https://doi.org/10.20896/saci.v6i4.378

THEMED ISSUE OPEN ACCESS

Peculiarities of Applying the Theory of International Business by Russian Oil and Gas Companies

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Abstract

The article is devoted to the specific use of theoretical and methodological provisions of the international business of domestic oil and gas companies in practical entrepreneurship. It addresses the following issues— the importance of the agreement of OPEC+; international oil and gas business as a system, criteria of allocation of categories of oil and gas majors; options indicators and international megaprojects; the changing of the vector of cooperation of high-profile domestic companies with foreign partners. The implementation of the agreement will change the balance of supply and demand in the world oil market. As a result, prices will rise to 58 to 63 dollars per barrel. This price is acceptable for the domestic core businesses, and for Russia, which is one of the main manufacturers and main suppliers of this resource. However, probably the level of prices can persist for a relatively short period because this indicator affects a large number of factors. It has been established that the participation of foreign companies in business projects is beneficial for Russian companies, since they are investors and innovators, which help to accelerate the development of deposits or the construction of infrastructure facilities. It is determined that the most important parameter, which can characterise the position of a major, is a high level of competitive advantages, which is measured by indicators linked to a specific year. The conclusion is that the Russian specialised companies successfully adapt to new macroeconomic conditions, including prices for hydrocarbons and increase their competitive advantage, increase production efficiency, increasing the volumes of supply to world markets.

Keywords: The Global Oil and Gas Majors, Competitive Analysis, Business Projects, Machine-Building Industry, Transcontinental Business, Russia

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Introduction

In 2017, the participation of Russian industry companies in the international oil and gas business received a positive impetus. The main reason is that for the first time the OPEC member countries and 11 other states, including Russia, which is not members of the cartel, managed to sign an agreement on reducing oil production for six months, starting from 1 January 2017. The overall production reduction of this energy carrier by member countries should be 1.8 million barrels per day, including the share of Russia – 300.000 barrels per day. The agreements on the reduction of production operated until the end of June 2017 and were extended until March 2018; the number of member countries outside OPEC increased to 13 (Otto, 2017). According to the results of February 2017, the number of general and land-based oil and gas production facilities was 754 and 737 units respectively, or almost twice as much as in May 2016 – Baker Hughes, 7 March 2017. According to Bloomberg, on 9 March 2017, the price for British Brent oil was 54.72 dollars per 1 barrel, Russian Urals oil – 53.52 and American WTI oil – 52.84 dollars per 1 barrel.

The agreement gave the expected result because January (2017) price of Urals crude oil was higher than the average annual rate in 2016 by 11.26 dollars per barrel, and Brent – by 10.82 dollars per barrel (OPEC Monthly Oil Market Report, 2017). The rise in prices is due not only to the agreement, but also due to both increase in world oil consumption in the II quarter of 2017 to 95.65 million barrels per day, and the decline in world reserves. If in January 2017 the excess of raw materials exceeded the average reserve level by 360 million barrels, in early October it fell to 168 million barrels (OPEC Monthly…, 2017).

The average monthly price of the Urals oil in October 2017 was $ 56.3 per barrel and exceeded the average price of 2016 by $ 15.63 per barrel (On Amendments to the State Program of the Russian Federation "Energy Efficiency and Energy Development", 2017). During the trades on 25 September 2017, the price of Brent crude oil reached $ 60.95 per barrel, and Urals – $ 58.65 per barrel.

Features of International Business as a System

Let us begin the discussion of the problems of the first section of the article from theoretical calculations. The concept of international business is a system of views, valid approaches and a set of principles that form the main direction of research, which determines the positive solution of the key task – the combination of theory, methodology, on the one hand, and the practice of international business activity, on the other; the concept is reached when each theoretical position in the context of its practical use is explained (Dyakin, 2012). Methodological approaches allow revealing the place and role of the international technological division of labour, international specialisation and co-production, the world market, which were the primary cause of the emergence of business activities. First in the national, and then in the international spheres (Consumption of electricity…, 2017). The creation of corporations, trusts, syndicates led to the entry of business into the external arena – beyond the national economy because narrow national markets constrained the organisation of mass production and its subsequent automation. Moreover, it is not just about the difficulties with selling the products. Organising a broad search for partners for cooperation abroad was necessary.

