KAZAKHSTAN IN THE CONTEXT OF THE GLOBAL INDEX OF INNOVATIVE ACTIVITY

Abstract. The article analyzes the position of the Republic of Kazakhstan in the Global Innovation Activity Rating of Countries, compiled by the World Intellectual Property Organization (WIPO), Cornell University and the INSEAD Research Institute. The rating of countries on the index of innovative development of the most close to the economy of the Republic of Kazakhstan and advanced economies such as: Australia, Belarus, Brazil, Britain, Germany, India, Canada, China, Kyrgyzstan, Mongolia, Russia, Singapore, Turkey, Ukraine, Switzerland, South Korea, Japan. In addition, an analysis of the innovation system of Kazakhstan was done and the main problems that hampered the development of the innovative economy were identified.

Keywords: Innovation, a global index of innovation, scientific and technological progress, the level of innovative development, public-private partnership.

Introduction. For several centuries, the most important factor of economic development is scientific and technological progress, which is directly related to the innovation process, the basis of which it is.

The uniqueness of the innovation process is that it brings together science, technology, economics, entrepreneurship, management, and extends from the birth of a scientific idea to its commercialization, cover the entire range of relations: production, exchange, consumption obtained by this innovation process.

To assess the level of innovative development of the country by international organizations, generalizing indices are developed that take into account, as a rule, three components: innovation potential, innovation activity and innovative results. For example, the «Global Competitiveness Index» published in the reports of the World Economic Forum (Davos), considers the factors of innovation and improvement as an independent third section of the indicators forming the overall rating of competitiveness and the Global Innovation Index which represents the most comprehensive set of indicators of innovative development in various countries of the world. This rating is calculated from 2007 according to the methodology of the international business school INSEAD (France).

Theoretical and applied aspects of innovation activity are widely studied in the works of such Russian economists: Fatkhudinov R., Trifilova A., Kuznetsova N., Balashova S., Shurina S., Trilitskaya O., Capreva E. and others [2-6].

Among the scientists of Kazakhstan, it is possible to note the following economists who raised the main issues of innovation activity development in organizational and economic aspects both at macro and micro levels: Abdygapparova S., Alshanov R., Mukhtarova K., Kupeshova S., Turginbayeva A., Kazymurat K., Kenzheguzin M., Myltykbayeva A. and others.

Particularly it is possible to note article PhD of Myltykbayeva A.T. "Measuring the national development of the Republic of Kazakhstan in the context of a global index of innovation development" analyzes the parameters of the Global Competitiveness Index (GCI) measurement system, which together provide the development efficiency and competitiveness of the country, and depending on the degree of influence and importance in each of the 12 components of the index global competitiveness, they are grouped by subindex and stages of economic development. The weight shares of each subindex at a
certain stage of development are indicated. According to the World Development Classifier, the place of Kazakhstan is shown [7].

Despite wide research of the sphere of innovations, it is very rare to find works on the competitiveness of the Republic of Kazakhstan on the index of innovation activity.

Methods of research.

By definition, this international business school INSEAD "Global Innovation Index" is a global study and its accompanying rating of the countries of the world in terms of the level of innovation development. According to this methodology, the index is calculated as a weighted sum of estimates of two groups of indicators, which are presented in Table 1.

Table 1 - Indicator groups used in the calculation of the global innovation index

<table>
<thead>
<tr>
<th>Available resources and conditions for innovation (Innovation Input)</th>
<th>Achieved practical results of innovation (Innovation Output)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutes; Human capital and research; Infrastructure; Development of the internal market; Business development.</td>
<td>Development of technology and knowledge economy; Results of creative activity; Creativity on-line</td>
</tr>
</tbody>
</table>

Source: compiled by the authors according to The Global Innovation Index, 2017 International Business School INSEAD [1]

Thus, from Table 1, we can conclude that the final index is a cost-effectiveness ratio, which makes it possible to objectively evaluate the effectiveness of efforts to develop innovations in a particular country. The entry subindex reflects the conditions and factors necessary for creating innovations and includes the following groups of indicators: 1. Institutions; 2. Human capital and research; 3. Infrastructure; 4. Market stability; 5. Sustainability of business. The subindex effect summarizes the results of innovation activities and includes the following groups: 6. Scientific results; 7. Creative results and in the methodology of the report for 2012 added a new indicator - creativity on-line. Of the 84 indicators included in the Global Innovation Index (GII) 57 are input indicators that characterize the country’s innovation potential and 27 are impact indicators that describe the effectiveness of using this potential.

Calculation of the final index, as a rule, is based on the principle of the average value of the parameters used, but with some with a preliminary normalization. Statistical values for each of the parameters are normalized according to the principle [8]:

\[ X_{norm} = \frac{x - min}{max - min} \]

here, \( min \) - the minimum value of the indicator; \( max \) is the maximum value for the sample.

After that, the average value for each of the parameters and the final index are calculated. Thus, the way to measure innovative development differs among organizations in the set of incoming parameters, their number depending on their characteristics, goals and objectives, but on the whole are similar in principle to mathematical calculation. Expertise methods, correlation-regression analysis, factor analysis, the method of principal components, fuzzy sets, index analysis (O. Obraztsova [9], Bagrinovsky K.A. [10], Bandman M.K. [11], Varshavsky A.E. [12], Korotkov A.V. [13], Leontiev V. [14], Tatarkin A.N. [15]). The choice of the model is influenced by: the complexity of the object under study, the availability of data, the mastered mathematical apparatus.

Thus, it can be argued that during the definition of the innovation activity index, various methods can be used depending on the goals and objectives of the study, as well as the complexity of the structure of the innovation system of countries.

Results and discussion.

