ISBN 0 86396 575 X

NO. 98/1

KEY ISSUES IN ESTABLISHING A NEW HOUSING SYSTEM BASED ON A MARKT ORIENTED ECONOMY

Yuan Shiming

January 1998

The Working Paper series provides a means for circulating preliminary research results by members of, or visitors associated with, the Chinese Economies Research Centre. To facilitate prompt distribution, papers are screened but not formally refereed.

About the author

Yuan Shiming is at the

Centre for Asian Studies
The University of Adelaide SA 5005
Australia

Copies of Working Papers are available from:

Chinese Economies Research Centre
The University of Adelaide
ADELAIDE SA 5005
Australia

phone **61 8 8303 4460**
fax **61 8 8303 4394**
email **jholmes@economics.adelaide.edu.au**
www **http://www.adelaide.edu.au/CERU/**

Key Issues in Establishing a New Housing System Based on a Market Oriented Economy

Shiming Yuan

1. Introduction

China began its urban housing system reform in 1980. This reform has experienced four stages: decentralisation in housing investment, sale of urban housing, experiments with low rent reforms and implementation of the urban housing system reform all over the country.

During this process, in terms of solving the problems of urban housing shortages, living space per capita has more than doubled and living conditions have been improved. Although there is some progress in implementing multiple channels of housing investment, selling public housing and raising rents in order to change economic mechanisms between the supply and demand for urban housing, reform towards a new urban housing system based on the market - oriented economy has not achieved its scheduled aims.

Firstly, the proportion of the housing investment by central or local governments and work units still amounts to 80 percent of the urban housing investment. Secondly, due to dual-track housing prices, two housing markets exist: an "internal housing market" with preferential prices and an "open housing market" in which the market sets the prices. The former still follows the old welfare system. The latter is limited to a very narrow range because most urban residents still rely on the provision of public housing. The price is too high for wage employees to afford their own housing, and the low rent system still exists so that people can get heavy subsidies if they live in public housing. Thirdly, in terms of the reform of the low rent system, the proportion of rent to total expenditure for urban residents was only 1 percent in 1994, which is even lower than in 1980 before the housing system reform began. Therefore, the low rent reform has not led to a healthy circulation of housing investment and the rent for public housing is still subsidised by the government and by work units.

As a result, China's housing reform has not fundamentally changed the old housing system. Although it has made some achievements in respect of multiple channels of investment, sale of public housing and raising rent, it has not achieved its main aims. As we will argue here, to some extent the housing shortages in urban areas still exist. This is because the

housing reforms have focused on overcoming the lack of capital in housing construction in order to solve the shortages in urban areas and to relieve the burden of the central government and work units instead of reforming the entire urban housing system in China.

In this paper, the key issues in the reforms will be discussed. Considering the experience of housing systems in market economies and China's present situation, apart from aspects of the reforms mentionned above, it is argued that further reforms should focus on four aspects: 1) setting rational housing prices based on wage system reform and the affordability for residents, 2) clarifying and legislating for property rights, 3) creating independent and socialised housing management companies and 4) establishing an efficient housing finance system.

2. Setting up rational housing prices based on the residents capacity to pay

China's experience of urban housing reform has proven that the first crucial issue is how to establish rational housing prices based on both demand and supply. It involves the relationship between housing sale prices, rent and income. At present, the price problems are reflected in two aspects: one is that the housing price in the 'open housing market' is too high to be affordable by ordinary urban residents. This results in an overstock of newly-built housing. The other aspect is that rents cannot be raised to a market level without a huge wage adjustment. This situation keeps the rents at a very low level. As a result, the low rent system has not fundamentally changed and the funds collected from rent are not enough to satisfy the demand for housing investment.

This section focuses on a discussion of the housing price distortion in the present system. The first step explores the housing price-income ratio in China in order to argue that the high price in the open market leads to a low level of affordability among households. It is then argued, in the second step, that the rent level determines people's motives for buying their own housing. The present low rent level is therefore still a crucial obstacle to realising housing commercialisation. However, wage adjustment is a pre requirement for raising rent to market levels. The third step examines the relationship between supply and demand in the present housing situation where there is excess supply in the open housing market and excess demand in the internal housing market. These exist side by side. On the one side, there is a lot of vacant new housing which is overstocked in the open housing market; on the other side, there is a lack of housing at a low rent in the internal housing market. The result is irrational housing sale prices and rents, and the failure to complete the housing system reform.

2.1. The capacity of households to afford housing - housing price to income ratio in China

The housing price to income ratio (PIR) can be measured as the ratio of the average trading price of a housing unit to the average cash income of households in a certain time and in a given city. The PIR is an important criteria for measuring the capacity of households to afford housing and an indicator for the housing demand-supply relationship in a market economy.

A rough preliminary indication of how housing prices compare with household incomes in the urban areas studied can be obtained using the following rule of thumb. In most market economies, PIR varies between 2:1 to 6:1 depending on the city and location involved (Grime 1976, p 65 and World Bank 1992, p. xiii). This means that housing expenditure is around 15-30 percent of household monthly income, varying by the amount of down payment and the time limit for loan repayments. These are regarded as affordable prices for average households. In developing countries housing expenditure by low-income households claims a higher than average share.

However, this is not the case in China. With rapid economic development, the primary distribution of national income has been adjusted and household income has clearly improved compared with the levels before the economic reforms. But the PIR in China is within the range regarded as affordable for ordinary employees to buy their own housing (See Table 1).

Compared with an international average level, the housing prices in the majority of urban areas are too high to be affordable for people who work for a salary. Table 1 shows us that in 1994 the PIR in 19 urban areas was over the range 6:1 and over 10:1 in 6 urban areas. The highest ratio was 15.76 :1 in Heilongjiang province. Only four urban areas fell in the range 2:1 to 6:1. These urban areas are located in remote inner lands, and have undeveloped economies and less population compared with coastal urban areas. Furthermore, the range of the ratio calculated in Table 6-1 is an average level in an urban area which includes all cities and towns. If we only compute capital cities in provinces and high population density cities, the ratio will be very high. For example, in Beijing, Renaud states, "the price to income ratio is initially a major obstacle to privatisation but can be expected to decline significantly with the increase of market transactions" (1991, p. 23). Why is the housing price so high? Is this a market price?

Table 1 Housing price to household income ratio in urban areas in all provinces of China in 1994

Regions	Housing building space (sq. m)	Housing Price (yuan / sq. m)	Housing price per unit (1,000 Yuan)	Household annual income (Yuan)	Price to household income ratio
Average*	74.75	1194.12	89.3	9076	9.84
Beijing	63.92	2740.30	175.1	13046	13.42
Tianjin	62.62	1681.20	105.3	10728	9.82
Hebei	72.95	705.61	51.5	8370	6.15
Shanxi	72.91	702.74	51.2	7994	6.40
Inner Mongolia	72.23	869.47	62.8	7350	8.54
Liaoning	66.73	1312.50	87.6	8538	10.26
Jilin	74.32	1094.64	81.4	7332	11.10
Heilongjiang	69.13	1539.77	106.4	6750	15.76
Shanghai	57.18	1921.34	109.9	14810	7.42
Jiangsu	71.30	1034.03	73.7	9948	7.41
Zhejiang	77.31	956.93	74.0	11194	6.61
Anhui	68.64	767.75	52.7	7586	6.95
Fujian	94.28	1431.41	135.0	9778	13.81
Jiangxi	88.69	499.03	44.3	6900	6.42
Shandong	80.56	855.74	69.0	8676	7.95
Henan	79.85	567.19	45.3	7092	6.39
Hubei	81.66	866.34	70.8	8102	8.74
Hunan	74.42	788.41	58.7	8208	7.15
Guangdong	88.25	2140.45	188.9	14234	13.27
Guangxi	93.96	813.07	76.4	8936	8.51
Hainan	40.64	1832.88	74.5	8976	8.30
Sichuan	74.23	734.33	54.5	8056	6.77
Guizhou	84.71	688.22	58.3	7740	7.53
Yunnan	73.37	1082.05	79.4	9028	8.80
Shanxi	51.15	628.54	32.2	7606	4.23
Gansu	67.99	796.57	54.2	9592	5.65
Qinghai	63.58	592.53	37.7	9952	3.79
Ningxia	54.81	580.24	31.8	8540	3.72
Xinjiang	70.93	1122.38	79.6	8506	9.36

Note: 1. Average* is calculated based on the urban areas of all provinces.

2. In China, housing price for sale is set according to the building space, while living standards are calculated based on the living space, which amounts to about 50 percent of the building space. These conditions vary depending on different housing standards and regions.

Source: Hou Ximin 1996, 'Fanggai yue wan yue beidong '(The later the housing reform, the more passive). *Liaowang* (*Outlook*) p. 19.

The main reason for the high housing price in the open markets is the irrational price-setting mechanism. In China, the housing price is not formed through market competition. It is still calculated according to the development costs and influenced by government policies. The defect of the price mechanism is the high appraisal of the total costs. It is very common for many apparently random factors to be added into housing costs in most Chinese cities (IFTE and IPA 1996, p. 149).

In China, the housing price consists of 13 items, with a total of 71 sub - items varying among different projects and urban areas. They can be classified into 4 major types: the first cost is that for land acquisition, resettlement of the peasant owners, site development, construction, taxes, object management and profits. The second cost includes expenses for auxiliary facilities with housing. The third cost covers all public facilities including green space, on-site infrastructure, kindergartens, schools, sub-district offices and other unspecified items, commonly knowing *da peitao* (large project of public infrastructure in new housing development areas). The fourth cost is for commercial facilities such as a clinic, grocery store, book shop, gas station, sewage plant, etc. The proportions of all the 13 items are shown in Table 2.

In fact, the real cost directly related to housing construction in Table 2 involves items 1, 2, 3, 4, 11, 12 and 13; which belong to the first type of housing cost. The other items such as 5, 6, 7, 8, 9 and 10 should not be included in the housing cost. For example, the cost of auxiliary facilities and outdoor projects can be paid for through fee collection rather than in the housing price. The cost of a large project public infrastructure theoretically should be covered by the government budget because these public facilities have been paid for by the residents' taxes. Items 5 to 10 amount to more than 30 percent of the housing price. If they are covered by other, more efficient, finance channels the present housing price can be cut by one third and the price to income ratio can be reduced to a reasonable level.

