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THE DILEMMA OF REAL ESTATE MARKET IN MAINLAND CHINA

Business Economics and Tourism

2011

Acknowledgement

First I want to give the great gratitude to my thesis supervisor Ms. Marjo Nyström for sharing her precious time to give me guidance on my bachelor thesis. She is a very kind, careful and responsible teacher. During the process of writing my thesis, she did a very thorough checking to my thesis, from the title to the content, from the text to the figures. Every time after our discussion, I could always get many useful recommendations, which gave a big improvement to my thesis. Her great help cannot be completely summarized in such a short paragraph. In a word, without her I could not finish my thesis successfully and may be not possible to get my bachelor diploma on time to continue my master degree.

I also want to thank the head of our department Ms. Maj-Lis Backman, she gave me lots of help and convenience during my two-year study in VAMK, and she also provided me some suggestions to my thesis proposal to guide me to a right direction. I also want to thank Ms. Päivi Auranen who gave a careful language checking to my thesis and thank Mikko Koivisto to help me translate the abstract.

Then I have to thank my friends in China who gave me a great help to fill in the questionnaire, and I have to thank professor Wang who shared his time to have a phone interview with me and we had an in-depth discussion about my research problems. They not only helped me to finish my thesis but also helped me to know better about Chinese real estate market.

Last but definitely not the least I want to express my great gratitude to my beloved families who are far in China and to my girlfriend who is studying with me in VAMK. I appreciate their understanding and encouragement. Their encouragement and expectation are the biggest support to finish my thesis.

Vaasa, Finland 25,05,2011

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Degree Programme

ABSTRACT

| | |
|--------------------|-----------------------------------------------------|
| Author | Bo Cai |
| Title | The Dilemma of Real Estate Market in Mainland China |
| Year | 2011 |
| Language | English |
| Pages | 70+ 8 Appendices |
| Name of Supervisor | Marjo Nyström |

The dramatic rise of housing prices in many cities of China has brought huge attention to the problem from both the governmental and academic circles. The main aims of this thesis are were to study why the housing prices in mainland China are so high that the majority of people cannot afford and what kinds of strategies can be made to solve this problem.

In the theoretical study, a brief introduction to the general situation of Chinese real estate market is given from its history to the current situation. Then the focus is on the reasons of the high housing prices and the housing bubble in mainland China. Both quantitative and qualitative methods were used in the empirical part of the study conducted by a questionnaire and a personal interview respectively.

Both the secondary data and primary data show that factors like rapid urbanization, fast economic growth, speculation, loose bank credit policy and high land prices are the main reasons for the high housing prices in mainland China. The housing bubble exists in mainland China, and it will cause very serious consequences when it burst. Therefore, the Chinese government should pay heavy attentions to the real estate dilemma and carry out relevant strategies to deal with it carefully and patiently.

Keywords: Housing prices, Mainland China, Real Estate Dilemma, Strategies

TIIVISTELMÄ

| | |
|--------------------|-------------------------------------------|
| Tekijä | Bo Cai |
| Opinnäytetyön nimi | Kiinteistömarkkinaongelma Manner-Kiinassa |
| Vuosi | 2011 |
| Kieli | Englanti |
| Sivumäärä | 70+ 8 liitettä |
| Ohjaaja | Marjo Nyström |

Asuntohintojen dramaattinen nousu monessa kaupungissa Kiinassa on saanut osakseen merkittävää huomiota sekä valtiollisissa että akateemisissa piireissä. Tämä opinnäytetyö pyrkii ensisijaisesti selvittämään miksi asuntojen hinnat Manner-Kiinassa ovat niin korkeita, ettei valtaosalla ihmisistä ole niihin varaa, sekä minkälaisia suunnitelmia voitaisi kehittää ongelman ratkaisemiseksi.

Lopputyön teoreettisessa osuudessa kirjoittaja tarjoaa pikaisen perehdytykseny Kiinan kiinteistömarkkinoihin sekä sen historiaan. Sen jälkeen keskitytään käsittelemään korkeiden asuntohintojen ja asuntokuplan syitä Manner-Kiinassa. Kyselylomakkeiden ja henkilökohtaisen haastattelun avulla toteutetussa empiirisessä osuudessa hyödynnetään sekä kvalitatiivisia että kvantitatiivisia tutkimusmenetelmiä.

Sekä ensisijainen että toissijainen tieto osoittavat, että sellaiset tekijät kuten nopea kaupungistuminen ja taloudellinen kasvu, spekulatiot, pankkien löysä luottopolitiikka sekä korkeat maahinnat ovat pääasiallisia syitä korkeisiin asuntohintoihin Manner-Kiinassa. Olemassa oleva asuntokupla tulee aiheuttamaan vakavia seurauksia puhjetessaan. Kiinan hallituksen tulisi täten kiinnittää vakavaa huomiota tähän ongelmaan ja tarttua oleellisiin toimenpiteisiin harkiten ja kärsivällisesti.

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1 INTRODUCTION

1.1 Background Information

In 1998 China abolished its welfare housing distribution system which had lasted for more than 50 years and carried out the housing reform. Since then China's real estate market began to form and grow. Now, China's real estate industry is treated as one of the pillar industries in the national economy (Huang 2011).

In recent years, China's housing prices have increased very fast across the country. What kinds of factors cause such a result? The reasons are various, like the fast development of the Chinese economy, large domestic demand, the rapid urbanization process, government's stimulative policy, and real estate speculation.

However, it is not difficult to find that some problems have already appeared in the Chinese housing market today. The growth rate of Chinese housing prices exceeds the growth rate of Chinese economy and households' income currently. Housing prices are roaring, especially in some big cities, such as Shanghai, Beijing, Hangzhou and Shenzhen. The roaring housing prices have made ordinary households unable to burden such prices. So the author of this thesis believes that there may be a bubble existing in the Chinese housing market, and what is more, if bubble bursts and housing prices collapse, it may cause a huge damage to the Chinese economy.

The dramatic rise of housing prices in many cities of China has brought huge attention from the economical, governmental and academic circles. UBS emerging-markets economist Jonathan Anderson declared China's property industry the single most important sector in the entire global economy. He also said that from a macroeconomic perspective if you don't understand Chinese property, you probably don't understand China (Wang 2011).

1.2 Research Purposes and Research Problems

1.2.1 Why is this topic important to study?

- 1) Owning a home is one of the most important things to every family in the world, especially in China. Because of its huge population and big demand and some other reasons, a lot of Chinese people still cannot afford a house. In the last ten years, the housing prices have gone up dramatically and become one of the issues that people care the most and the hottest topic that people talk about in their daily lives.
- 2) From the academic point of view, this thesis will talk from the perspectives of economics, finance and government policy.
From the economical perspective the thesis will talk about the role of real estate on national and local economy as well as talk about the housing bubble and its consequences.
From the financial perspective the thesis will talk about the role of Chinese commercial banks on real estate industry and talk the influence of interest rate on the real estate market.
From the government policy perspective the thesis is going to talk how the Chinese land policy affects the housing prices and what kind of policies should the central and local governments publish to control the housing prices?
- 3) There is much literature and many articles about Chinese real estate industry which are written by policy makers, college professors, or property developers. However, most of these articles are written in Chinese. So through this thesis the author hopes that foreigners could also learn something about the current situation of the Chinese housing market and help them get a clear idea of why housing prices in China are currently so high. At the end of this thesis, the author will try to give some recommendations to the Chinese housing market based on the current situation.

1.2.2 Research Problems

- 1) What kinds of factors are making the housing prices in China to be higher and higher?
- 2) Will the housing prices keep going up and how long the trend will last?
- 3) What kind of strategies can be made to ensure that more and more people have houses to live in the cities?

1.3 Research Limitations

Real estate is a very wide topic which can be written about to fill many books, so the author will limit his thesis within such subtopics as why China's housing prices are so high; why has China got a housing bubble; and what kind of suggestions can be made to solve the last two problems?

1.4 Research Methodology

A methodology is a recommended set of methods for collecting and analyzing data and the data can be divided into primary data and secondary data. (Wikipedia 2011).

In order to get the secondary data, the author has mainly read books and studied the topic on the internet. The author has searched lots of websites for E-journals, articles, E-newspapers, and referred to a lot of previous studies, research articles and related books.

In this thesis both qualitative and quantitative methods will be used to collect the primary data.

- Quantitative method

In the quantitative method, the author designs a questionnaire based on different areas and different occupations. All the interviewees must have a job; students are not included in this research.

- Qualitative method

In order to gain a deeper understanding of the current situation of Chinese real estate market and how it will develop in the future, the author has a telephone interview with a professor who has studied this area for more than ten years.

1.5 Structure of the thesis

Chapter 1 is the introduction, which includes background information, research purposes and research problems, research limitations, research methodology and the structure of the thesis.

Chapter 2 is the theoretical study. In this chapter the author mainly talks about the current situation and the bubble in the real estate market in mainland China, and links the Chinese housing bubble with other famous housing bubbles that have already happened in the world.

Chapter 3 is the empirical study. In this chapter the author describes and explains the research methodology in detail and then makes a thorough analysis to the data that he has got from both questionnaire and telephone interview. Finally he gives some suggestions to the real estate market in China based on the result he got.

Chapter 4 is the summative chapter. In this chapter the author makes conclusions to the whole thesis and gives some recommendations to those who are going to write on a similar topic.

2 THEORETICAL STUDY

2.1 Introduction to Real Estate Industry

2.1.1 Concept of Real Estate Industry

Real estate is land, all of the natural parts of land such as trees and water, and all permanently attached improvements such as fences and buildings. People use real estate for a wide variety of purposes, including retailing, offices, manufacturing, housing, ranching, farming, recreation, worship, and entertainment. The success or failure of these uses is dependent on many interrelated factors: economic conditions, demographics, transportation, management expertise, government regulations and tax policy, climate, and topography. The objective of those engaged in the real estate industry is to create value by developing land or land with attached structures to sell or to lease or by marketing real estate parcels and interests. The real estate industry employs developers, architects, designers, landscapers, engineers, surveyors, abstractors, attorneys, appraisers, market researchers, financial analysts, construction workers, sale and leasing personnel, managers, office support workers, and building and grounds maintenance workers (Yang 2000).

2.1.2 The categories of Real Estate Industry

Real estate industry can be divided into two parts: real estate investment industry and real estate services industry. Real Estate Services can also be divided into real estate consulting, real estate evaluation, real estate brokerage and property management. Therefore, the real estate industry includes real estate investment and development, real estate consulting, real estate appraisal, real estate brokerage and property management (Wang 2002).

- Real estate investment and development refers to the behavior of investing in infrastructure, housing construction on the state-owned land which people have got the right to use it. Real estate investment and development needs many aspects including the land, building materials, urban infrastructure, public facilities, labor, capital and professional experience (Wang 2002).

- Real estate consulting industry is defined as the activities of the professionals to provide the real estate laws and regulations, policy, information, technology and other service operations (Wang 2002).
- Real Estate Appraisal refers to the activities of professional valuers do the objective and reasonable estimate and determination of property price based on valuation purposes and the principles of valuation with appropriate valuation method (Wang 2002).
- Real estate brokers are people who provide agent services to those who are involved in real estate investment and development, transfer, mortgage or lease (Wang 2002).
- Property management industry: the owners of the property hire the property management companies to do the maintenance, conservation and management to the housing and supporting facilities, equipment and related venues. According to the contract, the property management companies are responsible to provide a clean and safe living environment to all the property owners in this area (Wang 2002).

2.1.3 The role of Real Estate Industry on the national economy

Real estate has been treated as the pillar industry of national economy. As I have mentioned above, real estate industry include four major parts: real estate investment and development, real estate consulting, real estate appraisal, and property management. But its directly related industries are more than 60, such as construction sectors, chemical industry, raw materials industries (stone, steel, concrete, wood), electricity sector, financial sector, advertisement industry. These related industries can promote national and local economy develops and can also help millions of people employed and reemployed (Wang 2002, Chen 2006).

Real estate sector has been considered as the pillar industry of national economy and the precondition to realize China's 11th Five-Year Plan (2006-2010). The whole country, especially the local governments tried every method to encourage real estate development which stimulates the investment in real estate industry. The total real estate investment goes up year by year. Besides, the total real estate

investment account for a very large share of China's GDP, and the proportion is still increasing now. Till last year, in some developed areas like Beijing and Hangzhou, their real estate investment and trade accounted for 60 % of the local GDP (Lang 2011). Property prices can affect government revenue mainly through government general revenue, which mainly consists of various types of taxes, and land sales revenue, which again depends on land prices and has become an important source of the extra-budgetary revenue to the Chinese local governments. The share of land sales revenue to local government revenue at provincial level differs significantly across regions. For example, Chongqing's land sales revenue is more than 30 percent of government general revenue while Shanghai's has been below 10 percent in the past few years, as can be seen in Figure 1. The high percentage shows that the Chinese economy relies too much on the real estate sector. On the one hand it is helpful to improve GDP, but on the other hand it is not optimistic for economy to develop in a healthy and sustainable way, which will be discussed in detail later (Lang 2011).

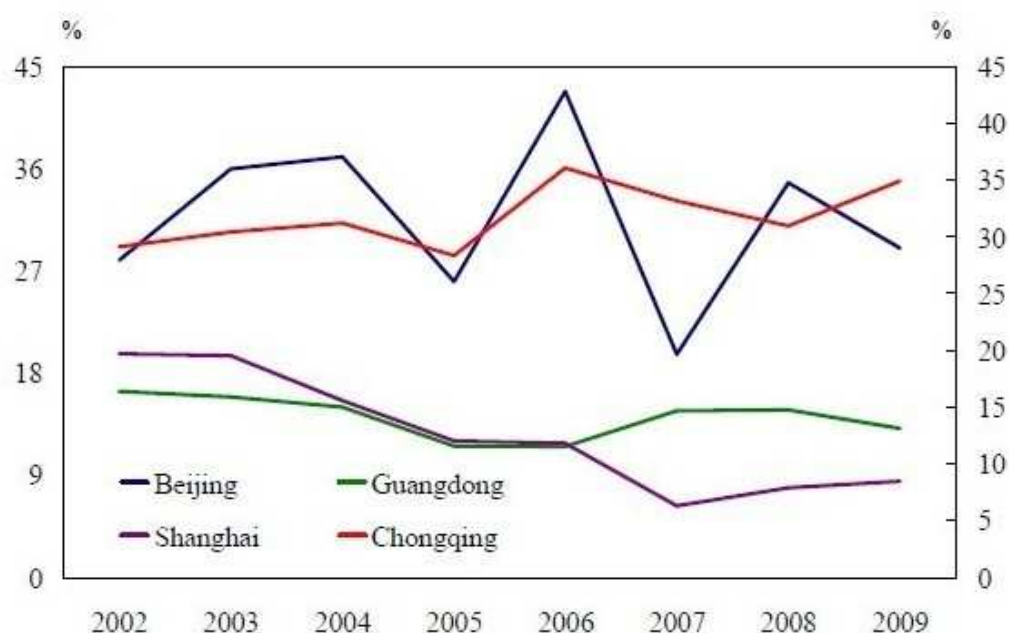


Figure1: land sales as a percentage of local government general revenue.

Sources: CEIC database 2009

2.1.4 The role of Real estate on the Banking Sector in China

The banking sector's direct exposure to property markets looks manageable. Mortgage loans and the loans to developers have been trending up in the past few years, but still account for less than 20 percent of total outstanding loans in late 2009, compared with 51.6 percent in Hong Kong SAR and 56.6 percent in the US (See Figure 2). On the other hand, loans from financial institutions are not a major source of funding for developers. Self-raised capital, advanced payment, and other sources of funding in 40 major cities, for instance, account for about 60 percent of developers' total funding in the first quarter of 2010 (Ahuja, Cheung, Han, Porter and Zhang 2010).

