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**USE OF NATIONAL ECONOMY BRANCHES FOR TRANSITION
TO INNOVATIVE TECHNOLOGICAL DEVELOPMENT**

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Abstract

This article considers the possibilities of using economic capacity of the national economy branches for transition to the mode of innovative technological development. The emphasis is put on the industry of the region, which is one of the primary branches providing uninterrupted functioning of all domestic economy. At the present stage of economic development Russia having chosen the innovative strategy of an industrial complex functioning to overcome a stereotype of a raw material colony of the western countries, to form digitalization in further development of information society, to change technologies of functioning of the domestic industrial enterprises as well as to change the paradigm of the industry into import-substituting, successfully solves problems of integration into global economic space. The practical importance of the given research is to offer methods, models, approaches and growth directions of industrial complex innovative capacity in Russia and Russian regions which promote the increase in efficiency of their functioning and level of competitiveness in the world market as they are tools for development of innovative activity and increase in level of innovative products release. To increase the efficiency of industrial production it is offered to develop the industrial enterprises with high readiness for diversification and to use industrial capacities of the enterprises capable for giving multiplicative effect and an extra impulse to the development of all economy of the region (the Chechen republic is used as an example). The efficiency increase directions of the state support in the industrial sector of the region economy are designated.

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Keywords: Economic strength, industrial sector, region, innovations.



1. Introduction

The national economy of the country includes industries, spheres of material production, where the social product is produced, and the industries of the non-productive sphere which result of functioning – is intangible services. The industry of Russia, being one of the core branches providing uninterrupted functioning of all domestic economy, needs modernization of the innovative and technological potential more than ever as the launching of finished products not always conforms to world standards (Sukhovsky, 2005). The targeted modernization and increase in level of using innovative and technological capacity of manufacturing enterprises, essentially improving the current and potential problems in satisfaction of demand for high-quality products, can solve these problems. Insufficient study of using and developing innovative and technological capacity of manufacturing enterprises, its value in the domestic economy, causing the efficiency of all innovative activity, as well as its assessment, define the expediency and this research tasks (Kalinichenko, 2018)

2. Problem Statement

In current context of economy management the increase in the level of competitiveness of market economy subjects is possible by means of formulating the necessary prerequisites of their further development by creation and implementation of technological, technical, organizational and other innovations, that is the use of innovative potential (Sulman, 2009).

The innovative and technological potential is structurally included into the innovative potential of the economic subject, is the basis of its production capabilities; its essence is presented as an ordered set of the available resources of this subject, providing implementation of innovative activity. At the same time, innovative and technological potential is characterized as an ability and readiness degree of the economic subject to carry out the innovative activity (Manturov, 2018).

Thus, innovative and technological potential is an assembly of the disposed, acquired and mobilized material, financial, personnel, information and organizational and administrative resources as well as the opportunities of society, country, region, a line of economic activity, a separate enterprise for achievement of the innovative activity goals. The approaches to the research of economic system innovative potential are presented in the figure 1.

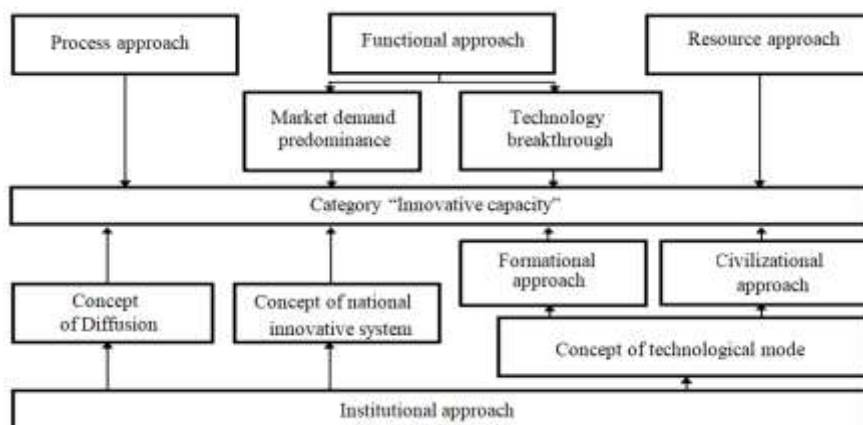


Figure 01. Set of approaches to the process of studying innovative potential of economic systems

