

An Analysis of Restrictions on Housing Purchases in China

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Abstract

In recent years, housing prices have increased rapidly in China. As a result, Chinese governments have taken measures to control prices. The most popular way is restrictions on housing purchases. However, this policy has been questioned since it was implemented. The writer focusses on whether this policy is suitable and reasonable for the housing market. Firstly, the writer analyzes the reasons for high housing prices in China. The reason is not related to supply and demand, but rather to financial and fiscal problems. Secondly, the writer provides more details about the adverse effects of restrictions on housing purchases, and explains why they are not sustainable for the Chinese housing market. Then an analysis of foreign policies provides some clever ideas for alternative policies to reduce housing prices. Finally, the writer gives her own thoughts about policies in the Chinese housing market.

Keywords: Housing Prices, Restrictions on Housing Purchases, Property Taxes

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1 Introduction

Recently, housing prices in the Chinese commercial housing market¹ have increased rapidly. In 2000, the average housing price was \$400 Canadian per square meter; by 2015, the average housing price had increased to \$1300 Canadian per square meter.² In Shenzhen, the increase was even greater, with prices rising to \$7000 Canadian per square meter by 2015.³ These high housing prices have had a huge effect on society, the living standards of Chinese people, and the economy. In response, the Chinese central government, the State Council of the People's Republic of China [State Council], enacted restrictions on housing purchases in 2010 to control housing prices in the Chinese housing market. This policy firmly restricts who can buy a house or condo in every city, how many houses and condos people can buy and also how big a down payment people must make. By 2012, 46 cities had enacted the policy to control housing prices. But this policy did not last long. Hohhot, the capital of Inner Mongolia province, was the first city to abandon this policy in 2014 because of downward pressure on the Chinese economy. Soon, 36 other cities also abandoned the regulation in the same year. By 2015, 41 cities had completely abandoned this policy. However, after a significant increase in housing prices from January to September in 2016, local governments re-enacted Restrictions on Housing Purchases to keep housing prices stability on October 2016.

However, whether restrictions on housing purchases are suitable for the Chinese housing market is still uncertain. This report will analyze the policy of restricting housing purchases to investigate whether it is an effective way to suppress high housing prices. Firstly, the report will discuss the situation of the Chinese housing market, focusing on the real reasons for high housing price and effects. This discussion helps to illuminate the core factors underlying high housing prices and better understand the real target of housing market policies.

¹ In what follows, the words "Chinese housing market" refer to the Chinese commercial housing market.

² Data on the average housing price is from the website of National Bureau of Statistics of the People's Republic of China [NBS] at <http://www.stats.gov.cn/tjsj/ndsj/2016/indexch.htm>

³ Data on the average housing price in Shenzhen is from the website of Shenzhen Bureau of Statistics on Average Selling price of Commercial Houses in Secondary Market (Group by use) at <http://www.szstj.gov.cn/xxgk/tjsj/tjnj/201701/W020170120506125327799.pdf>

After reviewing the causes of high housing prices, we will discuss restrictions on housing purchases. More details about this policy will be provided. Then, the policy is analyzed using the supply and demand model. Next, the policy will be analyzed based on law and economic. Finally, a conclusion will be drawn as to whether this policy is good for the Chinese housing market.

In addition, other policies in other countries will be discussed. Foreign experience will provide innovative ideas regarding more efficient policy options for China. The conclusion presents the author's suggestions for alternative policies that could efficiently solve the core problem of the high housing prices.

2. The Chinese Housing Market

The Chinese housing price increases more and is so high now. The reasons for the high housing price and the effect of the high housing price will be discussed in this part.

2.1 Explanations for the Increase in the Chinese Housing Price

The Chinese GDP growth rate was 6.9% in 2015, the lowest since 1990.⁴ However, although Chinese economic growth has slowed down, Chinese housing prices continued to increase in 2016 after China's central bank, the People's Bank of China (PBC), and the State Council enacted regulations that required local governments to reduce the number of unsold houses on December 2015 to reduce the credit risks of the banks. The recent increase in housing prices in China is not only driven by demand and supply factors, but also by financial and monetary issues.

As Mishkin (2007) argued, in financial markets the actual interest rate and the expectation of the incremental of the value of the houses or condos will influence financing costs for investors or even speculators, which in turn will influence the supply of housing. Furthermore, Iacoviello (2005) showed that using a VAR model estimated using US data (GDP, federal funds rate and real house prices) that the interest rate has a

⁴ Data information about the GDP growth rate is from the website of National Bureau of Statistics of the People's Republic of China [NBS] at <http://data.stats.gov.cn/easyquery.htm?cn=C01>

significant effect on the housing supply. Zhang (2013) also found that in China, the money supply is positively correlated with housing prices and mentioned that money supply also be measured by M2. Ye (2017) said that M2 could indirectly affect housing prices by affecting the interest rate. Huang and Wang (2010) use a structural vector auto-regression (SVAR) model for China to show that M2 does indeed affect housing prices by influencing the interest rate, while Shen, Zhou, and Li (2011) find that the interest rate has a significant effect on housing prices in China using an FAVAR model.

In China, the global financial crisis of 2008-09 caused the Chinese central government to use fiscal and monetary policies to inject 4 trillion yuan into markets. As a result, China's M2 was close to 100 trillion yuan by the end of 2012, a level which is 65 times higher than that in 1990.⁵ At the same time, the level of M2 in the United States was less than 10 trillion dollars.⁶ As for the ratio of M2 to GDP, in the United States it was 0.88, while in China it had achieved 1.80 by 2012, a much larger value.⁷ Thus, it appears that the Chinese central bank supplied excess currency to Chinese markets after 2008.

To make matters worse, there are few sound investment channels in China other than investment in the housing market. For example, most manufacturing industries, especially those that produce CPI-related goods and services, need overseas markets to absorb their excess capacity. However, the appreciation of the Chinese currency has made it more difficult to export goods from China. Hence it is not realistic for industries to dispose of their excess capacity by continuing to expand exports of their products. As a result, the profits of these industries have sharply declined. For example, in 2015 47% of steel-producing firms earned negative revenue, and incurred much higher losses than during the previous year.⁸ Furthermore, other market participants, especially banks, are losing confidence in the future of these manufacturing industries. Thus, market participants would rather invest in the housing market than in these industries, causing

⁵ Data on the China's M2 is from the website of People's Bank of China about China Money Supply M2 at <http://www.pbc.gov.cn/eportal/fileDir/defaultCurSite/resource/cms/2015/07/2012s07.htm>

⁶ Data on U.S. M2 is from the website of the Trading Economics about United States Money Supply M2 at <https://tradingeconomics.com/united-states/money-supply-m2>

⁷ Data on the ratio of M2 to GDP is from the website of the World Bank at about Broad Money (% of GDP) <https://data.worldbank.org/indicator/FM.LBL.BMNY.GD.ZS?end=2016&start=2016&view=map&year=2012>

⁸ Data on steel producers is from the website of the China Steel Association at <http://www.chinasa.org.cn>

housing prices to increase even further. In fact, higher housing prices have become the “stomach” of the Chinese economy that digests excess currency. However, housing is not included in the Chinese CPI. This suggests that the measured Chinese inflation rate and CPI growth rate are too low. In other words, although the rate of inflation measured using the CPI is slow, it does not accurately reflect the real living standard of ordinary people. Thus, one possible explanation for the emergence of a housing price bubble is that the sharp increase in the money supply did not go into CPI related goods and services.

