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A. Maidirova

Doctor of Economics, Professor, Head of the Economics and Entrepreneurship Department, the L.N. Gumilyov Eurasian National University

Maydirova2010@gmail.com

CONDITIONS OF THE FORMATION OF INTELLECTUAL CAPITAL OF KAZAKHSTANI ENTERPRISES IN MODERN CONDITIONS

Abstract. The emergence of global innovation and technological space has determined the modern economic policy of the Republic of Kazakhstan, aimed at achieving sustainable dynamic development of the country via diversification of economic sectors and moving away from the raw materials development trend. In this context, the intensification of innovative activity in enterprises has been mainstreamed which would motivate the formation of intellectual potential corresponding to the pace and level of innovation. The article provides a descriptive characteristics of the modern issues in development of innovation activism in the country.

Even though the financial crisis has affected almost all of the industrial enterprises, Kazakhstan today has a weak activity in the creation and dissemination of innovations. According to the Statistics Agency of the Republic of Kazakhstan, the share of innovation-active enterprises in the republic was 9.6% of the total number of respondents. This data leads to the idea that despite the adoption of state programs that should motivate the innovative activity of the country, unfortunately there are no major changes in this direction.

The subject of the study is theoretical and factual data on formation of the intellectual capital of enterprises.

The aim of the research is to explain the conditions for the formation of the intellectual potential of enterprises in Kazakhstan in conditions of an innovative economy formation.

Keywords. Intellectual potential, innovative activity, innovative economy, intellectual nation.

Introduction.

Considering that Kazakhstan is entering a new stage of its development, complex studies on various areas of social development are particularly relevant. One of these issues familiar to each Kazakhstani citizen is the problem of the formation and development of an intellectual nation as the support of our state, the basis for its further development and prosperity of our Motherland. This problem is multifaceted, as it covers many directions, such as the formation of an intellectual society in Kazakhstan, the augmentation of people's intellectual potential, the deepening of the media information policy in shaping the richest intellectual nation, the formation of intellectual citizens of their country.

Sovereign Kazakhstan has demonstrated impressive patterns of a new state emergence, public stability of internal harmony, and a steady development of the economy and political system. This is an incontestable fact confirming the scientific accuracy, foresight and the continued success of the First President's political course, which is supported by all the citizens of Kazakhstan.

Methodology

Author used mixed approach in writing the given article: both qualitative and quantitative, and the induction research methods.

Research background

Theoretical foundations of the processes associated with the factors of innovative development of the economy are thoroughly developed in scientific research and works of J. Schumpeter, S. Friedman, R. Solow, M. Porter, D. Bell, P. Drucker, D. Bishop, W. Steger, H. Neubauer, I. Dvořák and others. Their

works investigated various aspects of the innovative development of enterprises and the questions of the formation of intellectual potential.

A significant contribution to the development of this issue was made by the works of scientists and economists of the post-Soviet space - L. Abalkin, V. Makarov, G. Kleiner, B. Milner, S. Valentei, A. Dagaev, N. Shelyubskaya, V. Polterovich, P. Ivanter, N. Komkova, M. Pavlova, A. Nikolaev, T. Kaygorodtseva, L. Gokhberg, V. Leontiev, O. Pochukaeva, Yu. Voronin, B. Kuzyk, Yu. Yakovets and others. Various aspects of the innovative development of enterprises and questions of the formation of intellectual potential were investigated by them.

A certain contribution to the study of issues of evaluating innovative development and the formation of intellectual potential at the enterprise level has been made and continues to be made by such economists in Kazakhstan as A. Koshanov, O. Sabden, F.M. Dnishev, F.G. Alzhanova, B. Serikbaev, N. Buktukov, E. Frezorger, A. Maidyrova, G. Aubakirova, D. Kukhtinov, G. Abdykerova and others.

At the same time, these studies could not fully reflect many problematic issues of the formation and evaluation of innovative activity. However, these issues should be studied, since it would allow us to formulate the aim and objectives of the article.

