# Analysis of the operation mode of social forces participating in the construction of public rental housing

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Abstract: As an important supplementary part of the social security housing system, public rental housing has played a huge role in improving the living environment of middle and low income people and families and reducing people's burden. However, in the construction and operation of public goods, our government widely adopts the construction and operation modeled by the government and participated by state-owned enterprises, which seriously restricts the development of public rental housing in our country. Therefore, based on the research results of domestic scholars on the construction and operation mode of public rental housing, combined with social security, new public economics, principal-agent and other theories, this paper analyzes the main ways, advantages and disadvantages of social forces participating in the construction and operation of public rental housing based on the "public-private PPP" model and SWOT analysis method. It also discusses the main responsibilities that government departments should bear in the process of social forces entering the construction and operation of public rental housing. Finally, through the analysis of the main factors affecting the choice of social forces' participation mode, some suggestions are put forward to improve the enthusiasm of social forces to participate in the construction and operation of public rental housing.

Keywords: social force; public rental housing; construction and operation mode

#### 1. Introduction

The government-led and self-built approach to solving employee housing problem can promote the city's pillar industries, leading industries, and emerging industries. By solving the housing problem of industrial employees, it can play a role of stabilizing people's hearts, reducing the flow of people and alleviating the labor shortage, so as to achieve the purpose of promoting industrial development and promoting urban construction. Attracting social forces to participate in the construction and operation of public rental housing is an important principle for accelerating the development of public rental housing, and it is also an important determinant of whether public rental housing can develop rapidly, healthily and sustainably. At present, the main problems affecting the construction and operation of public rental housing are the shortage of funds, the inability to guarantee the scale of supply, and the lack of management experience<sup>[1]</sup>. Attracting the participation of social forces can effectively solve the above three problems.

This article is trying to take enterprises as the research object, establish the construction and operation mode of enterprises participating in public rental housing, find out the main participation modes and advantages and disadvantages of enterprises or institutional investors participating in the construction and operation of public rental housing, and provide suggestions for local government departments to adopt relevant policies in accordance with.

# 2. The current situation and significance of the construction and operation of public rental housing

The construction and operation modes of public rental housing can generally be divided into three ways: First, the government participates in public rental housing as a single entity construction and operation. Secondly, the government is responsible for the allocation of land and the construction of

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houses, and introduces social forces into the operation and management of public rental housing in accordance with the model of "government leading and market participation". Finally, the government departments sign relevant contracts to authorize the developer to legally own the development project, and let the developer carry out project financing and project construction. And the government, the society can be fully responsible for the land transfer fee, tax and other aspects of the construction and operation of housing<sup>[2]</sup>.

In short, there are two main problems in the construction and operation of public rental housing in my country. The first is that the main body of public rental housing is not clearly defined. Some believe that the government should bear the main responsibility for housing construction, while some scholars IT are believed that the housing problem of the sandwich layer should be protected by the market as the leading factor. The second is that there is a lack of qualitative research on the construction and operation models of public rental housing. In terms of construction and operation models, most cities mainly formulate policies for the construction, operation and development of public rental housing in their regions based on the construction and operation experience of other cities, without considering their own needs. Due to the actual situation, the public rental housing cannot meet the actual needs of the protection objects, especially the mode of enterprises participating in the construction of public rental housing. At present, the country does not have a unified model for reference<sup>[3]</sup>. What incentive mechanism can be used to increase the enthusiasm of social forces to participate in the construction and operation of public rental housing? At present, there are few theoretical studies on this part in China, which hinders the development of public rental housing.

## 3. Problems in the operation mode of social forces participating in the construction and operation of public rental housing

## 3.1 The contradiction between short-term development loans and long-term rental income is difficult to resolve

Since public rental housing projects cannot be sold at the initial stage, banks can only provide real estate development loans for project construction, and the term of development loans is usually two years. Even taking into account the factor of extension, the principal and interest must be repaid within 3 to 4 years, while according to the experience of some cities, public rental housing is leased for at least 10 years. Even without considering the gap between rental income and project financial costs, the possibility of public rental housing projects repaying commercial loans within the specified period is almost zero.

