

## The Impact of Tax and Non-tax Policies on Adjusting Housing Prices in China

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**Abstract:** Chinese government has made many policies to adjust the development of real estate market in recent years. For the sake of researching on the policies effect, this paper divides all Chinese provinces into three regions according to Chinese government classification standard. Then the paper respectively analyse the notability degree which tax factor and five non-tax factors influence on housing price of three regions. These five non-tax factors include affordable housing, construction cost of residential housing, urban resident's income, and loan scale. The paper appraises tax and non-tax policies effect, and gives some suggestions for the continued policies.

**Key Words:** Housing Price; Taxes Burden; Affordable Housing; Housing Cost; Urban Resident's Income; Loan Scale; Policy Suggestions

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## Preliminary Remarks

Real estate investment and sales are rapidly growing since the Chinese housing reform in 1998. The Chinese central government enacted many regulations in the beginning of 2003. The purpose was to increase the government's ability to control the real estate market. Imposing tax on real estates is one of the significant strategies for the Chinese government to control housing prices. The main regulatory policy is divided into two categories: taxation policy and non-taxation policy. Taxation policies include the following: adjustment of business tax in imposed on the transfer of residential real estate, land capital gains tax, urban land usage tax and real estate tax. Non-taxation policies include the following: promotion of the building of affordable housing, strict control of real estate credits and the increasing the supply of land for residential purposes. The intention of this paper is to provide a better understanding of the impacts of these different policies.

In accordance with a number of fellow Chinese scholars, Du et al's paper<sup>1</sup> uses panel data which included thirty-one provinces. The data included real estate prices and the relationship between local fiscal expenditure and real estate tax burden. Peng et al<sup>2</sup> analysed the reasons for the unreasonable high real estate prices in China from a theoretical perspective. The paper suggested the factors included the speculative behaviour of real estate developers, transferring large funds from other industries to real estate, the undersupply of affordable housing by the government but overemphasising the importance of real estate on GDP growth, and rent seeking by local government officials. Liang et al<sup>3</sup> selected certain provinces as representative samples from the eastern, central and western regions to examine the effects of monetary regulations in different provinces and price fluctuations. Wu<sup>4</sup> performed regression analysis on data from housing prices in twenty-two provinces was made in accordance with the following factors: urban GDP per capita, urban residential investment index, urban residents' per capita wages and other variables in the year of 1998; and arrived at a developmental feature of urban housing prices and basic conclusion of urban housing price comparison between the provinces.

Reviewing current literature, this paper found five main factors beyond the effects of taxes related to operating a real estate enterprise, which affect the real estate sales price. These are: affordable housing prices, affordable housing sales proportion in the real estate sales market, domestic loan schemes for real estate enterprise, the construction cost of residential real estate, and disposable income per capita of urban residents. Using 2002 – 2011 statistics, we intend to analyse the impact of these tax

<sup>1</sup> 杜雪君,黄忠华,吴次芳 [Du Xuejun, Huang Zhonghua, Wu Cifang], 《房地产价格、地方公共支出与房地产税负关系研究——理论分析与基于中国数据的实证检验》 [Study of Relationships between Real Estate Prices, Local Public Budget and Real Estate Tax—Theoretical Analysis and Empirical Examination based on data of China] (2009) 1, 数量经济技术经济研究 Journal of Quantitative and Technical Economics.

<sup>2</sup> 彭骥鸣, 彭浪川 [Peng Jimmin, Peng Langchuan], 《我国房地产市场价格虚高的成因及治理》 [The Cause and Solution of the Falsely Increased Price in the Chinese Real Estate Market] (2010) 3, 扬州大学税务学院学报 Journal of Tax Department of Yangzhou University.

<sup>3</sup> 梁云芳, 高铁梅 [Liang Yunfang, Gao Tiemei], 《中国房地产价格波动区域差异的实证分析》 [Empirical Analysis on Real Estate Price Fluctuations in different provinces in China] (2007) 8, 经济研究 Economic Research Journal.

<sup>4</sup> 吴建峰 [Wu Jianfeng], 《我国城市住宅价格研究》 [A Study on Housing Prices in China] (2002) 2, 城市开发 Urban Development.

