
Use of Investment Project Implementation Mechanism under Production Sharing Agreement for the Development of Oil and Gas

Julia Luebeck¹, Dmitry Petrov²

Abstract:

Strengthening the investment attractiveness of economic systems of Russia's mineral raw material specialization by means of oil and gas project implementation under a production sharing agreement.

Purpose of the article is formation of conceptual approaches to the use of the mechanism for implementing investment projects under a product sharing agreement in the development of oil and gas bearing regions of Russia.

The techniques and methods of system analysis are used for understanding the procedural and institutional, economic and financial nature of the proposed mechanism for implementing investment projects under a PSA model in the development of oil and gas bearing territories of Russia.

Keywords: investment project, oil and gas bearing subjects of Russia, oil and gas deposits, production sharing agreement, public-private partnership.

JEL code: H11, L24, O31, O43, Q35, P48.

¹ St. Petersburg Mining University, St. Petersburg, email: juliyaluebeck@yandex.ru

² St. Petersburg Mining University.

1. Introduction

The sustainable social and economic development of oil and gas bearing regions of Russia in the long-term hinges on a high investor appeal level of oil and gas development projects due to activation of the mechanism of committed partnership between the government and private business. This mechanism, by means of special tools, allows for timely requisite measures, for ensuring sufficient concentration and sustainable use of financial resources for effective project development in the oil and gas sector. Global experience in the world-wide use of public-private partnerships demonstrates achievement of higher efficiency and performance indicators, which ensures overall development of a territorial economic system, with an improved social dimension, respectively.

One of the public-private partnership mechanisms with direct participation of the state and a private investor company in management and control is a production sharing agreement (PSA), which is most promising for oil and gas projects in Russia. A PSA, with its customized taxation scheme for each project, is able to attract intensive investment into the development of those fields whose productions economically unviable under other types of contracts. Basically, such deposits are small and medium-size, their individual reserves being minor, but when they are grouped together under the authority of one territorial agency, financing the development of these hydrocarbon accumulations becomes extremely attractive for private investors.

Formation of the organizational and economic PPP mechanism under a production sharing agreement for oil and gas project implementation in many countries worldwide (Peru, Ecuador, Egypt, Indonesia, China, Turkmenistan) (European Economic Commission, 1998) occurs in an appropriate institutional environment, as well as subject to a specifically developed regulatory framework providing for functioning partnering relationship between the government and an investor company. At the same time, Russia also has its own legislation on PSA implementation for both major and small and medium-size fields (Federal law "On Production Sharing Agreements" of 30.12.1995), its viability being emphasized in scientific papers of several scholars as Konoplyanik and Grushin (2001; 2002), Subbotin and Mikhailov (2003), Perchik and Avalishvili (2002) and Sosna (2003).

Formation of the organizational and economic mechanism for oil and gas investment project implementation as part of production sharing agreements in Russia is based on international practices but according to its own legislation approved considering peculiarities of the national institutional environment that forms the basis of economic systems.

Investment attractiveness of oil and gas bearing regions of Russia and mining enterprises forming the basis of industrial agglomerations is associated with oil and gas project implementation on the PPP principles under a production sharing agreement. Goal of the research is formation of conceptual approaches to the use of the investment project implementation mechanism under a production sharing agreement in the development of oil and gas bearing regions of Russia.

In accordance with the goal to be sought, the main objectives of the study are as follows:

- to analyze international experience of using a committed partnership between the state and business entities under a production sharing agreement reflecting the economic aspects of the liberal development concept, the stakeholder theory provisions, and in investment project implementation for development of oil and gas bearing areas;
- to reveal the procedural and institutional nature of the production sharing agreement mechanism: principles of organization and basic schemes for investment project implementation under a PSA;
- to provide a rationale for using the proposed mechanism in the Russian context (analysis of the procedural and institutional basis and possible scheme for oil and gas project implementation under a PSA for accumulations of small and medium-size oil and gas deposits).

The scientific novelty of the article consists in formation of a conceptual approach to strengthening the investment attractiveness of the economic systems of Russia's mineral raw material specialization through oil and gas project implementation on the basis of PPP principles under a production sharing agreement. The revealed procedural and institutional nature of the presented mechanism testifies to the advisability of implementing both major projects with expected large positive effects and accumulations of small and medium-size oil and gas deposits provided that local deposits are united into a single group under the jurisdiction of one regional agency. Cost-effective development of such deposits is possible with a customized taxation scheme for the proposed mechanism, with provisions of long-term planning sequence and a system approach of the government to the investment activities management. The use of the presented mechanism in the oil and gas bearing regions of Russia will allow one to achieve higher indicators of development efficiency, and, therefore, can ensure a stable vector of territorial economic system growth.

2. Literature review

The specific features of oil and gas bearing regions in Russia due to the availability of strategic raw materials, monopolization of markets, special reliability requirements for industrial and social infrastructure systems in rough natural climatic conditions, accumulated social problems predetermine a special measure of government support and business responsibility when implementing investment projects in these territories. One of the courses of sustainable development of such territories and increase in their investment attractiveness is introduction of the committed partnership mechanism in the form of PSAs in investment project implementation when developing the oil and gas fields.

