

Survey and Suggestions on the Current Situation of PPP Model in Henan, China

Hao Wang^{1,*}, Mohamad Bin Ayob¹

¹Faculty of Engineering and Technology Infrastructure, Infrastructure University Kuala Lumpur, De Centrum City, Kajang, Selangor Darul Ehsan, 43000, Malaysia

*Corresponding author: 695604526@qq.com

Abstract: *The public-private partnership model, also known as PPP, which means cooperation between government and social capital, is the model for project operation in public infrastructure and has become one of the most popular models in the Chinese construction industry today. The aim of this study is to understand the development of PPP projects in China's Henan province today, the challenges faced, and to try to give sound advice in light of the major studies on the operational process of the PPP model in Henan. This study conducted a literature review to understand the development of PPP projects in Henan, and through the study learned that PPP projects in Henan, China are currently in a transition phase. The questionnaire was used to understand the core steps and challenges in the actual operation of PPP projects. According to the questionnaire, respondents generally agreed that current infrastructure development in China's Henan province is very good, but PPP projects are only average. In the survey of the most prominent shortcomings of PPP projects in Henan, "widespread default", "irregular project operation" and "weak market supervision" ranked the top three. Overall, the development of PPP projects in Henan has not been good, but it has not been bad either, and there is still room for improvement. Finally, based on the results, literature was reviewed and experts were interviewed to give sound advice. By creating a special bill for PPP, while pooling talent to create a dedicated body for guidance and oversight to ensure that PPP projects deliver their full value, this could be the solution to the current challenges.*

Keywords: *Infrastructure construction; PP model; Project procurement; Project Cost control; Cost management*

1. Introduction

Since 1979, the reform and opening up, China's economy has been developing rapidly, especially in the infrastructure construction is very intuitive^[1]. However, as the development speed tends to stabilize, people also pay more attention to the quality of the project, so the expenditure on infrastructure construction is constantly growing, at this time, it is difficult for the government to satisfy the requirements of infrastructure construction^[2]. But the infrastructure construction has to be done, so we need to solve this problem. At this time, the introduction of the PPP model has dispersed the pressure of financial resources. At present, China is vigorously promoting the operation of the PPP model, which is actually a new way of investment and construction for public projects that the government expects to achieve through cooperation with social infrastructure complement in order to reduce its own pressure. In this model, the government and social infrastructure complement each other's strengths, and together they provide the financial basis for national infrastructure construction, and also provide the quality and quality assurance with financial guarantee^[3].

The PPP model (Public-Private Partnership) also called PPP project. That is, government and social capital cooperation, it is a project operation model in public infrastructure. Under this model, private enterprises and private funds are encouraged to cooperate with the government to participate in the construction of public infrastructure. Based on the starting point of providing products and services, a concession agreement is reached to form a "benefit-sharing, risk-sharing, full cooperation" partnership, and PPP has the advantage of enabling all parties to achieve more favorable results than expected by acting alone: less financial expenditure for the government and less investment risk for enterprises^[4].

The market competition is getting more and more intense, the internal economic cost management of enterprises can enhance the external competitiveness of enterprises. Therefore, in the process of internal economic cost management, enterprises should establish the awareness of economic cost

management of all employees, improve the economic cost management mechanism, and build a mature economic cost control system, so as to realize the effective supervision of the economic cost of enterprises and make enterprises obtain the maximum economic benefits under the existing conditions. Cost management is the guarantee of economic profit and plays an important role in the management of construction projects. Construction enterprises should fully understand the significance of cost control and management of construction projects, grasp and understand construction costs, clarify the factors that lead to cost consumption, and think about effective ways to solve them^[5]. Whole process cost management is a very common cost management tool and has been widely recognized for its development so far. However, the PPP project has received mixed reviews, so how to do a good job in the PPP project under the whole process cost management has become a very worthy research topic in China^[6].

2. Research Implementation

2.1. Development Status

In China, the State Council and relevant ministries and commissions issued a series of policy documents in 2015 to promote the government-social capital cooperation (PPP) model. The year 2015 was also called the "Year of PPP" by the market^[7]. The years from 2015 to 2018 belong to the rapid development stage. During these three years, China completed the basic framework of the PPP system and standardized the basic principles and requirements of PPP project promotion, which led to a spurt in the growth of PPP projects and the promotion of PPP projects in various places^[8]. Starting from 2018, the wind direction of the national policy on PPP began to change, and the country began to carry out comprehensive clean up and rectification of local government financing guarantees. The pace of cleaning up PPP projects has been accelerating, and projects that no longer continue to be implemented in the PPP mode will be transferred out of the list of demonstration projects and cleared out of the project pool of the national PPP comprehensive information platform^[9]. In general, it is still in a transition phase.

