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Scientific and Technological Problems of National Security

The Problems of Providing Scientific and Technological Safety

In accordance with the Concept of National Security of the Republic of Belarus, scientific and technological safety of the country – a state of national scientific and technological and educational potential, providing the possibility of implementing the national interests of Belarus in the sphere of science and technology [*Concept of National Security*..., 2010].

Technological evolution is the source of a fundamentally new threats by providing previously inaccessible possible negative impact on the individual, society and the state. The information sphere is transformed into a system-factor in the life of individuals, societies and states. The role and influence of the media and global communication mechanisms for economic, political and social situation. Information technologies are widely used in the management of major critical infrastructure, which are becoming more vulnerable to accidental and intentional actions. There is an evolution of information warfare as a new form of independent strategic global competition. Distributed practice is focused informational pressure that causes substantial damage to national interests [*The State Program*..., 2011, p. 164].

The main national interests in science and technology field are:

– formation of an economy based on knowledge, ensuring the development of science and technology as a base for sustainable innovation development of Belarus;
– creation of new industries, sectors of advanced technological structures, intensive technological upgrading of basic sectors of the economy and the introduction of advanced technologies in all spheres of society;
– expanding its presence in Belarus on the world market of intellectual products, high technology products and services that mutually beneficial international scientific and technological cooperation and involvement in the economy of the country's world-class technologies.

In the scientific and technological sphere formed the basic elements of the national innovation system. Scientific, technological and innovative develop-

ments reoriented to the specific needs of economic, social and other spheres, increasing their effectiveness.

Remain low research intensity of GDP and the share of innovative production in total industrial production. An effective national innovation system as a whole has not been created. Not developed an innovative infrastructure, high technology equipment wear.

In the scientific and technological sphere by internal sources of threats to national security are:

– research intensity of GDP below the critical level necessary for the reproduction of scientific and technological capacity;
– low level of innovation activity and the susceptibility of the Belarusian economy;
– ineffectiveness of the national innovation system, including legislation, infrastructure, technology transfer from science to manufacturing, material and technical base of scientific institutions, the financing system, the industry (firm) science;
– unfavorable age structure and the lack of scientific training.

In the scientific and technological sphere the main external sources of threats to national security are:

– restricting access of Belarusian researchers and business entities to the latest technologies, the results of research and development world-class;
– deliberate policy of foreign countries and companies, enabling the emigration of highly qualified scientists and experts from the Republic of Belarus.

The major direction of the neutralization of domestic sources of threats to national security science and technology field is the completion of the formation of an effective national innovation system and implementation of new technology strategy for the economic development of Belarus.

Institutional "completion" of the national innovation system involves creating a modern regulatory framework that embodies the most favorable conditions for innovation, development of scientific and technical products and its infrastructure, the widespread use of venture capital and hedge funds, commercial introduction and expansion of exports of intellectual property systematic renewal of the material-technical base of science, the organization of world-class technology parks, capable of implementing large-scale innovative projects to attract foreign direct investment, to provide for the creation and development of high-tech industries.

The annual increase in GDP and knowledge-intensive approach its meaning and structure to that of EU countries will increase innovative activity and the susceptibility of the Belarusian economy will strengthen the industry (firm), science, improving the age structure of highly qualified scientific personnel capable of working in a competitive knowledge-based economy [Untura, Kaneva, 2010, p. 214–228].

Establishing an effective system of incentives for the development of high-tech industries and the mechanism of cross-flow of financial, human and material resources from declining sectors of the economy in the long-term, comprehensive computerization of the economy and society ensure the formation of a qualitatively new technological order in the Republic of Belarus, expansion of exports of high technology products, attract foreign investment and integration of national innovation system in the global innovation system in the world.

To protect against external threats to national security in the field of science and technology should be provided with research and development priority for the Republic of Belarus technologies, their expanded reproduction in the structure of the national economy. The development of the industry production base design component of higher technological structures will provide material and technical basis for safe operation of critical facilities, systems and infrastructures.

Strategic factor is the development of access to the international electronic databases of scientific and technical information, the creation of international scientific laboratories and centers, as well as providing the most favorable economic and image conditions for research in Belarus, and investment in its innovative science sector, the creation of new innovative enterprises.

The key should be the formation of expert system technology foresight, the implementation of continuous monitoring of the market of scientific ideas and conduct of the legal protection of intellectual property [Ettlie, 2006].