In the Address of the President of the Republic of Kazakhstan N. Nazarbayev to the people of Kazakhstan, on October 5, 2018, "Growing Welfare of Kazakh Citizens: Increase in Incomes and Quality of Life" the following priorities were noted: "special attention should be paid to the development of innovative and service sectors; on education, science and health care from all sources up to 10% of GDP" [1].

The idea of forming an intellectual nation in Kazakhstan is among the most fundamental system initiatives of the Head of our state. Therefore the national interests of the country suggest that there is a need to act without delay in order to avoid the growth of technological abyss, a hopeless lag behind competitors and an increase in dependence. Moreover there is a favorable innovation climate as well as the relevant infrastructure is actively being formed in the mainstream of the world development.

The emergence of a post-industrial technological order in the first half of the XXI century in the context of the formation of a global innovation and technological space, has determined the modern state economic policy of the Republic of Kazakhstan. Which is aimed at achieving sustainable dynamic development of the country through diversification of economic sectors and retreat from the raw materials development. The production of competitive and export-oriented goods – jobs and services in the manufacturing industry and services – is the main subject of the state industrial innovation policy.

In the modern Kazakhstan, there is a weak activity in the creation and dissemination of innovations, due to the fact that the current crisis has affected almost all of the industrial enterprises. According to the Statistics Agency of the Republic of Kazakhstan, the share of innovatively active enterprises in the republic was 9.6% of the total number of respondents to the January 1, 2017. It had the following levels of shares in the previous years: 2013 – 8.0%, 2012 – 7.6%, 2011 – 5.7%, 2010 – 4.3%, 2009 – 3.9%, 2008 – 4.0%, 2007 – 4.8%, 2006 – 4.8%, 2005 – 3.4%, 2004 – 2.3% [2]. The growth rate of the innovation activity of economic entities in the Republic of Kazakhstan over 14 years, between 2004 and 2017, is not dynamic enough making up only 4.1%. In general, there is a certain dynamics within 3 extremes in 2007 the indicator was 4.8%, in 2014 it was 8.1% and in 2017 – 9.6%. The minimum level of innovation activity was in 2004, when it drop to 2.3% and in 2005 making up 3.4% for obvious reasons, which are the consequences of the first wave of the global financial crisis. However, compared to other countries in 2017, there is still a lot to be done (the shares of other countries are the following: Russia – 17%, Romania – 30%, Slovenia – 35%, Poland – 39%, OECD countries – about 50%) [2]. For example, the share of innovation-active enterprises in the United States is about 50%; among the countries of the European Union: Germany (79.3%), Sweden (60%) and Finland (58%) have the highest rates. The average for the European Union countries reaches approximately 53% [3].

This data leads to the idea that despite the adoption of state programs that should motivate the innovative activity of the country, unfortunately, there are no major changes in this direction. Presumably the dynamics of the country's development (with shadow market, 40% of the economy [3], 122nd position in the Corruption Perceptions Index out of 180 countries, with an index of 31 points out of 100) [4] implies such level of activity. In general, by the end of the XX century, it became obvious that the level of innovation activity and the development of scientific and technical sphere: science, education, high-tech

industries, world technology markets – defines the boundaries not only between rich and poor countries, but also regions within one state, creates the basis of a dynamic economic growth and is a major factor in the formation of centers of power. Without the use of innovations, it is almost impossible to create competitive products with a high degree of knowledge-intensiveness and novelty. Thus innovations are effective means of competition, since they lead to the creation of new needs, to a reduction in the cost of production, to an influx of investments, to an increase in the image of a producer of new products, to the opening and capturing of new markets, including external ones.