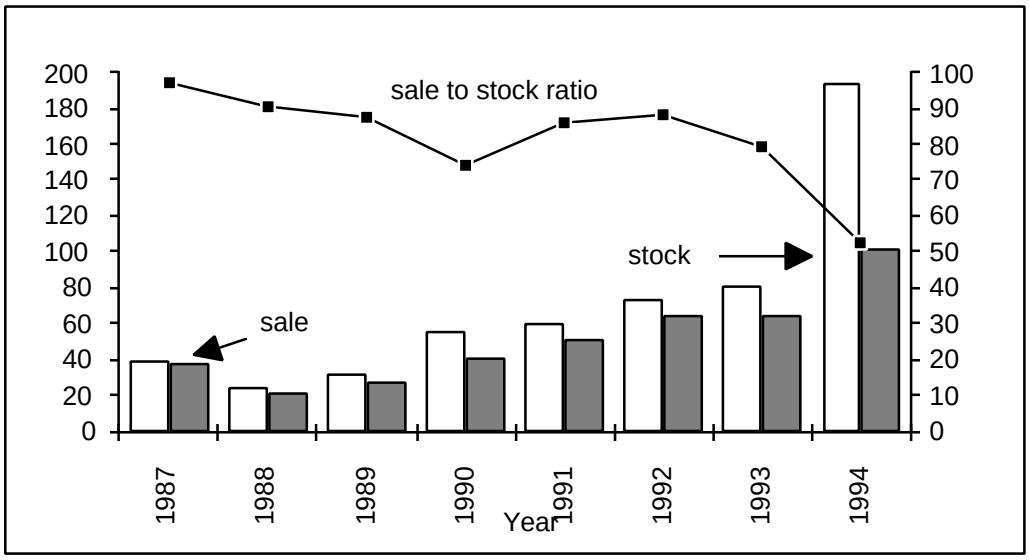
Table 2 Price composition of commercial housing in Beijing

Cost items	proportion of housing price
1. land acquisition	4.7
2. resettlement	24.5
3. land development	4.4
4. construction	25.6
5. auxiliary facilities	3.7
6. outdoor projects	3.0
7. public infrastructure	7.2
8. environment and green space	0.6
9. facilities for gas, water, heating	5.6
10. large project public infrastructure	10.6
11. business tax and local construction tax	2.4
12. management fee	1.8
13. profits	6.1

Source: Liu Qi (1992), *Zhonggou dangdai zhuzhai jingjixue* (Housing economics in modern China). cited in IFTE and IPA 1996, p. 152.

The irrational housing price in China is caused by the 'apportioned levies' (*tanpai*). Due to the limited role of the market and the irrational method of housing price setting, which is stipulated by the central government, it is very easy for local governments to transfer expenses in their budgets onto housing construction projects through special levies. Local governments can arbitrarily enlarge or put new items in housing costs. This is caused by China's present imperfect economic systems. Up till now, there is no clear distinction between public goods and private goods. Private goods have to share in the cost of public goods like the items 8 and 10 (Table 2). As a result, the housing price is so high that the market is overstocked. In Tianjin, despite the housing supply increase, the number of buyers at the housing price to income ratio 9.82:1 has been decreasing (see Figure 1). In 1987, the sale rate of ordinary housing in Tianjin was 97.3 percent of the total supply while in 1994 it was only 52.3 percent. On the surface, it is a market condition; in fact, it is caused by government behaviour.

Figure 1 Ordinary housing in the opening market in Tianjin 1987-1994



Source: The data is from the book *1996 China's Real Estate Market*, p.383.

In China, some private goods are still supplied by governments or enterprises though economy system reforms have been conducted for many years. This reflects the strong welfare ideology under the traditional planned economy system. Housing is still a typical model of an 'enterprise running a community'. Not only do enterprises continue to give heavy subsidies for their employees, but they also buy housing in the housing market for their employees, especially for people who have some privileges in their work units. So enterprises have become major buyers of urban housing. In Tianjin, for example, in 1994 the proportion of various buyers is shown in Table 3. Enterprises account for 53.1 percent of total housing sold and, through buying housing for some leaders of the enterprises, they force housing standards to rise so that housing prices rise with it.

Table 3 The structure of housing buyers in Tianjin in 1994

unit: square metre

items	space	percent
government organisations and institutions	238	0.5
foreign invested companies	8968	19.0
domestic enterprises	25113	53.1
individuals (overseas)	404	6.9
individuals (domestic)	12571	26.5

Source: *1996 China's real estate market* p. 386.

It is impossible to develop, all over the country, an opening housing market and increase the proportion of privately-owned housing with a high PIR. By the end of 1995 overstocked housing had reached 51 million square metres. Of overstocked housing, ordinary housing accounts for 70 percent of the total amount (Zhu Jiang 1996, p. 10). Therefore, the high price to income ratio is far beyond the affordability of residents. Changing the price mechanism and setting a rational housing price is a crucial issue for resolving the contradiction of overstocking and low affordability and developing an open housing market.

2.2. Housing price to rent ratio in the housing market - rent reform

A major purpose of rent reform is to remove distortions in the choice by individuals to buy their housing units. The choice between owning and renting will be discussed in detail in this section.

Under a market economy, the relationship between the price of renting and owning is the determinant of tenure choice. Tolley (1991) and the World Bank Report (1992) have done some research on this aspect. Their research method is adopted to analyse whether rent reform has reached the goal of stimulating people to buy their own housing in order to relieve the burden of housing supply by work units or governments.

The principle of housing price to rent ratio

How does a family decide its tenure choice? If the family rents, the yearly price of housing should be simply equal to the yearly rent charged. The rental cost of housing should include the interest cost on the investment plus depreciation and operating costs:

$$R = iV + sV + Eo \qquad (1)$$

where: R = yearly rent
i = rate of return on the investment
s = the depreciation rate
V = housing value, and
Eo = yearly operation expenses (maintenance, management, taxes, insurance and normal profit)

The yearly cost of home ownership is shown in equation 2 to be the sum of various annual costs. The yearly cost of housing ownership is called the user cost of ownership and shown as U:

$$U = iV + sV + Em \quad (2)$$

where: iV = interest on the housing asset, sV = yearly depreciation and Em = yearly upkeep expense.

According to the two equations tenure choice is determined by the yearly housing prices of R and U. User cost relative to rent plays a crucial role in the housing tenure decision. In a market economy, the housing value which developers must charge to stay in business will be determined by construction costs and rents will have to be set by providers to recover their cost. The family compares its user cost to the rental rate in deciding whether to be a tenant or an owner (Tolly 1991, p. 34). Therefore, equation 3 presents this relationship:

$$iV + sV + Eo = iV + sV + Em \quad (3)$$

On the left side of equation 3 is the yearly rent charged (equation 1); on the right side is the yearly costs of housing ownership (equation 2). Eo and Em represent routine operation expenses and upkeep expenses separately for these two housing tenure choice. They have a very strong influence on the choice by individuals to buy or rent their housing when the rate of return on the investment and the depreciation rate of housing value are equal for rental and owned housing.

People would be indifferent between renting and owning their own housing when the yearly costs of housing ownership equal the yearly rent charged. We can analyse this relationship in another way: yearly rent minus the yearly operating expenses of ownership can obtain a housing price from equation 1:

$$V = (R - Eo) / (i + s) \quad (4)$$

This equation shows the relationship between total housing price and yearly rent charged. When V and R have this relationship in the equation, people will be indifferent between renting and owning their housing. If developers set a selling price V higher than the level of indifference to rent, people would not purchase their own housing. There would be no home ownership. If the selling price V is set lower than this level, all people will decide to purchase their housing. Therefore, this means that the selling price can be determined on the present value of rents paid for a number of years in future, and conversely the rent can also be calculated based on the prevailing selling price (see equation 1). Both the rent and selling price are important factors in the economic analysis of a housing market.

Analysis of the relationship between the preferential price and the present rent system

Although a dominance of the low rent system still exists, the housing price to rent ratio plays an important role in people's choice between purchasing housing and renting. However, user cost (yearly housing price) performs a different function than determining yearly rent. Tolley argues that since the rental rate is set preferentially at an amount insufficient to recover housing costs, people will choose to buy only if the house value is reduced sufficiently that the user cost of owning compares favourably with the rent charged (1991, p. 34). This means that the low rent forces the housing price to be reduced, otherwise people would prefer renting to buying their housing.

We can apply this principle of using the situation of tenure choice between housing purchase and rent in China. Since the rent reform was carried out all over the country the rent for public housing has been raised from 0.1 yuan per square metre to 0.4 yuan per square metre (Gu Yunchang 1995, p. 7). This means that the yearly rent per square metre is 12 times 0.4 yuan or 4.8 yuan. Based on the research of IFTE and IPA (1996, p. 146), we adopt the lowest housing price of 600 yuan per square metre as the preferential selling price in the internal housing market and assume the construction space per unit is about 60 square metres[1], of which, 70 percent is the usage space - 42 square metres - for calculating rent charged.

According to equation 4: $V = (R-Eo) / (i+ s)$, with an interest rate i of 10 percent for a year term deposit, and a 50 year depreciation rates of 2 percent, then the yearly rent charged should be 42 times 4.8 yuan or 201.6 yuan per unit, and the housing price V should be the 1680 yuan. In this calculation, Eo is ignored[2] because it is impossible to find an accurate parameter and housing price V low enough to explain the relationship with the preferential housing price. Therefore, ignoring Eo does not have a significant influence on the research result.

Compared with the housing price of 1680 yuan calculated on the present rent, the preferential housing price in the internal market is 60 times 600 yuan or 36,000 yuan. According to the equation $R = iV + sV + Eo$ (Eo neglected), if we use the preferential

[1] This construction standard per unit is less than that of the standard commercial housing (65 square metres per unit) and higher than the state-set criteria (55 square metres per unit).

