PPP mode’s applications motivation in the field of water conservancy project - based on the “money service” theory of Milton Friedman

Zurong Chen¹,²,³, Jingchun Feng¹,²,³, Yuting Wang¹,²,³, and Song Xue¹,²,³

¹Business School, Hohai University, Nanjing Jiangsu, 211100, China
²Institute of Project Management of Hohai University, Nanjing Jiangsu, 211100 China
³Jiangsu Provincial Collaborative Innovation Center of World Water Valley and Water ecological civilization, Nanjing Jiangsu, 211100, China
⁴Sinohydro bureau 16 company limited, Fuzhou, 350003 China

*Corresponding author’s email: wangyuting2017@163.com

Abstract. We study on PPP mode’s applications motivation in the field of water conservancy project, on the basis of analyzing Friedman’s "money service" theory, for the disadvantages of traditional investment mode in water conservancy project field. By analyzing the way of government and social capital spending money in PPP projects, we get conclusion that both of which are the way of "spending their own money to do their own thing", which fully reflects that the two sides are a win-win partnership in PPP mode. From the application motivation, PPP mode can not only compensate for the lack of local funds, improve the investment efficiency of the government, but also promote marketization and the supply-side structural reforms.

1 Introduction

With China's economic development has entered a "new normal" and the raising of "supply-side reform". The gap between the growing demand and the constrained supply capacity of public goods constantly expands which is represented by infrastructure. This undoubtedly makes the infrastructure investment and financing mode move to the reform which is once completely dominated by the government, thus PPP mode is expected to become an important direction for infrastructure investment and financing reform. According to the statistics, currently, the number of national launch of the demonstration, the recommended projects and projects contracted but not included in the central project library are more than 3100, the total amount has reached nearly 6 trillion. If the country continues to release PPP demonstration and recommended projects in 2016, the proportion of our future PPP projects relative to the total capital of the project is likely to exceed 15% of the national standards of the world that accustomed to use, "PPP" will become the mainstream of infrastructure project financing pattern design in our country.

While for water conservancy project projects which have large-scale investment, long construction period and a strong social welfare, PPP mode are widely introduced.

Many scholars have studied the application of the PPP mode in the field of water conservancy project. Tian Jiaxing has analyzed how to attract social capital better to participate in the construction of the PPP according to the characteristics of water conservancy projects[1]. Ma Yi-peng, Qiao Gen-ping, respectively, have analyzed the applicability of commonweal, quasi-commonweal and operating
water projects for different PPP modes, and think to speed up conservancy market reform and to create better conditions for social capital into the water conservancy industry[2]. Gan Lin has researched the PPP mode on how to provide the public services efficiently in water infrastructure projects, which can not only guarantee the public nature of public goods, but also protect the interests of the private sector, makes the overall benefits of the project to be best[3]. Zhong Yun, Xue Song have studied the process of water project VFM decision evaluation in PPP mode of our country, thinking that the government and social capital share the risks, taking advantage of their risk aversion extremely and realizing the overall risk minimization[4].

From the existing research, PPP mode has been widely recognized by the community in the field of water conservancy project applications, many scholars have carried out some valuable researches and proposed the corresponding suggestions and countermeasures. However, most scholars have carried on the research under the premise of encouraging social capital to enter the field of water conservancy projects, while not highlighting the drawbacks of the original government’s direct investment, the social benefit caused by using the PPP pattern might make the government surprised. From this perspective, studying the application motivation of PPP mode in the field of water conservancy project can motivate the enthusiasm of the social capital to enter the water conservancy project. Therefore, the author analyzes why PPP mode is an excellent application in the field of water conservancy project by Friedman "money service" theory and gives policy recommendations according to the final results of the analysis.