Despite the influence of foreign experience and a variety of relationship building patterns on a liberal basis, Russia has its own potential for the formation and development of a mechanism for implementing investment projects based on PPP. Historically, a common understanding of PPP (mostly, of a concession mechanism as a form of PPP) was formed by the end of the 19th century as a progressive tool of economic activity that allowed for concentration of financial and material resources immense for the country that was agriculture-based back then, and for providing a powerful impetus for the entire economy to grow, including development of metallurgical, coal and oil industries (Sosna, 2003; Pociovalisteanu *et al.*, 2010; Thalassinos and Politis, 2012).

Considering PPP outcomes in Russia at the close of the 19th century and in the early 20th century in a number of material- and energy-intensive industries, the country's government opted for the PPP form with the aim to recover the market forces of the economy when pursuing the NEP. As a result, the efficiency of the implemented policy both in legislative and doctrinal terms and from the practical point of view was so high that a special plan was developed to achieve thereby a balanced development of various sectors of the economy, as well as to create a national economic development pattern. It was only the economic situation in the country in the 1990s that forced the government to dust PPPs off as an effective tool for stabilizing the economy and attracting investment in the real sector (following the example of concessions during the NEP period). Enactments³ drafted in the early 2000s were meant to propel evolution of the relationship between the state and private business to a whole new level. A significant contribution to the formation and development of the PPP mechanism in Russia at that stage, both in legislative and in practical terms, was made, among others, by Landau (1925), Varnavskiy (2002), Sosna (2003), Subbotin (2016), Konoplyanik (1989; 2000; 2002), Doronina and Semiluna (2003) and Yumashev (1993). The scholars' research findings laid the foundation for a revival of lost private entrepreneurial patterns and methods of economic management when using and operating public property and for creation of an adequate PPP regulatory legislation in Russia.

³ *Federal law "On Concession Agreements" of 21.07.2005; Decree of the Government of the Russian Federation of November 23, 2005 No. 694 'On the Investment Fund of the Russian Federation'; Order of the Ministry of Economic Development of the Russian Federation No. 372 of November 2, 2007 'On Expert Council for Public-Private Partnerships under the Ministry of Economic Development of Russia'*

The PPP mechanism development in the oil and gas sector has led to the emergence of industry-specific management methods, funding models and attitudes to property. An effective private-public partnership mechanism supporting the liberal principles of cooperation between the state and an investor company in the implementation of oil and gas projects has been made by a production sharing agreement.

A Production Sharing Agreement allows for oil and gas project development on mutually beneficial terms for the parties to a contract based on setting up a joint venture of the state and an investor, with a customized taxation scheme. A PSA in the oil and gas industry in global practice was first applied in Indonesia in 1971. Later, having adopted the experience of using such agreement on a liberal basis while maintaining the regulatory role of the state, countries from Africa, South America, the Middle East and other parts of the world concluded more than 50 similar agreements with investors, major oil fields were mainly developed therewith (European Economic Commission, 1998).

The Russian PSA model was enacted by Federal Law No. 225-FZ of December 30, 1995 'On Production Sharing Agreements'. Elaborating a PSA model as an alternative to licensing subsurface resources management, its developers (Konoplyanik and Grushin, 2001; 2002; Subbotin and Mikhailov, 2003) did not sideline the previous model; on the contrary, they sought to introduce an equilibrium competition between two investment regimes, each of them regulated by particular legislative instruments. Implementation of such an approach on project financing principles would clearly divide responsibilities: projects implemented under the PSA terms would be regulated by the law 'On PSAs', while the other projects would fall within the regulatory scope of the law 'On Subsurface Resources'. The presented provided additional incentives to improve the legislation and, as a result, contributed to the increased investment attractiveness of the mineral resources sector of Russia and of its certain oil and gas bearing regions in particular, it would predetermine the financial and credit sector activization, and, hence, financing projects in the real sector of economy.

Additional legislative elaborations by Russian scientists (Konoplyanik and Grushin, 2001; 2002; Konoplyanik *et al.*, 2002; Konoplyanik and Lebedev, 2000; Konoplyanik, 1989; 2000; 2002; Konoplyanik and Arbatov, 2003; Perchik and Avalishvili, 2002; Subbotin, 2016; Subbotin and Mikhailov, 2003; Lytaev and Tokarev, 2011; Doronina and Semiluna, 2003; Kokin, 2001a; 2001b; 2002a; 2002b), presently do not only make it possible to involve major projects (Sakhalin-1, Sakhalin-2 and the Kharyaginskoye field project) in development, but also contribute to the development of a large number of small and medium-size deposits without 'significant' complications of the legal procedure provided that they are combined into one project administered by one regional agency sometimes located in beneficiary regions. From the above standpoint, the Nenets Autonomous District of the Arkhangelsk Region, the Komi Republic, the Tomsk Region and others are the most promising.

In the context of a noticeable shortage of investment resources in the Russian economy, the evolvement of a production sharing agreement mechanism and its further development, according to the Russian scholars (Voznesenskaya, 1997; Klyukin, 1995; 1998; 2004; 2005; Makhlina, 1999; Salieva, 2001; 2002; Strugov and Gudkov, 1999; Strugov, 1999; Teplov, 1996; 1997; Teplov *et al.*, 2002; Sharifullina, 2000a; 2000b; Bondarenko *et al.*, 2017) aimed at creating a special institutional environment conducive to free functioning of joint ventures between the state and an investor is of great importance for effective implementation of oil and gas projects. Involving the presented mechanism in the oil and gas industry of Russia will make it possible to strengthen the investment attractiveness of small and medium-size deposits development, which in turn will provide additional revenues to treasuries at all levels and create more jobs in the regions.

