

Innovative perspectives of public-private partnerships in Uzbekistan

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Abstract

Public-Private partnerships are an increasing aspect of the delivery of public policies and services across the world. Public-private partnership can be seen as an effective structural way of dealing with specific causes of market failure by establishing a sense of equity and shared responsibility in transactions between public and private entities through cooperative actions. The current study begins by analyzing partnership between government and business along with present innovative activity in Uzbekistan. The paper also examines the ways to develop existing schemes and new initiatives in public-private partnership. A stable regulatory structure will maximize the state's benefits by guaranteeing that key collaborations function effectively and leverage the tools available to them in line with wider policy goals, ranging from social policy to environmental protection. It will be important to apply the principles of good governance to the prospective implementation of PPPs - but it will also be crucial to ensure that certain values are fully adequate to the context in which such PPPs work.

Keywords: Public-private partnership, innovative system, government, economy, investment, policy, information and communications technology

1 Introduction

In order to consistently continue and bring to a new, modern level, the work Uzbekistan has begun to create national strategies. It includes developing the field of science and education, educating the young generation with moral values and with in-depth knowledge, high culture, and spirituality, creating a competitive economy. In January 2020, President Shavkat Mirziyoyev proposed declaring 2020 in the country the Year of the Development of Science, Education, and Digital Economy.

Public-private partnerships play an important role in the integration of science, education, production and finance. Ensuring the competitiveness of the economy is impossible without the consolidation of efforts of state authorities and the business community. Nowadays, many countries with a transformational economy forming a new institutional structure of the economy, shifts are observed in the system of economic relations between the state and the private sector. Ensuring the competitiveness of the national economy, as well as its sustainable development, is impossible without the consolidation of efforts of state authorities and the business community. In many countries, public-private partnerships are becoming the most common form of cooperation between government and entrepreneurship, because it often finds services and solutions more cost-effective than traditional management approaches.

The term public-private partnership (PPP) describes a relationship when public and private resources are combined to achieve a goal or set of goals that are mutually beneficial to both the private entrepreneur and the state. In addition, public-private partnerships, as international practice shows, play an important role in the integration of science, education, production and finance in the interests of increasing the competitiveness of industry and developing an innovative economy.

The latter aspect is the most important for Uzbekistan, where more and more attention is paid to the rational use of the scientific potential of the country, to increase the investment of public and private funds in innovation, research,

development and technological work. Moreover, the emphasis is on innovative approaches to organizing relations between the state and business, in particular on public-private partnerships (PPPs). Public-private partnerships are considered to be one of the most effective forms of increasing the efficiency of innovative processes worldwide.

2 Partnership between government and business

The interaction of the state and the private sector to solve socially significant problems has a long history. The most significant experience of public-private partnerships has been gained in the UK ("public-private partnership" in financing the development of infrastructure in 2000) and, mainly, as an alternative to privatization, is a way of attracting the experience, knowledge and resources of private business in the budget services sector. In foreign countries, the term "PPP" is often used for almost any form of cooperation between government and private business. Throughout the world, public-private partnerships are considered to be one of the most effective forms of increasing the efficiency of innovative processes.

PPP is also supported in the manufacturing sector in the European Union, where 25 projects have been approved for public-private initiatives that focus on four areas of innovation: 1) high-tech manufacturing enterprises using the latest ICT achievements in creating the next generation of robotics, automated lines, in planning and stimulating; 2) production with digital technologies that reduce the need for physical prototyping; 3) manufacturing enterprises where new methods or new "green" technologies are installed and used, aimed at human needs; 4) production of new composite materials. Other sectors that use PPP to carry out their activities in basic research and basic services are the agricultural sector and health care.