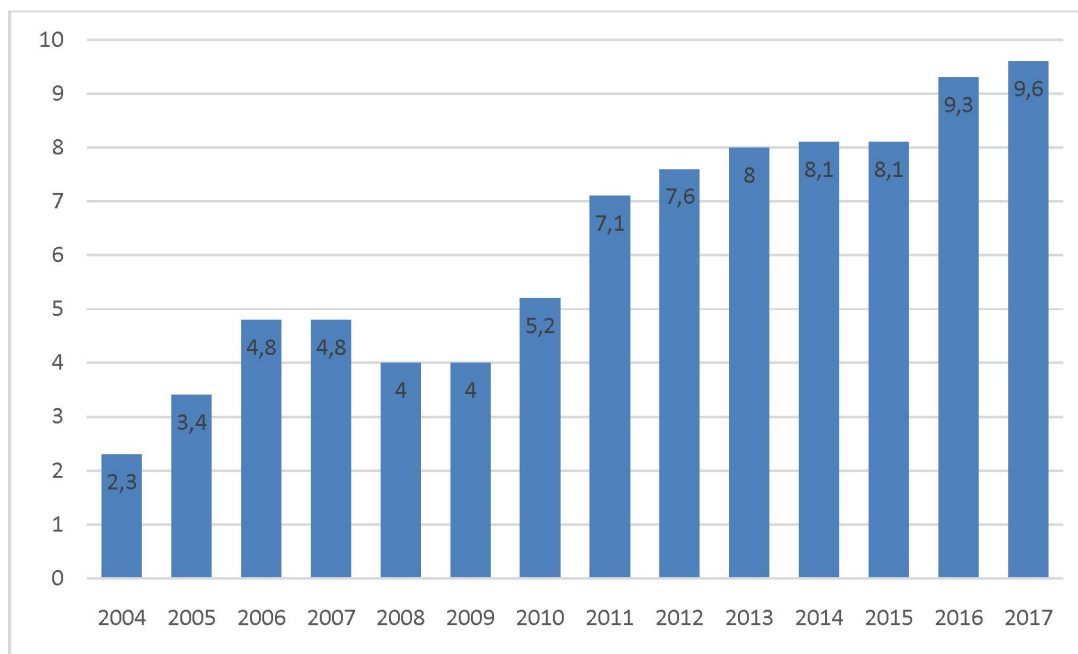


Figure 1 – Innovation activity in Kazakhstan between 2004-2017 [2] (activity Level in Innovation, in %)

