Analysis of Interest Groups in the Process of Installing Elevators in Shanghai

Xianglong Dong, Xiao Xiao, Quanling Li and Xinchun Chen

School of Economic and Management, Shanghai University of Electric Power, Shanghai, China, 201306

*Corresponding author: fchg609@163.com

Abstract. The interest groups related to the installation of elevators in old residential areas are multiple interest groups with specific purposes and identities. The negotiation dilemma caused by the redistribution of group interests due to the installation of elevators led to the stagnation of the installation of elevators, which should have net income. Using the method of interest group analysis, the method of consultative democracy and the conceptual model, this paper makes a detailed analysis of the attitude of different interest groups under the new situation of installing elevators, and finally puts forward measures to solve the negotiation problems from the calculation of average net income and the government's work in installing elevators.

Keywords: Interest groups; Consultative democracy; Average net income; Neighborhood committee.

1. Introduction

The vast majority of old residential areas in China (Hereinafter referred to as old residential areas) are 5-7 storey buildings without elevators. Due to economic and technological reasons, most old residential areas are not installed with elevators. With the continuous improvement of residents' income and quality of life, the further development of society and the intensification of aging, the residents of old residential areas have an increasing demand for the installation of elevators, especially the elderly, young, sick and disabled groups with daily mobility difficulties among high-rise residents. In order to further improve residents' life satisfaction, the installation of elevators in old residential areas has become an urgent matter that conforms to public opinion. However, due to the differences in interest demands [1], payment ability, fairness of subsidy benefits and other problems among residents in the community, and even the obstacles made by the communities that have elevators, the installation of elevators has been subject to many obstacles, which has not been popularized so far. In order to deal with the above four types of problems, community residents and relevant government departments have made many ways to promote internal consultation, but the actual effect is not good. Therefore, with the help of interest group analysis methods, consultative democracy methods and conceptual models, and in combination with the current situation of installing elevators in old residential areas in China, as well as the "medium and long-term plan for the country to actively respond to population aging" issued by the CPC Central Committee and the State Council, this paper clearly puts forward a "multi-level elderly care service system based on home and community" [2] comprehensive analysis in many aspects, and puts forward an effective compensation scheme, Further promote the promotion of elevator installation projects in old communities.

According to the interview with the residents of the community who have successfully installed elevators, the process of installing elevators is sorted out into the following four steps: the first step is to carry out a feasibility assessment on the conditions of installing elevators in their street communities based on the streets; The second step is to solicit opinions from the residents of the building affected by the installation of an elevator, which is agreed by the owners who participate in the voting of more than half of the area of the exclusive part and more than half of the votes [2]. Third, the neighborhood committee publicizes and solicits opinions from the whole community. Step 4: contact the relevant elevator installation companies to invite bids for the project. After the bidding is completed, it will be submitted to the government to complete the approval of adding elevators (Figure 1).
In the form of interview, the author selected 4 towns in Pudong New Area of Shanghai, a total of 8 residential areas, and collected 67 interview materials by using the method of encounter survey. Through the collation of interview data, we found that the main problems that hinder the installation of elevators in old residential areas lie in the two steps of early evaluation and consultation with owners. The former is not suitable for the installation of elevators because of the aging of the building and the fact that the structure is affected by the current installation of elevator technology. The problem with the latter is that it is difficult for residents to reach a consensus through consultation. The reason why it is difficult for residents to negotiate is that it is a collective decision. According to Olsen's explanation, collective action cannot be achieved due to collective size, differences in value preferences within the collective and free riding psychology of members [3].

This study regards residents' negotiation as a small collective action, analyzes the positive effect of the policy content formulated by the Shanghai municipal government on the achievement of residents' negotiation, and puts forward an algorithm model to achieve the balance of interests by using the method of interest group analysis and the theoretical approach of solution. The research value lies in that as a tool for regulating society, the government should issue appropriate tools at the right time to improve the efficiency of policies and give better play to government functions. Through the analysis of interest groups within the community, we can build a complete framework for the adjustment of residents' interests, and take this to form a long-term mechanism of community governance to provide useful enlightenment.