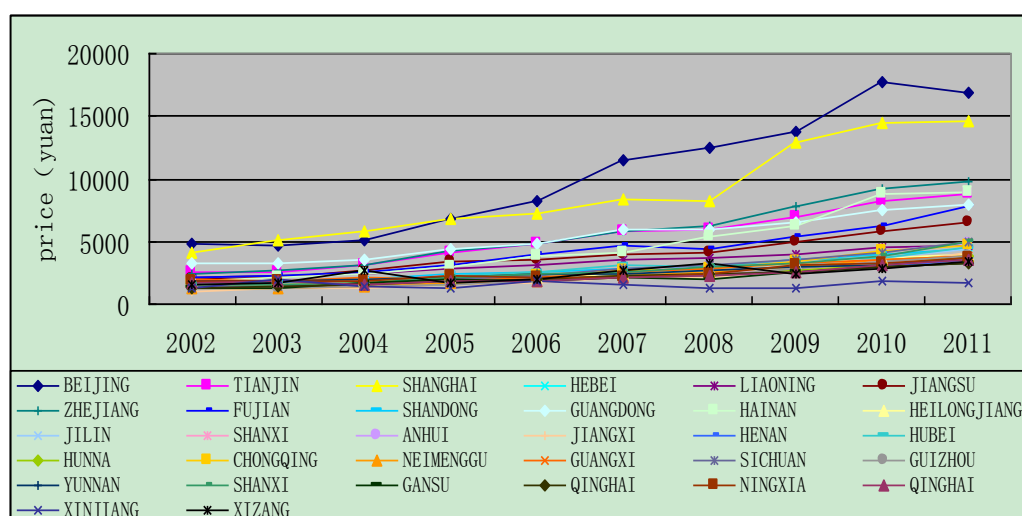
and non-tax policies on the real estate sales price and to propose recommendations for potential amendments of the regulations and policies.

## 1. Classification and Trends of Housing Price in the Three Main Regions

The method to divide China into three regions, eastern, central and western, was officially announced by the Seventh Five-year Plan passed by the Fourth Session of the Sixth National People's Congress in 1986. The eastern region implemented the open-door policy at the earliest stage and it has the highest level of economic developments. The Central region's economy is still at the developing stage. The western region remains poorly undeveloped. The eastern region includes eleven provinces: Beijing, Tianjin, Hebei, Liaoning, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong and Hainan. The Central region includes the following eight provinces: Heilongjiang, Jining, Shanxi, Anhui, Jiangxi, Henan, Hubei and Hunan. The western region includes the following twelve provinces: Sichuan, Chongqing, Guizhou, Yunnan, Tibet, Shanxi, Gansu, Qianghai, Ningxia, Xinjiang, Guangxi and Inner Mongolia.

In accordance with Chart 1, below, the commercial housing price for eastern region is the highest during the period of 2002 to 2011 followed by the central and eastern regions. The timeframe was limited to the period 2002-2011 because of the Chinese land and property auction trade and policy. The availability of the data system in 2002 to 2011 was taken into account in the implementation of the national land auction and the price of land transactions. In addition, the relevant data of Shanghai and Tibet was removed due to the special circumstances of the Tibet Autonomous Region and unattainable affordable housing data in Shanghai. In order to make the analysis in this paper more effective, twenty-nine cities (except Shanghai and those in Tibet) will be divided into eastern, central and western regions. Chongqing is assigned to the central region for the purpose of this paper; it is one of the four municipalities which continuously improve the level of economic developments in recent years.

**Chart 1 Commercial housing prices across the nation (including municipalities under direct control by the Central Government and autonomous regions)**



According to the results, the average housing price in the eastern region had a maximum increase of 25% in 2005 and a minimum increase of 5% in 2008. The housing price increased from about CNY 2500/m<sup>2</sup> in 2002 to about CNY 8000/m<sup>2</sup> in 2011. In the central region, the average housing price had been slowly increasing from about CNY 2000/m<sup>2</sup> in 2002 to about CNY 4000/m<sup>2</sup> in 2011. It had a maximum increase of 15% in 2009, the same as the western region. In the western region, there was a slow increase from about CNY 1400/m<sup>2</sup> in 2002 to about CNY 3500/m<sup>2</sup> in 2011. The lowest rate of 3% appeared to be in 2003.

## 2. Analysis of the impact on housing price by different influencing factors

In order to analyse the impact of tax and non-tax regulations, this paper takes *SJ* to be the commercial housing price of different provinces. *TAX* is business tax and surcharges for real estate development enterprises in different provinces, which include sales tax, land tax, urban land usage tax, arable land occupation tax, real estate tax and deed, etc. *JJ* is affordable housing price in different provinces, *RATE* is the proportion of affordable housing sales and the area of commercial housing, *LOAN* is the domestic loan scale of real estate development enterprises in different provinces, *COST* is the construction cost of the commercial housing in different provinces, and *INCOME* is the disposable income per capita in different provinces. The regression model was established to show the commercial housing price. It was concluded that there are six essential elements which affect the housing price.

$$SJ_{it}=a+bJJ_{it}+cRATE_{it}+dTAX_{it}+dLOAN_{it}+fCOST_{it}+gINCOME_{it}+\varepsilon$$

In the above formula, *a* represents a constant value, *b*, *c*, *d*, *e*, *f*, *g* are the impact factors of different elements.