3. Research methodology

The liberal development concept in the framework of oil and gas sector is inherently premised on basic provisions of economic theories: neo-liberalism (reducing state intervention in economic processes in oil and gas project implementation by intensifying the private sector development that can

ensure economic recovery and people's wellbeing); neo-Keynesian theory (substantiation of state regulation of the economic growth in the oil and gas sector in order to maintain a dynamical equilibrium in economy); new institutional economics (substantiation of the need to form an institutional environment of economic agents through optimization of transaction costs, effective exercise of property rights and contractual arrangements in the oil and gas sector).

On the basis of neo-liberalism, a rise of national economy and a growth of prosperity can be ensured only by reducing and subsequently minimizing government intervention in the economic processes of market self-regulation based on free prices that are formed depending on demand and supply (Von Mises, Von Hayek, 'The Road to Serfdom', 1974), according to the principle of classical economics by Adam Smith, (1777). Controlling economic regulators ('invisible hand', according to A. Smith), the state is called upon creating conditions for economic development and ensuring its social orientation (Erhard's theory of socially-oriented market economy 'Prosperity for all', 1956).

Based on the provisions of classical economics by A. Smith (1998), as well as Marxist economic theory (Marxist theory of reproduction), J.M. Keynes developed a scientific concept that explains occurrence of market fluctuations in economy and proposed a program for government regulation to overcome depression and to flatten economic cycles. The ability of market mechanism to recover long-term equilibrium in growth process was identified and the first-order conditions and prerequisites for this were theoretically comprehended by representatives of neo-Keynesian school (E. Domar, R. Harrod, A. Hansen) through studying the expediency of government regulation of economic growth and its implementation methods. The models developed by them described unstable trajectories of equilibrium economic growth and served to justify the need for government regulation thereof to maintain a dynamic equilibrium in the economy (Makhlina, 1999).

The dissatisfaction with the traditional theoretical economics that does not cover the issues of economic agents' institutional environment, as well as mutual conditioning of institutional changes and economic growth, which arose at the turn of the 20th and 21st centuries, contributed to the formation of a new research program and school called new institutionalism (Dolgoplov, 2012; North, 1993), basing on the following main statements:

- simulating restrictions imposed on exchange-regulating rules and contracts, with a mostly idealized property rights scheme in the neoclassical model used as a model (A. Alchian, H. Demsetz, 1973);
- recognition of incompleteness of information and non-zero exchange costs contributing to the study of positive transaction costs effects (Coase, 1937; Williamson, 1985);
- recognition of other possible dimensions (other than price and quantity) for measurable benefits, which gives rise to qualitative variations in production and provision of services for economic performance and economic organization (Jensen and Meckling, 1976).

The analysis of a newly formed stage of government regulation of economic processes in the oil and gas sector based on methodological approaches of Keynesian school and a synthesis of new institutional theories makes it possible to identify the following specifics of relationship between the state and business entities (investor companies) in the implementation of socially important projects in subsoil use:

- establishment of predominantly partnering relationship between government institutions and commercial entities in the oil and gas sector where intensive private investment would be able to ensure a stable vector of equilibrium growth in the economic system;
- a basis of partnering relationship formed by the state: development of general, domestic and foreign economic policies; ensuring enforceability of emerging relations; formation of a pool and legal status of parties to economic relationship; development of effective means of control and protection of the relationship;
- ensuring minimal intervention by state agencies in the economic processes of business entities when implementing oil and gas projects, concentrating only baseline minimum reasonably required for

normal existence and operation funds at the public level and, consequently, a seamless combination of administrative and legal leverages with financial and other ‘liberal’ those of the state impacting economic intercourse.

4. Results

The mechanism of committed partnership between the government and business entities under a production sharing agreement reflecting the economic aspects of the liberal development concept, the stakeholder theory provisions and based on the principles of public-private partnership is recognized as an effective economic mechanism for implementing investment projects in the development of oil and gas areas (Braginsky, 2006).

According to the analysis of 116 states with hydrocarbon deposits, 52 of them use PSAs (European Economic Commission, 1998). Basically, such agreements are executed for major projects in oil fields with production of more than 600 thousand barrels per day in various parts of the world (Table 1) (Konoplyanik, 1989; Lytaev and Tokarev, 2011; Zenukova and Shuvaeva, 2017).

Table 1. *International PSA practice*

Region name	Number of states applying PSA (Illustrative states)
Africa	22 (Angola, Côte d'Ivoire, Ghana, Tanzania, Nigeria, Libya)
Europe	3 (Russia, Norway)
Middle East	9 (Yemen, Oman, Egypt, Syria, Azerbaijan)
South America	10 (Peru, Ecuador)
Asia and Pacific basin countries	8 (China, Kazakhstan, Turkmenistan, India, Indonesia, Malaysia)

Source: Konoplyanik, 1989.

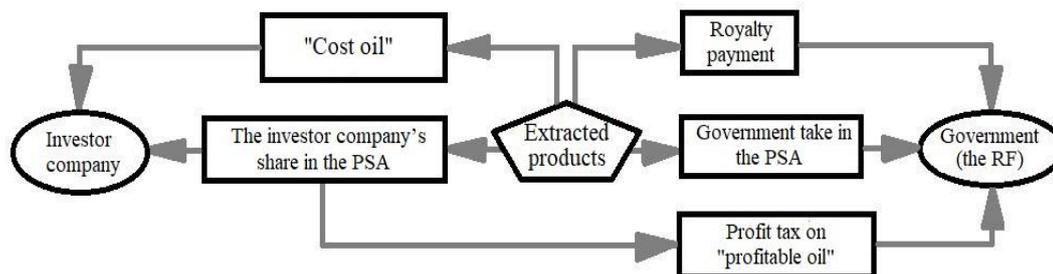
Feasibility of the Russian PSA model for the period of its adoption was backed by a list of hydrocarbon fields within the Russian Federation consisting of 26 facilities where a PSA is applicable (Federal law “On Production Sharing Agreements” of 30.12.1995; European Economic Commission, 1998).

