statistic) :0.0025		

The coefficient of the variable t is equal to −0.7 which is significant at $p<0.05$. On the other hand, in the logistic models of the LR statistic, the general significance of the model is examined, where the H0 hypothesis is rejected at the 5% level, and it satisfies the regularity of the model. As suggested in the theoretical framework, if the coefficient obtained from the estimation of the logistic function is negative, the hypothesis of the existence of the bubble is confirmed. Therefore, according to the results of this test, the existence of bubbles in the housing market is then confirmed.

4. Conclusion

This study tests the existence of rational expectation growing bubble in the housing market using the Blanchard and Watson (1983) model. The results show that high house prices are related to opportunistic purchases aimed at future capital gains brought by the expanding bubble components. We estimate the hazard function as linear logistic function .the data used in this study are a combination of cross-sectional data (of 30 provinces) in the period 2006-2020. The proposed model consists of two parts: expected return and unexpected return. The effect of expected returns is studied through macroeconomic variables. Also, the residuals of the model are considered as unexpected return. In the first step, after performing diagnostic tests, the effect of macroeconomic variables on real returns.

The results show that, the effect of fundamentals like GDP growth rate, population and unemployment rates cannot significantly affect the real return of housing. The price-to-rent ratio has a significant and positive effect on the real return of housing. This finding implies that the cash flow in owning a house is high. Thus, investors are more likely to increase their investment in houses, and house prices will increase in the future, which leads to an increase in capital income from future price changes.

In the next step, the residuals obtained from the model estimation are extracted and the periods with positive unexpected returns are separated and the hazard function is estimated as a logistic function. The results of the estimation show that the coefficient of the variable *t* is equal to -0.7 which is negative and significant at the level of 5%. On the other side, LR statistics in logistics models examines the overall significance of the model, where Hypothesis H_0 is rejected at the 5% level and regression significance is confirmed. Based on the theoretical foundations, the hypothesis of a bubble in the housing market is confirmed.

The results of Ghasemi et al. (2013) and Khatai et al. (2014) confirm the existence of price bubble in the housing maket of Iran. Also, Rasekhi and Shahrazi (2014) indicate that the Iranian housing market has experienced explosive behavior and multiple bubbles during the period. However, they did not consider local fundamentals. Abedini et al. (2016) in a study, determined housing prices and identified the price bubble in different provinces of Iran during the period 1996-2010 using panel data and fixed effects model. The results of the study reject the hypothesis of a price bubble in the Iranian housing market and claim that the continuous increases in housing prices over the past decades are explained by structural variables such as production costs, liquidity and effective demand growth. In addition, estimates show that land prices (with residential use) and liquidity have been the most important factors in the growth of housing prices in Iran.

Fluctuations in housing prices has been one of the main challenges of the housing market. Recognizing whether these fluctuations are rooted in the fundamental factors of the economy or due to the bubble leads to different policies and plays an important role in preventing adverse economic consequences. Therefore, considering the importance of the subject of this article, in order to fill the gaps in previous research and provide effective measures for policy makers and stakeholders in this field, it can be used as a risk warning system to eliminate the dilemma of house price bubble.

The following suggestions are made to improve the housing market in Iran:

- Use of land and investment companies with the aim of expanding justice, preventing rent rise, developing the capital market, maintaining the value of capital for those in need of housing that cannot afford one-time purchase of housing, and developing housing construction.

- Implementing policies such as facilitating the terms and conditions for granting construction permits, tax exemptions, affording cheap land for low-income households, using the potential of mass-makers to produce fast and cheap housing, propagating industrial manufacturing methods, and building more than modern construction technologies leading to a positive impact on the housing market.

- Applying punitive policies for obscuring landlords through tax: it can reduce incentives for housing and improve the market position.

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حباب انتظارات عقلایی قیمت مسکن در ایران

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چکیده

از آنجا که بخش مسکن ارتباط زیادی با سایر بخش‌های اقتصادی دارد نوسان‌های قیمت این دارایی می‌تواند هزینه‌های گزافی درپی داشته باشد؛ هم‌چنین تشخیص این‌که افزایش قیمت‌ها ریشه در شرایط بنیادی اقتصاد دارد و یا تنها ناشی از حباب است، می‌تواند منجر به اتخاذ تصمیمات و سیاست‌های متفاوتی بشود؛ بنابراین موضوع کشف حباب‌های قیمتی مسکن می‌تواند به‌عنوان یک سیستم هشداردهندۀ اولیه جهت جلوگیری از پیامدهای ناگوار اقتصادی مورد بررسی قرار گیرد. مطالعۀ حاضر، فرضیۀ وجود حباب در بازار مسکن ایران در طول سال‌های (۹۸-۱۳۸۵)را با استفاده از مدل بلانچارد و واتسون مورد آزمون قرار می‌دهد. براساس تئوری، احتمال وقوع بازدهی منفی قیمت سهام در شرایط وجود حباب، کاهش می‌یابد؛ همچنین تابع مخاطره ازطریق رگرسیون لجستیک برآورد شده است و یافته‌های حاصل از آن وجود حباب در بازار مسکن در دورۀ زمانی مورد بررسی را در استان‌های ایران تأیید می‌کند.

کلیدواژگان: تابع مخاطره، حباب قیمت، بازار مسکن، ایران.

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