Methodology of the ensuring the economic security for supply chains functioning					
Partial or complete introduction to the organization (enterprise) the standards ISO 28000, ISO 9000 or other					
standards in practice					
Conducting patent searches, if necessary, with all the ensuing follow-up actions (drawing up the patent					
for own invention, the industrial pattern, trade mark with the help of a specialist)					
Monitoring the condition of industry (sphere) in which the organization (enterprise) operates,					
international practice in the field of ensuring the economic security for supply chains functioning					
Increased level of technical equipment in the organization (enterprise), application of the licensed software					
products					
Carrying out the activities that contribute to the best possible result in the field of ensuring the economic					
security for supply chains functioning					
(for example, lecture, seminars for suppliers, clients, personnel)					

Fig. 1. Methodology of the ensuring the economic security for the supply chains functioning

Source: developed and compiled by the author.

However, it is important to understand that the clear methodology of the ensuring the economic security for the supply chain functioning in the organization (enterprise) does not exist. Certainly, there are standards that register substantive provisions of the ensuring the economic security, but each organization must constantly monitor not only its position in the markets (its competitors), but also it should be aware of international practice in this area, and, whenever possible, should adopt decisions to ensure economic security of the supply chain, which will be the most adapted for the organization (enterprise).

Thus, the standard ISO 28000:2007 is the international standard, developed by the International Organization for Standardization (ISO) in reply to the requirement of the global business community to strengthen the security of cargoes, vehicles and objects of the transport infrastructure from threats of terrorism, contraband and plunders. The main objective of this standard consists of strengthening of transport security and of unification of requirements for management systems of security (MSS).

Implementation and certification of management system of supply chains security allows to receive the organization (enterprise) assurance that its supply chain functions in safe conditions, and also to show the evidence of the reached level of security to all interested parties, including potential customers.

REFERENCES

- Melanich, E.V. Management system supply of security of supply chain. Standard ISO 28000 [Electronic resource] / E.V. Melanich. – Mode of access: http://qcert.ru. – Date of access: 27.04.2013.
- 2. ISO 28000 [Electronic resource]. Mode of access: http://www.rusregister.ru. Date of access: 28.07.2013.
- 3. The international standard ISO 28000:2007. Management system supply of security of supply chain. [Electronic resource]. Mode of access: http://www.icgrp.ru. Date of access: 06/05/2013.
- 4. APICS Dictionary. 8th ed. American Production and Inventory Control Society, 1995.
- 5. Terminology in Logistics // ANNEX Dictionary. European Logistics Association, 1994.

UDC 346.7(476)=111

REGIONAL PROBLEMS OF THE KNOWLEDGE ECONOMY DEVELOPMENT IN THE REPUBLIC OF BELARUS

ALIAKSANDR YEMIALYANAU, OLGA GORDIENKO Polotsk State University, Belarus

This article is presented the analysis of the preconditions of becoming the knowledge economy in the regions of the Republic of Belarus with the Knowledge Assessment Methodology developed by World Bank. Here is detected the main problems on the way to becoming the knowledge economy in the regions of the Republic of Belarus and proposed solutions of these problems.

At the moment, the economy of the Republic of Belarus is on the transformation period, the economy system of the country is being restructured. And now it is important to formulate the model that national economy should become. Note that the Republic of Belarus has no significant natural resource potential to compete with foreign countries in the world. At the same time, according to experts, it has a significant employment potential. Thus, the country's economy should be used the business model, which could realize this potential to the fullest. As such the model can be the knowledge economy.

Economics

Knowledge economy – is the highest stage of development of the post-industrial economy and the innovation economy [1]. It's the economy, where the main factors are the development of knowledge and human capital. The development process of this type of economy is to improve the quality of human capital, improve the quality of life and produce the knowledge, high technology, innovation and high-quality services.

According to experts, the Republic of Belarus has a significant research and innovation potential for the knowledge economy. However, the whole country and its regions as well as enterprises and organizations have significant drawbacks and barriers to transit to the knowledge economy.

In order to assess the readiness of countries to transition to the knowledge economy used Knowledge Assessment Methodology developed by World Bank. In accordance with this methodology are calculated:

1. KEI – Knowledge Economy Index – is an aggregate index that represents the overall level of development of a country or region in the Knowledge Economy. It is constructed as the simple average of following subindexes:

- economic incentive and institutional regime (EIIR);

– innovation;

- education;

- information and communication technologies.

2. KI – Knowledge Index – is an aggregate index that represents an ability to generate, accept and disseminate knowledge, and it is constructed as the simple average of three subindexes except subindex of economic incentive and institutional regime.