The philosophy of international business as a system of application of the most general laws, regularities, ideas and methodological provisions for understanding and explaining the essence and nature of international entrepreneurship. The system of international oil and gas business – international business in the oil and gas sector has its own system, which consists of subjects of international business, international business objects, forms and types of international business, international business mechanisms, international business projects, organisation and implementation of an international movement of core assets. Practical international business – all the theoretical and methodological provisions are

necessary in order to understand, intelligibly explain the specifics, nuances and purpose of international entrepreneurship and apply them reasonably to improve real international business activities about a certain industry (sub-sector), which determine its profile (area, the field of application). Before turning to the issue of forms and types of international oil and gas business, we will offer an interpretation of several additional terms (Natural Gas Weekly, 2017).

Classification of forms and types of international business – the principles of distinguishing existing forms presuppose the use of features that distinguish both a special feature of each of the forms and emphasise their generality, that is, the whole set of contradictions, taking into account the importance of the ratio of characteristics. It should be remembered that dialectic (resolved) contradictions are the source of development. Such a methodological approach is based on the parameters and indicators that separate, but at the same time, unite the real involved subjects and objects of international business activity. They determine all processes – from configuration to verification of each form and its corresponding species.

Together, all forms and types are ingredients in the system of international industry business. Each form has its own system qualities: mission, paradigm, vector, dominant, attractiveness, driving forces, management mechanism, business design methods, subjects and objects, environment (internal and external), potential, financing specifics, trends, significance, consequences, and also their place and role in the system of forms and species. The form – is an external outline that expresses the boundaries of the process. Each form must have certain content. Moreover, vice versa, this content should be put in the appropriate form (Struchkov and Rogachev, 2018).

