

Research on the Distribution and Selection Mechanism of China's Shared Property Housing: A Case Study of Beijing

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Abstract: In 2014, the Chinese government identified Beijing, Shanghai, Shenzhen, Huai'an, Chengdu and Huangshi as pilot cities for exploring and developing the reform of the housing system with common property rights. In practice, there are some problems, such as the distribution and selection of common property housing, which are not flexible enough and lack of effective ordering rules. This paper takes Beijing's common property housing as an example, based on public governance theory and social security theory. Under the principle of people-oriented, fairness and efficiency, and limited protection, this paper analyzes and studies the allocation and selection methods of shared housing in Beijing, and proposes targeted optimization measures, in order to maximize the role of shared property housing to improve the efficiency and feasibility of housing security.

1. Introduction

Housing is of special significance to the Chinese people who have a strong family concept. Housing represents the place where a person or family lives and the habitat of the soul. With the deepening of urbanization in China, housing is an important livelihood issue, and also an important part of government functions. During the 30 years of China's reform and opening up, on the one hand, the original state housing distribution system under the socialist planned economy system has gradually changed to the market-oriented private housing system under the market economy. On the other hand, urban society has gradually formed a "sandwich layer" group with certain economic income capacity, so it can not get the support of the national housing security, but lack the ability to pay for the purchase of commercial housing. In this context, the housing security system continues to improve and develop, and the innovative measure of shared property rights housing has been put forward to solve the new problems arising under the new situation. At present, the "Interim Measures for the Administration of Shared Property in Beijing" China's allocation of the purchase of shared property housing is mainly carried out by the "shake". Although prioritization is required based on factors such as "residence balance, family size, etc.", no specific prioritization grouping scheme has been published. At the same time, when selecting the qualifications for the purchase of a common-property housing, the selection criteria are determined mainly based on the family's real estate ownership or transaction, although 30% of the total housing supply is allocated to the "new Beijingers" who are stable in employment. However, ignoring the role of urban development in attracting talents will weaken the role of shared property housing in solving the "sandwich" of the city. Solving the above problems will help deepen the structural reform of the housing supply side, improve the housing supply structure, guide the residents to form a cascade consumption concept, support the housing-free families to solve the housing needs, and establish a housing basic system and a long-term mechanism in line with Beijing's characteristics.

2. Literature Review

2.1 A Summary of Relevant Studies in Chinese Academia

In the definition and feasibility of the concept of joint property right system. Lu Yulong (2005) presented many disadvantages in the traditional affordable housing background. In view of the problems arising in its specific operation process, this paper puts forward some solutions, which leads to the concept of affordable housing with common property rights [1]. Deng Xiaopeng, Mo Zhi and Li Qiming (2010) defined the concept of common property rights indemnificatory housing in China. They believed that common property rights housing refers to the ownership of the whole house by two or more subjects in a certain share. [2]. Chen Shuyun and Zeng Long (2016) defined the concept of common property right housing from the definition of property right, sorted out the subject and concept boundary of property right ownership, and pointed out the key problems of insufficient top-level system design in practice. The feasibility strategy from the perspective of government management and user psychology is put forward, but there are some shortcomings in the lack of specific implementation measures [3]. Shen Satellite (2013), from the perspective of the common property rights of affordable housing, believes that dealing with the speciality of shared property rights can improve the housing security effect of affordable housing, and provides theoretical considerations for the practice of shared housing. [4]. Yan Rong (2015) analyzed the characteristics, functions, advantages and limitations of shared property housing, and believed that the principle of positioning and development of shared property housing can help to explore a benign operational mechanism [5]. Ma Huimin and Liu Wei (2016) compared the policies of shared housing in each pilot city, and pointed out that in practice, it is necessary to focus on the three aspects of the original affordable housing relationship, property rights ratio and transfer, and operation management mechanism [6].

