Analysis on the Advantages and Disadvantages of PPP’s Application in the Development of Public Rental Housing

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Abstract. Government’s priority among priorities over the improvement of people’s living environment is to solve the problem of the under privileged, one of the best solutions is to develop Public Rental Housing (PRH). As Public-Private-Partnership (PPP) is prevalent in China, using it to develop PRH is feasible. Advantages, like government’s support and the match between PRH and PPP etc., are analyzed. Also, countermeasures are provided to face the disadvantages, such as underdeveloped frame of law system and inefficient share of risks. All these are trying to make reliable contributions to the future development of PRH.

1. Introduction

Since the housing system reform in 1998, guaranteed housing has been an important part of improving people’s living environment. To solve low income families and migrant workers’ housing problems in the city [1], 36 millions guaranteed houses need constructing during the 12th Five-Year Plan period, with PRH being the main body [2]. In the 13th Five-Year Plan, completing investment, credit, land and taxation policy, collecting PRH in different approaches, and strengthening subsidy for people who live in PRH are mentioned [3]. As thus, it’s worth exploring the development of PRH.

In recent years, governments are promoting PPP in infrastructure construction and public industry under the new normal. Whether is it a better choice of applying PPP in PRH? This paper will analyze its advantages and disadvantages and propose countermeasures next.

2. Advantages on Applying PPP in PRH

2.1 Preferential and supporting policies

Since the launch of Instructions in promoting PPP in public service field in May, 2015 and the establishment of PPP database on ministries and commissions level, PPP becomes surprisingly prevalent. The number of PPP projects recommended by National Development and Reform Commission during first round reached 1043 with 1970 billion Yuan. By the end of February, 2017, 11784 PPP projects have been in the database with 13937.532 billion Yuan. Arousing all kinds of enterprises and institutions’ enthusiasm in investing and operating PRH are mentioned in Instructions in accelerating the development of PRH, and local governments present that real estate companies and social institutions invest and offer houses in PRH area actively.

As can be seen above, although there are no specific institutions in applying PPP in PRH, central and local governments both encourage social capital to invest PRH using PPP, which creates an open environment for the social capital.

2.2 Property matches between PRH and PPP

As special public goods, PRH is of certain commonweal, which will cause some externalities problems. For example, some individuals get the PRH in deceiving ways [4], as a result of which, people who should have got PRH still have no where to live. However, PRH is mainly used for rent,
which will bring long-term profits and the profits will compensate previous cost and coming operation and maintenance fee. In short, internal rate of return (IRR) in investing PRH should at least equals to its benchmark yield \((i)\), plus governments’ preferential policies on PRH, its economic performance can be guaranteed and this is consistent with the requirement that PPP should bring benefits to the social capital.

Besides, from current PPP application experience, using PPP to develop PRH can form a structure shown in Fig.1.

![Figure 1. Relationships among all parties.](image)

2.3 A large amount of available social capital

According to the data reported by national bureau of statistics in January, 2017, folk fixed assets investment was 36521.9 billion Yuan in 2006 with a nominal increase by 3.2%, which accounts for 61.2% of national fixed assets investment (without peasant household). While fixed assets investment of real estate industry in secondary industry was 1117.9 billion Yuan with an increase by 2.9%.

Social capital’s vitality can be seen in Fig.2, under the new normal, as one of the “three carriages”, investment had reversed the low increase since 2015. As an essential part of real estate development, PRH is in greatly demands now, and it can make contributions to economic growth without doubt.

![Figure 2. Folk fixed asset investment and national fixed asset investment growth.](image)

2.4 PPP’s inborn advantages than other finance modelings

At present, PRH mainly depends on fiscal investment, because investment from other approach isn’t smooth. Consigning construction and REITs both have shortcomings. For example, consigning construction’s ability to leverage financing is weaker than PPP’s, which brings too many uncertainties. REITs’s system still needs to improve in China and it causes bad circulation and low efficiency [5].
In comparison, if using PPP in PRH, there are following advantages: (1) relieving local governments’ financial pressure; (2) bringing potential benefits for social capital; (3) financing in the name of project company, which makes risks under control and won’t cause parent company’s bankruptcy if failed, see Fig.3; (4) expanding new financing approaches, which conforms to the now normal’s needs. (5) Because PRH is for the low-income families, the rent won’t be too high, which will push social capital to improve management to reduce cost. As a result, people will get better service.

![Figure 3. Project company’s financing.](image)

3. Disadvantages on Applying PPP in PRH

3.1 Inadequate legal mechanism and other related systems

In China, the main reason why PPP is so prevalent is governments’ promotion. However, corresponding laws on its market entry, share of risks, basic profit and supervision are not adequate. Specifically, current laws are contradicted with PPP’s practice. For example, franchised contract with government needs to be negotiated and modified again and again during the whole process, but some parts in the contract can’t be modified under current laws’ regulation, which inhibits PPP contract’s flexibility.

What’s more, there isn’t strong supervision on the public sector because of the inadequate related systems. Therefore, once the public sector doesn’t follow the contract, such as delayed payment or quitting PRH’s construction, it will bring disaster to the private sector. For public sector, it becomes more difficult to receive social capital’s support to relieve its fiscal burden, which is not beneficial for local or even national sustainable development. Also, PRH’s low coverage rate, market entry and exit loophole, inadequate amounts and lagging related infrastructure needs to be solved [6].