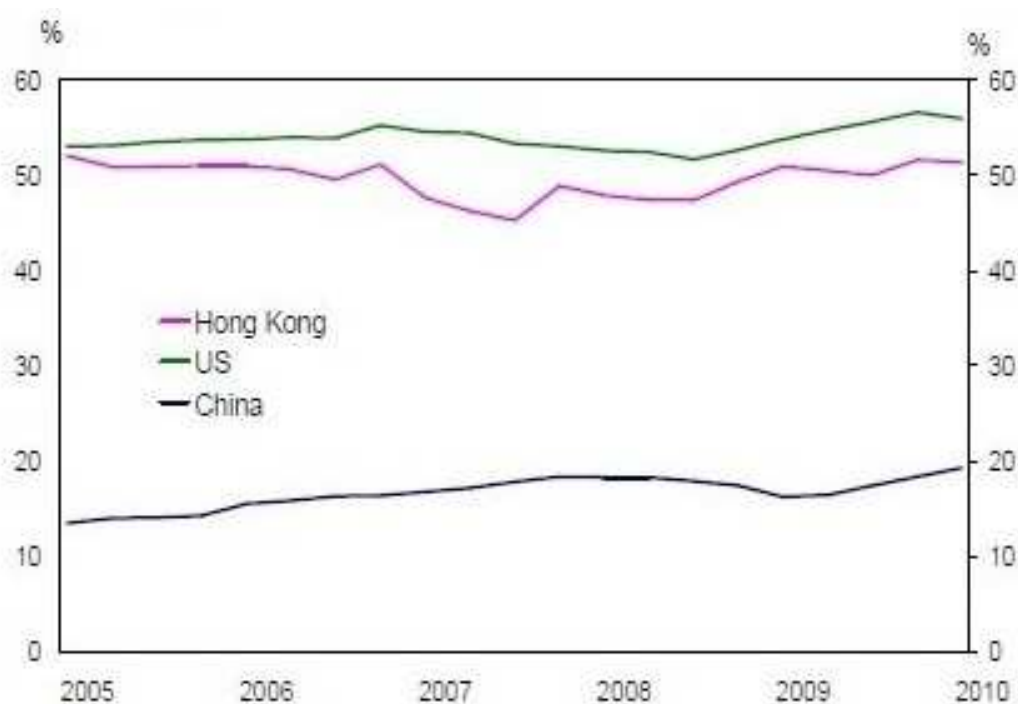


Figure 2: Banking sectors' direct exposure to property market

Sources: CEIC 2010; U.S. Federal Reserve

Nevertheless, banking sector's total exposure to property markets can be large because of the strong linkages between real estate sector and other industries. The cumulative input coefficients of the construction sector can in large part capture how real estate sector is linked with other industries. They illustrate how much output from other sectors is used as intermediate inputs to produce an additional unit of construction on a gross basis. The metal smelting and rolling sector appears to be most closely linked with the construction sector, followed by non-metal mineral products and chemical sectors. 1 U.S. dollar of final demand for construction, for example, will require an input of 0.40 U.S. dollar from the metal smelting and rolling sector. In fact, the amount of loans to the sectors that are closely linked with the property market is large, accounting for about 24.0 percent of total loans in 2009 (See Figure 3). Falling property prices will affect these sectors' output and hence erode their ability to repay loans to banks (Ahuja et al 2010).

The above analysis captures better the banking sector's exposure to the property market, but may still underestimate its exposure as firms may use their properties as collateral to borrow money from banks. Property price corrections will reduce the collateral values and, hence, hurt banks' balance sheets if borrowers default on loans. (Ahuja et al 2010).

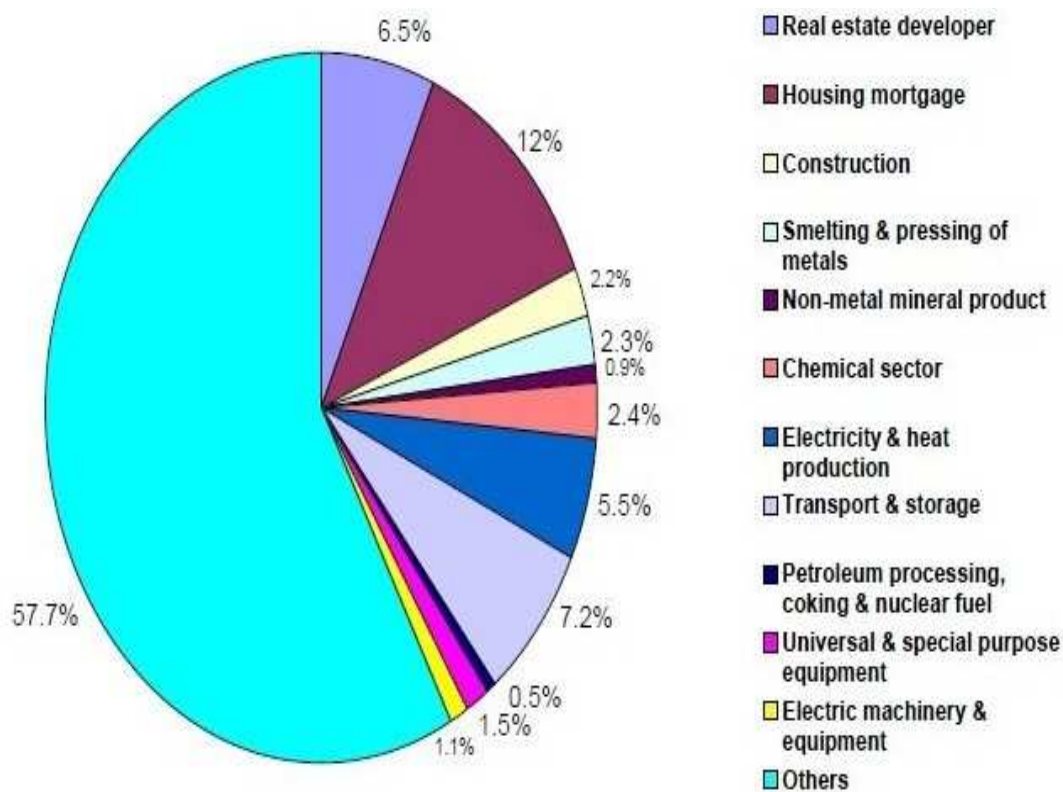


Figure 3: Distribution of outstanding loans in 2009

Source: CEIC 2010

2.2 The relationship between interest rate and real estate market

Interest rate has a very close relationship with the real estate market. Low interest rate brings a wealth of capital liquidity, which can make housing prices increase largely and real estate market be prosperous. On the contrary, if interest rate increases largely, it may cause the borrowers or debtors pay more interest and the housing prices decline. If things go worse, this may cause a crisis. Next the author will use the case of 2006-2008 U.S. subprime crisis to illustrate the relationship between interest rate and real estate market (Zhang 2010, Song 2010).

In the U.S. people's consumption is usually excessive, we also call it over-consumption or bubble consumption. In other words, people prefer to use tomorrow's money to enjoy today's life. From January 2001 to July 2003, the U.S. Fed-

eral Funds Rate declined from 6.5% to 1%. Under such a low interest rate, excessive consumption was promoted. People were encouraged to buy houses, cars and luxury goods. In order to pursue high profits, banks provide different kinds of credit cards to encourage excessive consumption (Zhang 2010). This is shown Figure 4 below.

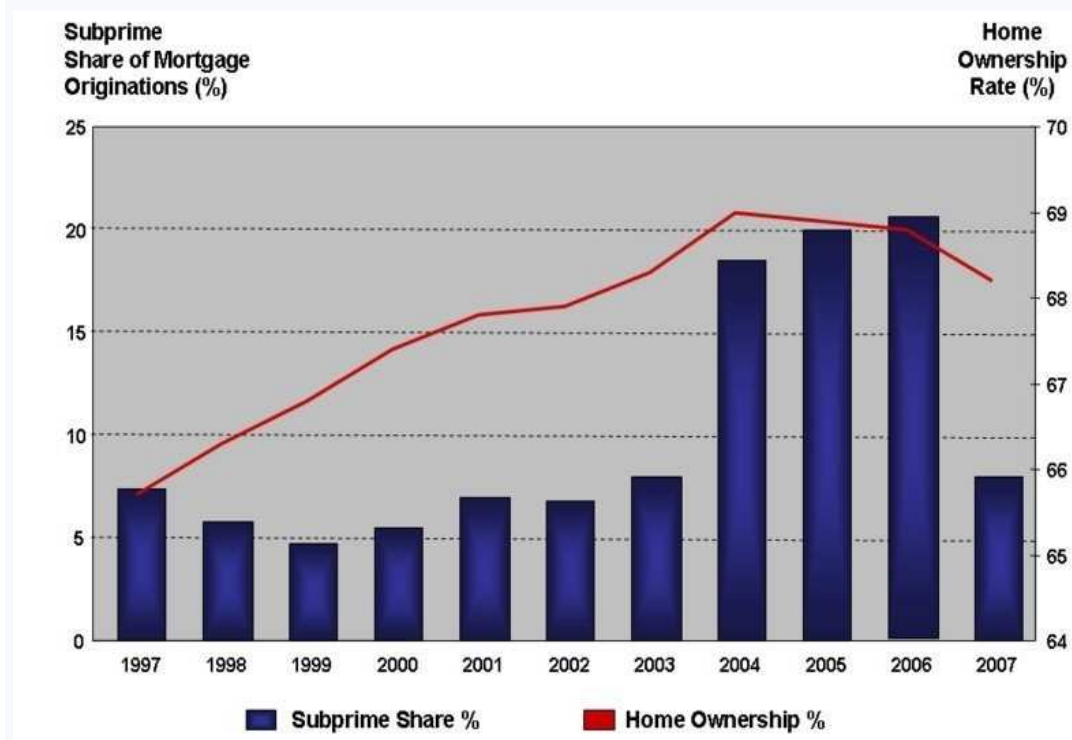


Figure 4: U.S. Subprime Lending Expanded Significantly 2004-2006

Sources: U.S. Census Bureau; Harvard University-State of National Housing Report 2008

The ultra-low interest rates stimulated the U.S. consumption market, real estate prices rose sharply and continually, a large number of lending institutions made loans to low-income and poor-credit people. In the United States, people whose annual household income below 40,000 U.S. Dollars belong to the low-income people (Ji 2010). At that time, people could see the loan advertisement almost everywhere, like on TV, in the newspapers, in the brochures on the mail boxes. Under this temptation, a lot of low-income and poor-credit people got the loans to

buy houses, because everyone believed that the housing prices would continue to rise, and these people could use their houses as collaterals. Those low income people were also told that several years later when they would sell their houses, they could make some extra money as the housing prices would continue to rise. Everything sounded perfect to both parties until the real crisis came.

Because the banks lent too much money to the whole society, then the excess liquidity brought inflation. In order to prevent the inflation from going worse, the Federal Reserve raised the interest rate as many as 17 times from 1% in 2004 to 5.25% in 2006. The sharply increased interest rates increased the repayment burden on home buyers and the housing prices began to decline. The houses' values were even lower than the value they bought them. The low housing prices and high interest led to those low income and bad credit home buyers not being able to pay back their loans. In the second half of 2006, as the defaults become more and more, lots of lending institutions in the United States went bankrupt (Baidu Baike 2011).

This subprime mortgage crisis was so huge that it affected not only the economy in U.S. but also the economy in the whole world. There is another reason that makes the influence spread to the whole world. Those lending institutions knew that the borrowers were low income and bad credit people and loaning money to them was in high risk, so they asked another institution B to insure their loan; this institution could be a bank or an insurance company. This kind of insurance is called CDO (Collateralized Debt Obligation). Then B could sell the CDO contract to institution C, C sold it to D, and each of them could get some profits from each selling until the crisis came. That is why lots of American companies, banks and even foreign banks and companies are involved in this subprime mortgage crisis. Things like CDO or MBS (mortgage-backed securities) are called financial derivatives; they are very popular in the American market, the European market and the Japanese market etc (Baidu Baike 2011).

Now in China, in order to reduce the speculation and prevent the housing prices from going up fast, the Chinese central bank has raised the interest rate many

times; now the loan interest rate for property developers is 10% and for private customers is 6,80% (Central Bank of China 2011).

2.3 The relationship between foreign capital and real estate market

Besides the interest rate, foreign capital also called hot money, has a close relationship with real estate market. Hot money is a term that is most commonly used in financial markets to refer to the flow of funds (or capital) from one country to another in order to earn a short-term profit on interest rate differences and/or anticipated exchange rate shifts. These speculative capital flows are called "hot money" because they can move very quickly in and out of markets (Wikipedia 2011). Hot money is money that flows regularly between financial markets as investors attempt to ensure they get the highest short-term interest rates possible. When the money comes to the real estate market, those speculators buy a lot of houses, which makes a fake situation that the demand is bigger than supply in the real estate market. This can cause the housing prices to rise sharply. On the other hand, such foreign capital provides a lot of help to the property developers who cannot get funded by banks. In China the land belongs to the government, it is state-owned, and only the property developers have the right to build houses. So in order to build houses, those property developers have to buy land from the government first, and the land is usually bid in an auction. With the support of the hot money, the developers have enough confidence and courage on the land auction, so usually the land is bid to a higher price. Since the land is expensive, then the building on it cannot be cheap. What is more, the hot money speculates not only in houses but also in raw materials. Then the high prices of raw materials transfer to the price of houses (Gao 2009).

In the past several years, U.S. Dollars depreciated a lot to other currencies, and China had a large import and export surplus to its partner countries like U.S. and many European countries. Therefore, these countries were pushing the Chinese currency to appreciate. Betting on the appreciation of Chinese Yuan to US dollar and Euro, the international hot money entered into the Chinese market through various channels. Most of this money flowed into the Chinese real estate market and stock market, which are potential dangers to these two markets (Lang 2011).

In history, there were several huge housing bubbles caused by the hot money, which are Japanese Housing Bubble, South East Asia Housing Bubble and Hong Kong Housing Bubble.

2.3.1 Japanese Housing Bubble

In the late of the 1980s, in order to stimulate economic development, the Japanese central bank engaged in a very loose monetary policy to encourage capital flows into real estate and stock markets, resulting in skyrocketing real estate prices. In September 1985, the finance ministers of the United States, West Germany, Japan, France and the United Kingdom signed the "Plaza Agreement", decided on the depreciation of the U.S. dollar. A large number of international capitals entered into the Japanese real estate when the U.S. dollar depreciated, which stimulated the increase of housing prices. From 1986 to 1989, Japan's housing prices tripled. During this period, the demand in the whole real estate market was quite strong, and the speculation was prevalent, which stimulated the sustained increase of the real estate prices (Xiao 2010).

After 1991, with the withdrawal of international capital after profit, the Japanese real estate bubble quickly burst and real estate prices plummeted immediately. Until 1993, Japanese real estate collapsed totally. In March 2003, seven major Japanese banks have written off about 5.6 trillion yen (about 43 billion U.S. Dollars) bad debts in total, and the Nikkei Stock Index also dropped below 8000 points (Japanese Economic and Fiscal Report, 2003), the lowest level in history. The burst of the economic bubble, especially the lasting decline in real estate prices led to a serious financial crisis, and destroyed Japanese economy wholly. Japanese economy has entered a long term recession period and in the following 10 years, the economic growth has always been wandering at the state of stagnation, which is called as the "lost decade" by the economic circle (Xiao 2010).

2.3.2 Southeast Asia and Hong Kong Housing Bubble

After Japan, the real estate bubble was also a painful experience in Thailand, Malaysia, Indonesia and other Southeast Asian countries and regions, of which Thai-

and is particularly prominent. In the mid 1980s, the Thai government regarded real estate as a priority investment industry, and gradually introduced a series of stimulating policies, which promoted the prosperity of the real estate market. After the Gulf War, a large number of developers and speculators pouring into the real estate market, coupled with the indulgence of bank credit policies, led to the emergence of the real estate bubble. Meanwhile, large amounts of foreign capital also entered into other Southeast Asian countries and territories to play speculative activities in the property markets. Unfortunately, this situation was not well regulated by the governments in these areas, which led to the housing supply far exceeding demand and an enormous bubble finally formed. Before the outbreak of the financial crisis in 1996, Thailand's real estate has already been in dangerous situation, housing vacancy rate continues to rise. When the Southeast Asian financial crisis broke out in 1997, the real estate bubble burst in Thailand and other Southeast Asian countries, which directly led to serious economic recession in 48 countries and regions (Xiao 2010).