#### 3.2 The subsidy gap of public rental housing projects is relatively large

Taking Nanjing as an example, the relevant departments have calculated the profitability of public rental housing. For the 10,000 housing units that will start construction in 2021, it is assumed that 2 billion yuan of the total investment of 2.5 billion yuan will be funded by enterprises (this part the annual fixed financial cost is about 123 million yuan. Based on 70% of the market rent, the annual rent of these 10,000 houses is about 96 million yuan. If 1% of the company's profit is added, the actual rental income the gap with income needs is about 47 million yuan. If we consider the other 125,000 public rental housing units built during the "14th Five-Year Plan" period in Nanjing, the subsidy funds required each year will exceed 580 million yuan, and there are still big doubts about how to implement this part of the funds<sup>[4]</sup>.

### 3.3 Land operation has become the main means of fund balance for most projects

Due to the limited sources of financial funds, in the balance of project funds, both public rental housing projects under construction and planned construction need to use land as a medium to balance costs and benefits, especially for supporting projects. For the public rental housing built in affordable housing complexes, affordable housing companies can balance project funds by selling land for commercial support<sup>[5]</sup>. For the supporting public rental housing in the commercial housing complex, the land department will set some conditions in the land transfer, and the development company will bid to according to the corresponding conditions, and balance the sales income of commercial housing. Although the use of land equalization funds as a means of cross-subsidy is an alternative model under the current institutional framework, it also involves questions of legality and rationality, so there is a need to explore other means of funding equalization.

Therefore, enterprises involved in the construction of public rental housing have difficulty balancing project profits and losses by relying on rental income, and there is also a large funding gap. In addition, many issues such as the ownership of public rental housing and property management responsibilities in the future are unclear, which will also affect the enthusiasm of enterprises to participate in the construction of affordable housing. Therefore, during the "14th Five- Year Plan" period, it is recommended focusing on the supporting incentives to attract social forces to participate in affordable housing and the policies that government departments should adopt.

# 4. Classification and analysis of the operation mode of enterprises participating in the construction of public rental housing

From the above three perspectives, there are many modes for social forces to participate in the construction and operation of public rental housing, and different social subjects have different requirements for the participation modes. This paper mainly focuses on enterprises or institutional investors as the main research objects. From the perspective of universality and importance, two aspects of construction mode and property rights mechanism are selected to analyze the construction and operation mode of public rental housing, as shown in Figure 1.

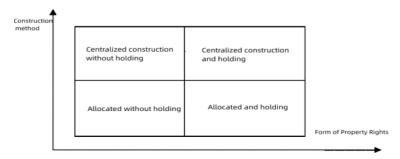


Figure 1: The operation mode of enterprises participating in the construction of public rental housing

#### 4.1 "Enterprise investment, centralized construction, holding and operation" model

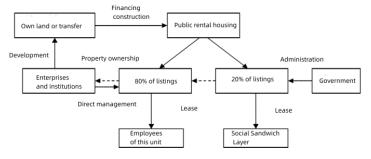


Figure 2: "Enterprise investment, centralized construction, holding and operation" model

This model mainly means that enterprises invest in the development of public rental housing projects and own all the property rights of the housing. According to the relevant requirements of the government, they rent out to urban families with low middle-income housing difficulties, migrant workers and newly employed graduates. The amount of capital investment is large, the investment recovery period is long, and the overall strength of the enterprise is high. Currently, most of the projects using this model are large state-owned enterprises. Under this model, enterprises use their own land or leased land to build public rental housing in a concentrated manner through a series of preferential measures from government departments. Relevant government departments carry out management, and the property rights of the houses still belong to the enterprise, but it is difficult to guarantee the return rate of the enterprise's investment. Some cities have begun to formulate some policies on the exit of enterprises. Buy for self-occupation at low price; Beijing also has related regulations. Utilizing self-owned land to build public rental housing can not only reduce land costs, but also give priority to ensuring the housing problem of the employees of the unit, which has certain enthusiasm for enterprises [6]. However, for the transferred land, the enterprise has to pay the corresponding land fee. Since the preferential treatment given by the government is relatively small, there are few participating enterprises. If some homes are allowed to be sold, businesses can quickly recoup their investment and

make a profit. With the improvement of relevant policies, the enthusiasm of enterprises to participate will gradually increase, as shown in Figure 2.