With this type of relationship, partners share risks, rewards, and responsibilities according to their share of the investment. As world practice shows, the structure of PPP involves three types of agreements. According to the first, it can be used to introduce private sector property into the

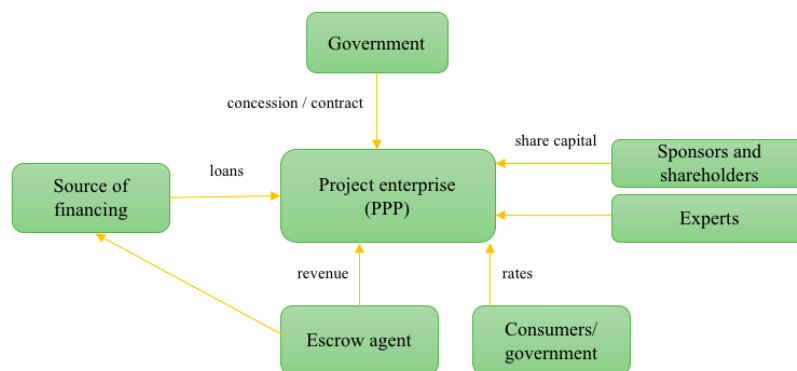
production process of state enterprises through state listing or sale of a certain part of the property (shares) of an enterprise. According to the second type, it can become a private financial initiative when the government transfers management of the enterprise on long-term terms to a private partner, which implies responsibility for the construction and maintenance of infrastructure for the provision of public services. And according to the third type of agreements, PPP can cover the sale (sale) of public services to private sector partners, which will more effectively use the commercial potential of state assets. That is, a private sector consortium performs the typical functions of special (special) companies - to develop, build, maintain, and manage assets during the contract period.

3 PPP in the development of innovation

In accordance with the World Bank classification, Uzbekistan is currently at the stage of transition from a

factor-oriented stage to a mixed investment-innovative model of economic growth. In order to intensify innovation in Uzbekistan, the resource potential of the private sector of the economy should also be used. The primary task of the state in this regard is to fully promote private investment in the innovation sphere. According to a study by Chen, Hu & Yang, countries with a higher share of private investment in research and development achieve relatively higher efficiency in this area. (If the private sector of China in 1996 accounted for only 2% of global R&D expenditures, then in 2017, according to GII-2019, it was already 27%.) At the same time, a substantial expansion and qualitative transformation of the system of supporting innovative processes for account of state resources in terms of both non-repayable (grants) and repayable (lending and investing) state financing of innovative projects. The resource potential of the private sector of the economy should be used to promote innovation in Uzbekistan.

Public-Private Partnership Project Structure



Source: *Global Innovation Index 2012*, p. 82

A key barrier for innovation promotion in the country is low demand for domestic innovative products and services. PPP, being, first of all, a method of involving extrabudgetary funds in the process of creating innovative products and promoting them on the market, can be an effective tool for creating mechanisms for stimulating innovative development, including still underdeveloped systems of venture lending for innovative developments. When implementing PPP projects, a business shares risks with the state, receiving money from the state only if there are agreements with one or more private investors. Only in countries with transformational economies are private entrepreneurs in no hurry to share these risks. This is due to some extent to the lack of the necessary trust in the state as a business partner. Therefore, when harmonizing the interests of private and state founders, asymmetric models are applied in the world practice, which imply providing private investors with more favorable commercial conditions than state investors. For example, this is how the Australian Investment Fund operates, which finances up to 2/3 of the capital of venture capital funds, but returns only 10% of its income, the remaining 90% is distributed among private investors.

Legal frameworks and policies aimed at making the use of PPPs more transparent and more integrated in the national context, as the practice of many transformational economies show, are faced with inadequate interaction between science,

the higher education system and production. In order to strengthen and increase the effectiveness of PPP forms, measures are required to expand research and development, reorienting technological and innovative policies towards strengthening and organizing cooperation between enterprises and research institutes at the pre-competitive stage of research with high potential for commercial use.

4 The state of innovation in Uzbekistan

Uzbekistan is in the group of countries in the world in which the state mainly creates innovations with minimal participation of the private sector and universities and where public-private partnerships in the scientific sphere are not well developed. Due to the insufficient level of advancement of the private business sector, there is a weak demand for domestic innovative products and services, which is a key factor holding back innovation progression in the country. Enterprises bear a significant part of the costs of innovation through the purchase of foreign equipment and technology, which is also due, in our opinion, to insufficient measures to stimulate the interconnection and cooperation of domestic science and business.