The industrial sector should focus on the creation of joint companies for the production of high-tech and complex technical products, the development of knowledge-intensive services sector. Effective factor in solving the problems should be exporting capital (technology) in the third world countries, the creation of overseas assembly plants on the Belarusian technologies.

In the field of information in order to neutralize the internal sources of threats to national security are improved mechanisms for the implementation of citizens' rights to receive, store, use and disposal of information, including the use of modern information and communication technologies. The State guarantees the provision of the statutory procedure for access to government information resources, including remote, and opportunities for obtaining information services. A significant step will be to develop and implement a comprehensive strategy for information, focused on the development of an electronic system of the administrative procedures provided by the citizens of businesses and government agencies and other organizations, and the transition of the state apparatus to work on the principle of information exchange. Accelerated the industry will develop information and communication technologies. Particular attention will be paid to the consistent quality, volume and competitiveness of national content, which is designed to occupy a dominant position within the country, and his promotion to the external information environment.

The priority is to improve the regulatory framework to ensure information security and complete the formation of a comprehensive national information security system, including through the optimization of the mechanisms of state regulation of activities in this area. At the same importance given to law enforcement capacity to prevent, detect and suppression of crimes against information security and reliable safety information that is protected in accordance with the law. Actively continue to develop and the introduction of modern methods and means of information protection in the information systems used in infrastructure, which is vital for the country, the failure or destruction of which could have a material adverse effect on national security.

Neutralization of a number of internal sources of threats to national security information helps ensure public policy, which is bringing to the citizens of the Republic of Belarus and the external audience of objective information on public course in all spheres of society, an official position on socially significant events at home and abroad, on the activities of state agencies. An important objective is that the expansion of channels and improving the quality of informing the public abroad. An integral part of information support of public policy supports information warfare, which is the integrated use of information, technical and other methods, ways and means to influence the scope of information in order to achieve political, economic and other problems or protect their own information space.

Protection against external threats to national security in the information field is carried out by the participation of the Republic of Belarus in the international treaties governing the equitable global information exchange, creation and use of interstate, international global information networks and systems. In order to avoid technological dependence the state will retain a regulatory role in the implementation of foreign information technology [*Concept of National Security*..., 2010].

ANALYSIS OF THE DYNAMICS OF INNOVATION

In the analysis of innovation is widely used parameters related to two levels:

1) Indicators of innovative potential, reflecting the structure of the resources used:
   - The share of researchers in the number of employees;
   - The composition of domestic expenditure on research and development, and their share in GDP [Logunov (http)];
2) Indicators of innovation activity, allowing both quantitatively and qualitatively describe the innovative products. They are connected both to the scale of the production of innovative products in the country, and with innovative quality products (the degree of novelty):
   - The proportion of expenditure on innovation in products shipped – a-stick characteristics of the intensity of the innovation process;

- Cost of product innovation;
- The level of exports of innovative products;
- The share of innovative products shipped;
- The proportion of new to market innovative products in an innovative product;
- and others.

Study of first-level indicators will begin with an analysis of the state of one of the main factors of innovative development – human capital. In the analysis revealed that the number of researchers in the 10,000 employees of Belarus in 2009 (69) ahead of the average performance of countries in Europe such as Slovakia (59), Ukraine (54), Latvia (55), Bulgaria (49), Poland (43), Moldova (36), Romania (29) [*Science and innovation*..., 2011, p. 146; *Belarus and the countries*..., 2011, p. 268].

However, this indicator of Belarus lags far behind developed countries in indicators of the EU and other countries: Luxembourg (220), Finland (209), Denmark (195), Iceland (174), Sweden (154), Switzerland (142), Norway (141), France (137) Austria (135) Germany (124) Japan (132), Canada (126) United Kingdom (109) and others. The level indicator in Russia (110 per 10 thousand employees) are also significantly higher than in Belarus.

In the study of the dynamics of this indicator noted that Belarus and Russia, in 2009 compared to 2000 there was a decrease in its level, and in some Western European countries there is a significant increase in the proportion of researchers, such as Denmark (148% growth), Austria (135%), Slovenia (134%), Norway (110%), Switzerland (109%), France (107%) [*Science and innovation*..., 2011, p. 146; *Belarus and the countries*..., 2011, p. 268].

