ISSN: 2455-8834

Volume: 05, Issue: 02 "February 2020"

RESEARCH ON THE PATH OF WATER RESOURCES SURVEY AND DESIGN ENTERPRISES PARTICIPATING IN PPP PROJECTS

¹Bo Liu, ²You-you Duan, ³Ming Che, ⁴Yu Chen, ⁵Shuai-jun Li

¹Lecture, Ginling College, Nanjing Normal University, Nanjing.

^{2,3,4,5}Postgraduate, Ginling College, Nanjing Normal University, Nanjing.

DOI: 10.46609/IJSSER.2020.v05i02.001 URL: https://doi.org/10.46609/IJSSER.2020.v05i02.001

ABSTRACT

In recent years, China's water resources industry has developed rapidly, and water resources infrastructure construction is an important part of it. However, water resources projects are mainly funded by the government, which has great limitations. Under the new situation, government financial pressure should be relieved, social capital should be encouraged to participate in water resources facilities construction, and PPP mode should be introduced. This paper made a detailed analysis of the necessity of introducing PPP mode into the construction of water resources infrastructure, and then put forward the main paths for water resources survey enterprises to participate in PPP projects. The participation of water resources survey and design enterprises in PPP projects is conducive to the implementation of cooperation between the government and social capital, the reduction of financial burden, the promotion of diversification of investment entities and the realization of good economic development.

Keywords: PPP mode; Water resources survey and design enterprises; Participation Path

INTRODUCTION

Due to the influence of the downward pressure of the economy, supply-side reforms and other external complex situations, the competition in China's water resources survey and design market is more intense and cruel, and the operation mode of water resources survey and design enterprises will also undergo major changes. Under the background that it has become a trend for government public welfare projects to adopt PPP mode construction, many cross- industry units are strongly involved in the water resources industry with the power of capital.

These units have great comprehensive strength and can realize the systematic operation of the

ISSN: 2455-8834

Volume: 05, Issue: 02 "February 2020"

whole activities such as design, construction and operation by integrating the industrial chain. For water resources survey and design enterprises, there is no doubt that they have fallen into a passive situation and cannot use the natural resources and advantages of the past. Limited to the short board of water resources survey and design enterprises' own investment and financing capabilities, they cannot participate in the whole process at present. They can only intervene appropriately as design units or EPC units. The capital side is at the strong end. Water resources survey and design enterprises cannot play a leading role in PPP projects, and cannot obtain the most core market information. Market expansion is relatively passive. Based on this, this paper will analyse the necessity of water resources survey and design enterprises participating in PPP projects, and put forward feasible paths for water resources survey and design enterprises to participate in PPP projects.

1. Necessity Analysis of Water Resources Survey and Design Enterprises Participating in PPP Projects

After more than 30 years of rapid growth, China's economic growth has begun to slow down. China's medium-to-high growth rather than high-speed growth will become a normal and structural phenomenon, which is also the only way to transform and mature China's economic structure. Under the background of China's economy entering the new normal and deepening the reform in an all-round way, supporting and guiding the healthy development of social capital investment has become an important part of China's reform.

Especially in the face of the difficulties that public investment may face when the economy enters the new normal, guiding social capital into the public sphere has become an important task of the Chinese government. On the basis of "Several Opinions of the State Council on Encouraging, Supporting and Guiding the Healthy Development of Private Investment" issued by the State Council in 2010, China successively issued a series of guiding documents on the cooperation between the government and social capital (Public-Private- Partnership, PPP mode) in 2014, providing strong support for promoting the cooperation between the government and social capital.

It is an inevitable development trend for social capital to enter the field of infrastructure construction. As an important component of infrastructure construction, water resources projects can and should reduce financial burden through the introduction of social capital, promote diversification of investment subjects, improve project implementation results and realize reasonable risk sharing. It is the general trend to adopt the cooperation mode between government and social capital in water resources projects. It is also an important measure for the water resources industry to improve government public services. It can organically combine the

ISSN: 2455-8834

Volume: 05, Issue: 02 "February 2020"

government's strategic planning, market supervision, management efficiency of public services and social capital, and technological innovation, thus helping to clarify the boundary between the government and the market, enhancing the government's legal awareness, contractual awareness, and market awareness, better performing public functions, and comprehensively improving the level of public services.