The Russian model is a special type with four levels of production sharing (Figure 1) (Lytaev and Tokarev, 2011; Subbotin, 2016):

- the investor pays royalties to the state;
- the investor receives ‘cost oil’ to recover their costs;
- the remaining ‘profit oil’ is to be divided between the state and the investor in the specified proportions;
- the investor pays a profit tax on their share of profit oil.

Under the PSA mode, a limited list of tax elements is levied from the investor: royalty, profit tax, bonuses. Payment of a part of taxes is replaced by sharing profitable production between the state and the investor, while the fiscal burden increases with higher actual project efficiency, the taxation scheme customized therewith (Federal law “On Production Sharing Agreements” of 30.12.1995; European Economic Commission, 1998). Currently, there are three projects in the Russian Federation operating under a production sharing agreement (Sakhalin-1, Sakhalin-2 and Kharyaginskoye field), the analysis of which within the framework of the oil and gas recovery sectoral structure in the country by 2016 showed that the share of operators in PSA projects was 2.8% of all oil production enterprises, and 4.2% among gas producers (National Rating Agency, 2016; Konoplyanik and Arbatov, 2003; Subbotin and Mikhailov, 2003; Shirokova, 2016).

Figure 1. Russian production sharing model under a PSA.



Source: Lytaev and Tokarev, 2011; Subbotin, 2016.

The implementation of PSA projects in the Sakhalin region has allowed the region to take the leading socio-economic position among all the constituent entities of the Russian Federation approaching the level of financial self-sufficiency (Table 2): the ratio of government debt to budget revenues was 1.1% in 2016, which is the second best result across the country after the city of Sevastopol (0%) (RIA Rating, 2017).

Table 2. Indices of the Sakhalin Region in the socio-economic rating of the Russian Federation regions, 2016

Integral rating of economic and social status of the subjects of the Russian Federation, points	Per capita gross regional product (GRP), million rubles	Investment estimates per capita, thousand rubles	Personal money income as against the cost of a fixed consumer goods basket, times	Tax collections in the budgets of the subjects of the Russian Federation, billion rubles
1. Moscow (80.9); 2. Saint-Petersburg (74.5); 3. Khanty-Mansiysk Autonomous District -Yugra (69.9); ... 9. Sakhalin Region (60.3)	1. Nenets Autonomous District (4.99); 2. Yamalo-Nenets Autonomous District (3.37); 3. Khanty-Mansiysk Autonomous District-Yugra (1.94); 4. Sakhalin Region (1.70)	1. Yamalo-Nenets Autonomous District (2050.4); 2. Nenets Autonomous District (1939.4); 3. Sakhalin Region (508.9); 4. Khanty-Mansiysk Autonomous District - Yugra (491.4);	1. Nenets Autonomous District (3,67); 2. Yamalo-Nenets Autonomous District (3,49); 3. Moscow (2.9); 4. Sakhalin Region (2.88);	1. Moscow (1673.5); 2. Moscow Region (531.3); 3. Saint-Petersburg (447.4); ... 7. Sakhalin Region (223.4)

Source: RIA Rating, 2017.

The data in Table 2 show high rates of development of the Sakhalin Region in the social and public sector and economic domain, and the high overall welfare of the population of this the Russian Federation subject. The region's sustainable position is largely ensured by the implementation of oil and gas projects in the form of a production sharing agreement as a mechanism for public-private partnerships (Sakhalin-1 and Sakhalin-2). At the same time, foreign companies invest large funds and technologies in the development of deposits to their benefit, while the Russian Federation receiving high revenues participates in direct regulation and management of these projects.

In major regions of Russia where oil and gas production are the main source of revenues to budgets of various levels, there is a problem of attracting an investor to development of deposits whose commercial stockpiles at a fixed tax rate do not ensure proper return on investment in a project. Examples of such deposits are small and medium oil and gas accumulations. An analysis of the

number of oil and gas fields with small reserves carried as an asset in the regions of the Russian Federation is presented in Table 3.

Table 3. *Number of small and medium-size deposits in the books of Russian regions*

Region name	Number of small and medium-size deposits in the books
Yamalo-Nenets Autonomous Distirct	189
Sakhalin Region	68
Tomsk Region	103
Komi Republic	124
Republic of Tatarstan	78
Republic of Bashkortostan	193

Source: *Oil producers of the Russian Federation - Sectoral resource of oil and gas industry.*

The Nenets Autonomous District, the Sakhalin and Tomsk Regions, the Komi Republic, Tatarstan and Bashkortostan are most promising in this respect. Through the introduction of PSA projects within their boundaries, these regions will achieve a significant increase in the tax base due to tax optimization depending on the specifics of a field and guarantee for legal stability for the entire lifetime of a project.