2. Research status of group negotiation

At present, mainstream scholars mainly focus on how to coordinate the different opinions of different households. Some scholars advocate that the conflict should be resolved by Friedrich Friedrich's "integration" [4]; Some scholars believe that public policies should be implemented from the perspective of the government to solve conflicts [5]; Some scholars believe that people still need to discuss it by themselves. The government only needs to install elevators in the negotiated community [6], while others believe that the power of introducing capital needs to be left to the market to solve [7]. Many scholars have made contributions to this issue, which gives the author many inspirations. From the perspective of structuralism, the problem of group negotiation can be seen as the behavior of different structures in groups to safeguard their own interests under different purposes.
Therefore, the group will be divided into smaller interest groups with different purposes and identities, and the contradictions in the process of installing elevators will be more clearly seen.

3. Composition of interest groups in the event of installing elevators in old residential areas

The installation of elevators involves residents, neighborhood committees, industry committees, elevator installation companies, government departments and some public goods management, which is a typical mass event. Chang Jian and Liu Mingqiu divided interest groups into four types: matter identity interest groups, matter interest groups, identity interest groups and public interest groups according to whether they involved specific identities and specific interests. [3] The interest groups involved in the installation of elevators belong to the interest groups formed by the installation of elevators. However, in the process of interest negotiation, different groups are divided into more specific matters - identity interest groups according to the identity they represent.

The installation of elevators in old residential areas is a project of the government to facilitate residents' travel and promote economic development, which has certain task requirements for streets and neighborhood committees. And as it involves the reconstruction of old houses, the relevant water and electricity channels need to be readjusted, which will affect the fire access and green area. Moreover, this process is a redistribution of group interests, involving housing prices, ventilation and lighting, noise and investment ratio. The main purposes of different interest groups are as follows:

(1) Neighborhood committee. Neighborhood committees are organizations that assist government departments in implementing policies at the grass-roots level. The neighborhood committee's perspective in the installation of elevators is to assist residents to install elevators within their capabilities, but avoid taking the main responsibility and causing contradictions among residents.

(2) Install elevator company. Elevator installation company is a product provider in the field of elevator installation in the elevator industry. The elevator installation company hopes to increase the trading volume, open the market and gain competitiveness as much as possible, but it should avoid reducing the income.

(3) Residents are the audience and users of elevators. Residents with different floor heights have different views on the installation of elevators. On the one hand, because the frequency and duration of elevator use are different, residents believe that the proportion of investment needs to be considered. On the other hand, due to the installation of elevators, it will block the sun, affect the ventilation, make noise and affect the house price, so residents think it is necessary to have appropriate compensation for this.

(4) Third party residents' living related departments. The third-party department is responsible for the management of water and electricity channels and the internal community in terms of fire protection, greening, building cleanliness, etc. The purpose of this group is to ensure the normal progress of all aspects of life and avoid the impact on Residents' lives caused by the installation of elevators.

4. Research direction of elevator installation process

Starting from neighborhood committees, elevator companies, residents and third-party departments, the following four points are the research objectives:

(1) The neighborhood committee supports the installation of elevators.

(2) Low rise residents and high-rise residents' demands for the addition of elevators in old communities.

(3) Support of elevator installation company for elevator installation.

(4) The third party department coordinates the installation of elevators.

The ultimate goal of analyzing the opinions of the masses in old communities in Shanghai is to explore the relationship between interest groups and the role that the government can play in it.
5. **Build a framework for calculating net benefits and promote group negotiation**

5.1 **Analysis of interest groups in the process of installing elevators**

As for the elevator installation project, first of all, it is a project to benefit the people, which benefits the life of ordinary residents in the community, the construction of community pension, the construction of barrier free environment and other residents at all ages. In addition, the redistribution of social wealth is promoted through financial subsidies. Second, it has a certain role in promoting the economy under the epidemic, strengthening the flow of idle funds. Third, it is the embodiment of the superiority of the socialist system with Chinese characteristics in caring for social vulnerable groups.