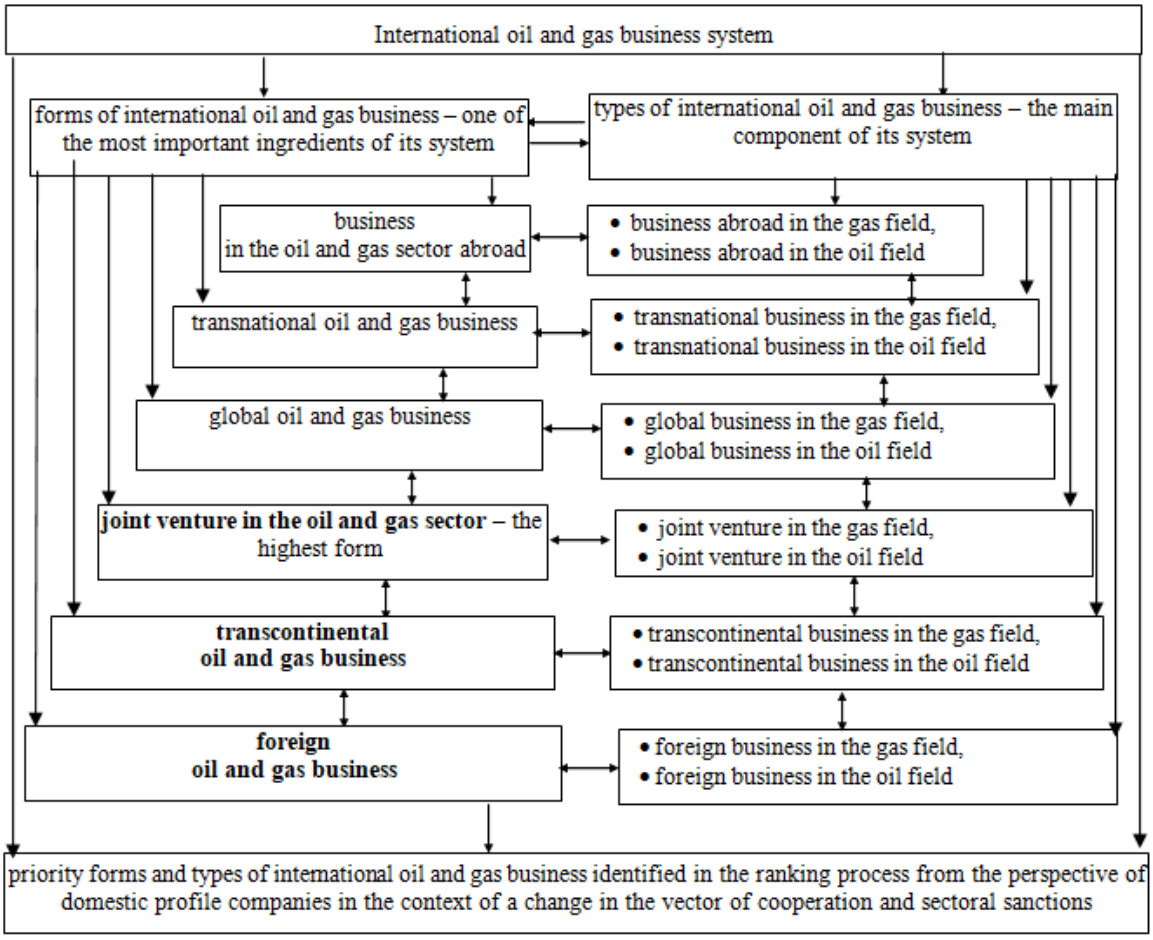

Figure 1: Forms and Types of International Oil and Gas business
Source: Compiled by the Author

The subjects of the international oil and gas business are the direct participants of this type of business, its forms and types – domestic gas and oil companies, their partners – foreign gas and oil corporations, Russian profile majors (Major – a large company that occupies a leading position in the market), national majors of other countries, world majors. Their goal is to open access to oil and gas assets for themselves, for example, through participation in joint business projects or in the case of acquiring shares in a partner company (Chizhankova et al., 2017; Frischbutter et al., 2017). The objects of the international oil and gas business are assets of different types and classes that are used by oil and gas companies. World majors have a wide nomenclature of 70 or more denominations of profile assets. Subjects commit different actions with assets: sale, purchase, exchange, international movement. Profile assets – oil and gas assets – gas assets and oil assets owned by oil and gas (gas, oil) companies participating in international oil and gas business, including world and national majors; the substance of oil and gas integration. This type of assets includes sectoral assets, natural gas and oil assets, produced gas and oil assets. Firstly, participation in international business projects/megaprojects significantly replenishes the portfolio of assets of participating companies, allowing to increase the share of high-quality assets, determining the optimal directions for structuring the portfolio (package) of assets. Secondly, each company puts the value of the obtained quota in the extracted and/or produced assets on its balance sheet, increasing the total value of its assets. Thirdly, business entities are eligible to participate in the organisation and implementation of the international movement of core assets. Fourthly, the accumulation of assets contributes to an increase in the volume of companies' capitalisation.

Further, let us present the scheme No. 1 "Forms and types of international oil and gas business". In this scheme, the role of the original concept is played by the "system of international oil and gas business"; an arrow connects it to the final concept of "priority forms and types of international oil and gas business identified in the process of ranking from the perspective of domestic profile companies in the conditions of a change in the vector of cooperation and sectoral sanctions". Both concepts are highlighted by "curtains" — forms of international oil and gas business – one of the most important ingredients of its system. In this type of business, the following forms and types are used Forms, which show in Figure 1.

