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PRIORITY TACTICS OF PRODUCTION COOPERATION WITH KNOWLEDGE-INTENSIVE INDUSTRIAL COMPANIES

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Abstract

The paper is devoted to the need of production cooperation with knowledge-intensive industrial companies. The authors note that the priorities of industrial development of the Russian Federation imply, first, development of knowledge-intensive, high-tech industries of economy; second, production of new types of products with high added value; third, replacement of low production technologies and implementation of innovation technologies; fourth, import substitution stimulation. In this regard the industrial development of the Chechen Republic shall happen in strict compliance with the priorities of industrial development of the country. Thus, the production of new types of products with high added value requires close cooperation between suppliers and consumers of these products. The task of improving the production cooperation may be addressed through industrial clusters, industrial parks and technoparks established in different regions of Russia. The paper refers to the best technoparks of Russia in the field of metal working and machine-tool industry. Thus, it is vital for modern plants of the republic to develop production cooperation with successful and knowledge-intensive industrial companies (senior partners) seeking for reliable younger partners, which are able to supply parts, to perform assembly works, to render any services in due quality, in due time and at the agreed price. It is concluded that the production cooperation with leading companies of technoparks and industrial clusters will trigger the development of goods and services commercially successful on the modern market of instrument making. First of all, there is a need to search for business partners and free market niches.

Keywords: Industry, privatization, denationalization, private property, Chechen Republic.

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1. Introduction

Modern priorities of industrial development of the Russian Federation imply, first, development of knowledge-intensive, high-tech industries of economy; second, production of new types of products with high added value; third, replacement of low production technologies and implementation of innovation technologies; fourth, import substitution stimulation. In this regard the industrial development of the Chechen Republic shall happen in strict compliance with the priorities of industrial development of the country. There is a need to withdraw from the regional policy to recover the production of the past century running on obsolete technological base. Such attempts are doomed to bankruptcy – the release of resource-intensive products with obsolete consumer properties make any production unprofitable and incapable to produce competitive goods. The production of new products with high added value requires close production cooperation between suppliers and consumers of these products, as well as production cooperation between suppliers of products and producers of accessories.

2. Problem Statement

The task of improving the production cooperation may be addressed through industrial clusters, industrial parks and technoparks established in different regions of Russia. An industrial cluster is a set of industrial participants connected by relations in a certain sphere due to proximity and functional dependence, which are located in one territorial subject of the Russian Federation or in several territorial subjects of the Russian Federation (Resolution of the Government of the Russian Federation, no. 779, 2015). The participants of a cluster jointly create the added value. Concentration and high extent of cooperation of cluster participants leads to the efficiency increase of each enterprise, effective inclusion into the national and world system of differentiation of labor. As of 2018, the industrial clusters are established in 28 regions of Russia, they include about 1,500 enterprises with production output of over 1.3 trillion rubles per year. The state support of industrial clusters makes all enterprises of a cluster more investment-attractive. Active inflow of Russian and foreign investments provides for dynamic development of enterprises.

3. Research Questions

The study is focused on the analysis of economic relations of industrial enterprises during production cooperation within foreign economic activity with other subjects of economy management and the state.

4. Purpose of the Study

The purpose of the study is to develop production cooperation with successful and knowledge-intensive industrial companies (senior partners).

The Ministry of Industry and Trade of the Russian Federation has been supporting industrial clusters since 2015. At the regional level the authorized executive authorities, association of industrialists, special cluster managing companies ensure state support of formation and development of industrial clusters. The key measures include methodical, organizational, expert-analytical and information support of an industrial