Distribution of researchers by sector (government, business, higher education and nonprofit) in Belarus differs significantly from the European countries towards a lower share of researchers belonging to the higher education sector. In addition, much of the research relating to the business sector, do not work directly in production, in this regard, enterprises not oriented in the scientific and technical issues necessary for their innovative development, which generates an error in the management of innovation.

In studying the distribution of researchers by fields of science it was found that the largest share of research capacity is concentrated in the area of technical sciences, and the proportion of researchers in this area increased from 54,4% in 2000 to 61,7% in 2010, second place is occupied science, but their share decreased from 23,7% to 18,6%.

The next indicator in the first group of indicators is the level of spending on research and development. Its value in Belarus is very different from both the level of European States and other developed countries. Since the share of domestic expenditure on research and development in GDP of Belarus (its share in 2009 amounted to 0,64%) is significantly lagging behind the performance of

Western European countries: Finland (3,9%), Sweden (3,6%), Iceland (3,1%), Switzerland (3%), Germany (2,8%), Austria (2,8%), France (2,2%). A very high level indicator in a number of countries: the U.S. (2,8%), Japan (3,4%), Israel (4,9%), Republic of Korea (3,4%). The share of expenditure in Russia (1,1%) is also higher than in Belarus, which was just above the level of some former Soviet republics: Armenia (0,2%), Kazakhstan (0,2%), Kyrgyzstan (0,2%), Moldova (0,4%), Latvia (0,5%). In analyzing the dynamics of this indicator revealed that in Belarus the share of costs in the level of 2009 compared to 2000 decreased from 0,72% to 0,64%. At the same time in many countries of Western Europe marked its growth: Austria (142%), Denmark (134%), Slovenia (135%), Switzerland (119%), Finland and Iceland (117%), Germany (115%). Also, a slight increase in the indicator is marked in Russia (103%) [*Science and innovation*..., 2011, p. 146; *Belarus and the countries*..., 2011, p. 268].

In Belarus, there are significant differences between the developed countries in the structure of expenditure on technological innovation industry organizations. The largest share of the country occupied by the costs of acquiring machinery, equipment and software (65,5% in 2010), and the level of the types of costs are constantly rising, but from the standpoint of innovation acquisition of machinery and equipment is the most progressive input intensities and the least activity.

The costs of research and development carried out on their own, are among the more progressive, but in our country they represent only 11% of the total cost. In Russia there is a similar situation: the share of the first group is 60,8% of the costs, and the second – 10,5%. In the developed countries of Europe the ratio of these groups is different: in Sweden (13,4% and 63,2%), Denmark (18,8% and 62,4%), Netherlands (19% and 62,5%), Luxembourg (32,5% and 53,8%), Belgium (38,6% and 42,2%), Ireland (37,6% and 34,5%) [*Science and innovation*..., 2011, p. 146].

One indicator of innovative activity in the country and regions are indicators of sales of innovative products.

In one of the major indicators of successful innovation – the share of innovative products shipped – Belarus is considerably inferior to European countries. Moreover, there was decline in the share of innovative products from 15,2% in 2005 to 10,9% in the crisis year of 2009, and then has been an increase to 17,4% in 2011, which was exceeded pre-crisis level [www.belta.by/ru].

The share of innovative products shipped differs greatly in different industries. The highest rate of innovative products that are put on the market, marked by the production of machinery and equipment – 45,2% with an annual forecast of 35%. In the manufacture of vehicles and equipment, the figure was 33,3% in January (the forecast 38,5%). Also, a high proportion of innovative products made in the manufacture of electrical, electronics and optics – 26,5% (the forecast 24%) and in the metallurgical industry – 23,1% (20%) [www.belta.by/ru].

Despite the increase in value of exports in absolute terms, reduced its share in the total volume of innovative products shipped from 83% in 2005 to 50,7%

in 2010, during the same period the share of exports to CIS countries rose from 25,4 % to 29,4% [*Science and innovation*..., 2011, p. 146].

In Belarus, it may be noted a lower level of research intensity in all economic activities in the industry, calculated as the ratio of domestic expenditure on research and development to the value of products shipped, compared to an average level of similar industries. The level of research intensity in Belarus over the past five years, barely 1% in 2008, again declined to 0,9% in 2010. Among the reasons for such differences are quantitative indicators of science intensity of European countries and of our country are the specifics of production process in our country, an old industrial base of domestic enterprises, low-innovation industries, due to many reasons, including lack of funding, and others.