[2] When the equation $V = (R-E) / (i+ s)$ is used in the World Bank Report, it points out that if operating expenses, E , are small relative to rent, then E can be neglected, and the purchasing price that will be paid will vary in direct proportion to the rent (1992, p. 46).

housing selling price of 36,000 yuan to compute the rent, then the yearly rent charged should be 4320 per unit compared with the yearly rent of 201.6 yuan charged under the present rent system. Based on these assumptions, families buy their own housing only if the preferential housing price of 36,000 yuan is reduced to the housing price of 1,680 yuan or if the rent is increased to 43320 yuan. Otherwise, families prefer renting rather than purchasing their housing.

In fact, the preferential housing price is only one third of the average housing price in an open housing market. However, even under these circumstances, rent calculated on the preferential price is still 21 times the rent calculated in the present low rent system. Not surprisingly people do not want to own their housing even at preferential prices. The simplest example can make this situation clearer: if one puts 36,000 yuan in a bank for a term deposit for one year, at an annual interest rate of 10 percent as we calculate the rent, a year's interest of 3,600 yuan can be used to pay more than 10 years' rent at the present calculated rent level.

According to the above discussion, the low rent level has not given any incentive to encourage people to purchase their own housing. The process of housing privatisation in China is therefore very slow. As a result, on the one hand with the improvement of the employees' living standards, enterprises have to give more subsidies. On the other hand, the housing shortage is still an urgent issue which needs to be solved. It is said that more than 4 million households have housing shortages in term of living space (under 4 square metres per capita), of which, 288,000 households are living in under 2 square metres (Wu Weiyu 1995, p. 10). It is estimated that by the year 2000, the 8 million households will have housing shortages (The Leading Group of Housing System Reform under the Jurisdiction of the State Council 1994, p. 56).

This housing situation is caused by the imperfect low rent system reform. Employees' housing consumption still depends on subsidies. Kornai describes the Hungarian experience as follows: 'In our view every effort directed at eliminating shortage on the supply side - while maintaining the nominal rent - is hopeless. ... Demand for housing is almost insatiable' (1980, p. 503). At present, China faces the same condition. Housing shortages should be overcome by speeding up the rent system reform, and setting up a rational housing price in the internal housing market. Past experiences have proven that the lower the rent charged, the lower will be the price people will be willing to pay to purchase housing. Therefore, a setting a rational rent is the key issue to stimulate housing ownership and reduce the housing shortages.

2.3. Double gaps in the housing market - a theoretical analysis

After years of housing system reform, two housing markets exist in China: one is an internal market in which work units or housing bureaus supply their employees or urban residents housing with heavy subsidies; the other is an open market in which any one is allowed to purchase housing according to the market value.

In the internal housing market the old system has not been fundamentally reformed and a market mechanism has not been set up. The only way to solve the housing shortage is to depend on huge investment in housing construction. All actions that the Chinese government has taken focus on the collection of housing construction capital, while the system transformation has been ignored, although some new policies have been formulated. As a result, the rent level is still very low and is less than a half of the housing maintenance fee. Although the government tried to sell housing to employees at a preferential housing price, they prefer renting rather than purchasing housing because they will lose benefits from enterprises after buying their own housing. Under the low rent system people do not make a reasonable contribution to housing themselves, while governments and enterprises cannot provide more money to build more housing. Housing shortages are an unsolvable problem. They form a "supply gap" in the present internal housing market.

In the open housing market the PIR is too high to be afforded by ordinary people so that there are a lot of overstocked housing. In 1993 there was unsaleable commercial housing of 17 million square metres ; in 1994, it was 32.89 million metres. By the end of 1995, 50 million square metres of "commercial housing" were waiting for sale. This amount accounts for 40 percent of total housing construction (Wang Wenbin, 1996, p. 34). On the basis of a square metre costing 1600 yuan, which is the lowest average price in the present opening housing market, 80 billion yuan of dead capital stagnates in the open market. This situation which is caused by irrational housing prices results in an ‘insufficient demand for commercial housing’. This creates a big gap between supply and demand in an opening housing market.

Therefore, on one side is a shortage of housing supply under the low rent system in a internal market and on the other side is an insufficient demand for housing in an open housing market. The structure of these dual - track markets and double gaps is characteristic of China's present housing markets, as shown in Figure 2:

Figure 2 The double gaps of supply and demand for housing in China

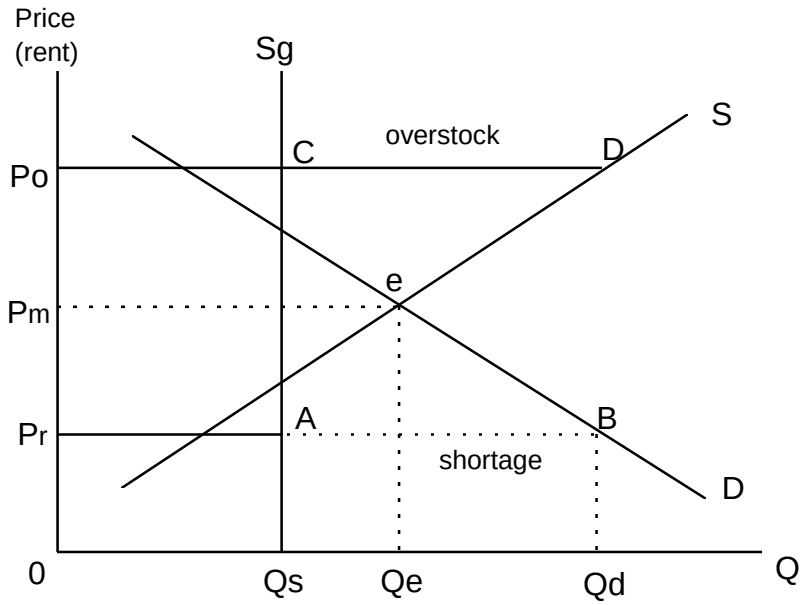


Figure 2 illustrates the situation of the present housing market in China. The supply curve S based on a market economy shows what a builder wishes to sell, and the demand curve D shows what consumers wish to purchase at various prices. When the two are put together we see that there is only one price Pm at which the quantity of housing firms wish to sell exactly equals the quantity of housing consumers wish to purchase. The intersection ‘e’ identifies the equilibrium price and quantity in a free housing market.

However, in the internal market, supply curve Sg is vertical which is inelastic because the government or work units only invest in housing construction as a welfare good to produce quantity Qs. The housing price Pr at point A is the present rent level with heavy subsidies under the low rent system. According to the low rent level, the Pr intersects the demand curve D at B. The actual demand is Qd. Therefore, the housing "supply gap" Qd - Qs (AB) occurs under the low rent system.

In the opening housing market, because state supply is a Qs there is a big supply gap. This attracts a huge investment in housing plus a high fee collection by various levels of government. In fact, the limitation of available urban land, building materials and technology pushes the construction price from Pm to Po. At present it is impossible for building companies to reduce construction costs through improvements in production efficiency because of the irrational housing cost caused by appointed levies and the high

rate of interest on loans for real estate companies. Therefore, the supply D at price Po level is beyond the affordability of the consumers. As a result, the 'insufficient demand gap' in the open housing market is D -C.

The double gaps are caused by the distortion of housing prices. This further distorts the relationship between supply and demand. Setting up a rational housing price is the key issue in establishing a housing market in China. In the internal market, rent reform should speed up so that rent reaches market level 'e' (see Figure 2) in order to let market forces play a role in adjusting the supply of and demand for housing.

Because of the low wage system it is difficult to reduce the total subsidies during the housing system reform. Wage adjustment is a pre requirement for raising the present rent level to a market level. An alternative method is to transform housing price subsidies from 'implicit subsidies' to 'explicit ones' to cushion the social impact. This could clarify the relationship between the provider and the beneficiary of housing subsidies. Furthermore, it will create an efficient way to increase the tenants' contributions to housing themselves and to rationalise housing prices as a real indicator reflecting demand and supply, households' real demand and their hard budget constraint.

In the meantime, the housing price in the open market should be reduced to "e" in order to realise real equilibrium. The items for calculating housing construction cost should be rationalised and the housing price should accord with the ratio of housing price to household income. Gradually, the two markets can be merged into one and the intersection of supply and demand will be the equilibrium e. Housing price and production quantity are adjusted on the principle of the market economy instead of the present irrational housing systems.

3. Clarification of property right in urban housing ownership

The issue of ambiguous property rights is one of the most fundamental characteristics of the planned economy system. Clarification of property rights are a fundamental task of economic system reform. Under the centrally planned economy, a major cause of economic inefficiency is that property rights are often ill-defined or administratively and arbitrarily restricted. The universal criticism of the concept of 'ownership by the whole people' is that property under such ownership is owned by no one and therefore misused and difficult to manage. The economic benefits of well-defined property rights are to minimise transaction costs in the economy, to facilitate the governance of costs and contractual relations over time, and to allow the emergence of organisations that are efficient and adaptable to the changing economic, technological, and social environment (Renauld 1991, pp. 39-41).

Housing system reforms include establishing clarified property rights over urban housing among the government, enterprises and individuals. In China, the reform started based on solving housing shortages. The targets of the reforms focussed on decentralising of investment in housing, increasing the channels of finance capital and raising rent. Therefore, the issue of ambiguous property rights over urban housing was neglected.

At the present stage, the reform can not continue to be implemented without reviewing property rights. Before the issue of housing property rights in China is discussed, however we should firstly clarify what is the real meaning of the property right in a market-oriented economy.

3.1. Property right in a market economy

Property rights are one of the important elements in commodity transactions in a market economy. Property rights are legally defined and enforceable rights which relate to the ownership and use of resources and commodities. Pryor defines property rights as 'a bundle of rights or a set of relations between people with regard to some goods, services, or 'thing'; such rights must have economic value and must be enforced in some recognised manner' (1972 cited in Lee Keun 1991, p. 20).[1] Therefore, all active approaches to property rights in a market economy place stress on the fact that property rights tend to effect incentives and economic behaviour. Furubotn and Pejovich state that 'property rights do not refer to relations between men and things but, rather, to the sanctioned behavioural relations among men that arise from the existence of things and pertain to their use' (1972, p. 1138). Hence, individuals are able to sell goods and services directly to each other and when such a transaction takes place there is not only an exchange of some physical quantity of the good but also an exchange of the rights to use that good in certain ways sanctioned by the legal system (Bannock, Baxter and Rees 1985, p. 359). The bundle of rights varies among countries. It can include over 100 specific items in some countries (eg. Sweden). Any particular right can be transferred and traded independently (IFTE and IPA 1996, p. 100).