2.2 A review of related research in other countries

The United Kingdom is the first country to implement the practice of shared property rights protection housing. Since 1980, it has formed a relatively common system of ownership housing operation, effectively solving the housing needs of some low- and middle-income families and increasing the housing ownership rate. Ohls (1975) used the simulation model of the residential market in the general equilibrium housing market to construct a filtering model. After the simulation, he believed that the housing "filtering" process would be affected by the construction of shared property houses. The open real estate market will be affected by the continuous strengthening of public housing policy, there will be a response to reduce the number of new housing, increase the rate of housing withdrawal, and the downward "filtering" effect of the number of housing slows down. Anna Clarke and Andrew Heywood (2012) of the Department of Land Economics, Cambridge University, have increased the income level of households with low-cost housing property rights and common property rights. This paper studies the transaction mode of property right purchase of common property rights, encourages the "ladder" purchase mode, and gives suggestions on the specific implementation details. Anna Clarke, Sarah Monk and Aife Ni Luanaigh (2007) draw conclusions based on data from MHO and Tower Homes, UK housing companies that have mainly shared property rights in London over the past 20 years. Most of the common property right households are satisfied with owning housing. The common property right model provides the opportunity for a large number of low-income groups to share property rights, which is very beneficial to social equity and wealth accumulation [7].

2.3 Summary

At present, there are many academic studies on the theoretical basis and practical process of the common property right housing, but less on the allocation and selection of the common property right housing. In practice, most of the pilot cities simply use the "roll sign" method to determine the

specific guaranteed persons from the guaranteed groups who apply. Although this method simplifies the allocation process and improves the efficiency of allocation, it is impossible to judge which groups of people have stronger demand for common property housing. This has affected the public acceptance and security effect of the common property housing, and even the phenomenon of "abandonment" after winning the lottery. In this regard, we can learn from the experience of traditional research on the allocation of affordable housing. Chen Bogeng and Fang Jianguo (2005) respectively discussed the income level of housing security objects [8]. Xiong Zhi (2013) believed that the family structure should be taken into account in the security housing, and family income should not be simply equated with wage income [9]. Feng Hai (2013) emphasized that the current audit structure in the allocation of qualifications audit means simple, can not effectively adapt to the applicant's economic situation, family conditions and so on. The lack of synergy in various departments provides an important reference for improving the operability of the distribution scheme [10]. Olsen (2001) believes that the government should consider the applicant's age, labor, income capacity, housing demand and urgency, etc., so as to set a limited level of protection [11]. He Ruili et al. (2012) proposed to adopt a comprehensive scoring method to rank and avoid the randomness brought about by the randomness of "shake" [12]. The research ideas of the above scholars provide an important reference for the selection of the allocation scheme indicators in this paper. In short, the "shake" distribution method of shared property housing ignores the needs of the most urgently needed people, and is not conducive to reflecting the fairness and efficiency of social security, and will affect the final housing security effect. Based on the theory of shared property rights, public governance theory, social security theory and social welfare theory, this paper selects the evaluation indicators as dimensions and constructs a system of shared property housing allocation and selection. In this way, it provides a practical distribution plan for the distribution of shared property housing, improving the effectiveness and fairness of housing security.

3. Optimization design of distribution and selection methods

Based on the existing research, this paper follows the principle of limited guarantee on the basis of fairness and efficiency, and refers to the existing housing filtration theory research and housing security practice research. Establish a new shared property housing allocation audit system, including dozens of indicators in terms of family situation, economic situation, individual factors, etc., including three core contents: (1) Defining the scope of the joint property housing protection target, that is, determining the scope of qualification ". (2) Establish a family selection index system, focusing on the family population, the number of assets, the type of family income, talent introduction and other indicators. (3) With reference to the indicators in the new system, the consensus of "priority order" is designed. Families whose teammates are eligible to apply for joint property right housing are scored, and the limited order of security is determined according to the scores.