THE DEVELOPMENT OF INFORMATION AND COMMUNICATION TECHNOLOGIES

Go to the innovative new-technological structure, formation and growth of which will determine the economic dynamics in the coming years, characterized by increasing instability, causing the need to transform the economy. This occurs in an environment where information sphere is transformed into a system factor of society.

In all spheres of society are being actively implemented modern information and communication technologies (ICTs). One of the aims of statistics is the collection, processing, storage, protection and analysis of information on ICT statistics. In this connection special importance is the analysis of the ICT sector, which makes it possible to evaluate the effectiveness of information security company. Currently, the country remains behind the leading countries in terms of information. In the ICT sector is working at present only 2% of the population of workers employed in the economy. This is significantly less than the share of ICT sector employment in the economically developed countries: in Sweden it is 4,8%, Finland – 4,5%, the UK and Denmark – 3,6%, Netherlands – 3,4%, France – 3,2%. The share of ICT sector in Russia and is also higher than 2,8%. Most of the workers engaged in the ICT sector in Belarus in the sphere of production, installation and maintenance of equipment (41,5% of total) and in the provision of telecommunications services (36,4%) [*Information Society*..., 2011, p. 89]. In 2010, the proportion of organizations in Belarus, with Web sites was 34%, while in 2008 in Denmark, Sweden, the Netherlands and Finland, it exceeded 80% in Germany, Norway, Belgium, Britain, Czech Republic, Slovenia, he reached a level of 70% or higher. Based on the information of the International Telecommunication Union in terms of the number of Internet users per 100 thousand population of Belarus in 2008 to 29,4 by the level ahead of all CIS countries except Russia (32.1 per user), but significantly behind the EU , and the

level of backlog amounted to some 2–3 times: the Netherlands had 86,4 user, Denmark – 84,8 Finland – 82,8, United Kingdom – 79,6 Germany – 76,0 etc. [*Information Society...*, p. 83–84].

The value of innovation lies in the fact that science and technology are key factors increasing the level of innovation and quality of goods and services.

ANALYSIS OF THE INFLUENCE FACTORS ON THE INDICATORS OF INNOVATION ACTIVITY

Indicators of innovative capacity and the activity can identify the strengths and weaknesses of the innovative development of the country and its regions, to find the barriers to innovation. The analysis of indicators can be used as management tools, economic systems at different levels.

Table 1 presents data characterizing the dynamics of the innovation activity of economic entities of the country.

Table 1. Dynamics of the innovation activity of economic entities of the country

Indicators, billion rubles	Years			
	2005	2008	2009	2010
The cost of technological innovation (CTI)	2362,1	2947,6	2700,4	2793,3
Domestic expenditure on research and development (DER)	441,5	962,4	883,3	1140,6
The products shipped (PS)	46063,1	94281,7	92803,6	128232,1
Innovative products shipped (IPS)	7003,6	13410,2	10089,2	18609,5
Export of innovative products (EIP)	5811,9	7928,2	5218,1	9433,6
Export innovative products to the CIS countries (EIP_{CIS})	1778,7	4581,3	2811,2	5465,1

Note – Source: own elaboration based on data from [*Science and innovation...*, 2011, p.146; *Statistical Yearbook...*, 2011, p. 633].

As the table shows, all presented figures for recent years are a positive trend. The fastest growing rate of the value of products shipped (2,8 times) and shipped innovative products (2,7 times). The highest growth rate recorded for the export of innovative products in the CIS countries (three times). Significantly increased domestic expenditure on technological innovation (2,6 times) compared to the cost of technological innovation (1,2 times).

Analysis of the influence factors on the proportion of expenditure on technological innovation in products shipped to fulfill the following models:

$$\frac{CTI}{PS} = \frac{CTI}{DER} \cdot \frac{DER}{GDP} \cdot \frac{GDP}{IPS} \cdot \frac{IPS}{PS} \tag{1}$$

where
CTI – the cost of technological innovation,
PS – the products shipped,
DER – domestic expenditure on research and development,
IPS – innovative products shipped.

Thus, between the share of expenditure on technological innovation in products shipped (CTI / DER), and such indicators as the share of domestic expenditure on R & D in GDP (DER / GDP), the share of innovative products shipped (IPS / PS), the ratio of domestic expenditure on research and development and costs of technological innovation (DER / CTI), the ratio of GDP and shipped innovative products (GDP / IPS) there is a relationship that is represented as an index of factor models and describes the relationship of indicators of innovative capacity and activity.