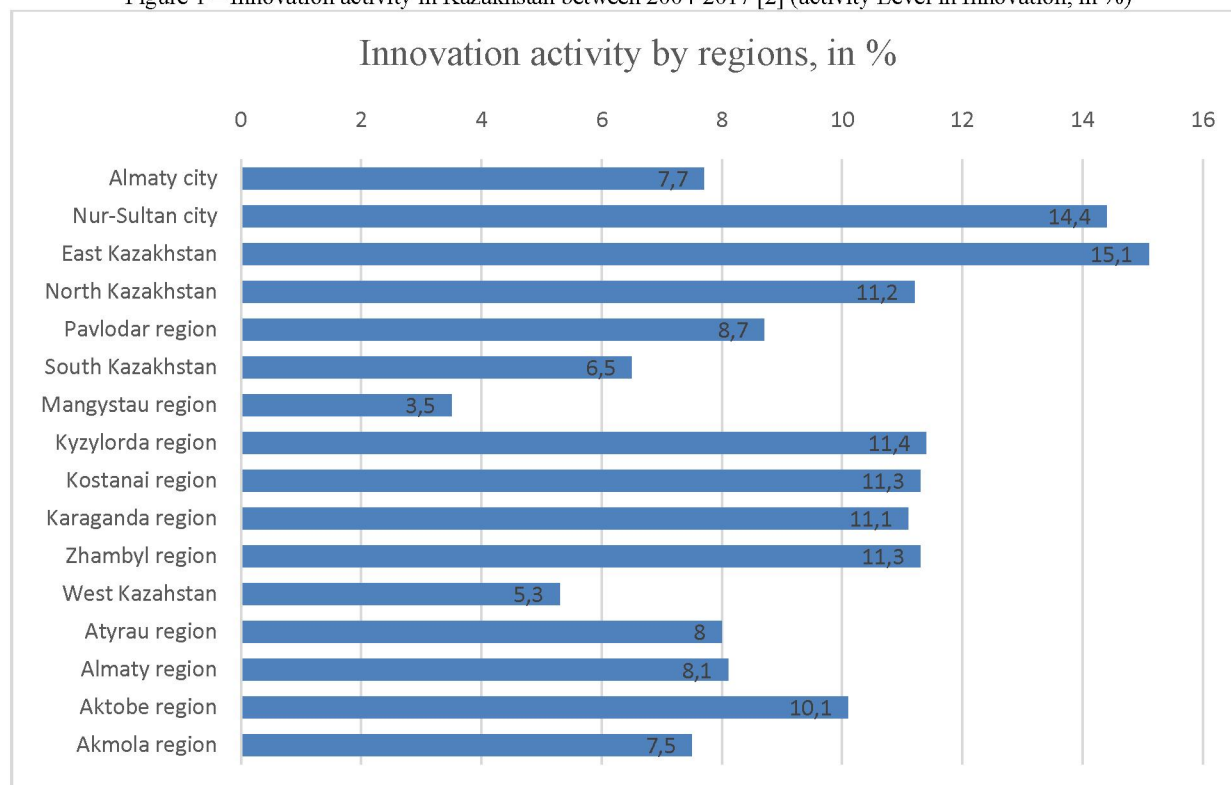


Figure 2 – Innovation activity by regions in 2017 [2]

Speaking about Kazakhstan in the regional context, the leaders in innovation development are East Kazakhstan – 15.1% and Nur-Sultan – 14.4%; among the lagging regions there are Mangystau region with 3.5% and West Kazakhstan making up only 5.3% [2].

There is heterogeneity of innovation development of the regions of Kazakhstan. It is a general knowledge that the level of innovativeness of a region is formed as a result of the interaction of many factors. It is generally accepted that the whole diversity of factors affecting the formation of an innovative environment can be reduced to four groups: the socio-economic conditions for the development of a region; innovation potential; human capital; and management capacity [5]. It would be seen that such areas as Mangystau, Atyrau [6], and West Kazakhstan region, that are included in the Industrialization Map of the country, should have been updating the solution to this issue. However innovation activity is not very high there and it does not motivate strengthening of the intellectual potential. The ratio of innovation activity on the use of new equipment and technologies across the regions of the Republic is also heterogeneous.

Data in Figure 3 demonstrates the highest applicability of new technologies in Almaty, which is 103 units, despite the fact that the level of innovation activity is two times lower than in Nur-Sultan and in the East Kazakhstan. It is explained by the fact that new projects are being implemented as the part of the Astana EXPO-2017 heritage and the city initiative of “50 Projects – Development Drivers for Almaty”. All of them not only attract the latest innovation technologies and create new workplaces, but also allow further reduction of environmental burden on the city’s environment.

The Kazakh-German company “FalconEuroBus” is building a fleet of vehicles and a plant for the production of third generation electric buses. The volume of private investment in the project is about 15 billion KZT [7].