In the period 2002- 2011, the statistic includes one hundred pieces of data from 10 eastern provinces, ninety from nine provinces in the 9 central provinces and one hundred from 10 western provinces, which constituted three sets of panel data. The following table shows the statistics in accordance with the panel data regression. (After verification, the White robust regression test shows obvious group wise heteroscedasticity). In addition to the real estate tax payable and the mentioned five non-tax factors, the regional housing price was also affected by factors formed by its own regularity: economic and geographical conditions, technical level, traditions, etc. Therefore, the factors affecting the regression coefficients obtained were not necessarily applicable to other regions and regions in China. However, to a certain extent it can contribute as a preliminary judgment to the analysis of various effects of the regulatory policies.

Table 1: Regression result of the panel data in the three regions

	Eastern	Central	Western
	-1	-2	-3
	<i>SJ</i>	<i>SJ</i>	<i>SJ</i>
<i>JJ</i>	-0.0821	-0.203	0.225
	(-0.24)	(-1.25)	-1.88
<i>RATE</i>	329.9	906.3*	-419.1
	-0.09	-2.66	(-1.93)
<i>LOAN</i>	0.000164*	0.00000756	0.000165
	-3.13	-0.18	-1.99
<i>COST</i>	-0.606	0.915***	0.405*
	(-0.59)	-5.38	-2.53
<i>INCOME</i>	7.096**	-0.949	1.206**
	-3.34	(-1.20)	-3.99
<i>TAX1</i>	-0.00509*		
	(-2.30)		
<i>TAX2</i>	-0.00461*		
	(-2.48)		
<i>TAX3</i>	-0.00376*		
	(-2.50)		
<i>TAX4</i>	-0.00286*		
	(-2.48)		
<i>TAX5</i>	-0.00264*		
	(-2.93)		
<i>TAX6</i>	-0.00199**		
	(-3.69)		
<i>TAX7</i>	-0.00191**		
	(-4.49)		
<i>TAX8</i>	-0.00157**		
	(-4.25)		
<i>TAX9</i>	-0.00122***		
	(-5.72)		
<i>TAX10</i>	-0.00122***		
	(-4.82)		
<i>TAX</i>		0.00000856	0.000202
		-0.08	-1.48
yr2		151.7*	
		-2.55	
yr3		443.1***	
		-5.52	
yr4		737.8***	
		-5.21	

yr5		881.0**	
		-4.59	
yr6		1270.2**	
		-4.71	
yr7		1429.8**	
		-4.08	
yr8		1765.1**	
		-4.47	
yr9		2370.4**	
		-4.91	
yr10		2950.3**	
		-4.96	
_CONS	-283.5	1079.5*	265.2
	(-0.13)	-2.65	-1.72
N	100	90	100

Remark: Parentheses report value is T value; “\*”“\*\*”“\*\*\*” indicate the significant level of 10%, 5%, 1%.

The above regression results show that the negative effect on tax policy region on housing price in the eastern region was significantly different every year, which indicated that the real estate tax region has played an important role in curbing housing prices in this region. Other significant influence factors in the eastern region include disposable income per capita and local real estate development enterprise loan schemes.

In the central region, the cost of commercial real estate had some significant impacts. This indicates that the completion of real estate prices has promoted the rise of housing prices in the area to some extent. On the other hand, the ratio of affordable housing sales area to marketable housing sales area is another influential factor.

In the western region, the significant factor affecting the housing price is the average income per capita and the cost of marketable real properties. Other factors affecting the price of real estate were weak.

Based on the above results, this paper analyses the following separately: tax policy, affordable housing policy, marketable housing cost, income of urban residents, real estate development enterprises credit scale and other non-tax policies which affect marketable housing price. Accordingly, this paper proposes some appropriate policy recommendations.

### 3. Tax Policies’ Regulatory Effect and Possible Recommendations

#### 3.1 Regulatory effect

Tax policies have always been one of the major housing rate regulatory methods in China. However, the effect of its regulation has been controversial. In order to carry out adjustments, the Chinese government has enacted a number of policies and has increased management since 2007. Most of the real estate enterprises have had a

heavier tax burden ever since. In accordance with the statistics, the eastern regions have received significant negative impacts from tax revenue on their property prices. However, the impacts in the central and western regions are positive and less significant.