#### 4.1.1 Advantages

Public rental housing has become an excellent asset for enterprises. With the continuous acceleration of urbanization process and the gradual improvement of economic and social development level, the value of urban land is in the space of constant appreciation. Even without considering the income from rent, housing itself is an excellent asset. Holding a house is like holding a stock option. If you exercise the option (that is, sell the house) at a certain time in the future, you can get a lot of monetary income. Therefore, as long as there are public rental housing in the enterprise's balance sheet, the enterprise is equivalent to owning a large number of high-quality fixed assets.

In the case of accurate system positioning, the income is relatively stable. Public rental housing belongs to affordable housing, and its demand is relatively rigid. The protection group is not determined by the market. It is usually determined by the local government based on the housing difficulties of local residents (resident population), especially the status quo of low-income and lower-middle-income families, to formulate corresponding housing construction plans. Therefore, the main government can scientifically set the protection scope of public rental housing, design housing construction plans reasonably, and enterprises can still obtain relatively stable income in the process of operation.

Enterprises can adopt a variety of operating methods to increase profits. The enterprise owns the property rights of the entire project, including housing and other commercial properties, and the enterprise can rent out or sell commercial properties to obtain more income, so as to cross-subsidize the low-income public rental housing properties. Moreover, according to the survey, public rental housing communities in most cities are concentrated in relatively mature communities and densely populated areas, and public rental housing itself can also gather a lot of popularity<sup>[7]</sup>. Therefore, the rent or selling price of commercial properties supporting public rental housing projects will be relatively high.

#### 4.1.2 Disadvantages

The payback period of investment is longer. Because enterprises hold the property rights of public rental housing, they mainly rely on rent to obtain income in terms of income, and the rent level of public rental housing is relatively low (generally  $60\% \sim 70\%$  of the rent of commercial housing in the same area), resulting in the investment payback period will be very long. Due to the limited area of supporting commercial properties in public rental housing projects, even if enterprises rely on selling or leasing supporting commercial properties, it is difficult to significantly shorten the investment recovery period.

There are many uncertain factors. Because the investment payback period is long, as time goes on, the uncertain factors during the operation of public rental housing will gradually increase, and the risk level of enterprises operating public rental housing will also increase accordingly. Uncertain factors mainly fall into the following categories: first, changes in government policies, including changes in national policies, changes in local government officials, changes in government housing security ideas, changes in supporting support and subsidy policies. Through the research, we learned that the secure boundary of public rental housing is difficult to be as clear as that of low-rent housing, which increases the systemic risk of housing owned by enterprises; the third is the change in demand. The demand for public rental housing will also change under certain special circumstances, for example, a significant reduction in the immigrant population, large-scale migration of urban residents, or the employment transfer caused by factors such as industrial transfer in cities.

Inadequate government support policies will affect earnings. The rental income of public rental housing is very small, and in some cities relying on housing rent alone can even make ends meet. Therefore, in order to increase the enthusiasm of enterprises to participate in the construction and long-term holding and operation of public rental housing, the government departments must have corresponding supporting measures. Including tax incentives, credit discounts and rent subsidies. In a long period of investment recovery, if the government's supportive policies are not in place, or there are major changes in the middle, the company's income from the project will be greatly affected, and the company may even face losses<sup>[8]</sup>.

