Public Rental Housing Development in China
Master of Science thesis

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Abstract

In recent years, along with the soaring housing price level, housing problem in China turned out to be in the spotlight more than ever before. With the high housing price, low and moderate-income families find it very difficult for them to buy their own dwelling. In order to meet the needs of low and moderate-income families and lessen the overheating, Chinese government carried out some plans, one among which was the Public Rental Housing program. Public Rental Housings mostly serve for low and moderate-income family to live, with a lower rent than market rent on the same condition. And there are other limits or drawbacks such as monitoring and housing register problem. Details of the limits differ from city to city. In this thesis, public renal housing project in Chong Qing, the first city implemented public rental housing to a great extent in China will be studied. Market analysis on both demand side and supply side is carried out to examine the influence on residential market and whether public rental housing can ease the overheating in residential market. A questionnaire is used to study public acknowledgement and satisfaction with public rental housing projects in Beijing (for convenience). The finding is: current public rental housing can ease the market but this policy requires better financing resource, subsidy policy to backup, monitor system and more involvement of society resources.
Acknowledgement

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Last but not least, I wish to thank my parents who have always believed in me and supported me.

April 11, 2011
Title: Public Rental Housing Application in China  
——Comparative study with PRH Scheme in other countries

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1. Introduction

1.1 Background

The real estate market in China grew at the fastest pace in the recent two years, with housing prices rising at a double digit rate, despite the government's cooling-down moves and in the circumstance of a tremendous financial crisis. Even families with moderate-income may find it very difficult to buy their own dwelling. Therefore, to prevent real estate market from overheating and to deal with the structural imbalance in the residential housing market, the Chinese government implemented several social housing program, including Price-limited dwelling (mainly for moderate income), Affordable Housing (mainly for low-moderate income), and Low-rent dwelling (mainly for low-income and unemployment), and also the new scheme “Public Rental Housing” (PRH). This PRH scheme is the first attempt to use non-ownership housing to solve the housing problem of people, mainly focusing on relieving the accommodation stress of local young staff and migrant workers who have relatively low income. Recently Beijing and other major cities in China have turned out to be very expensive cities to work and live. Apparently, new graduates and migrant workers are unlikely to be able to afford the expensive living costs in the first few years. In order to keep the attractiveness of the cities and obtain enough human resource to serve the development need of these cities, the PRH Scheme is designed to providing governmental assistance so that promising workers on low incomes are able to find accommodation, and calm down the overheated real estate market to some extent. It is a temporary and transitional arrangement as the tenancy period is strictly limited.

On the other hand, the public housing schemes in EU and some other Asian countries are quite mature. Although homeownership becomes more popular in EU (Gwin.C and Ong. S, 2008), this trend won't change the fact that the rental housing market plays an irreplaceable role in providing accommodation for households unable or unwilling to access homeownership. (Lee. J and Yip. N, 2006). Social rental housing (SRH) in European countries, which are mainly provided by state governments, local authorities and non-profit organizations, has similarity with the Chinese Public Rental Housing Scheme. With the promotion of Public Rental Housing concept, a tendency of Public Rental Housing construction appeared in large cities in China.
As we know, PRH Scheme is still a new concept in China. The earliest program has been implemented only for one year, so there is no much empirical data and research of Chinese case. The general objective of the thesis is the application of public rental housing market in China. This paper aims to analyze the public rental housing market in China and generate some principles through a conceptual and comparative study of some successful cases in Asia, for example Singapore and Hong Kong. In comparative study, the thesis supposes to explain related issues such as subsidies, rent regulation, target group, comparison of current status of rental housing markets, demand and supply for public rental housing, finance policies, land fiscal situation, rental regulations and so on. After the comparative study, this essay attempts to interpret whether this public rental housing program can ease overheating in residential housing market and if this can satisfied the tenant's need, and giving up land fiscal policy, more house use limitation and further managerial improvement are possible solutions by interviewing some managers, doing questionnaires survey about consumer behavior. Some of the variables influencing the demand and the supply of the public rental housing will be tested and attempted to regress a model. Through comparative empirical study and some related quantitative research from customers and developers, the future of public rental housing program in China can be explored more persuasively.

1.2 Objective

The objective of the project is the application of public rental housing market in China by case study, analysis and comparison study with other social housing projects. Through researching the current public rental housing project in China, certain rules can be revealed and whether this public rental housing project could work in China would be explored.

1.3 Methodology

The paper gives an overview on how this public rental housing program have succeed in some countries and applies these principles to Chinese case. This paper uses a qualitative method for the comparison study, based on literature review and some quantitative data on the current on-going public rental housing program in China. The research process structure will be inductive and ideographic methods will be used:

- Face-to-face interview with two managers
• Questionnaires: will be distributed to graduates and migration workers since they are the main target group according to the official statement. The method of collecting questionnaires is mainly by telephone or internet-based survey. In order to get large numbers of sample, sending questionnaires in my former university by co-working with the student union is one solution.

• Review of existing case studies

• Literature research

Data are collected from online databases, literatures, and official statistics from National Bureau of Statistics of China for example. The data will cover property investment, construction cost, personal saving per capital, GDP and CPI, etc. Based on these data, analysis will be conducted to figure out the real estate price mechanism and then explore the importance of housing policy. Moreover, gathering first-hand data from interviews and questionnaire is also an important part. Sampling should operate among housing developers, customers and authorizers. It is important to optimize objectivity by:

• Using different research methods of data gathering

• Validating the theoretical research findings with empirical research data

• Correlating the findings with existing studies and data

Policy and regulation terms are summarized from released and unreleased articles as well as government websites.

The initial hypothesis for the customers is “the public rental housing program can meet their need”. Interviews and questionnaire could be used to test the hypothesis. Potential variables like rent, housing amenities, location, qualification condition, subsidy and so on, which could influence the behavior of target group will be investigated during the survey. In order to get effective statistic data, the target group should be identified precisely at first, and then the demand and supply could be estimated at that base. Then, the form of collecting information is also important, on-line questionnaire or telephone interview could be possible options. This thesis is a cross-sectional research and also in-depth study.

1.4 Originality & Limitations

Although social rental housing is quite mature in Western country, the similar scheme “Public Rental Housing” in China is still a newborn. There are almost no articles concerning this issue due to lack of experience and information. This article attempts to explore whether
this project can solve the housing problem in China based on current information and the comparative study of other countries' experiences.

The problem behind could be the interview with the housing developers; it is quite hard to gain their true intention or thoughts since many relationships involving trade secrets and commercial confidential issue, which could hide the truth. Meanwhile, since the interview for customers involving income and other sensitive issues, so the collected information could be biased or untrue.

1.5 Disposition of the thesis

Chapter 2: describes housing market in China, identifies housing sub-markets and housing rights to introduce the reason to implement public rental housing.
Chapter 3: describes the existing social housing programs in China
Chapter 4: analyze the role of public rental housing by summarizing the reasons that there is huge need of public rental housing
Chapter 5: Integratedly analyze real public rental housing case in Chong Qing, including location choice, amenity standard, rent setting, entry & exit mechanism, allocation and monitor system, etc.
Chapter 6: Analyze public rental housing from market perspective, by using demand and supply theory and questionnaire survey.
Chapter 7: Explore the finance resources and housing allowance for public rental housing.
Chapter 8: Point out the limitation for public rental housing by analyzing the land fiscal situation in China.
Chapter 9: Debates about the advantages, disadvantages and potential problems of public rental housing.
Chapter 10: Review of housing market in China, find out if public rental housing can last as a permanent policy, the market influence and whether it can fulfill the needs of the low and moderate-income families.
Chapter 11: Conclusion and recommendations
2. Housing market in China

The real estate market has been a very strong drive for China’s economy since 1990, especially after the SARS in 2003. There are approximately 40,000 real estate brokerage agencies employing over 340,000 agents working in this field. China’s real estate market has experienced a rapid growth. The annual growth rate of real estate development and investment has been around 20 percent for successive years, until the recent a series of governmental control ordinance.

Since the commercial housing became the mainstream from 90s, the overall real estate market in China is dynamic and grows fast in terms of capital flow and development speed. There are more than 116 million (till 2009) urban residents in China today and lots of houses are built each year. One of the main reasons for the rapid growth of China’s real estate market is the rapid growth of Chinese regional economy growth at about continuously over 8-12 percent in recent years and the income of the residents has grown around 10 percent. (National Bureau of Statistics of China, http://www.stats.gov.cn/) Moreover, the housing system reform promotes the housing personalization, encouraging urban residents to purchase commercial housing to upgrade their dwellings while the secondary market also booms rather quickly. According to government statistics, the percentage of ownership dwellings in the total dwellings in China is the number one in the whole world. 86 percent of Chinese families have own their residences now, compared to only 17 percent 20 years ago. Since the market is so large, why the government still needs to construct different kinds of social housing in huge scale? Before we answer that question, we should understand the distinction between those different types of tenures first.

2.1 Housing right

To understand what exactly the rental housing market is, it is important to understand different types of tenures existing in the overall housing market. The rental housing market (or rental housing sector) is a specific type of tenure, a subdivided sector, together with other sub-markets constitutes the entire housing market.

Housing tenure refers to the financial arrangements under which someone has the right to live in a house or apartment. According to this definition, housing tenure could also be translated into the term “housing rights” or “property rights”. It gives the occupants certain
kinds of rights but meanwhile, also a bundle of limitations. Donner (2000) identified five main groups of tenures with decreasing ownership rights:

- **Full Ownership**: it is usually for single-family dwellings, owned by the owner, financing with mortgage loan, and entitling to all attributes of ownership.
- **Co-ownership**: it is usually for multifamily dwellings, which are owned by co-owners, financing with mortgage loan, and entitling to all attributes based on group agreement.
- **Common property**: it is usually for multifamily dwellings, which are owned by shareholder of a housing cooperative, financing with capital share, with social functions.
- **Shared ownership**: Tenants usually have part of the ownership, financing with capital share and limited disposal right.
- **Non-ownership**: Occupant pay rents and no right to dispose the dwelling. The only type of dwellings separates the owner and occupant.

Besides those five common types of tenures, there are various other types of tenures such as welfare housing (It is common that companies provides housing to their employers as transformed wages and other benefits) and living in friends or relatives’ home for free. However, those deserted dwellings and secondary residence such as vacation dwellings is not taken into consideration in this essay since they take up a small proportion of the total housing stock.

### 2.2 Housing submarkets

Since the edge of those housing tenures is often quite unclear, in short, there are three main types of tenures commonly used: rental, cooperative and homeownership. Hence, the overall housing market is divided into three submarkets: the rental, cooperative and homeownership markets.

Homeownership housing provides exclusive disposal rights of the dwellings to the occupants. The ownership rights mainly include full-ownership and co-ownership according to different housing forms. It is usually related to for-sale housing as against the for-rent housing.

Cooperative housing offers its shareholders exclusive rights to a particular flat in a multi-family building. It is common to witness that self-help organization that helps with its
members on various aspects through the acquisition of housing to search for public subsidies. Things like selection of new members, maintenance work are based on group agreement. Each member has a say in a group discussion. In terms of ownership rights, cooperative housing is similar to condominium co-ownership, especially when dwelling is tradable on an open market.

Rental housing as non-ownership tenure is special since it is the only tenure that separates the owner and the occupant. Regulating the rental market is more difficult than any other type of tenure in a sense that it involves the rights and duties of two opposite parties, the landlord and the tenant. No lease contract or tenancy law has been able to perfectly settle the relation between the two parties yet.