If we look at the twenty countries with the level of economic development from the Global Innovation Index 2017 report prepared by the World Intellectual Property Organization (WIPO), the Cornell University and the INSEAD research institute, it can be argued that over the past two years, exporters of technologically new products and services of daily use (consumption). Such as: Switzerland,
the United States, Great Britain, Singapore, Germany, South Korea, Japan, Canada and China. China, in 2017, was able to raise another 3 steps, ranking 22nd in the innovation development rating, thanks to high results at once on a number of indicators, including the number of companies engaged in research and development (R & D) in the country, the state research personnel in enterprises and the number of filed patent applications. Kazakhstan in this rating is on the 75th place according to 2016, and according to the data of 2017, having lost two positions it is located on the 78th place. Of the CIS countries, Kazakhstan is only ahead of Russia and Ukraine, which according to 2017 are located at 45 and 50 places respectively (Table 2 and Picture 1).

As for the rating on the level of innovative activity of the countries of Central and South Asia, Kazakhstan also closes in the top three, letting ahead only India and the Republic of Iran. India has been the undisputed leader in this region for the seventh consecutive year, having risen by 6 positions in 2017 compared to 2016 (from 66th to 60th place). Following India, as in 2016, are Iran (75th in the ranking of 2017) and Kazakhstan (78th place) (Table 2 and Picture 1).

Table 2 - 20 countries from the global rating of innovation activity with different levels of economic development

<table>
<thead>
<tr>
<th>№</th>
<th>Countries</th>
<th>2017 index</th>
<th>2017 place</th>
<th>2016 index</th>
<th>2016 place</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Australia</td>
<td>51.8</td>
<td>23</td>
<td>53.1</td>
<td>19</td>
</tr>
<tr>
<td>2.</td>
<td>Belarus</td>
<td>30.0</td>
<td>88</td>
<td>30.4</td>
<td>79</td>
</tr>
<tr>
<td>3.</td>
<td>Brazil</td>
<td>33.1</td>
<td>69</td>
<td>33.2</td>
<td>69</td>
</tr>
<tr>
<td>4.</td>
<td>United Kingdom</td>
<td>60.9</td>
<td>5</td>
<td>61.9</td>
<td>3</td>
</tr>
<tr>
<td>5.</td>
<td>Germany</td>
<td>58.4</td>
<td>9</td>
<td>57.9</td>
<td>10</td>
</tr>
<tr>
<td>6.</td>
<td>India</td>
<td>35.5</td>
<td>60</td>
<td>33.6</td>
<td>66</td>
</tr>
<tr>
<td>7.</td>
<td>Kazakhstan</td>
<td>31.5</td>
<td>78</td>
<td>31.5</td>
<td>75</td>
</tr>
<tr>
<td>8.</td>
<td>Canada</td>
<td>53.7</td>
<td>18</td>
<td>54.7</td>
<td>15</td>
</tr>
<tr>
<td>9.</td>
<td>China</td>
<td>52.5</td>
<td>22</td>
<td>50.6</td>
<td>25</td>
</tr>
<tr>
<td>10.</td>
<td>Kyrgyzstan</td>
<td>28.0</td>
<td>95</td>
<td>26.6</td>
<td>103</td>
</tr>
<tr>
<td>11.</td>
<td>Mongolia</td>
<td>37.1</td>
<td>52</td>
<td>35.7</td>
<td>55</td>
</tr>
<tr>
<td>12.</td>
<td>Russia</td>
<td>38.8</td>
<td>45</td>
<td>38.5</td>
<td>43</td>
</tr>
<tr>
<td>13.</td>
<td>Singapore</td>
<td>58.7</td>
<td>7</td>
<td>59.2</td>
<td>6</td>
</tr>
<tr>
<td>14.</td>
<td>USA</td>
<td>61.4</td>
<td>4</td>
<td>61.4</td>
<td>4</td>
</tr>
<tr>
<td>15.</td>
<td>Tajikistan</td>
<td>28.2</td>
<td>94</td>
<td>29.6</td>
<td>86</td>
</tr>
<tr>
<td>16.</td>
<td>Turkey</td>
<td>38.9</td>
<td>43</td>
<td>39.0</td>
<td>42</td>
</tr>
<tr>
<td>17.</td>
<td>Ukraine</td>
<td>37.6</td>
<td>50</td>
<td>35.7</td>
<td>56</td>
</tr>
<tr>
<td>18.</td>
<td>Switzerland</td>
<td>67.7</td>
<td>1</td>
<td>66.3</td>
<td>1</td>
</tr>
<tr>
<td>19.</td>
<td>South Korea</td>
<td>57.7</td>
<td>11</td>
<td>57.1</td>
<td>11</td>
</tr>
<tr>
<td>20.</td>
<td>Japan</td>
<td>54.7</td>
<td>14</td>
<td>54.5</td>
<td>16</td>
</tr>
</tbody>
</table>

Source: compiled by the authors according to The Global Innovation Index, 2017 International Business School INSEAD [1]

If we consider the data of Table 2 in the form of a diagram, we can see the following picture, which is shown in Figure 1, where we clearly see that the leading positions are countries with a high level of economic development. As is known, in modern conditions, economic growth is achieved due to the innovative activity of the economy. What is surprising, in this rating Kazakhstan is ahead of Mongolia, which is usually associated with the country with the lowest level of economic development in comparison with the Republic of Kazakhstan. However, the neighboring countries of Kazakhstan, such as Kyrgyzstan and Tajikistan, are represented in the report of The Global Innovation Index and occupy 95th and 94th places respectively.
Despite the stable position of Kazakhstan in the global innovation index, the experts of JSC "Institute for Economic Research" believe that the improvement of individual components of the index, the development of the national system of support and introduction of innovations of Kazakhstan is at the stage of formation, thereby explaining the gap with the leading countries of the world. The effectiveness of innovation depends on the overall economic situation in the country and the state scientific and technical strategy, on full-fledged resource support, market conditions, the availability of professional staff and effective management. To improve the calculations, the methodology for calculating the rating is revised annually. This year, new quality indicators were introduced. Since some processes cannot be adequately represented, the model of the global innovation index is not decisive in assessing the country's innovative development. This explains the loss of positions in this rating of Kazakhstan.