Southeast Asian financial crisis also led directly to Hong Kong real estate bubble. Hong Kong's property boom could be traced back as early as the 1970s. At that time, the business tycoons invested in real estate one after another. Moreover investors from Japan, Southeast Asia and Australia also put their funds in the property market. Driven by various factors, Hong Kong's housing prices and land prices went up sharply. By 1981, the housing prices and land price in Hong Kong had become the second most high prices region in the world, at that time the highest was Japan. From 1984 to 1997, the average annual growth rate of housing prices was over 20%. In some parts of Hong Kong the price reached to 200,000 HK Dollars (about 25,000 USD) per square meter. Southeast Asian financial came about when Hong Kong's real estate bubble reached the peak. According to expert calculations, from 1997 to 2002 these five years, the Hong Kong real estate and stock market capitalization has lost about 8 trillion Hong Kong dollars (about 1 trillion U.S. dollars) which was more than the GDP of Hong Kong in the corresponding period (Xiao 2010).

2.4 The history and current situation of Chinese Real Estate market

2.4.1 History

In 1949, the People's Republic of China designed the welfare housing distribution system to provide urban dwellers with decent and low-cost accommodations. The government owned most urban land and monopolized land transactions since 1949. The state directly controlled the production, allocation, operation, and pricing of urban housing, playing a dual role as both investor and developer (Xiao 2010).

In 1978, the Chinese leader, Deng Xiaoping, called for reforms in the housing sector, and China began to explore a reform of housing system. Deng Xiaoping's statement symbolized a major shift of the long-standing policy toward the public housing system and it paved the way for the subsequent new policies and experiments. Following this guideline, experiments have been carried out in different cities with a focus on reorganizing housing production and promoting sales of public-sector housing to ensure a sufficient return from housing investments (Xiao 2010).

The reform was focused on increasing the efficiency of the public sector by leasing out use rights of public property. In other words, the central government was in favor of marketization rather than privatization as the focus of its economic reform. They were trying to introduce competitors into the economy without the privatization of public property. To increase the efficiency of the economy, the central government pushed different state and locally owned enterprises to compete with each other in the market. But the ownership of these enterprises was still held by the central or local governments. (Lu 2010)

2.4.2 Current Situation

The sharp raise of housing prices started from 1998 when State Council announced its plan to replace its welfare-based urban housing system with a market-based housing provision scheme. With such significant housing policy changes, China has successfully expanded urban home ownership and impressively in-

creased per capita housing consumption. The housing market has become one of the major pillar industries in the country's economic boom. Especially since 2003, Chinese real estate market began to overheat in some regions, so that Chinese government began to conduct a comprehensive macro-control in order to stabilize the market development. But from 2006 to 2007, under the influence of hot money, speculation, appreciation of Chinese Yuan (RMB) and other factors, the housing prices appeared an explosive growth, for that reason the government began to tighten up credit for the purpose of cooling down the real estate market. In 2008, the international economic environment became to decline because of global economic crisis, with no doubt, China's economy also experienced a great influence. Under the continuing tightening of credit policy, Chinese real estate industry slowed down obviously. Housing turnover decreased by over 20% in 2008. However, the real estate market benefited from stimulus of the government's macroeconomic bailout measures and lower interest rates, so the sales status presented a restored momentum month by month from the beginning 2009. Although the economy has almost recovered, real estate is overheated in China now. In this situation, housing prices are increasing, the price is too high to ordinary households to afford in many cities and the affordable housing development has been greatly lagging behind the ever-increasing housing needs of a large lower-income population in the country (Xiao 2010, Chan 2010).

2.5 High housing prices in China

Since 2009, housing prices in major Chinese cities have rocketed by as much as 60 percent. The high housing prices has excluded ordinary Chinese, especially the medium and low-income people, from the housing market as houses have become unaffordable. In China different cities have different standards to distinguish high income, medium and low income people. In Shanghai, people whose per capita annual income is lower than 2800 U.S. dollars belong to medium and low income group; while in some undeveloped cities, this standard may only be 1000 U.S. dollars. The soaring housing prices will further increase inequality in China, which is a big issue in the Chinese society, as it can potentially trigger social and political instability. How can Chinese housing prices be so high and last for a long

time? A simple explanation is market disequilibrium caused by the quick expansion of demand but limited land supply. The main factors behind the high housing demand in urban China are clear. They include rapid urbanization over the past decade, which have resulted in about 200 million people moving from the rural areas to the cities; fast economic growth which has given rise to a growing class of suddenly-rich households with strong purchasing power and the Chinese traditional housing concept (Xinhua Net 2007). Next these three factors will be discussed in detail separately.

2.5.1 Rapid urbanization

In 1960, China's urban population accounted for 19.7%, and after 20 years' economic development, in 1980 this indicator was 19.4%. It can be seen that China's urban population has not increased, but decreased slightly, which is very rare in the world. Over the same period, the United States urban population rose from 70.0% to 73.7%, and in Japan the increase was from 63.0% to 76.2%. According to World Bank statistics, in 2005 the average level of world urbanization was 49%. In the high-income countries the number was 75%, in the middle-income countries the number was 60% and 28% in the low-income countries, while China's urbanization rate was only 41%, which was higher than that of low-income countries, but much lower than that of middle-income and high-income countries. A low level of urbanization has led to a serious impact on China's domestic demand, thereby affecting one of the driving forces of China's economic development—consumption (Xinhua Net 2007, National Bureau of Statistics 2006).

Although the economy is growing very fast in China today, the contribution of domestic consumption to economic growth is rather low, accounting for 35%, while in the United States the domestic consumption to economic growth is more than 70%. A very important reason for such a low consuming demand is that a large number of the population, about 70% of the people, lives in rural areas. The rural consumption volumes are about one-third of the cities' or even lower (Lang 2011).

Therefore, in order to keep the sustainable and healthy development of national economy, the consumption level of the rural people must be increased. In order to make the potential demand in rural areas become a reality, the fundamental measure is to reduce the number of farmers, and then urbanization is the only path. When the proportion of China's urban population increases by 1 percent, its direct effect can boost GDP growth of 1.5 percent. Therefore, urbanization has become a leader in the new period of economic growth (Lang 2011).

At present, China's urbanization is growing at an annual growth rate of 1.3 percent. According to the data of National Bureau of Statistics of China, more than 20 million people move from rural areas to cities each year, and the current average housing area is 26.11 square meters per capita, which means the annual increase of urban housing needs are 522,200,000 square meters. The entire area of commercial real estate in 2005 is only 4.8793 million square meters. Such big demand and limited housing supply has made the housing prices rise very fast in the recent years in China (Wang 2010).

In 2010, China's urbanization level reached 49.68%, compared to 80-90% in developed countries, which means there is a 30-40 percentage gap. In China the annual growth rate of urbanization is about 1.3%, so that China's real estate can still grow 20 to 30 years rapidly (Zhang 2011).

2.5.2 Rapid economic growth

Since China's reform and opening up in 1978, China's economy has boomed rapidly and people's living standards have improved a lot. From 1978 to 2007, in these 30 years, China's Gross Domestic Product rose from 346.5 billion Yuan (about 43.3 billion USD) to 24.7 trillion Yuan (about 3.1 trillion USD) with the average growth rate of 9.88% (See Figure 5). China's import and export trade volume increased from 20.6 billion U.S. dollars in 1978 to 2.1737 trillion U.S. dollars in 2007, with an increase of 104 times. (Wang 2010).

In the recent 3 decades, the per capita disposable income in China increased year by year (See Figure 6), and the Engel coefficient decreased year by year. The En-

gel coefficient of urban households dropped from 57.5% in 1978 to 36.3% in 2007, and the Engel coefficient of rural households in the same period fell from 67.7% to 43%. The figures demonstrate that Chinese people's living standards were fully improved and the consumption levels were significantly increased (Wang 2010, NBS 2008).

In particular, after formally joining in the WTO in December 2001, China has actively participated in economic globalization and accelerated the foreign trade development. This is the best period in the history of China in economic development. In 2002-2007, China's import and export trade had an average annual growth rate of 28.5%, from which 28.9% was average annual growth of exports, and 27.3% was average annual growth rate of imports.

According to 2011 Hurun Fortune Report, as of the end of 2010, the number of millionaires whose assets are more than 10 million Yuan (about 1.47 million USD) in mainland China has reached 960,000, with an increase of 9.7% compared to the year before. Among them, there are 60,000 people who are billionaires, with an increase of 9.1% compared to the year before. The report also claims that most billionaires are from Beijing, which has 170,000 millionaires and 10,000 billionaires; Guangdong comes the second, and Shanghai is ranked third. Nowadays, these three areas have the highest housing prices in China. Those millionaires and billionaires not only invest their entire industries but also invest in the real estate industry. What is more, people in these most developed cities have higher income than people in other cities, so they have more disposable income to improve their living conditions, which bring more demand in the real estate market. Those factors can be the reasons for high housing prices in the local cities (Hurun 2011).

Head of department of real estate research in Greater China area of Yuanta Securities, senior analyst of Asian real estate market Mr. Kevin Gin said that as long as the Chinese economy continues to grow at the annual growth rate of 8% to 10%, the long-term trend of China's real estate market is raising. He also said that China has 1.3 billion people, as their wealth increases and more and more

people move into the cities from the countryside, the overall demand for housing and real estate prices will increase (Hurun 2011).

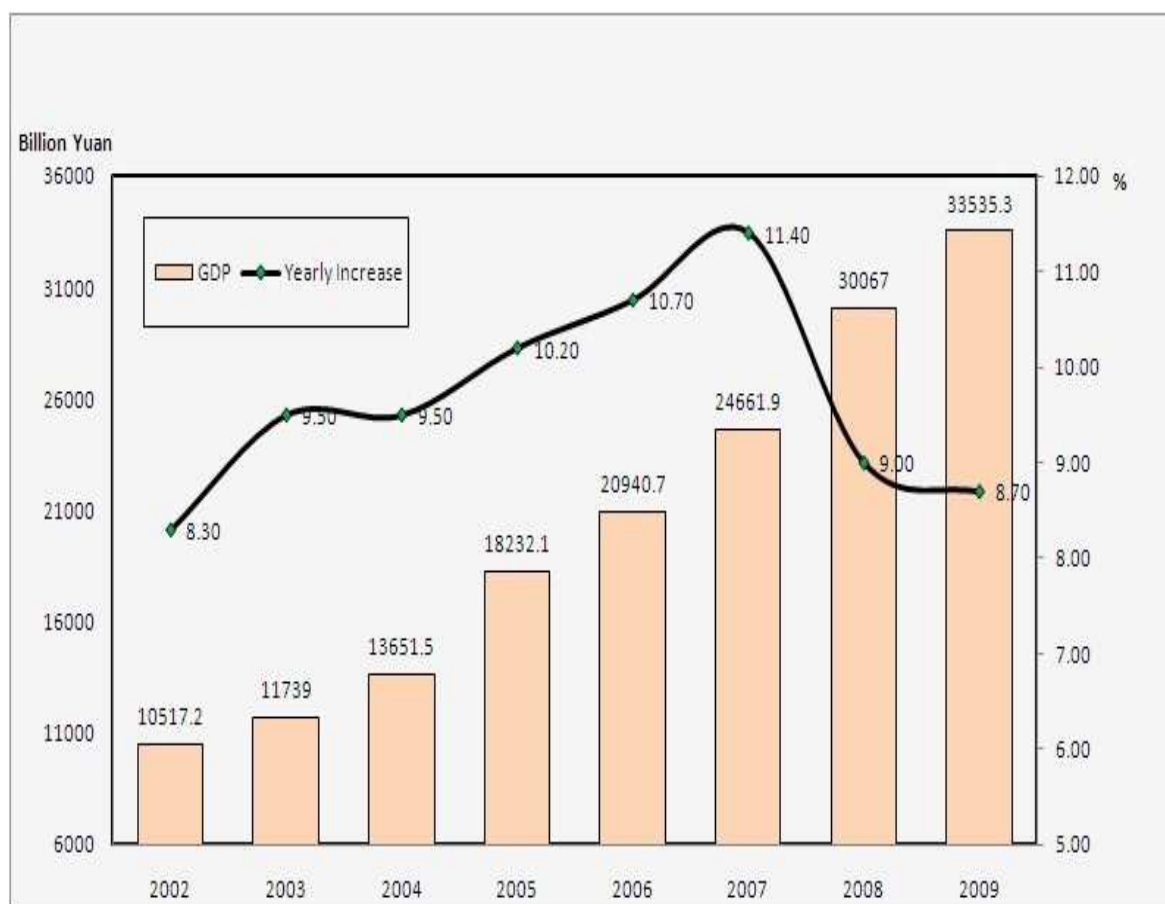


Figure 5: Chinese Gross Domestic Product in billion Yuan from 2002 to 2009 and its year to year increase rate.

Source: National Bureau of Statistics of China 2010

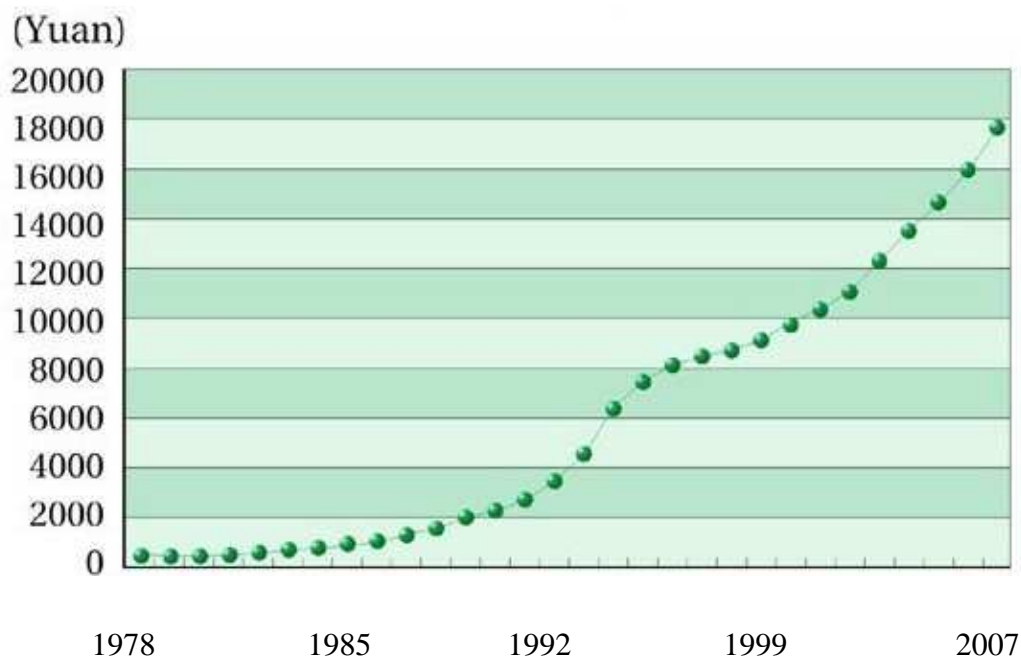


Figure 6: Per Capita Disposable Income of Urban Households (1978-2007)

Source: Guangdong Statistical Yearbook 2008

Note: Disposable Income = Total Income of Households - Income Tax Payable - Personal Expenditure on Social Security - Sample Household Subsidy for keeping Dairies. (Guangdong Statistical Yearbook 2008)

2.5.3 Traditional Concept

Cultural influence can be an explanation of the current high housing prices in China. The Chinese people, especially young couples, tend to regard owning property as a precondition for establishing a family. Renting is not a popular option for people with a stable job. In Chinese people's traditional thinking, they regard home as a house, so they will definitely buy a house before they marry, renting a house when marrying is absolutely unacceptable for most people, especially for girls. So couples usually ask families for help or ask for a loan from a bank and pay the mortgage in the next several decades. To facilitate the marriage of their son or daughter, Chinese parents are willing to devote all their savings to real estate. Consequently, incomes and savings from two generations and three families (bride's parents, groom's parents, and the young couple themselves) are all

influx to purchase a house, which drives the already unbearable housing prices to an even higher level.

Therefore, the author believes that as long as Chinese people do not change their ideas and concepts, with such a large population base and continued urbanization, the housing prices will keep rising.

2.6 What is the bubble in Real Estate Market?

The term “bubble” is widely used but rarely clearly defined. This widespread used term refers to a situation in which excessive public expectations of future price increases cause prices to be temporarily over elevated.

An often quoted definition was presented by Joseph E. Stiglitz in 1990: “If the reason the price is high today is only because investors believe that the selling price will be higher tomorrow---when ‘fundamental’ factors do not seem to justify such a price----then a bubble exists.” According to the definition from Contemporary Economy, the bubble can also be simply defined as market price of the asset deviated significantly from its fundamental value (Xiao 2010).