2.3 Rental housing market in China

According to the statistical analysis of more than 40 countries by the United Nations, the housing consumption is in the rapid growth period when the per capita of GDP reach 800 dollars; from 1,300 dollars it would be steady growing phrase and the growing speed will slow down when it reach 8,000 dollars per capital of GDP. In 2009, China’s per capita of GDP is 3,744 dollars, so it is in the period of stable growth in housing consumption. By using P/E ratio to analyze the current situation of Chinese real estate market, which means the average housing price dividing household annual income to evaluate the relative level of housing price. World Bank gives the standard limit is 5:1, which means if five times of the average annual household income can not buy an average housing (90 square meters), then housing prices are too high. The following is the P/E ratios of main cities in China in 2007, which shows the price pressure is quite high in China. (Mo, F., 2010)

<table>
<thead>
<tr>
<th>City</th>
<th>P/E Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wen Zhou</td>
<td>16.88</td>
</tr>
<tr>
<td>Shanghai</td>
<td>23.27</td>
</tr>
<tr>
<td>Hang Zhou</td>
<td>22.28</td>
</tr>
<tr>
<td>Beijing</td>
<td>17.93</td>
</tr>
<tr>
<td>Shen Zhen</td>
<td>10.61</td>
</tr>
<tr>
<td>Ning Bo</td>
<td>16.72</td>
</tr>
<tr>
<td>Guang Zhou</td>
<td>15.09</td>
</tr>
<tr>
<td>Xia Men</td>
<td>16.06</td>
</tr>
<tr>
<td>Nan Jing</td>
<td>19.24</td>
</tr>
<tr>
<td>Tian Jin</td>
<td>18.68</td>
</tr>
<tr>
<td>Qing Dao</td>
<td>18.83</td>
</tr>
<tr>
<td>Su Zhou</td>
<td>13.89</td>
</tr>
</tbody>
</table>

Table 2.1 P/E Ratio in the main cities in China in 2007
There is another important ratio to look at: real estate investment to GDP ratio. This indicator reflects the overall economy’s dependence on real estate. Japan, for example, their real estate investment-GDP ratio dropped from 8% since 1970s, and around it was around 5.5% during the collapse period for Japanese real estate market in 1991. From then on, Japan suffered a decade-long slump of the housing market. However, in China, the number started from 4.02% in 1997 to 6.6% in 2009. If based on the real estate sales amount to GDP, it can be counted as 13.11%, which is the highest in the world. Therefore, there is no exaggeration to say that real estate kidnapped Chinese GDP. Since speculation and inelastic demand keep the housing price running in the high level, in order to solve the severe problem, it is a must to vigorously develop the rental market.

Since the China’s housing reform on July 3, 1998, the original welfare housing distribution system has been completely abolished, and started the housing marketization process. During this process, not only commercial housing market and social housing developed so quickly, also rental housing market has been developing rapidly. It is the important part of the housing market, as complement to commercial housing market, which enable those who temporarily can’t afford commercial housing to have their place to live.

However, the rental housing market is less developed than commercial housing market. There are several deficiencies in this market: Lack of supervision, lack of industry rules; relevant law is not perfect and difficult to protect the interests of both parties; insecurity for rental housing and domiciliary registration problem, etc. It is due to various reasons, although there are plenty of available housing, the rental market has been less active, resulting in a great waste of social resources. In recent years, the state preoccupied with commercial housing market, and paid little attention to the rental market.

From the current situation, since there is large number of mobile population in major cities, the need for rental housing is quite active. Along with the steadily increasing housing prices, there are more and more people that can’t afford a house and the further demand and supply are from equilibrium. More people have to give up on ownership to rent. Therefore, government should manage this rental market and promote the stable development of the rental market to ensure people’s lives and social stability.
2.4 Private rental market in China

The proportion of private rental market in China is more than 80%. Most of them are operating by different kinds of housing agencies or private leasing like Blocket in Sweden. As it discussed earlier, it is a less developed, lack of supervision but energetic market.

According to Beijing Zhong Yuan housing agency’s statistics show that the ratio of rent and selling price of housing increased in 2009 in the five major cities in China, Beijing, Shanghai, Shenzhen, Guangzhou, Tianjin. Shanghai entitles the highest ratio 1: 501, then 1:428 in Shenzhen and 1:401 in Beijing, etc. The international standard for reasonable ratio should be between 200 to 300. These data show warning signal for bubble in housing market. On the other hand, for those investors who obtain profit by rent, the rate of return has also been reduced.

Such low rate of return for rent reflects the supply and demand in the rental market, and the consumption power of renters. It is common that most of the renters are migration workers coming from rural areas or college graduates. They are often considered to be the executor of urbanization, and in the present circumstances, the former will not consider to settle down in the city, while the latter don’t want to go back to rural areas but could not afford to live in the city. Private rental market can’t solve this problem for the group, therefore, in order to accelerating the urbanization process and stimulate a consistent growing economy, it is a must to strengthen the construction of social rental housing.
3. Present social housing schemes in China
There are several types of social housing schemes in China: Economically affordable housing, Price-limited condominium, Low-income rental housing, and Public rental housing.

The following form can identify their different purpose and ownership:

<table>
<thead>
<tr>
<th>Tenure Name</th>
<th>Target Group</th>
<th>Ownership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economically Affordable housing</td>
<td>Low and moderate income households</td>
<td>Homeownership with limitation</td>
</tr>
<tr>
<td>Price-limited condominium</td>
<td>Moderate income households</td>
<td>Homeownership</td>
</tr>
<tr>
<td>Low-income rental housing</td>
<td>Low income and disadvantage group</td>
<td>Non-ownership</td>
</tr>
<tr>
<td>Public rental housing</td>
<td>Low-moderate income households, especially for graduates &amp; migration workers</td>
<td>Non-ownership</td>
</tr>
</tbody>
</table>

Table 3.1 Comparison of social housing programs in China

3.1 Economically affordable housing

The time from 1997 till 1999 was the key transitional period of housing reform and the start-up period for commercial real estate market in China. Most of the households were unable to purchase the commercial housing because the price was too high compared with their wage. Therefore, in order to meet the low-moderate income household’s need for housing, the affordable housing was introduced in 1998. According to the definition given by the Beijing Municipal Commission of Housing and Urban-rural Development, affordable housing in China is a type of commercial social housing in order to support the housing need for the Low-moderate income households, which is monitored and provided by the authority through the coordination of all forces, with specific construction standard, target group and selling price.

From 1999 to 2005, as the first social housing project, affordable housing boomed quickly in major cities China, it was an important choice for these low-moderate income tenants because of its low housing price. However, there was some negative information about this tenure starting from 2005. Some of the affordable housings were built with luxury standards. Some flats have more than 200㎡ area. Many people driving BMW and Benz purchase these affordable housings, etc. The glory of affordable housing was fading and questioned. From
2006, other social housing projects were implemented also and now affordable housing don’t take a big share of total social housing. Meanwhile, there were some rules for disposal of this kind of tenure, it have to wait at least 5 years to be on the open market since the initial deal.

Usually government will operate with housing developer to provide economically affordable housing. In this way, the government entrusts and organizes professional developers to develop those projects. Although the profitability of developers could be affected by the constraints and limitations, those developers would also get a lot benefits from the government policies to compensate the profit loss. It should be the “win-win” result between developers and government. Government take its responsibility to provide social house to the low-moderate income families through real estate developers’ operation, the social security function is implemented; developers can also earn reasonable profit, and they don’t have to worry about the market. However, as we mentioned before, there were moral hazard existing and the form is not so efficient. Besides that, government can also work with some local institution to launch new affordable housing projects, or even the government implements those projects themselves and provide them to tenants directly, but it usually takes longer time than cooperate with housing developers.

### 3.2 Price-limited condominium

As we stated earlier, even moderate-income families are confronted with housing problem---it is very difficult for them to buy their own dwelling. Therefore the Chinese government intends to cool down the overheating real estate market by using housing price control mechanism. Among several social housing plan, “price-limited condominium” program is the one to meet the needs of moderate-income families and lessen the overheating. Price-limited condominium means that dwelling area, price per square meter and target buyers are limited. Details of the limits differ from city to city. In short, it is a kind of social housing with homeownership for tenants, and pricing below the market level. Compared with affordable housing, it can cover more households since the standard for the applicant is broader, however the housing price is usually higher.

For pros and cons, firstly, price-limited condominium can ease overheating housing market in the short run. The demand for housing continues to grow at a high level, which the supply of medium-quality residential housing remains at quite low level. The market suffers a
structural non-equilibrium, which contributes to the dramatic increasing level. Since market is difficult to lead the supply and demand to equilibrium in short term. With the urgent need of residential for residents, the most effective way is that government carries out the role to lead the market to equilibrium in short term. Moreover, since the current price level of commercial residential is too high for moderate-income families to afford, price-limited condominium can be one option for them to solve housing problems soon.

However, this kind of social housing has some drawbacks also. At first, abusing the governmental power can makes residential market in a state of disorder. Fixed price by government control in certain residential area can be harmful for the residential market nearby and also the attractiveness for housing developers since there is not much profit left, and market won’t operate as the way it did. Moreover, the quality of the price-limited condominium is questionable. Usually the quality is worse than commercial residential, which reveals a principal agent problem here. Most of these projects are located in suburbs, which have quite poor infrastructural facilities. At last, according to previous research, since the cost of supervision is extremely high for the government, it is quite difficult to supervise if customer is qualified. (Li. X, 2008). Therefore, some unqualified families may buy the dwelling successfully through cheating. Fairness or over-protection is also questioned since the ownership is transferred to the tenants, even they wouldn’t be qualified in the future.

3.3 Low-income rental housing

Low-income rental housing is a type of social housing which is mainly led by government, using rent subsidies and direct providing low-rent housing forms, in order to solve the housing problem of the disadvantage group in cities. The operation procedure and rules relating to housing supply, distribution, and monitoring should be established. It has obvious social security and welfare sense. Since the low-income groups can not rely on themselves to own dwellings through ordinary market transaction, so the low-rent housing is mainly provided by government organizations, which can meet the basic needs of residents: low rent, small unit-based.

According the review from Zeng, the current practice of low-rent housing in China is like following: “Rental housing subsidies is widely used in most cases, direct low-rent housing or rent deduction are second choices.” (Zeng. X, 2008) Rental housing subsidies mean that the government will provide different rent subsidies to eligible family based on rent standards, the residents can decide to rent a room on their own on the market or choose the
low-rent housing that the authority recommended. After both parties signed the low-rent housing contract, the lessor can receive a monthly rental subsidy on specific sites. Typical cities like Shanghai, Beijing, Chengdu, etc. The advantage of this way is quite flexible, highly targeted at low-income families, which is easier to provide them relevant housing according to their work and life circumstances of family members. It has advantage to form entry and exit mechanism also. From short-term perspective, it still improves utilization and coverage.

Directly low-rent housing refers to government lease affordable low-rent housing to these qualified families directly. The authority determines the rent, such as in Guangzhou and Fuzhou. Other companies mainly take of the housing resources. Although direct low-rent housing need one time massive investment, it doesn’t require more consistent input, except to meet the need of elder and disabled. If low-income families who haven’t got the direct low-income rental housing, then they can apply “rent deduction”. Such as Changchun City, the residents will pay the low-rent housing rent. The difference between the tenants pay and actual social housing rent should be subsidized by the government or deducted. (Zeng. X, 2008)

However, there are some problems with the development of low-rent housing. Firstly, the input for the construction of low-rent housing in China is not balanced. There are large differences between the East and the West parts. The total fund is insufficient to utilize its policy advantage. Moreover, the low-rent housing protects the disadvantage people with limited supply and limited people who get benefits. Furthermore, the local government pays inadequate attention on low-rent housing since they are afraid this “low-rent housings” can create new slums. It is common that there is a negative correlation between housing price and low-rent housing supply. Every 5% increase in supply of low-rent housing, it will force market prices to drop down 3%-4%. Once the housing price is decreasing, then the price for the land will drop too, which reduce the income of the government. On the other hand, it will barrier the growth of economy with decreasing GDP and makes negative influence for the local officer to evaluate their yearly work, therefore they are not so active when implementing it.