Priority forms and types of international oil and gas business from the perspective of domestic profile companies on the criteria for the availability of financial resources, technological innovations and modern equipment as a result of repositioning on the results of the 2016 ranking are the following. The joint venture took the first place in the system of international oil and gas business and its types, the second place was taken by the transcontinental business and its types, and the third place was left for foreign business and its types (Naumenkova, 2015; Akhmetshin et al., 2018).

Parameters and Indicators of Classifications of Majors – Participants in the International Oil and Gas Business and Oil and Gas Megaprojects

In the list of major labels – see table No. 1 "Majors of international oil and gas business in 2016" - world-class Russian majors, world majors from the USA, Great Britain, France, Italy, Norway, Saudi Arabia, China, India and other countries were named. According to the list given at the end of 2016, the number of world oil and gas majors was 39 companies from 32 countries, including three from Russia, the United States and China (Dyakin, 2012).

The fact is that the company's share in the project is determined by the number of hydrocarbons of oil and gas origin that the foreign company puts on its balance sheet, which directly affects the increase in its revenues, profits and capitalisation (Morris et al., 2017). It is also important that it dispose of the share of excavated or produced liquid and

gaseous hydrocarbons owned by the foreign company, of its own will. Let us continue the discussion of the table. In the above list, almost all world and several national majors are named. They are chosen on the basis of the four most important criteria: the volume of explored reserves of oil and gas and the levels of their extraction, the degree of participation in the implementation of oil and gas megaprojects and the measure of inclusion in the international oil and gas business, taking into account the volumes of foreign trade supplies of liquid and gaseous hydrocarbons (Garvey et al., 2016). According to the volumes of explored reserves of oil and gas hydrocarbons, the first places among the world's public companies are owned by Gazprom and Rosneft.

Which company or corporation has the properties and qualities of a major? Firstly, all oil and gas majors should be divided into world majors and national majors. This gradation is justified by us, as it is built on the results of applying the criteria for selecting majors. Secondly, the world major has higher parameters in comparison with the parameters of the national major. The most important parameter characterizing the position of a major is a high level of competitive advantages, which is measured by indicators tied to a certain year: volumes of reliable hydrocarbon reserves (bln t. o.e.); shares in world oil and gas production (in %); total hydrocarbon production (mln b. o.e.); volume of organic increase in hydrocarbon reserves (mln b. o.e.); the size of the organic increase in hydrocarbon production; volume of capital expenditures in exploration and production, processing, commerce, logistics, oil and gas chemistry ($ bln); specific costs of hydrocarbon production ($ b. o.e.); free cash flow ($/b. o.e.); the amount of R&D expenditures and technological surveys ($ mln), environmental costs ($ mln). Comparative characteristics for most of the above-mentioned indicators for 2015 – 2016 proved the superiority of Rosneft over the world's largest majors: ExxonMobil, BP, Shell, Chevron, PetroChina, Statoil, ENI, Petrobras (OAO Rosneft…, 2017). These indicators are the result of the competitive analysis performed.

Let us look at the following data for 2016 on the share of individual companies in world oil production (in %): Saudi Aramco – 12, Rosneft – 6.0, INOC – 3.8, ADNOC – 3.6, PEMEX – 3.6, KOC – 3.4, PetroChina – 3.4, ExxonMobil – 3, PDVSA – 2.9, Braspetro – 2.9, BP – 2.6, Lukoil – 2.6, Surgutneftegaz – 1.4, Statoil – 1.3, Gazprom Neft – 0.7. In total, these companies produced about 45% of the world's oil, and all companies that are listed in Table 1 – about 84%. There were never more majors in the world. It is clear that high production and financial and economic indicators are the results of productive use of the best world management practices, technological competencies, innovations and the most progressive equipment (Chaogang et al., 2017; Dalin et al., 2015; Kapitonov et al., 2018).