During a housing prices bubble, homebuyers think that a house that they would normally consider too expensive for them is now an acceptable purchase, because they believe that it will be compensated by significant price increases in the near future. Homebuyers may also worry during a housing bubble that if they do not buy a house now, they will not be able to afford a home later. The key features of a bubble are that the level of prices has been bid up beyond what is consistent with underlying fundamentals. But at the same time, people rush to buy houses with the expectation of future price continues increasing. The increasing price is caused by irrational expectation of buyers who think they will not be able to afford a house in the near future if they do not purchase one while they can now, and as a result the demand for houses will consequently increase. Moreover, the soaring demand leads to roaring price further, which makes buyers more certain that the price will keep going up (Hu, Su, Jin and Jiang 2006).

Housing prices are certainly unstable, if the expectation of rapid future price increase is the important motivation factor for homebuyers. Without doubt, housing prices cannot go up forever under this situation. When people perceive that prices have stopped going up, previous support for their acceptance of high housing prices will break down and housing prices will then fall due to the diminished demand. It will end whenever buyers perceive that prices are no longer going up. Hence bubbles carry the seeds of their own destruction. Only time is needed for bubbles to end (Schiller 2010).

2.7 Indicators of Real Estate Bubble

The saying that housing prices increase too fast, housing prices increase too much are often used to evaluate if there is a housing bubble. But strictly speaking, these sayings are far from accurate. To verify if there is a housing bubble, we need to analyze whether the housing market prices have been consistently higher than the fundamental level that they should be on. Here, some indicators are often used to evaluate whether homes in a given area are fairly valued and whether this real estate market is experiencing a bubble (Xiao 2010). They include housing price-to-income ratio, housing price-to-rent ratio and vacancy rate.

2.7.1 Housing prices-to-Income Ratio

Housing prices-to-income ratio is the basic affordability measure for housing in a given area. It is generally the ratio of median housing prices to median familial disposable incomes, expressed as a percentage or as years of income.

Housing prices-to-income ratio is one of the most common indexes used to measure real estate bubbles internationally. This index is often used to measure people's purchasing power. It has been acknowledged that the greater housing prices-to-income ratio, the lower households' ability to pay for houses. According to the standard provided by the World Bank, housing prices-to-income ratio normally ranged from 1.8 to 5.5 in the developed countries and from 3 to 6 in the developing countries. But in China the ratio is much higher than the international standards, especially in big cities like Beijing and Shanghai (See Figure 7). Ac-

According to Wikipedia statistics, at the first quarter of 2011 this ratio in Beijing was 27:1 (Hu 2010, Wikipedia 2011).

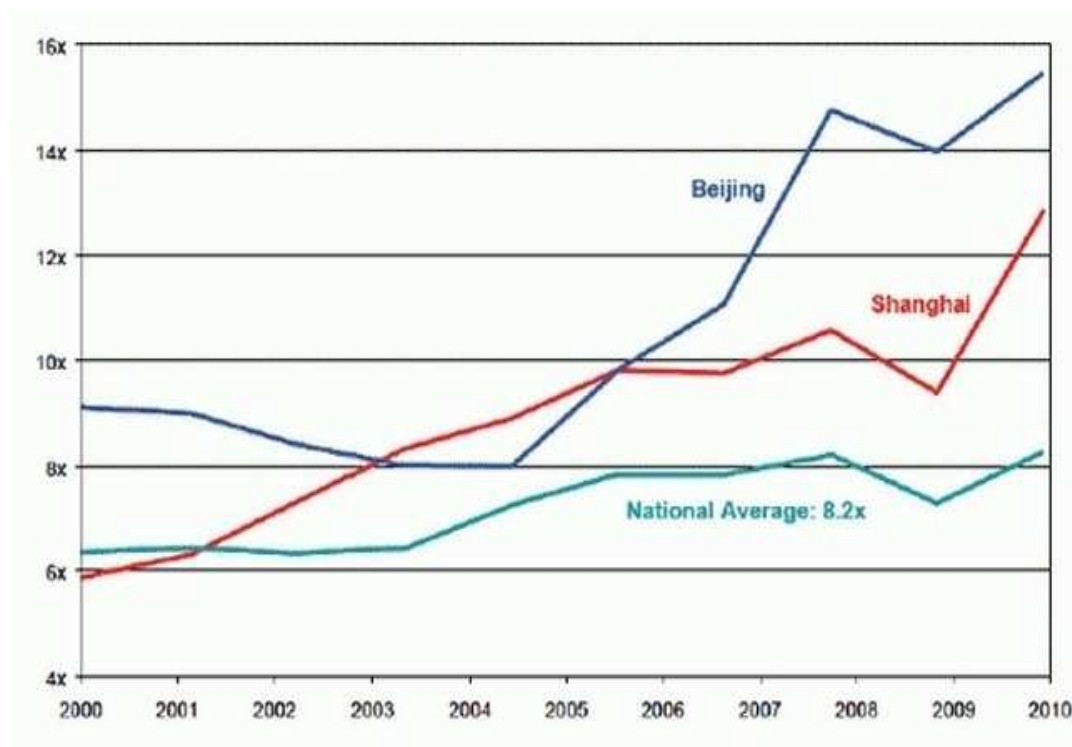


Figure 7: China national wide property value/ annual disposal income per urban household (01.2000-12.2009)

Sources: CEIC; Morgan Stanley; GMO Calculations, As of 12/09

2.7.2 Housing prices-to-Rent Ratio

Housing prices-to-rent ratio refers to the housing prices divided by monthly rent. In normal real estate market, there should be a certain proportional relationship between housing prices and rent.

Housing prices-to-rent ratio is another important index often used internationally to measure real estate bubbles. Housing prices-to-rent ratio is the index that shows the degree that housing prices has deviated from its value. Typically values from 1:200 to 1:300 are used as a standard to evaluate whether real estate runs well in a certain region and 1:300 is regarded as the warning line of real estate bubble in the

world. In April 2011, the ratio of Beijing was 1:500, while the global average was 1:300 in the same period. (Hu 2010, Wikipedia 2011).

2.7.3 Vacancy Rate

The vacancy rate is an indicator to reflect the degree of demand in real estate market, and it can affect the investors' expectation and judgment for the future real estate market. The formula is:

$$\text{Vacancy rate} = V / T * 100\% \quad (1)$$

V: Current Vacant Area of Commercialized Buildings

T: Total Completed Area of Commercialized Buildings in the Past Three Years

Vacancy rates are statistics kept on vacancies in rental properties, homes for sale, and hotels. High vacancy rates are usually viewed as a sign that the market is struggling, while low rates are desirable, because they indicate that property is a hot commodity and that vacancies rarely remain unfilled for very long. Statistics on vacancy rates are kept by many government agencies and companies which specialize in economic analysis, and they can be useful to consider when people are relocating to a community (Xiao 2010).

In theory, when the vacancy rate of a country is less than 3%, the real estate market is a seller's market, and it is difficult for the consumer to find an acceptable house in such market; when the vacancy rate ranges from 3% to 10%, the relationship between supply and demand in the market keeps stable, there would not exist the excess supply in the market, and the buyers also have sufficient choice for real estate commodities; but when the housing vacancy rate is greater than 10%, then the surplus housing supply would destroy the equilibrium in the real estate market; Furthermore, when this rate reaches to 15%, it means the excessive supply cannot be relieved by the real demand for housings, the high vacancy rate can be used to reflect the real estate bubble in the market (Xiao 2010).

In the sense of housing, a vacancy rate counts up the total number of livable but unoccupied units, and determines what percentage of the total available housing is

vacant. Vacancy rates include homes, apartments, and other living arrangements. The lower the vacancy rate, the more challenging it is for people to find housing, because units they are interested in may not come up for rent or sale very often. High vacancy rates in housing usually suggest economic depression. They can occur when lots of people move out of a community, leaving large numbers of homes vacant, and when developers overestimate the market for housing in a community (Xiao 2010).

Sheng Laiyun, a spokesperson for the National Bureau of Statistics of China, made a comment on 11 August 2010 that there was no official data on housing vacancy rates in China yet because it was a new issue that emerged only in the last few years as China's property prices surged upward. But some experts estimated that the vacancy rate in big cities like Beijing and Shanghai in 2010 was over 40%, and the national average was about 25-30% (Lang 2011, Xie 2010).

2.8 Why has China got the housing bubble?

Bubbles typically start in a rather extreme boom period that has lasted for a comparative long period. The causes of real estate bubble in China could be various, such as speculation, bank credit, unbalanced supply and demand, government policies. Each cause will be discussed in detail as follows.

2.8.1 Investment and Speculation

Speculation is a universal behavior in the market. It has an intrinsically difference with normal investment which can be summarized in three aspects :(1) These two have different purposes. Investment has a correspondence to actual economical growth and aims to appreciate the capital by the operating of assets. Speculation has no correspondence to actual economical growth and aims to gain the price difference of assets. (2) Investment and speculation have different market performances. The behavior how long these two will hold the assets and the behavior after these two purchases the assets are totally different. Investment is long term stable and consistent, while speculation is short term and uncertain. (3) Investment and speculation also have different market risk and features. In general, invest-

ment is only influenced by the management risk which depends on manager's situation and his judgment of the market, so that the risk is relatively small. But speculation is mainly depends on the speculator's subjective prediction. It has a relatively high risk which requires speculators have higher capability of predicting. Higher risk results in higher benefit, so if speculation succeeds, the benefits will be much higher than an investment is likely to be. (Lou, 2007)

Speculative purchases in the housing market are largely attributed to the apparent predictability in housing prices, at least in the short run. Housing prices speculation is often defined as the purchase of a house at the current time motivated by the expectation of a real increase in the price of a house in the future. The way of speculation on housing market in China could be various.

1) Idle Capital from Small and Middle Sized Enterprises

Nowadays no matter shopping in China or abroad, people can very often see Made in China on various products. China is a manufacturing country, and the manufacturing industry is the driving force of China's export, which has brought a lot of revenue to the government and entrepreneurs. It also creates millions of jobs to the Chinese people. It is one of the pillar industries in China.

In the recent years, the Chinese manufacturing industry seems to have become "sick". To be exact, there was a crisis in this industry since 2006. At that time, the manufacturing-based small and middle sized enterprises (SMEs), most of which are private, were encountering an overall deterioration in the investing and operating environment. They were experiencing an increase of interest rate, the increase of tax on business, a price increase of raw materials, the 2008 global financial crisis and the big appreciation of Chinese Yuan to U.S. dollars or Euros. So from 2006 to now, there have been about 30-40% of Chinese SMEs going bankrupt in the south and east coast of China. After the bankruptcy, although the companies are shut down, the entrepreneurs themselves have rich personal funds, which is called idle capital. So in order to protect their money from depreciating in the inflation, they invest the idle money in other ways. The Chinese government has the strict control of private money investing abroad, and as the real estate market is

very prosperous in China, those entrepreneurs invest their idle money into the Chinese real estate market in order to get more profit. According to a research the profit from the real estate they get are more than the 10-year profits they can get from their manufacturing companies. Therefore, today more and more entrepreneurs, whether their companies are doing well or poorly, are investing into the real estate market. More specifically, most of them are speculating instead of investing (Lang 2011).

2) Idle Capitals from Normal Citizens

As mentioned above that as the Chinese economy grows, more and more people are getting rich, their disposable income are increasing, and therefore they have idle money to invest in the real estate market. Houses are not only be used by investors themselves, but buying houses also prevents their money from depreciating from the inflation. And as a matter of fact, almost nobody has lost money in the housing investment, because the housing prices keep rising in the recent years in China. Under this temptation, more and more people are involved in making money from real estate market whether they are rich or only able to pay the down payment and pay the monthly mortgage afterwards. Nevertheless, money can always be made until now.

3) Hot Money

In the current real estate market, the hot money becomes a compelling topic. The main purpose of hot money is arbitrage; it is not a valid capital. The reason that hot money enter into the Chinese real estate market is based on the boom of this market and the appreciation of the Chinese Yuan. With more hot money, the economy becomes more active and the property developers can get financed more easily, which may lead to property market bubbles. However, the withdrawal of hot money will leave a big burden on the Chinese economy and give the economy a huge blow (Xie 2010).

4) Property Developers

In order to maximize the profit, some property developers may sometimes hold their properties. In other words, their new houses have been finished and could be sold to the public, but in fact they don't want to sell the houses, which cause an illusion that the supply in the market is less than the demand. As a result the housing prices will go up. When the prices reach a high level, then the developers sell the houses and make more money from them.

2.8.2 Loose Bank Credit Policy

As the real estate industry is capital-intensive industry, real estate development must have a strong capital. But with the constant expansion of real estate development, property developers' own capital is not enough to finance the operations, and bank loans become the main source of their property development. Usually governments have certain constraints in dealing with real estate development loans, but because of the high returns in real estate industry, many commercial banks violate relevant regulations in the actual operations. Those banks release a large number of loans to developers; they even do not verify the developers' credit rating, which causes a lot of money to flow into the real estate market, resulting in over-development in real estate market (Zheng 2011).

The supply of China's broad money M2 was 11.99 trillion Yuan (about 1.45 trillion U.S. dollars, exchange rate in 1999, 1USD=8.28 Yuan) in 1999 and it increased to 72.6 trillion Yuan (about 10.92 trillion U.S. dollars, exchange rate in 2010, 1 USD=6.65 Yuan) in 2010, which is five times more than that of in 1999. The credit and monetary growth rate far exceeds the GDP growth rate, for example in 2009 the growth rate of M2 was 27.7%, while the year's GDP growth was only 8.7%; in 2010 the growth rate of M2 was 19.7%, while the year's GDP growth was 10.3%. The ultra-issued currency is one of the reasons for the rising prices. (Zheng 2011)

With the rapid rise in housing prices, the competition of Chinese commercial banks in the real estate market is further exacerbated. In order to compete for market share, each commercial bank loosens its constraints, letting large numbers of bank credit flow to the real estate market and so encouraging people to get

mortgage loans. According to a research, in 2009, the capital of real estate development was 5.71 trillion Yuan (about 834.8 billion U.S. dollars, 1 USD = 6.84 Yuan), and 1.13 trillion Yuan (about 165.2 U.S. dollars) were from bank loans, with an increase of 48.5%; and individual mortgage loans were 840.3 billion Yuan (about 112.9 U.S. dollars), with an increase of 116.2%. Only from these two statistics, the bank credit funds accounted for 34.48% of the total real estate development funds (National Bureau of Statistics 2010).

China's current real estate market situation is very similar to the situation before the collapse of real estate bubble in Japan and other countries. The rapid expansion of bank credit makes lot of bank funds flow into the real estate market, which has pushed housing prices to rise higher and caused the housing bubble in most cities (Yi 2010).

2.8.3 High Land price

According to an analysis of the cost of housing elements, readers can have a further understanding of why the housing prices are so high in the cities as well as the impact of land cost to the whole housing prices (Zheng 2011).

Currently, the price structure of commercial houses in China can be divided into six parts: (1) Land cost and Administrative cost, the national average level account for nearly 50% of the total housing prices. (2) Construction costs include housing design costs, construction costs and ancillary facility fees etc, they usually account for 20%. (3) Financing costs mean the interest fee paid by the property developers when they get the loans from commercial banks. Now the financing cost usually accounts for 7% of the total price. (4) Marketing costs generally account for 3% of the total price. (5) Management costs include wages and benefits expenditures of the sales people and the administrators. The management costs only account for very few of total price. (6) Profit is usually about 20% (Zheng 2011).

Through the analysis of costs associated with real estate development, it is not difficult to find that the high housing prices are mainly caused by the rising cost of

land. The urban municipal governments in China have the right to acquire land from villagers for urban development with central government approval; rural farmers do not have the right to sell their land, even when they are the owners. This is partly why land acquisition disputes have become one of the most high-profile social issues in China (Qu 2008).

As a result of paying low compensation to farmers for land and charging high prices to developers, local governments have been able to use land as a significant source of financial revenue. It is said that land profits could account for as much as two thirds of many local governments' revenue. Local governments have also relied on the housing construction as a rapid means to spur the development of other industries, especially after the 2008 U.S. crisis. As a result many local governments are reluctant to let the housing prices down. (Lie 2011)

As the well-known economist, former president of the Chinese University of Hong Kong, Professor Lawrence J. Lau told the China Youth Daily reporter that the local governments depend heavily on land revenue. Therefore, they will certainly push up prices, and as a result the real estate price in China is so high (Ye 2011).

