

Analysis on the Obstacles of Private Capital Participating in the Construction of Municipal PPP in China

A Case Study of PPP Project of Underground Utility Tunnel in a New Airport Area of a City

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Abstract—This paper focuses on the PPP model with Chinese characteristics, and takes the PPP project of underground utility tunnel in a new airport area of a city as an example for analysis. Starting from the requirements of pre-qualification standard, it explores the obstacles of private capital participating in municipal PPP projects, comprehensively analyzes private capital's contradiction relationship between subjectivity and objectivity, and between inside and outside in the bidding process of the PPP project, and finds three problems including unclear policies and regulations, relatively large risk challenges and limited financing and operation capacity. It studies the countermeasures and methods for the optimization and improvement of PPP mode in China, proposes three suggestions of standardizing policies and regulations, perfecting operation mechanism and broadening financing channels, and heightens the passions of private capital to participate in PPP projects, so as to make Chinese private capital more competitive in bidding for PPP projects in the future.

Keywords—private capital; PPP projects; municipal

I. INTRODUCTION

Public-Private Partnership (hereinafter referred to as PPP) model is a long-term cooperative relationship established in the field of infrastructure and public services. We will transform government functions, relax control over market access, release social innovative vitality, and stimulate the enthusiasm of private capital investment, to optimize the supply of public goods and services. The first letter P (Public) in the PPP model only refers to the connotation of the government, while the capital of state-owned enterprises and government are transformed into the second letter P (Private), and they form the "social capital" with private capital, becoming the subject of the supply side of China's PPP market.

In recent years, with the increasing investment of PPP mode in the field of municipal construction in China, government departments select project partners through bidding and tendering. However, the bid winner is often the central enterprises, state-owned enterprises, and other enterprises with state-owned assets. According to the statistical data, central enterprises participated in 1,062 PPP projects in 2017, accounting for 35% of the total number of PPP projects in China; they invested about RMB 5.7 trillion in PPP projects,

accounting for 59% of the total turnover of PPP projects in China. Based on the data of turnover of PPP projects, the capital of state-owned enterprises is much larger than that of private enterprises, in which the former is RMB 6.3 trillion accounting for 76% and the latter one is RMB 2 trillion accounting for 24%. In terms of the number of PPP projects, the project transactions of state-owned enterprises outnumber those of private enterprises, which are 3,063 and 2,662, accounting for 54% and 46% of the total respectively. The average transaction value of each PPP project in state-owned enterprises is RMB 2.07 billion, while the average transaction value in private enterprises is RMB 760 million.

Through data comparison, it is found that private capital is not very active in PPP projects at present. Guiding private capital to provide public services is one of the major tasks of PPP reform. In order to make the PPP model an effective way to stimulate the investment of private capital, this report intends to analyze the specific reasons for the obstacles of Chinese private capital participating in municipal PPP projects, and then puts forward some suggestions for increasing private enterprises' participation in PPP projects in China.

II. LITERATURE REVIEW

As for obstacles of private capital participating in municipal PPP projects, domestic and foreign scholars have done some researches and analysis. Foreign scholars mainly focus on the study of public-private relationship and income on investment under the PPP mode. For example, Sharma (2013), Khan (2014) and other scholars thought that economic fluctuation, social environment and investment returns are important factors influencing the participation of private capital in PPP projects; Beh (2010) made an intensive study of PPP project policies and its operation mechanism, and believed that the low enthusiasm of private capital to participate in PPP projects was largely due to the lack of sufficient guidelines for the current PPP model, which may lead to a decline in the quality of PPP projects and an increase in the cost of PPP projects. He suggested that an effective supervision framework and a strong regulatory basis should be established. SunalaVelo (2010) and other scholars studied the bidding process of the PPP model, and held the opinion that

the negotiation process of PPP project cost a long time, which may bring higher input costs and greater possibility of default.