In the late 1990s and early 2000s, under the influence of low oil prices, the process of creating real-world majors, in the West first of all, accelerated as a result of a number of absorptions, acquisitions and mergers: BP (amalgamation of BP, Amoco, Arco), ExxonMobil (Exxon and Mobil), Total (Total, Ell and Fina), Chevron (Chevron and Taxsaco), ConocoPhillips (Conoco and Philips), Statoil (Statoil and Norsk Hydro), later – Rosneft (Rosneft, TNK-BR and "Bashneft"). There was a strong concentration of core assets and a strong centralisation of capitals: this led to an increase in capitalisation and the role of new companies in the global hydrocarbon economy. Megaprojects in the oil and gas sector are the largest and super-large oil and gas business projects, which are essentially a product of the integration process in the oil and gas sector and at the same time an eloquent manifestation and confirmation of the benefits of energy globalisation. Several dozens of such projects are being implemented in the world at the same time. The economic parameters of the megaprojects are as follows: the total cost of the project is at least 18-20 billion dollars (with an average payback of 12-15 years); the volume of liquid production (and/or gaseous)

hydrocarbons is at least 50 million tons, and in the case of LNG plants – 10-20, ORP – 12-15 million tons in o.e.; the number of majors participant is at least 2; no less than 3-4 countries are interested in their implementation, who expect to receive a part of the extracted or produced hydrocarbons.

Table 1: Majors of international oil and gas business in 2016

No.	Company	Country	Country participation in %
1.	**PJSC Gazprom**	**Russian Federation**	**51**
2.	**PJSC NK Rosneft**	**Russian Federation**	**50+1 share**
3.	ExxonMobil Corporation	USA	-
4.	Royal Dutch Shell Plc	United Kingdom, Netherlands	-
5.	China National Petroleum Corporation, CNPC/PetroChina Co	China	100
6.	Saudi Arabian Oil Company, Saudi Aramco	Saudi Arabia	100
7.	**PJSC NK Lukoil**	**Russian Federation**	**-**
8.	British Petroleum Plc, BP	United Kingdom	-
9.	Total SA	France	-
10.	Sonatrach	Algeria	100
11.	Petroleos de Venezuela SA, PDVSA	Venezuela	100
12.	Kuweit Petroleum Corp.	Kuwait	100
13.	ChevronTexaco Corp.	USA	-
14.	ConocoPhillips	USA	-
15.	Petrobras International SA, Braspetro	Brazil	56
16.	Abu Dhabi Co Onshore Oil Operator	United Arab Emirates	40
17.	Ente Nazionale Idrocarburi, ENI	Italy	100
18.	Statoil ASA	Norway	over 60
19.	Lybya National Oil Company	Libya	100
20.	Qatar General Petroleum Corp.,	Qatar	100
21.	QGPC	Oman	60
22.	Petroleum Development Oman	China	77
23.	Sinopec	Dubai	100
24.	Dubai Petroleum Company	Hong Kong	100
25.	CNOOC Ltd	Malaysia	100
26.	Petronas	India	74
27.	Oil and Natural Gas Corporation, ONGC	Spain	70
28.	Egyptian General Petroleum Co	Egypt	100
…	……	……	….
39.	Repsol-YPF SA	Kuwait	100
	Kuwait National Petroleum Company KSC, KNPC		

Source: Dyakin, 2012.

The interrelationship between megaprojects in the oil and gas sector and the world's majors is manifested in the context of the integration process in the oil and gas sector in the fact that domestic majors realise more than 25 megaprojects – a large half of them in Russia. This means that Russian majors are indispensable subjects of various forms of international oil and gas business, primarily priority ones; they are recognised participants