3. Research Questions

Based on the analysis of financial and economic justification to the draft Decree of the Government of the Russian Federation on the State program of the Russian Federation “Development of the North Caucasian Federal District until 2025”, it is possible to conclude that the Chechen Republic takes the seventh place according to the forecast of expenses of the federal budget (Idigova & Hadzhiyeva 2015) (Table 01).

Table 01. The spend analysis of the federal budget across the Territorial subjects of North Caucasian federal district of the Russian Federation, (million rub)

The federal district	Federal budget	The consolidated budget of the North Caucasian federal district	Non-budgetary sources of financing	Total	Specific weight in a total amount (%)
The Republic of Daghestan	640.740,0	64.740,8	314.630,2	1.292.111,0	31,5%
The Republic of North Ossetia – Alania	127.314,1	13.939,6	32.008,3	183.262,0	5,0%
The Karachayevo-Cherkessian Republic	393.385,9	15.558,5	138.065,5	447.009,9	12,2%
The Kabardino-Balkarian Republic	238.160,4	48.206,0	325.042,6	711.408,9	19,4%
The Stavropol Territory	73.217,7	6.668,8	0,0	69.866,5	1,9%
The Caucasus Mineralnye Vody region	62.011,0	5.439,0	156.399,3	213.849,3	5,8%
The Chechen Republic	323.388,9	17.656,8	8.290,9	449.336,6	12,3%
The Republic of Ingushetia	265.447,2	23.505,3	0,0	389.596,4	10,6%
Total:	3.400.834,0	189.105,4	1.074.821,6	3.665.405,0	100,0%

(Chechenstat, 2017)

4. Purpose of the Study

The aim and the objective of the research is to analyze the processes of formation, and to assess the use of innovative and technological potential and its reserves at manufacturing enterprises.

The achievement of the goals relies on the solution of the following tasks:

- to study theoretical issues of industrial enterprise innovative activity and innovative and technological potential as structural element of innovative development of economic systems;
- to analyze state and the prospects of development of innovative and technological potential.
- to offer ways of identification and an intensification of using reserves of innovative and technological potential at manufacturing enterprises.

5. Research Methods

Today the innovative vector is the necessary condition of the development of the high technology and high performing directions of the industry as well as the factor of competitiveness of the enterprise products in the market conditions at any forms of the organizing economy management (Basnukayev & Musostova 2015).

The transition to digital economy stimulates the innovative process to technological modernization of production, its efficiency improvement and development of new product competitive types. It allows to generate rather high added value, and, at the same time, to receive economy of all production factors, including capital expenditures, which is important for reduction of expensive nature of production processes under the limitation of the available resources necessary for development. Moreover, the received saving is a key factor of enhancement market value of the enterprise, which, in turn, characterizes cost efficiency of enterprise functioning as a whole (Idigova, Betilgiriyeu, Taymaskhanov, Mintsayev & Batayev, 2016).

Effective enterprise functioning is also a component of economic model of the industrial policy directed to protect domestic enterprise, that is, the policy of import substitution. Herewith, the import substitution of industrial products by own production is the program of innovative development for the domestic enterprises as the substituted products for the enterprises or producers are new. At the enterprise it is suggested to consider elasticity of goods production costs as an economic effectiveness criterion of innovative process against capital investments savings, that is – elasticity coefficient of production costs in regard to the capital investments less than unity. (Demidenko & Dubolazov, 2017).

6. Findings

Let us consider the distribution of the organizations by types of economic activity in the territory of the Chechen Republic (Table 02). The number of the industrial enterprises has been decreased for the considered period.