Assuming that there is no funding problem, the installation of elevators has brought certain performance results to the neighborhood committee, completed the tasks assigned by the corresponding government, and contributed to the development of elderly care services and barrier free services within the community. However, if the neighborhood committee is involved too much, due to China's national conditions, residents will attribute the problems of the elevator to the neighborhood committee. Then this matter involving a lot of funds will bring trouble to the work of the neighborhood committee.

The intuitive impact on residents is that housing prices and travel are more convenient. During the interview, some residents said, "when buying a house, the lower floors are more expensive than the upper floors, but the upper floors are more expensive than the lower floors with elevators. Is it reasonable not to give some compensation?" Express strong emotions about the installation of elevators. In addition, in the long run, elevator noise, lighting, ventilation and other factors are also the reasons why low-rise residents do not agree to install elevators.

The company that installs elevators will obtain certain benefits in promoting the installation of elevators. According to the interviewees, if the number of installed elevators reaches a certain level, the company will obtain the entry qualification of the Shanghai market. This is the purpose of the company that installs elevators.

The position of the third party department is that the installation of elevators may change the building structure. Including water pipes, cables, natural gas channels, fire channels, green area of the community, etc. The cross fields of public services and market services are often unclear, so it is difficult to communicate on the adjustment plan [8].

5.2 **Analysis of profit and loss of interest groups**

According to the above analysis of different interest groups, it will be divided into the following contents, so as to see the benefits and losses of different interest groups more clearly, and build a net income calculation model (Figure 2).

Distinguish between the vested interests and the losers by whether they benefit or not.

Vested interests: groups who cannot go downstairs normally due to the elderly and the disabled who are more convenient to go up and down stairs or other physical reasons, and ordinary residents who have more than three floors because of the rise in house prices due to the installation of elevators.

Distinguish supporters from those who can fight for and those who hinder by their status.

Supporters: elevator companies, neighborhood committees, vested interests.

Bidder: third party department

Third party departments such as the environmental department and the fire department, because the installation of elevators will affect the greening and occupy the fire access, but it is good for the policy and can provide support in this regard.

For the neighborhood committee, the constituent parts of the neighborhood committee include all residents' representatives of the community. It belongs to the administrative system and funds are allocated by the government. Therefore, the neighborhood committee and the industry committee are quite supportive of the people-friendly policy of installing elevators. But on the other hand, the
installation of elevators requires a lot of work, and the final responsibility belongs to the party, which also needs to deal with huge aftermath work. Therefore, the attitude of the neighborhood committee is to strive to publicize, but not involve too much, so as to make residents autonomous.

The industry committee is a representative elected by the community owners. Ownership of the property. It is a stage for supporters and opponents to play chess.

Obstacles: losers

| Supporter                      | Convincing person         | Hinder          |
|--------------------------------|---------------------------|-----------------|
| Elevator company               | Fire department           | Loser           |
| People with a vested interest  | Environmental Department  |                 |
|                                | Neighborhood committee    |                 |
|                                | Industry Committee        |                 |

**Fig. 2 Classification of interest groups**

Since the installation of elevators will inevitably lead to the opposition of low-rise owners, Pareto optimality cannot be achieved without financial compensation, resulting in the obstruction of the whole project. However, according to the cardo Hicks standard, to maximize the net welfare, the overall benefit of adding elevators to the building must be positive, so it is imperative.

The interest groups involved in the installation of elevators belong to matter identity interest groups. There are both common events and interest disputes arising from different positions and identities. The adjustment of this kind of interest group conflict should not be limited to the identity interest groups that put forward interest claims, but should further include other identity groups with relevant interests. Secondly, the purpose of conflict resolution should not be limited to "peace", but should further include balancing the interests of various identity groups. Finally, balancing the interests of identity groups requires the establishment of interest negotiation mechanisms among identity groups [3].