Another by-product of excess currency is a further increase gaps between the rich and the poor. After 1978, the Chinese income Gini coefficient rose to 0.462 in 2015,⁹ while the Chinese wealth Gini coefficient rose to 0.73.¹⁰ This means that income gaps are very large in China. The reason is that the excess currency is easily absorbed by the rich, but is less likely to improve labour income for ordinary people. Hence the severity of the uneven distribution of income and wealth is exacerbated, leading to further increases in gaps between the rich and the poor. However, gaps between the rich and the poor are not a key factor underlying increases in housing prices. Rather, what matters is how the rich use the excess currency. Due to the tendency of the wealthy to invest in projects with a high and quick return, the rich are looking for a high-revenue, low-cost industry, which is the main feature of the housing market. Therefore, the rich prefer to invest in the housing market, causing the demand for housing to increase and housing prices to grow further. Gradually, higher housing prices make the rich become richer and the poor become poorer.

The housing market is also affected by a demographic dividend. People who were born in the 1980s and 1990s have a large demand for houses or apartments for several reasons. Firstly, the number of such people is enormous. For example, the number of people born in the 1980s is two hundred twenty-eight million, while one hundred seventy-nine million people were born during the 1990s.¹¹ This huge population means a correspondingly large demand for new houses or apartments. Secondly, most of the

⁹ Data information on Gini Coefficient rate is from the website of National Bureau of Statistics of the People's Republic of China [NBS] at <http://www.stats.gov.cn/tjsj/ndsj/2016/indexch.htm>

¹⁰ Ning Xie, Xiaobo Li, Jianxin Li, Xuejun Yu and Qiang Ren, *China Family Panel Studies 2014* (Beijing: Peking University, 2014)

¹¹ Data information born population is from the website of National Bureau of Statistics of the People's Republic of China [NBS] at <http://www.stats.gov.cn/tjsj/ndsj/2008/indexch.htm>

parents of these people have accumulated great wealth. The average disposable income of Chinese citizens increased to 13,786 yuan in 2007, which is 6.7 more times than that in 1978. In addition, savings amounted to 17.3 trillion yuan in 2007, which constitutes an increase of 818.3% since 1978.¹² Hence the parents of those born in the 80s and 90s can afford high housing prices. Furthermore, the One Child Policy has ensured that most of those born during the 80s and 90s can easily get help in the form of a down-payment from their parents; their parents may even give their children new houses or apartments as gifts. So, their strong purchasing power can encourage those born in the 80s and 90s to buy new houses or apartments instead of living with their parents or renting houses. This large demand will increase housing prices unless the supply of housing grows equally fast.

Another factor that influences housing prices in China is that most Chinese parents also prefer to buy houses and apartments as gifts for their child. For thousands of years, the Chinese people have been fanatical about land and houses. As soon as Chinese people accumulate enough money, they immediately buy land and houses; ordinary citizens feel safe when they live their own houses. In today's China, owning one or more houses or condos is also associated with higher social status. In China, a popular saying is "no house equals no wife and houses equal success." This attitude causes Chinese parents to feel that they must buy houses or condos to demonstrate their's or their children's high social status. Meanwhile, this saying also influences the young; in 2015, the average age at which Chinese people buy their first house or apartment was 27, while that in UK has increased from 33 to 37, that in Japan and Germany is 42, and in US, the age is 30 on average.¹³ Thus, all participants in Chinese society are eager to purchase houses or apartments.

Another issue is that Chinese governments have not paid much attention to the rental housing market. Chinese governments did not enact any effective policies to manage the rental market until recently. They have not enacted laws to identify and protect both renters' and landlords' rights. In addition, they have not introduced regulations to

¹² Data information on average disposed income is from the website of National Bureau of Statistics of the People's Republic of China [NBS] at <http://www.stats.gov.cn/tjsj/ndsj/2008/indexch.htm>

¹³ "Average age of First-time Home Buyers in Beijing is only 27: Report" GLOBALTIMES. com, last modified August 30th, 2010. <http://www.globaltimes.cn/content/568479.shtml>

normalize the behaviour of rental agencies. Hence, a perfect rental market does not exist in China, and renting a house or apartment is not a reasonable or priority choice for people. Consequently, most people would rather purchase new houses or apartments than rent accommodation. Gu and Li (2013) argued that building an affordable rental market with symmetrical information is the most effective way to reduce the demand for new houses or apartments, and consequently adjust to housing prices in the Chinese housing market. The establishment of such a rental market could make more people prefer to rent a house or condo and enter the rental market than buy a commercial house or condo. As these people exit the commercial housing market, demand will be reduced. Consequently, housing prices will decline.

Reforms to the Chinese tax system have also influenced housing markets. In 1994, the Chinese central government reformed the Chinese tax system. More specifically, the Chinese central government re-assigned local and central government taxes: in the case of the Value-Added Tax (VAT), 75% of revenues are allocated to the central government, while only 25% go to local governments.¹⁴ Before 1994, 78% of revenues were allocated to local governments.¹⁵ This enormous difference means that local governments could face fiscal deficits due to the decrease in revenue. While this reform also involved transfer payments from the Chinese central government to local governments, transfer payments in fact did not effectively solve the problem. As a result, most local governments gradually incurred fiscal deficits. Hence, since 1998, local governments have turned to another source of revenue to solve this problem: the sale of land. In 2009, total revenue from land transfers was more than 1.5 trillion yuan, and 50%~70% of the fiscal revenue of local governments was from the sale of land.¹⁶ Wu, Gyourko, and Deng (2012) found that local governments benefit from increases in the price of land, which is closely related to the price of housing. Bai (2013) uses a VAR model to find that in the long term, high land prices cause manufacturing costs to increase and then increase housing prices, while in the short term, because of the inelasticity of the supply of

¹⁴ Data on allocation of governments revenues is from the website of Ministry of Finance of the People's Public of China http://yss.mof.gov.cn/zhuantilanmu/zhongguocaizhengtizhi/cztzwj/200806/t20080627_54328.html

¹⁵ Data on allocation of governments revenues is from the website of National Bureau of Statistics of the People's Republic of China [NBS] at <http://www.stats.gov.cn/tjsj/ndsj/2014/indexch.htm>

¹⁶ Data on the percentage of the land revenue on local government fiscal revenue is from the website of National Bureau of Statistics of the People's Republic of China [NBS] at <http://www.stats.gov.cn/tjsj/ndsj/2010/indexch.htm>

housing, the demand for housing will influence housing prices. That means that housing prices will influence land prices. Similarly, Chen, Li, and Zhou (2013) mention that with urbanization and the sharp increase in the population of adults in Chinese cities, the huge demand for houses or condos forces housing prices to increase. In the short term, the increase in housing prices also causes land prices to rise, which increases local governments' revenue. For these reasons, local governments benefit from high housing prices and do not want to take strict measures to reduce the demand for housing.