In short, from the perspective of implementation, the main principle of Chinese social housing market is “Government use rental housing subsidies in most cases, and rent should
be set in accordance with distinction and supply with classification. Authority should provide adequate Low-Rent housing, firstly it should ensure the poorest in society have places to live; Secondly, government should speed up the construction of affordable housing and price-limited condominium, in order to solve the housing need of the low and moderate-income families by leasing and selling ownership. Lastly, for these qualified migrant workers and college graduates, they can apply for public rental housing. In other words, the government will provide low-rent housing, affordable housing, price-limited condominium and public rental housing based on the qualification of applicants by using leasing or selling ownership approaches.

3.4 Public rental housing

What exactly is public rental housing? Before figuring out that concept, we should understand social housing first. Although there is no formal common definition of social housing, it can be formalized by its features – the rents charged, which are intended to be affordable; its ownership and management by public institutions, cooperatives or non-profit making organizations; and its social aims. (European Commission, 2010) Hugo Priemus used the notion of “social rental housing” on a non-profit basis provided by housing associations and municipalities. (Priemus. H & Macleannan. D, 1998). While in most countries social housing tends to be targeted at the poorest members of society, in some, such as Sweden and the Netherlands, it covers a wider range. No matter if it is called social rental housing or public rental housing, the essence remains the same. The concept in China is formalized as a type of public property, which is rented at below market price to low-moderate income groups or other special groups. (Yang. H, 2010) Since the public rental housing program has been implemented in China for only less than a year, so there is no much empirical study about the Chinese public rental housing scheme and it is still too early to judge without systematical study.

The purpose of this scheme, like other western successful cases, is to provide low cost houses for the citizens. From the nature of the product, it has much similarity with “low-income rental housing” since they are all non-ownership social housing with lower rent than market rent. According to the practices of these PRH projects, PRH is usually built or purchased back by government to fulfill the needs of the low-moderate income families with lower rent. However, there are still a lot of differences between “low-income rental housing”
and “public rental housing”. Firstly, the target groups are different. “Low-income rental housing” put more attention to those families who get the minimum income and also suffer housing problem while “public rental housing” has a wider range for target group: any qualified applicants for “low-income rental housing, affordable housing, and price-limited dwelling” can apply. Secondly, the forms of benefit distribution are different. For low-income rental housing, housing subsidy is more widely used than providing actual housing. But for public rental housing, it is more common for tenants to get direct housing support. Thirdly, based on the declaration of the authority, the rent of public rental housing is higher than the rent of “low-income rental housing”, but lower than the market rent, based on its nature and target group. (Beijing Municipal Government Official Website, 2009) PRH is also different from the welfare housing during the planned economy period, welfare housing distribution is for all workers, while Public Rental Housing can only be available for specific groups. (Yang. H, 2010)

For those who are not qualified to rent “low-income rental housing”, but also can not afford affordable housing; those are not qualified to buy affordable housing, but also can not afford commercial housing; those just graduated with relevant high income but without savings; those that can’t afford a house and also can’t rent cheap, stable housing----- is commonly known as the "Sandwich class" in China. Public rental housing (PRH) seems a pretty good choice for them. In Beijing, Tianjin, Shanghai, Changzhou, Qingdao, Xiamen, Guangzhou, Shenzhen and other cities, a certain scale of PRH projects has already been constructed or transformed through acquisition. These government-oriented, lower than market rent, long-term and stable social housing, are the hope to fulfill the gaps for the current housing security system.

In the recent few years, the housing price increased tremendously in China. The average price was 2937 RMB/m² in 2005, 3645 RMB/ m² in 2007, and 4695 RMB/ m² in 2009, which is an enormous increase. If taking a look at the big cities, for example in Beijing, the average selling price in August 2010 reached 21008 RMB/ m². (National bureau of statistics of China) The culture and other issues drive most of the Chinese people prefer to buy dwellings instead of rent, and they prefer to buy new dwellings instead of secondhand dwellings (The percentage of urban residents to own their dwelling is up to 87.8%, National bureau of statistics of China), which is probably one reason of the overheating residential trading market. According to Gwin.C and Ong. S’s study, the price-to-rent ratio is an
important indicator for tenure choice and the more income household gain, the more percentage they will choose to own apartment. In China, due to the high ratio of rent and selling price of housing (almost 1:4.000), the rental market is as overheating as the ownership market. Unlike in Sweden, most of the rental dwellings in the Chinese market come from individuals rather than municipal housing companies. Therefore, in order to research the ongoing public rental housing more persuasively, further first-hand research and second-hand analysis on this topic is still needed.
4. The role of Public Rental Housing scheme

Since there are many social housing program already, why launch the new “public rental housing” program? Firstly, we need to analyze the current situation of existing social housing programs: Both “low-income rental housing” or “affordable housing” have shortcomings.

Firstly, the construction volume of “low-income rental housing” is quite limited; therefore it is still far from sufficient to cover the actual need. Recently the Ministry of Housing and Urban-Rural Development of the People’s Republic of China, National Development and Reform Commission and Ministry of Finance People’s Republic of China declared “2009-2011 Construction plan for low-income rental housing”. According to the article, around 7.47 million households with housing problems can be taken care of from 2009 to 2011. According to the construction sector’s diagnostic statistics, there are about 10 million households struggling with housing problems in China. Even all of their problems will be solved; they are only counted as 5% of the total households. Moreover, those migration workers with low-income hasn’t taken into account in the system. However, the percentage of the households who enjoy social housing benefits is around 20% in most developed countries. For example, in United Kingdom, nearly 70% of residents have their own housing property, 20% of residents rent public rental housing provided by the Government, while 10% of the population living in private rental housing; In France, it is a must to have 15% - 20% low-rent housing in the total housing supply.

Secondly, the operation of affordable housing is actually in chaos. Although the new article “Affordable housing management” was introduced in 2007, all kinds of chaotic incidents appeared continuously. For example, an affordable housing project in Wuhan cheated during drawing housing lots. In Zhengzhou, the land for constructing affordable housing was used to build luxury villas. Moreover, some of those affordable housing have been purchased secretly by some authority officers and rich people. The regulator is lacking enough supervision and it raises political corruption problem. Since massive social housing projects consume capitals and land that can hugely contribute the local fiscal situation if it was used in commercial projects. Although the central government initiates to enlarge the supply of social housing, local municipality government don’t show very active attitude. The Ministry of Housing and Urban-Rural Development have to agree with the compromised way for
municipality government, such as acquisition from existing housing stock or monetary subsidy.

Unlike “Low-income rental housing”, which operated and constructed completely by government, public rental housing can bring market involvement. Some of those housing can be operated by public sectors (Such as in Singapore and Japan); Some can run by association and mutual aid organizations (Such as in UK and Germany) which some can be run by private companies (Such as in US). However, government is still the leader and supervisor in the system, in charge of entry and exit criteria, rent standard, etc. (Yang, H, 2009)

4.1 Scarce land source versus huge population

China has a large country area of total 9,596,961 km² (CIA), however the flat area which is suitable for urban development is only 12% of the total, 150 thousand km². Land will become relatively scarce source, which implies the marginal land costs will increase dramatically. The direct result will be that house price rapidly rises, which makes homeownership further impossible for low-income households and other economic vulnerable groups. In order to cope with this issue, not only the high-speed transportation system (metro, commuter train, etc.) should be developed, also the efficiency of land use needs improvement.

Public rental housing, unlike homeownership social housing with only one-time ownership transfer process and taking quite much of land sources, can be taken back and reused to other tenants if the previous tenants are unqualified after a certain rental period. In this way, it can increase the fairness and efficiency of land use.

4.2 High house prices and huge income difference

House prices have been experiencing a soaring rise since 2003, even though there are much governmental control carrying out, the price increases continuously. In 2009, the house price/income ratio was 45 in Beijing, which was quite beyond the rational average 22.33 in the world. Zhang Hong, who is the dean of Department of Energy in Nanjing Industrial University, proposed a "National Dwelling" concept, and also set a standard for it: Keeping the Housing P/E ratio changes between 3-6. In other words, a family can buy an apartment
with 90 square meters, only with 3 to 6 years family income. We assume a typical three people family, based on the statistics--- per capita disposable income of urban residents in 2009 was 17,175 RMB (National Bureau of Statistics, 2009), 6 years income, so we can draw the conclusion: A set of 90 square meters apartment should only cost 309150 RMB. In other words, the average residential housing price that people can afford shouldn’t over than 3435 RMB/m² in 2009, which is quite different with the reality. (Lin. M, 2009)

These statistic numbers indicated that bubble was quite severe. This widening of the difference between the irrationally rising house price and annual disposable income per capita has led to failure in improving housing quality and moreover, made housing for low-income households a more and more difficult problem. It is reported that the difference between income levels of high-income households and low-income households is larger than the world average level, the affordability to homeownership of moderate to low-income households is lower than that of the counterparts elsewhere. However, fast rising house price is not the only reason to blame, the slow increase of the low-income households’ income level makes homeownership an untouchable dream even if the house price increase could have slowed down. Therefore, public rental housing has become an urgent necessity for accommodating the low-moderate income households.

4.3 Potential rental housing demand

According to the Chong Qing official statistics, there is a huge potential demand for rental housing since only 9% of the urban tenant living in this sector currently. (Chongqing Public Rental Housing Information Website). Along with the booming development of this market, besides this 9% tenants, students and migration workers are main sources for rental housing demand.

There are several reasons of developing an increasing and regulated rental housing market: Firstly, along with the high economic growth and fast urbanization process, the urban population increase constantly, which enables the situation that rapid increased demand for housing lasting. Secondly, the household mobility should rise since the labor market expands rapidly in large cities. Moreover, the soaring housing price builds huge barrier for large number of moderate-income and low-income from homeownership. Since the former welfare-housing system has been abolished, so they choose either buy or rent. In that case,
especially for these low-income, which is highly sensitive to rent level, need more help from the authority.

4.4 The purpose and advantage of PRH: Cheap, Easy access, Flexible

To develop Public Rental Housing, is very important to stabilize the real estate market. The goal of the social housing system in China is “protecting the low-income, supporting the moderate-income, and be market-oriented for high-income housing market”. The weakest link in the system is the support towards to the moderate-income. Nowadays, these moderate-income and low-income families take a huge percentage in Chinese society and they are the biggest group with housing need, which are also the group affected by the high housing price and complaining the most.

Putting more efforts to build public rental housing in large scale, can complete the most important link of the system, easing the housing problem for the low-moderate incomes. By renting these kind of low-rent and long term rental housing, the huge need for housing ownership can be postponed, some of which can even not to buy house. Therefore, it is very important to stabilize the housing price and ease the contradiction between supply and demand.

In addition, when the development of public rental housing construction reached a certain scale, the target group can enlarge to cover more people. They can solve their housing problem by renting this kind of dwellings. In future, if the housing needs of major people are solved through affordable housing, public rental housing and so on, then the housing price of commercial housing can’t be increase that much.

To sum up, the main purposes of the public rental housing are the following:

1. The primary objective is "Everyone has the right to live in proper housing" instead of "Everyone has home ownership".
2. The housing support is to guarantee transitional living right other than permanent protection.
3. The designed standard of social housing is to meet the basic needs of low-moderate income families, other than enjoyment of high-income families.