Contrast with the intention of the policy, the average price of marketable housing have not reduced due to the increase of enterprises tax payable, but have simultaneously grown with the increase of tax payable. In 2007, before the adjustment policies and strengthening tax collection, the eastern region had a slightly lower tax burden in comparison to the central and western regions regarding the real estate development business tax payable. After the policy adjustment and increasing tax payable enacted in 2007, the tax burden in the eastern region was significantly higher than in the central and western regions. At the same time, the housing price growth rate was also higher in the eastern region. This indicates that the tax burden has been successfully passed on to consumers.

In summary, we suggest the policy failed to achieve the original aim to curb the excessive growth of housing price by strengthening the administration of land capital gains tax and increasing the tax burden of real estate developers. There has been no significant result other than an improvement on the fiscal position.

**Table 2 An overview of the three regions: Real estate tax payable, growth rates of housing price and tax burdens<sup>5</sup>**

	Area	2003	2004	2005	2006	2007	2008	2009	2010	2011
The growth rate of real estate tax revenues	Eastern	32%	33%	31%	27%	45%	28%	32%	33%	23%
	Central	31%	35%	35%	29%	38%	42%	30%	50%	31%
	Western	53%	28%	31%	25%	31%	53%	31%	34%	32%
The average house price growth	Eastern	5%	13%	27%	16%	22%	6%	16%	21%	16%
	Central	5%	12%	17%	6%	16%	5%	17%	19%	15%
	Western	2%	8%	14%	7%	14%	8%	15%	15%	14%
Real estate tax revenue / Total operating Revenue	Eastern	10%	10.6%	10.4%	11%	12.7%	14.1%	15.3%	17.2%	20%
	Central	12.7%	13.6%	13.2%	13.2%	12.4%	14.5%	14.5%	16.4%	16.2%
	Western	11.5%	12%	11.9%	11.6%	11.1%	14.5%	13.5%	12.2%	15.8%

<sup>5</sup> 《地增值税数据来源于中国税务年鉴——税务部门组织收入分地区分税种情况统计(2001-2008 年)》 [Land value tax statistics from the Tax Year Books of China – Census of revenue from State Administration of Taxation by geographical regions for years 2001-2008].

## 3.2 Countermeasure recommendations

### 3.2.1 Real estate tax reform

Despite the efforts of the central government, the rapid growth rate of housing price is still deemed to be socially unacceptable. People are now more concerned with the risk of housing market bubble and the polarising distribution of wealth. Citizens are looking forward to the trial individual real estate reform, hoping that it could play a role in curbing the rapid growth of housing prices. The Third Plenary Session of Eighteenth Central Committee of CPC stated that “the drafting of real estate tax legislation needs to be speeded up and reform needs to be implemented accordingly.” The Ministry of Finance said that there will be an expansion in the scope of the trial of the real estate tax reform. The purpose is to try and improve the relevant system as soon as possible. The aim is to fully implement the policy after a transitional period and to clearly define the real estate tax as the main type of region/county government tax revenue.

**Table 3 Real estate tax reform pilot scheme in Shanghai and Chongqing**

	<b>Shanghai</b>	<b>Chongqing</b>
<b>Levy scope</b>	Administrative districts in the city	Nine downtown districts
<b>Levy on housing stock?</b>	No	On houses
<b>Objects of taxation</b>	Shanghai hukou: taxable after the first  Non-Shanghai hukou: New purchased residences	Chongqing hukou: houses and new purchased luxury residences  Non-Chongqing hukou, unemployed individual: taxable after the first
<b>Duty-free proportion</b>	Under 60 square meters per capita	Housing stock: 180 square meters, New purchased: 100 square meters, per family.
<b>Tax rate</b>	0.4% or 0.6%	0.5%, 1% or 1.2%
<b>Tax calculation</b>	The tax payable = new residences taxable area * unit price * corresponding tax rate * 70%	Tax payable = taxable construction area * unit price * corresponding tax rate

There is some room for improvement for the current trial tax reform schemes, detailed as follows:

Firstly, Shanghai’s current real estate tax reform scheme is only levied on new housing rather than on available housing. Accordingly, the regulation of housing prices will be affected to some extent. This scheme is unfair on the basis that there should be no difference when addressing new housing and available housing for taxation purposes.



Secondly, the individual real estate tax should be calculated on the basis of market value, and not transaction value. The true market value of the real estate may not be accurately reflected because of the existing bubble effect. Assessing market value as a tax basis is beneficial as it aligned with the “Ability to pay” taxation principle. The policies of other countries in relation to real estate taxation on the basis of the market assessment value provides an interesting international perspective. Taxation on such a basis is indeed a more suitable strategy for today’s society. Therefore, the Chinese government should refer to the advanced strategies of foreign countries. Taxation levies should be assessed on the basis of market value rather than the transaction value. Nonetheless, as the real estate assessment system has not yet been established in China. Supporting regulations are also unrefined. The priority now is to create a sound evaluation system with fair and transparent assessment method and standard, in the meantime a group of relevant professionals need to be trained for the imminent demand.