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cluster (Idigova, Khadzhieva, Chazhaev, & Dudaev, 2018). It is important to integrate a project of cluster participants into the regional development strategy. An efficient measure of support is the inclusion of the project into investment programs of network organizations, other measures of state support of demand stimulation. The state budget of Russia subsidizes costs for infrastructure of a forming cluster, covers some costs for implementation of cluster projects, grants loans on easy terms and guarantees liabilities of a borrower to a bank, an investor. The state provides tax benefits to cluster participants, reduces administrative barriers. In 2018, the register of the Ministry included 38 industrial clusters meeting the requirements of the Russian Government (Resolution No. 779). In October, 2018 the Ministry of Industry and Trade of the Russian Federation summarized the results of the Tender Committee meeting on the selection of joint projects of industrial cluster participants. It considered 24 joint projects with the general need for subsidies amounting to over 6.8 billion rubles (subsidizing up to 50% of production costs for import substitution). Following the results of the Tender Committee meeting 17 joint projects with the planned subsidies of 4.7 billion rubles until the end of 2022 were approved. Besides, the total amount of off-budget investments into projects will exceed the volume of subsidies by almost 3 times and will make 13.8 billion rubles. Four enterprises of North Caucasian Federal District became the winners of the competition: StavStal, Arnest, Stroimontazh Yug in Stavropol Krai and Chechenneftekhimprom in the Chechen Republic. It was decided to subsidize part of the interest rate on investment loans of these enterprises (Resolution of the Government of the Russian Federation, no. 1218, 2017).

5. Research Methods

The study is based on general scientific methods within comparative, logical and statistical analysis. Thus, it is revealed that for modern plants of the republic it is vital to develop production cooperation with successful and knowledge-intensive industrial companies (senior partners) seeking for reliable younger partners, which are able to supply parts, to perform assembly works, to render any services in due quality, in due time and at the agreed price. It is important that Russia does not lag behind global trends and joins the ranks of countries-technological leaders (Hill, 2004). The cooperation of the republican enterprises with Russian and more advanced foreign partners in the field of electronics and mechanical engineering is an important task. South Korea is considered the world innovative leader of radioelectronics. Cooperation of producers is especially developed within the instrument making industry. According to an American marketing specialist Hill (2004), “electronic companies receive 73% of their products from outside”. JSC Chechenneftekhimprom has experience in doing business with the companies of South Korea in light of the investment project on the production of Li-ion batteries with 125 MWh a year. Besides, the initiator of the project Kh-B. Alviev follows the initial tactics of South Koreans – production in Grozny based on license agreements. The 2018 report of the Ministry of Industry and Energy of the Chechen Republic indicates facts of business meetings with the representatives of LLC Siemens in the Southern Federal District and North Caucasian Federal District concerning cooperation, visit of the ambassador of India in the Russian Federation Mr. Pankaj Saran to JSC Chechenavto (Law of the Chechen Republic, 2006). Some once large instrument-making enterprises of the republic and new production shall be focused on the role of contractors among the world leaders of instrument making, first of all, electronic instrument making. This refers to the following enterprises. LLC Electropult-Grozny with the production area of 5,061 sq.m,

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total area – 1.16 hectares. The enterprise specializes in the production of low- and medium-voltage electrical distribution equipment (switchboard and transformer equipment). Promavtomatika, a famous scientific and production enterprise well-known in the Soviet time, was reorganized into LLC Promavtomatika in 2017. In 2017, SUE Spetsavtomatika was reorganized into LLC Art Polymer Plant. The enterprise specializes in the production of heat-insulating pipes, spring blocks, foam rubber. The investment projects on the development of instrument making in the Chechen Republic are included into the federal target program *South of Russia (2014-2020)*. This refers to such projects as *The production of metering devices on the basis of LLC Energiya Plus* (second stage of the project, deadline – 2021), *The production of LED lighting devices* (deadline – 2021-2025) (Decree of the Government of the Chechen Republic. 2011). However, the efforts of industrialists and the government of the republic shall not be focused only or mainly on budgetary sources of financing of projects within state programs.

6. Findings

The situation of 2018-2019 differs considerably from that of the national economy in the period of high oil prices and lack of international sanctions against Russia. Now the budgetary costs are cut in every possible way. The production cooperation with leading companies of technoparks and industrial clusters will trigger the development of goods and services commercially successful on the modern market of instrument making. First of all, there is a need to search for business partners and free market niches (Table 01).