Effectiveness of science is regarded as the most critical marker in the innovation sphere, which is expressed in the

indicators of innovative activity of the public and private sectors in the national economy. Since the mid-2000s, R&D costs have increased significantly, but the republic is still behind the global average in terms of funding. The state funds most of the research, and the private sector is virtually not involved in the innovation process. Venture funds have not yet been widely developed, and small and medium-sized businesses are not willing to invest in innovation due to the high risk of innovation projects and the lack of financial resources. All this suggests the need for new approaches in an innovative policy that allows obtaining adequate results from the relatively highly qualified human capital and scientific potential of the republic. This is also indicated by the rating indicators of The Global Innovation Index 2012 (after 2013, Uzbekistan is not included in this index due to the failure to provide all the necessary data), wherein the subgroups "Human Capital / R&D" and "Absorption of Knowledge," the Uzbekistan took, respectively, 35th and 11th places among 141 countries.

In recent years, serious changes have emerged: innovation is becoming a priority in the policy of modernization. An appropriate legislative sphere has been formed and development institutions created - the Reconstruction and

Development Fund (FRRU), the Technology Transfer Agency (ATT), the Intellectual Property Agency (AIS), the Fund for Supporting Innovative Development and Innovation, which should finance and facilitate the development of all stages of "innovative elevator" (from the manufacturer of the development to the user); the research sector is being established in higher education institutions and innovation activity in state-owned corporations is being stimulated. However, the changes have not yet contributed to an increase in innovation, economic development, and the well-being of the population.

This is largely due to a number of institutional imbalances. There is a low demand for innovation from the business side. To some extent, this is due to the low degree of involvement of domestic enterprises in world markets with their focus on local markets with a low competitive environment, and, accordingly, low motivation for long-term investments in innovation and technology, since more than 60% of the structure of innovative costs carried out through the import of machinery and equipment. Hence, against the backdrop of significantly increased government spending on R&D, private sector spending is low.

TABLE 1 Indicators of innovative activity in the Republic of Uzbekistan

Years	2010	2011	2012	2013	2014	2015	2016	2017	2018
Government R&D expenditures (per employee, soums)	4520	5921	9715	13640	15074	17834	19644	21032	17242
Private R&D costs (per employee, soums)	2,5	4,9	4,4	5,3	7,3	10,1	13,5	13,8	16,6
Number of Patent Applications	134	165	160	176	565	189	243	296	289
The number of patents per 100 thousand employees	1,5	1,5	1,3	1,4	4,4	1,5	1,9	2,2	2,2

Source: Key indicators of scientific and technological potential. Statistics Bulletin. - State Committee of the Republic of Uzbekistan on statistics; WIPO Statistics database

A significant increase in government investment in R&D did not adequately affect the growth of publications and patents. In comparison with international standards, the costs of introducing innovations are low for such an indicator as the acquisition of international patents for the Madrid system for registering and managing trademarks around the world, Uzbekistan ranked 135th in 2015). Moreover, the R&D sphere remains underfunded (0.2% of the country's GDP). This affects the low competitiveness of NIS (National Innovation System), which is experiencing difficulties in the production and export of high-tech high-tech products to world markets.

5 PPP development in Uzbekistan

In Uzbekistan, public-private partnerships until recently were not sufficiently known and widespread. There is a fair amount of experience in attracting private investment in infrastructure (telecommunications and water supply) in the framework of EU TRACECA projects; pilot projects in the field of electricity and natural gas supplies to the population, the creation and development of roadside services on the Tashkent-Samarkand-Bukhara highway. The scheme for co-financing research cooperation between industrial companies, research institutes and universities began to be applied in 2010 (the Uzbekneftegaz corporation and the Institute of Energy and Automation of the Academy of Sciences of the Republic of Uzbekistan jointly participated in the creation of start-up production of innovative products for the oil and gas industry). But, basically, PPP is still considered as a tool financing whose subjects can attract

additional finance without investment in research and development. The government has spent a substantial amount of money on R&D, but it did not have an impact on the growth of publications and patents.

The state plays an important role in establishing partnerships between representatives of research institutes and the private sector. The state plays an essential role in establishing partnerships between representatives of research institutes and the private sector. There is a lack of competence of private companies in the market area and scientific organizations in the field of research. The government should act as an intermediary that facilitates the formation of partnerships through material incentives, supporting the manifest of these sector initiatives, and creating adequate legal conditions.