**Kazakhstan's rating in the global innovation index**

Source: compiled by the authors according to The Global Innovation Index, 2017 International Business School INSEAD [1]
In different years, Kazakhstan's position in the Global Innovation Index has been different. From Figure 2, we can see the index of innovation activity and the rating for the period 2011-2017. For seven years, Kazakhstan improved its position by 6 points, and the turkeys of innovation activity increased from 30.3 to 31.5. However, in 2013 and in 2014 the result of innovative activity was 32.7 and 32.8 points, respectively.

In many ways, the development of the national innovation system depends on the share of R&D funding in % of the ratio to GDP. If we look at the countries that took as an example in our work, we can see the difference in the volume of R&D financing and see the objective reason for the development of innovative economies among the leading countries on the Global Innovation Index list.

According to KNOEMA, where 78 countries are represented in 2015, Kazakhstan is located at 67 positions with R & D expenditures of 0.2% to GDP, whereas the International Council's recommended share of expenditures for developing countries is 1-1.5% of GDP. Leading positions in this list are: Israel (4.3% of GDP), South Korea (4.2% of GDP), Switzerland (3.4% of GDP) and Japan (3.3% of GDP) (Picture 3).

![Graph showing R&D expenses as % of GDP]  
*Source*: compiled by the author according to the literature [16-17]

Picture 3 - Expenditure on R & D in % of the ratio to the GDP of the countries of the world, 2015

Thus, summarizing the above data, we can draw the following conclusions that from the list of countries listed in this sample with different levels of economic and innovative development, the Republic of Kazakhstan is at the stage of becoming its innovation system. The index of innovation activity from 2011 to 2017 ranges between 30.3 and 32.8, when as the leader in this ranking of Switzerland, the innovation activity index is 67.7 points, which indicates that these countries are twice as fast as Kazakhstan in the sphere innovative development.

**Conclusions**

Having analyzed the innovative system of Kazakhstan, it is possible to identify the following main problems that hamper the development of the innovation economy, as well as to reduce Kazakhstan's positions in international ratings [18].

1. Low level of science financing in Kazakhstan. Expenses for scientific research from the budget are 0.2% of GDP. According to UNESCO, the world economy allocates 1.7% of GDP to science.

2. Low share of private sector financing for the development of the country, in contrast to developed countries.
3. Weak material and technical basis.
4. Low effectiveness and competitiveness of research results in the domestic and foreign markets. Approximately 17 thousand scientists account for 1-2 international patents.
5. There is a gap between science, education and business.

Thus, international ratings of the innovation activity of the Kazakh economy reveal, in fact, the same vulnerable areas. Basically, these are factors of institutional and regulatory nature that affect the development of R&D and the innovative economy as a whole. In the interaction of the state and business in the innovation sphere, two aspects come to the fore. The first is related to the institutional foundations of this interaction. The second - with the financing of research and development.

Basically, all the problems associated with the low level of development of innovation in the country is due to the poor financing of innovation. In this regard, we propose to introduce in the innovative sphere the mechanisms of the institution of public-private partnership, which will be able to solve a number of problems arising during the life cycle of innovative products. Through PPP, an innovative infrastructure is being formed, investment in small and medium-sized businesses is increasing, the percentage of commercialization of innovative developments is increased by means of introduction into production, and indicators of socio-economic development are improving.

REFERENCES

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КАЗАХСТАН В КОНТЕКСТЕ ГЛОБАЛЬНОГО ИНДЕКСА ИННОВАЦИОННОЙ АКТИВНОСТИ

Аннотация. В статье анализируется позиция Республики Казахстан в Глобальном рейтинге инновационной активности стран, рассчитываемойся Всемирной организацией интеллектуальной собственности (ВОИС), Корнельским университетом и исследовательским институтом INSEAD. Сделан рейтинг стран по индексу инновационного развития наиболее близких к экономике Республики Казахстан и стран с развитой экономикой, таких как: Австралия, Беларусь, Бразилия, Великобритания, Германия, Индия, Канада, Китай, Кыргызстан, Монголия, Россия, Сингапур, США, Таджикистан, Турция, Украина, Швейцария, Южная Корея, Япония. А также, проделан анализ инновационной системы Казахстана и выявлены основные проблемы, препятствующие развитию инновационной экономики.

Ключевые слова. Инновации, глобальный индекс инноваций, научно-технический прогресс, уровень инновационного развития, государственно-частное партнерство.

Е.Б. Домалатов

Әл-Фараби атындағы Қазақ Ұлттық университеті, Алматы, Қазақстан Республикасы

ГАЛАМДЫҚ ИННОВАЦИЯЛЫҚ БЕЛГІДІҢ ИНДЕКСІ ЖАРДАЙЫНДАҒЫ ҚАЗАХСТАН

Аннотация. Макалада Қазақстан Республикасының әлемдік зияткерлік миністері және INSEAD зерттеу институты мен Корнель университетімен ысептелетін мемлекеттердің жайынын инновациялық белгідің индексіндегі өрнектері сапатталады. Қазақстан Республикасының экономикасының даму дәстүрлі біршама жағын және экономикасы дамыған келесі мемлекеттердің инновациялық даму индексі бойынша рейтинг қасылықтар: Австралия, Беларусь, Бразилия, УКраина, Германия, Индия, Канада, Кытай, Кыргызстан, Монголия, Ресей, Сингапур, АҚШ, Таджикистан, Турция, Украина, Швейцария, Оңтүстік Корея, Япония. Солдан-сақ Қазақстандың инновациялық жұмыс істеу жүргізіліп, инновациялық экономикасының дамуына көлдеп келтірілген негізгі мәселелер анықталады.