Lau also said that land supply is limited and the land in a city will become scarce. Therefore, from 2003 on, the State began to regulate the real estate market and released a series strict control on land use. According to the principle of supply and demand, the demand is increasing while supply is reducing, and the land prices therefore become higher and higher, which in turn lead to further speed up in housing prices (Ye 2011).

2.8.4 Other Reasons

Except for the main reasons above that cause the real estate bubble, there are also some other reasons.

Reason 1: The development proportion of affordable houses and luxury houses should be controlled in a reasonable scope. But in fact, in order to pursue high profits, property developers prefer to develop luxury houses (See Figure 8), which

has resulted in a large vacancy rate in the larger houses and luxury houses, and a shortage of the affordable houses. This contradiction increases the price of affordable houses and results in the housing bubble.

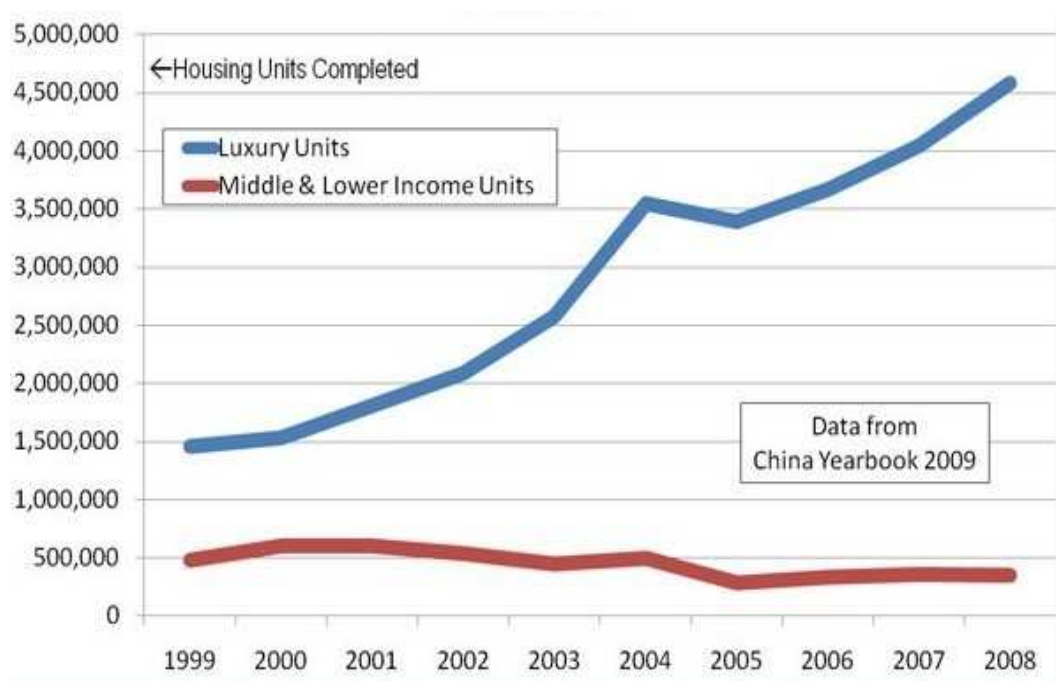


Figure 8: New Housing Units in China 1999-2008.

Source: China Yearbook 2009

Reason 2: Hu Kou means domicile or household register. It is very important in China. From Hu Kou people can recognize which city a person is from, and can also know whether a person is from rural areas or urban areas. In China, resources and facilities in the cities are better than those in the rural areas, and big cities are better than small cities. The top universities and good medical services are available in big cities like Beijing and Shanghai, and the local people have the advantage or priority to get access to these. So Hu Kou in cities, especially in big cities is very attractive. Under this condition, people are very much willing to pay a high price to buy houses in the city in order to get the urban Hu Kou, either for themselves or for their next generation in order to get the better benefits. That is why housing prices in the big cities are extremely high.

Reasons 3: False information from the media and people's expectations are also the reasons that cause the real estate bubble. In order to make more money, some property developers and speculators express their ideas in public. They say that the housing prices will continue to go up to a higher level. Ordinary people think that if they do not buy now, the price will be higher in the future. So they ask for financial help from families or friends, or they get the mortgage loans from commercial banks. In a short future they can see the housing prices are indeed going up, but they don't know it is them who push the prices higher and higher. Of course they do not know they are creating a very dangerous housing bubble, and they have not considered the consequences when the bubble bursts (Hu 2010).

2.9 The consequences if the housing bubble burst

If the real estate bubble bursts, housing prices will fall. When people think that the housing prices will continue to fall, they will stop buying houses; they are expecting to buy at a lower price. As a result the demand will drop, and the housing prices will continue to drop, which then creates a vicious circle.

A lot of home buyers buy their houses through bank mortgages. For example, one buys a house worth 100.000 Euros, he pays 30% of the total price called down payment, and the left 70% is from bank loan. People can choose to pay back the loan in 10 years or 20 years. If the housing price drops sharply, for example 50%, the house will be worth only 50.000 Euros, but the house owner has to pay the bank back 70.000 Euros bank loan, this means the house becomes a negative asset. At this time, many people will choose not to pay back the bank loan but let the bank forfeiture their houses. As a result the home owner loses 30% of the housing price and the bank loses 20% of the housing price. If the housing price continues to drop down, the bank will lose more, which will impact the entire financial system. This is what happened in the United States in 2007-2008 subprime crisis. From the current situation in the Chinese real estate market, the entire risk basically goes to the banking system, whether the loans to property developers or the mortgage to the private customers is in question. If the real estate bubble bursts, the risk takers are the Chinese commercial banks. However, all

banks are now becoming listed companies and therefore those investors will also take the risks (Lang 2011).

Also, real estate has a very long chain in the whole national economy; it relates to more than 60 other industries, like the construction materials, steel, coal, transport. All of them are capital-intensive industries. If the real estate bubble bursts, these industries will experience overproduction, which will lead to massive unemployment. Therefore, the people's consuming power will decline and the whole economy will tend to be in depression. Therefore, the real estate bubble is not limited to harm the real estate industry itself, but also affects many other industries. If the domestic real estate collapses, the country's economic crisis may occur. This is unfortunate for any country or region (Lang 2011).

3 EMPIRICAL STUDY OF THE REAL ESTATE MARKET IN MAINLAND CHINA

The empirical part of this study mainly introduces the research methodology and how it is implemented in this thesis. What is more, the data collection and data analysis are also described in this part.

3.1 Data Collection Methods

In researches the majority of researchers need to collect some primary data to answer their research questions. Once the researcher has decided to collect data through primary sources, s/he has to decide what kind of data collection method to use (Ghuri and Gronhaug 2010, 103). Usually there are two methods, the quantitative method and qualitative method.

The terms quantitative and qualitative are widely used in business and management research to differentiate both data collection techniques and data analysis procedures. One way to distinguish these two methods is to tell whether they are focus on numeric (numbers) or non-numeric (word) data (Saunders, Lewis, and Thornhill 2007, 145).

Quantitative is predominantly used as synonym for any data collection technique (such as a questionnaire) or data analysis procedure (such as graphs or statistics) that generates or uses numerical data. In contrast, qualitative is used predominantly as a synonym for any data collection technique (such as an interview) or data analysis procedure (such as categorizing data) that generates or uses non-numerical data (Saunders et al.2007, 145). In this thesis both quantitative and qualitative methods are chosen as the research choice. This choice is increasingly advocated in researches (Curran and Blackburn 2011).

3.1.1 Quantitative Method

Quantitative methods involve collecting and analyzing objective, numerical data that can be organized into statistics. Surveys and questionnaires are the research instruments. These two are among the most popular data collection methods in

studies (Ghauri and Gronhaug 2010). In this study the author designs a 15-closed questions questionnaire in which each person is asked to respond to the same set of questions in a predetermined order (deVaus 2002). The reasons that a closed questions questionnaire was chosen are as follows:

- It does not take the respondents too much time, only about five minutes.
- It does not require the respondents too much skills and professional knowledge
- It can be spread widely through the internet.

In order to increase the credibility of this research, the author sent the questionnaire to different areas of China through the internet. The respondents are people who have jobs; because they have the experience of buying a house or they are going to buy a house in the very near future. Therefore, they have more understanding of the real estate market.

Although questionnaires may be a very good data collection method, it is usually better to link them with other methods in a multiple-methods research design. Therefore, qualitative method is also used in this study (Saunders et al.2007, 356).

3.1.2 Qualitative Method

Qualitative methods investigate subjective data: the perceptions of people. The intention is to gain deeper knowledge. The qualitative data refers to all non-numerical data or data that have not been quantified, and the quantitative data analysis was undertaken manually (Saunders et al.2007, 470-471).

In this study the author had a 20-minute personal interview with Professor Huang in Nanjing University in China who studies financing and risk management. In the recent years he has mainly studied investment in real estate industry. Because the author is in Finland and Professor Huang is in China, the interview was conducted through a telephone. The author prepared three open questions and discussed them with Professor Huang one by one. This telephone interview results in the author have a better and deeper understanding of his research problems.

3.2 Data Analysis

The quantitative method was conducted by using a questionnaire in this study. Quantitative data are usually associated with numbers and quantitative research tends to emphasize descriptions more. Therefore, the data got from questionnaire are going to be analyzed by SPSS. The data will be transferred into figures or tables and some descriptions will be added to each of them (Ghauri and Gronhaug 2010, 196-197).

A qualitative study was conducted by a telephone interview in this study. Qualitative research tends to be more explorative and unstructured, with emphasis on understanding. Therefore, the data got from interview are going to be analyzed manually (Ghauri and Gronhaug 2010, 196).

3.3 Result of the questionnaire

The questionnaire has 15 questions, and the answers are analyzed below by the author.

Table 1: The age scope of all the respondents

| | | How old are you? | | | |
|-------|-------------------------|------------------|---------|---------------|--------------------|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 21-25 years old | 50 | 57.5 | 57.5 | 57.5 |
| | 26-30 years old | 18 | 20.7 | 20.7 | 78.2 |
| | 31-35 years old | 12 | 13.8 | 13.8 | 92.0 |
| | 36-40 years old | 3 | 3.4 | 3.4 | 95.4 |
| | older than 40 years old | 4 | 4.6 | 4.6 | 100.0 |
| | Total | 87 | 100.0 | 100.0 | |

Table 2: The work age of the respondents

| | | How many years have you worked so far? | | | |
|-------|--------------------|----------------------------------------|---------|---------------|--------------------|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 1-5 years | 60 | 69.0 | 69.0 | 69.0 |
| | 6-10 years | 13 | 14.9 | 14.9 | 83.9 |
| | 11-15 years | 10 | 11.5 | 11.5 | 95.4 |
| | 16-20 years | 2 | 2.3 | 2.3 | 97.7 |
| | more than 20 years | 2 | 2.3 | 2.3 | 100.0 |
| | Total | 87 | 100.0 | 100.0 | |

From Table 1 and Table 2 we can see that among 87 respondents, about 80% are young people, they are less than 30 years old and have worked less than 10 years. About 15% of the respondents are between 30-40 years old and have 11 to 20 years of working experience. Finally, less than 5% of the respondents are more than 40 years old and have more than 20 years of working experience.

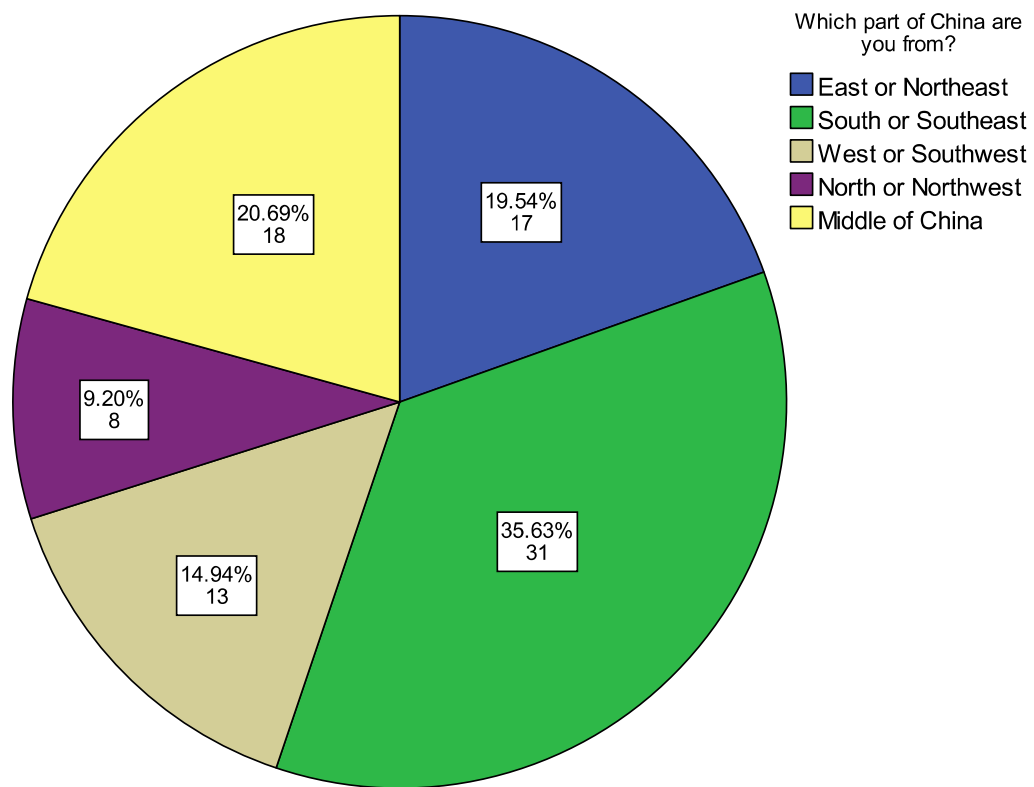


Figure 9: Areas that the respondents come from.

In Figure 9, those specific numbers like 17. 31. 13. 8. 18 are the exact number of respondents in that area; and the percentage numbers are the percentages of local sample population to the total sample population. From this figure it can be seen that the respondents of this research are from all over China, they cover different areas of China, and the numbers of them are relatively equal, not too extreme. This can help the author to better discover the general situation of the current real estate market in mainland China.

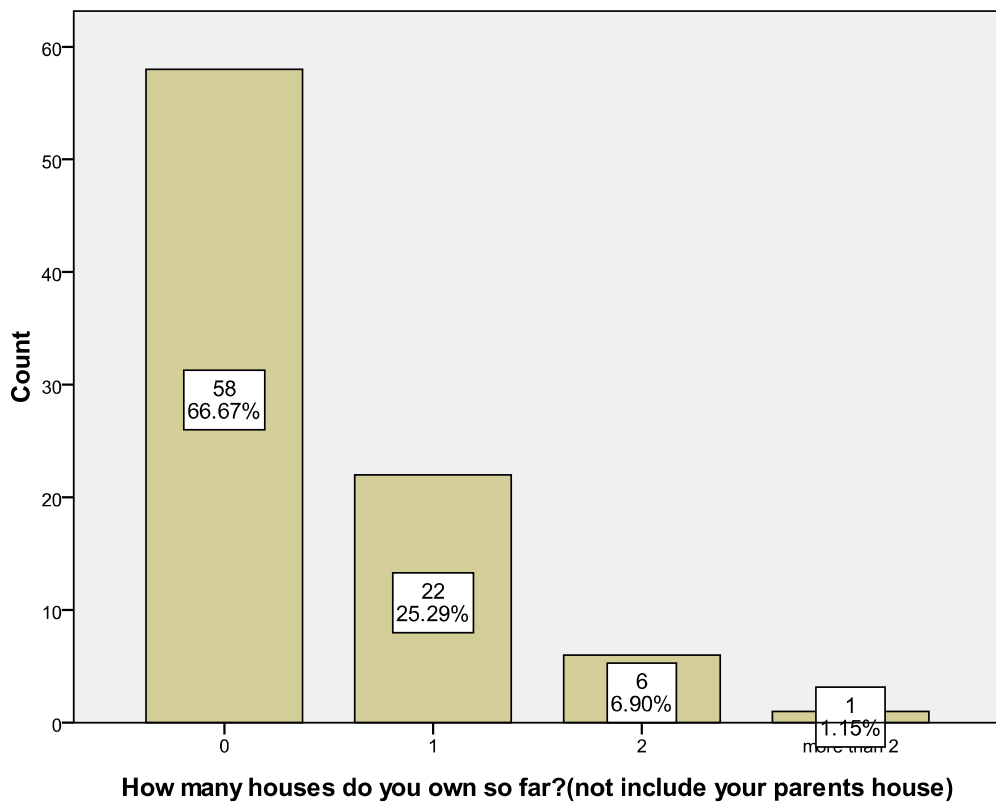


Figure 10: The number of houses that the respondents own so far.