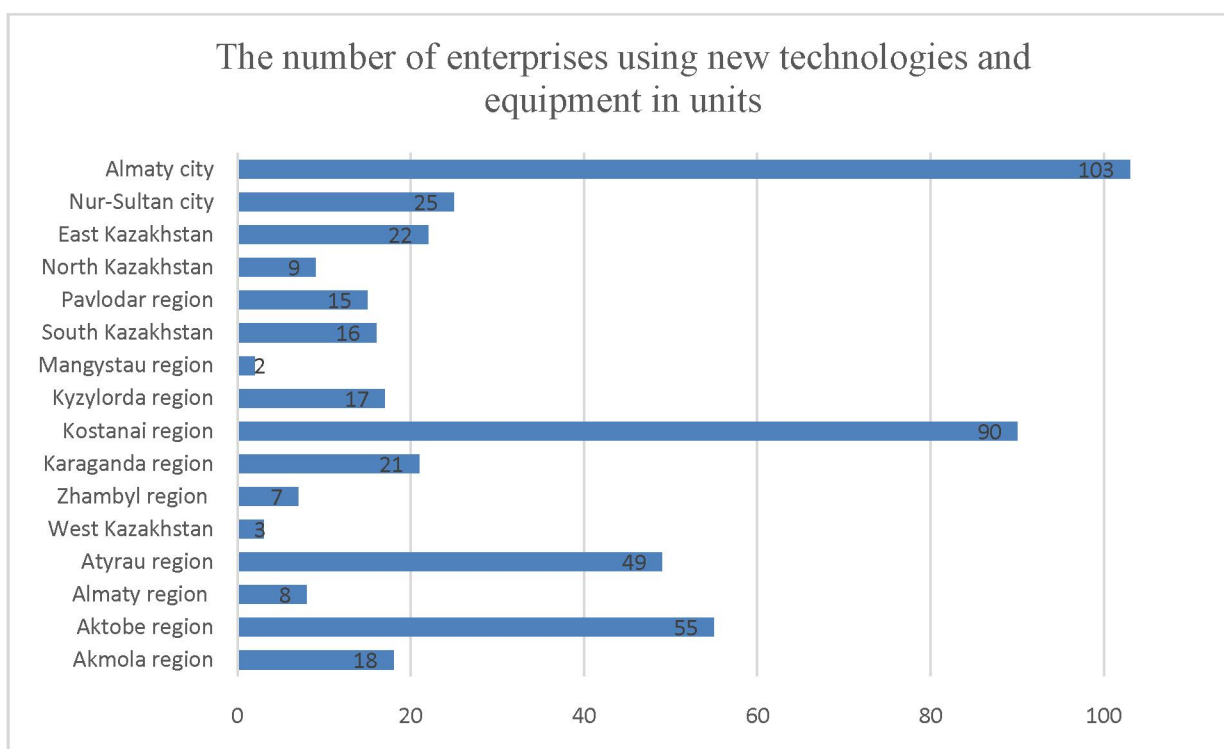


Figure 3 – The number of enterprises using new technologies and equipment for 2017

There is a plan to create six production sectors in accordance with the priorities defined by the state program of industrial-innovative development in Almaty: food industry, engineering, construction industry, pharmaceutical industry, chemical industry, and light industry. The active phase of work on the implementation of projects that have received permission for placement has already begun. When selecting projects, priority is given to innovative, environmentally friendly industries, as well as traditional industries. Currently 33 projects with a budget of 176,9 billion KZT have been authorized. As the planned

facilities are commissioned, it is planned to create almost five thousand jobs. At the same time, 19 projects are included in the Almaty Business Support Map [7].

There is a great importance in the operation of Technopark “Alatau” in Almaty, which participates in the state program of technological business incubation. In our opinion, these are the results of the quality of human capital in Almaty. There is a high level of research and development and involved people in them in Almaty: in 2004 this number was 8,700 people and in 2017 it increased to 8,821 people. There are conditions for the formation of high-quality intellectual potential [2]. As part of the Industrialization Map in the Kostanay region, 95 projects are being implemented, with a total investment of 433.4 billion KZT, and the creation of 9.3 thousand jobs. To date, 88 projects worth 131.5 billion KZT have been commissioned producing 5.2 thousand new jobs. It also includes: 88 projects commissioned, with a total investment of 301.5 billion KZT, and the creation of more than 4 thousand jobs, of which it is planned to launch 1 project in 2018, worth 16.5 billion KZT with the creation of 307 jobs – LLP “Rudny Cement Plant” – “Construction of a Cement Plant in Rudny” [8].

In addition, in 2018, it is planned to implement 6 more investment projects with a total investment of 10.3 billion KZT and the creation of about 500 jobs. A part of these projects will be included in the Support Map during the next update. Since the beginning of the implementation of the Program, the projects introduced have manufactured products worth 546.1 billion KZT, including 41.1 billion KZT in January-April of 2018 [8]. In Kostanay region there are the following trends in the formation of the intellectual potential of the region. The number of people involved in research and development in 2004 was 71 people, and in 2017 the figure increased to 569 people, which demonstrates a steady trend and conditions for the formation of high-quality intellectual potential of the region [9].