The PPP mode with Chinese characteristics, which is different from foreign PPP mode, makes domestic scholars focus more on the access threshold, and policies and regulations. Zhang Guidong, Liang Xue (2017) and other scholars took notice that some local governments had the ideas of “keeping the goodies within the family” and “local protectionism”, and they were reluctant to share PPP projects with better returns with private capital and set up tough access standards far beyond the actual demand, so that local state-owned enterprises gained the projects with overwhelming superiority and private capital had to “hold back”. Wang Junhao, Zhu Xiaoling, Chen Haibin (2017) and other scholars generally believed that private capital was unwilling to bear expected risks and challenges of PPP projects with large investment and long cycle. Wei Zhimin and Sun Yang (2016) and other scholars thought that the documented PPP laws, regulations and policies were not systematic, most of which were policy-oriented and directional guidance documents, lacked the detailed and standardized implementation links, and even caused related contradictions and conflicts due to multiple management. Wang Shouqing and Liu Ting (2014) and other scholars believed that in order to stimulate the enthusiasm of private capital to participate in PPP projects, we should clarify the role attributes of the government under the PPP model, and prevent the confusion and substitution of administrative and civil identities.

By comparing and analyzing the research results of domestic and foreign scholars, both of them keep a close watch on the game between the government and the social capital, and conduct researches and analysis from the perspective of project expectation, access threshold, and policies and regulations. However, the author thinks that the current research results mostly concentrate on the same subject, and there is a lack of case analysis on PPP projects that are

actually put into operation. Moreover, the relationship between subjective and objective, between inside and outside of private capital in PPP projects is neglected, and the data dialectics is not objective and comprehensive enough. This paper will take the PPP project of underground utility tunnel in a new airport area of a city as an example for research, comprehensively analyze private capital’s constraints between subjectivity and objectivity, and between inside and outside in the bidding process of the PPP project, and then put forward some suggestions on how to rationally optimize and upgrade China’s municipal PPP projects.

III. CASE STUDY

The PPP project of underground utility tunnel in a new airport area of a city (hereinafter referred to as “the project”) was officially launched in May 2015, with the total construction length of about 19.6 kilometers and the estimated total static investment of RMB 1.36746 billion. The social capital that won the bid was China Railway Construction Corporation Limited (hereinafter referred to as “China Railway Construction”). The government side (Xiamen Municipal Utility Tunnel Investment Management Co., Ltd., 10% of the shares) and social capital side (China Railway Construction, 90% of the shares) determined by the statutory tendering procedure jointly set up a project company, namely, “China Railway Municipal (Xiamen) Investment Management Co., Ltd.”. The project company is responsible for the investment, construction and operation of the project. The project cooperation duration is set to 20 years, including 4 years of construction period and 16 years of operation period. The return mechanism of the project adopts the mode of “user payment + viability gap funding”. The paper analyzes and studies the prequalification criteria of the project, and then demonstrates the obstacles of private capital participating in municipal PPP projects with examples.

TABLE I. LIST OF QUALIFICATION IN PREQUALIFICATION OF THE PPP PROJECT OF UNDERGROUND UTILITY TUNNEL IN A NEW AIRPORT AREA OF A CITY

No.	Enterprise Name	Enterprise Nature	Registered capital	Enterprise Net Assets	Credit Rating
1	Hongrun Construction Group Co., Ltd.	Listed private enterprise	1.1 billion	4.686 billion	AA-
2	Longyuan Construction Group Co., Ltd.	Listed private enterprise	1.53 billion	3.3 billion	AA
3	Chengdu Huachuan Highway Construction Group Co., Ltd.	Private enterprise	1 billion	6.23 billion	AA
4	Beijing Municipal Road & Bridge Group Co., Ltd.	State-owned enterprise	2.23 billion	39 billion	AA
5	Jinan Urban Construction Group Co., Ltd.	State-owned enterprise	600 million	1.735 billion	AA+
6	Beijing Urban Construction Design & Development Group Co., Limited	Listed state-owned enterprise	1.34 billion	26.2 billion	AA+
No.	Enterprise Name	Enterprise Nature	Registered capital	Enterprise Net Assets	Credit Rating
7	Shanghai Tunnel Engineering Co., Ltd. Shanghai Infrastructure	Listed state-owned enterprise+ state-owned enterprise	3.14 billion	21.6 billion	AAA