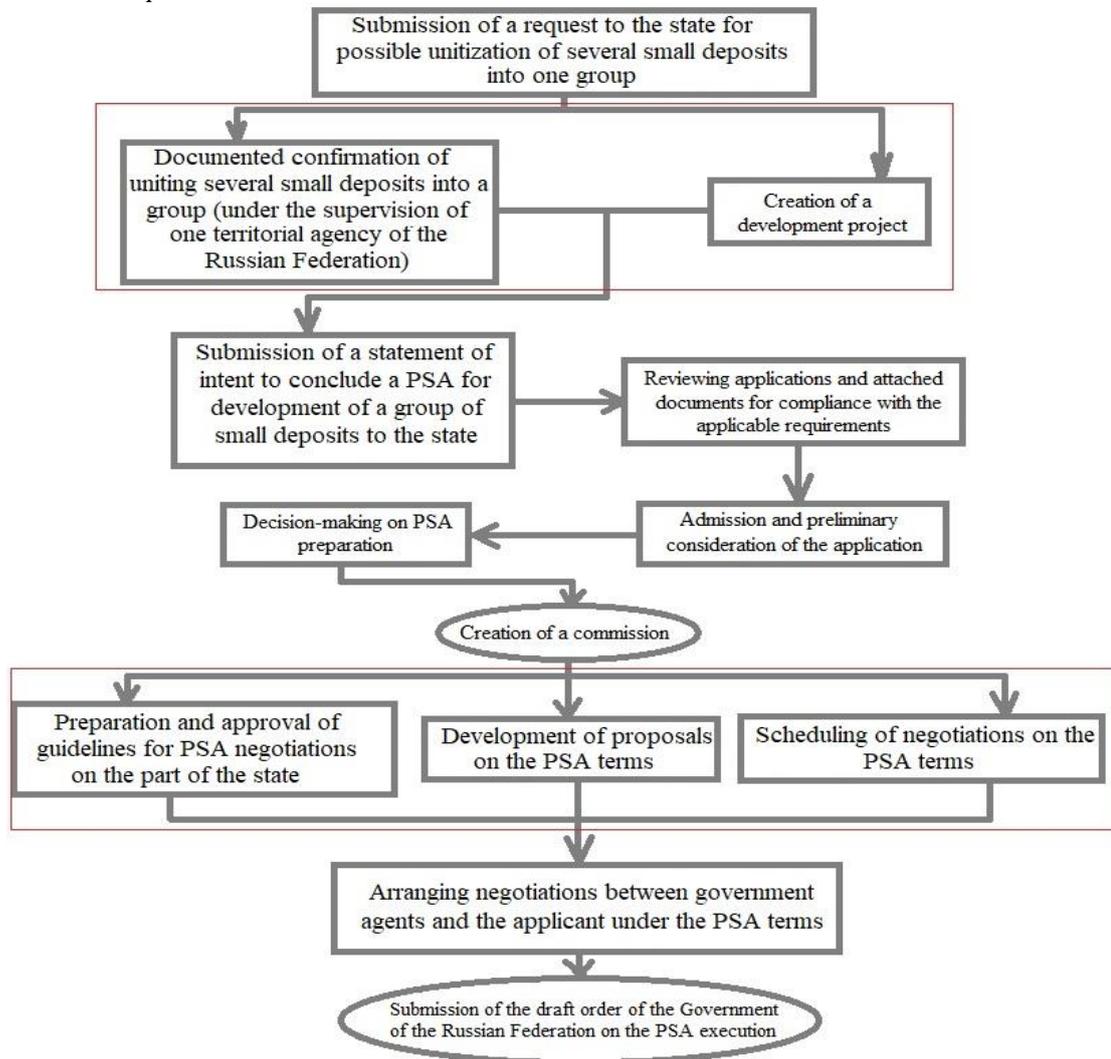
For an investor's interest in developing small and medium-size deposits, the state should offer subsoil development based on liberal concepts within the framework of partnership mechanism. A production sharing agreement as a case of public-private partnership is able to build up a fiscal regime so that a shortage of commercial reserves is compensated by tax incentives for an operating company's activity. Such a scheme is possible for project implementation by small private companies in Russia that could apply their oil and gas production technologies in practice and earn profits on their scale.

To attract intensive foreign investments into the development of oil and gas bearing provinces of Russia under a production sharing agreement, it is possible to combine small and medium-size fields into groups and enter into a common development agreement between them. Thus, the ultimate recoverable reserves and, accordingly, possible profit of an investor increase significantly. Also, the regions of the Russian Federation raise additional revenues to different level budgets.

A sequence of interactions between government agencies and investing companies when concluding a PSA is presented in Figure 2. The peculiarity of contract execution an accumulation of small and medium-size deposits is initial unitization of deposits into a group with documentary evidence of this fact. After a prior consent to unitization into a group is obtained, a production sharing agreement is made according to the normal procedure.

According to the block chart presented in Figure 2, preparation of proposals and recommendations for standard project solutions aimed at developing a group of small fields under the aegis of a production sharing agreement should include selection of a cluster of potentially productive sites (fields) with prerequisites for cost-effective hydrocarbon extraction through the use of advanced technology in combination with a flexible tax regime under a PSA; a quantitative assessment of commercial effectiveness of the proposed solutions in combination with the expected economic effects from the use of the PSA regime; an assessment of the macroeconomic consequences of applying the proposed solutions, including their impact on changes in the gross regional product (GRP), on inter-branch and multiplicative effects for the Russian Federation subjects.

Figure 2. Block chart of the procedure for preparation and conclusion of a PSA for a group of small and medium-size deposits.