## 4.2 "Enterprise accepts government entrustment, concentrates construction on behalf of others, and does not hold" model

This model means that the enterprise follows the relevant requirements of the government department. Generally, the enterprise obtains the land use right through the market, replaces the government department to build public rental housing, and the government repurchases it after completion. With this model, the investment of the enterprise can be faster IT has been recovered, but there is a relatively large risk in the early stage, as shown in Figure 3.

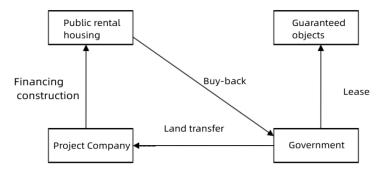


Figure 3: "Enterprise accepts government entrustment, concentrates construction on behalf of others, and does not hold" model

#### 4.2.1 Advantages

The return on investment is fast and the risk is relatively low. The biggest advantage of this model is that through the government's repurchase, the investment can be recovered in a short period of time and stable returns can be obtained.

#### 4.2.2 Disadvantages

Risk of local government default. Due to the unequal fiscal and administrative powers in our country's government system, local fiscal realities

The government's financial resources are extremely limited, and the financial revenue of some urban governments at their own level is only "eating finance". The construction of many cities depends on "debt", and local fiscal deficits are prohibited by law. At the same time, the State Council has recently increased its support for local financing platforms. Clean-up efforts, low available financial resources, and limited financing channels have led to "stretched" funds for local governments in the process of construction and security. In addition, the prospect of the central financial subsidy policy is not clear, which has also increased the funding gap for local governments for public rental housing construction [9]. If multiple affordable housing projects is launched in the city at the same time in a short period of time, and the proportion of agent construction is high, the government may find it difficult to pay according to the contract, and it may be delayed for a period of time to pay all the projects, and there is also a risk that the government will not be able to repay. Of course, the government usually has other compensation methods. Before the project payment is paid off, in addition to bearing the necessary financial costs, the enterprise cannot obtain income through rent, and must also bear a certain opportunity cost.

# 4.3 "Enterprise investment, commercial housing or price-limited housing with construction, holding and operation" model

This mode mainly refers to the government departments, in order to increase the construction of public rental housing, force real estate development enterprises that have obtained the right to use a certain piece of land to build a certain proportion of public rental housing in commercial housing or affordable housing, and the enterprises have the ownership of the housing and rent it out in accordance with the relevant regulations of the government departments. Enterprises can only rely on rental income, the sale or rental of related commercial supporting properties, and the sale of part of the housing after a period of rental, as shown in Figure 4.

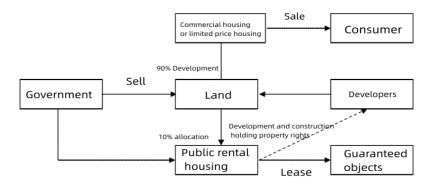


Figure 4: "Corporate investment, commercial housing or price-limited housing with construction, holding and operation" model

#### 4.3.1 Advantages

Easier to cross-subsidize through other programs. Residential quarters for public rental housing are usually developed and constructed by the same company, and the company can share part of the cost of operating public rental housing with the cost of commercial housing or affordable housing, so that the company can use it in a wider range Cross-subsidization effectively compensates for the lessees operating public rental housing, but the responsibility for the government's public finances is borne by ordinary families or even guaranteed low-income families. The basic motivation of income is reasonable, but it is inappropriate under the overall idea of housing security, and the government still assumes the main guarantee responsibility.

#### 4.3.2 Disadvantages

Added administrative costs for coordinating with other housing occupants. For the public rental housing projects that are built together, the protected families must live together with other social groups and enjoy the same property management. During the living process, there will be certain contradictions between different social groups that need to be resolved.

