



Public-private Partnership: The Model of Interaction of Regional Socio-economic Systems in the Trans-regional Space

Evgeny A. Tikhomirov¹, Maxim A. Bykovskiy², Natalia Y. Veselova³, Irina V. Mkrumova⁴, Ivan V. Malofeev⁵, Sergey V. Ryazantsev^{6*}, Artem S. Luk'yanets⁷

¹Moscow State Forest University, Moscow, Russia, ²Moscow State Forest University, Moscow, Russia, ³Kuban State Technological University, Moscow, Russia, ⁴Institute of Additional Professional Education of the Social Sphere Workers, Moscow, Russia, ⁵Institute of Additional Professional Education of the Social Sphere Workers, Moscow, Russia, ⁶Institute of Social and Political Sciences of the Russian Academy of Sciences, Moscow, Russia, ⁷Institute of Social and Political Sciences of the Russian Academy of Sciences, Moscow, Russia. *Email: riazan@mail.ru

ABSTRACT

Authors explore the feasibility of the model of public-private partnership (PPP) in the framework of cooperation of regional socio-economic systems. The authors have disclosed basic capabilities and limitations of the use of models of PPP. In the scientific revolution unsettled economic categories "virtual economy," "network economy," "information economy," which opens promising areas of research. In turn, the category of "PPP" breaks new ground in understanding the nature of interaction between businesses and public authorities. The question arises, present or absent interconnection of informatization of society (and the economy) and the development of PPP? What is the model of PPP within the framework of interaction of regional socio-economic systems in a trans-regional space? In our study, we assume that the PPP within the framework of the interaction of regional socio-economic systems in a trans-regional space - an alliance of government and business to achieve the maximum development of information society, the formation of the virtual economy and the associated virtual interaction of regional socio-economic systems in a trans-regional space.

Keywords: Economic Cooperation, Socio-economic Systems, Information Economy

JEL Classifications: Z1, P25

1. INTRODUCTION

It is worth noting; in June 2007 an agreement was signed between the Russian Union of Industrialists and Entrepreneurs and the Ministry of Education and Science of the Russian Federation. This document assumes a strategic partnership Union of Industrialists and the Ministry of Education and Science of the Russian Federation in a number of areas, namely: (1) The formation of a national system of qualifications and national system of standards of professional education, (2) development of an independent evaluation of the quality of education, (3) the development of modern innovative programs of vocational Education (Duma.gov.ru, 2015).

New forms of organization in the field of knowledge transfer at the federal level are implemented as "Macro Institutes development"

such as "National Venture Company" (Newsruss.ru, 2015), as well as in the field of corporate universities in large companies like Russian Railways, "Lukoil," "Gazprom," "Severstal" et al., which carry out educational programs for training and retraining of workers ("Corporate Universities in Vocational Education," 2005).

2. RESEARCH METHODOLOGY

Theoretical and methodological basis of the research are fundamental assumptions of economic theory about the objective of conditioning the transformation of knowledge into a dominant factor in the sustainable development of economic systems, as well as the theory of state regulation, the works of local and foreign scientists in the field of PPP, as well as the economics of education.

The theoretical significance of the work is to develop understanding of the relationship of market and state elements in the field of PPP, which may serve as a theoretical basis for the development of the federal concept of PPP, for example in the field of educational services, as well as partnership programs of the university with the business community. The practical significance of the study lies in the possibility of introducing specific recommendations for the development of PPP in the system of higher education.

3. MAIN PART

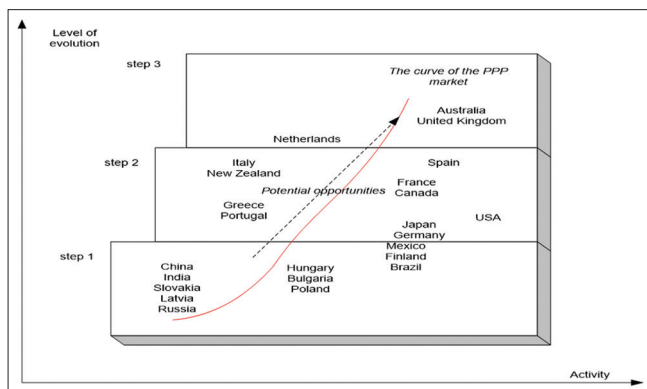
PPP provides a mechanism to attract private investment and institutional development of organizations, without giving the privatization and conversion facilities and agencies (PPP), which creates conditions for the mutual interest of the state and businesses to participate in the development of the activities of these industries and institutions in the “soft” form of transformation of state property. The level of development of PPP reflected in Figure 1.