These regions have all available grounds for the formation of an innovative economy, which cannot be said about other regions of the country. In addition, there are problems with the quality of human capital, especially among young people. The NEET index (this is the index for the proportion of young people without education, without work and without vocational training) for the largest cities of the country is as follows: Almaty – 14.5%, Astana – 12.5%, Shymkent – 14.13%, Aktobe – 17.79% [8]. What is wrong with our youth who are the basis of human capital formation? In 2016, there were 313,600 school graduates, of whom just under 40% go to colleges, 29% go to universities, 11% go to study abroad, and 25% remain without going to further study. These 25% of graduates annually join the ranks of the NEET, and some of them take on low-paid non-qualified jobs. The NEET potential of 20% of the annual school output forms a high total index of 37% [10]. It means that the quantitative potential in human resources decreases, which could have formed the intellectual potential for the innovation economy.

Regions that have all clearly traced directions of innovation development claim that there are certain conditions for the formation of an innovative economy and its intellectual potential.

In general, the degree of innovation attractiveness of regions can be assessed by the following indicators:

- gross regional product;
- industrial output;
- volume of innovative products;
- internal R&D costs;
- level of innovation activity of enterprises;
- volume of scientific and technical works [11].

Investments in research and development, internal R & D in the regions of Kazakhstan for 10 years increased only in 1.98 times [2]. This reflects a low activation of investments in research and development in the region. In this sphere Almaty city with the developed infrastructure of science is the leader of the country. The adoption of the State program of the industrial-innovative development of Kazakhstan, also stepped up work in this direction. The requirements of publications in scientific journals with high impact factor also influenced the development of science within organizations.

However, the picture 4 depicts that 28 187 599.8 thousand tenge was invested by scholars from their own funds. It is almost the same as the amount coming from the government expenditure, which does not motivate scientists, since wages of scholars stay at the same low level. There are no opportunities for them to invest in their own projects, and therefore the priorities outlined by the Head of State in his Address to the Nation are impressive and gives a momentum for the development of innovative sciences. The Head of

State emphasized that within 5 years it is necessary to bring governmental expenditures on education, science and healthcare from all sources to 10% of GDP [1]. Unfortunately, it is too early to talk about high-tech production and overall development of science, as in other OECD countries. The study of foreign experience shows that no country in the world formed the innovation system only based on the private sector. In order to enhance the competitiveness of the national economy, the state plays a leading role on the foundation of systematic approach in creating an innovative economy with a focus on community.

