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Innovative Potential as a Factor of Increasing the Competitiveness of the Republic of Tatarstan

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ABSTRACT

It is generally accepted that oil and gas are the main wealth of Tatarstan, but to maintain the competitiveness of the region, both on the Russian and on the international arenas, not the resources that the region possesses but innovation and its innovative potential come to the fore.

The absence of the generally accepted concept of "innovative potential" makes it impossible to determine its rational size, and also distorts the assessment of the influence of innovative potential on the development of the economy.

Numerous rating agencies do a regular analysis of the innovative potential of the country and its subjects for monitoring and management purposes. The Republic of Tatarstan takes leading positions in the ratings of innovative regions of Russia and the investment attractiveness of the regions for the last several years.

The republic's leadership focuses on the region's innovation, on its ability to adapt for changes and generate products of scientific and technological progress, that is an important factor of competitiveness.

Tatarstan actively interacts with other regions to create innovative products, new industries and spheres of economic activity. This mutually beneficial cooperation provides the republic with innovative leadership and competitiveness.

Keywords: Innovations, Innovative potential, Efficiency of innovative activities, Region, Scientific and technical potential.

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INTRODUCTION

For the last decade Russia sets the task - establishing and maintaining a high standard of living for the population, consolidating Russia's position in the world arena in the lists of leading countries. The development of the Russian economy in the innovative development of the country is one of the priority actions to achieve the task [1].

According to R. Nazarova and A. Kalyasheva, innovations are some kind of fuel, feeding the economy, and the more this fuel the quicker there is a development of society and payback of expenses of innovative activities [2].

The low effectiveness of innovative activities in the Russian Federation has become a scourge of the last years. This fact confirms by results of rating in The Global Innovation Index 2017 of the most innovative countries, held annually by the World Intellectual Property Organization (WIPO) of the United Nations Organization, where Russia moved on 75 place from 127 countries that participated in the research in 2017, fall on 15 points over the last three years. There is a lack of interest from the government and business to the results of innovative developments, which is confirmed by a fall in this indicator by four points (51st place).

Reduction of innovation activity in the country can under certain conditions lead to the emergence of a threat to economic security, harming the interests of the Russian Federation in the world space.

In March 2018, Russian President Vladimir Putin in the annual message to the Federal Assembly noted: "... the speed of technological change is growing rapidly, and is moving up sharply. Anyone who uses this technological wave will break far ahead. Those who cannot do this, this wave, will just overflow, will drown. Technological lagging, dependence, mean a decrease in the security and economic opportunities of the country, and as a result - the loss of sovereignty" [3].

The development of innovative potential is one of the main factors of the sustainable development of the country, increasing its competitiveness in the world arena. The innovative potential of the country consists of the innovative potential of its regions.

METHODS

This research is based on a general scientific dialectic method of knowledge. In this work we use the data from the Territorial authority of Federal State Statistics Service in the Republic of Tatarstan and data from the rating, information and analytical agencies.

RESULTS AND DISCUSSION

Works of the Russian and foreign scientists are devoted to problems of assessment of innovative potential within regional economy: A.G. Granberg, D.S. Lvov, A.P. Egorshin, L.I. Abalkin, I. Schumpeter, E. Mansfield [4], M. Porter [5], B. Nelson [6], J. Christopher [7], and others.

The concept of "Innovative potential" of the country, region, industry, enterprise appeared at the end of the twentieth century [8], but to the present day there is no single determination.

In the interpretations of the concept "innovative potential" provided on present day, authors consider one or several essential characteristics of this phenomenon. As a rule, these approaches narrow scope of application and distort the reality of this important category. Innovative potential is presented or as the information field about results of scientific and technical works and inventions, or is anchored to the national economy that also limits the sphere of its application.

Authors agree with opinion of D.G. Fedotenkov and A.A. Padalko, who in the work [9] are inclined to the fact that "the innovative potential contains the unused, hidden opportunities of cumulative resources which can be put in action to achieve the purposes of economic subjects".

As a result, on our days there is no unambiguous interpretation of essence of innovative potential that in turn complicates development of practical and methodological recommendations about its development and highly effective use, and has as a result an adverse effect on results of innovative activities [10].

In our opinion, the innovation potential of the region is the interconnection of the scientific, technical, educational and investment sectors under certain created conditions for the implementation of innovative activities in the region.