2.2. Implementation of the questionnaire

This study began on April 1, 2022 and ended on August 31, 2022. The survey questionnaire was predetermined, relevant survey data was collected, summarized and analyzed with relevant literature to develop the questionnaire. The survey was targeted at industry-related work teams involving different roles in PPP projects. Through electronic and paper formats, a total of 150 electronic and paper questionnaires were distributed. After eliminating the unqualified questionnaires, 126 valid questionnaires were finally recovered, with an effective recovery rate of 84%, and the questionnaire recovery rate and effective recovery rate met the requirements of social science research.

2.3. Analysis of questionnaire results

In order to better understand the current development of China's infrastructure construction, 65.87% of the respondents in the survey on "China's infrastructure development" said "very good", and the good infrastructure construction environment is conducive to the development of PPP projects. This also provides a strong premise for the development of PPP projects^[10]. (As shown in figure 1 and table 1)

Table 1: Results of the questionnaire on the current state of infrastructure development in China

Question 1	A	B	C	D	E
Options content	Very good	Good	Average	Bad	Very bad
Quantity	83	31	10	2	0
Percentage	65.87%	24.60%	7.94%	1.59%	0.00%

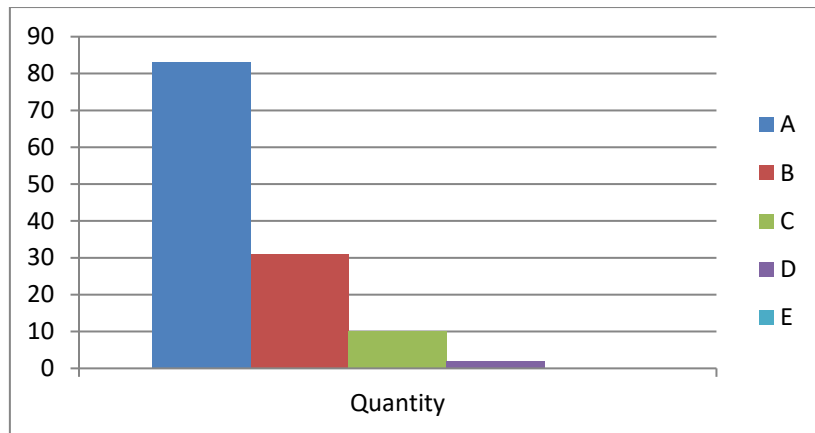


Figure 1: The bar chart for question 1

In the survey on "the current situation of public procurement in China," 34.13% and 30.95% of respondents chose "generally support" and "neither support nor oppose" by the results show that there are some problems in the form of government procurement, but the overall situation is still good. According to Chen Li of Tianjin University of Finance and Economics, most of the units pay more attention to government procurement and can carry out government procurement in strict accordance with laws and regulations and relevant policies, but there are also individual units that do not know enough about government procurement and are confused with the Bidding Law in the process of implementing the Government Procurement Law, and the construction of internal control system of the units lags behind and does not meet the needs of the new development. There is still room for improvement^[11]. (as shown in figure 2 and table 2)

Table 2: Results of the questionnaire on the current situation of public procurement in China

Question 2	A	B	C	D	E
Options content	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Quantity	36	47	22	21	0
Percentage	28.57%	37.30%	17.46%	16.67%	0.00%