We analyze the influence of these factors on the dynamics of the share of expenditure on technological innovation in products shipped in 2005–2010 (Table 2).

Table 2. Contribution to the change in input intensities performance products

The contribution rates	Change in share of expenditure on technological innovation in products shipped by factors over the years, %		
	2005–2010	2008–2010	2009–2010
The ratio of domestic expenditure on research and development and costs of technological innovation (CTI/DER)	-88	-58	-74
The share of domestic expenditure on R & D in GDP (DER/GDP)	5	-18	30
The ratio of GDP and innovative products shipped (GDP/IPS)	-9	-30	-190
The share of innovative products shipped in products shipped (IPS /PS)	-8	6	134

Note – Source: own elaboration based on data from [*Science and innovation*..., 2011, p.146; *Statistical Yearbook*..., 2011, p. 633].

Note that during all the periods analyzed there was a decrease share of expenditure on technological innovation in products shipped from 5,1% in 2005 to 3,1% in 2008, 2,9% in 2009 and 2,2% in 2010, i.e. more than 2,3 times. Therefore, the study of the role of factors in the reduction of the effective index of the

influence of the factor with the sign (-) indicates the contribution to the reduction of the result, and with the sign (+) in its increase.

The table shows that the influence of the first factor for all periods is sufficiently strong (from 58 to 88%), but it is negative. This is due to the constant decline in the first factor (from 2005 to 2010 – 48%), due to a slight increase in expenditure on technological innovation (118%) compared with an increase in domestic expenditure on research and development by 2,6 times. The third factor also leads to a decrease in the effective rate, although the decrease of this factor indicates a positive trend for its inverse indicator – namely, growth in the share of innovative products shipped to the GDP.

Growing share of domestic expenditure on research and development in the GDP had a positive effect on the effective rate for the 2005–2010 years, which has intensified in recent years. The negative contribution factor for the 2008–2010 years explained by the fact that so far failed to reach pre-crisis level in 2008, but there is an upward trend – increasing the level of this factor from 2005 to 2010 by 9%. In the future, this trend should help increase the innovation level of GDP.

The essence of economies of scale of expenditure on technological innovation lies in the fact that their growth is accompanied by the introduction of more expensive, but at the same time, more efficient technologies.

The fourth factor in the recent years has provided a positive effect, which is due to the positive trend to increase in 2008–2010 years share of innovative products in the products shipped, but the level of 2005 has not yet been reached. This is due to the advanced growth of the products shipped to shipped to innovation, namely, for the first five years rose by 2.8 times compared with the second increase of 2.7 times.

Next, we consider the influence of factors on the change in one of the indicators of innovation activity – the cost of shipped innovation products industry in the republic based on the following models:

$$IPS = CTI \cdot \frac{EIP}{CTI} \cdot \frac{EIP_{CIS}}{EIP} \cdot \frac{PS}{EIP_{CIS}} \cdot \frac{IPS}{PS}, \tag{2}$$

where
the EIP – export of innovative products,
EIP_{CIS} – export innovative products to the CIS countries.

During the study period (Table 3) the cost of shipped product innovation organizations in the republic's industry has grown 166%. In the study of factors affecting this change, it was found that for five years had a greater impact of export growth in the share of innovative products in the markets of CIS countries in total exports of innovative products (87% increase), in the past two years, this influence is somewhat diminished.

During the period from 2008 to 2010 increased the role of the ratio of exports of innovative products to the cost of technological innovation to 91% of the total increase. This is due to export growth of innovative products to CIS countries in the 3-fold compared with an increase in cost by 18%.

Table 3. Contribution rates to the change in the shipped product innovation

The contribution rates	Change the shipped product innovation over the years, %		
	2005–2010	2008–2010	2009–2010
The cost of technological innovation (CTI)	11	- 13	4
The ratio of exports of products to the cost of technological innovation (EIP/CTI)	27	62	91
Export share of innovative products in the markets of CIS countries in total exports of product innovation (EIP_{CIS}/EIP)	87	1	16
Coefficient of shipment of the product in relation to exports to the CIS (PS/EIP_{CIS})	- 17	43	- 66
The share of innovative products in the shipped products (IPS/PS)	- 8	7	55

Note – Source: own elaboration based on data from [*Science and innovation*..., 2011, p.146; *Statistical Yearbook*..., 2011, p. 633].