In the long run, the sustainable operation of the Chinese real estate market is very clear, which should include two tracks: the protection track and market track. (Jia Kang, 2010) But these two tracks are not mutually isolated; it requires overall master plan for the
government. Low-cost dwelling, PRH housing, commercial housing and so on should be all considered in the master plan. Many countries use PRH as in useful to solve the problem. As Li described (Li. W, 2010), unlike affordable housing and price-limited dwellings, public rental housing has covered the unfairness problem. Therefore, constructing public rental housing is an outstanding way to solve these low-moderate income households’ living condition problems.
5. Public Rental Housing Application------Introduction of Chong Qing’s Public Rental Housing schemes

5.1. Introduction of Chong Qing
Chong Qing city is the third largest city in southwestern China and one of the five national central cities. Administratively, it is one of the People's Republic of China's four direct-controlled municipalities (the other three are Beijing, Shanghai and Tianjin), and the only such municipality in western China. Chong Qing with an area around 82,400 km², consists of 19 districts and 21 counties. The population is around 32.35 million (2007). It is possibly the world's largest municipality by population and one of the largest by area.

Chong Qing was used to be a part of Si Chuan province, which was created on 14 March 1997. The city is one of the cities notable for history and culture in China, and notably, serves as the economic center of the Upstream Yangtze area, a modern manufacturing center and a transportation center for Southwest China.

Chart 5.1: Location of Chong Qing in China, Source: http://www.cq.gov.cn/
5.2. Chong Qing’s Residential Housing Market

From 1979 to 2010, Chong Qing’s residential housing market has walked through 31 years. The development can be divided into the following several periods:

1. From 1980 to 1991, starting period. It began with the Reform and Open Policy;
2. From 1992 to 1996, rapid developing period;
3. From 1997 to 2003, adjusting period. Since the severe Asia financial crisis in 1997, the residential housing market in Chong Qing turned into recession since the national macroeconomic measures.
4. From 2004 till 2010, recovering and booming period. Chong Qing’s residential housing market develops very quickly and stably, especially in year 2009, the average housing price raised 32.74%, even under the circumstance of the sub-prime crisis from 2008. There are some problems in real estate market: excessive demand, shortage of supply, structural imbalance in supply, etc.

The following chart is the average housing price in Chong Qing from February 2010 till January 2011.

![Housing Price in Chong Qing](image)

Chart: 5.2 Average housing price in Chong Qing city. Source: [www.soufun.com](http://www.soufun.com)

There are five main kinds of residential buildings in Chong Qing residential market:
Commercial residential housing, which is the residential that all the residents have right to buy; price-limited dwelling (maximum 2200 RMB/ m²), which is only for low-moderate income families whose family annual income is less than 144,00 RMB and have less than 13
m² for average individual housing area; economy housing, which is to meet the need of low-income families; and the last one is low-rent housing, which is to meet the renting need of low-income families. Plus the newly introduced public rental housing, the social housing system in Chong Qing is almost integrated and completed.

5.3. Public Rental Housing Projects in Chong Qing

Since the price-limited dwelling and affordable housing both have its side effects and are unable to fulfill all the citizen’s housing need as we discussed in the previous chapter, Chong Qing is the first city in China to deal with low-moderate income’s housing problem, starting to construct public rental housing in great scale. In 2011, it is estimated that more than 10 million square meters public rental housing will be distributed to tenants, which equals to half of the total commercial housing volume in Chong Qing in 2010.

“Min Xin Garden” is the first PRH project in Chong Qing, which started to be constructed in 28th Feb 2010. After one year, the community is nearly finished and will be delivered to the tenants soon. From the official Chong Qing PRH information website, we can see the master plan for PRH projects in Chong Qing: there are 21 planned projects in the main city area in three years, 7 projects have been constructed since 2010. (Chong Qing Public Rental Housing Information Official Website) The scale of PRH exceeds any other social housing in Chong Qing. In this essay, two projects (Min Xin Garden and Kang Zhuang Town) will be studied.

5.3.1 Location

All these two projects are located in Yu Bei District, where is suburban in the northeast direction of the inner-city; Min Xin Garden is in Yuanyang town while while Kang Zhuang Town is in Dazhulin town. It is above 12 kilometers from the city center. The areas where these projects are located are new developing areas with some commercial residential projects to compete with. The average price of those commercial projects is around 7000-8000 RMB/ m², with monthly average renting price 1500 RMB. Both of the projects are near planned subway stations, which can be built in near future.
Chart 5.3: Min Xin Garden and Kang Zhuang Town (Two blue characters)
Source: Chong Qing municipal people’s government website


Chart 5.4: The plan for public rental housing projects in Chong Qing in three years
Source: Chong Qing municipal people’s government website

From the above planned public rental housing project chart, we can see the future public rental housing projects will be located in the suburban area. Usually in these areas, commercial, educational and medicinal amenities might be quite undeveloped and the accessibility is needed to improve.
5.3.2. Housing Pattern

The areas all these public rental housing projects occupy are large. Min Xin Garden takes up 1 080 000 m² with 17 900 dwellings, while Kang Zhuang Town occupies 1 240 000 m² with 21 700 dwellings. All the buildings are quite high ones from 22 floors to 34 floors. All of these projects are built together with some supporting facilities such as garden, kindergarten, primary school, commercial center and community management center. Those two projects are close to the newly built subway. The dwelling is usually decorated with area between 31 to 79 m². Two examples for single room and double room in Min Xin Garden are listed in below. We can see the design of the apartment is practical and functional.

Chart 5.5: Min Xin Garden, E unit 31 m², single room

Chart 5.6: Min Xin Garden, H unit type, 59 m², double bedroom.

Source: Chong Qing Municipal government website
The scale and amenity of Min Xin Garden project is almost the same as commercial housing projects. According to the state government working report, it is expected that there will be 20 million m² public rental housing to be constructed in Chong Qing main city area from 2010-2020, half of them will be finished before 2012.

Chart 5.7. Under constructing “Min Xin Garden”.

The public rental housing program in Chongqing aim at high positioning, not only low rent and complete amenities, even the average floor area ratio (FAR) is only 3.8, which is lower than many commercial housing programs. More importantly, currently twenty-one planned public rental housing programs will be built combining with other commercial projects, so it won’t engage in new slums. When public rental projects boomed in some international cities like New York, there is lack of attention to build those projects mixed with commercial housing projects, therefore new slums are formed which have serious social security problems. Chong Qing authority aims to build public rental housing by livable standard, and let people live with dignity.

5.3.3. Rent

Due to the low cost of land price, the rent of public rental housing is much lower compared to the private rental dwellings, around 60% of average market rent. According to the local rent standard (Wang, W & Chen, Y, 2009), the monthly rent is around 9-11 RMB/m², so for an apartment with 60 square meters, the monthly rent is around 660, around 60% of average market rent. 60%-70% has become a standard for other cities in China, like Shen Zhen and Qing Dao, based on a principle to keep financial balance; (Central government website, 2009) however for some cities like Xia Men and Chang Zhou, their tenants only need to take 10%-30% of average market rent, which needs government to offer large amount of
subsidies. (Liu. Z, 2011) How to set the rent to be more efficient, is one of the essential point that we need to research later. The rent is used to pay for the construction fee and interests. The period of the leasing is usually five years maximum.

5.3.4 Qualified standard for applying PRH

There are some rules for applicants to follow: All the applicants of public rental housing have to be at least 18 years of age, with stable job and income sources, which indicate the rent payment ability. The applicants also need to meet the requirement the individual square area is less than 13 square meters or without any dwelling, college graduates and migration workers. If several people plan to share a set of public rental housing, all of the tenants have to be qualified and less than three people. There is a special rule about Chong Qing PRH: no household register limitation, all Chinese citizens can apply. For other city like Beijing, only the citizens registering in the local municipality can apply PRH.

More over, there are some requirement for the income: For single individual, the monthly salary has to be less than 2000 RMB; For family with two people, less than 3000 RMB; for family with more than two people, each family member’s salary should be less than 1500 RMB. The standard will be modified periodically. It is noted that people belong to “special talent plan in Chong Qing”, national or provincial worker models, national solider model, soldiers awarded above second-class reward are not affected by this limitation.

The area of the public rental housing corresponds to the applicant's family number. Family with less than two people can apply to the dwelling with less than 40 m² area; less than 60 m² for three people; less than 80 m² for family with four and more people. Since PRH is faced to these low-moderate income people, the rule says those who have family housing funding capacity shall not apply for public rental housing. The capacity refers to the applicant's parents, spouse, children or parents of the applicant have two or more housing units in the city and with 35 m² per capita housing area. For those who can apply for low-rent housing here apply for public rental housing, they get priority on the waiting list. If these tenants stay in an apartment for less than 50 m², they can paid the rent by the existing low-rent housing standard, and enjoy reduction for property fee.
5.3.5 Exit & Monitor of leasing

Here is the exit strategy for Chongqing’s public rental housing scheme: The duration of the leasing contract is 1 year for minimum and up to 5 years. After the contract expired, the lessee should move out from the apartment. If the tenants need to renew the leasing contract, they should apply in advance, and resign new contract after check their qualification by authority. If they are not qualified and can’t move out temporarily, they can be given 2 months as transition period, with market rent in these two months. Moreover, if the tenants have access to any housing in the city by purchasing, receiving or inheritance and so on, or exceed the income maximum standard for applying PRH, should exit public rental housing. After five years leasing, tenants can also choose to purchase the public rental housing that they live, however the apartment can’t be rented, transfer ownership or given to others but inherited and as mortgage, or sell back to the government with the original price.

The leasing period of public rental housing in Beijing is also five year maximum. During this period, the tenant can apply to purchase economically affordable housing or price-limited dwelling, and exit the public rental housing after purchasing new housing. For the essence, public rental housing is still a kind of transitional dwelling; the ultimate goal is still ownership.

However, the difficult part of evaluating the qualification of applicant is that, it is quite difficult to fully know the situation of a family’s property, especially for these assets like vehicles or stocks. There is lack of fully information-sharing system for the different departments of authority in China, not like in Sweden. Meanwhile, it is also hard to know if new employees have housing or not. Based on that, price leverage could be a good exit strategy for public rental housing. In Changzhou, if tenants don’t meet the qualification and can’t move out temporarily, they can apply for extension for up to 6 months. However the rent will rise from 30% of market rent till 100%. If they don’t move out after the extension, the rent will rise till 150% of the market rent. In order to make this exit mechanism to be more practical, Wang and Chen did the research about public rental housing in Xia Men (Wang Wei & Chen Yi Ying, 2009): the rent of public rental housing in Xiamen city is set higher than market rent, after receive the rent, the government subsidies the tenants with 30%-70% of the rent according to the qualification of the tenants. If the tenants don’t move out when they are not qualified any more, the government can simply stop giving subsidy.
In order to manage public rental housing program more efficiently, one special bureau will be built in Chong Qing——Public rental housing authority. In accordance with the objectives of the municipal government of Chongqing, the housing supply proportion should be maintained around 1:6:3. That means about 10% of high-income people purchase luxury commercial housing; 60% of moderate-income families use their 6.5 years of household income to buy small and medium size commercial housing with comparatively low price; 30% of low-income groups are provided social housing by the government.