	Construction Development Co., Ltd.				
8	China Railway Tunnel Group Co., Ltd. Xiamen XGMA Machinery Co., Ltd.	Central enterprise+state-owned enterprise	2.96 billion	3.06 billion	AA+
9	China MCC20 Group Corp. Ltd	Central enterprise	2.05 billion	1.963 billion	AAA
10	China Coal Third Construction Group Co., Ltd.	Central enterprise	810 million	5.05 billion	AAA
11	PowerChina Road Bridge Group Co., Ltd.	Central enterprise	4.9 billion	8.3 billion	AA
12	SinoHydro Bureau 14 Co., Ltd.	Central enterprise	2 billion	3.49 billion	AAA
13	China First Metallurgical Group Co., Ltd.	Central enterprise	1.2 billion	3.55 billion	AAA
14	MCC Tiangong Group Corporation Limited	Central enterprise	2.05 billion	61.5 billion	AAA
15	China State Construction Engineering Co., Ltd.	Central enterprise	30 billion	139 billion	AAA
16	Shanghai Baoyi Group Corp., Ltd.	Central enterprise	1.8 billion	4.2 billion	AAA
17	The 23th Metallurgical Construction Group Co., Ltd. of Minmetals	Central enterprise	2.2 billion	2.9 billion	AAA
18	China Communications Construction Company Limited	Central enterprise	5.86 billion	149.6 billion	AAA
19	China Railway Construction Corporation Limited	Central enterprise	13.58 billion	102.9 billion	AAA

^a As of December 31, 2014

31 enterprises have applied for the pre-qualification of the project. 19 enterprises are pre-qualified, of which 11 enterprises are central enterprises, and 1 enterprise is a combination of central and state-owned enterprises, and 4 enterprises are state-owned enterprises, and 3 enterprises are private enterprises. We will analyze why there is little private capital involved in the PPP project from the following aspects:

A. Limitation of Asset Size

The pre-qualification criteria for this project are more demanding on credit and financing capacity of social capital. First, according to the statistics in July 2017, only about 600 enterprises in China have obtained AAA grade, among which only a small number of private enterprises have obtained AAA grade. Even if private enterprises have excellent reputation and capital, they can only get AA + grade. Compared with private enterprises, central enterprises and state-owned enterprises can obtain higher credit ratings more easily. Second, the poor credit rating of private capital greatly inhibits the financing ability of enterprises. Banks' loans to private capital are small in amount, short in term, high in interest rate and also need a mortgage. However, private capital usually only possesses the management right of municipal PPP projects, but does not has the ownership right. Meanwhile, as China's securities market is still immature and underdeveloped, the issuance of bonds presents two distinct special states. National bonds and local government bonds are in short supply, while no one shows any

interest in private capital bonds, so that bonds cannot provide timely help to the financing of private capital.

Although the access standard of PPP project set by the government exceeds the actual demand, it is not the main factor that hinders the participation of private capital in PPP projects. The fundamental reason lies in the "internal and external problems" of private capital. The first is the lack of strength. The private capital itself is weak, and is usually unwilling to bear risks and challenges brought by the long cycle and large investment of municipal PPP projects. Besides, the government acts as both participant and regulator at present, and the private capital is concerned that the government has too much administrative power in cooperation. The second is misunderstanding and prejudice. Some local governments have misunderstandings and prejudice against private capital. They believe that the private capital naturally pursuing profits is not suitable to operate municipal PPP projects with the nature of public welfare. If private capital gains are considerable, it is easy to trigger social public to speculate that the government supervision is insufficient, and to misinterpret the legitimate operating income of private capital as the loss of state-owned assets and the transfer of benefits. Therefore, choosing state-owned enterprises as cooperative capital can reduce the pressure of later auditing and public opinion.

B. Limitation of Engineering Qualifications

The PPP model further highlights private capital's narrowness in investment field. China's private capital

investment is mainly concentrated in finance, Internet, real estate, industrial manufacturing, tertiary industry and other fields. Apart from largely mature emerging industries such as sewage treatment and garbage disposal, there are relatively few private capitals that have the strength to undertake municipal projects. Moreover, the first-level qualification standards need to meet many strict requirements, such as, “having at least 12 professional first-level registered constructors”, “technical director of project with at least 10 years of experience in construction technology management”, and “having at least 30 professional who hold the intermediate professional title or above in the related majors of municipal engineering”. There are few private capitals that can obtain this qualification. As a result, compared with central enterprises and state-owned enterprises engaged in infrastructure construction for a long time, private capitals have no competitive advantages, and it is difficult for them to give full play to their advantages including high efficiency, flexibility and innovation.

C. Limitation of Operational Capacity

Although we built a utility tunnel of more than 1,000 meters in Tiananmen square in 1958, as well as a utility tunnel on Zhangyang road in Pudong new area in 1994, the construction of underground utility tunnel has always been the “sparks of fire” in China. It was not until 2013 that China launched the pilot project of urban underground utility tunnel; In 2014, the General Office of the State Council issued a document and required to explore financing, project construction and maintenance, project pricing and charging, post-stage operation and management and other modes, and then the construction of underground utility tunnel was widespread. Not only that, before 2014, even though some private capitals were qualified to participate in the construction of tunnel through the BT model, few of them can operate and manage the tunnel.