Thirdly, other than the relevant real estate tax, the real estate turnover tax burden should be reduced. Accordingly, the individual real estate tax should increase at an appropriate level. Real estate turnover tax can only increase revenue, but overall it cannot achieve the expectation of real estate regulation. Nevertheless, real estate tax belongs to the individual capital levy category. It cannot change the price in any way and cannot be transferred easily. It can increase the cost of real estate investment and reduce investment speculation. Accordingly, this strategy reduces the real estate investment demand, thus lowering the price of real estate in the market. Fundamentally, in order to maintain the existing real estate tax burden, the policy maker should shift their focus from real estate tax to turnover tax. The turnover tax can provide an improvement in the tenure links of the real estate.

### **3.2.2 Real estate tax reform**

China has an imperative real estate tax reform. The Third Plenary Session of Sixteenth Central Committee of CPC stated that “the reform on urban maintenance and development construction taxes and fees should be implemented. When the conditions are met, the real estate tax should be levied according to a unified standard, and relevant fees should be abolished accordingly. The taxation management function should be granted to local governments when there is uniformed tax administration.” For a long time the chaotic situation of “using tax in exchange of rent, using fees in exchange of tax, using tax in exchange of fees, using fees to squeeze out tax and overlap between tax and fees” has greatly crippled the macroeconomic regulatory function of taxation policy. Real estate tax needs to be distinguished from fees with clear boundaries. The tax reform should merge the relevant administrative fees and appropriate taxes. Management and regulation of service fees should be strengthened and transparent. Unreasonable fees need to be cancelled. The above steps are preparations for the incoming reform on real estate taxes.

### **3.2.3 Establishment of real estate information sharing platform**

An information sharing platform should be built collectively by the organisations that have association with the real estate industry, such as office, national tax bureaus and local tax bureaus at local levels of governments, planning bureaus and

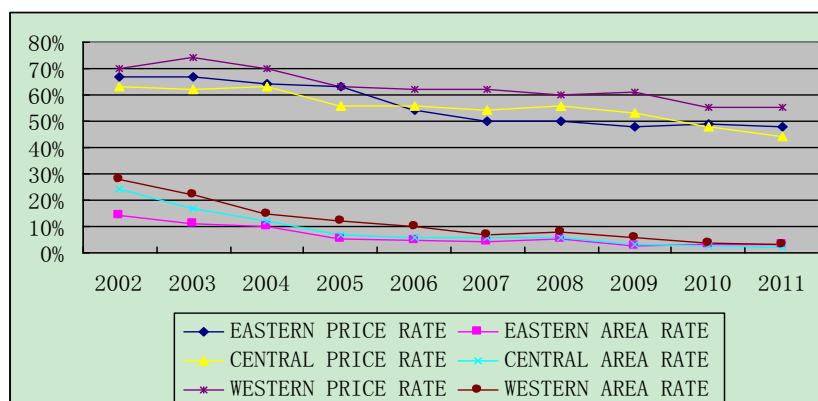
commissions of urban planning, commission of housing and urban-rural development, housing administrative bureaus, land and resources bureaus and financial service providers, in order to better ascertain the accuracy of the information on tax returns. This platform should house data on the following details on real estate developers: detailed project information, reserved land areas, constructed areas, sales progress, receipt of prepaid housing prices and property title exchange. The platform can enhance the authenticity of tax returns auditing and is necessary in order to build information and monitoring systems which are comprehensive and accurate when tax loopholes appear. In accordance with the various data from different provinces and cities, it is suggested that in order to build a database to store real estate taxation information, it is necessary to gather census data of the real estate business and individual taxpayers and census register information. In order to accomplish a perfect data set, the information sharing can promote supervision and management in many different aspects. It can also provide guarantees for real estate tax collection and administration.

#### **4. Effect of China Affordable Housing Policy and Recommendations**

The affordable housing policy does not seem to have a discernible impact on the housing prices in the three regions. Statistic data shows that only in the central region the ratio between affordable housing sales and commercial housing sales has a positive impact on the housing prices. The preferential pricing policy should be enhanced on affordable housing, although the trend will continue to decrease even though prices of affordable housing will increase with commercial housing prices.

On the other hand, the ratio between affordable housing sales area and commercial housing sales area decreases every year. There was a significant drop from 28% to 3% in the western region, from 20% to 2% in the central and from 14% to 3% in the eastern region. Compared to the central and eastern regions, the ratio in western region has decreased more substantially.