From figure 10 it can be seen that two-thirds of the respondents do not own a house. About 25% of the respondents have a house of their own, and only 8% of the respondents own two or more than two houses.

Table 3: Relationship between age and number of houses they own

How old are you? * How many houses do you own so far?(does not include your parents house) Cross tabulation

| | How many houses do you own so far?(not include your parents house) | | | | Total |
|-------------------------|--------------------------------------------------------------------|-----------|----------|-------------|-----------|
| | 0 | 1 | 2 | more than 2 | |
| How old are you? | | | | | |
| 21-25 years old | 45 | 5 | 0 | 0 | 50 |
| 26-30 years old | 9 | 8 | 1 | 0 | 18 |
| 31-35 years old | 4 | 7 | 1 | 0 | 12 |
| 36-40 years old | 0 | 0 | 2 | 1 | 3 |
| older than 40 years old | 0 | 2 | 2 | 0 | 4 |
| Total | 58 | 22 | 6 | 1 | 87 |

Table 4: The relationship between work age and the number of houses they own

How many years have you worked so far? * How many houses do you own so far?(does not include your parents house) Cross tabulation

| | How many houses do you own so far?(not include your parents house) | | | | Total |
|----------------------------------------|--------------------------------------------------------------------|-----------|----------|-------------|-----------|
| | 0 | 1 | 2 | more than 2 | |
| How many years have you worked so far? | | | | | |
| 1-5 years | 51 | 9 | 0 | 0 | 60 |
| 6-10 years | 4 | 8 | 1 | 0 | 13 |
| 11-15 years | 3 | 3 | 3 | 1 | 10 |
| 16-20 years | 0 | 1 | 1 | 0 | 2 |
| more than 20 years | 0 | 1 | 1 | 0 | 2 |
| Total | 58 | 22 | 6 | 1 | 87 |

In the previous figure (Fig. 10), it can be seen that two-thirds of the respondents do not have a house of their own; the author thinks that it is because most of the respondents are young people. In order to prove his hypothesis, the author makes

two comparisons of age or work age with the number of houses they own (See Table 3 and Table 4).

From Table 3, it can be seen that of the respondents less than 25 years old, only 10% of them own a house; of the respondents among 26-30 years old, 50% of them own their houses; of the respondents among 31-35 years old, 67% of them have a house or more of their own; and respondents over 36 years old, they all have houses of their own. From Table 4, respondents who have less than five years of working experience, only 15% own houses; respondents having 6 to 10 years of working experience, 69 % own houses; respondents having 11 to 15 years working experience, 70 % own houses; and respondents with more than 16 years of working experience, all of them have houses of their own.

These two tables show that the majority of young people who are from 21 to 30 years old are not able to buy a house of their own. But as they grow older and work longer, most of them will gradually have the ability to own a house of their own.

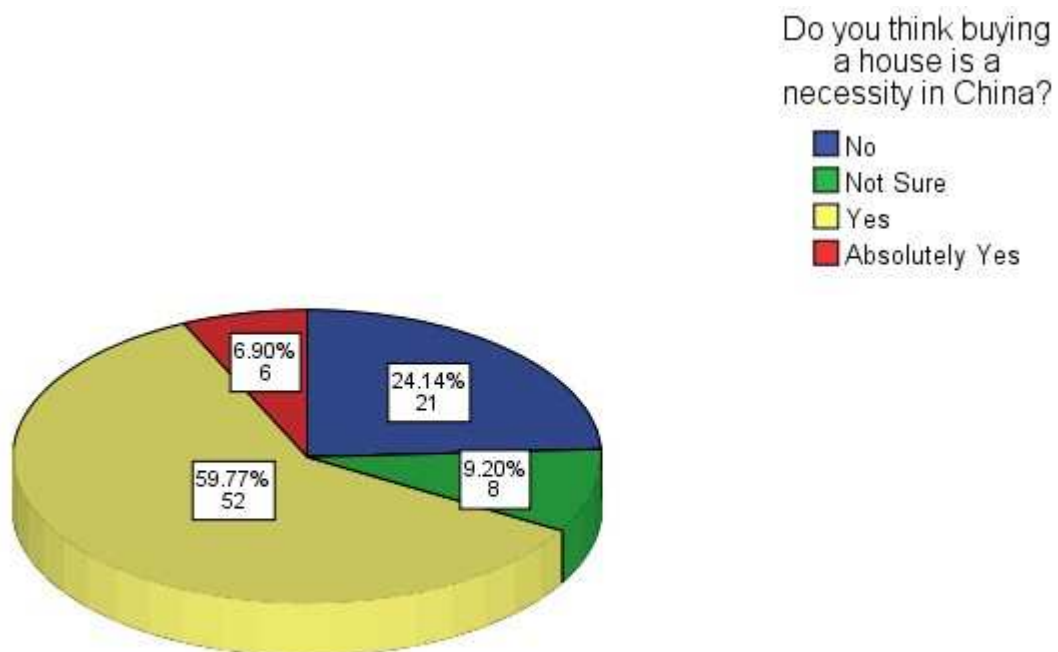


Figure 11: People's opinions about buying houses

In order to study people's views on whether they think it is necessary to buy a house in China, the author made a question on it. From the figure above we can see that 67% (two-thirds) of the respondents think that people must buy a house in their life. Only about 25% (one-fourth) of the respondents think it is not necessary to buy a house in China. This shows that whether young people or middle-aged people or elder people, most still have the Chinese traditional concept: house = home, which increases the demand in China's real estate market.

Table 5: Household's annual salary

What is your household annual salary (Yours or you and your wife's, not including your parents' income) ?

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|------------------------|-----------|---------|---------------|--------------------|
| Valid Below 5000 Euros | 40 | 46.0 | 46.0 | 46.0 |
| 5001-10000 Euros | 32 | 36.8 | 36.8 | 82.8 |
| 10001-15000 Euros | 7 | 8.0 | 8.0 | 90.8 |
| 15001-20000 Euros | 5 | 5.7 | 5.7 | 96.6 |
| More than 20000 Euros | 3 | 3.4 | 3.4 | 100.0 |
| Total | 87 | 100.0 | 100.0 | |

From Table 5 it can be seen that most of these respondents' household salaries are relatively low. About 80% of them earn less than 10000 Euros per year. However, the housing prices are very high, which will be discussed later. So, low household income may also be a reason that 67% of the respondents cannot afford to buy a house (see figure 10).

The relationship between household annual income and houses they own

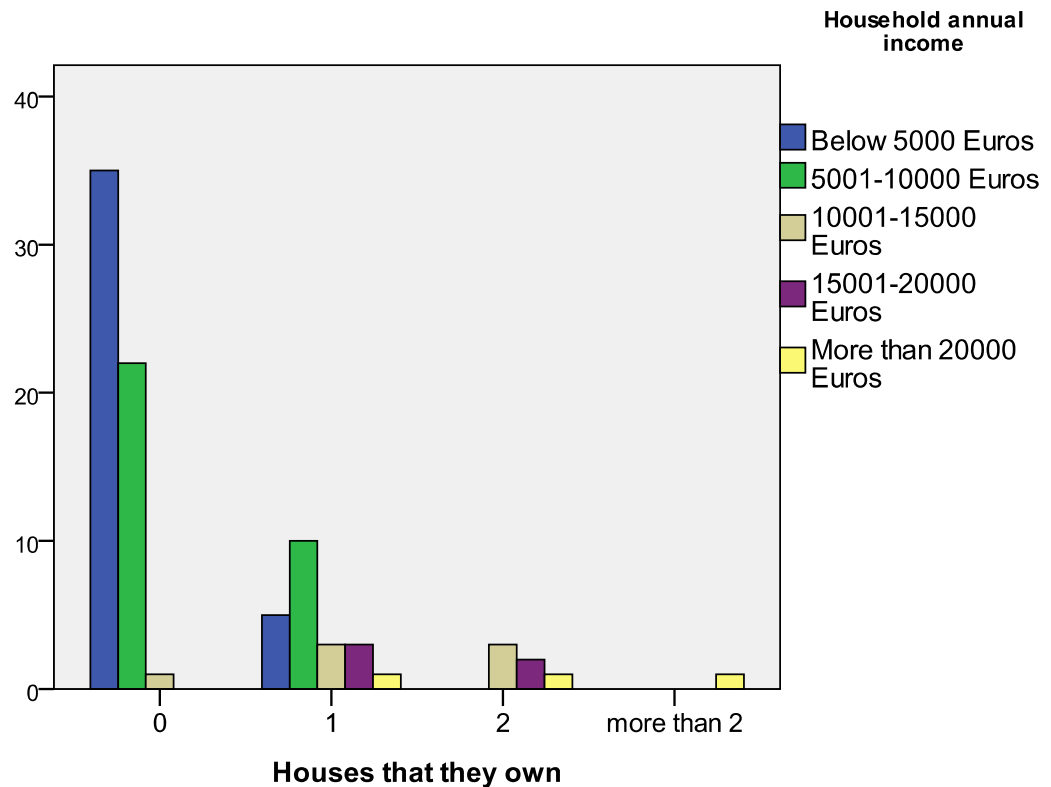


Figure 12: Relationship between household annual income and houses owned.

In order to verify that the number of houses people own has a positive relationship with their household income, the author made a cross tabulation (see Figure 12). From this figure it can be seen that among those who do not own a house, most have an annual income of less than 10.000 Euros. Those who own two houses, their household annual incomes are definitely over 10.000 Euros. And those who have more than two houses, their household incomes are more than 20.000 Euros per year.

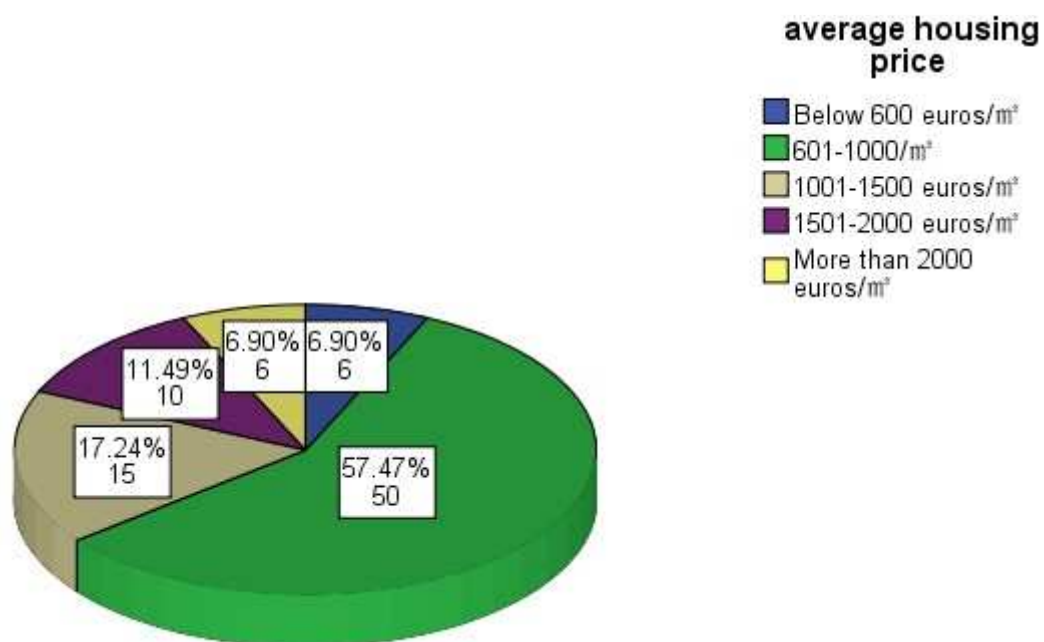


Figure 13: The average housing prices across China.

As mentioned in Figure 9 the respondents of this research are from all over the country, they cover different areas of China. Some of them are from small towns; some of them are from middle-sized cities, and some of them are from big cities like Beijing, Shanghai and Shenzhen. As a result the housing prices vary from less than 600 Euros/m² to more than 2000 Euros/m². From this figure it can be seen that in most cities the housing prices are between 601-1000 Euros per square meters, and in the major cities the housing prices may be a little higher, from 1000 to 2000 Euros per square meters, and in the very big cities like Beijing Shanghai and Shenzhen, housing prices are more than 2000 Euros per square meters. These figures (primary data) perfectly match the author's general knowledge and the secondary data got.

From Table 5 it can be seen that 46% of respondents, their household annual income are less than 5000 Euros; 36.8% of the respondents, their household annual incomes are from 5001 to 10000 Euros. The author picks their means respectively 2500 Euros and 7500 Euros. From figure 13 it can be seen that in most cities of China the housing prices are from 601 to 1000 Euros per square meters. The au-

thor picks its mean as 750 Euros per square meters. If they want to buy a 100-square meter house (see Figure 14), the price to income ratio will be:

$$P/I(1) = 750 \text{ €/m}^2 * 100 \text{ m}^2 / 7500 \text{ €} = 10$$

$$P/I(2) = 750 \text{ €/m}^2 * 100 \text{ m}^2 / 2500 \text{ €} = 30$$

So the price to income ratio is 10-30, which far exceeds the international standard 3-6. The bigger the city is, the higher the ratio will be. What is more, the “Income” should be disposable income while the author used their total income, so the actual P/I ratio could be higher than 10-30.

10-30 means people in these cities will spend their 10-30 years of household income in order to purchase a 100 m² house.

Note: Disposable Income = Total Income of Households - Income Tax Payable - Personal Expenditure on Social Security - Sample Household Subsidy for keeping Dairies.

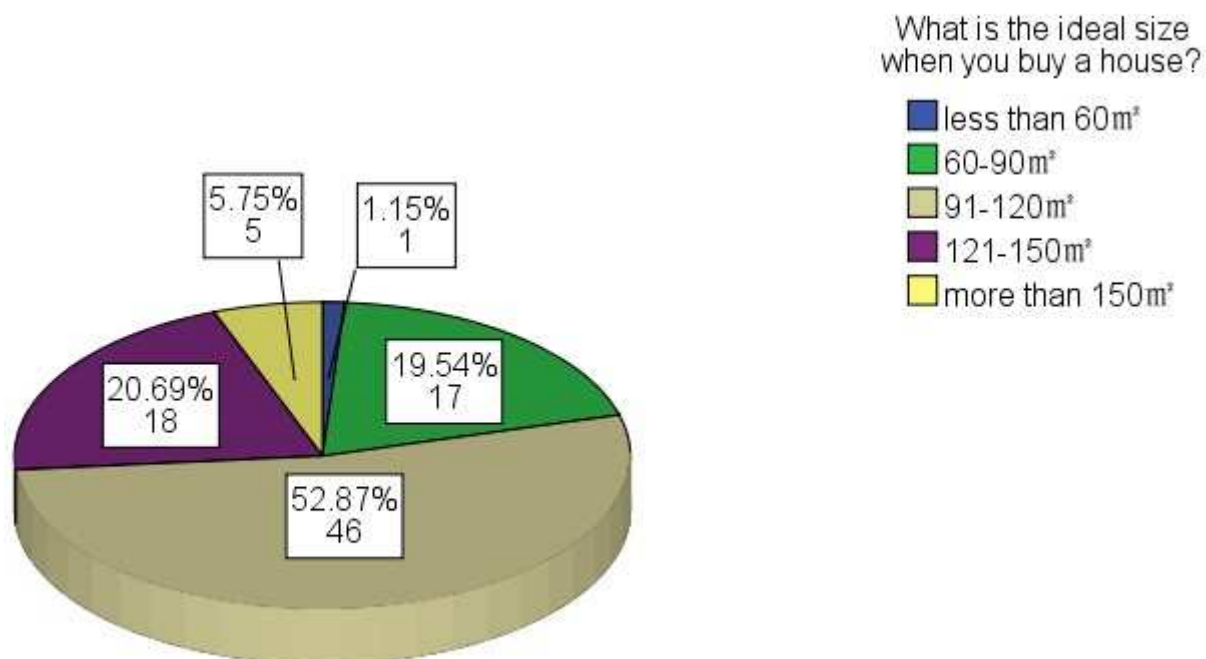


Figure 14: People’s ideal house size when they buy a house.