Rating agencies involved in building the rating of regions and their innovative potential in their methodical approaches actively use the system of indicators of quantitative and qualitative innovation development of regions. The Institute of statistical studies and economics of knowledge of the national research university "Higher School of Economics" for six years defines the Russian Regional Innovation Index (RRII), which includes 37 indicators grouped into four thematic blocks. The Republic of Tatarstan two years takes the top line in the rating, the value of the RRII is 0.5753, Moscow, the second place – 0.5361, St. Petersburg, the third place – 0.5207 [11].

Tatarstan is a region with great innovative potential. In 2016, the share of innovative products in the total volume of industrial production was 19.6%. This is not the best indicator of the region in recent years (0.99% to the level of the previous year). In the Volga Federal District, the region takes the second place after the Republic of Mordovia for the second year.

For several years Tatarstan is included into top three and takes the third place, after St. Petersburg (1st place) and Moscow (2nd place) in the rating of innovative regions of Russia, compiled by the Association of innovative regions of Russia (AIRR) [12], and the first place for the fourth year in a row in the national rating of the investment climate in the territorial subjects of the Russian Federation, submitted by the Agency of strategic initiatives in 2018 [13].

In the republic there are all segments of the sphere of science and technology: academic, university, industry and corporate. The structure of the scientific complex is presented in the Figure 1.

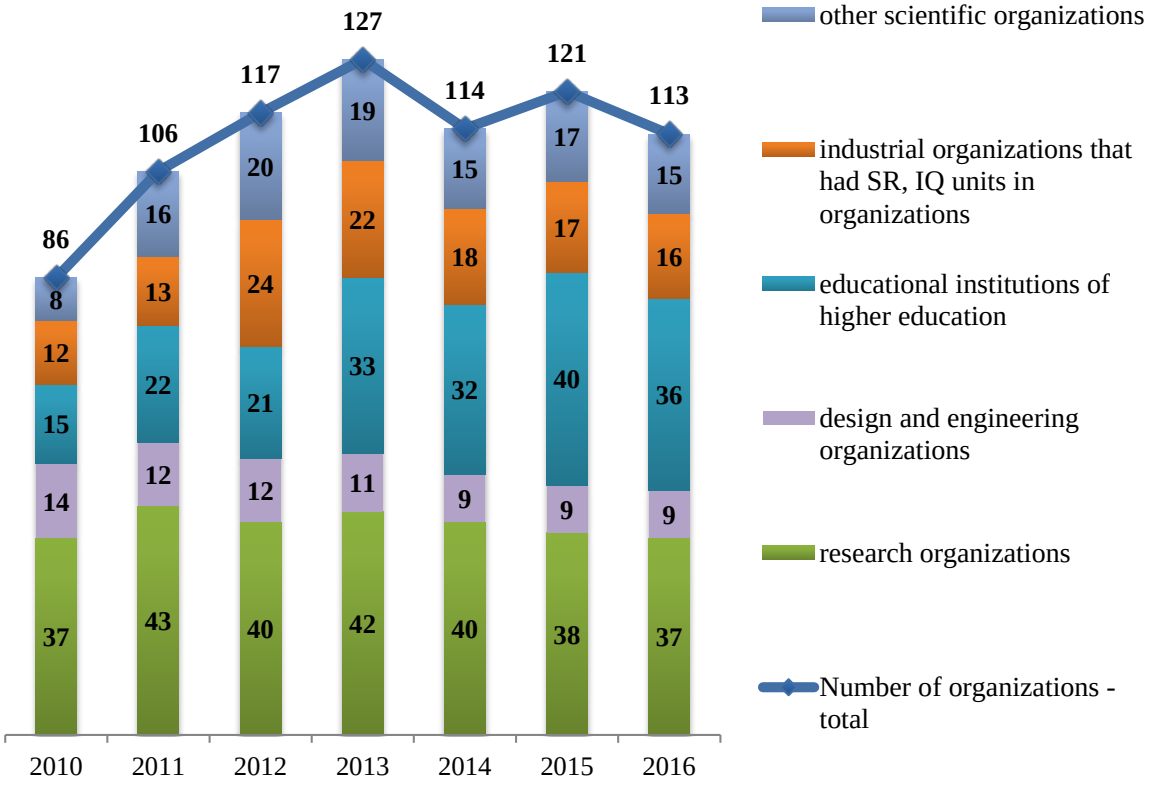

Figure 1. Structure of the scientific complex of the Republic of Tatarstan.

According to requirements and installations of the Strategy of innovative development of Russia for the period until 2020, the role of the higher school in the procedures for commercializing the results of scientific and technical activities is growing in the republic.

