**Tax Policy Studies to Support Scientific and Technological Innovation under the Background of PPP**

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**Abstract.** In recent years, Chinese government has regarded the technological innovation industry as the national economy steadily forward “new engine”. In addition to setting up the external environment and developing endowments, the central government devote all the effort to the developing “PPP” model. So the article expounds the statement, question and puts forward some advice to discuss.

**Introduction**

After the Third Plenary Session of eighteen, PPP model called mixed ownership has been a win-win choice of innovative. As is known to all, technology innovation become dynamic path to a full release of PPP.

**The Current Development Status of Technological Innovation and Industrial PPP Model**

Since the 1980s, the innovation has been regarded as a key to create national wealth. But the lack of efficiency in the use of funds and source of funds caused the slow development.

**The Living Environment of Industrial Technological Innovation**

Firstly, it is clear that the external tax environment is necessary to adjust according to “China Statistical Yearbook 2014” relevant data. Secondly, the application of scientific achievements level is not high. Thirdly our country needs more policy to encourage and support more and more people to join in innovation.

| Table 1. The Table of National Science and Technology Personnel Units: [million]. |
|---------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Scientific and technical personnel | 381.5  | 413.2  | 454.4  | 496.7  | -      | -      | -      | -      | -      |
| R & D personnel                  | 136.5  | 150.2  | 173.6  | 196.5  | 229.1  | 255.4  | 288.3  | 324.7  | 353.3  |
| Scientists, engineers            | 111.9  | 122.4  | 142.3  | 159.2  | -      | -      | -      | -      | -      |

Source: National Science and Technology, China Science and Technology Network Statistics
The Development of PPP Model

PPP model originated in Europe, which was to ease the financial pressure of the infrastructure, first was introduced in roads, railways and other public transport facilities construction. In China, the traditional public-private partnerships performs as BOT more likely, while modern model emphasizes sharing risk and interest. Therefore, in the development of PPP models, improving its fiscal support policies, protecting the land for the project and simplifying the review process are the inevitable choice. Land nationalization and improving the administrative efficiency of the top-level system design is to ensure the smooth implementation of the two back supplementary policies and the effective policies to support the financial and tax aspects has become the core interest demands to the process started of the Chinese PPP model.

Interest Bond between Scientific and Technological Innovation and Industrial PPP Model

The driving force in innovation of private capital is strong, while government masters the advantage of the innovation resources in the quantity and quality. At the same time, for scientific and technological innovation enterprises and innovative talents, in the process of research and development in science and technology, they will always face the real resistance which has large risk, long cycle and slow effect. What they need most is easy and convenient research environment, the external conditions of infrastructure served for technological innovation industries is particularly critical, it will play a good supporting and leading role for intellectual development of its human resources. Now PPP must combine private capital and government capital because public-private partnership model building provides public infrastructure full of scientific and technological content, its development and maturity can increase confidence on the contribution to technological innovation industry and technological personnel ; while scientific and technological innovation-driven need deeper tax support from government, in PPP mode, infrastructure investment pressure due to the reduction in revenue can also be effectively assessed by the private sector.

The Tax Policy to Encourage Technological Innovation and it’s Problem under the Background of PPP

Carding Currently Involved in a PPP Project Technological Innovation Tax Support Policies. Recently, the Ministry of Finance called on the local financial to report PPP pilot project. Through a very rigorous assessment screening, demonstration projects approved by Tianjin very clearly reflect the focus on technological innovation and support, such as new energy vehicles' charging facilities for public network project, SDIC northern power plants desalination projects, high technology content and have significant spillover utility. Looking at the present tax policy of technological innovation, the focus is mainly concentrated in the R & D investment to encourage scientific and technological achievements, to enhance scientific and technological achievements conversion rate, the introduction of new technology and transformation equipment to introduce high-tech talent and other sectors, in use of PPP platforms to encourage technology innovation between public-private project remains vacancy.

For science and technology innovation enterprise, if technology transfer income of the enterprise among a year does not exceed $5 million, it will be exempted from corporate income tax; part of more than $5 million will be taxed on one half. For high-tech enterprises
supported by the state, the direct rate of enterprise income tax is 15%, regardless of whether the company is in the high-tech industrial park. At the same time, the government performs shortening or accelerated depreciation of fixed assets depreciation tax incentives for scientific and technological innovation enterprises.

From January 1, 2009 China formally implemented the VAT transformation from “production” to “consume”. In order to encourage enterprises to increase investment in fixed assets, support enterprises to accelerate technological innovation, and promote the upgrading of its equipment. Since there is higher requirements for the high-tech enterprises to invest in equipment replacement rate, this transformation reform can reduce their burden of VAT.