Let's use this methodology to assess the potential of the regions of the Republic of Belarus for the transition to the knowledge economy, which determines readiness of the country for the knowledge economy. To do this, let's analyze the data in table 1. It is presented the results of our earlier calculations subindexes and indexes of the knowledge economy made in accordance with the procedure KAM. On its basis it is possible to carry out a comparative analysis. Normalized value of economic incentive and institutional regime subindex is taken at a rate of 2.5 for all regions, as there are the same conditions for all administrative-territorial units of the Republic of Belarus.

Region	Rank	KEI	KI	EIIR	Innovation	Education	ICT
Minsk city	1	6,934	8,412	2,5	8,21	8,096	8,929
Minsk region	2	5,757	6,843	2,5	6,963	4,602	8,963
Gomel region	3	5,287	6,216	2,5	6,428	6,507	5,713
Vitebskregion	4	4,549	5,232	2,5	5,714	5,872	4,109
Brestregion	5	4,365	4,987	2,5	3,929	4,603	6,428
Grodno region	6	4,014	4,519	2,5	4,466	4,446	4,645
Mogilevregion	7	4,004	4,505	2,5	4,109	6,19	3,215

Table 1 – Indicators of the knowledge economy by regions of the Republic of Belarus in 2013

Source: author's own design using KAM [2].

As can be seen from Table 1, the leader of the knowledge economy index and knowledge index among the regions is Minsk city. It is no wonder because Minsk is a place of concentration of industrial, innovation, education and ICT areas. The second place has Minsk region that is inferior to other regions only education subindex. This is due to the lack of high schools in the region, and thus there are lower normalized values of many variables.

Vitebsk region is on the 4th place. Being higher in the ranking of the Brest region Vitebsk region inferior to it ICT subindex. Last place of this ranking is performed with Mogilev region. It is inferior to Grodno region in all variables except education subindex. Thus, it can be seen how much is difference in variables of region from the leader region and from each other. Analysis of these data enables a choice of the direction of development for each region.

There can be seen a significant variation in individual variables of KEI and KE for regions of the Republic of Belarus. Thus, a number of organizations engaged in R&D in Minsk exceeds almost 9 times a number of such organizations in other regions as well as there is the largest number of innovation-active organizations. The lowest value of this and the other variables is observed in Mogilev region that is why Mogilev region is on the last place among the regions in this subindex. Thus, there is a concentration of innovative potential only in one region, while the becoming of the knowledge economy should be carried out in all regions of the country in accordance with the policy of the Republic of Belarus in respect of their development in the direction of alignment of social and economic status.

Economics

In the Minsk city is concentrated the largest number of establishments of higher education and the largest number of students per 10,000 population of the region. It is noted the highest normalized value of the percentage of persons with higher education variable in the region. But its absolute value is not very high, what doesn't correspond to the concept of the knowledge economy. All of the above factors allow to carry out the effective preparation of high qualified specialists, which should be the core of the new economy, as acquired knowledge and skills ensure the growth and development of the state introduced and used the knowledge economy. The lowest values of the education subindex are observed in Minsk region, due to the presence of higher education establishments only in the Minsk city.

In the Minsk city values of ICT subindex exceeds many times the values of variables in other regions. Hence it can be seen that the other regions do not correspond to the concept of new economy and this fact will complicate the process of becoming of the knowledge economy in the regions of the Republic of Belarus, as the development of the ICT sector is the most important objective for countries in the transition to the knowledge economy. Because the accumulation and rapid exchange of knowledge and information are possible only using achievements of ICT.

The main problems that are common to all regions of the Republic of Belarus and reduce its capacity in the field of the knowledge economy are presented in the table 2.

Table 2 – Regional problems of Belarus on the elements of the knowledge economy in accordance with the procedure KAM

EIIR	Innovation	Education	ICT
a) an application of	a) a low degree of	a) reducing the budget	a) gap of the ICT sector
the strict policy of	susceptibility of enterprises and	funding for education	level on the level of
protectionism	organizations to innovate		developed countries
b) excessive	b) a low level of innovative	b) discrepancy between the	b) lack of access to
banking supervision	entrepreneurship activity	structure of specialist	information support
		training and needs of society	
c) bad conditions	c) lack of effectiveness of	c) lack of specialists with	c) the use of obsolete
for investment	government innovation	the skills	software and hardware
attracting	stimulation		
d) legislative	d) low interest of employees in	d) reduction in the quality of	d) a low level of training
weaknesses	the implementation of	higher education	in the field of ICT
	innovation		
e) unstable	e) insufficient funding for	e) lack of feedback from	
economic conditions	research activities	employers	
	f) weak infrastructure to		
	support innovation		
	g) lack of development of		
	intellectual property market		

Source: author's own design based [3, p. 20-24].