3.2 Inadequate professional and interdisciplinary talents

Expertise in real estate, law, accounting, finance, management and counsel is necessary in applying PPP in PRH, which needs related talents to conduct. However, truths are that most governments and enterprises aren’t familiar with PPP business, so they often deliver the project to the consultancy who doesn’t have much practice experience in PPP indeed. This vicious circle usually leads to the waste of public resources. Besides, too many pseudo-PPP projects exist now because of incomplete understanding of PPP, which will not exploit PPP’s advantages analyzed above to the full.

3.3 Inadequate share of risks

Serial systematic risks, such as policy change and flow of rate, and individual risks, enterprises’ unqualified management and cash flow, will be encountered during the development of PRH, so valid share of risks is the key to the success of PRH’s construction and social capital’s profits under PPP modeling.

PPP officially started in China in 2015, which indicates that it’s not fully mature and defenses against risks are inadequate, therefore, slight mistakes shall bring unpredictable loss. Because of governments’ dominant position, package risks which should be undertaken by both public sector and private sector usually are assigned to the social capital only which is too much for them.
4. Countermeasures on Applying PPP in PRH

To better apply PPP in PRH, except for the policy support, first thing government should accomplish is improving related laws, which should mainly focus on protection system, government’s credit, range of application, usage mode, financial subsidies, risk management, exit mechanism, information disclosure and supervision etc. Besides, related from central government to local government should be established and make every effort to make it work.

4.1 Strengthening contract spirit and supervision on all related parties

Whether the government is faithful or obeys the contract strictly is the key factor that affects private sector’s activeness. Perfect system, which will regulate all parties’ rights and duties specifically, must be established. For example, behaviors that violate the contract should be regulated from both qualitative and quantitative sides, and punishments should be implemented to the legal position of person.

On supervision side, from private sector’s position, first, government should focus on the selection of social capital at project approval phase, which is entry supervision. Instead of state-owned enterprises’ monopoly, competitive bidding method shall be adopted. Second, VfM assessment during the life circle process must be applied, which contains performance evaluation. For government, in civil contract, administrative relief and judicial relief should be included. What’s more, for certain projects, systems on information disclosure, people’s involvement in decision and supervision should be established too [6].

4.2 Improving high education’s quality and cultivating more disciplinary talents on PPP field

High education team is the nucleus of implementing the strategy of reinvigorating China through science, education and human resources. In high education, under the guidance of innovation, related students should strengthen studies on PPP and explore practice cases from domestic and overseas [7]. Synthetic knowledge, which includes construction management, finance and law and comforts to national conditions, should be taught. Except for those successful cases, typical unsuccessful cases, such as construction of the anglo-frence channel, should be learned to summarize experience and foster reverse thinking to solve similar problems in the future.

For people who have already joined in work, these talents should attend professional training organized by government, consultancy or high education institute regularly. On the one hand, they can be sent abroad to study advanced ideas and theories. On the other, taking advantage of existed talents to foster domestic human resources to expand high education team.

4.3 Implementing rational and valid share of risks

As is indicated in foreign successful experience, the nucleus of PPP modeling is rational and valid share of risks. During the process, experience on BOT and PPP from domestic and overseas should be taken for reference to summarize and recognize potential risks. Accordingly, formulating responses and solutions in order to conduct process combination to minimize systematic risks and reduce individual risks, see Fig.4. Besides, maxmin method, maximax method and minimum and maximum regret value method can be used [8]. Social capital can use Eq.1 to calculate expectant yield to compensate systematic risks.

\[ T(I_j) = I_f + \alpha_j[T(I_m) - I_f] \]

in which, \( T(I_j) \) represents project \( j \)'s expectant yield rate in the same project and time period; \( I_f \) represents yield rate in no-risk project; \( T(I_m) \) represents whole market’s average yield rate in the same project and time period; \( \alpha_j \) represents project \( j \)'s systematic market risk coefficient (related coefficient, 

\[ \alpha_j = \frac{COV(I_j, I_m)}{VAR(I_m)} \).
What’s more, following principles need to be obeyed to implement rational and valid share of risks. First, level of risks and corresponding profits are consistent. Second, the party who needs the least cost or has the most power to control the risks should take them. Third, the risk is limited, that is, Party A should take the restrictions [9]. At last, obey the contract strictly and don’t buck-passing. If so, all parties will behave rationally to make their risks under control and risk probability can be reduced, which means even if risks happen, the loss will be minimized as much as possible.

![Figure 4. Changes of systemic risks and individual risks.](image)

5. Summary

Housing is one of the livelihood issues, PRH’s construction is and will be in a prosperous development time, during which, analyzing the advantages and disadvantages of its development approach has positive meanings. To sum up, applying PPP in PRH is not only feasible but also deserves promoting. However, PPP modeling is not so mature in China, there is still much to be studied. As the main body to provide PRH and maintain its balance, governments need to improve the ability to construct and operate PRH with the investment of private sector under the now normal to stabilize economy increase and relieve governments’ liability.

References