Table 01. Advanced technology parks of Russia in the field of radio-electronics and instrument making

No.	Name	Profile	Year of creation	Number of residents	Number of jobs	Floor space, thou. m^2	Revenues in 2016, mln rub.	Number of patents in 2016
	TECHNOSPARK Nanotechnology Center Moscow www. technospark.ru	New materials and instrument making. Radio-electronic industry. In 2019 the largest Russian center of flexible electronics will be launched.	2012	81	1129	7.7	202	15
2	STROGINO Technopark Moscow www.tpstrogino.ru	Information and communication technologies, energy saving technologies.	2007	46	653	17.4	4822	16
3	Kalibr Private Technopark Moscow www.kalibroao.ru	Radio-electronic industry, instrument making, information and communication technologies.	2015	49	346	30.0	3402	3
4	Technopolis Moscow	New materials, information and	2012	55	1990	353.1	625	21

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	www. technomoscow.ru	communication technologies: robotics, microelectronics, optics, nanotechnologies.						
5	High-Technology Technopark in Mordovia www.technopark-mordovia.ru	Energy saving lighting technologies, radio-electronic industry, new materials and instrument making.	2011	94	1969	48.3	7744	115
6	Science and Technology Park of the Novosibirsk Akademgorodok www. tpark.ict.nsc.ru	Radio-electronic industry, instrument making, information and communication technologies.	1996	24	800	13	5227	12
7	IT Park www. itpark-kazan.ru	Information and communication technologies.	2009	152	3034	55.5	9006	248
8	Sapfit Technopark www.tpsapfir.ru	Radio-electronic industry and instrument making.	2014	164	982	59	25819	28
9	Slava Technopark www.technopark-slava.ru	Radio-electronic industry and instrument making, biotechnologies.	2008	91	1078	31	3610.6	12

Source: (Danilov, Golubkin, & Labudin, 2017).

Table 01 shows that the Russian technoparks make knowledge-intensive products amounting to billions of rubles. Over 2016, they created hundreds of patents and dozens of thousands of highly paid jobs. The residents of technoparks are willing to expand the volumes of production and component parts in cooperation with suppliers (Idigova, Khadzhieva, Chaplaev, & Dudaev, 2019). The industrial enterprises of the Chechen Republic in cooperation with the residents of technoparks and industrial clusters of Russia are able to solve the whole complex of urgent tasks: release of commercially successful products, utilization of idle capacities and their modernization, integration of industrial production into the knowledge-intensive sphere, increase of production profitability. Joint ventures and partnerships with instrument-making and engineering companies of Germany, the USA, Italy, China seem a significant trend of international cooperation of industrial enterprises of the Chechen Republic. The presence of German companies is quite high in the modern Russian economy. According to the Chairman of the Board at Russian-German Chamber of Commerce Matthias Schepp, as of 2018 there are 4,965 enterprises collaborating with German partners in Russia, which accounts to over 270 thousand jobs (Lindt, 2018). Among priority fields of cooperation there are the leading enterprises of such Russian industrial clusters as the machine-building cluster,

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production of rubber, plastic products of the Republic of Tatarstan, the industrial cluster of machine-tool construction and machine-tool industry of LIPETSKMASH of Lipetsk Region, the innovation and territorial cluster of machine-tool construction of Rostov Region. Moreover, these regions are open to cooperation, they are ready to render free aid regarding some issues of cooperation in the best Soviet traditions. The federal government considers the branches of mechanical engineering as strategically important thus implying the package of state support measures. The subprogram *Automotive Industry* within the state program of the Russian Federation *Development of the Industry and Increase of its Competitiveness* envisages a number of subsidies to Russian automotive organizations, including their subsidiaries: subsidies for the compensation of part of costs for interest on loans within investment and innovative projects; subsidies for the compensation of part of costs for R&D and tests of wheel vehicles; subsidies for the compensation of part of costs for jobs; subsidies for the compensation of part of costs for the release and support of warranty liability on wheel vehicles corresponding to Euro-4, Euro-5; subsidies for the compensation of part of costs for the use of energy resources by energy-consuming automotive enterprises (Table 02). The subprogram *Transport Mechanical Engineering* implies state measures for innovative development of transport engineering organizations; stimulation of acquisition of innovative rolling stock (Idigova et al., 2018). The above subsidies are granted on a competitive basis for the compensation of actual target costs within the corresponding investment projects and measures. In this regard some machine-building enterprises of the Chechen Republic have high potential for dynamic development. OJSC Chechenavto specializes in assembly production of LADA GRANTA cars. Its area amounts to 1.84 hectares. From January to July, 2018 its output reached 1,346.4 million rubles. It provided 269 job places. For example, the objective of the Voronezh regional cluster of petrochemical and chemical equipment producers is the "creation of efficient integrated structure of outsourcing, cooperation and subcontracting within a cluster" (Aristov, 2012, p. 3). It is known that in case of production outsourcing the third party is partially or entirely liable for the production of goods or their components.