---

[1] Barzel defines the concept of property rights as follows: Property right of individuals over assets consist of the rights, or the powers, to consume, obtain income from, and alienate these assets. Obtaining income from and alienation of assets require exchange; exchange is the mutual ceding of rights. Legal rights, as a rule, enhance economic rights, but the former are neither necessary nor sufficient for the existence of the latter. (1989, p. 2). The alienation right is included in the control right over assets, which has a wider meaning. Furthermore, under current circumstances, the economic right could not be protected and realised without legal rights. Therefore, we adopt Pryor's definition in following discussion.

There are two important subsets of property rights: income rights and control rights. Income rights are the right to use particular goods or services to obtain income, either monetary or in the form of goods or services, other than by means of labour. The income derived from the holding of these rights can be obtained through particular types of levies or by using the goods or services to produce something that can be exchanged for money. Control rights are the rights of use and disposition of goods or services with regard to production and exchanges and are sometimes called a decision-making right. Control rights may be either directly used by the owner of a property or delegated to others by the owner (Pryor 1973 cited in Lee 1991 p. 23).

Lee Keun points out that income rights usually involve the responsibility of taking risks with the exercise of the rights. In this case, the owner bears the value consequences of exogenous events as well as of his own decisions associated with his property. Control rights concern a voluntary transfer or disposition right, which means that the owner can sell his property rights to somebody else. A combination of risk-bearing income rights and transferable control rights is necessary if resources are to be allocated to their highest valued uses regardless of initial assignment, as long as transaction costs are zero (1991, p. 21 - 25).

The property right over housing is one of most complicated property rights. There are four dominant forms of property ownership in a market economy. We summarise the main characteristics below (Johnson 1989, p. 23 and IFTE and IPA 1996, p. 102):

First is sole proprietorship, which are exclusive ownership rights over a property and holding of a title to all of the assets and responsibility for the liabilities. Sole proprietors can be individuals or legal entities such as government institutions. Sole proprietorship is a popular and major form of ownership rights over urban housing.

Second is partnership, which has more than one owner and two forms. One is general partnership, under which all partners share in the rights, duties, obligations and financial rewards in accordance with the partnership agreement. However, the partners' personal liability for the debts is unlimited. The other is limited partnership. Most importantly, the liability of limited partners for losses and debts is restricted to the amount of their original capital investment. As the high cost of land and housing makes group ownership more easy to operate than individual ownership, the partnership is a very common form of association in real estate.

Third is the corporation, which is a legal entity empowered to own property, to contract debts, and to engage in certain activities. The corporation owners (the stockholders) share

dividend payment and their liability is limited to the amount of their investment. This form of ownership makes it easier to attract funds for large scale investment, and to help the small investor with no experience benefit from the profits created by specialised management.

Fourth is the real estate investment trust, which is a specialised trust fund that invests in real estate exclusively and accumulates idle funds in society through issuing bonds. There are three methods for investment, either directly, through mortgage funds, or both. It is convenient for small investors to join in a large real estate operation.

In the light of the above discussion, the property right has at least the income right and control right associated with liabilities and is exchangeable in a market. Property ownership has multiple forms and reflects economic and legal relationships among people in a market economy, in contrast to the abstract concept of public ownership in socialist countries. Therefore, the clarification of property rights can ensure the order of economic development.

3.2. Property rights over urban public housing in China

In this section, we focus on property rights over public housing because property rights over private housing have been basically restored since economic reform and are, to a certain extent, influenced by the property right over public housing. Moreover, private housing only accounts for a small proportion of the total amount of urban housing. If property rights over housing in China are not guaranteed, it is impossible to realise urban housing commercialisation and privatisation at all.

The public ownership of urban housing in China was built up through urban housing nationalisation. Public housing was set up based on denying private property rights including income and control rights. During the period of housing control and administrative distribution, ambiguous property rights became a source of urban housing problems, such as the inequality and inefficiency of housing investment and distribution.

In 1995 Chinese urban public housing accounted for 80 percent of the total urban housing stock (Cao Zhenliang 1996, p. 18) and is of two major types: one is 'directly controlled public housing' under the city real estate management bureaus; the other is "self-managed public housing" under the management of various work units such as enterprises, institutions and others.

In terms of directly controlled public housing the property rights are quite ambiguous because most of the housing was built and distributed by local governments, then entrusted

to local real estate bureaus for maintenance and management. The bureaus had no rights of disposition over these properties, and the government never clarified whether the property right belonged to the central or local governments or others. Work units occupying the housing had the right of housing allocation. Consequently, the control right, one of the important property rights in a market economy, is separated from the property owners in directly controlled urban housing.

In terms of self-managed public housing, the property rights are more complicated. For example, according to ownership the housing of the state-owned enterprises should belong to the government, because all investment comes from the fiscal budget and the levels of government are the representatives of public interests. In fact, after the housing capital was invested in work units by the various levels of government they did not have the right to make a decision on how to distribute the housing, and they never cared who should control the properties. As a result, who should hold the control rights over the self - managed housing is uncertain.

The issue of the ambiguous control right over the property is one concern. The more serious problem of denying the income right over the property is the other. The investment in urban housing comes from the fiscal budget in China and the return on housing investment should be through the rent. This is a basic income right for the investor. However, due to the ambiguous property rights not only does the investor not get the investment return through the housing lease but also, because of the low rent system, the more the investment the more subsidies for urban housing the governments or work units have to defray. Housing investments and subsidies have become a heavy burden for various levels of government and all work units. There was not any legislation to guarantee a rational return to the housing investment. As a result, the inefficiency of housing investment results from denying income rights over property, a principle which is rooted in the traditional housing systems. Therefore, the income right over housing property should be clarified with the rent system reform. Housing system reform cannot attain its goal without clarifying and protecting property rights, especially the control and income rights.

3.3. The implications of clarifying property rights over housing

The aim of housing system reform is to realise housing commercialisation through transferring the welfare system of housing distribution to a system based on a market oriented economy. Obviously, property rights are an unavoidable issue during the transition because all trades in a market economy are carried out on the basis of transfers of a bundle of rights.

Property rights among the various social levels

According to present regulations for property rights, the sale of housing, will create a new inequality among work units. Work units with more housing can have more income and reduce housing subsidies from the sale of housing. Hence, they can reinvest in housing construction to improve their employees' living standards. Work units with less or no housing for sale will still have to pay more wage compensation with increasing rent. So, who should own the income from the sale of the self- managed public housing and how to redistribute the income involves clarifying the property rights of the self-managed housing. Otherwise, the inequality of housing investment among the work units will be worse.

In fact, all investments in housing in state-owned enterprises and institutions were provided by the government during the period of the centrally planned economy. In the meantime, these work units have paid a lot of housing subsidies, maintenance and management fees since the housing was built. In particular, some expenditures on self-managed housing came from retained profit, self-financed funds and other investment channels. Consequently, it is not easy to judge the division of the property between the work units and the governments on an administrative basis. At this stage, therefore, the clarification of property rights is very much more important for continuing housing system reform in work units. For example, in Jiangsu province, 85 percent of the income from housing sales has become fiscal revenue for the central or local government, depending on which levels of the government the work units belong to (Ji Lantian 1995 p. 43). Undoubtedly, this situation will make the housing sale more difficult because work units have a different attitude towards the share of income from housing sales, based on their own opinions of housing property rights.

Property rights for housing buyers

As regards rent system reform, property rights are one of the most important aspects for both the establishment of a housing market and the privatisation of urban housing. In China, tenants in public housing have more rights and benefits than in other countries. Once employees have obtained distributed housing, they have rights in virtual perpetuity to live there, to pay rents below market level, to pass the housing on to their heirs, and to lend the housing free to others. In this respect, work units and real estate bureaus do not have control and income rights over the housing. The property rights of work units or real estate bureaus are only nominal in rental housing. The IFTE and IPA Report explains that experiences of various countries have proved that the demand schedule for home ownership is affected by the de facto ownership rights given to tenants: the stronger the tenancy rights, the higher the tenancy rate, and vice versa. This is because relatively strong tenancy rights let tenants enjoy more services and benefits (1996, p. 98). Developing this idea to a logical conclusion, in China unclear property rights lead people to prefer to rent

rather than to own their housing, which becomes a major obstacle to encouraging them to purchase their own housing.

Without a perfect legal system of property rights to protect the interests of investors it is impossible to set up real multiple financial channels for housing investment, especially to make individuals contribute more from their savings to housing themselves. The reason is that the incentives for the purchase of home ownership are limited by the de facto ownership rights given to tenants and by the limitations and ambiguities relating to owner property rights. The current situation of property rights in China therefore reduces the amount that households are willing to pay to purchase their own housing to a fraction of the value that would be paid if property rights were similar to those in a market economy. According to a survey of people willing to buy their own housing in a urban area, Tolley states that the property rights that prevail in China reduce the amount people are willing to pay to purchase housing to 58 percent of the value that would otherwise be paid (World Bank Report 1992, p. 47). No people would like to buy their housing with out guarantee property rights. At the present stage of the reform, the ambiguous property rights and the low rent system impede the commercialisation of urban housing.

Therefore, property rights are an unavoidable issue because housing sale is an integral component of housing system reform. In terms of the present policies for housing sale, private buyers meet a lot of restrictions on their property rights. For example, a regulation for buyers on how to use their property rights was passed at the Third National Conference on Urban Housing Reform in 1994. If households buy their housing at a "standard price" (the price in the internal housing market or set by employees' work units), they are allowed to sell or lease their housing five years after their purchases, and work units have the priority of either buying or renting rights. The earnings from the housing sale should be distributed between the work unit and buyer according to a certain proportion (the Leadership Group in Charge of Housing Reform under the Stated Council 1994, p. 8). Under these circumstances, individual buyers have neither a real control right nor a income right. Few people would like to invest their money in a housing asset over which they do not have full rights, which makes housing commercialisation more difficult to realise.