In the literature and actual practice can meet the following terms used to characterize the PPP as a model for the interaction of regional socio-economic systems: The PPP; partnership between the state and the private sector; municipal-private partnership; PPP; public-private cooperation; PPP; PPP. They are all in their own way reflecting the various aspects of this phenomenon and are very useful for scientific understanding.

First of all, you want to define the concept of “PPP.” Many authors have noted that there is no precise definition of PPP, “the terminology used to describe PPP is not standardized” (Newsru, 2015).

International instruments essence of PPP is defined as “a form of cooperation between public authorities and the business foundation whose purpose is to provide financing, construction, renovation, management and maintenance of the infrastructure facility or the provision of services” (Green Paper on PPP and Community Law on Public Contracts and Concessions. Commission of the European Communities, 2004) or as “a partnership between the public and private sectors the aim of the project or service traditionally provided by the public sector” (Guidelines for Successful Public-private Partnerships, 2003). It is emphasized

Figure 1: The level of development of public-private partnerships in the world



that this particular format i.e., interaction between government and business, which includes the various forms of long-term contracts concluded between legal entities and state authorities. Their purpose is to finance, design, implementation and management services provided by the public sector (United Nations. Economic Commission for Europe, 2015).

Thus, the hallmarks of a public-private contract documents the relationship of PPP are: Long-term, compulsory representation of both private and public sector and the purpose - the provision of public services.

A number of foreign studies analyzed the peculiarities of the model of PPP, and identifies the following features of the PPP (Vertakova and Plotnikov, 2014; Bult-Spiering and Dewulf, 2006):

- Purpose of the agreement is to achieve a “more mutual benefits” and the implementation of the joint task subjects interaction of regional socio-economic systems;
- Participants at the conclusion of the agreement by their own interests;
- Revenues are divided in proportion to the investment of participants and risk-taking;
- Cooperation Agreement formalized.
- There are signs, the presence of which in the interaction between business and government indicates that it is a PPP. Here they are:
- The partnership must be presented, both public and private sectors;
- Relationship by PPP should be a partnership, that is equal in nature;
- By PPP should have common goals and clearly defined public interest;
- By PPP must combine their contributions to achieve common goals;
- Relationship by PPP should be recorded in official documents (agreements, contracts, etc.);
- The part of PPP should be distributed among themselves the costs and risks, as well as participate in the use of the results.

Partnership between the state and the private sector is a model of an alliance between the government and private business in order to implement national and international, large-scale, socially significant projects.

It implies that the partners have agreed to work closely together to improve the quality of services in the public interest, and the availability of negotiated agreements on the division of benefits and rewards, using qualified professionals, expertise and financial resources of a large number of sectors. Such partnerships are usually encouraged and supported through government policies.

PPP as an organization is determined by a balance between economic interests of participants of PPP. Violation of the balance of interests of participants of the PPP defines “range transformation” integrated interaction of subjects within the PPP.

The effectiveness of the organization PPP will be the greater, the more mature and clear will form benefits the participants of

strategic partnership “shell” and the less will be the cost to integrate integrated interaction taking into account the neutralization of opportunistic behavior of participants and the effectiveness of the solution, “agency” problems and issues delegated risks and responsibilities between the PPP.

The quality and effectiveness of PPP are closely related, the higher the cost of organizational interaction of the subjects, the lower the quality and balance of their interests.