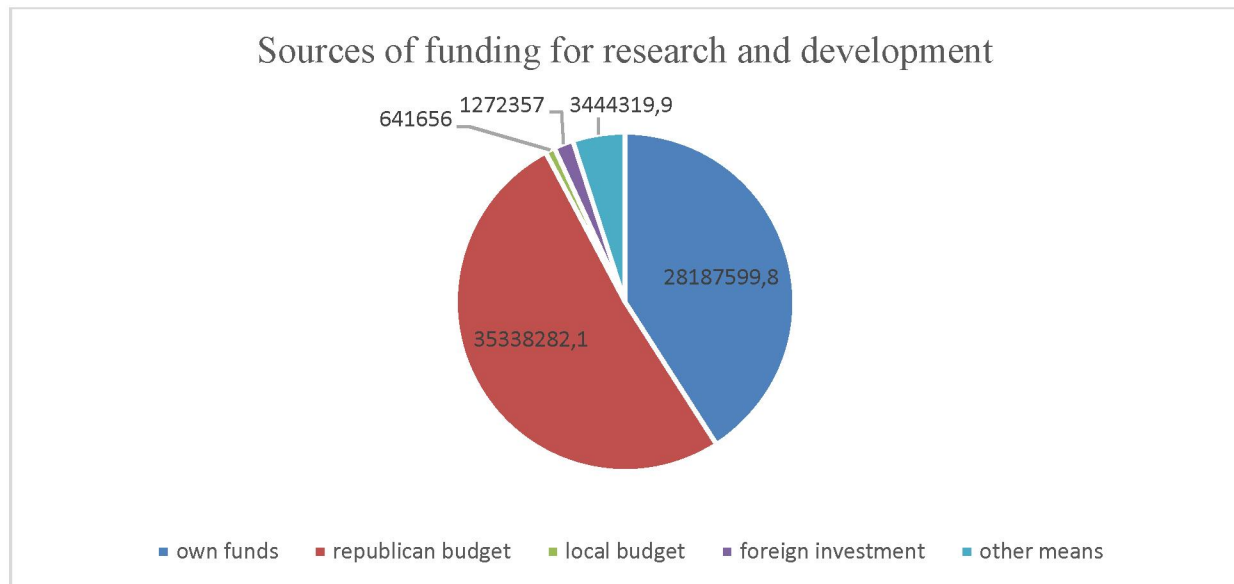


Figure 4 - Sources of funding for research and development [2]

In developing countries, manufacturing industry is the main mean of development; it helps to turn poor countries into important players in the global economy.

At the same time, Kazakhstani innovative enterprises mainly choose a “catching-up” strategy, which testifies its innovative immunity. The “catching-up” strategy involves imitation of foreign technologies, copying products and their mass production. However, its manufactured goods are not innovative in the global sense; therefore it is not worthwhile to position it as the latest.

Meanwhile the development of innovation system, despite the efforts of the state is constrained by a number of factors. Thus in the development of innovation activities in the regions, the following problems were identified that affect the change in its structure:

- insufficient provision of manufacturing industries with innovative equipment and technologies;
- general technical and technological backwardness of enterprises;
- low innovation activity of enterprises;
- low investment attractiveness of non-primary processing industries;
- lack of financial resources affecting the innovation activity of the production of the real sector of the economy;
- limited relation of science and production and the lack of effective mechanisms for bringing scientific and technological products to the level of goods;
- lack of a flexible system of training and retraining of specialists and personnel;
- underdevelopment of the sphere of small innovative enterprises with the necessary flexibility for rapidly changing market conditions;
- undeveloped innovation infrastructure, low level of R&D funding.

Thus, it can be summarized that the existing problems in the development of an innovative economy, restrain not only innovation activity in the country and in its regions, but also reduce the motivation in the formation of intellectual potential.

Results

The emergence of global innovation and technological space has determined the modern state economic policy of the Republic of Kazakhstan, aimed at achieving sustainable dynamic development of the country through the diversification of economic sectors and moving away from the hydrocarbon production. Under this framework, the intensification of innovative activity in enterprises has actualized, which would lead to the formation of intellectual potential corresponding to the pace and level of innovation. This article provides a descriptive analytics of the situation in the country on the development of innovative activity.

The results can be used to manage the process of innovative economies formation and the development of innovative activity of enterprises.

Conclusions and findings

Despite the fact that there is a lot of investment in the country to strengthen the innovation activity of enterprises, which could develop the level of innovations, it is too early to talk about high-tech production and the overall development of sciences as in other OECD countries. In order to improve the competitiveness of national economies, state plays a leading role on the basis of systemic approach in the creation of innovative economy with social background. Usually to enhance the competitiveness of national economy, the state plays a leading role on the basis of a systematic approach in creating an innovative economy with a social bias. Thus it can be concluded that the existing problems in the development of an innovative economy, restrain not only innovative activity in country and its regions, but also reduce motivation in the formation of the overall intellectual potential.

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А. Майдырова

Э. ф. д., профессор. Л.Гумилев атындағы Еуразия ұлттық университетінің
«Экономика және кәсіпкерлік» кафедрасының меңгерушісі.