Additionally, higher housing prices could help to transfer financial risks, including local government debt crises and the credit risks of banks, between parties in Chinese financial markets. Firstly, higher housing prices could help transfer local government debt crisis to other parties. In 2015, the total debt of Chinese local governments was 16 trillion yuan, while GDP was 67.67 trillion yuan.¹⁷ Thus, the ratio of local government debt to GDP was 23%.¹⁸ In fact, this ratio is not the highest in the world. The debt ratio of most provinces is still at a safe level, but in some provinces the debt-to-GDP ratio is extremely high. For example, in 2015 the debt-to-GDP ratios of Liaoning province and Guizhou province were 120.2% and 197.47% respectively, which is higher than the Chinese emergency limit.^{19, 20} Thus some provinces and areas may be at risk of defaulting on their debt payments. The governments of such regions may welcome higher housing prices, because they increase the price of land and allow them to raise more funds to avoid default on. This default referred the default of the loans borrowed from banks or local people. These loans are used to finance the fiscal deficit, change the environment of the local area or offset losses on the tax deductions that attract firms to develop the local economy. Secondly, higher housing prices could transfer the credit risks of banks to individuals. Because the risk associated with personal bank loans is lower than that of other types of loans, banks prefer to focus on personal bank loans. At the

¹⁷ Data on Debt and GDP is from the website of National Bureau of Statistics of the People's Republic of China [NBS] at <http://www.stats.gov.cn/tjsj/ndsj/2016/indexch.htm>

¹⁸ Data on Debt-to-GDP is from the website of National Bureau of Statistics of the People's Republic of China [NBS] at <http://www.stats.gov.cn/tjsj/ndsj/2016/indexch.htm>

¹⁹ Chinese emergency limit referred that the debt ratio is not more than 100% and the debt ratio means the rate between debt balance and total governments funds. Detail see "Talking about some Chinese Emergency Lines" SOHU.com, last modified July 23th, 2017. http://www.sohu.com/a/156786675_181128

²⁰ Data on Debt-to-GDP on each province is from the website of National Bureau of Statistics of the People's Republic of China [NBS] at <http://www.stats.gov.cn/tjsj/ndsj/2016/indexch.htm>

same time, higher housing prices lead individuals to believe that housing prices will increase further. The greater the demand for personal bank loans, the more profit the banks could gain and the less risk the banks take. Hence banks will prefer personal housing credits to local government debt or the debt of state-owned businesses. Thus, higher housing prices gradually reduce the financial stress on local governments and the banks and mitigate financial risks in Chinese markets.

In short, the increase in housing prices in China cannot be explained in terms of a simple demand-supply problem. In fact, it involves complex issues such as monetary policy, culture and society.

2.2 The Effects of Higher Housing Prices in China

Higher housing prices have a negative overall effect on the Chinese economy. Lin (2016) argued that higher housing prices cause all market participants to become speculators. All participants invest their funds in the housing market to quickly gain more profits. As a result, the development of other industries such as manufacturing is stifled due to a lack of funds, causing the profits of manufacturing industries to decline. Consequently, no one is willing to invest in manufacturing industries. Hence Lin (2016) suggests that high housing prices break the balance among different industries and invest the more money into the housing manufacturing. This means that all market participants focus on investments in houses or condos and use the leverage to get high returns, while other manufacturing firms cannot obtain funds from banks or other financial institutions. Therefore, manufacturing firms cannot develop and in the markets, only the housing industry or related industries are well-developed. Then if the housing industry collapses, the whole economy will break down.

The life choices of Chinese people are also being distorted by high housing prices. Gong (2016) pointed out that most people believe that owning a house or apartment in Beijing, Shanghai, Shenzhen or a provincial capital means higher social status. Hence Chinese parents pressure their daughters to marry men who have a house or apartment and a car. Even some women see this as their goal. Therefore, the final goal of most

Chinese people is to purchase a house or apartment in Beijing, Shanghai, Shenzhen or a provincial capital.

In a few words, higher housing prices mainly make market participants speculators who invest their currency in the housing market rather than in more productive enterprises. Although it hurts the manufacturing industries, the housing market has a close relationship with the Chinese economy. Hence Chinese governments should consider some measures that might be helpful for manufacturing industries and mitigate the risks in the housing market. And, they should consider when is suitable to use policies to punish the speculative behavior of other market participants.

2.3 The Development of Chinese Housing Policies.

According to Yuan and Hamorki (2014), prior to 1998 the Chinese central government used low-rent welfare housing allocation in the Chinese housing system. Under this policy, Chinese families could get houses or condos close to their location of work, and the houses or condos belonged to the corporations for which they worked. After 1998, a big change took place in the Chinese housing system. Yuan and Hamorki (2014) noted that the Chinese central government introduced the monetization of housing in 1998. This reform meant that the low-rent welfare housing allocation was abandoned, and Chinese houses or condos were commercialized and privatized. Meanwhile, Chinese governments introduced various policies intended to keep housing markets fair and information is clear. As a result, Chinese housing prices rose sharply after 2004 (see Figure 1).

Yu (2016) described a variety of policies to control housing prices that the Chinese central government implemented from 2004 to. For example, the Ministry of Land and Resources of the People's Republic of China announced that lands would be controlled by the central government if local governments could not solve the land problems caused by the housing reforms before August 31st, 2004. In 2005 and 2006 the State Council separately published the new regulations to oversee housing markets and control housing prices. For example, the State Council required that local governments induce ordinary

people to rationally buy or sell their houses or condos and implemented regulations to inhibit speculation in the housing markets. However, because of the financial crisis in 2008, the central government launched the Chinese Economic Stimulus Program to invest RMB¥ 4 trillion (US \$685 billion) to ease the crisis. Therefore, housing prices continued to grow despite the crisis. Then, in 2010, the State Council implemented new policies including limits on the purchase of a second unit of residential housing, especially limiting personal credit for purchases of a second unit of residential housing. Those new policies were called restrictions on housing purchases.

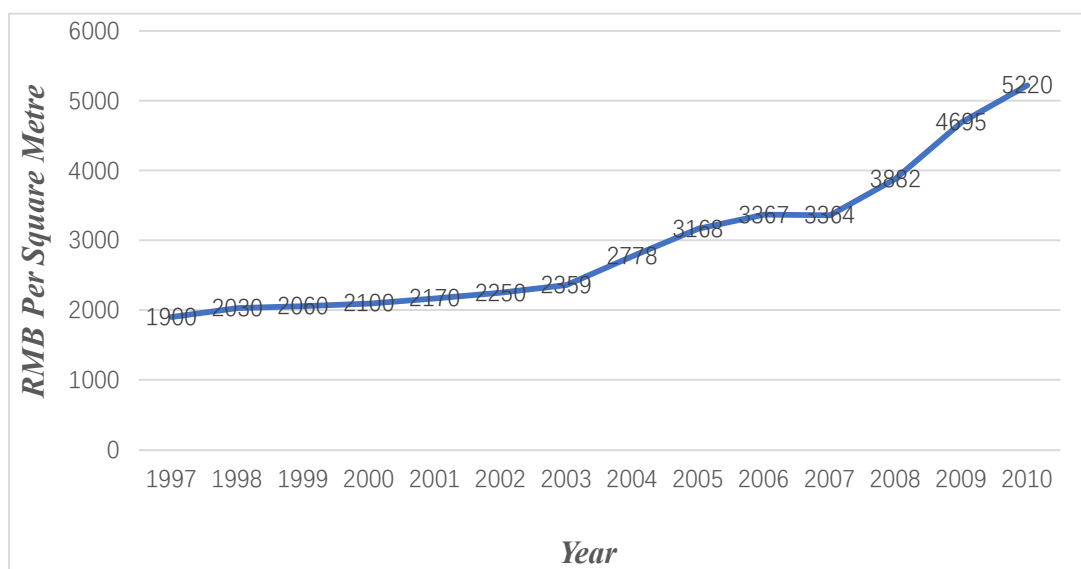


FIGURE 1 Residential Selling Price 1997—2010

Source: Author draw the figure using the data from the National Bureau of Statistics of the People's Republic of China at <http://www.stats.gov.cn/>

Before 2008, Chinese government housing policy focused on the suppression of speculation and oversight of housing markets. This meant that the central government preferred the housing markets to rely on the invisible hand to adjust housing prices, while governments simply played the role of regulators in the markets. However, after 2008, the causes of higher housing prices became more complex. Therefore, the central government had to adopt strict measures, especially strict administrative means, to

control housing prices, resulting in the implementation of restrictions on housing purchases in 2010. However, Chinese governments abandoned this policy in 2015, until further increases in housing prices in 2016 caused them to reenact this policy.