in oil and gas integration and are active both in taking advantage of the energy globalisation and in limiting its threats. We will confirm the above mentioned provisions with the business activity and integration practices of Rosneft. In 2011, Rosneft entered into a strategic partnership agreement with the US ExxonMobil. The strategic alliance was to develop three deposits on the Kara Sea shelf and achieved phenomenal successes, as well as the Tuapse license area, as well as sections in the Chukchi Sea and the Laptev Sea. To develop the sites, Rosneft and ExxonMobil established a joint venture and it operated until the US company left the projects in September 2014 because of the sanctions. JV Karmorneftegaz of Rosneft and ExxonMobil drilled the Universitetskaya-1 well on the East Prinovozemelny-1 section and rapidly extracted ultra-light oil. The explored reserves of the Pobeda field on the Kara Sea shelf amount to 130 million tons of oil and 499.2 billion cubic meters of gas in categories C1+C2, while Pobeda brand is second only to Vietnamese oil White Tiger regarding its chemical and physical properties. For the cost-effective development of the shelf, the price of a barrel of oil should be at least $ 80. Commercial oil production in the field is likely to begin no earlier than 2020 (Rosneft Oil Company, 2016).

At the end of April 2012, Rosneft and Italian Eni signed an agreement on strategic cooperation to develop the Fedynsky and Central Barents regions in the Barents Sea and the Western Black Sea area (Val Shatsky). A joint venture was created to develop projects. The share of Eni in the project was 33.3%, it will also provide financing for a complex of exploration works worth about $ 2 billion. The total investment in the development of the Barents Sea deposits will be $ 50-70 billion, $ 50-55 billion in the Black Sea. The total recoverable resources of the sites are estimated at 36 billion barrels of oil. Rosneft has similar agreements with the Norwegian company Statoil ASA, although some projects are suspended due to EU sanctions. "Rosneft" announced the involvement of partners for the development of other offshore fields in 12 fields. Negotiations with PJSC Lukoil are underway. Similar proposals were sent to Chinese profile corporations – also world majors and other majors of the APR countries (De Boni, 2017; Kapitonov, 2017).

Thus, types of three priority forms of international oil business are involved. They are elected by PJSC "Rosneft" as the most attractive forms. Thus, more than ten joint ventures, consortiums and strategic alliances created by Rosneft for the implementation of international megaprojects in the regime of joint oil production on the territory of Russia, that is, the opportunities and advantages of joint business in the sphere of international business relations are used. An agreement was signed on the construction of the Turkish Stream in Turkey in partnership with one world-class foreign major (ENI). Russia and Turkey signed an intergovernmental agreement on the Turkish Stream gas pipeline, which will pass under the Black Sea to Turkey on October 10, 2016. At the end of January 2017, Turkey issued all the necessary permits to start work on the gas pipeline construction project. The capacity of the two lines is 31.5 billion cubic meters of gas. The first is needed for gas supplies to the Turkish market, the second – to Italy. The Swiss contractor Allseas – a company with vessels, pipelaying equipment and work experience, began laying pipes in the second half of 2017. Investments in the offshore part of the pipeline amount to about € 7 billion. Deliveries of gas will begin in 2019.

The presence of a large number of majors and a significant number of simultaneous megaprojects in the oil and gas sector confirm the fact of the integration process of the industry companies into the international oil and gas business, its forms and types. Russian profile companies: gas companies – Gazprom, Novatek and oil companies – Rosneft, Lukoil, Gazprom Neft and Zarubezhneft are actively included in the international oil and gas business. They are interested and ready for vigorous participation in the development of international oil and gas business projects both in Russia and abroad. The peculiarity of the