Түйін сөзбер. Инновация, инновацияның жайынын индексі, ықылы-техникалық прогресс, инновациялық даму дәстүрлі, мемлекеттік және миністерлік сұрапестік.

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MODERN TRENDS OF YOUTH UNEMPLOYMENT IN KAZAKHSTAN

Abstract. In the modern world space in the context of globalization, the subject of youth unemployment is an actual and most significant problem. In addition, according to the International Labor Organization (ILO), the unemployment rate in the world has already reached its record values and the number of unemployed in the world has exceeded 192 million persons, the global trends of youth unemployment lead to socio-economic imbalances. The need to assess the situation of youth in the labor market is due to the fact that young persons are the future of the country, and the subsequent development of the economy and society depends on the starting conditions of their activities. Each country, depending on the peculiarities of the state employment policy, has specific reasons for youth unemployment, the level and its consequences. Maley domestic and foreign scientists-economists and researchers have studied the issue of unemployment from various angles. The current assessment of the level of youth unemployment requires constant monitoring, analysis of its current state and a rapid political response to any transformation.

The article analyzes unemployment pictures, presents the dynamics of youth unemployment by regions of the country, as well as the structure of the unemployed for various socio-demographic factors. The main reasons of youth unemployment in general are considered, the main directions of the state policy in the sphere of employment of the population are proposed, which contribute to reducing the level of youth unemployment.

The article also contains references to a number of documents regulating youth policy and employment issues at the national level.

In the conclusions, the authors of the article find the relationship between the level of youth unemployment in Kazakhstan and the measures taken to stabilize this indicator. Since the level of youth unemployment has decreased by 2.5% over the last seven years to 4.1%. At the same time, the level of youth unemployment in the rural is lower (3.5%) than in the urban (4.6%).

Keywords: youth unemployment, self-employment, employment, youth policy, labor market.

Introduction. Effective use of labor potential is one of the most important tasks of forming a socially-oriented modern state, conducted within the framework of the state policy of Kazakhstan. Youth is a socio-economic active layer of the population, has an innovative and creative potential, although by virtue of its age does not have sufficient experience in this or that field of professional activity.

The special status of young persons creates the need for an adequate youth policy that can solve or alleviate existing problems, as well as channel creative potential of youth into creative channels. Therefore, employment issues, support and development of professional competitiveness of young persons in the labor market are a very topical and strategic priority of the state policy of the Republic of Kazakhstan. In addition, according to the Committee of Statistics of the Republic of Kazakhstan (CSRK), young persons make up more than a quarter of the economically active population of Kazakhstan [1]. In Kazakhstan, according to statistics of the Committee on Statistics of the Republic of Kazakhstan, in 2010 year, youth unemployment was 2335.4 thousand persons, and in 2017 year - 2140.9 thousand persons. In total for the last 7 years, youth unemployment has decreased by 8%.

Methods. Methods of scientific cognition have become both general scientific (statistical, normative analysis, synthesis, analogy and generalization), and empirical-theoretical in the studied branch of science (collection, study and comparison of data).
The theoretical basis for the study was the work of domestic and foreign economists on analysis and problems of combating unemployment, regulations and regulations of the Government of the Republic of Kazakhstan regulating employment and labor migration at the state and interstate levels, materials of monographic and experimental research, scientific conferences, as well as Scientific publications in periodicals and materials posted on the Internet.


To carry out quantitative and qualitative analysis of youth unemployment, it is necessary to take the following statistics:
1) the level of youth unemployment (15-24 years), the age of referring to youth according to the standards of the International Labor Organization;
2) The level of youth unemployment (15-28 years). The age of referring to youth in accordance with the Law of the Republic of Kazakhstan «On State Youth Policy» [2].

Consider the level of youth unemployment in Kazakhstan (taking into account the main indicators of the labor market over the past seven years) (picture 1).

![Unemployment Diagram](image_url)

**Picture 1** – The level of youth unemployment in Kazakhstan in 2010-2017 years.

**Source:** compiled according to the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan [4, 7-9]

In 2017 year, with a total unemployment rate of 4.9%, youth unemployment (15 to 28 years) was 4.1%. At the same time, in 2010, on average for Kazakhstan, statistical data were determined within 5.5% and 6.2%, respectively. In general, the level of youth unemployment in the republic in 2010 exceeded the total number of unemployed by 0.7%, and in 2017 year - decreased by 0.8%. The proportion of unemployed women is higher (4.7%) than men (3.6%). In general, during the analyzed period, the level of youth unemployment fell by 2.5% to 4.1%. In parallel, there was a gradual decline in the level of long-term youth unemployment. The main reason for the reduction of youth unemployment is the various social modernization programs adopted at the state level for the self-realization of youth, such as «100 schools, 100 hospitals», «Business Road Map 2020», «Employment 2020» [3].

The differentiation according to the level of youth unemployment according to the data of the Committee on Statistics of the Republic of Kazakhstan in the regional context is characterized as follows: the highest level of youth unemployment in 2016 year was observed in Almaty (7.4%), Astana (5.8%),
Karaganda region (5.0%), Zhambyl oblast (4.9%); the lowest level of youth unemployment was registered in Atyrau oblast (2.4%), Almaty (2.5%), North Kazakhstan (2.9%) regions [7].

Economists identify several reasons for youth unemployment, among which there is an economic decline in production and an illegal influx of labor (mainly from Uzbekistan, Kyrgyzstan, China, etc.), as well as non-demanded because of low qualifications of graduates of economic and legal specialties [11, 17, 21].