Presented in the table the problems of each area of the knowledge economy allow to identify the directions needed to take measures to remove obstacles to becoming a knowledge economy in the regions of the Republic of Belarus. There is needed a comprehensive solving of identified problems. Those are measures in all areas: economic incentive and institutional regime, innovation, education and ICT as they are closely linked.

Measures to overcome the obstacles on the way to becoming the knowledge economy in the regions of the Republic of Belarus can be represented by the elements of the KAM [4, p. 42-44]:

- 1. Economic incentive and institutional regime:
- a) mitigate of tariff regulation;
- b) the formation of the favorable investment climate;
- c) self-banks control for their activities;
- d) creation of adequate conditions for business.
- 2. Innovation:
- a) establishment of small innovative enterprises and support their state;
- b) the introduction of government and business partnership in innovation;
- c) intraentrepreneur;
- d) use of the CALS technologies;
- e) the establishment of strategic alliances for the implementation and application of R&D;

Economics

- f) use of venture capital;
- g) innovative activities in the field of IT-technologies;
- h) improvement of the legislation in the field of intellectual property.
- 3. Education:
- a) the introduction of government and business partnership in education;
- b) informatization of education;
- c) revision of curricula;
- d) conduction of internships on enterprises
- e) preparation of elite specialists;
- f) feedback from the employer.
- 4. ICT:
- a) improving of equipment;
- b) expansion of e-services;
- c) improvement of the legislation in the field of ICT;
- d) development of broadband access to the Internet;
- e) creation of ICT development.

Thus, carrying out the above activities, creating a culture of knowledge will lead the organizations in the region and the country to economic growth and prosperity and that is possible only with mutual development of business and government.

REFERENCES

- 1. Экономика знаний [Электронный ресурс] // Википедия свободная энциклопедия. Режим доступа: https://en.wikipedia.org/wiki/Knowledge_economy. – Дата доступа: 24.12.2014.
- Normalization Procedure [Электронный ресурс] // Knowledge for development. Режим доступа: http://web.worldbank.org/WBSITE/EXTERNAL/WBI/WBIPROGRAMS/KFDLP/EXTUNIKAM/0,,contentMDK:2058428 1~menuPK:1433234~pagePK:64168445~piPK:64168309~theSitePK:1414721,00.html. – Дата доступа: 26.12.2014.
- 3. Забродская, Н.Г. Проблемы инновационного развития и формирования экономики знаний в Республике Беларусь / Н.Г. Забродская // Наука и инновации. 2013. № 4. С. 15–24.
- 4. Колотухин, В. Управление интеллектуальной собственностью на макро- и микроуровнях / В. Колотухин // Наука и инновации. 2012. № 12. С. 42–44.

UC 33:769(07)

PHYSICAL-SPORTS FACILITIES: ECONOMIC ANALYSIS, PROBLEMS AND PERSPECTIVES OF DEVELOPMENT

RUSLAN ZHURNIA, ANNA LAVRINENKO Polotsk State University, Belarus

At present the issues of physical-sports facilities management for optimization of budget expenditures and the use of the given facilities in business activities on the terms of self-repayment are urgent. Proper organization of physical-sports facilities functions and effective planning of their activity will provide selfrepayment of marginal facilities and allow to avoid construction of sports centers without conducting thorough analysis of their future cost effectiveness.

Physical education and sport are important factors of health promotion among the population and preservation of the gene pool of the nation in the Republic of Belarus. Priority guidelines of the social and economic development program in the Republic of Belarus are satisfaction of people's needs in systematic exercises, improvement of their health, provision of sportsmanship and health. One of the most important directions of the targeted goals is construction of physical-sports facilities and further development of their network providing arrange of sporting services and a developed infrastructure of commercial services. Sports service market has been growing rapidly over the last years: there are 238 stadiums, 41 sports arenas, 237 swimming-pools, 6619 sports clubs, more than 695 mini swimming pools in infant schools, the Olympic training bases "Stayki", "Raubitchi", "Ratomka", sports palaces, tennis courts, multifunctional ice stadiums, more than 10 000 outdoor sports areas, etc. The sports facilities are multifunctional, have modern design and comply with international standards.