At last, some tax policies about the benefit of innovative talents are issued and being implemented. For companies which develop software, wages and education funding in training costs can be deducted before income tax. Important scientific and technological achievements prize, special government allowances exempt from personal income tax. Owing to research institutions and universities scientific and technological achievements, winner acquires shares or stock options as a reward, the reward temporarily exempt from personal income tax, but he must pay the income tax when obtain dividends or income transfer.

The Problem of Current PPP Projects Encourage Technological Innovation Tax Policy. The preferential situation is limited and focused primarily or supporting innovation. At present, the income tax reduction to Chinese main corporate breaks for the industry rather than the form of ownership. High-tech enterprises enjoy a 15% preferential income tax rate of direct relief. This approach does not consider business continuity of technological innovation and the development of specific projects, leading companies pay too much attention to get high-tech enterprise qualification, while PPP projects select mixed ownership model of public-private partnership, so the attraction to private capital is not enough. tax policy in encouraging technological innovation is mainly to “direct tax concessions is main and indirect preferential tax base is supplemented”. The former has greater transparency, stronger incentives, but obviously focusing on encouraging innovation result and being hysteresis. While the latter emphasizes the innovation process, therefore the latter really guides the enterprises which are preparing for technological innovation or are innovating technology.

The preferences terms of Scientific and Technological Innovation System are quite one-sided, so it is difficult for SME to enjoy. In current tax system, the tax policy of income tax and turnover tax incentives for technological innovation aimed at software development, aerospace and electronic information industries. These industries are often already relatively mature, for which it is easier to create new product, so they are easier to be accepted by market; on the contrary, medicine, environmental protection and other creative industries is the opposite and its products have stronger commonweal and utility spillover, so they are more need for supportive tax policy. The PPP projects focused on the latter, providing strong public basic products, thus industry preferential tax system is exclusive.

It is difficult for to promote innovation for enterprises and then one-way adjustment is the only idea. At the beginning of operations of PPP project risk of loss is high, the PPP projects business and low-profit enterprises which are at loss are really in need of getting support from tax policy, but in the opposite they can't get compensation in the early days of independent operators to carry out technical R & D. In addition, a variety of the tax incentives policy to promote scientific and technological innovation for PPP projects are concentrated in the basic R & D, product trial and the results of the application. The current policy lack the “demand
side”, it means the direct incentives policy when consumer purchase and use the innovative product of PPP project is not perfect.

Absence of venture capital tax policy blocked the important “financial resource” of the PPP project’s technological innovation. Venture capital is an important driving force of helping innovative companies to share technology research and development risks and get funds for innovation. However, double taxation and reinvestment tax issues of corporate venture capital are still solved well, only seven of the amount of income tax credit cannot fully meet the needs of venture capital risk compensation.

Income tax incentives of the investment based on encouraging intellectual innovation lacks breadth and depth. Most technology innovative companies are focused on high-tech talent in human capital investment, but the personal income tax exemption threshold of its scientific and technological innovation prize is too high. At the same time average labor costs of innovative talents are much higher than the other types of enterprise employees. In addition, funding for education of the high-tech talent can't be deducted from the corporate income tax in full, there is no difference for the deduction of personal income tax between high-tech talent's child and others'. So these are not conducive to the cultivation of innovative talents and the introduction of overseas high-end.

The Tax Incentives Recommendation of Priority to the Development of PPP Projects Aimed at Promoting Technological Innovation Industry. For the problem of the concise, this paper proposals from the following aspects.

i. To improve taxation legal system of supporting scientific and technological and make basic level easier to implement policy and decide in practicing operation. developing both relatively stable and adjustable tax content according to different phase characteristics of PPP project's development. In the early days of orienting project, we should focus on support and encouragement; in the growth stage we should focus on promotions of benefits and compensation of risk.

ii. Policy resources is the same as economic resources on the scarcity, so we must optimize the policy resources, especially tax policy resource allocation structure between the region of PPP projects and the industry to enhance the efficiency. We should continue to promote the way which is mainly based on indirect benefits and industry-based preferential tax concessions in technological innovation aspects of PPP projects, while refine the tax incentives of ex ante and risk assessment, and take advantage of tax credits and tax incentives and other measures to ensure processes and technological innovation processes can be effectively synchronized.

iii. To complete tax policy intended to promote the venture capital and lead venture capital and other social capital into PPP projects and the field of science innovation. Specifically, it is to increase real tax incentives for the venture investors of technological innovative corporate and private capital of PPP project partners in the practical implementation and improve income tax deductible amount for these two types of taxpayer to offset the negative effects of investors and investee who are double taxed in way of direct tax credits.

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