Transformation of state mechanisms manifested through PPPs, for example in the field of education in the development of a “market” element in the provision of public goods in order to improve the quality of life of citizens. For the private sector the transformation manifested in the development of the “social” element in the provision of private benefits on the basis of corporate social responsibility and the ability to attract knowledge as intangible asset in installments when the return on investment is done at the expense of tax revenue, taking into account the stipulated percent previously. For the transformation of educational institutions appears to change the structure and content of the educational process in the framework of innovation-oriented organizations to provide educational services through additional funding to bring the scientific development to commercial level of patenting and securing copyrights and to obtain new competitive advantages in the market of educational services.

PPP is seen as an alternative to the direct and indirect methods of innovation system. The direct methods include direct government orders, tenders, the maintenance of proper contracting market.

At the same time it should be noted that the method of indirect financing is an essential element supporting the Institute of PPP, since the tax benefits received by private businesses involved in educational activities and research and development, provides a tax incentive the participation of the private sector in the financing of education.

The nature of this interaction, methods and concrete forms can vary significantly depending on the maturity and national characteristics and market relations. The state is never free from their socio-critical functions related to the national interests and business, in turn, it is always a source and motor development and increment of new knowledge.

Use of PPP as a model for interaction of regional socio-economic systems appropriate to the implementation of entrepreneurial projects with a long payback period, and a large volume of necessary investments, which are not profitable in the short term entrepreneur. It is worth to emphasize that the informatization of society, the development of virtual forms of interaction are the projects with the highest payback. Model PPP allows the delegation of entrepreneurial risk between the private and public sectors of the national innovation system, which contributes to the implementation of strategic importance for the national economy of innovative breakthroughs and strengthen the competitiveness of the country, characterized by a positive long-term socio-economic effects.

It should be noted that the feasibility of the model of PPP of the regional socio-economic systems (e.g. for education) is due to several factors:

- Formed ruptures in the relationship “education - research - mass innovation” imbalance of relationships that provide the harmonization of interests and balance of participants in the interaction;
- Dramatic changes in the state economy, the domination of private ownership, effective use of which requires the partnership of government, business and society;
- Department of administrative resources of power from direct involvement in private ownership and a weak presence in the power business, has significant liquid resources, the modern intellectual, organizational - economic potential;
- The provision of educational services as a strategic resource in the hands of the state, the need to improve their efficiency in education due to the advantages of cooperation with business, in order to cover costs and to increase profitability of the state budget;
- The benefits derived from the partnership of government, business and society in different forms of its manifestation.

The government sees the private sector additional resources, effective management and expects to benefit from this. Entering into a partnership with the business, it usually gets not only the possibility of attracting additional sources of financing reduces the burden on the budget, but a more flexible and efficient than the traditional bureaucracy, project management system, enhancing the effectiveness of public spending. In partnership management of private organizations to be more effective, since the processes of making and implementing management decisions more democratic. This brings mutual benefit to partners from working together, as the public sector suffers from the relative slowness and inflexibility.

The state also received dividends in the form of increased tax revenue to solve social problems and improve the overall level of production, thereby increasing the competitiveness of products and services in domestic and foreign markets.

Motivation to participate in a model of partnership of the public sector, and due to the stimulation of innovation activity of businesses that produce high-tech products; the creation of new high-tech firms and the support of small and medium innovative enterprises; the development of key technologies for federal needs; involvement in economic turnover and commercialization of research and development results obtained with the use of the state budget; capacity and infrastructure development.

Business walking on economic cooperation with the state relies on the support by the administrative, material, financial and natural resources of the state, seeing in the state or municipal authorities stable, reliable, responsible and mutually beneficial partner. Private business takes the main business risk in the market and, as a rule, has the largest share of the profits. He gets for himself a certain set of safeguards, preferences and hopes to remove many barriers to its development.

Motivation to participate in the partnership model of the private sector and due to the new opportunities for innovative business development. However, private companies may also join a PPP with the more specific motivations, in particular, to ensure access to the results of research and development of the public sector; access to public infrastructure, as well as information and high-tech equipment.

As a rule, the model of PPP of the regional socio-economic systems radically changes the economic ties and relations between government and business for the better, promoting effective cooperation and reduces the probability of occurrence of different types of conflicts.