3. An Analysis of Restrictions on Housing Purchases.

Many countries had launched a variety of policies to control housing prices when the market failure happened in the housing market. And most scholars have studied housing policies which have been abandoned, are currently implemented or may be introduced in the future. For example, Eunkyung (1998) and Onathan and Richard (2002) argue that tight monetary policy can suppress housing prices. Similarly, Collyns and Senhadji (2002) suggest that easy credit policy will increase housing prices. Rosenthal (1992) notes that the property tax rate is negatively related to housing prices. Abraham and Hendershott (1994) argue that governments have the dominant power in making land policy, so governments should make regulations to control the land value, which will in turn cause housing prices increase or decrease. Meanwhile, Goodman (2008) argues that the affordable housing policy would effectively influence demand and supply in the housing market.

This brief review of possible housing policies implies that governments could choose different methods to control housing prices when the market failure happened in the housing market. The Chinese central government enacted restrictions on housing purchases, which limit the number of houses or condos purchased by individuals and families to control housing prices.

3.1 The Details on Restrictions on Housing Purchases.

Restrictions on housing purchase was started in 2010. Chinese governments abandoned restrictions on housing purchases in 2015, but they started to re-enact this policy again in 2016. This policy has been used for the past seven years. Details about this policy are showed as follows: a local family who own only one house or condo can

buy at most one more house or condo; or a non-local family can buy one house or condo if they can provide proof of a social insurance premium which has been paid for one year or more; otherwise, any house or condo cannot be purchased. Also, the central government required local governments to make regulations on down payments for property purchasing. For example, the policy requires that the down payment for the first property purchasing must be above 35% and at least 60% for the second purchasing, 100% for the third purchasing in Beijing. In addition, in Beijing the length of the time of the mortgage cannot exceed 25 years. Other Chinese local governments have introduced similar regulations involving personal credit. Meanwhile, the central government allows the local governments to add additional strict regulations into this policy based on their own situations.

It seems to be an ineffective way to control housing prices. Since September and October 2016, the increase of housing prices of most cities has still been larger than before --- for example, On March 2017, housing prices in Shanghai increased 19.8% compared with March in 2016.²¹ Among 70 cities, there were 2 cities in which housing prices decreased, 27 cities in which the increase of housing prices was above 10% and 41 cities in which housing prices increased above 10% on March 2017.²² Thus housing prices in most cities indeed increased more. The reason is this policy only takes measures to limit the housing purchase volume of the citizens to decrease housing prices, but it does not solve the deepest problem involving why this housing price is high, and did not consider how it itself affects the housing markets.

3.2 Policy Analysis

As what mentioned above, this policy just focuses on the sale volume. According to Han, Huang and Zhou (2014), restrictions on housing purchases are effectively to suppress housing prices in the short term. However, as Zhang (2015) mentioned, the key way to control housing prices is not limiting the sale volume to decrease demand but is to

²¹ Data information about housing prices is from the website of National Bureau of Statistics of the People's Republic of China [NBS] at http://www.stats.gov.cn/tjsj/zxfb/201704/t20170418_1485514.html

²² Data information about housing prices is from the website of National Bureau of Statistics of the People's Republic of China [NBS] at http://www.stats.gov.cn/tjsj/zxfb/201704/t20170418_1485514.html

increase the supply. Hence, the analysis will be showed--- what happened on housing supply and demand if restrictions on housing purchases are implemented.

3.2.1 The Effect of Restrictions on Housing Purchases on Housing Supply and Demand.

Economically, the housing markets also follow the rule of demand and supply. However, restrictions on housing purchase essentially decrease current demand in the housing market by delaying buyers' purchases. Wan (2012) refer that the demand on the housing market is generally divided into three types: inelastic housing demand, low leverage investment demand, and high leverage investment demand. The term "inelastic housing demand" refers to people who really need a house or condo in which to live. For these people, policies that restrict purchases just delays people's plans to purchase a house or condo, rather than eliminating their demand. In the short-run, it prevents people who need to borrow to buy a house or condo from making a purchase, due to limits on personal credit. Therefore, they have to forgo purchasing a home until they can afford to do so in the future. Chen, Li and Zhou (2013) point out that as the number of such potential buyers increases (due to such factors as marriages of individuals aged between 25 and 30 and population growth in larger cities), this demand will not decrease. This means the policy just postpones this type of demand to the future rather than eliminating it.

Feng and He (2012) claim that the most important feature of low leverage investment demand is that investors are looking for low borrowing rates at which to finance their investment. Those people who need low leverage investment usually have no ability to afford the loss if the investment program fails. As Wan (2012) suggest, those people just want to make money by investing the high-return programs but they know they do not have enough capital to face high risks. Therefore, they prefer low-risk, high-return investments. Investments in houses and condos meet these criteria and become an ideal program for such investors. They may also become the main investment program for those investors. However, restrictions on housing purchases will raise the cost of investments for these investors. For example, restrictions on housing purchases

focus on the down payment. This means that investors will be forced to borrow less money from banks or may even be unable to borrow from banks in order to buy a second or more houses or condos. As a result, they will face higher investment costs and lower returns, which will make it more likely that they will exit the housing market.

The high leverage investors prefer a quick liquidation channel and, as Wan (2012) mentioned this behavior is also called speculation. A high leverage investment will potentially yield higher returns to the investor, but also increase potential losses. Since such investors need to raise money to cover their debts when they are in a crisis, assets with a high degree of liquidity are more suitable for them. Restrictions on housing purchases will decrease the number of buyers in the housing market and then housing prices may decrease. So, restrictions will make more difficult for them to liquidate the housing market, so such investors will tend exit the housing market.

In conclusion, restrictions on housing purchases will indeed reduce the number of buyers in the housing market, causing demand to fall. Meanwhile, restrictions on housing purchases indeed reduce the irrational behavior on the housing market --- such as the low leverage and high leverage investment. But will the decrease in demand lower housing prices? The answer to this question will also depend on how those who already own one or more houses or condos respond to the policy.

Owners who need their houses or condos to live in will not enter the market to sell them. The number and behavior of those owners could be ignored. In fact, restrictions on housing purchases could make those for whom houses and condos are an investment program leave the housing market, resulting in a shift in the housing supply curve coinciding with the reduction in demand. However, Zhang (2015) referred that the effects of any policies cannot appear immediately. In the short-run, housing manufacturers are likely to actively attempt to prevent housing prices from falling by not putting all their inventory on the market at the same time, waiting until prices rise before offering additional units for sale. Similarly, if prices are low, low leverage investors in housing will prefer to rent their additional units rather than selling them to judge whether housing prices can still be increased in the future or how long this policy is implemented. Thus, low leverage investors who already own housing are unlikely to respond to restrictions on

housing purchases by selling their housing investments. As for high leverage investors in the housing market, because they use high leverage and they are not willing to afford the huge loss, they will immediately leave it when the demand falls. Or even, they will immediately sell the houses or condos to get quick liquidation when the housing market is boom. However, Wan (2012) suggest that the part of high leverage people is small. Hence, the increase of the supply is small in the short-run.

In fact, if the policy is implemented for some time, the target of this policy will be achieved. Housing manufacturing do not have enough funds to cover their maintain costs and repay their mortgage for the banks. Then housing manufacturing have to decrease housing prices and also low leverage people will sell the houses or condos. However, Zhang (2015) referred that most local governments still relax the constraints on this policy even in Beijing and Shanghai. And in 2015, governments abounded this policy. Therefore, governments cannot implement this policy for long time and as a result, the target of this policy are difficult to be achieved in the short-run.