Water resources projects have long been dominated by government financial investment and have not formed a diversified, multi-level and multi-channel investment mechanism. Under the past investment system, as a watershed design unit, survey and design enterprises have long had natural resources and advantages, and can undertake survey and design business in various places or watersheds. However, due to the challenges brought about by the downward pressure of the economy and the complex external situation such as supply-side reforms, the market competition is more intense and cruel, and the business model will also undergo major changes, which will pose a greater challenge to the further expansion of the market for China's water resources survey and design enterprises. The water resources survey and design enterprises are facing increasing competitive pressure. Especially under the background that PPP mode has become a trend for government public welfare projects, many cross-industry units are strongly involved in the water resources industry with capital. These units have great comprehensive strength and can realize the systematic operation of the whole activities such as design, construction and operation by integrating the industrial chain. For the design units, they undoubtedly fall into a passive situation and cannot use the natural resources and advantages of the past. Limited to the short board of surveying and designing enterprises' own investment and financing capabilities, the Company is still unable to participate in the whole process, and can only intervene appropriately as a design unit or EPC unit. The capital side is at the strong end, the Company cannot play a leading role in PPP projects, and cannot obtain the most core market information. The market expansion is relatively passive.

2. Main Paths for Water Resources Survey and Design Enterprises to Participate in PPP Projects

The main paths for water resources survey and design enterprises to participate in PPP projects are as follows:

2.1 Pave the way for the Company's main business by participating in PPP project consultation.

There are two main participants in PPP projects, one is the government and the other is the social capital. Under PPP mode, due to the strong dominance of social capital, government departments no longer manage specific affairs, and all relevant matters are managed by social capital/project

ISSN: 2455-8834

Volume: 05, Issue: 02 "February 2020"

companies. The government's role in them is mainly coordination and supervision. Under this background, the advantages of government background possessed by water resources survey and design enterprises in the past are no longer prominent, and they will face great challenges in business undertaking.

For water resources survey and design enterprises, collecting their own qualifications can be seen that the engineering consulting qualification target has not been fully utilized. For a PPP project, according to the current regulations of China's Ministry of Finance, it has to go through five stages: project identification, project preparation, project procurement, project implementation and project handover. Among them, project identification, project preparation and project procurement are very important links.

The three stages of PPP project identification, project preparation and project procurement determine whether the project can adopt PPP project, which operation mode to adopt, and the determination of social capital. Judging from the current practice, the vast majority of PPP projects in China are initiated by the government, and the government needs to carry out the preparation of "two evaluations and one case" (i.e. value for money evaluation, financial affordability demonstration, preliminary implementation plan and implementation plan) for PPP projects. Due to the limited human resources in government departments and the lack of awareness of PPP projects in some local governments, the current work, including the follow-up procurement work, is completed by consulting units.

For water resources survey and design enterprises, it has its own engineering consulting qualification. In addition, it has relevant consultants and has good relations with local governments. At the same time, it has close relations with some state-owned enterprises, especially those in the water resources system.

The company can take advantage of this advantage to actively participate in the preliminary consultation of PPP projects and actively strive for PPP project consultation business through bidding, competitive negotiation/negotiation, etc. On the one hand, as there are relatively few enterprises engaged in PPP project consulting business and their appearance time is not long, the charging standard for PPP project consulting business in the market is relatively high, which is much higher than that in the traditional consulting field. On the other hand, it is also the main aspect. Through early intervention, it can pave the way for water resources survey and design units to intervene in PPP projects as social capital parties, do a good job in relevant communication with local governments, and also provide effective support for the future business development of water resources survey and design units.

2.2 Strengthen contacts with relevant investors and sign strategic cooperation framework

ISSN: 2455-8834

Volume: 05, Issue: 02 "February 2020"

agreements

In the PPP market, investors are important participants in PPP projects, which determine whether PPP projects can successfully land.