In the light of the above discussion, on the one hand, the clarification of property rights among governments and work units is an urgent task for stepping up urban housing system reform. In the terms of private housing sale, on the other hand, what needs to be removed immediately is the web of laws and administrative regulations that are systematically biased against the free and effective use of private property. (Renaud 1991 p. 41). Otherwise, it is impossible to set up a housing market, realise housing commercialisation and privatisation.

At present, China only has two simple kinds of property rights for urban housing: public ownership according to socialist ideology and private ownership with limited rights. In a market economy, the types of property rights over assets depend on the method of management As mentioned above, in a market economy, multiple forms of ownership and diversification of property rights are good for the competition mechanism. Therefore, combined with clarification and legalisation of housing property rights, the development of multiple forms of housing ownership can stimulate the speed of urban housing reform.

4. Establishing an independent housing management system

For years, Chinese urban housing reform did not change the old housing supply system at all except for a small proportion of housing for sale in an open market. The majority of employees still rely on the housing supplied by their work units: the production and consumption of urban housing has not become commercialised. Therefore, the management system for urban housing has not fundamentally changed.

Although the issue of the housing supply system has been raised as an important aspect since the beginning of the reform process, the central government has not paid much attention to solving it. As a result, the proportion of housing under work units management accounts for more than 70 per cent of total housing stocks, and in the open housing market most of the newly built housing is bought by work units. Housing sold at a market price still fell into the welfare system of work units' housing management because work units buy housing at market prices and look after housing with heavy subsidies.

This section switches to discuss the effect of work units, supply housing as in-kind benefit, why an independent system of housing management should be established, and how the housing supply of urban residents can be separated from their work units.

4.1. Work units-owned housing property - historical outcome

Work units-owned housing property, i.e 'self-managed' public housing, was the creation of the central planned economy. Before the economic system reform, China was a centrally planned economy. The government controlled everything, including people's housing consumption. Due to the low wage system adopted as part of the socialist industrialisation urban residents did not have savings for investing in their own housing. Therefore, employees had to rely on their work units to distribute what they needed for their family living, instead of buying consumption goods on the market.

Under the traditional system, the work unit had to run a community. It supplied health insurance, a kindergarten, schools, public bathrooms, transportation and other facilities. Housing was a necessary item of public goods supplied by work units for their employees. However, the work units did not have the right to make decisions over building their own housing due to the distribution pattern of profits.

These enterprises had to hand in all their profits and depreciation funds to the government for redistribution of national income according to the national plan. For the institutions there were no independent resources for constructing housing except the money coming from the government budget. About 90 percent of housing investment had to depend upon fiscal budget appropriations (IFTE and IPA 1996, p. 111). After the housing had been built, the work units owned it and had rights to distribute it. This kind of housing was the dominant form of public housing in urban areas. As a result work units had to maintain the housing, investing a lot of money and only collecting low rent. Therefore, work units-owned housing became a big burden. An important aspect of housing reform is to shift work units-owned housing into the housing market, relieving work units from the social duty of housing supply.

4.2. Issues caused by the present housing management system

It is impossible to reform the system of housing production and distribution without changing the old housing management system. However, the decentralisation of housing investment without that reform of the housing management has strengthened the old housing system of work units management in China. So, there is a dilemma between the present urban housing management system and housing commercialisation. Some scholars point out that the social functions of enterprises, especially managing housing, is one of the main obstacles which restrict the efficient operation and development of state-owned enterprises (Li Ruxin; Xing Xiude and Qi Banxin 1997, p. 79). Therefore, housing management reform has been one of the main tasks in the reforms.

1. The inequality of the housing distribution among work units after housing reform.

Under the centrally planned economic system there was an inequality of housing distribution among work units. As discussed before, in that time housing budgets were approved by the government administration through a top-to-bottom process. A higher-rank work unit could get a larger housing budget than a lower-rank work unit due to its more effective influence on the central and local government. As a result, state-owned enterprises or government organisations were stronger than collective-owned enterprises in 'regime-bargaining'.

Although this situation has changed tremendously since the reform inequality of housing distribution still exists and has been transformed into another style. After the decentralisation of housing investment, the capability of housing supply for employees depends on the enterprise's retained profits, welfare funds, depreciation funds and other financial channels instead of the government budgets. For institutions, the capability to supply housing for staff depends on appropriations from the government budget on one hand and self-raised funds on the other. As a result, a new pattern of inequality in housing distribution has appeared.

Now, inequality of housing consumption among the various work units is caused by the great differentials of welfare and real income among them. So, when people are searching for jobs, they choose not only between state and collective units but also between work units with more chances of supplying housing. The Report by IFTE and IPA states that the power of work units for control over public housing and workers reliance upon the their workplaces as the main suppliers of their housing has become stronger than before the housing reform (1996 p. 113). That means that after housing system reform the main housing suppliers have become the work units rather than various levels of governments, and the welfare system has not basically changed.

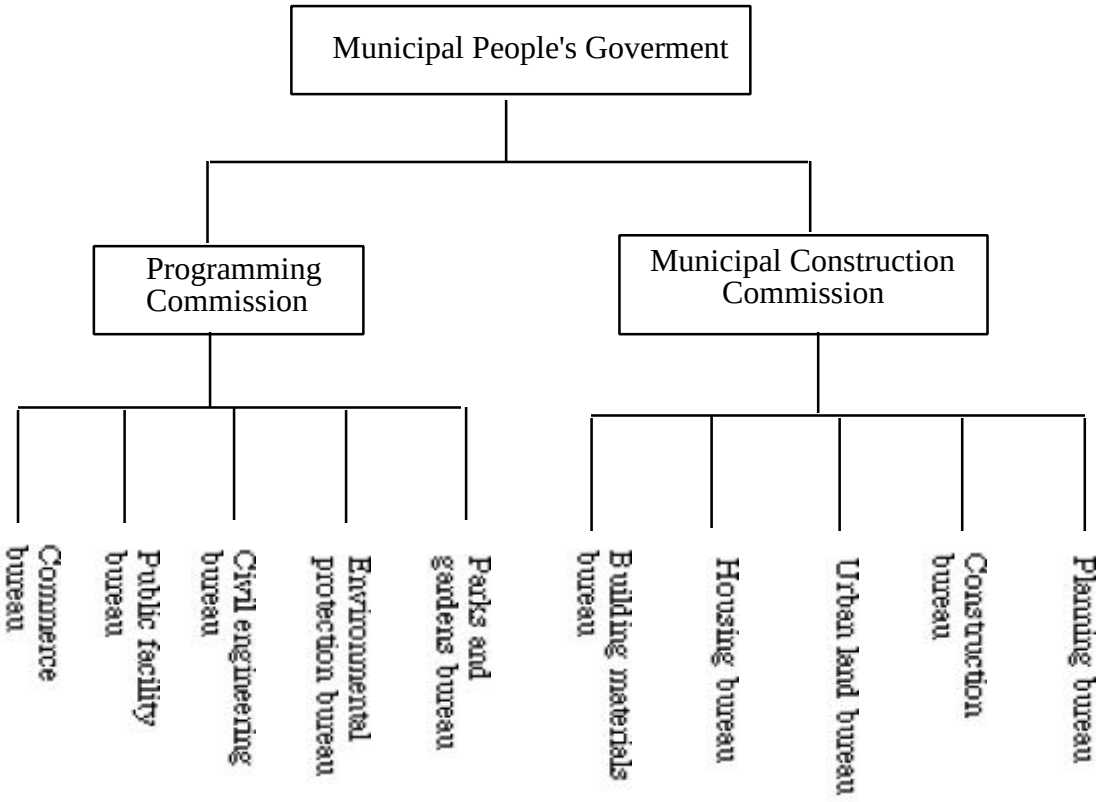
2. The work unit's burden - managing housing

Up to this time, a work unit running a community' as an important component of the public sector has made work units inefficient. As main housing suppliers to employees, work units not only have the heavy burden of subsidising housing consumption but also run the whole process of building housing for their employees - from financing and distribution to maintenance. In terms of financing investment in housing, as well as the proportion of depreciation funds approved by the government work units often move other depreciation funds for production to building housing. This leaves work units with not enough capital to improve their production technology and weakens their production efficiency.

Apart from the capital issue, a lot of effort has to be put into a housing project in order to go through the process of applying for housing construction, buying building materials and cooperating or negotiating with the different authorities, and avoiding unexpected troubles. In Tianjin, for example, Figure 6-3 show us that, for a housing project to start, the application from a work unit is considered by ten authorities and two commissions, and has to be approved by relevant bureaus and commissions. This process takes at least one year. After the housing construction is finished, work units have to provide regular housing maintenance. Most of the work units have a special section to deal with routine housing affairs.

In market economies, financing, construction and maintenance are conducted by real estate companies and their agents. The specialised industry for housing leads the labour allocation to be efficient and makes the best use of resources. In these terms, the present system of housing management by work units in China wastes tremendous labour and is inefficient.

Figure 3 Authorities concerned in a housing project in Tianjin in 1996



Note: Figure 3 shows the administrative structure of Tianjin municipality for applying for housing construction in 1996. There are 12 districts (6 urban and 4 suburban) and 5 counties in Tianjin. Source: author's interviews in the Tianjin Real Estate Bureau and Tianjin Urban Housing Reform Office in 1995.

3. Distorted market order by work unit-owned housing management

Creating a housing market is a prerequisite to realising urban housing commercialisation. However, housing management by work units has limited the process of urban housing commercialisation. In a market economy, the demand side for housing is consumers who choose buying or renting housing, depending on their income and housing market value. Usually, enterprises are not involved in their employees' housing consumption. Only the government takes some action in assisting the poor who cannot afford housing.

In China, work units as main housing suppliers represent the demand side in the market for buying or building housing. Demand behaviour for housing is constrained by financial capability rather than by employees' income. As a result, the irrational demand for housing under the 'soft budget' of work units leads to housing prices being distorted. In the open housing market, the price is extremely high because work units consider demand pressure more than the housing market value. Work units compete with each other in doing their best to provide their employees with good housing conditions through buying housing in an open housing market. This irrational demand increases the housing prices. In contrast, in the internal housing market, work units try their best to lower the prices of housing for sale and rent under the pressure of welfare competition.

Obviously, under the housing management system by work units it is impossible for housing reform to reach the set goals. It is necessary to change the system of work units-owned housing management in order to speed up the whole process of urban housing reform.

