Assessment on Public Satisfaction of Public Housing Condition in Beijing

FAN Wenjing, CHANG Jinming
Beijing City University, Beijing, 100083, China
net6080@163.com

Abstract. This paper analyzes the satisfaction of residence conditions and public housing combining the online survey data of Tuosuo Company and Zero Company with public. The paper finds that the public dissatisfies with the old residential renovation, infrastructure maintenance and the construction of affordable housing. And then it analyzes the reasons of these dissatisfactions and proposes recommendations accordingly.

1. Introduction
Resolving the issue of public housing not only requires realizing the dream of "home ownership" for low-income people, but also requires achieving an overall improvement in residence conditions of the public. Therefore, this paper analyzes the public satisfaction of housing conditions from two aspects as residence conditions and public housing according to online survey data of Tuosuo Company, Zero Company and the public.

2. Survey on satisfaction of public housing conditions

2.1. Survey on satisfaction of housing conditions
(1) Satisfaction of residence conditions ranks moderate level in people's livelihood survey
According to the survey data in Figure 1, it is obvious that the satisfaction of residence conditions ranks the fourth place on ten surveys people's livelihood, with satisfaction ranking among the moderate level, which shows that the problems reflected in residence conditions are not particularly prominent and urgent in the mind of the public.
Figure 1 Comparison about satisfaction of ten people's livelihood indexes

(2) Comparison about residents' satisfaction of residence conditions in 2017 and 2016
According to the comparison of survey data about residents' satisfaction of residence conditions in 2017 and 2016 in Figure 2, it can be concluded that residents' satisfaction of residence conditions has been significantly enhanced in 2017. Among them, the satisfaction level of Fengtai District, Haidian District, Changping, Daxing and Huairou has increased relatively greatly while the growth rate in Chaoyang and Mentougou District is smaller, showing that the government has approved by citizens in terms of the work they did to improve residents' residence conditions.

Figure 2 Comparison about residents' satisfaction of residence conditions in 2017 and 2016

(3) Comparison about satisfaction of housing conditions among districts
According to the results in Figure 3, it is obvious that residents’ satisfaction of residence conditions in the core area and extension area is smaller than the average; however, that of the new development area and the conservation is higher than the average. The main reason for this kind of result is that the core area and extension area are distributed with dense population with big density and old residential areas, so the satisfaction is lower. However, the population density in development areas and conservation areas is relatively lower and these areas are relatively new, thus resulting in the relatively higher residents’ satisfaction.

(4) Analysis on satisfaction of housing conditions of different classes of people
According to the data in Figure 4, it is common that the score of ordinary residents in all districts and counties is lower than that of NPC members, CPPCC members and grassroots workers, which shows that, to a certain extent, ordinary residents have relatively little understanding on national policies, as well as what the government has done and plans to do for ordinary residents.

2.2. Survey on satisfaction of public housing
(1) Ranking for satisfaction of public housing in eight surveys on people's livelihood
The online survey on satisfaction of fundamental public service in Beijing includes following 8 aspects: transportation, security, housing, fundamental education, social security & employment, health care, culture and sports, and urban environment. According to the survey results (as shown in Figure 5), the public satisfaction of housing is very low, ranking seventh place with the satisfaction rate being 57.3%, which is closely related to the large number of population in need of affordable housing due to the high housing price in Beijing.

![Figure 5: Ranking for satisfaction of public housing in eight surveys on people's livelihood](image)

(2) Overall satisfaction of public housing of the public
The overall satisfaction of the public on housing part among the fundamental public services (basic satisfaction + satisfaction + very satisfied) is 57.3%. However, 23.2% of unsatisfied people choose being dissatisfied while the rest 19.4% chooses being quite dissatisfied. Among all aspects involved, the public satisfaction of the control policy over real estate market is the lowest, which is closely related to the high housing price in Beijing. Secondly, the satisfaction with distribution and management of affordable housing, as well as housing conditions of migrant workers’ and the young is relatively low. However, the satisfaction with the resources allocation around houses ranks the highest level. In addition, the score in 2017 is higher than that in 2016, which is related to the increase in public housing supply and the continuous improvement of public housing policies made by the government. Though, both of them have alleviated people's anxiety over the housing problem, there still exists a huge gap between stubbornly high housing price, the number of affordable housing and public expectations, which is also the main reason for the long-term low satisfaction with public housing.