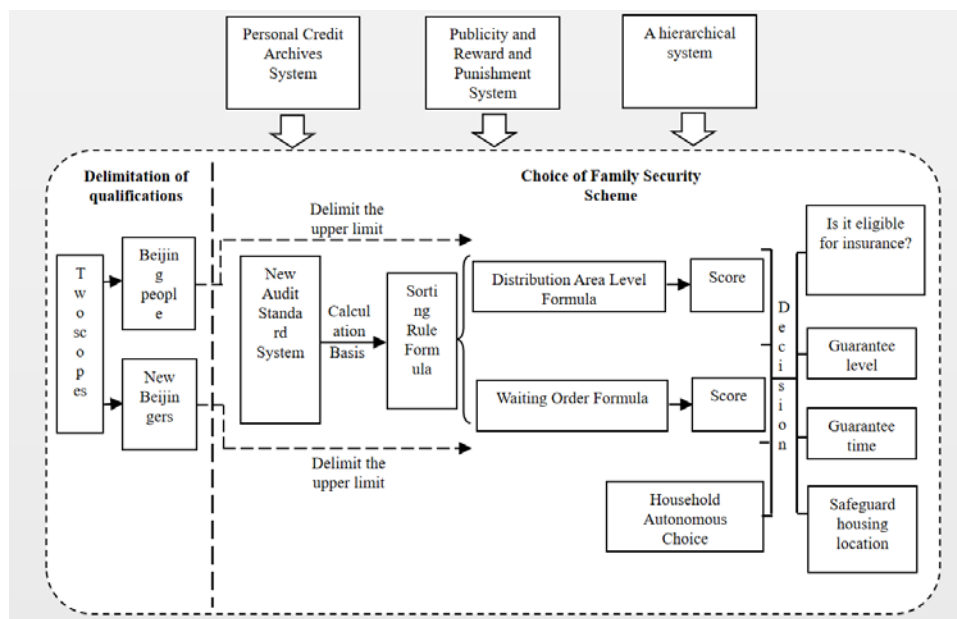


Figure 1 Schematic Map of Optimizing the Distribution Process of Shared Property Right Housing

On this basis, the final determination of the purchase of common property rights housing families can independently choose the size of housing, household type and so on. It should be noted that the implementation of any safeguard policy is inseparable from institutional guarantee. This paper hopes that China can be fully supported by the perfect personal credit system and social publicity system in the process of promoting the ownership of shared property.

3.1 Delimitation of qualifications

As an important measure to solve the housing security problem of "sandwich layer" urban residents in China, the scope of the housing security should be extensive. Not only limited to the historical residence registration system but also limited to the urban household registration population, we should consider the "new citizens" who have been working and living in the city for a long time. At present, the relevant management documents related to property ownership in Beijing are clearly stated. While taking into account the needs of local residential housing, the supply of "new Beijingers" for stable employment should be no less than 30%. In the actual implementation process, it is necessary to be able to flexibly divide "Beijingers" and "New Beijingers". The proportion of listings.

In the process of providing shared property housing, it is necessary to take into account the government budget, urban land supply and land use quota restrictions, and housing supply in different regions. Therefore, it is necessary to comprehensively consider from three aspects: (1) to investigate the number of households in this city without private housing and the number of permanent households in the city, so as to determine the demand volume. (2) Calculate the government's fiscal expenditure capacity and the amount of financing funds that can be obtained, investigate the developer's development capabilities, and determine the supply volume of the shared property housing. (3) According to the volume of demand within three years, the proportion of "Beijing people" and "new Beijing people" should be adjusted flexibly according to the proportion of "30%". Therefore, on the one hand, we should establish a scientific selection and distribution system, avoid the non-security objects to be mixed into the security system, and enhance the pertinence of housing security. On the other hand, we should establish a distinct type of housing supply with common property rights to meet the needs of different families and avoid excessive security.

3.2 Construction of Selection Standard System

Which families are eligible to buy the housing with common property rights depends not only on the situation of the family owning or trading the housing, but also on the establishment of a scientific

and rigorous selection criteria system as a yardstick.

Qualification allocation of joint ownership housing requires a rigorous and scientific selection system to determine which families or individuals are eligible to purchase joint ownership housing. This selection system should fully cover the actual situation of families and individuals, including but not limited to: the number of family population, family population structure, income type, income level, existing assets, family health, past consumption habits, family education and so on. Therefore, it is necessary for all government departments to establish a unified platform, coordinate interaction, establish a sound "family information system" as soon as possible, achieve information sharing, and improve the scientific and rigorous selection system. In addition, it can cooperate with social third-party organizations to establish non-profit organizations that specialize in assessing non-wage income and assets of the family, and give full play to the role of public supervision. Auxiliary government agencies conduct surveys and assessments of intangible assets that are difficult to determine, and increase the fairness of the selection criteria system.