ҚАЗАҚСТАНДАҒЫ КӘСІПОРЫНДАРДЫҢ ЗИЯТКЕРЛІК КАПИТАЛЫН ҚАЛЫПТАСТЫРУ ШАРТТАРЫ: ҚАЗІРГІ ЖАҒДАЙЫ

Аннотация. Ғаламдық инновациялар мен технологиялық кеңістіктің пайда болуы Қазақстан Республикасының экономикалық саясатын экономикалық секторларды әртараптандыру және пикізат ресурстарын дамытудан ауытқу жолымен елдің тұрақты динамикалық дамуына бағытталуларымен анықтады. Осы тұрғыда кәсіпорындарда инновациялық қызметтің қарқындылығы өсіп, бұл қарқыны мен деңгейіне сәйкес интеллектуалдық әлеуетті қалыптастыруды ынталандыруға әкеледі. Мақалада елдегі инновациялық қызметтің дамуының сипаттамасы келтірілген.

Зерттеу мақсаты. Ұсынылған мақала инновациялық экономиканы қалыптастыру контекстінде Қазақстандағы кәсіпорындардың зияткерлік әлеуетін қалыптастыру жағдайларын түсіндіреді.

Зерттеу нәтижелері. Дағдарыс барлық өнеркәсіптік кәсіпорындарға әсер еткенімен, Қазақстанда инновацияларды құру және тарату салаларында әлсіз белсенділік бар. Қазақстан Республикасы Статистика агенттігінің мәліметі бойынша, республикадағы инновациялық белсенді кәсіпорындардың үлесі респонденттердің жалпы санының 9,6 %-ын құрады. Бұл деректер, екіншіше орай, еліміздің инновациялық белсенділігін ынталандыратын мемлекеттік бағдарламалардың қабылдануына қарамастан, осы бағыттағы ерекше өзгерістердің жоқтығына әкелді.

Нәтижелер ауқымы. Инновациялық экономиканы қалыптастыру, кәсіпорындардың инновациялық қызметін дамыту процестерін басқару.

Түйін сөздер: интеллектуалды әлеует, инновациялық қызмет, инновациялық экономика, зияткерлік ұлт, инновациялық экономика.

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А. Майдырова

Д.э.н., профессор. Зав.кафедрой «Экономика и предпринимательство»
Евразийского национального университета им. Л.Гумилева

УСЛОВИЯ ФОРМИРОВАНИЯ ИНТЕЛЛЕКТУАЛЬНОГО КАПИТАЛА ПРЕДПРИЯТИЙ КАЗАХСТАНА, В СОВРЕМЕННЫХ УСЛОВИЯХ

Аннотация. Становление глобального инновационно - технологического пространства определили современную государственную экономическую политику Республики Казахстан, нацеленную на достижение устойчивого динамического развития страны путём диверсификации отраслей экономики и отхода от сырьевой направленности

развития. В этом контексте, актуализировалось, усиление инновационной активности на предприятиях, что привело бы к мотивации формирования интеллектуального потенциала, соответствующего темпу и уровню инноваций. В статье дана описательная характеристика ситуации в стране по развитию инновационной активности.

Несмотря на то, что финансовый кризис затронул почти все промышленные предприятия, сейчас в Казахстане наблюдается слабая активность в создании и распространении инноваций. По данным Агентства Республики Казахстан по статистике, доля инновационно-активных предприятий в республике составила 9,6% от общего числа респондентов. Эти данные приводят к мысли о том, что, несмотря на принятие государственных программ, которые должны стимулировать инновационную активность страны, к сожалению, в этом направлении нет серьезных изменений.

Предметом исследования явились теоретические и фактические данные по формированию интеллектуального капитала предприятий.

Цель исследования представленной статьи состоит в объяснении условий формирования интеллектуального потенциала предприятий в Казахстане в условиях формирования инновационной экономики.

Ключевые слова. Интеллектуальный потенциал, инновационная активность, инновационная экономика, интеллектуальная нация, инновационная экономика.

Author information:

Maidyrov Aigul Bulatovna – doctor of economic Sciences, Professor. Nur Sultan, Maydirova2010@gmail.com, <http://orcid.org/ORCID-0000-0002-7053-5225>

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