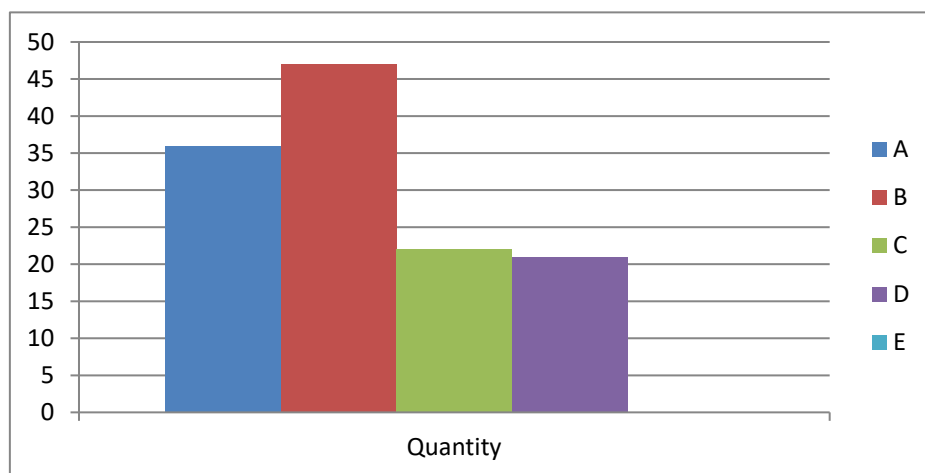


Figure 2: The bar chart for question 2

According to the evaluation of the current situation of PPP development based on personal subjective feelings, 40.48% of the respondents chose "average". From the report of the PPP Center of the Ministry of Finance in 2022, we can see that the growth rate of net investment in PPP landed and started projects reached the highest value in 2018, and from 2018 to 2022, the growth rate of net investment began to decline significantly, and the growth of company scale in PPP projects slowed down and the winning projects gradually decreased^[12]. Thus, although the government has started to make adjustments to the PPP model, the poor development in the early stage has affected the public's

view of the PPP model. (As shown in figure 3 and table 3)

Table 3: Results of the questionnaire on the current status of PPP in China.

Question 3	A	B	C	D	E
Options content	Very good	Good	Average	Bad	Very bad
Quantity	13	22	51	24	16
Percentage	10.32%	17.46%	40.48%	19.05%	12.70%

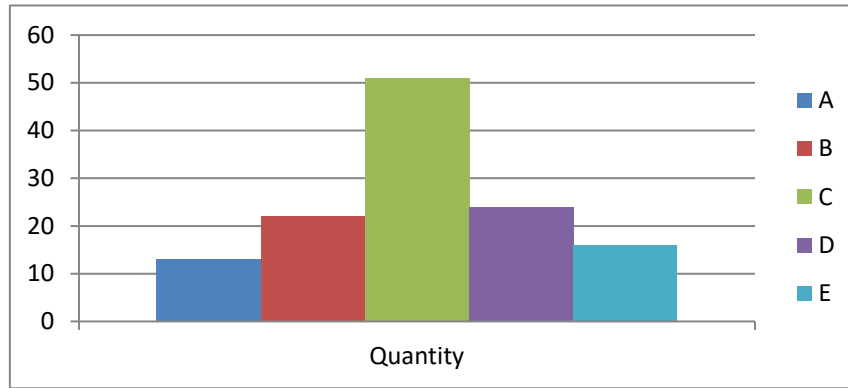


Figure 3: The bar chart for question 3

Table 4: Results of the questionnaire on the biggest challenges of PPP in China at present

Question 4	A	B	C	D	E	F
Options content	The PPP model leads to higher financing costs for private institutions	The concession system commonly used in the PPP model may lead to monopoly	The complex transaction structure of PPP projects may reduce efficiency	PPP's long-term contracts lack sufficient flexibility	The cost of public use of public goods/public services may ostensibly be higher for the public	Others
Quantity	19	35	28	24	20	0
Percentage	15.08%	27.78%	22.22%	19.05%	15.87%	0.00%

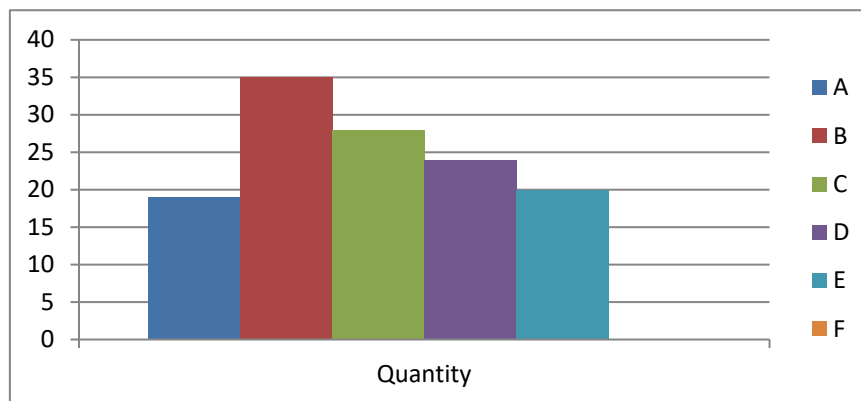


Figure 4: The bar chart for question 4

Regarding the shortcomings of PPP projects and the biggest challenges they face today, 27.78% of the respondents believe that "the concession system commonly used in the PPP model may lead to monopoly" and "it is common for local governments to sign contracts hastily and breach contracts at will." In the planning and issuance of PPP project products, local governments are the most important players in terms of financial and policy support, and the credit level of local governments obviously greatly affects the pricing of the products. Lei Yiming from Lanzhou University of Finance and Economics designed the experiment by controlling the variable method, and through the observation and analysis of the experimental data a local government with a developed economy, stable policies