Based on the above, this paper combines the existing research results to optimize the establishment of a new common housing standard selection system, and also points out the calculation methods, auditing basis and data source of each indicator in the system (see Table 1).

For the indicators in Table 1, the following points need to be explained:

(1) According to the difficulty and complexity of data acquisition, the selection criteria can be divided into two categories: Compulsory Index and reference index. Among them, the "required trial index" refers to the index that relevant data can be obtained through official channels and must be audited in the process of family application for eligibility. "Reference indicator" refers to information that is difficult or even impossible to obtain through official channels, and can only be obtained through non-profit organization evaluation or public supervision. Such indicators are only used as reference data for review.

(2) The statistics of household annual income data must be based on the improvement of the personal income file system by the tax authorities. The so-called personal income file system refers to the taxpayer's identity card number as the sole mark. On this basis, personal income information is obtained through various channels such as reporting by individuals and employers, and implementing information supervision on banks to achieve supervision of personal income (Dong, 2006). On June 30, 2011, the 21st Session of the Standing Committee of the Eleventh National People's Congress of China voted to adopt the decision of the Standing Committee of the National People's Congress on Amending the Individual Income Tax Law. On January 1, 2019, the new tax law was implemented in an all-round way, and the personal information files of China's national tax law were improved.

(3) Among the "original assets of the family", the "current residential area" and "per capita residential area" refer to the housing in which the family currently lives, and the property rights can be freely or rented. "Property status" refers to the ownership relationship between a family and its current housing, including the ownership of all property rights, some property rights, leasing or borrowing other people's housing. Due to the particularity of China's housing reform, China's housing has the types of property rights such as housing reform and small property rights, and the types are more complicated. This article does not discuss too much here. The protection of shared property housing should be for those who have no housing or have a low per capita housing area. Groups that have received other forms of housing security should not be included.

(4) The risk of occupations of the main members of the family is also related to the urgency of the demand for affordable housing. For example, people who are engaged in high-risk work have low income stability, and they must have income difficulties. They can stay on the streets at any time because they cannot afford to pay rent. Therefore, under the same conditions, priority should be given to the housing needs of staff with unstable income and higher security. Therefore, we will also include the occupational risk index in the scope of the audit, as a reference.

Table 1 Insured family selection criteria system

Category	Primary indicator	Secondary indicators	Calculation method	Audit basis	Data Sources
Mandatory target	Wage income	Family annual income	Total annual wage income of employed households	Personal Income Archives	Tax Bureau
		Per capita annual income	Annual household income/total household population	—	—
	Population	Total Family Population	Number of registered population	Registered residence	Household Registration Office of Public Security Bureau
		Number of on-the-job population	Employment Registration Number	Employment registration	Labor and Social Security Department
	Special group	Aged	—	Identity Card, Registered residence	Household Registration Office of Public Security Bureau
		Disabled	—	Disability Certificate	Federation of Disabled Persons
		children	—	Education registration	Bureau of Education
		Patient	—	Diagnostic proof	Public hospitals
	Family assets	Current Residential Housing	Data shown in housing area certification	Real Estate Certificate or Nationality Data	Unit or
		The measure of area	Current residential area/	—	Street operation
		Per capita housing	—	Certificate of Property Rights or Housing Lease Contract	Ministry of housing and construction
		The measure of area	Nature of Land Property Rights	Land Certificate and Collective Land Ownership Certificate	Village Committee and Ministry of Natural Resources
	Jian an type	Property status	—	Land expropriation compensation	Ministry of Housing and Natural Resources
Reference index		Useful land	—	—	Non-profit organizations, the public
	Asset income	Land expropriation compensation	Three-year Average Value-added Income	—	Bank
		Total Family Assets	Three-year Average Value-added Income	—	Securities redeeming institutions
		Interest on deposit	Three-year Average Value-added Income	—	Securities redeeming institutions
	Other income	shares	—	—	Non-profit organizations, the public
		fund	—	—	
	Consumption expenditure	Part-time income	Entertainment expenditure as a proportion of total income	—	Banks or third-party payment institutions
	Occupational risk	—	—	Government Open Standards	Non-profit organizations
	Talent introduction			government policy	Relevant Government Departments

(5) Talent introduction policy refers to the policy of attracting high-quality human resources with special needs in accordance with the requirements of urban economic industry and social development, which includes incentives such as welfare treatment and work support. Shared housing can be based on different snowballs that attract outstanding talents in the city, and consider specific requirements in terms of professionalism, education, technology, and social contribution.