As known, the main attractive and stimulating argument for the growth of employment is wages. To do this, consider the average monthly nominal wage of one employee at the ages of the 15 - 28 years.

![Average monthly nominal wage of one employee](image-url)

**Source:** compiled according to the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan [4, 7-9]

This picture shows the dynamics of changes in the average monthly nominal wage of one employee in our country. As the graph shows, the average monthly wage in the national currency (tenge) has increased over the past seven years, and the dollar has been different. So in 2013 year the average salary in US dollars was the largest and amounted to $ 717, and in 2016 year the lowest - $ 418.

The majority of economically active youth are engaged in such sectors of the economy as trade (17%), agriculture (15%), industry (11%), education (10.9%), transportation and warehousing (6.6%), public administration (6.5%). Nevertheless, there is an industry flow of young persons during the analyzed period into the sphere of trade (+17.5 thousand persons), transport (+19.1 thousand persons), education (+45.3 thousand persons) due to outflows from such spheres as agriculture (-302 thousand persons), construction (-8.3 thousand persons) [4, 8].

<table>
<thead>
<tr>
<th>Table 1- Self-employed youth (at the age of 15-28 years) by employment status, population types, sex for 2010-2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-employed (urban population), thsd. persons</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Self-employed (rural population), thsd. persons</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
</tbody>
</table>

**Source:** compiled according to the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan [4, 7-9]
In the section «urban - rural» the following picture is formed. The greatest number of self-employed - in rural areas (67.1%). As can be seen from the table 1, for the analyzed period self-employed young persons are decreasing both among the urban population and among the rural population.

The rate of decline in the rural population is 2 times more than among the urban population. If in 2010 year the total number of self-employed youth was 199.2 thousand, persons among the urban population, in 2017 year - 161.8 thousand persons. While among the rural population, these pictures were respectively 651.9 and 330.7.

The explanation for this phenomenon is a large outflow of rural to the urban. Not finding a job at home, they go to the urban, hoping to find a suitable job there and often fill up the ranks of unemployed citizens because of the inaccessibility of housing, lack of residence permits, vocational education and work experience. In addition, students from among the rural, having received diplomas on secondary special or higher education, are not in a hurry to return home even if they are actually employed in their native rural. However, the unemployment ratio of urban and rural youth does not reflect the real picture of youth unemployment in the rural, since much of it is hidden by so-called self-employment. That is, it is believed that the availability of subsidiary farming provides the rural resident with a self-employed status, and thus the statistics do not record it as unemployed and the number of such persons grows. As a result, the level of youth unemployment in the rural is lower (3.5%) than in the urban (4.6%). Tensions in the labor market for both urban and rural youth are strengthened by graduates of schools and other educational institutions who are not employed after graduation, young persons who have not completed their studies for various reasons, children from orphanages, orphans and children left without parental care before the age of 23 years old. In addition, changing values and priorities in the lives of young persons, inflated expectations and a sense of «easy», «fast» money has led to a new type of youth NEET. NEET (Not in Employment, Education or Training) is defined as the proportion of young persons who do not want to work (unemployed or not in employment) and do not study in% of the total youth. According to the data of the Constitutional Court of the Republic of Kazakhstan in Kazakhstan, the share of NEET youth is 8.7% of the young population (see picture 3).

![Bar chart showing percentage of NEET youth from 2010 to 2017](image)

**Picture 3** - The share of youth is NEET (15-28 years) in the Republic of Kazakhstan for 2010-2017.

**Source:** compiled according to the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan [4,7,8]

While there is a significant negative relationship between youth education and unemployment of youth. In terms of educational level, a significant part of unemployed youth has higher or incomplete higher education (in 2017 year, 43% and in 2010 year - 31%). At the same time, the highest unemployment rate is typical for young persons with secondary education (4.6%) against young persons with secondary special education (4.1%) and higher education (4.2%).
Young citizens of Kazakhstan began actively to study - for the year the population of the age group aged 15-28 who were not present in the labor market due to the day-long learning process increased by 62.4 thousand persons, or by 5.4%. Of no less importance in this was the implementation of the state project «Free vocational education for all». Since January 1, 2017, Kazakhstan has been implementing the Program for the Development of Productive Employment and Mass Entrepreneurship for 2017-2021, which provides for mass training and inculcation of skills in demaedeled occupations, training of personnel with technical and vocational education and short-term vocational training at the expense of the republican budget, and training in entrepreneurship, lending, assistance in employment and support of labor mobility. In addition, the participants of the Program are provided with a scholarship, one-time hot meals, travel, hostels provided. However, according to the Office for the Coordination of Employment and Social Programs, in recent years, the number of persons applying to employment agencies has decreased. Perhaps this is due to the discrepancy between the expected wages of employees and the high demands of employers.

### Table 2 – Structure of youth unemployment in Kazakhstan for 2010 and 2017 years

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2010 year</th>
<th>2017 year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>thousands of persons</td>
<td>%</td>
</tr>
<tr>
<td>Higher and incomplete higher</td>
<td>728.3</td>
<td>31.18</td>
</tr>
<tr>
<td>vocational (specialized)</td>
<td>528.1</td>
<td>22.62</td>
</tr>
<tr>
<td>Basic, secondary, general, primary</td>
<td>1079.0</td>
<td>46.20</td>
</tr>
<tr>
<td>Total</td>
<td>2335.4</td>
<td>100</td>
</tr>
</tbody>
</table>

*Source*: compiled according to the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan [4, 7-9]

### Table 3 - Monitoring of persons applying for employment and employed

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2016 year</th>
<th>2017 year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appealed to employment agencies (person)</td>
<td>4026</td>
<td>3500</td>
</tr>
<tr>
<td>Employed (person)</td>
<td>2606</td>
<td>2520</td>
</tr>
<tr>
<td>Sent to public works (person)</td>
<td>757</td>
<td>758</td>
</tr>
<tr>
<td>Employed in social work places (person)</td>
<td>150</td>
<td>136</td>
</tr>
<tr>
<td>Are directed to vocational training (person)</td>
<td>433</td>
<td>432</td>
</tr>
<tr>
<td>Organization of youth practice (person)</td>
<td>281</td>
<td>204</td>
</tr>
</tbody>
</table>

*Source*: compiled according to the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan [4, 9]

This is due to the fact that more and more young persons began to receive information assistance in the search for work.