Table 02. Dynamics of number of the enterprises according to their industrial distribution. Total number of the enterprises and organizations for 2006-2016

Production enterprises	Period						
	2010	2011	2012	2013	2014	2015	2016
Total	10101	10053	9891	9350	9562	9840	10397
including enterprises with basic activity							
agriculture, hunting and forestry	1600	1377	1320	1119	1168	1209	1242
extraction of mineral resources	49	46	42	42	47	47	48
extraction of fuel and energy minerals	21	20	18	18	21	20	21
working manufacturing	605	574	570	555	554	559	543
food production	166	139	124	120	125	137	134
textile and apparel manufacturing	29	28	32	31	28	27	27
woodworking	51	46	42	36	37	32	29
chemical production	8	7	6	9	8	8	8
plastic production	25	24	25	25	26	28	28
nonmetallic mineral product manufacturing	112	102	99	96	93	92	84
metallurgical and semi-finished metal goods production	31	31	34	30	27	26	28
machinery and equipment production	28	28	26	25	21	25	28
electric equipment production	44	52	58	59	60	54	48
vehicles production	5	6	6	7	9	10	10
other productions	42	41	43	41	42	43	41

production and distribution of electric power, gas and water	59	64	59	58	57	59	63
construction	2613	2345	2173	1872	1789	1754	1806
transport and communication	311	303	321	323	331	338	343

(Chechenstat. <http://chechenstat.gks.ru>)

According to the Chechenstat, for the last seven years (2010-2016) the number of the enterprises occupied with agriculture, hunting and forestry has been decreased by 22.4%. The number of the working manufactures has been decreased by 10.2%, mainly, due to the reduction of the number of the woodworking enterprises (reducing by 43.1%), nonmetallic mineral product manufactures (reducing by 25%) and food industry enterprises (reducing by 19.3%). The number of the construction organizations has been reduced by a third (by 31%). The number of the enterprises of extraction of mineral resources has not been changed. There is a growth in such branches as wholesale and retail trade (increased by 40%) and transport (increased by 10%) (Chechenstat, 2017)

The gross output (in current prices) in 2016 when compared to 2015 on such type of activity as extraction of mineral resources has been increased by 1.4%, but does not exceed an 2007 indicator. According to the form of activity in the agricultural and forestry industry the volume of the products produced in 2016 in comparison with 2015 has been grown by 28.7%, in working manufactures has been grown by 11.5%, wholesale and retail trade has been grown by 13.5%.

More than 340 names of products were mastered by the industrial enterprises of the republic, including those that correspond to Russian, and in some cases (wiring and electro-technical products) to the international standards. A number of the project enterprises with a complete description, cost efficiency, social effect is presented in the table 03 (Basnukayev & Musostova 2015).

Table 03. The core investment projects, which will be implemented in the territory of the Chechen Republic in the near term

No	Project initiator	Project description	Economic effect	Social effect
1	JSC "ChechenAvto"	Implementation of one of the directions of the program of automotive industry development in the ChR. Within the project the construction of the fab shop, the painting shop and the creation of an inbound logistics system in the plant are planned	<i>Design capacity:</i> 50000 cars per year. <i>Total project cost:</i> 6180.902 mln. RUB. <i>Project efficiency:</i> a payback period is 7-8 years	-creating up to 988 new vacancies (according to the design and estimate documentation - DED); - tax payments to the different level budgets up to 2,584.8 mln. RUB (since the year of reaching design capacity).
2	JSC ChechenAvto / LLC "Plant Avtokomponent"	Modernization of the industrial enterprises providing buying of manufacturing equipment for autocomponents production	<i>Design capacity:</i> 250 000 automotive components per year. <i>Total project cost:</i> 2373.74 mln. RUB.	-creating up to 200 new vacancies; -tax payments to the different level budgets up to 40,0 million rub
3	JSC "Tannery production"	Creation of the modern tanning production providing the required productivity and high-quality leather working	<i>Design capacity:</i> 1 152 000 sq.m. of leather per year. <i>Total project cost:</i> 1 449,849 mln. RUB. - a payback period is 8 years and 4 months.	<i>Project efficiency:</i> -creating up to 245 new vacancies; -tax payments to the different level budgets up to 250,0 mln. RUB.
4	JSC "Footwear Factory"	Construction of factory on production of designer, sports and specialized shoes	<i>Design capacity:</i> 2 200 000 pairs of shoes per year. <i>Total project cost:</i> 1 644.905 mln. RUB.	<i>Project efficiency:</i> -creating up to 2,961 tax payments to the different