3. Problems existing in residence conditions of residents

3.1. Problems existing in the reconstruction of old housing estates
At present, the so-called "old residential area" specifically refers to resident dwellings with construction quality built in and before 1990. In order to improve the residents’ residence conditions, Beijing Municipal Government has started the reconstruction work of old residential buildings since the issuance of Opinions on Implementation of Comprehensive Reconstruction of Old Residential Areas in Beijing in January 2012. In recent years, the area of reconstructed old residential areas in
Beijing has reached 41.48 million m². The implementation of this policy has enabled ordinary people to improve their residence conditions and been approved by many citizens. However, there are some problems that deserve our consideration and improvement in the process of reconstruction.

1. The coverage of energy saving and insulation reconstruction of houses is insufficient
   First of all, judging from the area of existing old residential areas and the areas that have been reconstructed in Beijing, the completed reconstruction task only occupies 24.6%, meaning that 75.4% residential areas have not been reconstructed yet. For example, there are 81 public opinions in Fengtai District and 30 opinions in Fangshan; all of these opinions reflect that both of the two districts have not enjoyed energy saving and insulation reconstruction of houses. This is also the main reason for the public response to insufficient coverage.

2. Quality problems in the reconstruction of old residential areas
   There are some quality problems existing in the reconstruction of old residential areas. The large-scale reconstruction of dilapidated houses, the high demand for reconstruction speed and clear mentality on prompt completion of the public, as well as the lack of supervision in construction process have led to a series of problems. The most remarkable problem, which is also reflected the most by the public, is the quality problem caused by construction, such as roof leakage, balcony leakage, leakage problem of water supply and drain pipes, etc. These problems caused by construction will seriously affect the residents’ livelihood and their satisfaction with the reconstruction of old residential areas.

3. Gap between the house reconstruction scheme and the actual needs of the public
   First of all, there is a deviation problem between the reconstruction contents stipulated in reconstruction policy and the actual reconstruction contents. During the renovation work at present, the actually implemented reconstruction items of all district governments include energy saving reconstruction, green replanting, newly constructed balcony for individuals and thermal insulation reconstruction outside stairs. There exists a certain difference compared with the urgent needs of residents for reconstruction contents, such as increasing area and elevator facilities, as well as residential environment improvement, etc.

   Secondly, there are conflicts between beauty and practicality in the reconstruction scheme. Though both of beauty and practicality are advocated in the reconstruction of old residential areas, there is a problem that beauty and practicality are disjointed actually.

   Thirdly, there is a lack of design for many items in the reconstruction scheme. Elderly residents occupy more than half of the population in the old residential areas. Though planning for additional facilities for the aged has been made in the new round of "comprehensive reconstruction" of old residential areas, many residential areas have begged the question and omitted this part of work in "comprehensive reconstruction” since it is not enforced due to the issue of funds. At present, there still exists the problem of lack of facilities for the aged in many old residential areas where the reconstruction work has been completed.

4. The lack of adequate public participation in the process of reconstruction
   In present reconstruction work, many urban planning decision-makers consider that the reconstruction of old districts involves professional design and complicated technology; ordinary people has little understanding on corresponding planning and design knowledge; therefore, the social public has not fully participated in professional decisions related to the reconstruction of old districts. When reflected in the reconstruction of old residential area, it means that the public opinions have not been fully or sufficiently considered before the reconstruction of many old districts.

3.2. Problems existing in the maintenance and updating of housing infrastructure

1. Delayed updating of infrastructure management and maintenance
   According to the negative feedback from the public opinions, 13 out of 18 pieces of negative information reflect the issue of infrastructure in residential areas, which have seriously affected the satisfaction of residents. The main causes for these problems include the unclear responsibilities between the property management party and the real estate developer, the inadequate auditing of the
public maintenance funds by the government, the mutual blaming between property management party and the real estate developer, as well as the lack of the mutual trust between residents and property management party.