Consequently, restrictions on housing purchases essentially reduces the volume of trades in the housing market, which effectively suppresses the speculation in the short run. However, Economically, Zhang (2015) referred that if we want to get the reasonable price, we should increase or decrease the supply instead of the demand. Hence, the governments just want to decline the demand to decrease the prices. This way is not an ideal way. As Jia and Meng (2012) predicted, once housing purchases are abounded, housing pricess will continue to slightly rise. Restrictions just does not efficiently work on housing prices. Other policies should be implemented to control housing prices.

3.2.2 The Analysis of Restrictions on Housing Purchases Based on Economic and Law

Restrictions on Housing Purchases are essentially the regulations. Hence, the welfare effect analysis of this policy is not only the economic problem but also the law problem. Then the theories and models on Law and Economic can be used to analysis the welfare effect.

Firstly, the difference between property rule and liability rule in law is whether the governments interfere the market. Property rule in law is like Coase Theorem. Coase Theorem states if the trade in externality is possible and transaction costs are low, bargaining will lead to a Pareto efficient outcome regardless of the initial allocation of property. In other words, property rule referred that people do not use the third party such as the court or the government to solve the conflict and then get Pareto efficient outcome. And the same premise of the property rule is the same as the Coase theorem --- the transaction costs are low. However, the transaction costs are rarely low and using property rule cannot let the people to get the Pareto efficient outcome. Liability rule, which means that the third party appear to solve the conflicts, is used to get the Pareto efficient outcome which mean the third party appear. As Calabresi and Melamend (1972) mentioned, that the judge or the government should mimic the market to reduce the transaction costs and get the Pareto efficient outcome. In other words, the purpose of the policies, regulations or law is to get the Pareto efficient outcome. Hence, the analysis of the policy should focus on efficiency. Besides, as Feldman (1994) suggested, the reason on choosing efficiency instead of justice is the efficiency is objective, and the justice is “subjective”. Then it is the question that how to measure the efficiency of policies, regulations or law. Munzer (1990) mentioned that the answer is itself morally correct, what the legitimacy of the policy is and the limitation on judging the legitimacy of this policy. Calabresi (2016) also emphasize the importance of moral costs on judging policies or law are efficiency.

When it comes to judge whether restrictions on housing purchases are efficiency, there are two premises: the first one, as Bromley (1989) pointed out, is a good policy should aim to get efficiency rather than raising revenue for the government; the second one, as Li (2011) mentioned, is governments and ordinary people are eager to get economic efficiency and social welfare from this policy and economic benefits can be traceable.

Li (2011) mentioned that it is good way to apply the Kalidor-Hicks compensation principle, which states that a policy can be viewed as increasing social welfare if those people who benefit from a social resources allocation or outcome could give enough

revenue to compensate the people who lose. As Li (2011) mentioned, although this principle is not perfect, it is still good to judge whether the policy is efficiency. In other words, when governments use one policy to allocate social resources again, they should consider whether those people who gain the profit will compensate other people who loss to avoid the conflict among people under this regulation. Munzer (1990) said that If the policy or law is indeed meet this Principle, it is efficient. Hence, if restrictions on housing purchases could meet this principle, this policy is efficient.

Restrictions on housing purchases raises the cost of entry into the housing market. As a result, this policy forces investors to exit this market in the mid-term or long-term. Then the demand falls. Housing prices may be decreased to a level which the people with the inelastic demand could buy the house or condo. However, if investors exit, they will lose the opportunity on making more profits from the increase on the fixed assets' price in the future. As Chen and Qiu (2011) noted, the beneficiaries of the policy are that the people with the inelastic demand, who cannot afford the price, could buy the house or condo to live. However, the interest on the housing developers, local governments and banks could be reduced.

The question is whether the gains of beneficiaries outweigh the losses of the losing parties. Theoretically, two ways to allocate resources can be used: one is allocated by the market --- these individuals who need resources always pay to obtain or maintain the resources; another is central planning or government planning --- the governments decide who could unconditionally gain resources. Jin (2004) referred that those two ways above are used based on the function of the house or condo in the housing markets. The house or condo is a complex commodity. For example, the inelastic demand of the individual for the housing is the basic right --- the right of residence. And every citizen has the right to live the house or condo which is suitable and safe. However, compared with other necessity goods, the value of the house or condo is larger, and the value may increase. That means the house or condo is similar to an investment program. The characteristic of the investment program easily makes unfair houses or condos allocation without the governments intervention. For example, because of the scarcity of the land and houses, the high-income groups could occupy additional resources, but the low-income groups

cannot get anything and then lose their basic right. Calabresi (2016) claim that if those resources will be allocated by the market, moral costs are numerous --- most people will hate this result. Therefore, the governments should establish and regulate the market. For example, the governments oversee all participants in the housing markets through implementation of relevant laws and regulations. Then, the non-inelastic demand can be restricted by the governments. Meanwhile, to protect citizens' right of residence, governments should firstly meet the inelastic housing demand in the housing market. If the inelastic housing demand cannot be satisfied, the basic human right may be violated. Worse, it will cause social conflicts. Therefore, in Chinese housing market, the governments should raise the cost of the entry for the investors and let investors exit the market, and then let the supply of the housing completely meet the inelastic housing demand.

Additionally, it is noticed that the loss of the investors, which is caused by the policy, is not they deserve. Christman (1994) said that if the selling price increases based on the inelastic demand and supply, the profit investors get from this market is not deserved. For example, investors usually gain the incremental value of the houses or condos in the housing markets. Li (2011) claim that investors think the reason of the incremental value of houses is based on the risk of the investment program, instead of the existence of the inelastic housing demand in the market. Hence, the legitimacy of this income is difficult to be supported by most of the people especially the people who could not buy the house or condo.

To sum up, morally, this loss cannot outweigh the gains. Therefore, this policy indeed reduces the moral cost and meet the individual inelastic demand to get Pareto efficiency outcome.

However, the implementation of the policy may have the negative external effect. Simply relying on this policy cannot improve the social welfare and even lead to the side effect. For example, this policy just focusses on the commercial housing market. It just has an impact on the allocation of the commercial houses or condos. However, low-income groups cannot easily to buy the houses or condos in the commercial housing market even though housing prices in the commercial housing market is reasonable. Then,

the governments should help them to get the house or condo by the affordable housing system --- in China, the governments use indemnificatory housing system.²³ Once the housing problem among the low-income people will be solved, the society will be more stable. Meanwhile, the governments will be believed and supported by more people. Therefore, Jin, Zhu and Li (2010) suggested that Chinese governments should continue to take the indemnificatory housing system. Hence, if the governments still focus on the commercial housing market and hope to use restrictions on housing purchases to control housing prices on the commercial housing market to solve the housing problems for all citizens, this policy will not solve any housing problems.

Additionally, Hu and Sun (2011) referred that because both the commercial housing market and the indemnificatory housing system need the land: because the land resources is scarce, the governments in the allocation of housing resources still encounter social conflict. For example, if the governments only focus on the inelastic demand of mid-income groups in the commercial housing market and the increases of supply of commercial houses. Then it reduces the number of lands used to the indemnificatory housing system due to the scarcity of the land. Finally, there are no enough land to build new indemnificatory housing and then some low-income groups cannot get the indemnificatory apartments and then they are forced to enter the commercial housing market. However, they lack the competitiveness in the commercial housing market, even though they also have the same opportunity as the middle class. Hence, they are likely to be failure and then the housing problem for those low-income groups has not been resolved. Details on this policy also reflected the governments hope that the commercial house could solve most of the housing problems for mid- or low-class in the society.