Table 02. Advanced technology parks of Russia in the field of metal working, machine-tool industry

No.	Name	Profile	Year of creation	Number of residents	Number of jobs	Floor space, thou. m^2	Revenues in 2016, mln rub.	Number of patents in 2016
1	Mosgormash Technopark www.tpmgm.ru	Metallurgy and metal working, electrotechnical industry.	2014	52	1068	33.5	5832	6
2	NAGATINO Technopark www.technopark-nagatino.ru	Metallurgy and metal working, electrotechnical industry, pharmaceutical industry.	2015	69	710	19.4	1580	-
3	XL Industrial Technopark Vladimir Region	Electrotechnical industry, metallurgy and metal working. Residents of the XL industrial science and technology park are Russian leaders in climate control equipment.	2014	4	1071	87.1	17968	10

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4	Technopark-Lipetsk www.technopark48.ru	Electrotechnical industry, new materials, information and communication technologies.						
5	Sarov Technopark Nizhni Novgorod Region www.itechnopark.ru	Machine-tool industry, instrument making, aviation and space industry.	2005	48	635	25	1387	23

Source: (Danilov, Golubkin, & Labudin, 2017)

To increase the utilization of production areas of the plant, development of material and technical resources and nomenclature of products the residents of the following clusters may serve the potential partners for mutually beneficial cooperation (Table 03). In 2016 alone the resident enterprises of these 3 technoparks generated 26 scientific patents, made products for the amount of 6.6 billion rubles, and created 2,428 hi-tech jobs.

Table 03. Residents of technoparks and industrial clusters are interested in cooperation

No.	Name	Profile	Year of creation	Number of residents	Number of jobs	Floor space, thou. m^2	Revenues in 2016, mln rub.	Number of patents in 2016
1	West Siberian Center (Tyumen Science and Technology Park) www.tyumen-technopark.ru	Production oilfield, drilling and geology-prospecting equipment, etc.	2008	52	708	12.1	1251	4
2	Kosmos-Neft-Gaz Science and Technology Park Voronezh Region www.kng.ru	Production of oilfield, drilling and geology-prospecting equipment, PJSC Rosneft, PJSC Lukoil.	2008	5	925	78.3	3600	12
3	High-Tech Science and Technology Park KhMAD www.tp86.ru	Production of oilfield, drilling and geology-prospecting equipment, etc.	2008	152	795	16.5	1753	12

Source: (Danilov, Golubkin, & Labudin, 2017).

As a reliable business partner LLC Neftemashservis is also valuable since the plant pays much attention to the development of its labor potential. The plant cooperates with the Russian State Geological Prospecting University, Southern Russian State Polytechnic University and Grozny State Oil Technical University on the issues of providing the best university graduates and ensuring professional development of specialists of the plant. The products of the plant are certified against the GOST standards. In September, 2018 LLC Neftemashservis received the Quality Management System Certificate of Conformity to requirements of the GOST P ISO 9001-2015.

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7. Conclusion

Thus, having removed the "fetters of state unitary enterprises" paralyzing the economic initiative, the industrialists of the Chechen Republic shall start seeking for partners, fitting into cooperation technological chains, developing business reputation as reliable contractors (Idigova, Betilgiriev, Taymaskhanov, Mintsaev, & Bataev, 2016). Besides, they shall invest their earnings to enhance competitive advantages of enterprises, purchase shares and stocks to become full-fledged owners of plants where they have worked for years. Of course, the administrative risks in the republic were not reduced at all, and the courts still do not correspond to their intended purpose. In this case there are also methods to protect the property and investments. For example, there is a need to stipulate the courts located outside the republic or the country to consider economic disputes; to attract such contractors that do not only make the first-class products, but have strong legal services capable to protect, if necessary, not only the business interests, but also the interests of a junior partner.

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