**Conclusion.** World is facing an employment crisis and youth constitutes a group that is among the most vulnerable.

From the moment of independence to the present, one of the most global problems of the present and the republic is the problem of unemployment those with employment. In the republic laws «On employment of the population», «On labor», normative legal acts and state support programs for reforming the labor market, improving employment were developed.

One of the important measures taken by the new economic policy is the state program "Nurly Jer", which resulted in regional employment promotion plans, memorandum of akims with large enterprises on mutual cooperation on issues of job preservation, memorandums of educational institutions with employers for further employment of graduates) [5].

In 2011 year, «Employment 2020» program developed into the program «Employment road map – 2020», then into the program for the development of productive employment and mass entrepreneurship in the context of globalization and the fast-change labor market requirements. In addition, separate state projects for youth are being implemented: «Green country», «With diploma - in rural», «Youth of the eternal country - industry », «Youth staff reserve» [6].
The effective increase of youth employment is the main principle of the entire reform to regulate the situation on the national labor market, aimed at the following tasks:

1) training of personnel with technical and vocational education, taking into account the needs of the labor market;
2) short-term vocational training of workers in the professions and skills in demand on the labor market;
3) learning the basics of entrepreneurship;
4) expansion of microcredit in the rural and in the urban;
5) assistance in providing employment for the unemployed and self-employed;
6) increasing labor mobility;
7) creation of a single digital platform for employment.

The share of the population with higher and secondary vocational education is growing in the structure of the unemployed population and the share of persons without qualification and education is declining. The imbalance in the training of specialists with higher education, as well as secondary vocational education, increased the share of NEET youth.

Statistics show that secondary vocational education is more demanded and flexible. An important role is played by the program "Youth Practice", implemented since 2009 year, which makes it possible to acquire graduates of higher educational institutions and colleges of practical experience in their specialty. Therefore, the introduction of a dual system of education in higher education institutions would positively solve the issue of vocational training of graduates and would increase and reduce the level of unemployed with higher education.

In general, the employment programs of the persons of the Republic of Kazakhstan are based on strategic plans for the development of the state and take into account the current trends in the economy.

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ҚАЗАҚСТАННЫҢ ЖАСТАР ЖҰМЫССЫЗЫҢЫҢ ҚАЗІРГІ ЗАМАНЫҢ ТЕНДЕНЦИЯСЫ

Аннотация. Жаңындандыру кезеніндегі заманауи елдің кеңістікке жастар жұмыссыздығы тақырыбы өзкін қажет екен мәселе болып табылады. Еңбекти халықаралық ұйымдастыру (ЕУ) мәліметтерімен келесі отырғыз елдегі жұмысқа жатады қоғамдың өзінің грекіндік өсіне жететін елдегі жұмыссыз жағдайларын қалпы, елдің тенденциясы олеңдік-экономикалық тәсілдікке қарай. Еңбек қаронызына жастардың жағдайлары баянындың қызметтіліге ол қасиетіна ауыстырды және олардың елдерінен көп құрылысқа жатады. Жаңындау және қартоққа тәрізді дайындығы мен құрылыс, Қазақстан.

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СОВРЕМЕННАЯ ТЕНДЕНЦИЯ МОЛОДЕЖНОЙ БЕЗРАБОТНЫХ КАЗАХСТАНА

Аннотация. В современном мировом пространстве в условиях глобализации тематика молодежной безработицы является актуальной и наиболее значимой проблемой. К тому же согласно данным Международной организации труда (МОТ) уровень безработицы в мире уже достиг своих рекордных уровней.
значений и число безработных в мире превысило 192 млн человек, общенародные тенденции молодежной безработицы приводят к социально-экономическому дисбалансу. Необходимость оценки положения молодежи на рынке труда обусловлена тем, что молодые люди — это будущее страны, и от стартовых условий их деятельности зависит последующее развитие экономики и общества. Каждой стране, в зависимости от особенности государственной политики занятости, присущи определенные причины молодежной безработицы, уровень и ее последствия. Многие отечественные и зарубежные ученые-экономисты и исследователи изучали вопрос безработицы с разных сторон. Современная оценка уровня молодежной безработицы требует постоянного мониторинга, анализа текущего ее состояния и быстрого политического реагирования на любые трансформации.

В статье анализируются показатели безработицы, представлена динамика уровня молодежной безработицы по регионам страны, а также структура безработных по различным социально-демографическим факторам. Рассмотрены основные причины молодежной безработицы в целом, предложены основные направления государственной политики в сфере занятости населения, способствующие сокращению уровня молодежной безработицы. В статье также содержатся отсылки к ряду документов, регулирующих вопросы молодежной политики и занятости на национальном уровне.

В выводах авторы статьи находят взаимосвязь между уровнем молодежной безработицы в Казахстане и предприятиями мерами, направленными на стабилизацию данного показателя. Так как за последние семь лет уровень молодежной безработицы снизился на 2,5% до показателя 4,1%. При этом, уровень молодежной безработицы на селе ниже (3,5%), чем в городе (4,6%).

