Application of PPP Mode for Higher Education in China

Mei-Lin YIN¹, * and Kai-Yan ZHANG²

¹Education Technology Center, Experimental Teaching Center, Guangdong University of Foreign Studies, Guangzhou, China
²School of Economics and Trade, Guangdong University of Foreign Studies, Guangzhou, China

*Corresponding author

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Abstract. With the development of PPP (Public-Private Partnership) mode in China, the government and the private sectors have achieved mutual benefit in many projects. Under the background of educational reform, the combination of higher education and PPP mode in China presents huge potential. In order to explore the application of PPP mode in higher education, we use case analysis, literature analysis and summary induction to analyze the PPP mode of higher education at home and abroad. As a result, we get the necessity and feasibility of higher education in contemporary China. We also construct a basic operation mode of PPP in higher education, which provides new ideas and theoretical basis for the reform of higher education in China.

1. Introduction

Public-Private Partnership Mode (PPP mode) is an emerging model combining the efforts of the government and the private sectors to provide public goods and service. Nowadays, the PPP mode is used in many areas such as transportation, ecological construction. The application fields of PPP mode in China are relatively concentrated, especially in large-scale construction. However, the applications in public service such as culture and education are still far from enough. We still have a long way to go in these areas.

2. The Development of PPP in Higher Education in China

2.1 Theoretical Achievement

Sun Jie put forward that PPP was an ideal way to promote the healthy development of University reform [1]. Yue Jun also proposed introducing PPP mode into higher education fund management helped to make the fund more diversified [2]. In this way, we can make full use of social (private) investment. Wang Xinhuai put forward that higher education should focus on efficiency and give consideration to fairness based on the condition of a country. However, few scholars have carried out typical case studies on the model and summarized a more general operating model. There are relatively few studies on the quality standards and profits of PPP projects in the field of for-profit education. Therefore, there are few PPP projects in higher education which can provide practical reference and research.

2.2 Project Achievement

At present, there are few projects introducing PPP mode into higher education industry in China, but the mode of running a school similar to PPP mode has certain practice in China. At the beginning of New China, civilian-run colleges have appeared. Since the relax policy in the 1980s, the number of private schools have grown rapidly. Until 1990s, the private schools supported by government have appeared. These kinds of school were invested and managed by private sectors, but belong to government. They were mainly built to cultivate professional workers in specific areas such as transportation and water conservancy projects. This way just met the booming talent demand since the reform and opening up.
3. The Development of PPP Mode in Higher Education Abroad

In order to facilitate the study, we will study four representative countries: the United States, Japan, Australia and the United Kingdom. The higher education in America is market-oriented. The higher education in Japan is government-oriented. The higher education in Australia is in transition. The higher education in the United Kingdom is different from the three kinds above.

3.1 Policy Aspects

As economic entities providing services, American universities are often influenced by the market. So the resources of universities are more controlled by the "invisible hand" than by the intervention of the public sectors. The System of Promoting the Effective Use of Government Funds for Basic Research by Special Legal Persons and Other Departments was launched in Japan to encourage public universities to cooperate with the private sectors to create a good academic research environment. Amendments such as the Law on the Promotion of Technology Transfer in Universities promoted the development of scientific research by giving preferential on land to encourage private enterprises to establish research facilities in universities [3]. Australia issued a series of standard contract models such as guidelines for public-private partnerships according to its current situation. All of the models made PPP projects implemented more scientifically. While the British government solved the problem of dual functions of government through contract mechanism and internal control mechanism [4].

3.2 Theoretical Achievement

In Britain, the president of Nottingham University proposed that public universities should adopt private factors and private sectors started to invest a lot in higher education [5]. In the United State, many private enterprises participated in the construction of higher education. The cooperation mainly reflected in the public sector's subsidies to private schools. Henry Levin believed that this was a mutually beneficial and win-win agreement between two or more parties. The foreign PPP education model is not a fixed one but a diversified one.

4. The Reference and Enlightenment to the Development of PPP Mode in China

4.1 PPP Mode in Higher Education is an Important Way to Broaden the Sources of Educational Funds

At present, the main source of education in our country is financial expenditure, but seldom comes from private and social donations. The way of raising funds is so single that financial pressure of the state is excessive. In the United State, funds other than financial support have become an important source of higher education funds. The diversification and socialization of funds also speeds up the popularization of education in addition to reducing pressure on the government.