## 4.4 "Enterprise accepts government entrustment, builds in commercial housing or price-limited housing, and does not hold" model

According to research, most companies currently adopt this model. The enterprise obtains the land use right according to the market way, and signs the "supporting construction contract" with the government department. After the auxiliary construction housing is completed, the ownership of the house and the supporting facilities of the house are handed over to the government department free of charge. This model is generally suitable for local governments with certain financial strength. For underdeveloped areas, the method of reducing or exempting land transfer fees is generally required to require enterprises to build<sup>[10]</sup>. For enterprises, this mode is less risky than 4.2 and 4.3. At present, many cities are also adopting such policies to mobilize the enthusiasm of enterprises to participate in the construction of public rental housing, as shown in Figure 5.

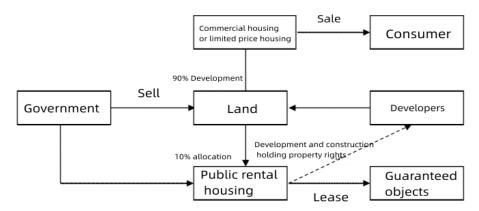


Figure 5: "Enterprise investment, commercial housing or price-limited housing with construction, not holding" mode

The actual transfer price of this model is closely related to the land transfer conditions. If it is a free transaction, the government will inevitably make certain concessions in terms of land transfer conditions. Therefore, the operational flexibility in terms of cost accounting and investment recovery hanse also becomes the biggest advantage of this mode of operation. Similar to Mode 3 ("construction", "holding"), this method also has the rationality and legality of subsidizing public rental housing tenants by other buyers. Similar to Mode 2 ("concentrated construction", "no holding"), this mode of operation has certain advantages in reducing business risks and quickly recovering investment, and at the same time, it transfers the contradictions that need to be resolved in the follow-up management process to government departments.

#### 5. Conclusion

Through the analysis of the participatory mode of social forces, it can be concluded that the main factors affecting the selection of the participation mode of social forces are the design of the local housing security system, the local public rental housing system, bank credit, land supply policy, government support policy, and the application of real estate trust funds. In order to increase the enthusiasm of social forces to participate in the construction and operation of public rental housing, the following suggestions are made.

#### 5.1 Improve the design of social forces participating in the relevant systems of public rental housing

Through the analysis of the model of social forces participating in public rental housing, the current system design of public rental housing that only rents but not sells leads to low investment yields and long investment payback periods for public rental housing projects, which cannot mobilize social forces to participate in public rental housing Enthusiasm for building operations. Therefore, in order to increase the construction of public rental housing and improve the operational efficiency of public rental housing, it is necessary to improve the relevant system design. For example, social forces participating in the construction can be allowed to sell part of the property rights of housing to recover the investment, so as to increase the enthusiasm of social forces to participate.

#### 5.2 Strengthen financial innovation and expand funding sources

At present, the construction funds of public rental housing mainly come from government financial funds and bank loans, but these two types of funds have insufficient supply and limited loan term, and there is little support for enterprises to participate in the construction. Most cities only compensate development enterprises with certain funds in the land transfer fee, and buy back the completed housing. Although this model can ensure the construction of public rental housing, it is not conducive to the socialization and market operation of housing, which may lead to low operating efficiency and rising operating costs year by year.

## 5.3 Strengthen the implementation of various preferential policies

Through the comprehensive evaluation of Xi 'an enterprises' participation in public rental housing construction operation mode, government policy plays a crucial role in the choice of enterprise participation mode. Therefore, in order to attract social forces to participate in the construction and operation of public rental housing, it is necessary to implement relevant preferential policies, do a good job in planning public rental housing, and guide enterprises to actively participate in the construction and operation of public rental housing.

#### 5.4 Change the way of land supply and reduce the capital cost of social forces

Through the analysis of the participation of social forces in some cities in China, it can be concluded that due to the limited sources of financial funds, in the balance of project funds, both public rental housing projects under construction and planned construction need to use land as a medium to balance costs and benefits. For example, if the land transfer fee is implemented on an annual lease system, then the financial pressure on social forces participating in the construction will be greatly reduced. Therefore, for cities with high land use fees, it is entirely possible to mobilize the enthusiasm of social forces to participate in the construction and operation of public rental housing by changing the way of land supply.

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