Moreover, the policy divides people into difference groups in the city by the household registration,²⁴ the residence permit,²⁵ the proofs of social insurance and the personal income tax certificates. Taken Beijing for example. The most effective and harshest measure is to stop to sell the house or condo for those non-local people who are

²³ The indemnificatory housing includes the low-rent housing, the affordable housing, the price-fixed housing and the public rental housing, and the rebuild shanty areas

²⁴ the household registration in China means you can enjoy the benefits such as education and the social insurance in the city where you are born and if you move other cities, you cannot enjoy those benefits of those cities. This is like the relationship between foreigners in Canada and Canadian.

²⁵ The residence permit in China means a proof that you can live in this city which may not be the city you are born.

unable to provide a valid temporary residence permit and the proofs of social insurance or personal income tax for 5 consecutive years or above. As a result, this policy forces non-local families choose to rent or move to Beijing. Since the rental price increase after the policy is enacted, the non-local people have to leave a city and return to their city where they born. Su (2007) referred that once this policy becomes normalized, the moving between the different cities will become more difficult, and it increases the gap between the non-local people and the local people in the social insurance, public services and other fields. In other words, every city welfare cannot be shared by all the people in this city.

In addition, the policy cannot fully restrict the speculators to enter the commercial housing market. Although these ways may break the laws, most investors use other ways to re-enter the commercial housing market when the profit is numerous. However, some local governments put some details in this policy --- which is to require that if the amount of the house or condos that the buyer has exceeded the maximum amount, the buyer cannot register the new house in the government system. As Li (2014) implied, the property law and some regulations in China require that the local government have no right to interfere the citizens' rights on purchasing the houses. That means no governments have any other documents or restrictions on the real estate registration except law. Obviously, the policy, which is enacted in some areas, are not included in laws. Then, some governments' regulations insert into the areas that the governments could not interfere. It is beyond the boundaries between the public rights and the private rights. Hence it may bring a series of the legal problems.

In summary, the analysis not only focuses on the influence of the housing market, but also considers the housing resource allocation. Although the policy suppresses the speculator, it is hard to say that the policy is reasonable after considering many factors.

3.2.3 The Conflict Between the Local Governments and Central Government

Because of the tax system in China, the price of the land is very important to local governments. High housing prices raise local government revenues. Thus, a policy, which

suppresses the demand for housing and indirectly the demand for land, will not help local governments reduce their fiscal deficits. Deng, Li and Zhang (2014) note that the policy will affect the growth rate of housing prices, but it is not what local governments want. Hence, local governments are likely to use other methods to relax the constraint to offset the effect of restrictions on housing purchases on the housing market. For example, Chengdu, the capital city of Sichuan Province, relaxed the strict household registration system to attract more excellent undergraduate and graduate students from other cities. However, the target of the central government was to make it easier for the local residents to buy their first house or condo, not non-local people. Relaxing the household registration system is a better way to attract the young people. In other words, the conflicting interests of the central and local governments will gradually erode the effectiveness of restrictions on housing purchases to restrict housing purchases. As Cao (2015) points out, the policy was originally introduced in 2010, but until 2014 the growth rate of housing prices started to be slower than before. Cao (2015) said that it not only reflects the lag of the macroeconomic policy but also the conflicts between the local governments and the central government. Consequently, the conflicts will influence the effectiveness of this policy

3.2.4 Conclusion.

The goal of restrictions on housing purchases indeed reduces the demand to reduce the high housing price. However, this policy does not work and is not rational. First, the policy does not focus on the key reason on the high housing price. Second, although the policy could decrease housing prices in the mid-term, but relying on the policy will lead to the people who need the indemnificatory housing gradually lose these housing. Meanwhile, the existence of the household registration system will increase gaps between the local people and nonlocal people. The governments cannot ultimately improve the social welfare. Thirdly, some regulations in policy will beyond the boundaries between public rights and private rights and over-interference will appear. Finally, the conflicts

between the local governments and central governments will influence the effectiveness of the policy.

4 Housing Policies in Other Countries

4.1 The Low-rental Housing Market.

Most developed countries have a well-established rental housing system. Many families rent their homes for a long time. In United States, about 35% households to solve the housing problem by renting the house or condo in 2012.²⁶ Zhu and Zhu(2009) mentions that the residents' income does not exceed 30% for buying the house or condo in United States and claims Only If the residents' income does not exceed 25% for buying the house or condo. When it exceeds this standard, they will consider the rental method.

Zhu and Zhu (2009) referred that in Chicago, if the overall household income is higher, households choose to live far away from the downtown. Li (2009) said that this pattern could be explained by the housing "filter". Due to the expansion of the city, the highest income families moved to the edge of the city to live in the new house and left the previous house to the lower income. And then the old houses will be disposed until the low-income groups left those house. And after 1980s the governments in United States also changed to subsidize the low-income households. There are two different housing financing ways for the affordable housing.

The first one is a Low-Income Housing Tax Credit Plan. According to Kleit and Page (2015), in the United States this program provides tax credits to investors in multi-family housing if they rent a certain percentage of the units to low-income families at affordable rental rates. Further details on the program are provided in OCC (2014). Specifically, projects are eligible to receive tax credits if at least 20% of the units should be rented to families who earn no more than 50% of the local median income, or at least 40% of the units are rented to families who earn no more than 60% of the local median

²⁶ Joint Center for Housing Studies of Harvard University *American's Rental Housing ---Evolving Markets and Needs* (Boston: Joint Center for Housing Studies of Harvard University 2013),1.
http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/jchs_americas_rental_housing_2013_1_0.pdf

income. Furthermore, the rental rate (including utilities) must not exceed 30% of imputed income.²⁷ Finally, the housing units must remain affordable for at least 30 years.

The second means of stimulating investment in affordable housing is a Real Estate Investment Trusts (REIT). On the one hand, an REIT is like a company that makes profits through the acquisition and management of existing real estate. It is a securitized investment fund. On the other hand, the fund managers can pool the funds of many investors and then entrust a professional institution or person to follow an investment profile and assign income to the investors. REITs also effectively convert illiquid assets in the form of housing into liquid assets.

Still other programs for the provision of affordable housing exist. Marom and Carmon (2015) discuss the case of New York City, where there exist various programs to build mixed-income housing. Such programs are intended to develop neighbourhoods in which families with different income levels live in close proximity. However, Marom and Carmon (2015) raise some concerns about mixed-income housing plans, with respect to their costs and benefits, whether they have been effective in lowering housing costs, and social exclusion.

4.2 The Property Tax

In developing and developed countries, property taxes constitute an important source of government revenue. In the United States, the property tax is an important source of local government revenue. Property taxes accounted for approximately 30% of local government fiscal revenue in 2015.²⁸ According to Huang (2013), the property tax has become one of the largest and most stable sources of the income for local governments in China. Huang also notes that in the UK, taxes on housing (including the residential property tax and the business tax) constitute the most important local taxes, and a major source of local fiscal revenue. Similarly, in Ontario, Canada, property taxes also account

²⁷ See footnote 7 on page 2 of OCC (2014) for more information about the calculation of imputed income.

²⁸ Data information is from the website of urban institution about State and Local Property Tax Revenue at <https://www.urban.org/policy-centers/cross-center-initiatives/state-local-finance-initiative/projects/state-and-local-back-grounds/property-taxes>

for 41.7% of local government revenue in 2013.²⁹ And Slack (2013) said that more than 80% of tax revenue is from property tax in Australia, New Zealand, Ireland, United Kingdom, Canada, United States.³⁰

Different countries and regions have different regulations for determining who should pay the taxes on a particular piece of property, but in general, all the owners and users of the property bear the burden of the property tax. For example, in the United States, the legal owner of the property must pay the tax, while in Holland property tax laws require the users of the property to pay the tax. In the UK, owners of the property who are 18 years of age or older must pay property taxes. In Japan, the legal owner of the property is liable to pay the tax. According to Li (2015), in Taiwan the user or tenant of a housing property is the taxpayers.