4.3. Establishing a market-oriented housing management system

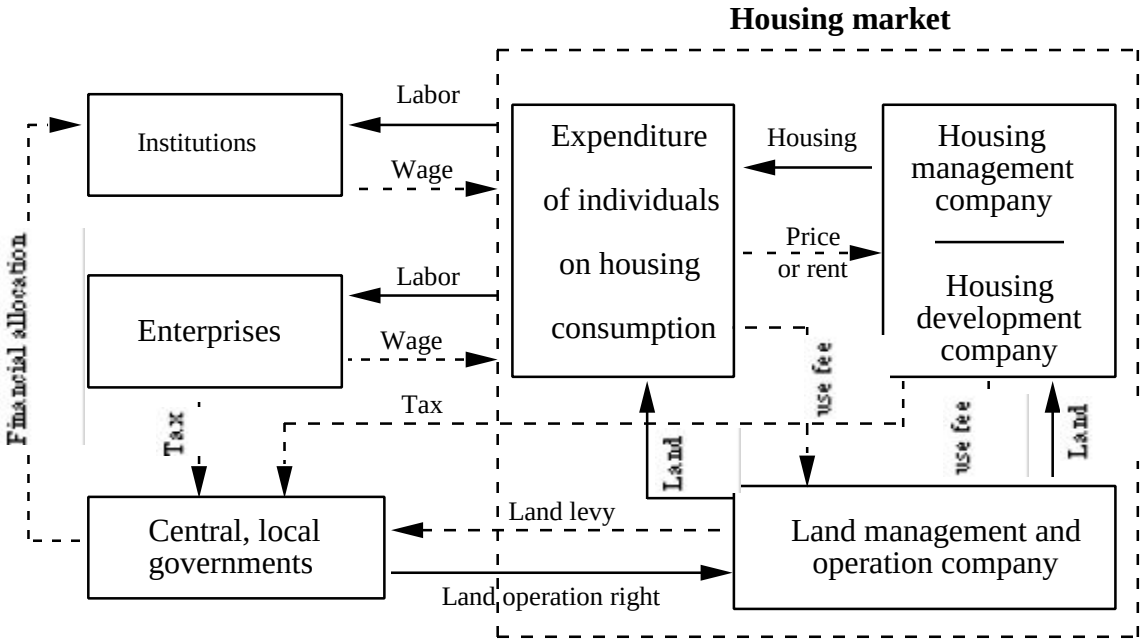
In the light of the above discussion, housing reform cannot be implemented further if the present housing management system under work units, which control most of the urban housing stock, is not thoroughly reformed. For years the most substantial problem with the reform has been that it fails to end the dependency of employees on the work units. To continue the reform the 'umbilical cord' linking employees to their employer must be cut. How to change the situation is a key issue affecting the overall process of the reform.

The World Bank Report has recommended that there should be an end to the allocation of enterprise and local government resources to housing construction. Work units should shift from a significant reliance on compensation in-kind, including low-rent housing, to higher cash wages and a reform of rents, allowing the latter to approach full-cost recovery levels. These reforms would imply a transformation of the housing production system with the

development of an independent, consumer-oriented housing industry. One option deserving careful consideration is to require that work units divest themselves of all housing, in exchange for taking shares in rental management companies (1991, p. 27 and 54).

With the experience of the market economy and the combination of the present circumstances in China, the housing management system could be modelled as shown in Figure 6-4, so that housing management is separated from work units and various levels of governments and, as well, an independent real estate industry can be established.

Figure 4 A structure of housing production and consumption based on a market-oriented economy



In Figure 6. enterprises pay tax to the government. The government then makes a financial allocation to institutions which are the non-profit work units. Employees working in enterprises or institutions get their wages, including a reasonable percentage of money to pay the housing price or rent at a market value.

In a housing market, on the demand side, consumers judge and choose buying or renting their housing by themselves depending on their income, preference, and other factors. On

the supply side, the real estate companies provide housing and services at a commercial price or rent, instead of at the low rent or 'preferential price' for housing sale in work units. Because of different administrative institutions set up in different cities or provinces, the housing management companies and housing development companies may be two entities. The former manages existing housing stocks and maintains them; the latter builds new housing and sells it or transfers it to the former. Therefore, they all pay taxes to the government. The land management and operation company represents the municipal government to lease urban lands and to charge fees for the right of use of urban lands from real estate companies and private housing owners, and then hands in the revenue or levy to the government.

Therefore, Figure 6. shows us a new housing management model based on a market oriented economy. The dotted line rectangle presents a housing market without the work units' subsidies and government housing control. Urban residents can get access to buying or renting their housing in the housing market rather than waiting for housing distribution from their work units. Housing companies can get profits by their business operation rather than depending on government financial allocation.

Establishing a new housing management system needs wage system reform and other relevant adjustments in the national economy. Otherwise, it is impossible to set the price for housing sale and rent at a proper level to cover costs. It is an urgent task - establishing a market-oriented housing management system in order to solve the inequality of housing distribution among work units, to relieve the burden on work units and improve their efficiency, and to create a good market environment through correcting irrational housing prices and low rents.

5. Promoting the development of a housing finance system

Housing finance has been defined by the United Nations as follows:

> Money provided by any source other than the residents or builders of the dwelling for the construction or purchase of housing. It includes construction funds loaned to builders and mortgage funds loaned to individual families by private or public banks and by a wide variety of other types of financial institutions (The United Nations 1974 cited in McGuire 1981, p. 51).

Developing this meaning of the definition to its logical conclusion, housing finance could attract money to flow into the sector in order to increase the housing supply and promote the development of the industry.

The main barrier to carrying out a program of housing development for a country is the lack of a sustained and guaranteed source of money. When, however, a nation has entered a period of long-term steady economic growth the residents' expenditure on housing will increase, which will lead to a growing share of housing investment in national total investment. Therefore, with a large investment, a housing financial system should be rapidly developed.

China has now entered upon a phase of rapid growth of the national economy and a continual improvement of people's living standards, and the amount of housing investment has been increasing year after year. Although multiple channels of financing capital for housing have been adopted, the amount of demand for housing investment is far beyond the amount of money available under the present financing system. The current financial system fails to suit the situation. There are three crucial issues for the financial system: firstly, financial institutions, channels and instruments do not fit the requirements of a long term investment in housing; secondly, the financial mechanism does not guarantee a benign circulation of housing investment; thirdly, there are no specific institutions for consumers to negotiate a mortgage loan. Therefore, establishment of a market-oriented financial system is one of the crucial tasks in deepening the reform of the urban housing system.

5. 1. Limited range of housing financial system reform to date

Before the housing system reform there were no financial institutions, channels and instruments for housing investment. Limited capital for urban housing construction came from government budgets and was managed by banks. Financial institutions were actually the agencies of the government at local levels.

During the period of economic system reform, the financial system in China has changed. In 1978 some financial intermediaries were authorised to provide some short term loans to state-owned real estate companies to develop commercial housing for sale in the open market. Then, in 1982, more financial institutions started to set up special sections to conduct business deposits for housing.

Since 1987 the development of financial housing institutions has been remarkable. In 1987 two local specialised housing banks were established in Yantai, Shandong province, then another in Bengbu, Anhui province in the following year as an experiment in financial system reform to meet the demand for housing finance. In 1989 the People's Construction Bank of China issued the "Provision for Employees Housing Mortgage Loan" (IFTE and IPA 1996, p.126, and World Bank 1992, p. 106).

The most important achievement in establishing new financial channels for housing was that of 'housing provident funds' first in Shanghai as a trial in 1990. Then it was implemented all over the country as one of the main goals of the urban housing system reforms to build up a steady and rational source of investment for housing consumption which combined with enterprises and employees' contributions.

Although there have been some achievements in housing financial system reform, compared with the demand for housing investment in China the functions of the current financial intermediaries are not suitable for the development of housing production and consumption. The main issues in the present financial system are as follows:

1. High down-payments far beyond the affordability of households

Under the regulation of granting a home loan from banks the loan to housing price ratio is 50 per cent, that is there is a minimum down-payment of 30 per cent of the total housing price that the borrower has to pay (Leading Group of Housing System Reform 1994, p.45). In fact, borrowers have to keep in the bank a further deposit, which is no less than 20 percent of the housing price before the mortgage is paid off, then they can be granted a loan. This means the borrowers cannot get a home loan until they have 50 per cent of the housing price in the bank. The requirements of a high saving ratio for a home loan makes it impossible for most people to put this much money in the bank at once.

2. Short maturity of home loans

In the terms of a home loan for housing purchase, the loan maturity is limited to a very short period of 10 years according to the guidelines of The People's Construction Bank of China (Leading Group of the Urban Housing Reform 1994 p.45), or within 10 - 15 years varying among local banks (Wang Zhongrun 1996, p. 63). Because the low wage system has not been reformed and there is a high loan to housing price ratio, the short maturity of the home loan has limited borrowers for home loans to a very narrow range - this loan is only suitable to high income households which account for less than 20 per cent of total urban households.

3. Problems in housing provident funds

The system of housing provident funds was implemented in 1991 (The State Council 1991, p. 227). The housing provident funds are defined as an obligation for long-term saving, which is contributed to equally by both work units and employees. Each participant has to set aside 5 per cent of employees' wages as a contribution to the housing provident funds.

The employees' contributions are deducted directly from their wage payment. For enterprises, sources for the funds come from housing depreciation, renovation and maintenance fees, while for administrative units, they mainly come from their budget expenditures. (Leading Group of Housing System Reform 1994, p. 37).

The aim of the housing provident funds is to set up a benign circulation of housing capital in order to overcome the defects in the existing housing investment system by increasing individual contribution to housing. However, there are still some problems in implementation.

Firstly, the scheme has not been carried out by all work units. A survey of the implementation of urban housing provident funds in 202 cities in 1994 found that 35 per cent of them have not set up the funds. For example, in the Shangyao area in Jiangxi province, of 12 cities housing provident funds are only founded in 4 cities. In each of these cities the housing provident funds account for 10 per cent of the total work units (Zhuang Shaoqing 1996, p. 9).