2 Friedman "money service" theory
"Money service" theory is put forward by Milton Friedman, who was the Nobel Prize winner of economics in 1976, in his book free choice[5]. He discussed the famous "four cost way" mode from the perspective of funds use of moral hazard, Which can effectively explain all kinds of efficient use and save of scarce resources. The specific contents are that “spending other people money working for others”, "spending their own money for oneself", "spending other people's money working for oneself", "spending their own money working for others".

| Spending | Efficiency | Benefit |
|----------|------------|---------|
| Others   | Low cost   | Low     |
|          | High       | High    |
|          | efficiency | II      |
| Oneself  | Low cost   | Low     |
|          | High       | High    |
|          | efficiency | III     |

Figure 1."Money service" Matrix

As can be seen from Figure 1, the cost and efficiency of “four cost way” mode are different and the results caused by this are not the same. In the first mode of money, people spend their own money for others, because of spending their own money, the main body will intend to save and the cost will be low and because they do the things for others, the main body’s enthusiasm is not high and not attentive and the efficiency will be low. In the second mode of money, people spend other people’s money for others, because of spending other people’ money, the main body will not intend to save and the cost will be high and because they do the things for others, the main body’s enthusiasm is not high and not attentive and the efficiency will be low. In the third mode of money, people spend their own money for themselves because of spending their own money, the main body will intend to save and the cost would be low and because they do the things for themselves, the main body’s enthusiasm is not high and not attentive and the efficiency will be low. In the fourth mode of money, people spend other people’s money for themselves, because of spending other people’s money, the main body will not intend to save and the cost will be high and because they do the things for themselves, the main body’s enthusiasm is not high and not attentive and the efficiency will be high. Therefore, the key is to choose the appropriate mode and to avoid the drawbacks of other modes.
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It can be seen through the above analysis that the third mode both has high efficiency and can save resources, which is an ideal way to spend in the reality; the second mode can neither bring high efficiency nor save resources, which isn’t an ideal way to spend in the reality; for the first and fourth mode, one can save cost but sacrifice efficiency and the other is high efficiency but sacrifice cost, both of which are not ideal way to spend.

Therefore, from Friedman "four cost way" theory, the best way to obtain high efficiency and save resources is the third that spend their own money for themselves.

3. Analysis through money theory of the PPP mode in the field of water conservancy project

PPP (Public Private Partnership) is the government cooperates with the social capital that makes the resources of the social capital involved in the provision of public goods or services. By signing a franchise agreement, which let social capital obtains gains at the concession period so that the mode of benefit sharing and risk sharing will be built. Here, the author divided money theory into money theory of government and money theory of social capital.

3.1 Analysis of efficiency of government spending

What is so called the money theory of government is that viewing the money spending in PPP project from the perspective of the government. “Who spent the money” determines the extent of the focus on cost of government in PPP projects, “for whom” determines the extent of the focus on efficiency of government in PPP projects. Because of the special nature of the government, the government will only spend their own money while won’t work directly. Although this situation has been improved in recent years and the main body of investment has developed into diversification, China has still not established incentives to encourage and guide social capital investment in water infrastructure. Single funding sources, less involved social capital, many obstacles to intervention and low degree of marketization which result in the investment of insufficient supply of water conservancy infrastructure and the lack of guarantee mechanism of stable investment. Water conservancy constructions of government investment have focused on flood control for many years, which reduced the economic losses caused by floods, but it does not make up for the huge losses due to water pollution and ecological water shortages and the unreasonable investment structure. Moreover, the responsibilities of investment and management are unknown. In water conservancy infrastructure, where the government invests directly, the government is both the investor and the operator, the government administration integrates with enterprise, coupled with a large expenditures of operation and maintenance for water project late, the weak of government operating professional ability, lacking of social capital, professional management experience, talent management and management techniques, which affect the operational efficiency of water conservancy infrastructure largely and weaken the basis of the status of water projects.

While applying the PPP mode in the field of water conservancy project, is a change of government and a change of institutional. Government attracts social capital into the water conservancy project through a variety of preferential policies, the establishment of the project company is jointly funded by the social capital and the government, projects are managed and constructed by the project company. After completion, government and social capital sign the franchise contract and social capital has the right to operate the project, the government gives social capital fifteen to twenty years or more operation period in order to make social capital beneficial. In the franchising period, the government gives up right and gives it to the social capital, which is actually the way that the government purchases services of social capital. From Friedman “four cost way” theory, the government spends their own money for their own work which not only improves the efficiency of the investment of government, but also makes up for the lack of financial resources of government.
3.2 Analysis of efficiency of social capital spending
What is so called the money theory of social capital is that viewing the money spending in PPP project from the perspective of the social capital. “Who spent the money” determines the extent of controlling costs of social capital in PPP projects, “for whom” determines the extent of guarantee efficiency of social capital in PPP projects. Generally, social capital invests in the form of funds but the government invests policies in the form of more favorable conditions and policies, social capital has a franchise of the project in the franchising period to get in return through this form. Social capital spend their own money founding project company and the project is constructed by project company, which gives social capital enormous power to save costs. Because money is themselves, the first ten years or even longer after the completion, the project will be operated and managed by social capital which gives the social capital great power to ensure the quality of the project. Therefore, from Friedman "four cost way theory, this is a typical way to spend their own money doing your own thing. which is the most effective way at present. Making social capital participate in public projects also stimulates the enthusiasm of the social capital and the participation in public construction.