Although the scope of the property tax is different in different countries, many countries – for example, the United States, Canada, and Australia – property taxes are used to raise revenues in both rural and urban areas. Furthermore, property taxes are levied on both land and buildings. For example, Hellerstein, Stark, Swain and Youngman (2001) notes that this is the case in the United States which means the tax base for the property tax is a certain proportion of the estimated value of land and housing.

An important issue in property tax is the tax assessment. According to An and Ge (2014), necessary conditions for a system of property tax are to establish a property evaluation agency, a property registration system, and information management. Therefore, most countries establish a complete property evaluation system. According to Ding (2015), in the United States appoints assessment officers, and authorizes social evaluation agencies to assess the property to ensure the efficient and accurate determination of property values.

5 A Policy Proposal

²⁹ Enid Slack, “Funding Options for Municipalities” (presentation, MFOA Annual Conference, Collingwood, ON, September 24, 2015)

³⁰ Enid Slack, “Funding Options for Municipalities” (presentation, MFOA Annual Conference, Collingwood, ON, September 24, 2015)

The discussion above suggests that restrictions on housing purchases in fact cannot help to suppress housing prices. Therefore, it should be replaced by other policies that will decrease housing prices at a level which is reasonable. The remainder of this section provides some suggestions regarding appropriate policies for achieving this goal.

5.1 The Rental Housing Market Should be Improved

Li (2013) indicates that the rental housing market involves the private rental housing and the low-rental housing. Low-rental housing system could help some low-income groups to rent condos at the lower price. But because of the scarcity of the low-rental housing, the governments should solve the housing problem for those people, which do not belong to the low-income groups but cannot afford housing prices, by the private rental market. And the rental housing market could help to stabilize or even decrease housing prices, for people will rent the house or condo to live instead of buying the house. For example, the young do not have the enough money to buy the house or condo, renting become the best way for them. Especially when housing prices is so high, the young could rent the house or condo until housing prices decrease or continue to rent. That means the inelastic demand exits, and then demand will fall. As a result, the price will gradually fall. However, Wu (2015) and Li (2013) point out that the rental housing, including low-rental housing and private rental housing, constitutes only a small part of the stock of housing. For example, Li (2013) notes that in Shanghai, the rental house volume just accounted for 3.39% of the housing areas. The rent-sale ratio is 1:507 in the Jiading District of Shanghai. Additionally, there exists problems in the rental housing market especially in the private housing market. For example, no law or no regulations protect the right of tenants and households in the private housing market. Hence, the central government not only focus on the low-rental housing system, but regulate and oversee the private rental housing market. Now firstly we focus on how to improve the rent housing system.

5.1.1 The Low-rental Housing System should be improved

Firstly, Zhu and Zhu (2009) note that because of low income and low social status, low-income individuals cannot buy the house or condo by themselves. For example, they cannot get mortgage from banks because of the low income. And in the private rental housing market, the households cannot rent their house or condo for them. Therefore, they do not benefit from any policies in the commercial housing market or the private rental housing market. A low-rent housing system would be more beneficial to these individuals. In China Lei (2015) said that urbanization resulted many peasants and students moves to larger cities and they always are low-income groups. Those peasants and students are always non-local people, which causes they cannot easily be access to the information about those cities and buy the house or condo. Hence, if governments actively provided information on the availability of the rental housing, it would be easier for such migrants to find the housing. However, because of scarcity of the low-rental housing, the governments should establish the criteria for determine who should be eligible for low-income housing. When establishing criteria, local governments should consider the average price of the housing, the local fiscal capacity, the proportion of the non-local population, and the number and composition of low-income families to cover more people.

Secondly, as was discussed in section 4, other countries have used several methods to encourage investors to develop the low-rent housing system. Some methods could be adopted in China. For example, a preferential tax program could be implemented in China. Under this program, governments could offer a lower tax rate or a tax credit to investors who want to build or renovate the low-rental houses or condos. Alternatively, governments could subsidize interest rates for those who invest in the low-rent housing system. Chen (2016) used a cost-revenue model to show that a real estate investment fund could also be implemented in China. However, for a real estate investment trust fund to work, the rules of operation and taxation of such funds must be clarified, and most importantly, issues related to property rights must be resolved. Since 1949, the Chinese government has been the owner of all land and housing, and private property rights over housing were mandated to expire after 70 years. With the expiry date (2019) fast

approaching, the legal status of private property rights after the 70-year period ends remains unknown. This uncertainty about what will happen to property rights in the future is a deterrent to private investment in low-rent housing. Finally, Lei (2015) uses game theory to show that governments can reduce risk in real estate investment funds and increase the supply of the low-rent housing by combining public and private sector financing of housing.

Thirdly, Wang (2013) suggests that in housing markets, governments should play the role of a regulator and induce other market participants, such as private citizens and organizations to enter the market and provide low-rent housing. Furthermore, Xing (2008) suggests that local governments be allowed to play a role in the design of regulations related to housing, to ensure that the provision of low-rent housing correspond to local needs. For example, the transportation network and the location of schools and universities should be taken into account when deciding where new low-rent housing is built. Meanwhile, the construction of the low-rent housing is not permitted in remote rural areas, nor is it allowed to build low-rent housing blocks due to fears that these will develop into socially unstable poor communities. As for the characteristics of low-rent housing, units could be less than 50 square meters in size. Low rent housing should meet the basic needs, be energy-efficient and environment-friendly, and meet safety standards. Moreover, it would be desirable to build mixed communities which include the different housing types of different value, and different income levels so that low-rent housing areas do not become low income communities.

Finally, tenant rights need to be clarified in China. Especially clear rules regarding the conditions under which tenants in low-rent housing can be evicted are needed. Current regulations allow tenants living in low-rent housing to be evicted if they no longer meet the conditions to qualify for such housing; if they use the housing for something other than their own accommodation; or do not pay rent for more than 6 months. In fact, governments have the authority to evict tenants without providing any reason at all. Ensuring that tenants can only be evicted for valid reasons and publishing a list of those reasons will simplify management of rental housing and improve the life of tenants (Zhu and Zhu 2009). Additionally, better oversight and management of low-rent

housing is needed. Zhang (2007) recommends that governments should continue to build a tracking review mechanism, establish an online information management system, and implement dynamic management of low-rent housing. Besides, managers of low-rent housing must be better supervised and disciplined when they violate rules. Staff who do not strictly follow regulations governing the pricing of the low-rent housing, or those who abuse power in the construction department should be disciplined. Furthermore, staff who commit crimes should be held criminally responsible. These measures will raise confidence in the low-rent housing system. Currently, staff who violate regulations are punished internally but do not face penalties under the criminal justice system. A clearer definition of which level of government is responsible for which aspect of the provision of low-rent housing would increase accountability and provide local governments with an incentive to improve the performance of the system.

5.1.2 The Private Rental Housing Market should be improved

Firstly, Chinese governments should interfere the private rental housing market and make regulations on the rental price. Currently, because no law or no regulations oversee the private rental housing market, the rental price also unreasonably increases and tenants and owners always make an agreement on housing prices. Hence the governments should make some regulations to keep the range of the rental house stability and reasonable. Secondly, no law or regulations classify the right and responsibility of tenants and owners. That means if the conflicts between the tenants and owners happened, no third party or law judges who has the right or responsibility. Meanwhile, since no law require when the contract could be terminated, the rental contract is a short-term. And the owners could use any reasons to terminate the contract and let the tenants move the house or condo without any responsibility. As a result, the tenants could not live one house or condo for long time. Chinese governments should enact the law to require how the owners could terminate the contract. For example, this law should require that the owners could terminate the contract if the tenants did not pay the rental fee for 3 months and the contract could be terminated after one-year. This law also allows that if the owners want

to live in this house or condo, they can terminate the contract. Finally, this law also should consider and protect the owners' rights. That refers the owners could require the tenants give them some proofs including bank statements, total yearly or monthly income and the detail on the tenants' work. As for the responsibility, Chinese governments should require what the owners and the tenants should be responsible for. For example, if some problems happened in the house and is not caused by the tenant, the owners should solve some problems. For the tenants, they cannot damage the house or condo. If they do, they should be responsible for the damage.