For the last years the internal costs on research and development in Tatarstan increased more than 10 times from 1,2 billion rubles in 2000 year up to 12,6 billion rubles in 2016 year. In structure of funding sources of Research and Development (R&D) in the region not budgetary funds dominate- more than 60% of expenses on science prevail, general in the country the value of this indicator is at the level of 35%.

Thus, the economic model of a scientific complex of the region answers the principle of "multichannel" financing of the research process [14].

The share of investments into science in the total amount of investments in the republic for the last years constitutes more than 2,5%, however if in 2014 year the indicator was 2,78%, then in 2016 year only 2,53% which is even lower than in 2012 year, 57%.

The volume of RW (Research Work) increased from 2012 for 2016 by 66.1%, provided that costs for Research Work increased by 31.8%, there is a faster growth of the effective indicator. The most effective was in 2016 year, when the volume of Research Work was 32112.8 million rubles.

For the period from 2012 to 2016 in the republic there is a clear reduction in the share of costs for research and development with outstripping growth in output (volume of scientific and technical work), which indicates the availability of control over the effectiveness of the use of invested funds.

Tatarstan is the region where is active, at the high government level, are supporting innovations, that is confirmed by a significant share of enterprises developing technological innovations (Figure 2).

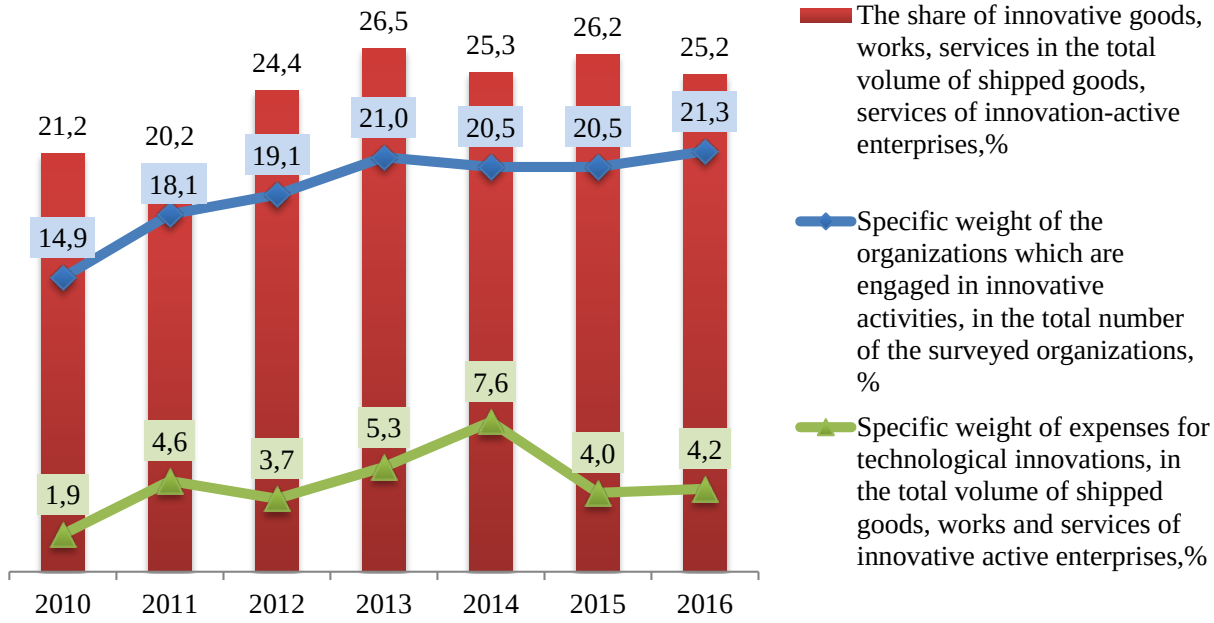

Figure 2. The level of innovation activity of large and medium enterprises and organizations of the Republic of Tatarstan, %

The share of innovative products in the total volume of shipped goods, works and services for the last four years steadily is higher than 25%, this confirms the high effectiveness of innovative activities in the republic.

Within the framework of the Strategy of social and economic development of the Republic of Tatarstan until 2030, one of the ways to increase competitiveness is the creation the zones of advanced development based on the cluster approach.

One of the growth points in the republic is the Kama agglomeration, where actively develops the largest cluster of federal importance - the Kama innovative territorial and production cluster. The cluster has a powerful innovative potential, which determines the Kama agglomeration as a defined point not only for Tatarstan, but for the Russian Federation as a whole.