Moreover, with the gradual prevalence of PPP + EPC mode, the status of investors has become more prominent. In the "PPP Project Contract Guide (Trial)" issued by the Ministry of Finance, social capital is defined as follows: "Social capital refers to enterprises with legal person status established according to law and effectively existing, including private enterprises, state- owned enterprises, foreign enterprises and enterprises with foreign investment. However, government financing platform companies under the people's government at the corresponding level and other state-owned enterprises (except listed companies) controlled by them shall not participate in PPP projects within the jurisdiction of the government at the corresponding level as social capital parties. " Therefore, China's definition of social capital is not private capital in the traditional sense. State-owned enterprises and foreign enterprises all belong to the category of capital. Therefore, the concept of social capital in PPP in China is broader than that in private capital in public-private cooperation in foreign countries.

Moreover, judging from the current practice, the social capital of many PPP projects in China is state-owned enterprises, some are PPP funds, etc., and the real private capital (private capital) is less involved. This means that the leading party of PPP projects in China is still in state-owned enterprises. For water resources survey and design enterprises, as state-owned enterprises, they have natural and close ties with other state-owned enterprises, especially those in the water resources system. Based on this, under the background that state- owned enterprises actively participate in PPP projects, water resources survey and design enterprises should focus on strengthening cooperation with state-owned enterprises, especially those in the water resources system, actively sign strategic cooperation framework agreements with them, and participate in PPP projects.

At the same time, China is currently vigorously promoting the construction of "the Belt and Road". Against this background, many state- owned enterprises in China are participating in it. Water resources survey and design enterprises should also seize this opportunity to actively participate in overseas engineering projects, especially to strengthen cooperation with construction enterprises in state-owned enterprises and participate in foreign PPP + EPC projects.

2.3 Strengthen capital operation to dominate PPP project operation

Based on oneself is the center of all work of water resources survey and design enterprises, and

ISSN: 2455-8834

Volume: 05, Issue: 02 "February 2020"

is also the premise and foundation for the development of water resources survey and design enterprises. Under this background, for water resources survey and design enterprises, one of the fundamental problems they are facing in the process of participating in PPP projects is that their lack of financing capacity leads them not to dominate PPP projects, but to participate in PPP projects as partners of investors. This puts the company at a disadvantage in PPP projects and has limited voice.

Therefore, for water resources survey and design enterprises, they should actively carry out capital operation under the existing conditions, realize their own scale growth through asset integration, internal standard reorganization, merger and acquisition of other units, and start the listing procedure at an appropriate time. At present, A shares have a total of 9 engineering design enterprises, including 2 infrastructure design (Suzhou Jiaoke, Design Shares), 3 professional engineering design (Sanlian Hongpu, China Haicheng, China Mining Resources) and 4 architectural design (Zhongheng Design, Shanding Design, Huajian Group and Suzhou Design). For water resources survey and design enterprises, if the initial capital cannot meet the requirements for listing on the main board, they can start with the New OTC (Over the Counter) Market and the Growth Enterprise Market. Through listing operation, financing is carried out, and then capital is the leader to participate in relevant PPP business.

In addition, water resources survey and design enterprises should actively integrate assets and coordinate and communicate with the competent departments to strive for more assets to be injected into the company, so as to increase the credit line of enterprises and provide effective support for enterprises to participate in PPP projects in related industries.

2.4 Establish and improve the integrated service system and service capability for the whole life cycle of construction projects

PPP mode emphasizes the management of the whole life cycle of construction projects. For water resources projects and other projects, life cycle management not only means the design and construction of the project, but also includes the follow-up operation and maintenance management into the tasks of the project company of PPP projects. Moreover, from the changes in China's fixed asset investment structure, it can be seen that many projects in China have entered the stage of renovation and expansion or the stage of maintenance and use, which will lead to a sharpincrease in the business volume of renovation and expansion projects in the future. It is required that water resources survey and design enterprises must establish and perfect the concept of the whole life cycle of construction projects. Through the integration and extension of internal business, we will improve our own integrated service system and service capability for the whole life cycle of construction projects, and strive to build a team capable of carrying out

ISSN: 2455-8834

Volume: 05, Issue: 02 "February 2020"

the operation and maintenance of construction projects, thus realizing the vertical extension of our own business value chain.