**Chart 2: Price and area ratio between affordable housing and commercial housing sales in the three regions.**



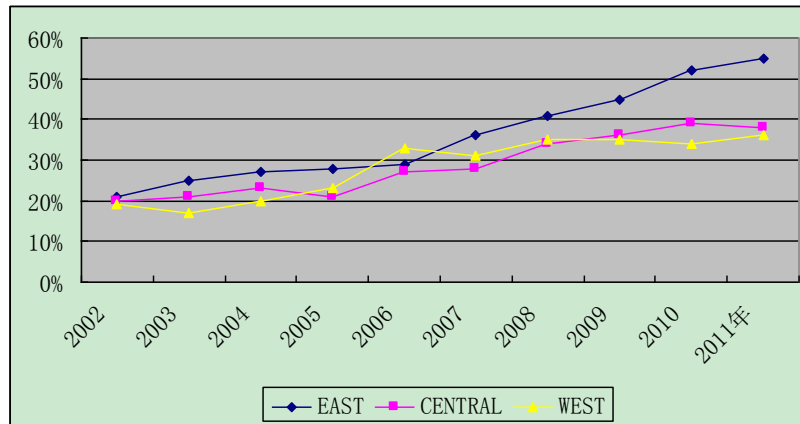
One of the reasons why the affordable housing policy has failed to have significant effect is because the policy is not powerful enough. For instance, the ratio of affordable housing sales area to commercial housing sales area is too low. Therefore, one of the key focuses of the government's efforts in controlling housing prices is to increase the supply of affordable housing. A couple family with an average income level in their locality can afford a set of 60 m<sup>2</sup> affordable housing after working 8 years. However, the ratio of affordable housing sales area to commercial housing sales area was only 3% until 2011, assuming only residents whose annual per capita income is 50% lower than the average level in the locality are entitled to purchase the affordable housing, they would have to work 16 years before they can afford the housing. To tackle the problem of excessive price of affordable housing in the western region, we can refer to the strategy of external commercialization adopted by foreign countries regarding indemnificatory apartment. Germany, for example, has established an independent Real Estate Assessment Committee to set a benchmark price for the different types of affordable housing in different localities. If the housing price set by property developers is 20% higher than the benchmark, it would be categorized as "excessive price" and is illegal; a price that is 50% higher is "exorbitant price" and would constitute a crime.

## 5. Effect of China Land Policies and Recommendation

In the eastern region, the effect of commercial housing prices at completion to sales prices is negative and insignificant. The land purchasing prices constitute the greatest proportion in the total building costs of projects. From 2002 to 2011, the proportion of unit land purchasing price in the sales prices of commercial housing increased from 20% to 55%. The unit land purchasing price in the eastern regions increased substantially in 2007, from 1200 yuan to 3100 yuan per square metre, resulting in an increase of 1000 yuan per square metre in the commercial housing sale price. The central regions also saw the significant influence of unit land purchasing prices on commercial housing prices, where the unit land purchasing price increased from 400 yuan per square metre in 2002 to 1600 yuan per square metre in 2011, constituting 40% of the sale prices, a figure 20% higher than that in 2002. The increase is less significant than that in the eastern regions. The unit land purchasing price in the western regions witnessed an 1120 yuan increase per square metre from 280 yuan per square metre in the 9 year period since 2002. In the western area, this price

increased from 280 yuan per square metre in 2002, constituting a similar proportion of sales prices with that of the eastern regions, namely from 20% to 40%, only with greater fluctuation.

**Chart 3 Ratio of unit price of land purchasing to sales prices of commercial housing**



Since the implementation of land transfer and auction policies in China, the ratio of purchasing prices to development costs has increased substantially, and the more regulated land markets have rendered real estate development enterprises less likely to gain the huge profits that they used to earn because of the low land prices. The short-term objectives of the implementation of the policy have been fulfilled. However, the auction prices of land are growing faster than the sale prices due to the rapid development of economy, and when the unit land purchasing prices constitute about 50% of sales prices, land auction becomes more of a tool to increase government income, rather than a device to control the huge profits of real estate industry. The housing prices are forced to increase due to the excessive costs of land purchasing, resulting in the much accused “land finance”. Under these circumstances, the government should actively increase the supply of land to reduce land prices, and keep using the profits generated by land transfer as a substantial source of government revenue and retaining its high growth rate would be detrimental to the real estate industry or even the entire area.