According to the interview results, the steps of installing elevators have great obstacles in the stage of soliciting residents' opinions. To solve this problem, it is necessary to take into account all interest groups involved in the conflict of interest groups, and balance the interest relations between various groups. Therefore, the author uses the Kaldor Hicks standard and considers the relevant group interests to build a calculation model of net welfare, which is used as the reference data to balance the interests of various groups. And with the help of the analysis of interest groups, provide suggestions on the group negotiation of the installation of elevators.

5.3 Calculation method and direction of net benefits of installing elevators in old residential areas

The net benefit algorithm is mainly based on the cardo Hicks standard, which lists the direct benefits and losses in the process of installing elevators in text.

Therefore, this paper proposes a mathematical model as follows, which is mainly divided into residents' direct income, direct loss and external compensation given by the government. Among them, residents mainly consider the gains and losses of people's long-term life and house prices, while the government mainly considers the proportional subsidies for the installation of elevators and the policy of withdrawing provident fund issued by the government, as shown in Figure 3.
5.4 Suggestions for group negotiation on installing elevators in old residential areas

Based on the analysis of interest groups one by one and the results of field interviews, the following suggestions are put forward for the next installation of elevators:

(1) Establish an overall awareness and strengthen publicity and guidance

Look at the benefits of installing elevators from a long-term and overall perspective, strengthen publicity and education, and guide residents’ value preferences. Taking the building as a unit, the income of installing elevators is positive. Taking the owner as a unit, the income of installing elevators is different for everyone. Therefore, in order to balance the interest relationship between different interest groups, we must compensate different residents according to the average net income. In group negotiation, residents will judge their position according to their immediate interests, and their sensitivity to loss is far greater than that of income, and will determine the outcome of the elevator installation event. Therefore, improve the standardization awareness and group communication ability of the residents' committee staff, and strengthen publicity to help residents realize that the installation of elevators can bring benefits to every resident, which is of positive significance to every resident. So that residents can reach a unified view on the installation of elevators in consciousness.

(2) Strengthen goal orientation and be responsible for solving problems

In the process of installing elevators, the owner's opinions play a decisive role, but it is difficult for the owner to have time and energy to organize meetings and negotiate issues due to work, going out and other reasons. In this case, the role of the neighborhood committee in organizing consultation meetings is of great significance. At the same time, the neighborhood committee also needs to give the owners universal knowledge and realize the role of installing elevators in the long run. In these two aspects, the neighborhood committee should actively participate in the implementation. The elevator installation company needs to actively develop new products and formulate innovative elevator installation schemes while promoting the contents of elevator installation, so as to meet the needs of different communities for elevator installation. To solve problems specifically is not only to carry forward their respective strengths, but also to improve efficiency. In the process of installing elevators, each group is suitable for different division of labor.

(3) Connect with relevant third-party departments to promote communication and coordination

The third-party department mainly refers to the Department of water and electricity access and the Department of fire protection, greening, building neatness, etc. within the community. When residents install elevators as the main body, they are faced with the need to coordinate the building water and electrical pipelines, fire access and other issues. According to the interview results, the cost of communication between residents and third-party departments is too high. Even after communication, there is still no way to solve the problem of adjusting pipelines and channels, which has been criticized by the person in charge of residents who installed elevators. Therefore, a third-party department is required to formulate a plan according to the installation of elevators to ensure the last step of the installation of elevators.
6. Conclusion

This paper takes the newly constructed old community interest groups as the research framework to study the coordination of installing elevators in old communities. Through the analysis of various interest groups, we can find that the problems existing in the collaborative governance of installing elevators are mainly reflected in the inconsistent distribution of interests, the lack of multi department collaboration, and the lack of standardization in the actual operation process. At the same time, there are also conflicts between the installation of elevators in the neighborhood committee and routine work, the lack of coordination awareness and communication awareness of staff. Therefore, the installation of elevators in old residential areas requires the participation of various interest groups to play their respective roles, clarify the subject of collaborative responsibility, balance the interests of all parties, and establish a long-term mechanism to make the whole process run in the "sunshine", accept the supervision of all parties, and provide a guarantee for residents' lives.

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