In conclusion, Chinese governments should develop the rental housing market to help reduce demand in the commercial housing market. They should introduce regulations or laws to clearly define the rights and responsibilities of the tenants and owners -- such measures could attract investment to this market and give more people the option to rent housing instead of buying a house. Then the build-up and development of the rental housing market will increase both demand and supply in the rental housing market. It may also reduce demand in the housing market and thus reduce housing prices.

5.2 Increase Reliance on Property Taxes

Both Hamilton (1975) and Fischel (1992) suggest that property taxes can be beneficial to a local community. Brown (1997) argues that property taxes encourage people to rent house and thus decrease the demand in the housing market. At the same time, property taxes will discourage speculation in the housing market by reducing the profits of speculators, thereby increasing the supply of housing. As a result, housing prices will decline. Thus, property taxes can help to control housing prices. In China, the property tax system involves the house property tax, the deed tax and so on. However, Currently, in China, house property tax still accounted for only a small proportion of government revenue. From 2007 to 2011, the share of government revenue due to the house property taxes declined from 5.71%, to 9.51%.³¹ The house property tax needs to be overhauled to have the desired effect.

³¹ Yanwei Pan "Research on China's real estate tax reform," (Master thesis, Zhengzhou University,2013), 9- 10.

Thus, the house property tax appears to be under-utilized in China. Pan (2013) suggests that the local government tax system should be reformed in such a manner as to increase reliance on the house property tax as a source of revenue. Foreign experience showed that house property tax could become the primary local government tax.

To achieve this goal, a number of steps should be taken. First of all, the definition of the tax base should be adjusted. For the purpose of the property tax, taxpayers should be defined to be owners of houses and condos. Foreign experience has shown that defining property owners and users to be the taxpayers promotes the flow of real estate and is consistent with the principle that the beneficiaries of public services should pay for them. However, the tax base should be expanded to include the property in rural areas, especially the commercial housing and the residential housing. Currently in China, the scope of the house property tax is limited to the property in cities, towns, and mining areas.³² As the rural economy has developed, especially through suburbanization, the value of rural real estate has increased sharply. Therefore, if the rural property is not included in the scope of the tax, it will undoubtedly result in a considerable loss of revenue. Second, the management of the house property tax must be improved. Jia (2012) notes that property registration and protection, information management and professional communication, and tax administration are all essential to an effective property tax. Shi (2013) recommends that the first step should be to introduce a reasonable and feasible property evaluation methods, and establish a unified real estate assessment agency. In addition, governments should establish a sound real estate information database to realize the information sharing system in the housing market and to meet the needs of the collection and management of the property tax. Finally, governments improve the training of the staff who manage the property tax and provide tax.

5.3 Reform the Local Government Financing System.

As has already been discussed, the dependence of local governments on revenue from the sale of land is one of the factors underlying high housing prices. Therefore,

³² Mining Areas referred the places which are developed based on the mineral resource.

reforms to the fiscal system can help to reverse the present situation. Liang and Gao (2007) argue that an imbalance between the revenue-raising capacity of local governments and their administrative powers is responsible for local government to reliance on revenue from land sales and thus the real estate industry, thus contributing to high housing price. Therefore, to effectively alleviate the imbalance, the central government should actively reform the taxation system, improve the existing tax collection system, and adjust the responsibilities of local governments. Changes to the revenue sources available to local governments should increase and stabilize their revenue. At the same time, relieving local governments of the responsibility of providing some services will leave them with more funds for the development of the local economy.

Reforms to the intergovernmental transfer system in China can also help to raise local government revenues. The existing transfer system was established in 1993, with payments growing at a fixed rate each year. However, the initial distribution established in 1993 no longer corresponds to the pattern of regional fiscal needs in China. Instead, it promotes the growth of rich regions, while poorer regions continue to decline. Cui (2011) suggests that the central government standardize the intergovernmental transfer payment system, and increase general transfer payment to make up for the financial and fiscal gaps of poor regions, so as to gradually narrow regional fiscal gaps. This reform too will reduce the dependence of local governments on the real estate industry and land prices. Reducing this dependence could also change expectations about housing prices, which would be conducive to greater price stability.

5.4 Other Policy Options

5.4.1 Control the Supply of M2

Ye (2007) notes that because current interest rates in China are not fully market-oriented, the money supply has become the most useful monetary policy tool. Furthermore, as discussed earlier the money supply can have an important effect on the housing market. Thus, to solve the problem of high housing prices, the central bank must

control the supply of money (M2). The development of a more efficient capital market will also promote the healthy development of the real estate market.

5.4.2 Broaden Investment Channels and Reduce Investment in the Housing Market

Lastly, the government must broaden the range of investment channels available to residents and businesses, and make effective use of stocks, bonds and other capital markets to provide alternatives to investment in the housing market. For example, the government could improve the laws and regulations pertaining to the bond or stock markets and increase the economic benefits of the companies to make them more attractive vehicles for investment.

6 Conclusion

Houses and condos are complex goods. They are not only necessities, but also investment goods. Therefore, in the housing market, both inelastic demand and investment demand exist. Investors hope that housing prices will remain high forever, but high or increasing housing prices will hurt consumers with an inelastic demand for housing. Because real estate is an investment good, housing prices can also be influenced by the money supply, the economic behavior of people or other fluctuations in the economy. Meanwhile, the demand for housing as a necessity of life may also be influenced by the growth of population and so on. Hence, in order to ensure that housing is the government should interfere the housing market to oversee all the participant and control housing prices.

In China, housing prices increased sharply after 2004. Now, it is so high that most medium or low-income households cannot afford to purchase housing. To control housing price, the central government of China introduced restrictions on housing purchases in 2010. However, these restrictions on housing purchases did not reduce housing prices. Although restrictions on housing purchases could force investors to exit the housing market in the medium or long term, in the short run investors may remain in the market, keeping housing prices high.

Restrictions on housing purchases also cannot solve the main problems, such as the supply of the housing, or the need of low-income groups for housing. Furthermore, conflicts between the central government and local governments have eroded the effectiveness of the restrictions. Hence, restrictions on housing purchases did not have a significant effect on housing prices. The author therefore recommends that Chinese governments consider the other ways to control housing prices.

Other countries have used various policies to control housing prices and solve the housing problems of low-income groups. Those policies include an affordable housing system and property tax. In other countries, governments have used different methods of financing low-rent housing. Also, most countries have a well-developed property tax system in which the definition of taxpayers is clear, and property assessment methods are well-established. These policies provide some innovative ideas for Chinese policy on real estate. The author recommends that the central government improve the rental housing market. Firstly, the governments should focus on the low-rental housing system. They should provide funds to support this system. Then they should enact laws or regulations to oversee the private rental housing market. Secondly, governments should introduce regulations on property taxes to help control housing prices. The author gives some advice on the property tax involving taxpayer, tax base and so on. The third recommendation is to reform the tax system to let the local governments raise more fiscal revenue. Finally, there are other ways to control housing prices -- such as controlling the supply of M2 and broadening investment channels.

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