The uniqueness of the Kama cluster can be considered the crossing of interests of two largest sectors of economy: automotive industry and petrochemistry. It creates synergy effect of cluster development and allows creating new productions in innovative spheres of economy: additive technologies, robotics, IT technologies, and other. However, the underdevelopment of infrastructure which considerably lags behind requirements of the industry, constrains effective development of cluster and agglomeration.

In June 2016, the Government of the Russian Federation approved the Concept for the creation a territorially separate innovation and production center "InnoKam". The concept was jointly developed by Tatarstan and by the Ministry of economic Development of the Russian Federation the purpose is a permission of infrastructure restrictions in the Kama agglomeration and the Kama cluster. The main directions of the concept are: quality of life, innovation, production, infrastructure and agglomeration. The result of the project will be the creation of a cluster of high-tech industries that are competitive at the global level. At the same time, labor productivity and export volume will increase 1.5 times by 2020, and the amount of the involved investments will make more than 700 billion rubles [14].

The innovative structure of Tatarstan is developed at the high, modern level and includes almost all infrastructure elements of economic and scientific activities:

- Two special economic zones «Alabuga» and «Innopolis»;
- Technopolis «Himgrad»;
- A network of technoparks (Technopark in the sphere of high technologies "IT Park", Technopark "KNIAT", Innovative and Production Technopark "Idea" and others);
- Industrial parks (Kama industrial park "Master", Center of nanotechnologies of the Republic of Tatarstan and others).

One of the latest trends in the development of innovative infrastructure in the republic was the creation of prototyping centers and regional engineering centers. These centers are necessary for the introduction of modern innovative technologies in industry and other sectors of the economy.

Within the subprogram "Development of a small and average entrepreneurship" of the state program of the Russian Federation "Economic development and innovative economy" 6 high-tech centers have been created and successfully operating in Tatarstan:

- Regional Engineering Center "KAI-Laser";
- Regional engineering center of medical simulators "Center of Medical Science";
- Regional center of engineering in the sphere of chemical technologies;
- Regional center of biotechnology engineering;
- Center of prototyping and implementation of native robotics;
- Center of prototyping "Center of digital technologies".

In the rating of investment attractiveness of regions in 2017 according to Expert RA at Tatarstan "average potential - a minimum risk (2A)" [16]. The Republic of Tatarstan is in the block (2A) since 2014, and before during 2012-2013 was in the leading block (1A). That is, Tatarstan has lost its leading position on the investment attractiveness of the regions four years ago and cannot make up for lost time. This fact points to the need to activate and strengthening of innovative potential of the republic for building-up of competitive positions. Innovations should become the basis for effective development of the economy of the Republic of Tatarstan.

SUMMARY

The Republic of Tatarstan is a region with high innovative potential. This status is confirmed by the results of researches which are annually carried out by the leading rating agencies of the Russian Federation on identification the most innovatively and investment active and attractive regions.

In Tatarstan, a high proportion of organizations that carry out technological and non-technological innovations, as a result, the share of innovative goods, works and services, as well as the number of employees in high-tech and mid-tech activities above the average Russian values. The Republic is distinguished by the initiative and innovative activity of the regional authorities. Tatarstan actively and successfully participates in the competitions, held by federal executive authorities and federal institutes of development, holds public innovative events.

The weak side in the innovative development of Tatarstan is: a low share of high-tech and knowledge-intensive industries in GRP, a low proportion of the small enterprises that carry out technological

innovations, insufficient internal the insufficient size of internal costs for research and development in GRP, low number of articles published in the reviewed journals indexed by Russian Scientific Citation Index

CONCLUSIONS

Increasing the competitiveness of the region by strengthening the innovative potential of the economy of the Republic of Tatarstan will help to reach the higher rates of economic development. The innovation of the region is the ability to introduction of the advanced progressive technologies, to formation clear to understand accurate and effective approaches to management of innovative activity.

Creating a favorable environment for innovative active enterprises, ensuring support for science-intensive small and medium-sized businesses will provide the sustainable development of the Republic of Tatarstan. Advance of innovative products and new kinds of activity around traditional resource opportunities of Tatarstan (oil, gas) will be provide to the region a stable innovative leadership and competitiveness for many years.

Creation of the favorable environment for innovatively active enterprises, ensuring support for the knowledge-intensive small and medium business will provide sustainable development of the Republic of Tatarstan. Advance of innovative products and new kinds of activity by passing traditional resource opportunities of Tatarstan (oil, gas) will be provided to the region by his stable innovative leadership and competitiveness for many years.

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