Therefore, the project requires the leading Party of the consortium form to have a total assets of RMB 5 billion or a performance in operation and management of tunnel. It is difficult for the private capital which “lacks both” of capital and experience to obtain the qualifications of the leading Party of the consortium. The private capital with relevant professional ability and high service level cannot directly participate in municipal PPP projects and lose at the starting line. As a result, the opportunity for “small and specialized” private capital to participate in the project is far fewer than those of “large and complete” state-owned enterprises, and the private capital has difficulty in taking a step and face tremendous obstacles on the way to participate in municipal PPP projects.

Based on the above analysis, policies and regulations in PPP mode in China are still unclear. Meanwhile, PPP projects pose relatively large risks and challenges to the private capital, and private capital has limited ability in financing and operation; they are important factors restricting private capitals’ participation in municipal PPP projects.

IV. CONCLUSION

A. Further Standardizing Policies and Regulations, and Building a Fair and Just Cooperative Relation

Relevant supervisory departments should give full play to their responsibilities. In the prequalification documents and procurement documents of municipal PPP projects, they should do as follows. First, they should strictly eliminate unfair competition including the establishment of differential clauses and discriminatory clauses. Second, they shall not exclude the private capital by setting a threshold that does not match the actual cost and investment of the project or exceeds the actual financial needs, and on the grounds of limited enterprise registered capital, net assets and bank deposit, or low bank line of credit and insufficient total profit. Third, they shall not evade the government procurement process by means of central-local cooperation, investment invitation and strategic cooperation agreements, to designate partners as the social capital party. Fourth, as for municipal PPP projects that have violated regulations and set up different clauses and discriminatory clauses, they should promptly specify and rectify them within a time limit. The initiation of PPP projects that are not rectified will be suspended.

B. Further Improving the Operation Mechanism and Creating a Flexible Implementation Plan

The first is to perfect the pricing mechanism. In view of the uncertainty of the return rate of municipal PPP projects, the government, enterprises and public representatives are organized to hold hearings, participate in pricing together, establish a flexible pricing mechanism, and include factors such as cost, price fluctuation, internal rate of return, management and maintenance fees, and interest rates in the pricing mechanism to ensure the proper balance between risks and benefits of municipal PPP projects. The second is to implement dynamic subsidy. For municipal PPP projects requiring subsidy, we should establish a dynamic subsidy adjustment mechanism, comprehensively consider the basic price of the project, construction and operation costs, operation period, financial medium and long-term affordability and other factors, and determine a standard for the financial subsidy, so as to ensure that municipal PPP projects can obtain reasonable income.

C. Further Broadening Financing Channels and Fostering a Favorable Business Environment

The first is to foster long-term investment institutions. We will foster professional and long-term equity investment and trading institutions, further improve the rights and interests protection mechanism, and give private capital the confidence to participate in PPP projects. The second is to issue income bonds. We will issue bonds in accordance with the profit outlook of projects, expand financing channels, provide convenience for private capital to overcome financial difficulties, and attract private capital to actively participate in PPP projects. Local governments and relevant departments will reduce the issuance cost of income bonds, simplify the issuance and review procedures, discount interest on some PPP project bonds, enable state-owned enterprises to provide bond

guarantees for private capitals with high credibility, and take some other supporting measures, so as to relieve the difficulties of private capital in financing. The third is to introduce fund and insurance. We will accelerate the cultivation of secondary market, encourage investors with different risk preferences and professional service institutions to enter the PPP field, refinance PPP projects through financing funds and the introduction of insurance institutions, realize risk distribution, mitigate the additional responsibility of private capital for credit enhancement due to its participation in PPP projects, and reduce the risk cost of financial service institutions participating in PPP projects, improving the financing difficulties they face in participating in PPP projects. The fourth is to perfect the transfer and withdrawal mechanism. We will establish and improve the transfer mechanism of relevant rights and interests in PPP project, realize the organic transaction, transfer and withdrawal of social capital through asset securitization in the secondary market, improve the trading activity of PPP project income right in the secondary market, attract more suitable and powerful investors to participate in the PPP project, and advance the healthy and steady development of PPP model.

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