By sharing resources and knowledge, both sides benefit from the synergies, risk sharing, which in other circumstances would have been impossible. Mechanisms for sharing capabilities of the state and business, and create conditions for the promotion of best practices in solving problems in the public interest.

The most important problem of PPP of regional socio-economic systems associated with the redistribution of property rights that arise in the process of escalating administrative and power relations of the state and business partnership, set forth the parties' agreement.

Different models of PPP reflect varying degrees of ownership and management of public-private agreements - all of the powers of the designated property by one of the partners to the assignment of property rights of some other parties for a certain period and under certain conditions.

PPPs in education serves as an educational alliance between government, business and the public sector in order to implement socially - oriented projects and the provision of public services. The State is responsible to society for the uninterrupted supply of public goods (public goods), which explains the tendency to preserve a number of sectors and industries owned by the state. Within the PPP, while maintaining the most important national facilities in state ownership of the proprietary rights are delegated to the private sector. Thus, in the traditional public sphere of the economy are brought a kind of private goods and services (private goods), which creates conditions for the effective functioning of these objects, the optimal management and rational use of resources.

The most important prerequisite for the emergence of PPPs in education is the natures of the relationship alyansovy PPP participants therefore require fundamentally different approaches that can predict the impact of their activities and the qualitative characteristics of educational services.

In contrast to the PPP model in the field of education there are the economic benefits of integration of participants of PPP (profit sharing, tax incentives, discounts, reduced interest rates, a new intellectual property, property gains, etc.), As non-economic benefits (tacit knowledge, competence of workers, flexibility organizational technologies, programs, cultural mobility

of employees to create a favorable image of the company, strengthening the intellectual base of education and human capital used in the field of education, ensuring compliance graduates the structure of demand in the labor market). Characteristic features of PPP as an educational alliance are:

Firstly, polystructural subjectivity (collective process of appropriation - the expansion of market power in the provision of educational services (government, business, employers, consumers, suppliers of educational services).

Secondly, polystructural object assignment (assignment of knowledge, skills, explicit, implicit, routines, etc. (the competence of workers, flexibility in educational technology programs, cultural mobility of employees).

- Performance attribution effects (reduction of social risks, the site of the future interactions of innovation, appropriation of adaptation possibilities of differentiation of educational services and their results for the further implementation).
- Assignment of monopoly rents as the experience of harmonization of formal and informal mechanisms of interaction between participants of the PPP alliance relations.

Third, poly-functionality form assignment (assignment of non-economic (exchange of knowledge, routines, customs, etc.), the assignment of the economic (income benefits).

Thus, the process of implementation of the model of PPP as educational alliance is not limited to the production of educational services, and formed an alliance under negotiation; distribution, exchange and consumption efficiency of educational services.

Unlike the standard full-scale privatization in the partnership between the state retains a significant degree of economic activity and control over economic processes, as in a series of "use-own-order," a gradual transfer of property rights from the use of a disposition of property to the private sector, in most cases the order is up the state, which defines the content, the operation of the integrated model of interaction between participants of PPP.

In foreign practice, the classification of the PPP model is carried out in accordance with the model of interaction between the state and business:

- PPP contractual nature (private finance initiative of the individual stages of the project, the model of concessions);
- PPP of an institutional nature (independent object is created under the project).

Classification of PPP models, depending on the state or private funding and the degree of integration of design stages is reflected in Figure 2.

It is necessary to take into account the peculiarities of the implementation of PPP in the field of vocational education, which are shown in the following mandatory conditions:

1. Compliance with the priorities of the social importance of vocational education - namely, the provision of quality

education and equal access for all citizens of Russia, the preservation and performance of the entire volume of the social challenges facing the state and municipal educational institutions (educational institutions), timely and adequate satisfaction the needs of society and the economy for highly skilled labor force;

2. Consideration of each PPP model as a complete project, which should be identified and recorded:
 - The aims and objectives of the PPP model;
 - The formation and management of partnership activities;
 - Resolution of conflicts of interest, the system of internal control and risk management of PPPs;
 - How to use the revenues and the order of distribution costs resulting from the implementation of PPPs;
 - Rights and obligations of the partnership;
 - Requirements for each side of the partnership;
 - Conditions and procedures for reporting and disclosure of information about the process of implementation of partnership activities;
 - The conditions and procedure for termination (disbandment) partnership.