5. Discussion

In recent years, in many countries across the world with market-based and, with the abandonment of centrally controlled management methods, with transitional economies, a new institutional structure of economy has been emerging, significant changes have taken place in the system of economic relations between the state and the private sector within the framework of liberal conservative doctrines. Development and implementation of new mechanisms into the current institutions takes place either in the context of a declared new economic policy of state regulation (Great Britain, New Zealand, Argentina and other countries of Latin America) or as part of a supplement to the existing system of public administration (developed countries of Europe and America: the USA, Canada, Japan, EU countries, etc.).

In accordance with the neo-liberal development concepts, in many countries of the world, the process of reforming the relationship that develops between the state or a municipal formation and the real sector of economy in implementation of federal and regional projects is based on an appropriate legal framework that ensures transparency of investment mechanisms. Currently, two main schemes for regulating relationship between the state and private business are implemented internationally in terms of PPP legislation: within the framework of specially developed norms of public law that extend to state and municipal property objects (France, Italy, Spain, Germany, Austria, Switzerland and other

countries that are part of the continental legal system) or within the framework of common law (the USA, England, Northern Ireland, Canada, Australia and other countries of the Anglo-Saxon and Anglo-American legal system type) (Sosna, 2003).

Analysis of the international institutional and legal framework of PPP mechanism formation allows for the conclusion that PPP schemes in most foreign countries are recognized as an effective economic mechanism for implementing socially important federal and regional projects aimed at effective implementation of investment projects. In terms of the scope of ownership rights transferred to the private sector, investment commitments of the parties, distribution of risks between the parties to contractual relationship, responsibility for different types of work (construction, management, operation), there are different schemes for implementing investment projects under a PSA.

The Russian economy and society are institutionally poorly prepared for using such mechanisms. There is no conception and strategy for transition to such an economic management mechanism, the tools for government regulation of corporate activities relying on the PPP principles are unclear, there is a lack of comprehensive, scientifically grounded studies of this problem in general and sectors backed by detailed calculations. The specifics of current and largely preliminary stage of property reform based on PPP in Russia are that a legislative base is being created and an actual mechanism for operation of such facilities is being worked out at the same time.

Laying a legislative framework of private law relations in the Russian Federation is under the strong influence of the European and American PPP mechanism. In modern Russian law, there are no concepts of public law and private law property of the state and municipal entities characteristic of most developed Western countries. Therefore, the PSA model established by the Russian legislation is an entrepreneurial agreement combining private law and public law elements. The relationship between a contract and business activities, its non-gratuitous nature, complex legal structure, specific procedure for contract execution and consideration of disputes, as well as public law regulation of relations in order to serve the interests of the state emphasizes the presence of public law elements of an agreement and its meeting the criteria of a business agreement (Mulyavin, 2007).

The presented principles are expanded because of the development of a specific organizational pattern carried out on the basis of a formed national legal model that allows for development and implementation of investment projects for design, construction and operation of oil and gas facilities. In particular, in order to develop oil and gas bearing territories in Russia, it is most promising to use the PSA model for major projects that are delivered in demanding environments (for which the costs for discussing individual first-order conditions and conclusion of a PSA are justified by the scale of potential positive effects) and small fields managed by one regional agency (if possible to unite them into one major project). The use of such a mechanism in oil and gas bearing regions of Russia (the Yamalo-Nenets Autonomous District, the Sakhalin Region, the Komi Republic, the Tomsk Region) will make it possible to increase the investment attractiveness of economic systems by developing small and medium-size deposits within the PSA framework.

Apart from that, PSA development and implementation should occur in the format of Russia's oil and gas sector development strategy aimed at accomplishing priority objectives within each of the strategic areas and envisaging development of cooperation between government institutions at all levels, the business community and public organizations. The result from PSA implementation in the oil and gas sector is assumed to be multi-levels.

At the macro level:

- increased contribution of the oil and gas industry to GDP growth due to an outrunning growth in production and sales of the industry products relative to the dynamics of the country's economic growth;
- development of new industrial regions (the Yamalo-Nenets Autonomous District, the Sakhalin Region, the Komi Republic, the Tomsk Region, etc.);

- assistance in solving development problems of the main user industries of economy with sizeable public capital: defense industry complex, metallurgy, nuclear engineering, aircraft industry, shipbuilding, motor industry, railway transport, transport engineering, etc.;
- development and construction of necessary infrastructure facilities based on integrated models combining PSA models and concession agreements (power transmission lines, ports, railways, pipelines).

At the micro level:

- further development in the oil and gas sector of efficient market-oriented business structures that have potential for self-development;
- enhanced innovative activity and renewability level of enterprise funds in the industry and related sectors;
- facilitated access of the industry players to financial markets, expansion of securities market to attract financial resources;
- increased demand for research and development.

Further development of PPP relations in the oil and gas sector of the country should be aimed at: strengthening the scientific and technical potential of the industry and focusing it on meeting long-range development objectives; ensuring a favorable legal and economic climate for establishment and development of innovative ventures; elaboration of procedures for government control over strategically valuable projects.