inclusion of Russian industry companies in the international oil and gas business is the following: the shift of the vector (Vector – applied to the subject matter – the main direction and force (speed) of the process, the beginning of which was put by the starting point in the vector field) – under the impact of reducing gas demand in the energy-deficient countries of Europe and the introduction of sectoral sanctions by Western countries, Russia and domestic companies are changing the main direction of their preferential orientation in the international oil and gas business, in the perspective supply of oil and gas hydrocarbons of Russian production from the western to the eastern direction. Let us make it clear at once, this turn does not mean that Russia turns its back on Europe. In this case, we are talking about the most promising market for Russian hydrocarbons, which is reasonably associated with the APR countries. Firstly, the Yamal LNG megaproject is one of the most important projects of Russia in the field of liquefied natural gas production – LNG. In 2014 Total bought 14% of Novatek for $ 4.8 billion and 20% in this project for $ 425 million (PJSC Novatek, 2017). In order to accelerate the implementation of the project, Novatek invited a major world CNPC from China, which received 20% in the project, and the Chinese Silk Road Fund – 9.9%. Novatek retained its share in the project, equal to 50.1%. Novatek signed a framework agreement with the Chinese CNPC in 2013 on buying and sell of LNG, according to which deliveries to China of this energy carrier will be carried out in a volume of at least 3 million tons per year. The contract is valid for 15 years. In 2016, Novatek produced 66 billion cubic meters of gas and 12.4 million tons of oil. Development and implementation of transcontinental business projects/megaprojects for the extraction and processing of natural gas on the territory of Russia with the participation of APR countries – megaprojects for development of deposits and production of natural gas, in which PJSC Gazprom and Novatek (LNG) participate, and also their partners from the APR countries – Chinese CNPC, Japanese Mitsui and Mitsubishi, Total (France). The LNG plant (Sakhalin Island) is being operated and will be expanded by Gazprom. Delivery of LNG to APR countries is carried out by gas-carrier vessels. Secondly, given the change in the vector of Russian hydrocarbon supplies, domestic companies are reviewing the list of priority forms of the international oil and gas business for the future under the changed conditions. Thirdly, a policy to diversify the routes of export supplies of oil and gas hydrocarbons from Russia, without reducing their volumes to Europe is being pursued. Fourthly, a first-class resource base is located in Eastern Siberia and the Far East – new hydrocarbon fields and their supply to the east will be cheaper due to a smaller transport link.

The development and implementation of transcontinental business projects/ megaprojects of infrastructure nature in Eastern Siberia – the construction of the "Siberia Power" gas pipeline by PJSC Gazprom for the supply of network gas to China. Close cooperation with the branch companies of APR countries, which gradually develops into Eurasian oil and gas integration, is necessary for the interests of accelerating and reducing the cost of developing gas and oil fields in Eastern Siberia and the Far East. The following tasks are solved: uninterrupted supply of population and enterprises with gas and oil products of the Far East – local raw materials and fuel; economic development of the productive forces of this region through the creation of jobs, the construction of new cities and enterprises, etc.; the formation and use of a part of the oil and gas export potential in the eastern supply direction.

Conclusion

Domestic industry companies perform the main function in the transcontinental oil and gas business and explain their main role as follows. Firstly, Russia is the host country. Secondly, Russian companies own significant natural resources, which are not available in other APR countries. Thirdly, the objects of transport infrastructure are located in our companies'

property. Moreover, fourthly, they choose and invite business partners.

The motives of the APR industry companies for mutually beneficial participation in transcontinental oil and gas business projects/megaprojects on the territory of Russia boil down to the following— first, the interest of the companies of China, India, Japan, South Korea and Vietnam is that they are allowed to natural assets unique regarding volume and structure, seeking to get a share in projects, and to put this amount on its balance sheet, increasing the size of capitalisation. Second, the economies of countries represented by companies participating in business projects receive oil and gas, meeting current needs. Concern about the prospect of ensuring national energy security ensures that countries are included in long-term and large-scale megaprojects in Russia.

References

Akhmetshin, E., Danchikov, E., Polyanskaya, T., Plaskova, N., Prodanova, N., Zhiltsov, S. (2018). Analysis of innovation activity of enterprises in a modern business environment. *Journal of Advanced Research in Law and Economics*, 8(8), pp. 2311-2323.

Chaogang, X., Yongcan, G., Genquan, Z., Jiushun, Z. (2017). Roles of Emerging FCC-based Technologies in Shifting to Petrochemicals Production. *China Petroleum Processing and Petrochemical Technology*, 19(4), pp. 1-5

Chizhankova, I.V., Novikova, N.V., Povorina, E.V., Duplij, E.V., Androsova, I.V. (2017). Clusters in the system of interindustry regional integration. *International Journal of Applied Business and Economic Research*, 15(13), pp. 23-30.