It should be noted that the development of PPP models over time to evolve from the models based on the market contracting for institutional and integrated into the international practice the ratio between 3% - contract models, and 97% of Figure 3 (Novikov, 2009).

The dominance of institutional PPP models due to a number of factors associated with the possibility of splitting ownership of the infrastructure and enhancing the integration of the various stages of the project, which involves a variety of effects to save the product life cycle. The maximum they sector (2) which uses the PPP model based on the joint facility and transfer it to the private sector - to save the life cycle at the level of 30-40%.

In turn, the Russian practice is characterized by diametrically opposite situation and the dominance of models based on the market contracting of institutionally-integrated model.

Among the mechanisms of the model contract the Russian practice of interaction of the state and municipal educational institutions and private sector entities defined in the following areas:

- Joint projects with universities on research and experimental development, the creation of a research center;
- Support for university infrastructure and modernization projects - support for material and technical base of universities, holding of restoration and repair work;
- Construction of new property for educational institutions by entering into investment contracts with public authorities;
- Co-financing of educational institutions of the state and private sector entities;
- Grant and scholarship support for students and teachers of public educational institutions from the business;
- Preferential loans and education loans;
- Participation of representatives of the private sector in the development of training and methodological support in the educational process, head of the department;

Figure 2: Classification of models of public-private partnerships of regional socio-economic systems (Novikov, 2009)

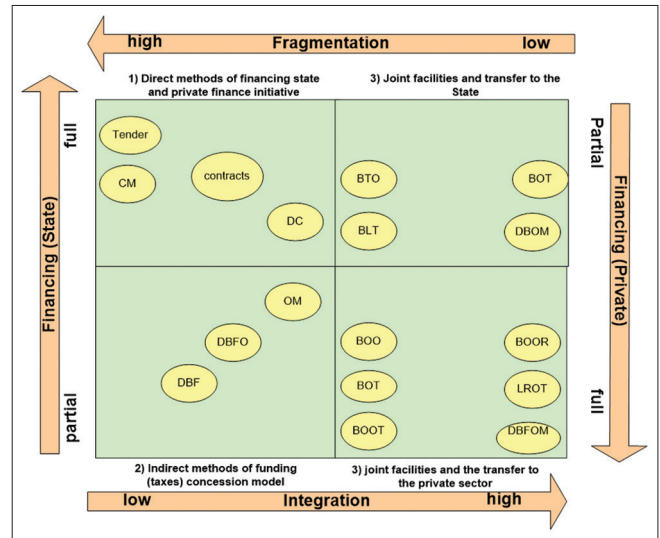
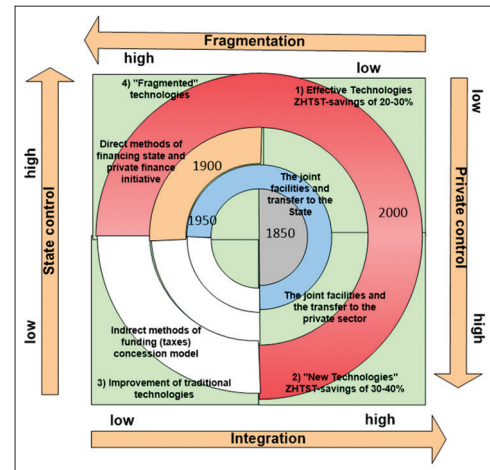


Figure 3: The evolution of models of public-private partnerships (Miller, 2000)



- Conferences and seminars;
- The organization of practice for students of educational institutions in the production of the partner company.

The practice of implementation of the institutional mechanisms of the model is limited to isolated examples in the following areas:

- The establishment of private sector entities to charitable funds (in the form of non-profit organizations);
- The creation of research centers in the form of legal entities involving public universities and private sector actors;
- The opening of business schools, founded by private actors - individuals and legal entities;
- The establishment of corporate universities in the form of non-commercial partnerships between the public university and private sector entities.