Secondly, compared with the present housing prices in the open housing market, the ratio of the housing provident funds to housing price is too low. For individual housing purchase, a family with two employees needs to spend 60 years' accumulation of housing provident funds to buy their own housing in the open housing market and at least 33 years in the internal housing market. Only 1.5 per cent of families can be satisfied with the total amount of the housing provident funds for their mortgage loan each year (Qian Yingying 1997, p. 27 and Yi Cheng 1996, p. 19).

Thirdly, housing provident funds are diverted. Although the interest rates for both deposits and loans are set lower than other prevailing rates according to administrative regulation, some of the funds are diverted to commercial purposes for high return. For example, Yi Cheng points out that the interest rate on the funds is 3.15 percent - the temporary deposit rate, but some banks lend the funds at 9.15 percent per year (1996, p. 19). The banks can get 6 per cent of the spread as their return. This use would hurt the benefits and interests of the all participants in housing provident funds.

5.2. Establishing an efficient housing financing system based on a market-oriented economy

According to the above discussion, with a high down payment, short maturity of home loan and problems in housing provident funds, the limited range of the housing financing system reform did not lead to an efficient financing system for individual housing consumption. So far, work units are still the main source/instrumentality for housing

investment. The decentralisation and multiple channels of housing investment have not solved the problems of housing capital in the long term, or satisfied its aim of a benign circulation of housing production and consumption. Therefore, the reform of the housing financing system should be carried further in order to provide an effective financial system for the development of Chinese housing production and consumption.

Generally speaking, a housing finance system links together lenders, builders, consumers. It consists of all the institutions that are essential to sustain the flow of money into and through the housing sector. It is necessarily a very broad network encompassing government regulation on the one hand and individual institutions that mobilise savings and investment capital on the other.

In a market economy, although mortgage loans are provided by a wide range of financial institutions, they can be summarised in four basic patterns: first is the direct route between two individual parties where one lends money to the other. Second is the deposit finance route used by mutual institutions or general banks. Third is the contractual route where households are locked into a savings scheme involving some form of provident funds. Finally, the mortgage bank route where the lender funds mortgage loans through wholesale financial markets rather than the retail deposit market (Renaud 1988 cited in The World Bank Report 1992, p. 115).

The housing financial system reforms in China should consider these options and carry out a broad financial system reform. At the current stage of reform, a reduction of the down payment ratio should be adopted in order to attract more residents to participate in home loans. In the meantime, the maturity period of the home loans should be extended in order to reduce the borrowers' annual expenditure on housing and improve affordability (in India, a loan to housing price ratio is 80 per cent and the maturity 15 - 20 years; in Thailand, a loan to housing price ratio is 80 per cent, the maturity 20 years and in Singapore, the ratio is 80 per cent, and the maturity 20 years) (IFTE and IPA 1996; The World Bank 1992 and Renaud 1991). The role of the housing provident funds in the financial system must be strengthened and the abuse of the funds prevented otherwise, the provident funds will be weakened and the housing financial system reform will fail.

It is not easy for China in the short term to set up a feasible financial system to provide enough money for the housing industry and long term home loans. The alternative option is to encourage and promote the development of housing cooperatives. In market economies these types of organisations for financing housing can get preferential policies from their governments. The Chinese government should create a good economic environment for the development of housing cooperatives in order to move more savings to finance housing. In the meantime, commercial banks should provide services such as

agencies for home loans to help the development of a housing financial system for a market - oriented economy.

6. Conclusion

Housing system reform in China has been carried out for 17 years. The new housing system based on a market oriented economy has not yet been established because the reform has focused on solving urban housing shortages through decentralisation in housing investment, sale of urban housing and raising rents. Four key issues which have been discussed in this chapter, are the main obstacles in the way of housing system reform and establishing a new housing system.

How to set up a rational housing price based on the affordability of residents is the first crucial issue for continuing the reform. In the open housing market, the housing price is too high to be afforded by ordinary urban residents. This results in a large of amount of overstocking of newly-built housing - "supply exceeding demand". In the internal housing market, there is urgent housing demand at the low rent level - "demand exceeding supply". This situation forms double gaps of supply and demand in the Chinese housing market. In fact, the housing price is a mechanism to adjust rational relationships between supply of and demand for urban housing in the two markets. According to the housing price to income ratio and the principle of housing price to rent in a market economy, housing reform in China should decrease the price in the open market and raise the rent in the internal market in order to set a rational price and establish a united housing market rather than two separated markets.

It is very important for realising the commercialisation of urban housing to clarify property rights in China. For years, ambiguous property rights have become a source of urban housing problems such as inequalities and inefficiencies of housing investment and distribution among directly controlled public housing, self-managed public housing and private housing. In market economies, there are two most important property rights - income and control rights. Through the housing system reform people should have rights to get a rational income and to sell or buy their housing, and the housing rights over housing owned by different work units should be clarified. Otherwise, without clear property rights over urban housing, the reform can not continue to be carried out.

Since the housing reform, the reliance of employees on their work units for housing supply has not fundamentally changed. The housing managed by work units accounts for the majority of total urban housing. The present housing management system results in a new inequality in the distribution and a more heavy burden on work units. Under this management system, the housing resources are inefficiently allocated. To continue the

reform the 'umbilical cord' connecting the employees to their employer must be cut. Establishing an independent and specialised housing management system can promote the process of urban housing commercialisation. Establishing a new housing management system needs wage system reform and other adjustments in the national economy otherwise it is impossible to set a price for housing sale and a rent at a market level to cover real housing costs.

How to finance housing is one of the overriding issues in the housing system reforms. At present, a few home loans can be provided for certain urban residents by some banks with strict regulations promulgated by the governments. High down-payments with short maturity are far beyond the affordability of most households. Housing provident funds as a compulsory saving for housing are a good beginning for setting up a new financial system. However, the scheme has not been thoroughly implemented in urban areas. Compared with present prices in housing markets, the ratio of the housing provident funds is too low and the funds are often diverted. To establish an efficient housing financing system based on a market oriented economy the experiences in other countries should be studied. The schemes for housing provident funds must be extended. The alternative option is to encourage the development of housing cooperatives and to promote commercial banks to provide services in order to establish an efficient social financial system for Chinese urban housing production and consumption.

References:

Bannock, Graham; Baxter. R. E. and Rees, Ray (1985) *Dictionary of economics.* Third edition. Penguin Books p. 359.

Barzel, Yoram (1989) 'The inherent difficulty of delineating rights fully' *Economic Analysis of Property Rights* Cambridge University Press, p. 2.

Beijing Gaode Real Estate Company Limited (1996) 'Tianjin ordinary housing market' in *China's Real Estate Market* Enterprises Management Publishing House p. 383.

Cao Zhenliang (1996) 'Guoyou qiye zhufang zhidu gaige yu chanquan bianjie' (Housing system reform and boundary lines of property rights in state-owned enterprises) *Zhongguo fangdichan* (*China Real Estate*) No 6 p.17.

Furubotn, Erick and Svetozar Pejovich (1972) 'Property rights and economic theory: a survey of recent literature' *Journal of Economic Literature* No. 10 p. 1137-62. cited in Lee Keun 1991, p. 20.

Gu Yunchang (1995) 'Wenti, nandian and duice' (Issues, difficult points and countermeasures -final report for the project of breaking through difficult points and strengthening housing reform) *Zhongguo fangdichan* (*Chinas Real Estate*) No. 7 , p. 7.

Hou Ximin 1996, 'Fanggai yue wan yue beidong' (The later the housing reform, the more passive). *Liaowang* (*Outlook*) weekly publication No. 18. p. 19.

Ji Lantian (1995) 'Cong zhiguan guoyuo gongfang chushou shouru shangjiao 85% sou xiangdao de' (Consideration on returning 85 percent of income from selling the state- owned housing) *Zhongguo fangdichan* (*China Real Estate*) No. 12: p. 43.

Johnson, Robert W. (1989) *Financial management* Fourth edition. Allyn and Bacon Publishing pp. 23-24.

Kornai, Janos (1980) *Economics of shortage*. North-Holland Publishing, Volume B, p. 503.

Leadership Group of Urban Housing System Reform under the State Council (1994) *Guanyu shenhua chengzhen zhufang tizhi gaige de jueding*' (A resolution on deepening the urban housing reform) Gaige Publishing House p. 8.

Lee, Keun (1991) *Chinese firms and the state in transition: property rights and agency problems in the reform era*. M.E. Sharpe, Inc.

Li Ruxin; Xing Xiude and Qi Baoxin (1997) 'Qiye ziguanfan ying cong qiye zhong fenli chuqiu' (Separating the self-management housing from enterprises) *Zhongguo fangdichan* (*China Real Estate*) No. 1 p. 77.

Pryor, Frederic L. (1973) *Property and industrial organisation in communist and capitalist nations*. Indiana: Indiana University Press.

Qian Yingying (1997) 'Dui Zhufang Fenpei Huobihua de Sikao' (Considering monetisation of housing distribution) *Zhongguo fangdichan* (*China Real Estate*) No. 1 p. 27.

Renaud, Bertrand (1988) 'The housing sector in the national economy and its financing: the international experience and its relevance to China' paper presented at the World Bank Economic Development Institute Seminar on Urban Finance, Tianjin, China, August, cited in the World Bank Report '*China: Implementation options for urban housing reform* 1992, p. 115.

Renaud, Bertrand (1991) ' Housing reform in socialist economies'. World Bank discussion papers p. 23, 41.

The State Council (1991) 'Notice to positively and stably implement the reform of urban housing system' cited in Wang Guoting and Song Changjun *The guideline of the reform scheme of Tianjin urban housing system* . p. 227.

United Nations (1974) World Housing Survey cited in McGuire (1981) *International housing policies - a comparative analysis*. Lexington Books p. 51.

Wang Wenbin (1996), 'Shangpinfang zhixiao de yuanyin fenxi' (Analysis of the reason for unsaleable commercial housing) *Zhongguo fangdichan* (*China Real Estate*) No. 9 p. 34.

Wang Zhongrun (1996) 'Factor analyses of influencing supply of and demand for mortgage' Zhongguo fangdichan (China Real Estate) No. 7 p. 63.

Wu Weiyu (1995) 'Sehui baozhang shangpinfang tixi' (Social security system of commercial housing) *Zhongguo fangdichan* (*China Real Estate*) No. 12, p. 11.