(2) The infrastructure allocation is to be improved

In terms of infrastructure allocation, especially in old residential areas, the feedback of this problem is relatively concentrated and intense. The most serious problem is the allocation of elevators. According to the survey, it is found that there are up to 69 opinions involving in the installation of elevator in residential areas.

4. Countermeasures and suggestions for improving residents’ residence conditions

4.1. Countermeasures for improving residents’ residence conditions

3.1.1 Promote the reconstruction of old residential areas and improve residents’ residence conditions

(1) Release notice for the reconstruction plan of old residential areas via various channels to improve satisfaction with information transparency

The government has formulated a sound reconstruction plan according to present situation of old residential area and notified it to the public through various channels so as to make the public understand that the reconstruction shall be carried out as per the planned schedule, thus reducing the uncertainty and anxiety of the public, and further reducing their dissatisfaction.

(2) The way of reconstruction should be refined

First of all, enhance the publicity to make residents fully understand the arrangement for reconstruction in their respective residential areas. Efficient communication shall facilitate residents to have a positive and profound understanding on the reconstruction, thus bringing a more comprehensive understanding and support of residents on the reconstruction.

Secondly, provide favorable consideration to public opinions. On the one hand, it is required to coordinate the reconstruction orientation set by the government and the actual demands and aspiration of residents in the old districts. On the other hand, it is necessary to coordinate the consensus between professional designers and the general public so as to achieve relatively equality and harmony of mutual roles.

Thirdly, it is necessary to improve the proportion of outdoor living environment in old districts in the reconstruction work. Increase facilities for the aged in old districts during reconstruction process; focus on solving the parking problem in residential areas; pay attention to the space transformation of the old residential areas, etc.

Fourthly, the reconstruction of old residential areas consumes a great deal of materials and financial resources. If there are lots of problems caused by the construction quality, it shall affect the significance of reconstruction; therefore, all districts and counties should adopt various methods during construction process to ensure the construction quality, thus ensuring the process quality through strict monitoring.

(3) Expand ideas of reconstructing old houses, and provide various feasible reconstruction schemes

First of all, strengthen the research and application of reconstruction of old houses; promote the transformation of house repair to house reconstruction according to the demands of residents; expand ideas of reconstructing old houses according to present status old residential areas in Beijing, and promote the reconstruction of old houses as per domestic researches.

(4) Strengthen public participation

With the social progress, as well as increasingly optimized and perfected law and policies, residents' self-awareness has been enhanced constantly as well, and they have higher demand for social justice and individual rights. Therefore, the government should include the contents with residents’ participation into the renovation and reconstruction procedures of old residential areas; moreover, it should provide legal protection and basis for public participation, and give full consideration to residents' opinions when making plans. The public participation shall not only alleviate workload and share responsibilities of the government, but also improve the satisfaction with
government work; moreover, it shall also facilitate the reconstruction progress due to the public participation and support.

3.1.2 Suggestion for the maintenance and updating of housing infrastructure

(1) Strictly audit the public housing maintenance fund

The state has enacted a strict Management Measures for Special Residential Maintenance Funds, which clearly defines the auditing and approval procedures and corresponding provisions related to the public maintenance fund, since there exists the problems as drawing public maintenance fund by fraud. Therefore, the government should strictly audit the public housing maintenance fund to ensure the authenticity, and make sure that the fund has been released in time and in place so as to ensure the effective maintenance and updating of infrastructure.

(2) Prepare effective management system, define the responsibilities of developers and property management companies respectively, and set up a special channel to solve the problems quickly.

The biggest problem that makes it difficult to complete the maintenance and updating of infrastructure quickly is the unclear separation of powers and responsibilities between real estate developers and property management companies, which makes residents unable to make complaint when encountering the problems, thus prohibiting solving the problem quickly. Therefore, it is necessary to define responsibilities clearly, and the government should set up a special channel for solving problems that seriously affect residents' livelihood quickly.