In order to prevent previous problems in affordable housing, such as “Driving BMW and living in social housing”, there is a series of regulations and rules to supervise in Chong Qing. Currently Chong Qing public rental housing administration establishes an information network for social security, taxation and fund management, etc. After receiving the applications for public rental housing, they will rigorously examine the information and qualification of the applicants through this network. If they pass the preliminary examination, the income, current address and other information will be publicized on the Internet. If there is no objection by the public, then the applicants can be put on the waiting list. Meanwhile, if the applicants’ income or housing situation changes during the waiting process, they should submit written materials to the authority initatively, and wait the re-examine eligibility. The applicants have right for “housing lottery” once they are on the waiting list. Chong Qing Public Rental Housing Administration will publicize the housing sources with rental units, quantity, location, application time and other information on the Internet. The Housing lottery is taken under the supervision of authority, a notary public, news media and representative of applicants, and it delegates the housing to the applicants by an electronic system, according to the applicants’ choice. From the result of the first time lottery, we can see the proportion for get the apartment is 1: 1.46. After the lottery process finished, the result will be publicized under the public supervision. The applicants will get confirmation letter for renting if there is no objection. Those applicants who don’t get the housings can wait until next round of lottery, and they can decide to change location or not. After the tenants live in public rental housing, their qualification and housing situation will be checked regularly by the authority and be supervised from the whole sociality by calling official hotlines or sending email. The public rental housing program in Beijing also have the following rules to prohibit subleasing or borrow to someone else. Six prohibited acts for the tenants include: sublet and borrowing; changing the residential purpose without
permission; not living in the apartment for consecutive six months; failing to pay rent on time for consecutive three months. As long as one of the above acts happens, the authority will take those apartments back.

**5.3.6 Allocation: Direct PRH provision or Housing allowance**

There are two main supply methods for public rental housing: directly supply public rental housing (with rent lower than market rent) and provide subsidies at different level. Chong Qing is using the first method. According to the “Implementation of the public rental housing in the main city” examined and approved by Chong Qing municipal government on Jan 14, 2010, 20 million m² of public rental housing, approximately 335 thousand units will be constructed and put in the market in the next ten years. By then, housing problem for the “sandwich class” will be history in Chong Qing. We can do a simple calculation: We need around 30 thousand acres land to build public rental housing projects with 20 million m². Based on the lowest current land-transferring fees 2 million RMB/ acre, we can count that the financial revenue in Chong Qing government will reduce at least 60 billion RMB. In 2009, the entire financial income for Chong Qing municipality is only 160 billion RMB. Therefore, by providing 30 thousands acre of land with zero cost, it fully shows the determination to separate income from land selling and fiscal income.
6. Market Analysis in Public Rental Housing

6.1. What are the determinants of the residential housing rent?

Many scholars have researched the existing factors influencing house price, such as Alonso (1964) found that accessibility, location, public facilities, transportation and other factors can influence housing price level. Sirmans et al (1989) believed that the physical characteristics of property could affect the market value of property, and also affect the market rent of property, since the housing market value is considered as capitalized value of rent, and rent is crucial measure to asset these factors. Benjamin and Sirmans (1994, 1996) agreed that rent plays an important role for property valuation, since any factors affecting housing rentals, would affect the value of the property. Therefore, previous researches on rentals determinants also focus on property characteristics, accessibility and environmental quality and other factors.

The earliest research on the determinants of residential rentals was made by Marks (1984). He used 3385 rental housing data in Vancouver in 1978, to investigate the impact on residential rent by using hedonic price index, and found that neighborhood quality, parking spaces, laundries, house age, number of bedroom and other affected housing rent significantly. Sirmans et al (1989) studied comfort environment and service will affect the price of rental housing, especially in parking spaces; for external factors such as traffic congestion, the convenience for using public transportation also have huge impact on rental level. For the relationship between housing age and residential rents, Malpezzi et al (1987) discovered that there was significant negative correlation between the depreciation rate of housing and rental level, that means the older the house is, the lower the rent is.

But what kinds of factors have effects on the residential housing price in China? Is there a new way to see the difference between Chinese rental housing market and the western rental housing market? To simplify the problem, we will study these factors from both supply and demand sides.
6.2 Demand Side

Although the statistics of declining rent-housing value ratios in major cities in China show the payback for renting as long term investment isn’t quite idealized under the circumstance of overheating housing market in China, there are still huge demand from migration workers and college graduates moving to major cities in China. In the short-term, the rental housing supply is fixed due to the time lag of construction and private rental housing supply is quite stable. Thus, factors from demand side have a larger effect in rent than that from supply side in short-term.

6.2.1. Traditional Attitude to Housing

There was a common culture issue influencing the Chinese housing market: Most of Chinese prefer ownership to a great extent, comparing with westerners. This is determined by several cultural principles in China. First, since the Household Register System caused some limitation on social service like social insurance, education for children and so on, a large number of Chinese chose to stay in one city to develop their career for the whole life and the liquidity of labor force in China was relative low. Meanwhile, most Chinese are risk-averse about changing jobs, therefore it is more likely for them to purchase property if their financial situation allows. Moreover, people value home ownership an important criteria for marriage in China. In some region, people didn’t dare to get married if they don’t own a house because their parents and other friends will judge. Due to lack of regulated rental market, Chinese can never feel the sense of home in a renting apartment because it is not worth them to decorate and invest in the rental housing since they could only rent it for a short period of time. Traditional attitudes decide that ownership demand is high and that is also one reason for the high price level in commercial housing market in China now.

6.2.2. New trend from ownership to rental market

Although it seems that the rental market was not mainstream in the past, the < Property Green Book: China Housing Development Report 2010-2011>, which is published by Chinese Academy of Social Science hold a different idea. It analyzed the housing market in China during 2009-2010 that most consumers believed that the housing price is too high to afford. They hoped some governmental measurements can control the market more and the wait-and-see attitude is getting stronger. According to the Central Bank of China, the proportion of the residents’ willingness to purchase housing continues to decline in 2010.
This change is related to the residents’ judgment of housing price level: since 2009, the housing price level rises rapidly and more people believe that the housing is too expensive to afford. Meanwhile, with the introduction of governmental measures to control the housing market, the expectation for continually increasing housing price has been weaken and most of people choose to wait for better moment to buy housing. At the same time, the housing tenants have to pay soaring rent. Since 2010, the rental housing market turnover has increased dramatically, and there is large increase for the rental market. Some housing agencies want to survive since the sales of housing business drops quite much, so they collect housings from owners and rent them out to make profit; also large-scale demolition and some potential buyers turns to rental housing market are also some factors for pushing up the rental level. However, lack of governmental regulation for rental market, higher cost for renting since the price of housing is high are probably the most essential reasons. For the customers, their housing problem already become a “can’t afford” and “can’t rent” dilemma.

The Green Book pointed out that after investors and speculators have experienced the strong wave of housing booming, most of them choose to wait and see. According to the questionnaire survey of purchasing properties situation for their depositors, which conducted by People’s bank of China, in Q1 2010, investment buyers took 23.1% of the total residents have housing demand. However, the number dropped to 17% in Q2 2010, which indicates that investors and speculators feared the housing price would crash under the stringent regulation and control. Although their behavior become more conservative, this doesn’t mean that they are willing to withdraw from the housing market. Therefore, some of them turn to the rental market temporarily.

6.2.3. Migrant Labor and graduates

Migrant labors and graduates are another important factor that affects the rental level. Chong Qing’s population keeps rising every year. In 2009, the number of labor force in Chong Qing is around 18,785,000 in total. (China Annual Statistics 2010) The major component of the increasing part is migrant labor and newly graduates. Metropolis means larger opportunities, higher wage and colorful life. These attractive reasons make Chong Qing an attractive city. Each year, there are large amount of new comers, whose main components are migrant farmers and fresh graduates of college. These migrant labors increase the
demand of housing. However, from the following price indices for real estate in five large-sized cities in China, we can see the housing price still increasing rapidly in 2009, even though under the background of global financial crisis. Therefore, most of the migration workers and newly graduates don’t have the ability to purchase residential properties in the recent years. Hence they are the main customers in the rental market.

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<td>101.8</td>
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Table 6.1: Price Indices for Real Estate in five large-sized Cities
Source: China Annual Statistics 2010

6.3 From the Supply Side

Although currently the rental market is still not regulated perfectly and quite inelastic since it is mainly relied on private sector, in the long-term, supply of rental housing is elastic due to the following factors.

6.3.1 Sources of rental housing

As we discussed earlier, the rental housing market in China is less developed and almost 80% of the market is dominated by private sector. Most of them are operating by housing agencies or private direct leasing. Low rate of return for rent in the past reflected the excess supply and suppressed potential demand. Along with the rapid urbanization in most of cities in China, social rental housing should play a bigger role in the market, which needs government to direct and regulate more.

6.3.2 Constructional Cost and Payback Period

We know that it requires a certain period of time and tremendous amount of capital. The assembled constructional period of residential house is three years, which means the three
years time lag postpones the potential supply for three years. Moreover, constructional cost, which includes land value, construction materials & labor cost and loan interests, can influence the housing supply to a great extent. Since there is less unconstructed land existing in main city like Beijing, the land price becomes much higher than before. In year 2005, land price in Haidian district, Beijing is around 7000 RMB/ m², while in year 2010 it was up to around 26000 RMB/ m². Although the land price is very high, developers still eager to purchase land, which illustrates the shortage of land. Since the payback period for rental housing is quite long, comparing with the opportunity cost of launching commercial project, rational housing developers won’t choose to implement rental housing program, therefore, in order to increase the supply of rental housing to a great extent, it can only rely on the government.

6.3.3. Policy about public rental housing

As we mentioned before, public rental housing programs are constructed by social organizations through government leading. Currently there are three main forms to construct the public rental housing (Zhao. P, 2009): First, state-owned enterprises will construct or invest and acquire housings, and supply those housings to the society, especially those newly graduates and those “sandwich layer” who can’t afford commercial housing. Those acquired housing will meet the requirement of public rental housing: small units, regional balance and accessibility, etc. Second, enterprises or institutions can organize the housing construction themselves for supply their employees. Third, for those development-park and industrial park (an area zoned and planned for the purpose of industrial development.), they will construct public rental housing in the park and serve the employees working there. At present, the first public rental housing project in Yi Zhuang development park in Beijing already finish the construction in March 2011 and starts to serve for the tenants.

In year 2011, several policies were released in order to ease the overheating in real estate market. One of the most significant one is there will be 36,000,000 units social housing constructed in the next five years, which equals half of the current real estate stocks. This will completely change the structure of real estate market in China. On thing for sure, public rental housing will take a very important role in future.
6.4. Questionnaire Results and Discussions

6.4.1. General Introduction

This questionnaire is designed to investigate the public acknowledgement and satisfaction of the public rental housing project and expectation to the future market. The research was finished in November 2010 in Beijing. Totally 78 effective samples are taken into account. Respondents were randomly chosen but in certain sectors: banking, real estate, retail, university, IT, government, manufacture, media (newspaper), etc. Mostly of them are well educated. Most of them already live in Beijing and only eleven of them have plans to move to Beijing in future.

6.4.2. Background

From the following charts (Chart 6.1, Chart 6.2 and Chart 6.3) we can see, this survey involves 78 people from age 22 to 62 (93.6% of the respondents are less than 40) and covering from eight working types from public sector to private sectors. 15.4% of the respondents have high school diploma, 55.1% have a bachelor degree, 26.9% have a master degree and 2.6% have PhD. According to the rules for applying public rental housing in Beijing, 33 respondents have a family annual income less than 58 000RMB and family saving less than 300 000 RMB, which is up to the standard. Since public rental housing program is mainly designed for the low-moderate income group, especially for those graduates and migration works, the sample is selected by that criteria. Most of them live in temporary dwellings, either rented from private landlord or living with their friends or relatives and don’t have the ability to buy commercial housing, therefore the survey can tell some pattern about public acknowledge about public rental housing in China.
Chart 6.1: The percentage of age constitution

Chart 6.2: Distribution of family annual income

Chart 6.3: The percentage of educational background
6.4.3. Public Preference and Opinion

According to the results of the questionnaire, most of the residents show lack of knowledge of social housing, even though we selected large proportion of well-educated people. From Chart 6.4, Chart 6.5 and Chart 6.6, we know that only 27% know their favorite type of social housing, and only 8% of respondents know the difference of public rental housing and other social housing. Moreover, 5% know where to apply for public rental housing. Therefore, we can see people don’t take social housing as their first choice or show careless attitude. But what causes that?