6. Conclusion

The presented scheme for investment project implementation under a PSA in the economic systems with mineral raw materials specialization in the oil and gas bearing regions is formed based on the established institutional environment corresponding to market approaches to the state regulation of economy and the legislative framework that ensures functioning of PPP relationship. The scheme for implementing the principles of public-private partnership developed on the PSA basis is an effective economic mechanism for innovative development of oil and gas bearing areas, the main aspects of which are clarified in the following:

- in the context of changing role of the state in managing social and economic processes in the oil and gas industry, importance is being increasingly attached to search for organizational and legal forms alternative to direct state administration of public property or production based on unilateral administrative and legal acts. Introduction of the committed partnership mechanism in the investment project implementation will ensure target amounts, concentration and effective application of funds for innovative development of integrated structures;
- the use of public-private partnership mechanism in the form of a production sharing agreement in the oil and gas sector is most promising for major projects delivered in demanding environments (for which the costs for discussing individual first-order conditions and conclusion of a PSA are justified by the scale of potential positive effects) and small fields managed by one regional agency (if they can be united into one major project);
- the implementation of public-private partnership forms as a production sharing agreement through the example of the Sakhalin Region is a viable scheme to attract foreign capital and leading international technologies for exploration and production of oil and gas, upgrading the infrastructure, increasing revenues to the federal and local budgets, cooperation arrangements with foreign partners.

The effectiveness of the PPP forms application and their contribution to social and economic development of integrated structures will be significant under the conditions of long-term consistent planning and a systemic approach by the state to the management of investment activities.

References:

- Alchian, A.A., Demsetz, H. 1973. The property rights paradigm. *Journal of Economic History*, 33(1), 16-27.
- Bondarenko, G.T., Isaeva, A.E., Orekhov, S.A., Soltakhanov, U.A. 2017. Optimization of the Company Strategic Management System in the Context of Economic Instability. *European Research Studies Journal*, 20(2B), 3-24.
- Braginsky, O.B. 2006. Oil and gas complex of the world. Moscow, Gubkin Russian State University of Oil and Gas Press.
- Coase, R.H. 1937. The Nature of the Firm. *Economica*, 4(16), 386-405.
- Dolgoplov, D.V. 2012. The concept of the 'Institute' in the neo-institutional and evolutionary paradigm. *Problems of Modern Economics*, 1(41), 46-49.
- Doronina, N.G., Semiluna, N.G. 2003. State and regulation of investment. Moscow, Gorodets-izdat.
- European Economic Commission. 1998. Economic survey of Europe. No. 3. New York and Geneva, United Nations Organization. Chapter 5 "On Production Sharing in Russia", 151-168.
- Federal law "On Concession Agreements" of 21.07.2005. N 115-FZ. Available at: http://www.consultant.ru/document/cons_doc_LAW_54572.
- Federal law "On Production Sharing Agreements" of 30.12.1995. N 225-FZ. Available at: http://www.consultant.ru/document/cons_doc_LAW_8816.
- Jensen, M., Meckling, W. 1976. Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics*, 4(3), 305-360.
- Klyukin, B.D. 1995. Formation of Russian mining legislation on the basis of subsoil legislation. *Legislation and Economics*, 17/18, 3-8.
- Klyukin, B.D. 1998. The variety of forms of ownership of natural objects. *Law and Economics*, 1, 36-41.
- Klyukin, B.D. 2004. On the development of the contractual basis of the right to use subsoil. *The State and the Law*, 9, 46-54.
- Klyukin, B.D. 2005. Mining Relations in Western Europe and America. Moscow, Gorodets-izdat.
- Kokin, V.N. 2001a. Investor's rights guarantee. Russia: The Third Millennium. *Bulletin of Current Forecasts*, 3. Moscow.
- Kokin, V.N. 2001b. The investor as a subject of legal relations in subsoil use. Proceedings of V International Conference "Development of the Arctic shelf of Russia". St. Petersburg.
- Kokin, V.N. 2002a. Production sharing agreement in the state relations regulation system in subsoil use in Russia. Legal support of market economy, 1. Moscow.
- Kokin, V.N. 2002b. Protection of the investor's rights in subsoil use on the terms of the production sharing agreement in the Russian Federation. Ph.D., Thesis. Moscow.
- Konoplyanik, A.A. 1989. Principal types and conditions of agreements in the petroleum industry of the capitalist countries between TNCs and host countries. *Bulletin of Foreign Commercial Information*, Annex 10, 3-23, available at: <http://www.konoplyanik.ru/ru/publications/b31/b31p1-2.htm>.
- Konoplyanik, A.A. 2000. Production sharing in the oil and gas sector. *Law*, 2. Available at: <http://www.konoplyanik.ru/ru/publications/259/259.HTM>.
- Konoplyanik, A.A. 2002. The Politics of Russian companies in relation to the PSA. *Oil of Russia*, 9, 32-34.
- Konoplyanik, A.A., Arbatov, A.A. (eds) 2003. The controversy about PSA. Moscow, Olita. Available at: <http://www.konoplyanik.ru/ru/publications/b57/b57.htm>.
- Konoplyanik, A.A., Grushin, V.A. 2001. Some problems of the preparation and signing of the PSA for the so-called 'small' deposits and possible ways of their solution. Available at: <http://www.konoplyanik.ru/ru/publications/308/308.htm#pic3>.
- Konoplyanik, A.A., Grushin, V.A. 2002. On the preparation and conclusion of PSA for small fields. *Mineral resources of Russia. Economics and Management*, 1-2, 68-72.
- Konoplyanik, A.A., Grushin, V.A., Oksengorn, N.V. 2002. On the procedure for the transfer of small deposits of hydrocarbons in the PSA regime. *Oil Industry*, 6, 83-89.
- Konoplyanik, A.A., Lebedev, S.V. 2000. Project financing in oil and gas industry: world experience and the beginning of the application in Russia. *Oil, Gas and Law*, 2(32), 38-41.
- Landau, B.A. 1925. Concession Law of the USSR. Moscow, Right and Life.
- Lytaev, A.V., Tokarev, A.N. 2011. Attraction of investment in oil projects under conditions of production sharing agreements. *Bulletin of Novosibirsk State University. Series: Socio-Economic Sciences*, 11(4), 85-92.
- Makhlina, M.I. 1999. On the development of civil-law relations of subsoil use in Russia. *Mineral Resources of Russia. Economics and Management*, 5, 43-49.
- Mulyavin, M.K. 2007. The production sharing agreement: civil-law elements and legal bases of the conclusion. Ph.D., Thesis. Kazan, Institute of Economics, Management and Law.