4.2 PPP Mode in Higher Education is the Vigorous Source of Promoting the Innovation of Educational System

Nowadays China's demand for innovative and high-quality talents is increasing, which can be solved through education reform. Compared with ordinary financing projects, PPP mode in higher education can not only solve the problem of educational investment gap, but also introduce advanced technology and efficient management mode. In this way, it will help to cultivate modern new talents and achieve win-win results in social and economic benefits.

4.3 PPP Mode in High Education is an Inevitable Trend to Conform to the Development of Socialist Market Economy

For one thing, applying PPP mode to educational projects enables the government to build a long-term virtuous cycle mechanism. For another, private capital can also be used in more advanced design and operation in the construction of universities, reducing investment risks. Consequently, the market can play a decisive role in economy. As a new mode of running a school, it can be applied to
the areas which lack teaching resources. All in all, it is a way that can be explored deeply whether in infrastructure construction or teacher construction.

5. Application Model Design of PPP Mode in Higher Education

Through analyzing the experience of PPP mode application, Feng Yahong, a Chinese scholar, believed that government, enterprise and system play a key role in the success of PPP mode application [6]. According to the key factors of successful PPP projects and the characteristics of higher education, we design the basic operation mode of higher education PPP project. Due to different forms of PPP projects in higher education, we can only draw a more general mode for reference. The framework is shown in Figure 1.

![Figure 1. Basic Operational Framework of PPP Mode in Higher Education.](image-url)

Firstly, the government encourages more private sectors to bid for PPP projects in higher education through corresponding incentive agencies. Then government selects the private sectors with strong comprehensive ability and high credit through credit risk institutions. After signing the concession contract with the private sector, a company of PPP project in higher education is built. The new Company of PPP project in higher education is the core of this model, which plays a key role in the successful operation. The company plays a direct role in the construction or management of universities. It is a company with certain abilities in the field of higher education. As a company that participates in the whole process, it must work out a feasible and concrete plan before operation and cooperate with many participants in the process of operation. For example, it can sign contracts with contractors, operators and consultants. Only in this way can Companies of PPP project make full use
of every advantage of participants and make up for shortcomings. In the end, the project can achieve maximum efficiency. Besides, Companies of PPP project should voluntarily accept supervision and timely feedback. When the project is finished, property rights of university will be fully transferred back to government departments or partly remained in the private sectors. It will be formulated according to the actual situations.

- **Private Sectors:**
  Before the operation of the project, the private sectors conduct the project bidding through the government's bidding. During this period, they need to accept the evaluation of risk institutions. After obtaining result including the relevant credit score and capital score, they are selected by the government. The selected private sectors can invest in Companies of PPP project in higher education through equity or other forms. As the main source of PPP project funds, the private sectors must maintain the smooth flow of funds so that PPP projects can operate normally in daily life. The private sectors come from a number of enterprises in society, which can increase the diversity of funds and reduce the risk. During the operation of the project, the private sectors can exchange certain rights or dividends by investing equity. They can withdraw selectively or invest again for the next term of investment.

- **Contractors, Operators and Consultants:**
  Operators, construction contractors and consultants are not the three necessary parts of PPP project in higher education. As other participants in the project, whether to participate in the project or not depends on the ability of Companies of PPP project in higher education. For instance, if a company of PPP project is not good at campus infrastructure, the task can be solved by contractors. At the same time, businesses participating in the PPP project can meet their own financial needs by signing loan contracts with financial institutions.

- **Financial Institutions:**
  A PPP project higher education needs relatively large sources of funds in the process of operation. Private or public sector investment is far from enough. It needs medium-term or long-term loan support from banks and financial institutions. Through loan agreements with financial institutions, the public and private sectors can obtain liquid money to solve some urgent problems. It also makes the sources of funds more diverse and reliable.

- **Risk Institution:**
  Because credit and comprehensive ability play a key role in a PPP project, it is essential to evaluate the risk of each participant. It can also play a supervisory role for participants. In this paper, we mainly discuss higher education projects. We suggest that the risk institution be formed by professional university researchers to make a reasonable assessment of the potential of participants especially in higher education.