**Ключевые слова:** молодежная безработица, самозанятость, занятость, молодежная политика, рынок труда.

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INVESTMENTS IN EDUCATION AND HEALTH AS FACTORS OF FORMATION OF HUMAN CAPITAL

Abstract. Of all types of investment in human capital, investments in health and education are the most important. Investing in health leads to a reduction in diseases and mortality, prolongation of a person's working age. Strength, endurance, efficiency, an increase in the period of active labor activity are necessary for every person in any sphere of professional activity. Competitive advantages of an innovative nature that require large investments in their creation and development depend on the carrier itself, on the nearest environment, on the society and on the enterprise in which they are implemented. For an employee, the economic effect of investment is expressed in his income. For the enterprise - in raising the productivity of workers. For society - in maintaining the competitiveness of the national economy. By investing in the education of employees, enterprises strive to increase their labor activity, increase labor productivity, reduce losses of working time and thereby strengthen their competitiveness.

Keywords: investment, education, human capital, health, competitiveness, potential

Introduction. Human capital is a natural and acquired potential, formed by a person as a result of development, not contradicting his inner desires and possibilities, the cumulative volume of accumulated knowledge, abilities, skills, experience, skills, motivations and health, the use of which, in the course of labor activity, provides income to its owner, the business entity and society as a whole.

The following types of human capital are singled out as management objects:

• individual human capital, which is owned by a specific person;
• integral human capital (cumulative), i.e. the combination of individual human capital within the following levels: the human capital of the primary labor collective; corporate-human capital of the organization; regional; sectoral and national human capital.

Methods of research. The main methods of research are a method of deduction and induction, as well as a comprehensive approach and a method of scientific abstraction. The variety of goals, objectives and areas of activity in agriculture predetermines various criteria for assessing the effectiveness of economic entities.

The discussion of the results. Special investment in human capital is investment in special training, physical condition and emotional behavior, with the focus on forming an employee's sense of commitment to the organization. International experience shows that investments in education contribute to significant returns for the economy and society. The earlier the investments begin, the more effect they have. General, special, higher and postgraduate education, training in magistracy, doctoral studies, etc., self-education of an individual improve the quality, increase the level and stock of knowledge of a person. In developed countries, there is a stable relationship between the level of education and the income of the individual. To stimulate motivation to receive education, expectations of decent wages, opportunities for professional growth are necessary. The interests of the individual and society in that the employee had a higher level and quality of education should coincide. Investments in human capital are necessary for the formation of highly skilled workers who are able to adapt in a rapidly changing world. It is necessary to emphasize that education performs the most important educational function, the function of forming social capital - people with an active civic position, high social cohesion. The transition to an innovative and diversified economy and the implementation of breakthrough projects of industrial and innovative development of Kazakhstan largely depends on the quality of human capital, based on the education and professionalism of human resources.
Investments, for the production of human capital are extremely important for the family and for the whole society. Consider how much education, health care and social services are in the GDP part, million tenge.

![GDP by types of economic activity, million tenge](image)

**Figure 1 - GDP by types of economic activity, million tenge**

Note - compiled by the author on the basis of the data of the COP of the Ministry of Education and Science of the Republic of Kazakhstan [2]

**GDP in terms of education amounted to 1 242 272.4 million tenge, and health and social services 769 201.1 million tenge**

Investments in human capital are the costs necessary to preserve and maintain health, form a culture, receive education, training, skills and experience of working people.

<table>
<thead>
<tr>
<th></th>
<th>The state budget</th>
<th>Republican budget</th>
<th>Local budget</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>billion tenge</td>
<td>Specific gravity, in%</td>
<td>billion tenge</td>
</tr>
<tr>
<td>Expenses</td>
<td>12485.4</td>
<td>100</td>
<td>10677.5</td>
</tr>
<tr>
<td>General government services</td>
<td>652.3</td>
<td>5.2</td>
<td>493.9</td>
</tr>
<tr>
<td>Defense</td>
<td>452.4</td>
<td>3.6</td>
<td>428.7</td>
</tr>
<tr>
<td>Education</td>
<td>1843.2</td>
<td>14.8</td>
<td>464.6</td>
</tr>
<tr>
<td>Health care</td>
<td>1128.3</td>
<td>9.0</td>
<td>1018.6</td>
</tr>
<tr>
<td>Social assistance and social security</td>
<td>2302.3</td>
<td>18.4</td>
<td>2130.0</td>
</tr>
<tr>
<td>Other</td>
<td>5397.2</td>
<td>43.3</td>
<td>5592.6</td>
</tr>
</tbody>
</table>

Note - compiled by the author on the basis of the data of the COP of the Ministry of Education and Science of the Republic of Kazakhstan [2]

Low level of integration of science and education, as well as inefficient use of the available scientific potential. The main reasons are the lack of motivation for scientific labor and the lack of competent PPP, the lack of time for PPPs due to their workload in different types of activities. Therefore, in order to improve the quality of human capital, it is necessary to raise the status of science in society on the basis of strengthening the factor of motivation for creative work. If we take for example, Europe or the US, it is the universities that conduct the main scientific work and widely attract students, undergraduates and doctoral students. In this respect, the experience of Nazarbayev University is attractive, where the Centers for Research have been established, whose activities contribute to the integration of science and education.
The labor force at the age of 15 years and older in the I quarter of 2018 amounted to 9.0 million people. 8.5 million people or 66.1% of the population aged 15 years and over were employed in the economy of the republic. The number of employees amounted to 6.5 million people and increased by 143.0 thousand people (2.3%) as compared to the first quarter of 2017.

The expected return on investment in human capital includes a higher level of earnings, greater satisfaction from the chosen work during life, as well as a higher valuation of non-market activities.

Consider the remuneration of labor of workers, its average value for Kazakhstan, how much the work of educators, health and social services.