- National Rating Agency. 2016. Oil and gas complex of Russia: the end of 2015 (as of 08.05.2016). Available at: <http://www.ra-national.ru/ru/node/58843>.
- North, D. 1993. Institutions, ideology and economic performance. Moscow, Catallaxy.
- Oil producers of the Russian Federation. Sectoral resource of oil and gas industry. Available at: <http://www.nftn.ru/oilfields>.
- Perchik, A.I., Avalishvili, G.D. 2002. Development of small oil fields by a consortium of small businesses under production sharing agreements. Moscow, Gubkin Russian State University of Oil and Gas Press.
- Pociovalisteanu, M.D., Thalassinis, I.E., Tirca, A. and Filho, L.W. 2010. Trends and challenges in the energy sector of Romania in the post-accession to the European Union. *International Journal of Environmental Technology and Management*, 12(1), 3-15, DOI: 10.1504/IJETM.2010.029957.
- RIA Rating. 2017. Rating of the socio-economic situation of subjects of the Russian Federation, at the end of 2016. Available at: <http://riarating.ru/infografika/20170530/630063754.html>.
- Salieva, R.N. 2001. Legal support for the development of entrepreneurship in the oil and gas sector of the economy. Novosibirsk, Nauka.
- Salieva, R.N. 2002. On the legal regulation of contractual relations in the oil and gas sector of the economy. *Oil, Gas and Business*, 4, 61-67.
- Sharifullina, A.F. 2000a. Features of payments for the right to use subsoil in the implementation of PSA. *Oil, Gas and Business*, 2, 9-14.
- Sharifullina, A.F. 2000b. Production sharing agreements: concept, conclusion, implementation. Ph.D., Thesis. Moscow, Moscow State Law Academy.
- Shirokova, N. 2016. Confidence in the Sakhalin way. *The Russian Newspaper – Federal release*, 7162(294). Available at: <https://rg.ru/2016/12/27/kak-razvivalsia-proekt-sahalin-2-v-2016-godu.html>.
- Smith, A. 1998. *An Inquiry into the Nature and Causes of the Wealth of Nations*. Oxford, Oxford University Press.
- Sosna, S.A. 2003. Concession agreement as a new type of contract in Russian law. *Journal of Russian Law*, 2, 14-24.
- Strugov, A.F. 1999. On amendments and additions to the law "On subsoil". *Mineral resources of Russia*, 2, 39-41.
- Strugov, A.F., Gudkov, C.B. 1999. Further development of legislation on production sharing agreements. *Journal of Mineral Resources of Russia. Economics and Management*, 6, 47-50.
- Subbotin, M. 2016. A nasty joke about the PSA. *Oil of Russia*, 9, 12-15.
- Subbotin, M., Mikhailov, A. 2003. *Yabloko and PSA*. Moscow, Epicentr, Integral-Inform. Available at: http://www.yabloko.ru/Publ/Book/SRP/srp_0005.html.
- Teplov, O.M. 1996. Problems of application of the Law of the Russian Federation "On Production Sharing Agreements" and the main directions of its amendments. *Law and Economics*, 13/14, 145-147.
- Teplov, O.M. 1997. Legal basis for production sharing agreements in contractual practice with investors. *President. Parliament. Government*, 5, 51-54.
- Teplov, O.M., Klyukin, B.D., Tolstykh, N.I., Veremeeva, M.V. 2002. Regulation of subsoil use relations in the territory of the Russian Federation (Subsoil and Law). Moscow, The Institute of Legislation and Comparative Law under the Government of the Russian Federation.
- Thalassinis, I.E. and Politis, D.E. 2012. The evaluation of the USD currency and the oil prices: A VAR Analysis. *European Research Studies Journal*, 15(2), 137-146.
- Varnavskiy, V.G. 2002. Conceptual economic and legal foundations of the concession activities. *Polemika*, 13. Available at: <http://irex.ru/publications/polemika/13/varnavsky.html>.
- Voznesenskaya, N.N. 1997. *Production Sharing Agreements in the Sphere of Oil Production*. Moscow, Russian Academy of Sciences, Institute of State and Law Press, Information and Law Firm.
- Williamson, O. 1985. *The Economic Institutions of Capitalism*. New York, The Free Press.
- Yumashev, Y.M. 1993. Foreign concessions in Russia and the USSR (the 1920-30s). *State and Law*, 10, 101-112.
- Zenukova, A.P., Shuvaeva, A.I. 2017. Public-private partnership in the oil and gas industry. *Proceedings of VII International Scientific-Practical Conference "Topical issues of law, economics and management"*. Penza, 101-104.