Internationally, the occupation of state owned lands are usually through a state owned land leasing system. For instance, until 1997, Hong Kong was “leased” to the United Kingdom by the Qing government. Therefore the British authorities had a system to manage the land through public leasing where a rent is paid annually. The current land possession fees revenue in China allows the government to collect the revenue generated by land in the next few decades in a lump sum, which is the local government consider it as their main financing source. However, this practice would result in the abuse of land resources and land revenue by incumbent officials. Adopting the public leasing system with annual rent would allow the government to collect land revenue annually, which would help stabilise financial income and reduce land resource abuse driven by vested interests. Meanwhile, in order to add value to the land, and utilize the land resources more effectively, local governments will try to improve the environment and attract investment.

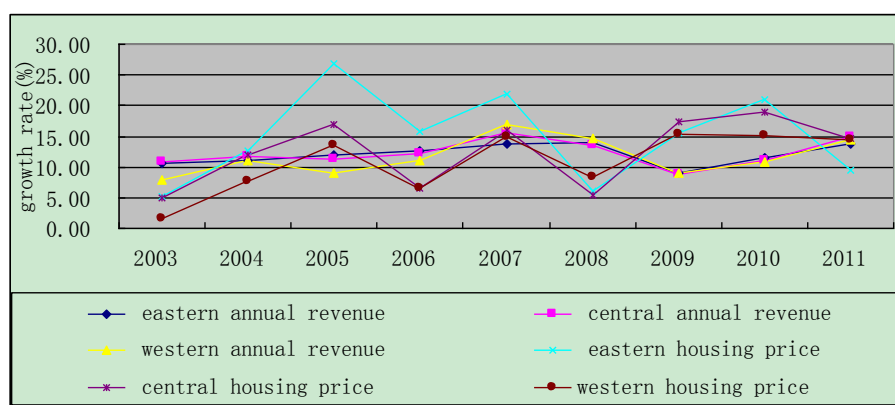
## 6. Effect of Urban Residents' Incomes Policy and Recommendations

In the eastern and western regions, the per capita annual income of urban residents is exerting a positive and more significant influence on housing prices, and is helping to increase the demand for housing. Its impact on the housing price in the central regions is negative but less significant. From 2002 to 2011, the annual per capita income in urban cities and the housing price in the three regions all showed an upward, but slightly different trend throughout the period.

In the eastern regions, the growth rate of housing prices has been higher than that of per capita income of urban residents except in 2008 and 2011, with a biggest gap of nearly 15%. Most parts of the urban per capita income growth only reflect the income growth of wealthy people due to the large Gini coefficient in China, and the middle and low-income groups are actually enjoying little or no growth of their income, and are thus facing greatest pressure in house purchasing. The middle and low-income groups are the most demanding of habitable housing, yet their income growth is much slower than the growth of housing price, which makes it difficult to create a sustainable and healthy real estate market, and to provide habitable housing to most residents.

In the eastern and western regions, the gap between the growth of annual per capita income and that of housing price is narrower, fluctuating from 5% to 17%. In these circumstances, central and western urban residents are facing less pressure in house purchasing than the residents in the eastern regions, and are less likely to panic about being unable to afford an apartment due to the growing gap between income and housing prices.

**Chart 4 Growth rate of annual per capita income in cities and commercial housing prices per square metre**



Based on the above information, the government's macro-control policy should include two aspects. Firstly, to solve the housing problem of low-income groups by affordable housing, it should focus on increasing the proportion of construction on affordable housing and rent-subsidised housing. Secondly, it should focus on the housing problems faced by middle-income groups, preventing the situation where they could not afford commercial housing nor are they qualified to purchase affordable housing. The most effective approach to solve the housing problem of

middle-income groups is to increase their income, to keep the growth rate of their income with that of housing prices. The government can provide certain labour market guidance to promote income growth of middle-income groups. A further reform of the individual income tax system should be promoted to reduce the tax burden of middle and low-income groups and increase their disposable income.

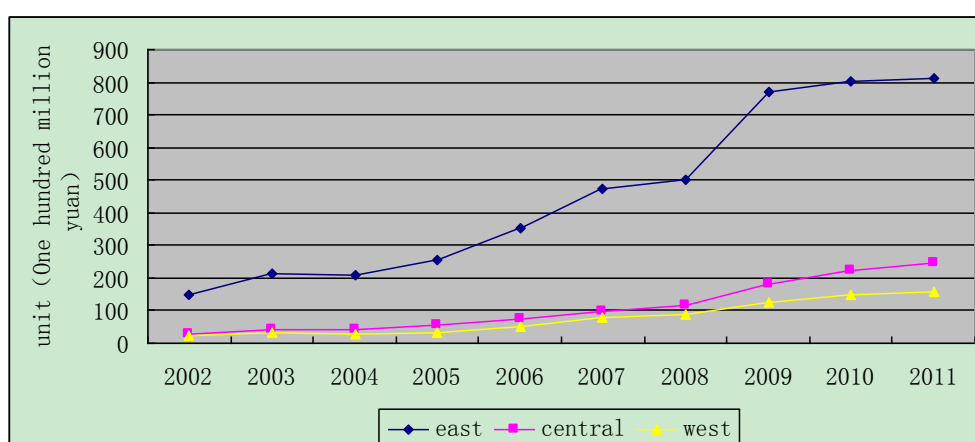
## 7. Effect of Credit Policy and Recommendations