The average housing price in different areas of China

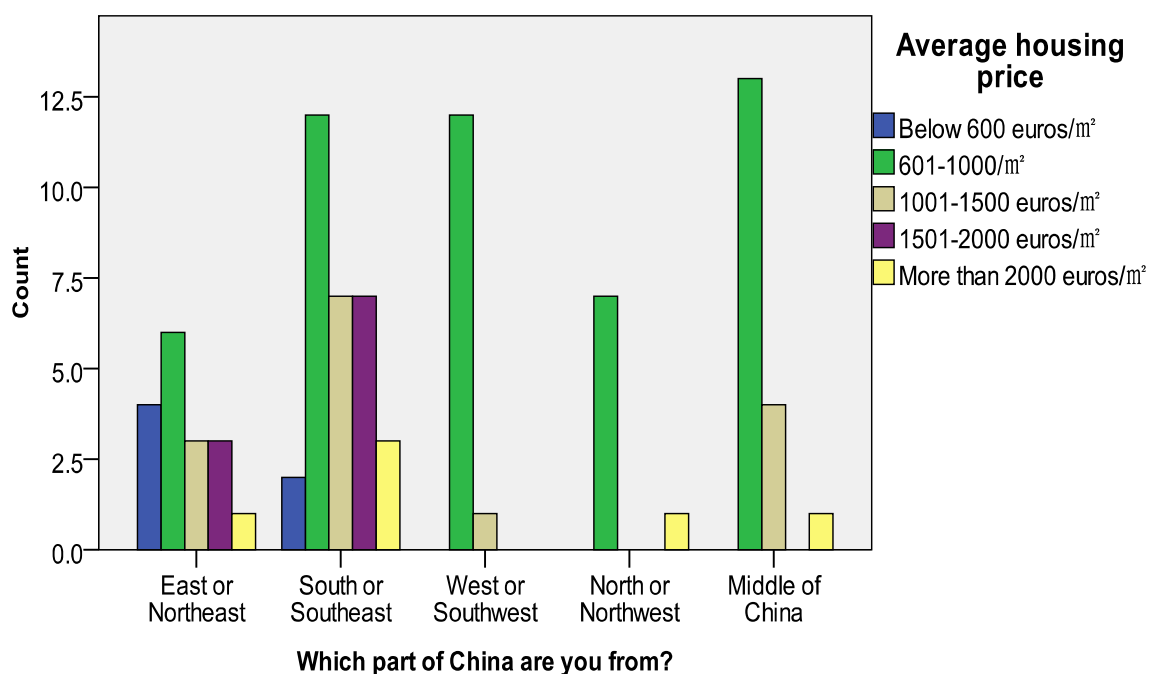


Figure 15: The average housing prices in different areas of China.

In order to understand general situation of housing prices all over China, the author made a cross tabulation (as shown in Figure 15). From this figure it can be seen that in the coastal areas like east, south and southeast part of China, the average housing prices are higher than that in western or northern parts of China.

Table 6: The average rent price in different areas in China.

What is the average renting price in your city (apartment for 1-2 person(s))?

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------------------------|-----------|---------|---------------|--------------------|
| Valid Below 100 euros/month | 30 | 34.5 | 34.5 | 34.5 |
| 101-200 euros/month | 45 | 51.7 | 51.7 | 86.2 |
| 201-300 euros/month | 8 | 9.2 | 9.2 | 95.4 |
| 301-400 euros/month | 4 | 4.6 | 4.6 | 100.0 |
| Total | 87 | 100.0 | 100.0 | |

From Table 6 it can be seen that 34.5% of the respondents say that the renting prices are lower than 100 Euros/month, and 51.7% of the respondents say that their renting prices are 101-200 Euros/month. Altogether they account for 86.2 % of the total sample population. This seems to be in an acceptable level to most people based on their household income. However, if comparing their income with the housing prices, most of them (about 90%) think that the housing prices are expensive or very expensive (as shown in Table 7). So, most of them (about 86%) will apply for a mortgage loan if they want to buy a house (as shown in Table 8).

Table 7: People's opinions about the housing prices according to their household income

What do you think of the housing prices in your city compared to your income?

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|----------------------|-----------|---------|---------------|--------------------|
| Valid Very expensive | 38 | 43.7 | 43.7 | 43.7 |
| Expensive | 41 | 47.1 | 47.1 | 90.8 |
| Acceptable | 6 | 6.9 | 6.9 | 97.7 |
| Cheap | 2 | 2.3 | 2.3 | 100.0 |
| Total | 87 | 100.0 | 100.0 | |

Table 8: The way people finance themselves when they buy houses.

How do you finance yourself when you are ready to buy a house?

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------------------------------------|-----------|---------|---------------|--------------------|
| Valid own savings | 6 | 6.9 | 6.9 | 6.9 |
| own savings+ parents money | 6 | 6.9 | 6.9 | 13.8 |
| own savings+ bank loans | 45 | 51.7 | 51.7 | 65.5 |
| own savings+ parents 'money+ bank loans | 30 | 34.5 | 34.5 | 100.0 |

How do you finance yourself when you are ready to buy a house?

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------------------------------------|-----------|---------|---------------|--------------------|
| Valid own savings | 6 | 6.9 | 6.9 | 6.9 |
| own savings+ parents money | 6 | 6.9 | 6.9 | 13.8 |
| own savings+ bank loans | 45 | 51.7 | 51.7 | 65.5 |
| own savings+ parents 'money+ bank loans | 30 | 34.5 | 34.5 | 100.0 |
| Total | 87 | 100.0 | 100.0 | |

What is or the estimated the proportion of your mortgage loans to your household income each month?

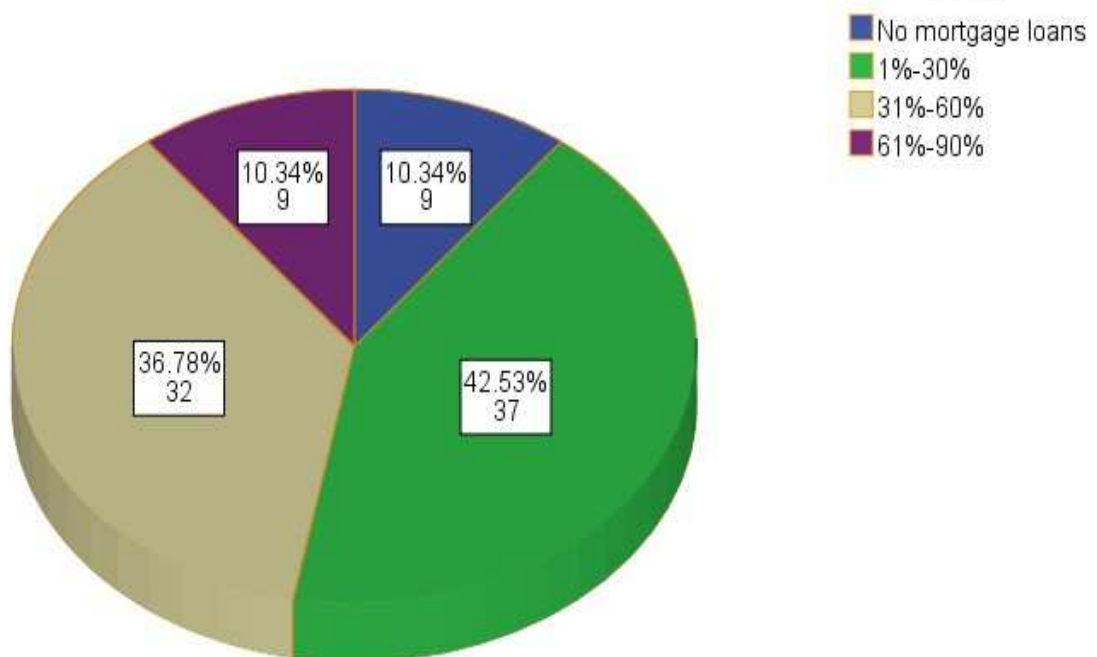


Figure 16: Proportion of mortgage loans to household income each month.

As mentioned before, about 86% of the respondents need a mortgage loan from a bank when they buy a house. From this figure, we can see that about 10% of the respondents say that they would prefer a one-time payment, in other words they do not need a mortgage loan. About 42% of the respondents say that their monthly mortgage accounts for less than 30% of their monthly household income. About

37% of the respondents say that their monthly mortgage accounts for 31%-60% of their monthly household income. And another 10% of the respondents say that their mortgages are as high as 61%-90% of their monthly household income. In China the government suggests its citizens to control their monthly mortgage to no more than 50% of their monthly income, and in countries like the United States, they suggest their citizens to control the mortgage loans within 35% of their monthly income. Because if people pay too much mortgage loans every month, they will have very little capability to consume other things and this will reduce their quality of life. What's more, if the majority of citizens cut their consumption, the enterprises will cut their production, which will lead to a massive unemployment and depression of the national economy.

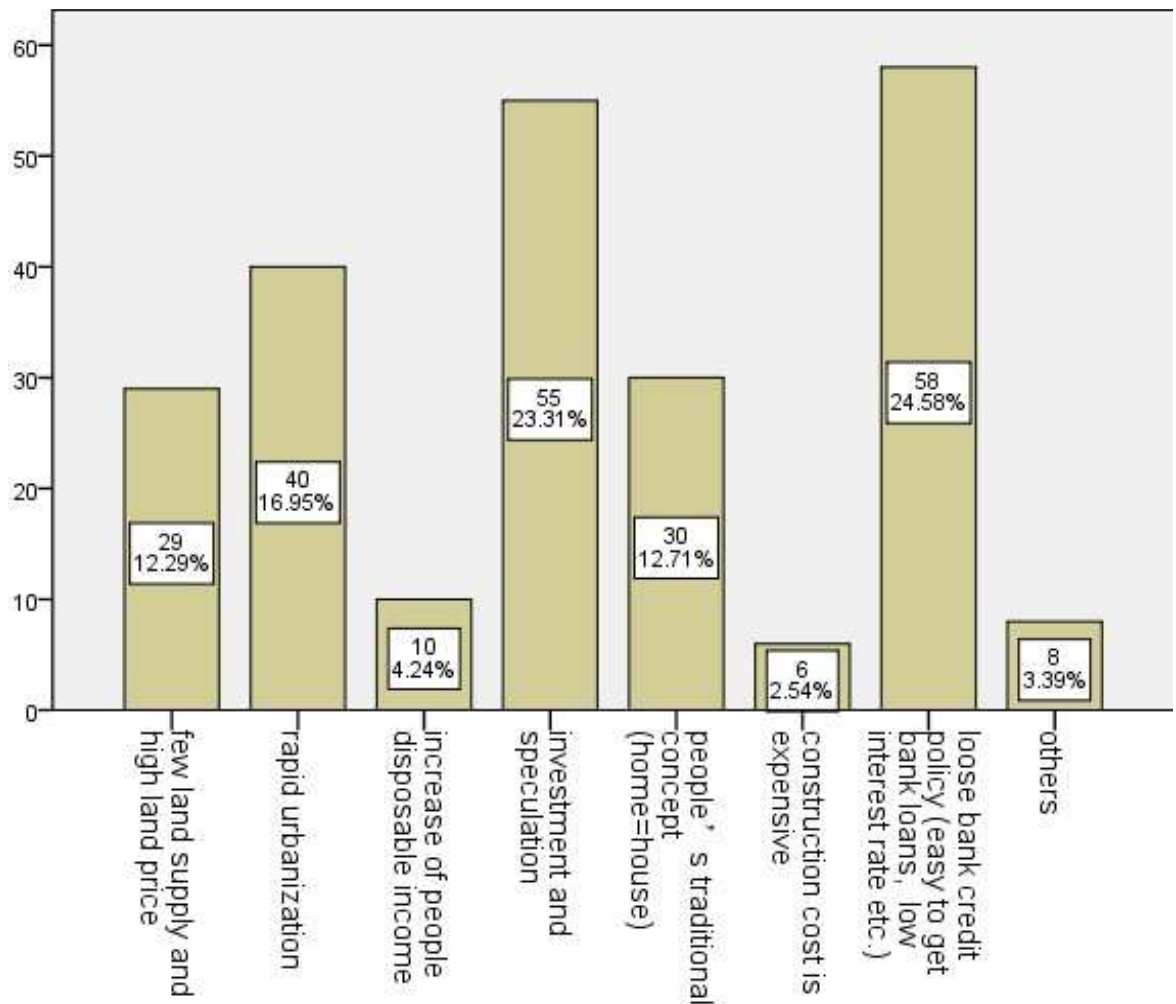


Figure 17: Main reasons that housing prices are high.

In order to know the main reasons for the high housing prices in mainland China, the author made multiple-choice questions to the respondents in order learn their opinions about it (as shown in Figure 17). They think that loose bank credit policy, speculation in the real estate market and rapid urbanization are the top three reasons to cause high housing prices in China. The least of them think that the high housing prices are due to expensive construction cost.

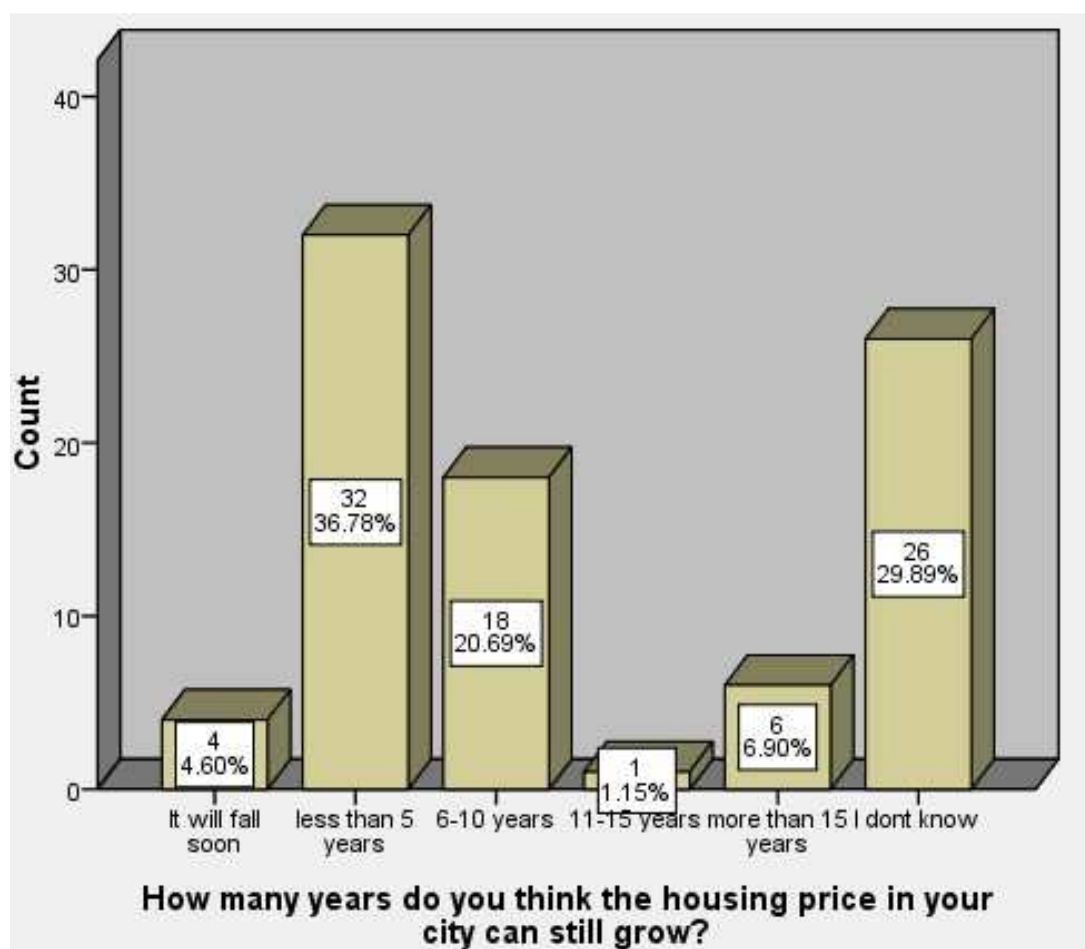


Figure 18: People's opinion about the future of housing prices.