Yi Cheng (1996) 'Jianli jianquan shiying wougou chengzhen zhufang fazhan de zhufang jingyong tixi' (Establishing and amplifying suitable housing financing system for our urban housing development) *Investment Research* No. 9. p. 19.

Zhu, Jiang (1996) 'Xuanze zhonggou xin de jingji zengzhang dian' (Choosing new points of China's economy growth) *Liaowang* (*Outlook*) No. 51. p. 10.

Zhuan Shaoqing (1996) 'Jiaqiang zhufang zijin de chouji chujin fangai' (Strengthening financing housing capital and promoting housing reform) *Zhongguo fangdichan* (*China Real Estate*) No. 3: p. 9.

Chinese Economies Research Centre Working Papers

90/1	China's Economic Growth, Changing Comparative Advantages and Agricultural Trade	Kym Anderson
90/2	Rural Industrialization in China: A General Equilibrium Analysis	Wu Yanrui
90/3	Urban Household Subsidies and Rural Out-Migration: The Case of China	Kym Anderson
91/1	The Classification of China's Industries by Factor Intensity and the Corresponding Trade Pattern of China	Zhang Xiaohe
91/2	Enterprise Response to Market Reforms: the Case of the Bicycle Industry (1979-1988)	Zhang Xunhai
91/3	China's Tea War	Keith Forster
91/4	The Urban-Rural Isolation and its impact on China's Production and Trade Pattern	Zhang Xiaohe
91/5	Scale, Factor Intensity and Efficiency: Applications to the Chinese Coal Industry	Wu Yanrui
91/6	Who Provided Industrialization Funds in China?	Sheng Yuming
91/7	The "Real" Chinese Gross Domestic Product (GDP) in the Pre-Reform Period 1952/1977	Harry X Wu
91/8	China's Urbanization and Rural-to-Urban Migration: Estimates and Analysis in a Perspective of Economic Development in Pre- and Post-Reform Periods	Harry X Wu
91/9	China's Labour Force Sectoral Transformation and Economic Growth in 1953-1989	Harry X Wu
91/10	Government Control of Grain Production in China	Li Qing-zeng
91/11	Efficiency Differential and its Potential Sources in Chinese Iron and Steel Industry	Wu Yanrui
91/12	Private Business and the State in China's Reforming Economy	Susan Young
91/13	Grain Production and Regional Economic Change in China	Li Qing-zeng Andrew Watson Christopher Findlay
91/14	The "Wool War" and the "Cotton Chaos": Fibre Marketing in China	Zhang Xiaohe Lu Weiguo Sun Keliang Christopher Findlay Andrew Watson

91/15	Oil Price Shocks and Policy Responses in the Post-Reform Chinese Economy	Peng Zhaoyang Will Martin
91/16	One State - Two Economies: Current Issues in China's Rural Industrialisation	Chen Chunlai Andrew Watson Christopher Findlay
92/1	Using a CGE Model to Analyse External Shocks in the Reformed Chinese Economy: A Background Paper	Peng Zhaoyang Will Martin
92/2	Productivity Changes and Regional Disparities in Chinese Agriculture since 1980	Hong Yang
92/3	Growth of Rural Enterprises, Urban-Rural Relations in China's Foreign Trade	Christopher Findlay Zhang Xiaohe Andrew Watson
92/4	Issues in Fiscal Contracting in China	Christopher Findlay, Andrew Watson
92/5	China's Rural Economic Performance during the Reform Decade: Estimates and Assessments	Harry X Wu
92/6	The "Industrialisation" of China's Rural Labour Force Since the Economic Reform	Harry X Wu
92/7	Productivity Performance of Chinese Rural Enterprises: A Comparative Study	Wu Yanrui
93/1	The Measurement of Efficiency: A Review of the Theory and Empirical Applications to China	Wu Yanrui
93/2	One Industry, Two Regimes: The Chinese Textile Sector Growth, Reforms and Efficiency	Wu Yanrui
93/3	Domestic Distortions, Production and International Trade in China: An Analytical Framework	Zhang Xiaohe
93/4	The Sequencing of Economic Reform	Richard Pomfret
93/5	A Method for Estimating China's Rural GDP	Harry X Wu
93/6	Modelling China's Rural Economy	Zhang Xiaohe
93/7	China's Experiment with a Quasi-Land Market: The Sale and Transfer of Land Use Rights	Jiang Bing
93/8	China's Dual Land Ownership System: Formation and Problems	Jiang Bing
93/9	The Impacts of Economic Reforms on Chinese Agricultural Performance	D T Nguyen Harry X Wu
94/1	The Role of Prices in China's Grain Production During the Post Reform Period	Hong Yang
94/2	Rural Reforms, the Weather, and Productivity Growth in China's Grain Sector	Bin Zhang Colin Carter

94/3	Market Reform and Agricultural Development in China	Andrew Watson
94/4	China's Agricultural Reforms: Experiences and Achievements of the Agricultural Sector in the Market Reform Process	Andrew Watson
94/5	Productivity Growth, Technological Progress and Technical Efficiency Change in China: A Three-Sector Analysis	Wu Yanrui
94/6	Productivity and Source of Growth in the Reforming Chinese Economy	Harry X Wu Wu Yanrui
94/7	A Potential Inconsistency in "Dynamic" Socialism	Steven Lim
94/8	Rural Industry - Interactions with Agriculture and State Industry	Steven Lim
94/9	Direct Foreign Investment in China	Richard Pomfret
94/10	Rice Markets in China in the 1990s	Wu Yanrui
94/11	Modelling Inter-regional Strategic Interactions within a General Equilibrium Framework	Leong H Liew
94/12	Comparison of Chinese and International Grain Prices	Cheng Enjiang
94/13	Financial Issues and the Forces for Grain Marketing Reforms in China	Cheng Enjiang
94/14	Household Grain Consumption in China: Effects of Income, Price and Urbanisation	Yanrui Wu, Harry X Wu
94/15	Reforms of China's Foreign Exchange Regime: Behind Unification	Harry X Wu
94/16	Macroeconomic Management under Partial Reform: China's Economic Upswing in 1992-94	Cheng Yuk-shing
95/1	Market Reform and Integration in China in the early 1990s - The Case of Maize	Cheng Enjiang, Wu Yanrui
95/2	Growth and Productivity in China's Agriculture: A Review	Wu Yanrui, Yang Hong
95/3	Cointegration Analysis of Chinese Grain Performance 1961-1992	Steven Lim
95/4	Household Income Determination and Regional Income Differential in Rural China	Xin Meng, Harry X Wu
95/5	Fiscal Dencentralisation, Regionalism and Uneven Development in China	Christopher Findlay, Harry X Wu, Andrew Watson
95/6	Relocation of Farm Household Labour and Its Direct and Indirect Impacts on Grain Production in China	Harry X Wu, Xin Meng

95/7	Trade Reforms and Integration of China's Domestic and International Grain Markets since the middle 1980s - the Case of Wheat and Maize	Cheng Enjiang, Christopher Findlay
95/8	Provision of Institutional Credit and Economic Transition in Rural China	Cheng Enjiang, L R Malcolm
96/1	Multiple Deprivation in Rural China	Wu Guobao, Sue Richardson, Peter Travers
96/2	Rural Poverty and Its Causes in China	Wu Guobao, Sue Richardson, Peter Travers
96/3	Recent Developments in Foreign Direct Investment in China	Chen Chunlai
96/4	Research on Rural-to-Urban Labour Migration in the Post-Reform China: A Survey	Harry X Wu and Li Zhou
96/5	Economic growth and trade dependency in China	Christopher Findlay and Andrew Watson
96/6	China's steel imports: an outline of recent trade barriers	Ian Dickson
96/7	Changing Patterns of Alcohol Consumption in Rural China: Implications for the grain sector	Yanrui Wu
96/8	Challenges to China's Energy Security	Chao Yang Peng
96/9	Sources of Productivity Disparities in Regional Grain Production in China	Yang Hong
96/10	Trends in China's Regional Grain Product and their Implications	Yang Hong
96/11	China's Maize Production and Supply from a Provincial Perspective	Yang Hong
96/12	China's Rural and Agricultural Reforms: Successes and Failures	D Gale Johnson
96/13	The Sino-Japan Steel Trade Negotiations Framework	Ian Dickson
97/1	Grain Sector Reform in China	Christopher Findlay
97/2	Internal Reform, Budget Issues and the Internationalisation of the Grain Market in China	Cheng Enjiang Christopher Findlay and Andrew Watson
97/3	Risks and documentary credits in China's international metals trade	Ian Dickson
97/4	China's Grain Demand and Supply: Trade Implications	Harry X Wu and Christopher Findlay
97/5	The Internationalisation of China and its Implications for Australia	Bijit Bora and Chen Chunlai
97/6	Productivity of China's Rural Industry in the 1980s	Jin Hehui and Du Zhixiong
97/7	The Stock Market in China: Problems and Prospects for Domestic and Foreign Investment	Lan Yisheng
97/8	Foreign Direct Investment and Economic Development in Guangdong: Problems and Prospects	Lan Yisheng

97/9	China's Fishery Industry: Production, Consumption and Trade	Lan Yisheng and Peng Zhaoyang
97/10	Evaluation of China's Urban Housing Reform	Yuan Shiming
97/11	Foreign Direct Investment and Trade: An Empirical Investigation of the Evidence from China	Chen Chunlai
97/12	The Location Determinants of Foreign Direct Investment in Developing Countries	Chen Chunlai
97/13	The Composition and Location Determinants of Foreign Direct Investment in China's Manufacturing	Chen Chunlai
97/14	Comparison of Investment Behaviour of Source Countries in China	Chen Chunlai
97/15	The Evolution and Main Features of China's Foreign Direct Investment Policies	Chen Chunlai
97/16	Provincial Characteristics and Foreign Direct Investment Location Decision within China	Chen Chunlai
97/17	Testing the hypothesis of irrational exuberance in China's steel imports, 1992-1996	Ian Dickson
97/18	China's myriad customs regimes and their implications for openness (with reference to steel imports)	Ian Dickson
98/1	Key issues in establishing a new housing system based on a market oriented economy	Yuan Shiming