Real estate projects often require a long period of time and large investments, and some major projects may require more than a billion in upfront investments. Without the support of credit funds, the project would not survive the initial stage of land auction. According to the regression results, the impact of real estate developers' credit scale on commercial housing price is more significant in the eastern region, but not as significant in the central and western regions.

Statistics revealed a greater gap between the credit scale of the eastern and mid-western regions. The value of loans in the eastern region increased from less than 20 billion yuan in 2002 to more than 80 billion yuan in 2011, while the value of loans in the central and western regions only increased to 20 billion yuan in 2011 from approximately 3 billion yuan in 2002. It is evident that the significant influence loans have on commercial housing prices in the 10 eastern provinces is due to the large scale and rapid growth rate of credit loans, and the smaller scale and slower growth of loans in the 19 central and western provinces is the reason why a less significant influence on housing prices was observed there.

In addition, from the credit structure of real estate development enterprises, only a small proportion of credits are from non-financial institutions, while more than 90% of the credits are issued by financial institutions. Therefore, the government's macro-control policy on housing prices should focus on controlling the credit scale provided by financial institutions, especially in the eastern region where the housing prices are soaring.

**Chart 5 Scale of loans in the three regions**



## 8. Conclusion

The excessive housing price is a focal point of social and economic conflict in China. The constantly growing housing price disturbed financial order, increased income polarisation, and eventually exerted detrimental effect on the healthy development of China's economy. The real estate industry is one of the pillar industries in China, involving a long supply chain and a large number of associated sectors. Although the current problem involves mainly structural issues in some parts of China, it is likely to evolve into nationwide issues if not properly dealt with, resulting in severe inflation or other serious consequences. Regulating the housing price is a systemic issue, and tax policies would not only directly influence various aspects of the real estate industry, but carry out a dual function of revenue distribution and regulation. These functions are best fulfilled when being used in coordination with non-tax regulatory policies. Constant and systematic analysis and detailed studies to the various tax or non-tax policies issued by the government is necessary in order to exert effective control on real estate industry.

## Bibliography

Balchin, Paul, *Housing Policy in Europe* (Psychology Press, 1996).

杜雪君,黄忠华,吴次芳 [Du Xuejun , Huang Zhonghua, Wu Cifang], 《房地产价格、地方公共支出与房地产税负关系研究——理论分析与基于中国数据的实证检验》 [Study of Relationships between Real Estate Prices, Local Public Budget and Real Estate Tax—Theoretical Analysis and Empirical Examination based on data of China] (2009) 1, 数量经济技术经济研究 *Journal of Quantitative and Technical Economics*.

梁云芳, 高铁梅 [Liang Yunfang, Gao Tiemei], 《中国房地产价格波动区域差异的实证分析》 [Empirical Analysis on Real Estate Price Fluctuations in different provinces in China] (2007) 8, 经济研究 *Economic Research Journal*.

龙朝晖, 曾燕璇 [Long Chaohui, Zeng Yanxuan], 《我国房价持续高涨的原因与相应的税收政策研究》 [The Causes of the Steady Upsurge of Housing Prices in China and Research of Corresponding Tax Policies] (2009) 9, 扬州大学税务学院学报 *Journal of Tax Department of Yangzhou University*.

彭骥鸣, 彭浪川 [Peng Jimmin, Peng Langchuan], 《我国房地产市场价格虚高的成因及治理》 [The Cause and Solution of the Falsely Increased Price in the Chinese Real Estate Market] (2010) 3, 扬州大学税务学院学报 *Journal of Tax Department of Yangzhou University*.

国家税务总局 [State Administration of Taxation], 《地增值税数据来源于中国税务年鉴——税务部门组织收入分地区分税种情况统计(2001-2008 年)》 [Land value tax statistics from the Tax Year Books of China – Census of revenue from State Administration of Taxation by geographical regions for years 2001-2008].

吴建峰 [Wu Jianfeng], 《我国城市住宅价格研究》 [A Study on Housing Prices in China] (2002) 2, 城市开发 *Urban Development*.