- **Incentive Organization:**
  The incentive organization is mainly set up to organize the operation mode of PPP project more reasonably and scientifically. More professional PPP project researchers are required to formulate a more reasonable scheme. They should have a specific and in-depth grasp of the private sectors’ needs and have close communication with government departments. In this way, they can strive for a more balanced and mutually beneficial situation. The scheme lays a solid foundation for the joint construction of colleges between the private sectors and the government.

6. **The Feasibility of Developing PPP Mode in Higher Education**

6.1 **Theoretical Basis**

6.1.1 **The Publicity of Higher Education**
Higher compulsory education belongs to quasi-public goods, which makes its sources of funding more diverse. The funds not only come from the government, but also from the private sectors. At the same time, because of its competitiveness, universities have certain access threshold. While the non-exclusiveness of education appears as the fact that students’ behavior on campus will not affect other students to do the same thing. For example, a student will not disrupt others when he is reading
or borrowing books in the library. To sum up, higher education has the nature of quasi-public goods, which makes it more suitable to introduce public-private cooperation.

### 6.1.2 Pecking Order Theory

POT theory was proposed by American financier Miles and Chilean scholar Melev based on information asymmetry theory. They concluded that when a company financed a new project, it would follow the order of internal surplus, bond financing and equity financing [7]. In the market of asymmetric information, opening up different financing channels can resolve capital problems for higher education in our country. Even though universities are different from enterprises in the market, they can learn from the financial management methods in the market to provide more references for the financing of universities.

### 6.1.3 Principal-Agent Theory

Principal-agent theory was proposed by American economists Burley and Mills. In the application of PPP mode, the government is the principal and the private sectors are the agents. Both sides can achieve effective incentives through contracts, and achieve satisfactory results [8]. There are several principal-agent relationships in higher education in our country. In the field of education, we can see the principal-agent relationship of the Ministry of Education to universities and the principal-agent relationship of secondary units in universities. The principals can appoint reasonable incentive mechanism to motivate the agents. On the other hand, supervision policies should be formulated to supervise agents. It helps to prevent risks and maximize benefits.

### 6.2 Practical Foundation

#### 6.2.1 The Guidance of Governmental Policy

Two aspects are emphasized according to the detailed definition of the scope of PPP mode in the Guiding Opinions of the National Development and Reform Commission and the Guiding Opinions of the State Council. For one thing, the government is responsible to provide product. For another, the product should be suitable for market operation. This corresponds to the quasi-public nature of higher education. In addition to publishing how to operate PPP projects, the government should make lots of evaluation and guidance. It should promote the summary and outlook of PPP projects as well. The most important thing is that the government is obliged to strengthen supervision to reduce risks. The Ministry of Finance published On Standardizing Promoting Government and Society Opinions on the implementation of the work of Capital Partnership, which laid a foundation for better development of PPP projects.

#### 6.2.2 The Good Foundation of Private Capital

Investment is one of the "troikas" driving economic growth. These years the amount of private capital invested in the construction of public facilities is growing rapidly. The key to attract private capital is the profit model of the project. As a quasi-public product with positive externalities, higher education has lower risks and more possibilities. If investors can invest in high education, they will obtain long-term reasonable returns. It will promote a virtuous cycle of capital. The strong private capital in higher education can provide a more solid economic, technological and management foundation.

#### 6.2.3 The Steady Reform in Education

Since the reform and opening up, China's education has been constantly changing. From the initial pure public schools to the rise of private schools, we can conclude that the pace of higher education in China is steadily moving forward. In the 13th Five-Year Plan, it is proposed to promote the development of public-private cooperation in the field of education by guiding social capital to participate into education area. All in all, the reform provides a solid foundation for the introduction of PPP mode in higher education in China.

### 7. Conclusions

In this paper, we sum up the necessity of introducing PPP mode by exploring the application of PPP model in higher education at home and abroad. According to the successful factors of PPP mode in China, we put forward some suggestions on how to better develop PPP mode in higher education.
Then we construct a basic framework for the operation of PPP project in higher education. However, there are still many shortcomings, such as the lack of corresponding typical cases for research, the lack of operational risk prediction and avoidance. In today's educational reform, the application of PPP mode in higher education is a very feasible innovation, but also a future trend.

References