**Favorite Type of social housing**

- A. Public Rental Housing (8%)
- B. Price-limited dwelling (9%)
- C. Economically affordable housing (4%)
- D. Low rent housing (1%)
- E. Monetary subsidies (1%)
- F. Others (73%)

Chart 6.4: Favorite type of social housing

**Do you know the difference between PRH and other social housing?**

- A. Known (8%)
- B. Unknown (9%)
- C. Heard of it before but not fully understand (83%)

Chart 6.5: Do you know the difference between Public Rental Housing and other social housing?
From the question 6, 9, and 10, we can see that the respondents didn’t show huge confidence about current social housing security system. 83% of respondents believe very few qualified applicants can get their social housing security. The result of our survey is listed in the Chart 6.7, 6.8 and 6.9. On one hand, that may result in the huge difference between relative low volume supply of social housing each year with huge demand of social housing from the low- moderate income group. On the other hand, due to the management problem of previous social housing programs, which cause social housing became the tools for speculation and profit sources for rich people or someone have “connection” with those greedy officers, only 2% our respondents think the same thing won’t happen on public rental housing program. Since we test the response on the condition for applying public rental housing, and most of respondents think it is acceptable, therefore the main issue for people show less interested in public rental housing than expected is the doubted authority creditability. Also there is still a shortage of moderate-standard dwellings in residential market in the public’s opinion.
Chart 6.7: Do you believe Public Rental Housing will benefit people in need?

- A. Yes: 4%
- B. Can’t draw conclusion yet: 13%
- C. Very few qualified people can get their housing: 83%

Chart 6.8: Do you think “BMW in social housing” will happen in Public Rental Housing too?

- A. It will, inevitably: 13%
- B. No, it won’t: 2%
- C. I don’t know: 85%

Chart 6.9: Do you think the condition for applying Public Rental Housing is too strict?

- A. Very much: 7%
- B. A little bit: 6%
- C. No so much: 5%
- D. Acceptable: 82%

Focusing on the public rental housing itself, according to our investigation, our respondents
pay more attention to location & transportation than other amenity criteria. Around 39.7% of the respondents choose location and public transportation as the most important criteria, followed by housing pattern (22%) and housing quality (14%) takes the third place. (See the following Chart 6.10). Due to the huge area of Beijing and the time cost for transportation is quite high, therefore convenient transportation and location weight quite much to them.

**Most important criteria**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Percentage</th>
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<tr>
<td>A. Location and transportation</td>
<td>31</td>
</tr>
<tr>
<td>B. Housing facilities</td>
<td>10</td>
</tr>
<tr>
<td>C. Housing quality</td>
<td>11</td>
</tr>
<tr>
<td>D. Housing pattern</td>
<td>17</td>
</tr>
<tr>
<td>E. Others</td>
<td>9</td>
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Chart 6.10. The most important criteria for public rental housing

Furthermore, the respondents don’t think there is a strong connection between public rental housing and the average housing price level in commercial housing market: Only 3% think the implementation of public rental housing will shock the commercial market. (Chart 6.11) Moreover, nearly 86% of respondents think the ultimate goal for public rental housing isn’t for lowering the overheating housing market. (Chart 6.12) Therefore, our respondent value public rental housing mainly as a kind of social security resource other than measures to control commercial housing market. For the essence of public rental housing------ rent, most of our respondents (72%) believe it is reasonable to pay 60%-70% of market rent. However, when it comes to individual rent system, major respondents don’t know whether it is reasonable. (Chart 6.13) It is possible that people are worried about such flexible system can cause bribe corruption and seeks corruption. In the end of the survey, (Chart 6.14) around 17% of our respondents showed their willingness to apply for public rental housing if the project is suitable, while 6% said it depend on rent and 4% won’t apply. Major respondents took a wait-and-see attitude (73%) since public rental housing is still a new thing in China.
Do you think PRH will influence commercial housing market?

- 79%: Not at all, since the target of PRH is different with commercial housing
- 12%: Yes but very small impact
- 6%: It will shock the commercial market
- 3%: Don’t know yet.

Chart 6.11: Do you think Public Rental Housing will influence commercial housing market?

Does PRH is designed for lowering commercial housing price?

- 14%: Agree
- 86%: Disagree

Chart 6.12: Does Public Rental Housing is designed for lowering commercial housing price?

Is it reasonable to have different rent according to individual situation?

- 74%: Reasonable
- 18%: Unreasonable
- 8%: I don’t know.

Chart 6.13: Is it reasonable to have different rent according to individual situation?
Chart 6.14: Willingness to apply Public Rental Housing

- 73%: If the project is suitable, then I will
- 4%: Depends on the rent
- 6%: No
- 17%: I don't know
7. Capital source and housing allowance

7.1 Capital source for PRH

Since Public Rental Housing will serve more tenants than other types of social housings, and the task of constructing is enormous, therefore it is crucial to have enough financial support. Based on the experience by the previous projects, the main sources of funding are the following channels:

First, special fund in the governmental fiscal budget; second, using Housing Public Accumulation Fund (a special housing fund in China which refers to the long term housing savings deposited by state organs, state owned enterprises, urban collective enterprises, foreign-funded enterprises, urban private enterprises and other urban enterprises and public undertakings, as well as in-service workers) to support the construction of social housing, according to Wang’s research (Wang Wei, 2010); third, using the low-rent housing guarantee fund after the balance to construct public rental housing; fourth, making use of social capital resource, including bank loans, enterprise funds, revenue of commercial real estate projects, etc. After the construction of public rental housing project completes, the management cost, maintenance fee and capital cost are paid by the rent. Meanwhile, the authority is exploring new way like REITs to expand the financing channel for public rental housing.

7.2 Principal-agent issue between housing developers and the authority

Why developers are reluctant to invest in PRH?

As we mentioned earlier, most of housing developers prefer to construct commercial real estate projects rather than social housing. For this issue, I did an interview with Meng Chunling, who is the propaganda manager in Beijing Jinyu (Real Estate) Group. She thought that there is small profit to launch social housing projects, but the process has to be monitored well, otherwise there will be a loss. Longer selling period for social housing influences profit. As Meng introduced, their company has constructed nearly 2.3 million m² social housing in Beijing. Although economically affordable housing, price-limited dwelling and commercial housing transfer ownership through selling, however the way of housing transaction and capital returns varies among different types of social housing. She said that commercial housing project is relatively simple: Once they applied pre-sale licensing and other five certifications to “Beijing Municipal Commission of Housing and
Urban-Rural Development”, then they can organize sales. As long as the marketing strategy works well, the funds can return as planned in a certain period of time. These funds can repay the loans or acquire other land to develop new projects.

However, social housing is completely different. Although the construction period is almost the same for both social housing and commercial housing, the time from application of social housing permit till sale is very long, something it takes six months. Taking price-limited dwelling for example, before signing the contract, there are several steps like applying pre-sale license, obtaining pre-sale permission, obtaining “lottery” permission, and then reviewing the qualification of applicants. Each steps takes more than one week.

For public rental housing, we are worried even more. The biggest advantage of other social housing is that once you construct the housings, they are ensured to sell out. However for rental housing, even you don’t need to worried about the creditability of the tenants, capital return time will be quite long since it can only rely on monthly rent. It takes decades to break even and starts make profits. For most of housing developers, they won’t invest such projects. Last year, Beijing Jinyu undertook a public rental housing project. According to the contract, after the construction finishes, the government can buy the properties back. Although the land for public rental housing construction is allocated, housing developers still bear to cost of land consolidation, plus construction cost which equals to the governmental repurchase price. Meng said even the “buy-back” period can takes quite long, which can takes several months. The loan and interests during this period have to be paid by the housing developers themselves, which makes it more likely to lose money. Therefore, most of developers don’t want to involve in construction of social housing. Currently, these companies participate in building public rental housings in Beijing are state-owned enterprises.

Incentives for developers and investors to participate in PRH construction

Since the price difference between public rental housing and commercial housing, the local government is bound to provide a series of preferential policies to attract more companies to join. Generally speaking, through open tendering the local government can select companies with good qualification and low price offer to develop public rental housing projects. These
companies can negotiate with the authority about land price, and they can enjoy corresponding credits or tax incentives, plus an enormous amount of saving on sales costs. Therefore, some enterprises should be positive in the construction of public rental housing.

Moreover, in order to promote the development of public rental housing, the government can set “Housing developers have to provide a certain amount of rental housing in the commercial housing projects” as a condition for land bidding. (Yang, H, 2010) Moreover, the government can reduce the tax burden for those developers launching rental housing projects. Meanwhile, rental housing projects with small and medium sized units or corridor type should be supported with priority.

7.3 Financial innovation application on PRH

- **Fund**

Financial innovation on public rental housing has made new progress. Recently the first public rental housing fund by J&J capital has been reported to the National Development and Reform Commission and Ministry of Housing and Urban-Rural Development (MOHURD) and wait for approval. This fund will be established with joint-stock company form by J&J capital as fund sponsor and manager. They will raiser 20 billion RMB of fund, with 5% annual return for 5-year deposit to invest public rental housing. (Liu, X, 2011) This fund can be concertized to construct public rental housing, which transforms the building mode from BT (Build-Transfer) to BOT (Building- Operate-Transfer). It can delay the payment time for the government to buy back the housing from developers. Moreover, it is also possible to exit from the capital market through IPO or converted into REITs, in order to solve the problem that the main financing source for social housing relies on governmental fiscal income.

Currently, the income of public rental housing fund is mainly from rental income and other policy benefits, such as reduced or exempted land use tax, deed tax, stamp duty, operation tax and property tax. Meanwhile, there are some beneficial rules for public rental housing, such as 50%-70% discounts for land transfer fee, and 1.5 to 2 times of residential floor area ratio compared with commercial housing. These benefits make the cost of public rental housing roughly as half of the one for commercial housing, or even lower.
According to J&J Capital’s plan, the reasonable rent of public rental housing for is around 30 RMB per square meter per month, which is around two third of average market rent in Beijing. Meanwhile, this fund proposal also suggests that use 15% of total area for commercial property leasing. If this part of commercial property also exempted from operation tax and property tax, therefore the rental income for the commercial property would definitely improve the yield of public rental housing fund. Public rental housing fund is operated with around 50% of market cost, acquiring two-third of market rent, which hides blatant leverage benefits.

- **Trust**

In speeding up the process of constructing public rental housing projects, it is better to use more sources like insurance funds, long-term trust funds and so on in construction of public rental housing through direct investment, private equity, or even REITs. However based on the current situation, the supporting system for insurance capital into public rental housing field is far from perfection. There is lack of enough income returns for trust fund, based on Ge and Wan’s description. (Ge. C& Wan. M, 2010)

Insurance fund have strong advantage to contribute to constructing public rental housing projects. The capital in insurance company has stable, long-term, and huge amount characteristics compared with bank loans, and it doesn’t have to bear the pressure of repayment. Since the cost of land takes a large proportion of the cost for a property, the housing cost for public rental housing drop substantially since the government will subsidize for the land cost. It is expected to have satisfying rental income, which should be an optimal long-term investment.

However, there are some problems for insurance fund involving in public rental housing. Firstly, the ownership for public rental housing is doubtable. Secondly, the rental income is related to the housing price level in the market. When the market goes through recession, there is potential debt risk for those insurance companies. Moreover, whether public rental housing can gain profit and if these profits are high enough is doubtable. The average expected rate of return of public rental housing is around 4%-5%. Even we count it as 5%, which almost equals to the deposit interest rate (risk free rate). Last, trust fund should be a very flexible investment, however
the liquidity of public rental housing is very low. Therefore it is wiser to invest on the bank. The executive director of the China International Capital Co. Ltd, Sun Fei said the government should provide subsidy in order to improve the yield of public rental housing.