Although most people think that the current housing prices are very expensive to them (see Table 7), from figure 18 we can see that very few of them (less than 5%) think that the prices will fall soon. More than 50% of them think that the prices can still grow five years or even longer to ten years. In a few cities, people

think their housing prices can grow as long as 15 years or longer. Finally, about 30 % of the respondents say that they have no idea about the future of housing prices in their cities.

3.4 Result of the Personal Interview

Because the author is in Finland and professor Huang is in China, this personal interview was conducted by telephone. In order to make this interview not last long and still be efficient, the author prepared three open questions in advance.

1). What kinds of factors are pushing the housing prices in China higher and higher?

The reasons can be various, but he mainly talked from four aspects: the land policy in China; urbanization; speculation and the credit policy of banks.

The land policy: He said in China the land belongs to the central government and the central government gives the right to all local governments that they can sell the land and all the sales revenue belong to these local governments themselves. What's more, Chinese people cannot build houses by themselves in urban areas; they must buy houses from the property developers and the developers buy land from local governments. He also mentioned the sales of land were through auction, that is to say the one who bids the highest price gets the land. Because the real estate industry in China is really profitable, many property developers are willing to pay a high price to buy land. The land cost could be as high as 50 to 60% of the total housing prices. The land has been a significant source of financial revenue to many local governments. He said that land profits could account for as much as two thirds of many local governments' revenue. Therefore, the governments are not willing to let the housing prices down.

Urbanization: In this part of the discussion he mentioned that the urbanization rate in China was still lower than most countries in the world, so in order to stimulate the economic growth, the Chinese government is promoting the process of urbanization largely. He said each year more than 20 million people are moving from rural areas to cities, and every year more than 5 million college graduates hunt for

jobs in cities. So, these people increase the demand for houses in the cities, especially in big cities.

Speculation: He told me that in China people speculate on many things, like stock, real estate and luxury goods. But in the recent years, due to the instability in stock market, real estate has become the first choice to many speculators. In the last decade the price of real estate kept rising, even when there was a drop in 2008, but in 2009 the price went up again. Almost every speculator has made profits from real estate till now, and it is regarded as a low risk and high return investment. So the speculation is also a driving force of high housing prices in China.

Bank policy: He said banks also needed to be responsible for the high housing prices in China. In China most banks are commercial banks, and in order to enlarge their business and make more profits they give too many loans to property developers and ordinary citizens. When developers get these loans, they have more money to maintain the high price for rather a long period, in other words, if they do not get the loans so easily, they would probably bring down their housing prices, because they need to sell their houses as soon as possible to get more cash to operate their real estate companies. When citizens can get mortgage loans so easily, most people who cannot afford a house before now can buy one through a mortgage loan, so the demand for houses increases. Therefore, the housing prices go up accordingly.

2). Will the housing prices keep going up and how long will it last?

Professor Huang said that this was a good question but at the same time it was also a hard question. Whether there is a bubble in China's real estate market, and if there is, when will the bubble burst? These questions have been discussed and argued by economists, academic professors, property developers, politicians or even ordinary citizens for several years. Now he can be sure that the housing bubble really exists in most big and middle sized cities, but he cannot be sure when will the bubble burst and he thinks that no one can give a 100% accurate answer to this question. He also mentioned some predictions by real estate experts in the previous years, but in the end those predictions were all proven to be wrong. Finally

he said that although he could not predict how long the bubble could last, he is sure that the consequences will be very serious when the housing bubble burst, it will harm many other industries and lead to massive unemployment and many commercial banks will be in big troubles.

3). With what kind of strategies can we ensure that more and more people have houses to live in the cities?

About this question Professor Huang said there were plenty of suggestions to the governments or to the public. First he mentioned what the central government and local governments had done: increase the down payments of first and second houses, households are forbidden to buy a third house, increase the interest rate, set up a upper limit to the housing prices in some regions. However, these strategies may be only efficient in a short term. In a long run, he suggested we should try the following strategies:

1. As the land costs always account for 50-60% of the total housing prices, if the land costs came down, the total housing prices would come down accordingly. But as the land revenue is the main revenue to local governments, and if this revenue is cut, they will not have enough capital to develop their local economies. In other words, the local governments are relying too much on the land revenue. So he suggested the central government could provide various channels for local governments to get fund, not just by selling land. And what is more the land is a limited resource; it will be sold out sooner or later.
2. The central bank should require the commercial banks to tighten their credit policies, cut the loans to real estate market and have stricter credit evaluations to those who want to get bank loans. This strategy can reduce the housing bubble and decrease the risk of China's banking system.
3. Those who cannot afford a house so far should be encouraged to rent houses instead of borrowing money from parents or applying for mortgage loans from banks. These people include college graduates and low income workers. They can choose to rent houses for several years and when they have enough money, they

can buy their own houses. This strategy will largely reduce the current housing demand. If banks cut some loans of property developers and citizens stop buying houses, the high housing prices will not last long, because those developers need capital to run their companies and the only way is to reduce the prices and sell their properties as soon as possible.

4. The central government should require each local government to build some affordable houses and small sized houses each year, which are called government-subsidized houses. These houses could be used to rent or to sell to low income people. Of course, the governments have to make strict evaluation rules to identify who is qualified to rent or buy these houses.

5. Finally, Professor Huang talked about the small and middle sized enterprises in China. He said that nowadays these enterprises were in a difficult situation. In the coastal areas a large number of entrepreneurs have shut down their companies, which has caused massive unemployment and lots of idle capital flow into the real estate market. This capital should be used in the real economy, but currently they find doing business is much harder and earns less than investing in the real estate market. So in this situation, the central government should publish some policies to encourage and support those entrepreneurs to get back to their business. On the one hand, they can create much employment, and on the other hand, the idle money can be drawn from real estate market to reduce the housing bubble.

In the end, Professor Huang stressed that strategies were easier said than done. The most important strategy is that the governments can put each useful suggestion into practice. He described the housing problem as a long term battle, and he hoped the Chinese government can deal with it carefully and patiently.

3.5 Validity and Reliability

Validity refers to the degree to which a study accurately reflects or assesses the specific concept that the researcher is attempting to measure. In other words, it focuses on the truth of the data. Reliability is concerned with the accuracy of the actual measuring instrument or procedure; it is the extent to which an experiment,

test, or any measuring procedure yields the same result on repeated trials (Colorado State University 2011)

In this research both quantitative and qualitative methods have been used to collect the data. The quantitative method was conducted by a questionnaire with 87 respondents. All the respondents were those who had the experiences of buying a house or who were going to buy a house very soon, so they must know the real estate market in China very well. And each respondent answered to all the questions in the questionnaire, there was no missing data and all the data are valid. These all show the validity of this research. The qualitative method of study was conducted through a personal interview; the interviewee was a college professor who has studied this area for several years. The author thought his professional knowledge could increase the validity of this research. In order to show the reliability of this research, the author also referred to lots of secondary data from previous studies, and he found that the data he got from these two empirical methods were much similar to the information from previous studies. Therefore, this research is also reliable.

4 CONCLUSIONS

4.1 Summary of this thesis

This thesis mainly talks about the current dilemma in the Chinese real estate market and the strategies to deal with this dilemma.

In order to complete this thesis, the author referred to lots of previous studies in real estate from books, articles and internet news as secondary data. The theoretical study mainly talks about the general situation of the real estate market in mainland China, from its history to the current situation, from the reasons of high housing prices to the real estate bubble, and also compares China's housing bubble with other housing bubbles that have happened in the world, such as the U.S. housing bubble, the Japanese housing bubble, and the Hong Kong housing bubble. Both quantitative and qualitative methods are used in the empirical part of the study to collect primary data. Data are conducted by a questionnaire and a personal interview respectively. From the results of the questionnaire, a more direct, clearer and updated information can be obtained on the current situation of China's housing prices and its influence on people's lives. In the personal interview, the interviewee gives several personal suggestions to deal with the real estate dilemma in mainland China. The suggestions include cutting the land cost, tightening credit policies of Chinese commercial banks, encouraging people rent houses instead of buying houses mostly through a mortgage loan, building more government-subsidized houses for those low income people, encouraging and supporting entrepreneurs to invest their capital in the real economy, instead of speculating in the real estate market.

As a conclusion of this thesis, the reasons of high housing prices and housing bubble in mainland China are various, which include rapid urbanization, fast economic growth, traditional concept about houses, speculation, loose bank credit policy and high land prices. When China's housing bubble will burst is unpredictable, but the consequences of it will be very serious. Therefore, both the government and the public should pay more attention to the real estate problem in mainland China, because it not only concerns people's daily life but also concerns the

sustainable development of the national economy and what is more, it concerns the stability of the whole country.

4.2 Suggestions for future research

Although the author spent lots of time in completing this thesis, he still has some suggestions for future research in a similar area.

In this research, there are 87 respondents answering the questionnaire. In a future research he hopes there can be more responses nationwide, perhaps 500 to 1000. This can increase the validity of the research result.

This research talks about the dilemma of real estate market in the whole mainland China, which as a topic is still big. In future research, the researcher can limit the target within one city or one area, for example, the eastern part of China, or the western part of China.

In the empirical part of this research, the qualitative part was conducted by a personal interview, and the interviewee was a college professor. In the future research, there could be more professionals involved in the interviews. For example, the researcher could also discuss his research problems with a property developer, a banker or a governmental official. The opinions from different professionals can make the primary data more various and more reliable.

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Questionnaire

Dear all, this is an anonymous questionnaire about the real estate market in China. All your information are confidential, they are only used for the author's personal analysis. It will take you about 5 minutes. Thank you for your kind cooperation!

1. How old are you?

- a. 21-25 years old b. 26-30 years old
 c. 31-35 years old d. 36- 40 years old e. older than 40

2. How many years have you worked so far?

- a. 1-5 years b. 6-10 years c. 11-15 years
 d. 16-20 years e. more than 20 years

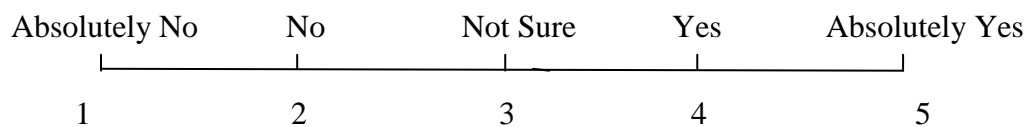
3. Which part of China are you from?

- a. East or Northeast b. South or Southeast
 c. West or Southwest d. North or Northwest
 d. Middle of China

4. How many houses do you own so far? (Not include your parents' house)

- a. 0 b. 1 c. 2 d. more than 2

5. Do you think house is a necessity in China?



6. What is your household annual salary? (Yours or you and your wife's, not include your parents' income)

- a. Below 5000€
- b. 5001-10000€
- c. 10001-15000€
- d. 15001-20000€
- e. More than 20000€

7. What is the average housing prices in your city?

- a. Below 600€/m²
- b. 601-1000€/m²
- c. 1001-1500€/m²
- d. 1501-2000€/m²
- e. More than 2000€/m²

8. What do you think of the housing prices in your city compared to your income?

- a. Very expensive
- b. Expensive
- c. Acceptable
- d. Cheap
- e. Very cheap

9. What is the average renting price in your city (apartment for 1-2 person(s))?

- a. Below 100€/month
- b. 101-200€/month
- c. 201-300€/month
- d. 301-400€/month
- e. more than 400€/month

10. What is the ideal size when you buy a house?

- a. less than 60 m²
- b. 60-90 m²
- c. 91-120 m²
- d. 121-150 m²
- e. more than 150 m²

11. How do you finance yourself when you are ready to buy a house?

- a. own savings
- b. own savings+ parents' money
- c. own savings+ bank loans
- d. own savings+ parents' money+ bank loans

12. What is or the estimated the proportion of your mortgage loans to your household income each month?

- a. No mortgage loans
- b. 1%-30%
- c. 31%-60%
- d. 61%-90%
- e. More than 90%

13. What is your main purpose to buy a house?

- a. For own living
- b. For marriage
- c. For investment
- d. In case the price will go up in the future
- e. I don't know
- f. Others_____

14. What kind of reasons do you think are the main reasons to cause the high housing prices in China? (Multiple-choices)

- a. few land supply and high land price
- b. rapid urbanization
- c. increase of people's disposal income
- d. investment and speculation
- e. people's traditional concept (home=house)
- g. construction cost is expensive
- f. loose bank credit policy (easy to get bank loans, low interest rate etc.)
- h. others_____

15. How many years do you think the housing prices in your city can still grow?

- a. It will fall soon
- b. less than 5 years
- c. 6-10 years
- d. 11-15 years
- e. more than 15 years
- f. I don't know

Thank you for your valuable time and wish you have a nice day!

问卷调查 2011-5

尊敬的各位朋友，这是一份无记名的问卷调查，您的所有信息都受到作者的保护和保密，所得数据只用作论文分析。请您抽出宝贵的 5 分钟完成这份问卷，感谢您的友好合作！

1. 您的年龄：

- a. 21-25 岁 b. 26-30 岁 c. 31-35 岁
d. 36-40 岁 e. 大于 40 岁

2. 您到目前为止已经工作了几年？

- a. 1-5 年 b. 6-10 年 c. 11-15 年
d. 16-20 年 e. 长于 20 年

3. 您目前工作在中国的哪个地区？

- a. 东部或东北 b. 南部或东南 c. 西部或西南
d. 北部或西北 e. 华中地区

4. 您现在所拥有的房产是（不包括您父母，亲戚的房产）：

- a. 0 套 b. 1 套 c. 2 套 d. 大于 2 套

5. 您同意中国人一生必须要买房这种看法吗？

- a. 绝对不同意 b. 不同意 c. 不知道
d. 同意 e. 绝对同意

6. 您目前的家庭年收入大约为（单身或情侣，夫妻收入和，不包括父母，亲戚的收入）

a. 5 万元以下 b. 5-10 万 c. 10.1-15 万

d. 15.1-20 万 e. 大于 20 万

7. 您所在城市的平均房价大约为：

a. 低于 6000 元/m² b. 6000-10000 元/m² c. 10001-15000 元/m²

d. 15001-20000 元/m² e. 大于 20000 元/m²

8. 根据您的家庭收入，您觉得您所在城市的房价：

a. 非常贵 b. 比较贵 c. 可以承受

d. 便宜 e. 非常便宜

9. 如果在您的城市租一套够 1-2 人住的房子，每月的租金大约为：

a. 1000 元以下 b. 1000-2000 元 c. 2001-3000 元

d. 3001-4000 元 e. 4000 元以上

10. 如果您要买房，您的理想面积是多大？

a. 60 m² 以内 b. 60-90 m² c. 91-120 m²

d. 121-150 m² e. 150 m² 以上

11. 如果您买房，您的付款方式是：

- a.自己积蓄一次性付清
- b.自己积蓄+父母赞助一次性付清
- c.自己积蓄+银行按揭贷款
- d.自己积蓄+父母赞助+银行按揭贷款

12. 您目前或将来预计房贷占家庭收入的比重是多少？

- a. 不用贷款
- b. 1-30%
- c.31-60%
- d. 61-90%
- e.超过 90%

13. 您买房的主要目的是：

- a.自住
- b.为结婚而买的
- c.用于投资
- d.现在不买以后会更贵
- e.不知道
- f.其他

14. 您认为中国城市房价上涨的主要原因有哪些？（可多选）

- a.土地供应短缺而且地价很贵
- b.城市化进程加快，使得城市住房需求增加
- c.人均可支配收入增加，所以房价水涨船高
- d.由于炒房客的炒作而哄抬房价
- e.人们的传统观念：有房才有家，从而增加需求
- f.建筑成本高
- g.银行的宽松信贷政策，使得大量游资进入房市，造成楼市泡沫，且银行以各种方式吸引人们贷款，为炒房客提供便利。
- h.其他

15. 您认为您所在的城市房价还能上涨多久？

a.很快就会下降

b.1-5 年

c.6-10 年

d.11-15 年

e.长于 15 年

f.不清楚

感谢您的宝贵时间，祝您和家人度过愉快的一天!

Personal Interview (through telephone)

The interviewee is Professor Huang from Nanjing University in China who studies financing and risk management. In the recent years he mainly studies investment in real estate industry. The author made a 20 minutes telephone interview with Professor Huang to get the answers of the following questions.

1. What kinds of factors are pushing the housing prices in China higher and higher?
2. Will the housing prices keep going up and how long it will last?
3. What kind of strategies can we make to ensure more and more people have houses to live in the city?