Researchers highlight a number of benefits that state-owned corporations in the field of innovation possess, as they can:

- carry out business activities to achieve the goals for which they were created, i.e. they do not have the goal of immediate profit;
- take loans at low interest rates

They can attract not only public but also private investments. Thus, the presence of a powerful financial base allows state corporations to support not only internal developments, but also to acquire and employ foreign technologies.

As part of ongoing modernization programs economies in the country are declining sectoral and regional polarization by indicators innovation activity. Hence, it is necessary to ensure coordination innovative strategies state

corporations budget research institutes, universities and government agencies. This requires regular monitoring and evaluation of innovative initiatives.

6 Strengthening the role of PPP in innovation

The country has the necessary conditions for improving existing schemes and new initiatives in PPP, which could increase the scope, depth and economic return from the national sphere of research and development. There are good conditions for using the potential of PPPs for innovation in the telecommunications sector: the use of telecommunication providers in solving critical social problems, such as distance education, improving medical services, quality education and a more open government.

A special incentive regime for public-private partnerships should reduce the adverse business sphere in combination with high commercial risks associated with innovations and become important tools to facilitate the conditions for interaction in innovation activities. For this, it is necessary to revise the taxation system of emerging start-up enterprises and the conditions for the transaction of intellectual property rights that take into account innovative costs (costs of developing related technologies, design, engineering and training) of exporters of innovative products and services.

The main forms of public-private partnership in the economy can be implemented in the form of contracts or concessions. As the practice of foreign countries, countries of the former Soviet Union shows, it would be advisable to create a Center for public-private partnership in the form of a joint-stock company under the Ministries of Innovation Development, which will coordinate issues arising from such a partnership between business and government.

To promote linkages in the chain of universities — production needs to be widely developed innovation infrastructure - business incubators, technology parks, engineering centers and centers for the collective use of scientific and technological equipment and scientific and technical information. The state, as shown by the practice of foreign countries should do this on a competitive basis through subsidy programs. Now the technologies of scientific institutions are not sold to small and private enterprises. This is because the organization-developer cannot set the price itself, which, of course, would be adequate.

With the existing system of technology cost formation involving large number of departments the price is too high. Therefore, it is necessary to provide independence to the organization-developer to determine the price of its

technology and innovation, and also have the right to its transfer to business representatives for use. Also important is the formation of a network to promote the promotion of the results of scientific and technological activities in production.

Promotion of communication and pre-competitive cooperation, based on partnership among leading manufacturers, suppliers, research institutes, universities and engineering companies within specific technology platforms play critical role. They include bio-industry, nanomedicine, computer technology, green energy, renewable energy, new polymers and composite materials.

7 Conclusion

Thus, measures of the government's innovation policy are already yielding positive results - an increase in absolute indicators of investments in R&D of the state, business and universities, and emerging venture capital. But the etimers do not yet have a special effect on the institutional structure, and the socio-economic consequences.

From this perspective, PPP can become a decisive condition for the development of innovations, creating a space for research and development outside government structures, which creates a favorable environment for the introduction of innovations. Partnership helps to attract talents and qualified personnel more widely in the innovation process, as well as to create a disciplined and responsible work culture in this area, stimulating creativity and innovative thinking. Finally, the partnership between the state and private business reduces the risks of ineffective solutions in the field of science and innovation.

The most favorable environment for the development of public-private partnerships can be considered the ICT sector. Most of the innovations introduced in various business sectors of the economy depend on ICT. Thus, on the one hand, the PPP model can be an ideal mechanism for financing ICT projects, contributing to the development of the necessary infrastructure with a certain degree of guarantee of return on investment. On the other hand, information and communication services are provided within financial reach for millions of consumers in rural and urban areas. In view of this, public sector service goals can easily be tied to the goals of ICT service providers. It is also important that the development of social services becomes largely dependent on the communications network, and the state and private sector institutions work together to provide the necessary ICT infrastructure in places accessible to business and individual citizens.

References

- [1] *The Global Innovation Index* 2012 p. 82[8]
- [2] *Key indicators of scientific and technological potential* Stat Bulletin - State Committee of the Republic of Uzbekistan for Statistics, 2019
- [3] UN ESCAP (United Nations Economic and Social Commission for

Asia and the Pacific) *2011 A Guidebook on Public-Private Partnership in Infrastructure, Economic and Social Commission for Asia and the Pacific* Bankok: UN