and high creditworthiness can play a huge role in supporting the project. Therefore, the credit level of local governments will have a significant positive effect on the development of PPP projects^[13]. (as shown in figure 4 and table 4)

3. Conclusions

According to the research, from 2019 PPP projects, after experiencing rapid growth, the growth rate of net investment amount began to decline significantly, and PPP projects saw a slowdown in the growth of company size and a gradual decrease in the number of winning projects. The rough management and barbaric growth of PPP projects at the early stage of their activation exposed many problems, and although this made some practitioners lose confidence, it left valuable experience; coupled with the COVID-19 epidemic outbreak forced many projects to stop, at this time, the market will treat PPP projects more calmly and objectively, which is a good opportunity to adjust from the other side. We can better respond to the above challenges and make corresponding adjustments, such as establishing a special PPP bill to improve the legal constraints and increase the cost of violating the law; at the same time, the government should take the lead in establishing a special PPP service agency and supervision, and in the absence of professional talents, concentrate limited strength and widely absorb PPP talents from all walks of life to join PPP projects as a third party, which can not only fairly and impartially supervise supervision and management of every step of the PPP project process, but also improve the process efficiency, and assist in talent development.

References

- [1] National Bureau of Statistics of China. Report on 30 years of reform and opening up No. 2: The great historical turn from closed and semi-closed to all-round opening. Available from: http://www.stats.gov.cn/zjtj/zfjx/jnggkf30n/200810/t20081028_65688.html [Accessed 15th Dec. 2021].
- [2] Liu Xinrong. Research on local government financing in China's urban infrastructure construction and countermeasures. Master's Thesis, Minzu University of China, Beijing; 2016.
- [3] Meng Wei, Wu Yue. Has the PPP model eased the fiscal pressure on local governments - an empirical study based on data from Chinese prefecture-level cities. *Journal of Guizhou University of Finance and Economics*. 2019; 6(01):63-72.
- [4] Wu Hao. Exploring the whole process cost management of engineering projects under PPP mode. *Urban Architecture Space*. 2021; 28(01):249-250.
- [5] Zhang Qun. Cost management of construction economy under market economy. *Zhejiang Construction*. 2017; 34(03):56-57+63.
- [6] Yin Lin. Exploring the evaluation of risk factors of whole process engineering cost consulting for PPP projects. *Heilongjiang Science*. 2020; 11(18):149-151.
- [7] China Government Procurement Network. Zhou Wei, Jian Mengwei: 2016 Government Work Report The warm wind of PPP policy blowing out. Available from: http://www.ccg.gov.cn/ppp/zcjd/201603/t20160322_6602712.htm [Accessed 27th Dec. 2021].
- [8] Wang Runquan. The evolution of PPP model in China. *Agricultural Development and Finance*. 2018; 12 (12):42-45.
- [9] Liu Min, Wang Hongbin, Cheng Wen. Reflections on the Performance Evaluation of Public Debt Projects. *China Collective Economy*. 2020; 36(32):64-66.
- [10] China Public-Private Partnership Center. Important signals to boost confidence! The central government clearly supports infrastructure construction with PPP mode. Available from: <https://www.cpppc.org/zgcjb/1001930.jhtml> [Accessed 23rd Aug. 2022].
- [11] Chen Li. Analysis of the Current Situation of China's Government Procurement System and Countermeasures Research. Master's Thesis, Tianjin University of Finance and Economics, Tianjin; 2018.
- [12] Ma Haitao, Yang Jianmin, An Xiumei, etc. Blue Book of PPP in China - China's PPP Industry Development Report (2022). Beijing: social sciences academic press (CHINA); 2022.
- [13] Lei Yiming. Analysis of the impact of local government credit level on the pricing of PPP products. *Modern Business* 2021; 36(04), 98-100.