4.2. Countermeasures and suggestions for construction of public housing

(1) Improve relevant legal system

All countries in the world have enacted strict laws and regulations before implementing the housing guarantee system. In view of successful experience of developed countries, the Ministry of Housing and Urban-Rural Development, Ministry of Human Resources and Social Security, and the Ministry of Civil Affairs of China should enact and improve relevant laws and regulations necessary for the development of affordable housing system in China as soon as possible according to current lagging situation in the construction of laws and regulations regarding the field of affordable housing in China. It is insufficient to expose punishment only from the perspective of moral criticism and supervision by public opinion to strictly define all illegal activities during the process of implementing the affordable housing system; it is also necessary to provide legal basis for realizing the goal of "home ownership”.

(2) Make planning and decisions rationally, improve the supporting facilities surrounding affordable housing

First of all, provide sound infrastructure and basic medical services surrounding affordable housing when making construction planning so as to guarantee the basic life requirements of residents.

Secondly, continue to improve transport facilities surrounding the affordable housing. With the increase of population, it is required to give more considerations to the road construction, bus station construction, opening of transport lines, as well as the extension of and additional stations along subway lines when making construction planning so as to solve the problem of going out of residents.

(3) Optimize affordable housing supporting mechanisms, eliminate loopholes in the system

First of all, establish an effective auditing mechanism for household property income as soon as possible. Strictly define the auditing scope of household property income. For example, the financial department, insurance department and tax department of China Unicom should fully understand and audit economic situation of applicants.

Secondly, give full play to the role of community publicity system and supervision by public opinion, and improve the supervision mechanism over affordable housing constantly. In addition, give full play to the role of social opinions, the media and networks so as to strengthen supervision.

Finally, improve the exit mechanism as soon as possible. An exit mechanism should be included into the affordable housing system in Beijing due to the dynamic development of the residents' economic conditions. For those families that are already inconsistent with the conditions, recover the affordable housing in time.

(4) Adhere to multi-level affordable housing policy, and eliminate the "sandwich layer” problem
Beijing is a city with a large population and a wide income gap, the housing demand here also presents multi-level feature, and a single affordable housing policy is not enough for solving the housing problem; therefore, the safeguard level should be diversified. At present, there are two major groups with housing problem in Beijing, namely, migrant workers and the new generation of employment groups. In response to the housing problem of these two groups, Beijing municipal government should conduct a full investigation and make reasonable planning so as to guarantee their housing demands in a way of allowing them to apply for public rental housing, which is also consistent with the slogan of "regarding public rental housing as the main subject of affordable housing system" for the development of Beijing.

5. Conclusion
This paper analyzes the satisfaction degree of public housing from two aspects of living conditions and public housing, and finds that the public is not satisfied with the renovation of old residential areas, the maintenance of infrastructure and the construction of affordable housing. Through this study, in order to provide the basis for the government's next public housing policy formulation and revision.

References
[1] Wen Zongyong, Zhen Yinan, Dong Ming & Li Wei. Road to “Home Ownership” - Research on Current Situation of Affordable Housing in Beijing. Beijing Planning Review, 2013(02).
[2] Zhang Junjun. Investigation and Study on the Transformation of Old Residential Areas -- a case study of Beijing residential area. Beijing University of Civil Engineering and Architecture, Master Thesis, 2014
[3] He Linghua. Research on Design for the Aged Availability during Reconstruction of Old Residential Areas, Urban-Rural Governance and Planning Reform under the Background of Aging - A Collection of Annual Theses on Chinese Urban Planning in 2014, September 13, 2014.
[4] Li Yangang. Judgment and Countermeasures for China's Public Housing Policy Phase. Journal of Beijing University of Aeronautics and Astronautics (Social Sciences Edition), 2017(5).
[5] Mo Wenbin. Research on Public Housing Policy in China and Abroad and Its Enlightenment. Journal: Value Engineering, 2017(4).
[6] Liang Jie. Research and Strategies for China's Current Public Housing. Journal: Value Engineering, 2013(31).