At the same time, under the background of the Chinese government's promotion of new urbanization and green development, water resources survey and design enterprises should strive to expand their businesses in related fields, and actively explore and enhance the value of survey and design services from the perspective of rich and improved urban functions, changes in people's production and life styles in the process of urbanization and supply-side reforms. On the basis of survey, design, construction management, operation and maintenance in the water resources industry, we will integrate multi-disciplinary links, develop integrated services in the fields of new urbanization and green technology innovation system, make full use of the state's policy guidance of encouraging social capital to participate in infrastructure construction, and explore integrated services in the whole process and life cycle.

CONCLUSION

As an important branch of modern advanced engineering construction, water resources survey and design enterprises affect the development of China's water resources engineering construction market. In order to promote the continuous progress and development of China's construction industry and make water resources survey and design enterprises have better development prospects, the state vigorously promotes the cooperation between the government and social capital. This paper analyzed the inevitability of water resources survey and design enterprises participating in PPP project, pointed out the future development direction of relevant enterprises, and put forward relevant suggestions on business development, strategic cooperation, capital integration and integrated service of project life cycle in combination with PPP mode, so as to help some water resources survey and design units seize the opportunity to make sustained efforts.

This paper discussed in detail the path of water resources survey and design enterprises participating in PPP projects, but did not analyze a specific water resources survey enterprise, which needs further improvement and comparative study with cases with different characteristics.

ACKNOWLEDGEMENTS

This work was supported by the National Natural Science Foundation of China (# project No.71801130), Jiangsu Social Science Foundation Project (# project 18GLD013), Science and Technology project plan of Ministry of housing and urban rural development-Soft science research project (# project 2018-R4-003).

ISSN: 2455-8834

Volume: 05, Issue: 02 "February 2020"

REFERENCES

- [1] Ge, Jing. "Analysis of construction and operation mode of major water resources project PPP project. "Heilongjiang Water Resources Science and Technology 45.7(2017): 187-189. Print.
- [2] Li, Xiangyun, Lin Luo, and Yajie Wang. "Current status, problems and countermeasures of PPP mode implementation in water resources projects." Water resources Economy 37.5 (2019): 27-30. Print.
- [3] Zhang, Xuehao. "Construction and operation model of major water resources project PPP project." Smart City 5.10 (2019): 185-186. Print.
- [4] Zhang, Meng. "Brief analysis of the application of PPP mode in rural water resources infrastructure construction." Hebei Water Resources 11 (2019): 20. Print.
- [5] Zu, Meirong. "Application of PPP model in water resources infrastructure construction." Contemporary Economy 14(2017): 84-85. Print.
- [6] Yang, Chao, and Song Li. "Research on Risk Management of Engineering Project Based on PPP Mode—Taking A Municipal PPP Project as an Example." Journal of Transportation Finance and Accounting 4(2018): 39-45. Print.
- [7] WU, Qiang. "Analysis on the problems and suggestions of PPP mode of water resources projects in the implementation stage." Shanxi Water Resources 2(2019): 200-202. Print.
- [8] Chan, Albert P. C, et al. "Empirical Study of Risk Assessment and Allocation of Public-Private Partnership Projects in China." Journal of Management in Engineering 27.3(2011): 136-148. Print.
- [9] Zhou, Xingbo. "Comparative analysis of management modes of international water resources and hydropower projects." Hydropower and Pumped Storage 3.6(2017): 114-119. Print.
- [10] Pang, Jingpeng. "Summary of PPP pilot experience and situation research and judgment of major water resources projects." Water Resources Development Research 17.11(2017): 12-17. Print.
- [11] Wang, Pengcheng, Duojietai Cao. "Research on the path of water resources survey and design enterprises participating in PPP projects." Shanxi Construction 45.14(2019): 181-182. Print.
- [12] Huo, Zhenggang, and B. Yan. "Study on Influence Factor to Risk-Sharing for Water Conservancy and Hydropower PPP Project."2011. Print.
- [13] Ernest. Effah. Ameyaw, and Albert PC Chan. "Risk ranking and analysis in PPP water supply infrastructure projects." Facilities 33(2015): 7-8. Print.
- [14] Grimsey, Darrin, and M. K. Lewis. "Evaluating the risks of public private partnerships for infrastructure projects." International Journal of Project Management 20.2(2002):107-118. Print.

ISSN: 2455-8834

Volume: 05, Issue: 02 "February 2020"

[15] PPIAF, and W. Bank. "Approaches to Private Participation in Water Services." 2006. Print.