The negative impact of the change of shipped product innovation has shipped production ratio in relation to the export of innovative products in the CIS. This is due to outstripping the growth rate of exports to CIS countries, compared with an increase in the value of products shipped.

We analyze the influence of factors on the export of innovative products in the CIS countries:

$$EIP_{CIS} = \frac{EIP_{CIS}}{EIP} \cdot \frac{EIP}{IPS} \cdot \frac{IPS}{CTI} \cdot CTI \,. \tag{3}$$

During the analyzed period (Table 4) a major role in increasing exports of innovative products in the CIS countries is given growth factor the ratio of exports to the cost of technological innovation.

Its contribution to total growth over the period ranged from 71% to 228%. It is associated with a significant increase in exports of innovative products in the CIS countries, compared with a growth rate of expenditure on technological innovation.

Table 4. Contribution to the change in export performance of innovative products in the CIS

The contribution rates	Changing the export of innovative products in the CIS countries due to factors,%		
	2005–2010	2008–2010	2009–2010
Export share of innovative products in the markets of CIS countries in total exports of innovation (EIP_{CIS}/EIP)	70	2	15
The share of exports in product innovation (EIP/IPS)	- 50	- 103	- 38
The ratio of innovative products shipped to the cost of technological innovation (IPS/CTI)	71	228	86
The cost of technological innovation (CTI)	9	- 27	37

Note – Source: own elaboration based on data from [*Science and innovation...*, 2011, p.146; *Statistical Yearbook...*, 2011, p. 633].

Decline in the share of exports in product innovation over the past five years has provided a permanent negative impact on export growth of innovative products in the CIS countries. This suggests that in order to improve the quality of exports, namely, exports to CIS countries and far abroad, it is necessary to promote the export of innovative products and enhance scientific and technological capabilities of enterprises.

To move businesses to a higher technological level of innovative activity, they need a quantitative leap in the volume of unit costs for technological innovations that will contribute to the competitiveness of products and organizations in the country.

Upon reaching the competitive scientific groundwork necessary to ensure adequate funding of technological innovations carried out in enterprises. Currently, equity in the enterprises in most cases is not enough. The share of equity financing in the amount of expenditure on technological innovation in industry organizations in 2010 was 38.9% compared with 77% in 2005 [*Science and innovation...*, p.112].

CONCLUSION

State innovation development program for 2011–2015 provides that in the next five years is planned to triple its exports of high technology products. It is expected that as a result of the program of Belarus will be able to significantly

increase exports of its products and services that address the issues of import to most types of products, enter one of the most competitive countries in the world. It is envisaged that by the end of 2015 the share of innovative products shipped into the country will reach 20%, the share of innovation-active organizations will be at least 40%. Gross domestic expenditure on research and development should be of 2.5 – 2.9% of GDP [*The State Program*..., 2011, p. 164].

Improving the investment climate in Belarus, required for the perception of innovation and creation of high-tech jobs is a necessary step in ensuring the attraction of budgetary funds and investors to support and implement innovative projects.

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Summary

Main areas of neutralizing the sources of threats to national security in the field of science and technology is the formation of an effective national innovation system and implementation of new technology strategy development of the economy. The study analyzed the influence of factors on the indicators of innovation development. These include indicators of innovative capacity, reflecting the structure of the resources used, as well as indicators of innovative activity, allowing both quantitatively and qualitatively describe the innovative products. Improving the investment climate in Belarus is a necessary step in ensuring the attraction of budgetary funds and investors to support and implement innovative projects.

Naukowe i techniczne problemy związane z bezpieczeństwem narodowym

Streszczenie

Głównym obszarem neutralizowania źródeł zagrożeń dla bezpieczeństwa narodowego w dziedzinie nauki i techniki jest tworzenie skutecznego krajowego systemu innowacji i wdrażania nowych strategii rozwoju technologicznej gospodarki. W badaniu przeanalizowano wpływ różnorodnych czynników na wskaźniki rozwoju innowacji. Są to wskaźniki zdolności innowacyjnej, odzwierciedlające strukturę wykorzystywanych zasobów, a także wskaźniki działalności innowacyjnej, dzięki czemu zarówno ilościowo i jakościowo można opisać innowacyjne produkty. Poprawa klimatu inwestycyjnego na Białorusi jest niezbędnym krokiem w zapewnieniu atrakcyjności środków budżetowych i inwestorów do wspierania i wdrażania innowacyjnych projektów.