7.4 Housing allowance for tenants

In general, household income is the key determinant for the entitling to housing allowances. Direct housing benefits granted to eligible households are widely adopted in Europe. In Sweden, there is a dual system of housing allowance, which is open both to tenants and to owner-occupiers, but the great majority of beneficiaries are tenants. Housing allowances are a function of dwelling size, household income, household size and maximum rent. (Donner, 2000) Setting entry standards and monitoring of the standards is important. In China, the government will subsidize 20% to 70% market rent to the tenants living in public rental housing, according to the qualification of the tenants and different rules in different municipalities.
8. Land fiscal policy for public rental housing

Any social housing is limited by land fiscal condition in China. The land would have higher yield if it doesn’t be used as the land for social housing purpose, and with much less payback period. According to Lan’s article (Lan. F, 2010), the executive vice president of Sunshine 100 group, Fan Xiaochong thought, this kind of project requires excessive amount of funds and yield less, most of housing developers are generally reluctant to participate.

Moreover, the local government is lack of motivation to invest on public rental housing. According to statistics, one third of governmental fiscal income comes from land transfer fee. Influenced by the high land price, the land cost takes nearly 60% of the housing value in some cities, which directly push up the housing price. Some local governments make short-term decisions currently since they don’t have enough tax sources, and neither can borrow money to implement their development plan. Therefore, they can only rely on limited land resource to get as much money as possible. The fiscal condition for local government determines the future of public rental housing.

In this view, those local government with tight budget can’t launch large scale of public rental housing. In Chongqing, land revenue has nothing to do with fiscal income. We can do a simple calculation: in order to build 20 million m², around 335 thousand units of public rental housings in Chong Qing, it requires 30 thousand mu (a Chinese unit of area, equal to 1/15 of a hectare or 1/6 an acre) of lands. Based on the lowest land remise fund on the market – 2 million RMB per mu, it would directly reduce the fiscal income of 60 billion RMB for Chong Qing government. The total fiscal income for Chong Qing government was only 160 billion in 2009; therefore it took huge determination for the government to provide such large scale of “zero cost” land for public rental housing construction. However, in other world, government reducing the land remise fund, although it can affect the fiscal income for the local government, it would definitely influence the housing price back to normal level, which can benefit the general low-moderate income group to a great extent.

Besides the subsidy for the land, the construction cost for public rental housing in Chong Qing case is around 50 billion RMB. Therefore, the total cost for constructing 20 million m² of public rental housing is around 100 billion RMB. According to Liu’s article, (Liu.J, Zhu.
W, Xu. X, 2010), the chairman of Chong Qing Property Group, Zhou Tianyun said, these on-going constructed 5 million m² of public rental housing starting from 2010 required the investment of 15 billions RMB. Their company will plan to invest 7 billion RMB, adding 500 million of the governemental subsidy; 3 billion of housing provident fund (HPF), 500 million subsidy for low-income rental housing (which constructed together with PRH), 3 billion from bank loan, which can solve their finance problem. After the project finished, with continued rent income, these properties can either raise value, or to be used for mortgage.

Furthermore, there is some innovation for the Land Remise Fund. In Beijing, the Xi Erqi public rental housing project has identified the Land Transfer Rent, which means the developer only needs to pay annual rent for the land, instead of purchasing the ownership of the land through bidding auction and paying 70 years of Land Remise Fund at once, as Liu said in his article (Liu. Y, 2010). Therefore, the land cost has been reduced and it can motivate more developers to join the construction of social housing.
9. Debates about Public Rental Housing Scheme

9.1. Positive Opinions

9.1.1. PRH Helps to Ease Overheating in Short-term

In Beijing residential market, overheating is caused by the unbalance structure of residential supply starting from 2007 until 2010. Since the housing price in Beijing surged in 2007 and irrationally doubled in 2009, plus the more and more scarce land, once they got the land through auction, those housing developers tended to launch high quality and large units projects to serve high-income group in order to gain maximum profit. It causes highly unbalanced housing structure in supply. Compared to the low supply of medium-quality residential, the demand for them was very high. That made the overheating housing market even out of control. It is impossible for the market to adjust itself to equilibrium in a short run, so the government should play its role to cool down the market. Public rental housing is an important and effective weapon for that purpose.

Public rental housing increases housing supply. Firstly, it will have impact on the price level of rental housing in the short term, suppress some demand for investment purpose, and indirectly suppress the housing price increasing too fast. In Shanghai, even though under the financial crisis in 2008, the rent for those low-quality properties still increased by 8%. Facing with this situation, these “sandwich layer” bear living pressure the most. Therefore, it is very important to meet the market need and suppress the rent increasing too much for supplying public rental housing in the city. Actually, the influence on real estate speculators began to take shape. After the news that the government will construct a large-scale of public rental housing, the second hand housing market in Chongqing responded quickly: Recently many speculators intended to sell their housing into the market originally for leasing, most of which are near to those public rental housing projects.

In addition, it will influence commercial housing market in the long term. On one hand, public rental housing can change our expectation about housing market. In recent years, there are many buyers purchasing housings beyond their economic condition, the reason is that people think the later they wait, the more expensive the housing will be, and also for renting. The introducing of public rental housing can ease the anxiety to this issue, which lead people to take time to realize the transition from renting to housing ownership in accordance with their economic condition. On the other hand, a large amount of public
rental housing putting into the housing market will reduce the average rent, especially lowering the increasing speed for the rent of those low-quality properties, which decreases the return for investment. Taking interests, taxes and property tax in future, it is possible for investors to buy a house easily but have difficulty for investment or rent it. Therefore, speculating on real estate would be risky and have to pay a large amount of cost. (Han. Y, 2010) By squeezing the housing investment, it is efficient to suppress the housing price increasing too quickly.

9.1.2. PRH Helps to Solve Housing Problems in Short-term

The demand in residential market is increasing due to the urbanization. More and more people flood into major cities in China; especially those migration workers and newly graduates, which are the main source to serve the city and accelerate the urbanization process. Their housing problem must be met in some way. Based on the current situation in the residential market, the current price level of commercial residential is too high for them to afford. Moreover, they can’t apply economy housing and other social housing since the household register problem. Although the rent of private landlord is affordable for them, there are still a series of problems since it is quite unregulated and immature market. Therefore, Public rental housing is not only the way to solve housing problem, but at the same time, is one effective way to meet the urgent need in residential rental market.

9.1.3. PRH only benefit the ones have real need

There are rules on who has the legal right to rent a public rental housing, however the cost of supervision is extremely high for the government. According to the rules, for example, Chongqing residents whose family annual income is less than 200,000 RMB have the right to apply public rental housing. Similar with all the other social housing, due to the unsound social monitor system, government can only know family members’ annual salaries, but never know the exact money a family earns in a certain year. Thus, it is very difficult to check the true income of a family. Moreover, it is hard to know whether a family has their own apartment or not. Because they can buy their own apartment but have it registered under their parents’ names. Therefore, only based on this principal it is still hard for the authority to execute. Another rule for restricting the housing area as less than 60 square meters can really make those “rich” people stop trying to get public rental housing, and benefits those people in need.
9.2. Negative Opinions

9.2.1. PRH makes housing market in a State of Disorder

Market price is determined by market supply and market demand. With increasing demand in a certain area with exclusive geography advantage, the average housing price and rent level will definitely increase. If the government provides a large amount of public rental housing in that area, those private rental sector and residential market will be influenced. Private rental landlord may have to reduce the rent while the housing price in these areas would probably drop since the amenity and public resources in these neighborhoods have to share with newly settled lessees, which will devalue the quality of the outer environment of existing properties.

Moreover, if these special policies for public rental housing to attract private capital funds are based on those beneficiary provided by the government, then this is not real market behavior. Since this system tend to separate the housing price and property tax into “two-track system”---social housing standard and commercial housing standard, therefore to form the significant different rent, taxes and housing price between those two forms of dwellings, and thus interfere with the housing price signal and resources allocation, leading the problem more complicated. At this situation, the market rules will be probably in a state of disorder and market operation will not go according to the rule of supply and demand. Market fails to operate properly.

9.2.2. The scale of PRH is still too little

According to the statistics, the percentage of public rental housing in the total housing supply is around 80% in Singapore, and more than 50% in Sweden. However, in China, even in Chongqing, which has constructed most social housing in China, the public rental housing still takes small percentage of total housing supply. Currently the scale of Public rental housing is still too small and can’t meet all the demand at once. However, the Chongqing government decided to build almost 335 thousands units of public rental housing in the next ten years, which is around 50% of current total housing supply in Chongqing. By then, the housing problem for the “Sandwich class” should be solved.
9.2.3. Quality is still unknown

Based on the interview with Meng, the manager in Beijing Jin Yu Group (Real Estate), the profit of public rental housing for developers is rather small compared to commercial housing. Taking long bureau process, interests, banking loan into consideration, it is possible to loss for developers bearing such risk. In order to have higher profit, developers will might construct more units per sqm with lower area of green land per sqm, and lower quality of construction material and surrounding amenities and services, compared to commercial residential. And most of the public rental housing projects are located relatively in the suburban areas. The infrastructural facilities are poor.

9.2.4. High supervision cost for the government

There are rules on who has the legal right to rent public rental housing; the cost of supervision is extremely high for the government. These rules are mainly based on income and the existing housing condition of the applicants. However, due to the less integrate social monitor system, government can know the family member’s annual salaries, but is still hard to know how much money a family earns each year. This is possible since people can make money in stock market with their parents’ account or people can buy their own apartment but register it under their parent’s name, and it is common since the family ties firmly in China. Thus, it is very difficult for the government to carry out effective supervision. Moreover, unlike other ownership social housings require supervision only for once before the ownership transfer, public rental housing requires more supervision, at least every five years for each apartment. Therefore, the supervision cost for the government is very high.

9.3 Potential problem for PRH

Since the number of “Sandwich class” is quite large, it is impossible to meet all needs in the short term. Due to the unbalanced regional development in China, there is fiscal disparity in different local governments. Therefore, when implementing public rental housing projects, it is a must to follow the actual situation instead of setting unified unrealistic goal, which is difficult to achieve success. Besides the complexity for implementing public rental housing project, there are still some potential unsolved problems for public rental housing.
9.3.1 Household register issue

In major cities like Beijing and Shanghai, there are many college graduates and migration workers not belonging to those local registered population. However, since the fiscal constraints, public rental housing projects in most of the cities can only serve for their local registered population. Especially in Beijing, the number of local registered population is around 13 millions, and the number of foreign population living in Beijing for more than half year is above 4.5 millions, therefore it is hard to solve all people’s housing problem at once based on the current construction speed, and it is difficult to identify the qualification also. Even for local population, due to the shortness of public rental housing resources, the standard to apply PRH is relatively high either to low-income families or to new employees. Thus, it is imperative to accelerate the construction of public rental housing.

To solve these problems, the government can try the following ways: First, when the government set the plan for public rental housing programs, taking accessibility into consideration is crucial. For example, set new bus lines in the newly built community, therefore it can solve the hesitation for tenants considering between rent and traffic condition. Second, the government should build multi-channel social housing systems and make use of private capital to accelerate the construction, in order to meet the need of all the population in need. Third, it should be encouraged for those companies have ability to build housings for their own employees’ need.