3.3 Prioritization formula

Prioritization refers to the prioritization of the classification criteria according to the selection criteria. If the measured shared property housing needs to be balanced, the higher priority group can select the housing category earlier. If the measured demand for jointly owned housing is greater than the supply, in the "lottery" mode, the winning probability will be adjusted according to different priority groups, and the groups with higher priority will be easier to win.

Priority value = on-the-job population / total family population \times $\times i1$ + occupational risk degree \times $\times i2$ + talent introduction \times $i3$ + per capita housing area \times $\times i4$ + waiting time \times $\times i5$ + annual family income \times $\times i6$ + total family assets \times $i7$ + housing property \times $i7$ + extra points for special population.

What needs to be explained about this formula is:

(1) According to this formula, all households with the right to purchase a shared-property housing are scored. The scores are ranked from high to low, and the highest priority is high. When the housing type is preferred, the winning rate is the highest. In order to improve operability, scores can be divided into segments, and different groups can have different winning rates.

(2) The urgency of housing demand needs to be determined by the family population structure. Considering the elderly, children, special groups and the employed population, the urgency is higher when the number of employed population is small while the other population is large. The higher the occupational risk is, the higher the urgency is. The lower the per capita housing area of the family, the more difficult it is for family members to live and the higher the urgency. The longer a family has waited for the allocation of affordable housing, the more they should solve the housing problem as soon as possible.

(3) For occupational risk, the government shall, in accordance with the Labor Security Law, combine the specific facts of work in various industries, development of various industries, work stability and safety, and so on. The "Occupational Risk Assessment Report" was issued to provide reasonable support for the improvement of the housing security system.

(4) Talent introduction needs to be evaluated by the government's specific talent introduction policies.

At the same time, we also need to respect the family's right of choice, to meet their preferences in housing location, household type, orientation, floors, surrounding environment, etc., and then adjust the share of property rights floating according to the family's allocation of funds. It should be noted that if the object of protection is subject to land acquisition or housing demolition for the provision of shared property housing land, it should be fully adjusted in priority.

4. Institutional Guarantee of Optimizing Distribution and Selection

Firstly, the system of personal credit archives must be established. Personal credit system is an important indicator of social progress and an important institutional guarantee for any social security policy. If there is a phenomenon of dishonesty in the process of the distribution of shared property houses, it should be counted in the integrity file, depriving it of the qualification to apply for a shared property house within 5 years, and may even limit its eligibility for loans.

Second, we must establish an official personal income file system and strive to achieve transparency in personal income. Household wage income, asset income and other forms of income are basic data to be considered in any social security or social resource allocation. If these data are not available, the allocation process can not be implemented.

Thirdly, the publicity and reward and punishment system of housing distribution with common property rights should be established. Indicators, schemes and results of family selection and ranking should be made public to the society, subject to public supervision, give full play to the role of public supervision, and make every effort to avoid rent-seeking behavior.

Fourth, it is necessary to establish a shared property housing supply system with distinct levels of property rights, prices, areas, and functions. Only in this way can we achieve hierarchy, science and fairness in the distribution process.

5. Conclusion

In order to optimize the distribution and selection of shared property housing in Beijing, this paper designs the above-mentioned new affordable housing allocation process. However, due to the limitations of the length and the author's professionalism and energy, only a general reform idea is provided, and some specific problems are not explained in detail. How to design the weights in the priority formula should be specifically the study. In addition, the share division, access and exit mechanism, supervision mechanism and so on of the common property right housing are all important to play the role of the common property right housing, which needs further in-depth study. In a word, the allocation process proposed in this paper needs to be further explored and perfected in theory as well as tested and revised in practice.

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