4. CONCLUSIONS

Among the models of PPP in the form of social interaction are several examples of the formation of school boards for

educational institutions, in which representatives of the private sector (in this case these tips can have considerable powers only in the private educational institutions). There are a few examples of the formation of school boards for educational institutions, in which representatives of the private sector (in this case these tips can have considerable powers only in the private educational institutions).

However, at the moment, the potential of PPPs in education is not used to the full, as evidenced by a minor amount of PPP projects as well as educational institutions that are actively cooperating with the private sector. In addition, almost no developed mechanisms aimed at improving the efficiency of asset management in education.

This situation is caused primarily by the presence of a number of problems and constraints to attract private-sector actors in the field of vocational training on the mutually beneficial partnership for both conditions, among which are the most common:

- Imperfection of the legislation, which leads to a lack of clearly defined property rights for the PPP, which reduces the efficiency of the delegation of property rights, responsibilities and risks between the parties of PPP in education;
- Institutional unwillingness of the owner (state and municipalities) to form on the basis of the balance of economic interests of the new infrastructure of educational institutions;
- Educational institutions poorly study the professional features of the business do not always seek to maintain direct contacts with employers, involve employers in the management of educational institutions to know their staffing requirements and training methods, organize practical training, and in the future employment of graduates, tailored to specific companies;
- Unwillingness of businesses to meet educational institutions, as high risks of investing in capital-intensive facilities of education in the absence of guarantees of the state, lack of tax incentives (educational activities companies are taxed on a par with commercial activities); business is the development of cost-effective systems of internal corporate education and training, the creation of businesses based departments in some universities, corporate universities;
- Absence of a system of professional standards, which should be the basis for the improvement of vocational education and the creation of educational standards to meet the requirements to the level of qualifications and competences by occupation imposed by employers and the labor market;
- Lack of a modern national system of qualifications to ensure transparency, comparability, comparability and recognition of qualifications, diplomas and certificates of education and training;
- Private companies are not allowed in one of the founders of professional educational institutions of primary, secondary and higher education, resource and educational centers, which does not understand the real value of specific education for employers to make effective business involvement in education management, to attract additional funds and increase the participation of representatives of business directly in the educational process and examination committees of educational institutions;
- Does not create a public, objective system of evaluation of public and professional educational institutions with the active participation of the business with a professional expert community.

REFERENCES

- Bult-Spiering, M., Dewulf, G. (2006), *Strategic Issues in Public-Private Partnerships*. Oxford, UK: Blackwell Publication.
- Corporate Universities in Vocational Education. (2005), *Open Education*. Norilsk (Russia): Corporate Universities in Vocational Education. p3.
- Duma.gov.ru. (2015), In the State Duma held a "Round Table" on public-private partnership in education. Available from: <http://www.duma.gov.ru/news/273/55774/>. [Last retrieved on 2015 Apr 17].
- Green Paper on Public-Private Partnerships and Community Law on Public Contracts and Concessions. Commission of the European Communities. Brussels; 2004. Retrieved from: http://www.ec.europa.eu/internal_market/publicprocurement/docs/ppp/ppp-report_en.pdf.
- Guidelines for Successful Public-Private Partnerships. (2003). Brussels. Retrieved from: http://www.ec.europa.eu/regional_policy/sources/docgener/guides/ppp_en.pdf.
- Miller, J. (2000), *Principles of Public and Private Infrastructure Delivery*. Boston, MA: Kluwer Academic Publishers.
- Newsruss.ru. (2015), Russian Venture Company. Available from: <http://www.newsru.ru/doc/index.php/%D0%A0%D0%92%D0%9A>. [Last accessed on 2015 Apr 07].
- Novikov, V. (2009), *Public-Private Partnerships as a Mechanism for the Transformation of Educational Services in the Russian Federation (Postgraduate)*. Rostov-on-Don (Russia): Southern Federal University.
- City in motion: People first. (2015). United Nations Economic Commission for Europe. Paris. p14
- Vertakova, J., Plotnikov, V. (2014), Public-private partnerships and the specifics of their implementation in vocational education. *Procedia Economics and Finance*, 16, 24-33.