9.3.2 Rent setting

Setting the rent standard for public rental housing is not easy. If the rent is set too high, it is against the principle of public rental housing to provide affordable rental housing to the target group, or the rent can become the biggest barriers for them. If the rent is set too low, then it is too difficult for the government to subsidize such large scale of public rental housing since it requires rent to balance the housing management and maintenance expense. Since the target groups are different for public rental housing and low-income rental housing, the former’s rent is higher than the latter. In most of cities of China, the rent for public rental housing is based on construction and operation cost with some adjustment regularly, but it is much lower than market rent. It is common that the rent of public rental housing is 70% of the average market rent in many cities of China. For example, the rent is 80% of the market rent in Beijing, 70%-80% in Qingdao and Nanjing, 60% in Chongqing, 10%—30% in
We can see that the subsidy in Beijing is apparently not sufficient for those who can’t buy affordable housing to pay 80% of market rent, the burden is still quite heavy for them living in public rental housing. However, in Xiamen, the subsidy is quite high. In this case, if the government fiscal situation can’t bear such large scale of projects, it would affect the sustainability of this policy operation.

9.3.3 Monitoring system

On one hand, it is difficult to oversee the qualification of applicants, for entry and exit mechanism of public rental housing. The dilemma is that only relying on the housing authority can hardly know the situation of a family’s property, especially for car and stocks. Whether new employees have dwellings in the city is also difficult to be known. To build an efficient exit mechanism, price leverage is an option: It is possible to raise the rent or stop subsidy when the tenants are not qualified. Rent higher than marker average rent can force those families to move out initiatively, in order to avoid unreasonable public resources allocation. However, this “full rent first, then return” way of subsidy would undoubtedly increase the workload of the authority, especially for such large scale of public rental housing. (Wen. Y, 2010) It is a must to solve the common shortage of personnel in the housing authority.

In addition, for the management of government itself, it is necessary to build a transparent and scientific management system to assure public rental housing developing for the right purpose. Some local governments might use the resource for public rental housing to some other purpose, in the name of promoting investment or introducing talents and the people in need don’t get the benefits. From the experience of public rental housing projects in other countries, negative problems like low operation efficiency, lack of necessary maintenance, transforming to slums can happen after public rental housing operates for years. All of these issues need to avoid and prevent during the process in China.
10. Final Analysis

10.1. Is Public Rental Housing a Temporary or Permanent Policy?

After developing for twenty years, the residential market in China is mainly dominated by market forces. However, the immature unregulated market has accumulated bubbles and doesn’t fill all the people’s needs, therefore the aim that government implemented public rental housing policy was to improve the status of rental housing in residential market, transform the residential supply structure, and ease the overheating housing market. As the group who demand public rental housing (those who seek housing with low rent and practical use), migration workers and graduates take up the largest part in the demand side, who is the main force and engine of urbanization. Their demand is huge, according to questionnaire result and still not satisfied after those previous social housing projects, which usually have very strict qualification barriers.

Compared to commercial housing, these public rental housing not only cut off developers’ profit but also government’ financial revenue, because the land for those projects are sold with a lower price from government. The only ones who benefit from this policy are those low-moderate income families. If the government wants to solve housing issue dramatically by public rental housing like Chong Qing did, a large number of the projects would be carried out. If so, there would be huge loss for both government and developers in the short term. Another problem is that this policy will weaken the market functions in rental market, and have some effect on the residential ownership market since people might postpone their decision on purchasing ownership. The pressure turns from market-lead to government-lead. The reason that Chinese government would make decision to construct large scale of public rental housing is more for social stability purpose since the situation in housing market is very serious and the extreme disparity between the rich and the poor is getting worse. Since all the previous social housing haven’t obviously effected on the overheating housing market, then the public rental housing policy is used. Therefore, if there is a better solution, the government won’t choose this policy as a permanent one.

Aside from the previous social housing programs, public rental housing has its unique background. Since the housing market in China experienced skyrocketing in 2007, global financial crisis in 2008, easy monetary policy in 2009, inflation in 2010, the risk and bubbles reach the highest level. In Chong Qing, the average housing price was around 3500 RMB
per m², but 8000 RMB per m² in 2010. Along with large number of social housing putting on the market and the introduction of property tax, it is expected that the housing price will drop, at least in the arithmetic average housing price sense. Although it can’t change the situation of rapidly rising commercial housing price, the goal for controlling housing price should be accomplished. Moreover, in March 2011, Chinese government declared clear regulation on commercial housing market: the increasing speed of housing price must be lower than the increasing speed of average disposal income of urban residents. In Beijing, the local government stated clearly to force the housing price to decrease. There are 2550 hectares of residential land planning to supply on the market in Beijing in 2011, including 1330 hectares for social housing use, which accounts 52% of total residential land. As the chart 10.2 shows, the construction of social housing is booming in 2011. The number of newly on-going public rental housing projects is six times comparing with last year. It is the first time to use such strong government intervention in China. After the government declared their proposition clearly on the housing market on March 2011, the housing price in four major cities (Beijing, Shanghai, Guangzhou and Shenzhen) has decreased. Based on the statistic of Beijing Real Estate Transaction Website, the first-hand residential sales volume dropped to the lowest point in the last three years in the first quarter 2011, which is only 60% of that in the fourth quarter of last year. Whether the housing market can completely change and adjust the transaction to “two-track system” (commercial housing market and social housing market), still need time to tell.

Chart 10.1: The increasing speed of housing price of 70 major cities in China
What if public rental housing is only a temporary policy? Since the earliest public rental housing project is finished at March 2011, it is still too early to make conclusion on the future of public rental housing, though the housing market already have some reaction on these series of strict governmental control policies. It still needs huge amount of fiscal support to guarantee such large scale of projects to be permanent. Whether the government will stick to this policy depends on the effect of easing the essential housing problem in China.

From the previous analysis we can know, this policy have some effect on the housing market but rather small one due to the limitation of its developing scale. Moreover, if there is no solution for financing resource, it is difficult to maintain public rental housing to be a permanent policy. Current this policy is more like makeshift arrangement for the overheating housing market, serving for social stability instead of economic purpose.

Whether public rental housing can be successful and run as permanent social housing program depends on if the government can make good use of market resources. The success of Hong Kong public rental housing system attributes to the maximize utilization of market resource. The most representative way is to use the public rental housing itself to finance and maintain. The Housing Authority is in charge of the planning, design, construction and management of the commercial facilitates, parking lots, and other non-residential facilities nearby public rental housing projects. According to the statistics (Fang. H, 2010), from April
1993 till April 2003, there was operation deficit of 12.036 billion HK$ for public rental housing. However, during the same period, only the rent income was 21.602 billion HK$. After deducting the 50% bonus for the government, the left profit could make up the majority of operating deficit. Moreover, if we add the profit of 92.508 billion HK$ for selling public rental housing after 10 years, the Housing Authority have the strength to continue to build new public rental housing. Therefore, we can see public rental housing have potential to run as a long-term project.

10.2. Public Rental Housing’s Effects on Market Behavior

The essence of public rental housing policy is that there are limitations for land price and rent. From government’s perspective, pricing for the rent is vital. If the rent is too low, excessive subsidy does harm the government’s revenue; if the rent is too high, then there is no difference between public rental housing and private rental housing. Moreover, since the government has to sacrifice millions of land remise fund to launch public rental housing projects, the scale of PRH is limited by the fiscal income of the local government. From the developer’s perspective, they might cut the construction cost such as the cost of construction materials in order to make the whole construction cost lower, therefore their risk would reduce and the profit would be higher for them to participate. Thus, the housing quality of public rental housing is also a potential risk. Therefore, only if the rents of PRH were reasonable, both developers and customers would participate in this project.

The second positive effect is that public rental housing makes developers don’t need to worry about marketing. In the past, developers would construct dwellings and sell them gradually, in the mean while increasing the selling price. In this way, since the government will guarantee the allocation of the housing, developers can focus on constructing works and will start to have capital back for reinvestment once the tenants living in the housing.

10.3. PRH Could Meet Housing Need of low-moderate-Income Families

From aspect of social security system, public rental housing policy makes sure that cheap and practical rental housings are available for low-moderate income families if this policy could be carried out permanently. In the short term, market didn’t show much influence yet
since the supply of public rental housing is far from enough now according to investigation and the earliest project just finished in March 2011. If the government can fix the housing problem and implement this policy as permanent one, it does help out from the demand side and ease the pressure on the commercial housing market.
11. Conclusion and Recommendation

Low and moderate-income families are very important parts in China’s society. They are the largest component, and their housing need is very important in both social economy aspect and social security aspect. Especially for those migration workers and newly graduates, if their housing need can’t fulfill, the urbanization process will be affected. Public rental housing policy, which was carried out at the beginning of 2009, tries to ease the housing demand for low-moderate income families. Since it is still a very new kind of social housing and no much experience or previous study on this field, it is not easy to define the future of this social housing project. However, according to the study on both demand side and supply side, no obvious effects on easing the overheated commercial housing market happened. Based on our survey, public knowledge and satisfactory level is in relative low level with public rental housing projects in Beijing. The housing market shows strong tendency to divide into “two-tracks system”, which social housing and commercial housing have different pricing strategy, market share and serves different target group and purposes. Maybe that is the future Chinese housing market looks like and the result that Chinese government can sacrifice millions of fiscal income to implement public rental housing projects. Hence, under the current situation, some changes might be needed.

First of all, the rent of public rental housing might be more sensitive to market situation. Since the housing market in China changes quite much, the evaluation of reasonable rent setting should be more sensitive to the market fluctuation. Since current public rental housing only has small advantages (around 30%) on price, when market is under recession, it could easily lose its advantage if the administrative don’t adjust the rent according to the market changes.

Secondly, concrete regulation of public rental housing quality should be released and more incentives could be given to developer in order to maintain or improve housing quality. Housing standard of public rental housing is different from commercial housing, but it should meet the basic housing standards, small and practical.

In addition, public transportation between city center and public rental housing areas should be improved. Most of the projects are located in suburbs, which have inconvenient public transportations and lack of necessary commercial, medical and educational facilities. With
better traffic and other facilities, more people are willing to participate in public rental housing.

Last but not least, in order to solve the bottleneck of construction funds for public rental housing, the government should learn from the foreign experience: To innovate financing mechanism, reduce administrative fees and use governmental funds to encourage the participation of society, using BOT model, REITs and government bond to maximize the financing ability under the government guidance.
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Appendix

Questionnaire:

Question 1: Which is your favorite type of social housing provided by the Government?

A. Public Rental Housing  
B. Price-limited dwelling  
C. Economically affordable housing  
D. Low rent housing  
E. Monetary subsidies  
F. Others

Question 2: Do you know the difference between public rental housing and other social housing like affordable housing and low rent housing?

A. Known  
B. Unknown  
C. Heard of it before but not fully understand

Question 3: Do you know where to apply for public rental housing?

A. Known  
B. Unknown  
C. Heard of it before but not fully understand

Question 4: Do you think the public rental housing can really benefit those who is in need?

A. Yes  
B. Can’t draw conclusion yet  
C. Very few qualified people can get their housing

Question 5: Do you think after the government built public rental housing, will the situation like "drive a BMW, live in public rental housing" happen?

A. It will, inevitably  
B. No, it won’t  
C. I don’t know

Question 6: Do you think the conditions for applying public rental housing is too strict?

A. Very much  
B. A little bit  
C. No so much  
D. Acceptable

Question 7: What is the most important criteria for public rental housing?

A. Location and transportation  
B. Housing facilities  
C. Housing quality  
D. Housing pattern
E. Others

Question 8: Do you think how public rental housing will influence the commercial market?

A. Not at all, since the target of PRH is different with commercial housing
B. Yes but very small impact
C. It will shock the commercial market
D. Don’t know yet.

Question 9: "the ultimate goal of constructing social housing is to reduce the housing price level", do you agree with this view?

A. Agree
B. Disagree
C. I don’t know

Question 10: Do you think is it reasonable to implement different rent system according to individual situation?

A. Reasonable
B. Unreasonable
C. I don’t know.

Question 11: Would you apply for public rental housing?

A. If the project is suitable, then I will
B. Depends on the rent
C. No
D. I don’t know.

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