4 The motivation of applying PPP mode in the field of water conservancy project
Through the analysis of the government and social capital spending way, according to Milton Friedman's “four cost way”, government and social capital belongs to the third kind of spending way of “spending their own money for their own work”, therefore, the application of the PPP mode in the field of water conservancy project is mutual help and mutual benefit, win-win situation. The author analyses the motivation of applying PPP mode from four aspects.

4.1 Improving the efficiency of government investment
From the above analysis of spending way, the construction organizations' original way of “spending others' money for the others' work” has transformed into social capital of using PPP mode of “spending their own money, for their own work”. In the traditional mode, the government adopted the mode of financial capital expenditures, the relationship between the three of investment, construction and use of units are fuzzy, the government as an investor and the final "owners", lacking the rights restriction mechanism. The use of PPP mode transformed large one-time capital expenditure into long-term micro payment mechanism, which effectively compensated for the lack of local fiscal funds, greatly reduced the government's financial risk, and through the signing of the franchise agreement, the duties and rights of the government and social capital will be divided clearly, forming an effective constraint mechanism. By changing the system, to attract social capital into the field of water conservancy project, with their advantages of professional technical skills, management experience used in, reducing the intervention of government in micro field, accelerating the cycle of project which government invests, is good for the government's perfection of infrastructure, effectively improve the efficiency of government investment.

4.2 Better promoting the marketization
The third Plenary Session of the 18th CPC Central Committee resolution clearly pointed out "make the market play a decisive role in the allocation of resources and better play the role of government”. Li Keqiang in 2016 government work report pointed out that the water conservancy project construction needs to be reformed deeply, and use market mechanisms more. Our country vigorously promotes the PPP mode, which is essentially an expressive form of the market. Through the tender and other means, it fully plays the role of the market mechanism to introduce social capital in water conservancy project projects. Under the background of market-oriented reform, the social capital into the field of public service can not only promote the development of infrastructure, but also can improve the quality of public services, change the way of public-private cooperation, and promote the economy dominated by the government to be transitioned to a more market-oriented development mode.

4.3 Promoting the structural reform of the supply side
It has being paid much attention by people to promote investment in infrastructure of supply-side structural reform, especially in the field of water conservancy project. At present, as the global financial market turmoil and the economic recovery is weak, it is of great practical significance to expand investment and improve infrastructure, which not only can provide power to promote economic growth in a short term, but also can lay a solid foundation to realize a long-term economic sustainable development through promoting supply-side structural reform. At present, as the global financial market turmoil and the economic recovery is weak, it is of great practical significance to expand investment and improve infrastructure, which not only can provide power to promote economic growth in a short term, but also can lay a solid foundation to realize a long-term economic sustainable development through promoting supply-side structural reform. The promotion of PPP mode is an important part of our country's supply-side structural reform. In addition, PPP mode is also with very obvious characteristics of innovation, which is not only with intuitive innovation expressed by investment and financing mode and management mode, but also with innovation corresponding to the national macro level governance mode. The dynamism and standardization process of PPP mode will force legalization and promote continuous optimization of supply-side reform.

5 conclusion
2016 is the beginning of the year of “the 13th Five-Year plan”. In order to realize the well-off society by 2020, PPP mode should be to the steady growth level, is to mobilize private capital, social capital together to increase the effective investment, excess capacity can be transformed into effective capacity.

The contradiction between the limited nature of public funds and the urgent need of the facilities in the field of water conservancy project has attracted wide attention. The introduction of PPP model can effectively ease the contradiction between the two. Through the analysis of the theory of spending money, knowing by the traditional mode of “spend other people's money for others” into PPP mode of “spend their own money for their own work”, is a major change in the current market mechanism which is not perfect. In order to adapt to this change, need the government to change the function, streamlining government and delegating authorities, deal with the relationship between government and market, let go to the market, realize the innovation of the governance mode on the national macro level.

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