			- a payback period – 8 years.	level budgets up to 546,7 mln RUB
5	JSC “Energiya Plus”	Serialization of energy resources metering devices in the territory of the Chechen Republic	<i>Design capacity:</i> up to 180 000 pieces. <i>Total project cost:</i> 270,0 mln. RUB.	<i>Social project efficiency:</i> creating about 56 additional vacancies.
6	JSC “Novye kompozitnye tekhnologii (New composite technologies)”.	Organization of the large research and production cluster on introduction and development of energy efficient technologies in the Chechen Republic	<i>Design capacity:</i> 9059,617 tons of support per year. <i>Total project cost:</i> 1,837.0 mln. RUB. - a payback period is 9 years 11 months.	<i>Project efficiency:</i> -creating up to 343 new vacancies; -the budgetary efficiency is 242,447 mln. RUB (average annual value)
7	JSC “PIK-Altenergo”	Electric power generation on the basis of renewables, by constructing and commissioning the chain of hydroelectric power plants on the river Argun.	<i>Design capacity:</i> total power of this object is 89 MWth. - a payback period is 15 years	<i>Project efficiency:</i> -creation of 50 new vacancies; -tax payments to the different level budgets up to 43,2 mln. RUB.
8	Ministry of Industry and Energy of ChR.	Electricity supply of scarce areas of the republic by developing hydroelectric potential of small mountain rivers	<i>Design capacity:</i> 15 MWth. <i>Total project cost:</i> 850,0 mln. RUB.	<i>Project efficiency:</i> -creating up to 50 new vacancies; -tax payments to the different level budgets up to 6,9 mln. RUB.
9	PJSC “Rosneft Oil Company”	The investment project “Construction of the oil refinery in the territory of ChR”	<i>Design capacity:</i> 1 mln.t. of oil per year <i>Total project cost:</i> 17089,0 mln. RUB. -a payback period is 9,9 years	<i>Project efficiency:</i> -creation of 400 new vacancies; -tax payments to the different level budgets up to 683,56 mln. RUB.
10	Ministry of Industry and Energy of ChR.	Upgrading and retooling of gas distribution pipelines in the territory of the Chechen Republic.	<i>Funding needs:</i> 21785,94 mln. RUB, including costs for developing the design and estimate documentation – 1646,780 mln. RUB.	<i>Project efficiency:</i> -creating up to 134 new vacancies
11	Integrated use of geothermal water energy of the republic.	Organization of integrated use of geothermal water energy of the republic.	<i>Project efficiency:</i> The planned internal rate of return on the project is 9.6%	Environmentally friendly production from renewable energy sources

To transfer from the Russian industry and economy in general, and in the considered region in particular, to the model of innovative sustainable development it is necessary to overcome negative consequences of destructive deindustrialization of the economy, taking place in the ninetieth – the beginning of two-thousand years (Idigova, Hadzhiyeva, & Dudaev, 2017).

7. Conclusion

Formation of the effective industry in the Chechen Republic, providing high competitive positions of producers in the internal and external markets, the development of the knowledge-intensive productions, technical and technological modernization of the industrial enterprises, introduction of modern methods of business management as well as increase on this basis of the standard of living and employment of the population are the main objectives and the directions of economy development in the republic. The solution of these tasks is impossible without utmost improvement of investment climate in the republic. the effective control system of the intellectual capital, knowledge and information is necessary For successful development of the industry production systems it is necessary to develop the effective management system

of intellectual capital, knowledge and information. Creation and use of information and knowledge is the basis of sustainable development of the modern industry.

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