Consumption of electricity in UES of Russia in 2017 increased by 1.3% by comparison with 2016. (2017). Website of the "Ministry of Energy of Russian Federation", Available from: https://minenergo.gov.ru/node/10277 (accessed September 18, 2018).

Dalin, W., Feng, Z., Jingmin, F. (2015). Analysis of commercial application and flexibility of DCC-PLUS process [J]. *Petroleum Processing and Petrochemicals*, 46(2), pp. 71-75

De Boni, L.A.B. (2017). Empirical/theoretical proposal for the production of biodiesel. *Periódico Tchê Química*, 14(28), pp. 166-174.

Dyakin, B.G. (2012). *International Business*. Theory of international business activity and its practical use. Moscow: TEIC, pp. 18-27.

Frischbutter, A.A., Fisher, Q.J., Namazova, G., Dufour, S. (2017). The value of fault analysis for field development planning. *Petroleum Geoscience*, 23 (1), pp. 120-133.

Garvey, P.R., Book, S.A., Covert, R.P. (2016). *Probability Methods for Cost Uncertainty Analysis: A Systems Engineering Perspective*. Boca Raton: CRC Press, pp. 44-88.

Kapitonov, I.A. (2017). The practice of implementing systemic measures to develop an innovation-oriented low-hydrocarbon economy and reducing greenhouse gas emissions abroad. *Economy: Yesterday, Today, Tomorrow*, 7(1A), pp. 96-106.

Kapitonov, I.A., Zhukovskaya, I.V., Khusaenov, R.R., Monakhov, V.A. (2018). Competitiveness and competitive advantages of enterprises in the energy sector. *International Journal of Energy Economics and Policy*, 8(5), pp. 300-305.

Morris, S., Kaufman, G.M., Grace, J.D. (2017). Exponentiation Bias in Production and Reserves Estimates Made by Use of Exponential-Decline Models. SPE Economics and Management, 9(2), pp. 1-8

Natural Gas Weekly Update. (2017). Website of the "Energy Information Administration". Available from: https://www.eia.gov/naturalgas/weekly/archivenew_ngwu/2017/03_09/ (accessed September 19, 2018).

Naumenkova, S.V. (2015). Financial inclusivity: Economic contents and the approaches to its assessment. *Actual Problems of Economics*, 166(4), pp. 363-371.

OAO Rosneft. Annual report. (2017). Website of the "Rosneft". Available from: https://www.rosneft.ru/Investors/statements_and_presentations/annual_reports/ (accessed October 02, 2018).

On Amendments to the State Program of the Russian Federation "Energy Efficiency and Energy Development". (2017). Website of the "Ministry of Energy Russian Federation". Available from: https://minenergo.gov.ru/node/10397 (accessed October 19, 2018).

On Amendments to the State Program of the Russian Federation "Energy Efficiency and Energy Development". (2017). Website of the "Ministry of Energy Russian Federation". Available from: https://minenergo.gov.ru/node/10397 (accessed October 19, 2018OPEC Monthly Oil Market Report. (2017). Website of the "OPEC". Available from: https://assets.kpmg.com/content/dam/kpmg/kz/pdf/oil-gas-nf-may2017-rus.pdf (accessed October 07, 2018).

Otto, B. (2017). The importance of detailed geological characterization for future expanded use of gas storage in the sustainable energy context. *Petroleum Geoscience,* 23 (3), pp. 327-338.

PJSC Novatek. (2017), Available from: http://www.novatek.ru/ (accessed October 10, 2018).

Rosneft Oil Company. (2016), Available from: https://www.rosneft.ru/ (accessed October 07, 2018).

Struchkov, I.A., Rogachev, M.K. (2018). The challenges of waxy oil production in a Russian oil field and laboratory investigations. *Journal of Petroleum Science and Engineering*, 163, pp. 91-99.