![Remuneration of labor, tg.](image)

Figure 2 - Payment of employees of education, health and social services

Note - compiled by the author on the basis of the data of the COP of the Ministry of Education and Science of the Republic of Kazakhstan [2]

The average wage in education is 101,108 tenge, in the healthcare and social services system - 116,434 tenge, which is higher at 15,326 tenge. However, salaries of these workers are lower than the average salary in the country at 169,725 tenge. As evidenced by the shortage of workers in this sphere, migration and the search for information contribute to the movement of labor to regions and industries where labor is better paid, i.e., where the price for human capital services is higher.

Higher education is the determining factor that influences the quality of human capital. The annual growth of human capital by 1% in higher education ensures an increase in GDP growth rate per capita by 5.9% [11].

In our country, on the basis of the National Framework of Qualifications in the spheres of education and science, labor, agriculture, the sectoral framework of qualifications has been formed, professional standards and an institutional system of independent confirmation of qualifications are being developed. Therefore, the important task of the current stage of development of this system is the formation of its legislative framework. In order to implement the principles of the qualification system, according to the experience of foreign countries, independent certification organizations should be formed. For example, to improve the quality of medical education, in a number of countries experts from other countries or non-governmental organizations are involved in this procedure. In Singapore, for example, specialists from England and the United States are being recruited to conduct an external assessment of health personnel. In America, such an assessment is carried out by a private non-governmental organization - the National Council of Medical Examiners, which develops medical licensing exams, provides medical schools with tests on subjects [10].
The most important forms of investments in a person are Western economists: education, on-the-job training, medical services, migration, the search for information on prices and incomes, the birth of children and care for them. Education and training at work increase the level of human knowledge, i.e. increase the volume of human capital. Health protection, reducing morbidity and mortality, prolongs the life of a person, and also increases the intensity of its use.

The mechanism for the formation of human capital is investing in people, that is, expeditious investments in the individual in the form of monetary or other form, contributing, as mentioned above, on the one hand, to bring income to a person, and on the other, to increase labor productivity. Costs that increase productivity can be seen as investments; current costs are realized with the expectation that they will be repeatedly compensated by higher profits in the future [5].

Consequently, of all types of investments, investments in human capital are most important, and they differ as follows:
- investment in education (training in school, institute, advanced training in production);
- health care costs that provide for the individual's physical and mental health (disease prevention, medical care);
- Improvement of housing conditions, contributing to the restoration of the worker's strength and strengthening his mental activity);
- adequate power.

The above types of investment create conditions for quality labor, which promotes the use of human capital.

Conclusions. The peculiarity of investments in human capital is that the increase in knowledge and experience of individuals contributes to the growth of productivity of capital embodied in people, not immediately. This process, as a rule, is prolonged in time.

Human capital occupies a leading place among the competitive advantages of the enterprise, which means that the analysis and evaluation of personnel is the most important condition for the successful leadership of any organization. Without investments in personnel, ensuring competitive advantages is impossible.

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АДАМЫҢҚАПИТАЛЫНЫҢҚУРЫЛЫСЫФАКТОРЛАРЫ
БІЛІМ ЖӨНЕ ДЕНСАУЛЫҚ ИНВЕСТИЦИЯЛАРЫ

Аннотация. Адамың капиталға сальынған инвестициялардың барлық түрлерінің бірі денсаулық пен білімге инвестициялар болып табылады. Денсаулыққа инвестициялар аурулар мен елді-жітімді әзіртегі, адамның әрімі жасы әліп келеді. Қосіби қызмет кез келген саладағы ер адам үшін тәзірмілік, тәмділік, әрібес бөлінеділігін ұлылама қажет. Оларды әліп мен әдемі үлкен инвестицияларды қажет ететін инновацияларын сипаттағы бөсекелестік тақырыпқа шығарылықтарының өзі, жақын жерде, қоғамда және олар әліпке аңырақтың кәсіпорында болады. Қызметкерсіңе инвестициялардың экономикалық асері өзінің ұлсауымен көрсетеді. Құсірпің үшін - қызметкерлердің әңімділігін әртүрді.

Қоғам үшін - әліп шаруашылығының бөсеке кәбілеттілігін сақтау. Кәсіпорындағы қызметкерлерді әдемі үлкен инвестициялар әрқылы олардың әрібес қызметін, әрібес әңімділігін, олардың бөсеке кәбілеттілігін әртүрді және әрімің үлгісін қоғамдық әдемі үлкен азыруына ұalyticsы.

Түпін сөздер: инвестиция, білім, адам капиталы, денсаулық сақтау, бөсеке кәбілеттілік, олесует.

УДК 338.43.

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ИНВЕСТИЦИИ В ОБРАЗОВАНИЕ И ЗДОРОВЬЕ
КАК ФАКТОРЫ ФОРМИРОВАНИЯ ЧЕЛОВЕЧЕСКОГО КАПИТАЛА

Аннотация. Из всех видов инвестиций в человеческий капитал наиболее важными являются вложения в образование и в образованье. Вложения в образование приводят к сокращению заболеваний и смертности, продлению трудоспособного возраста человека. Сила, выносливость, работоспособность, увеличение периода активной трудовой деятельности необходимы каждому человеку в любой сфере профессиональной деятельности. Конкурентные преимущества инновационного характера, требующие больших инвестиций в их создание и развитие, зависят от самого носителя, от ближайшего окружения, от социума и предприятия, в котором они реализуются. Для работника экономический эффект инвестиций выражается в его доходах. Для предприятия - в повышении производительности труда работников. Для общества — в поддержании конкурентоспособности национальной экономики. Инвестирование в образование сотрудников, предприятия стремятся активизировать их трудовую деятельность, повысить производительность труда, сократить потери рабочего времени и тем самым укрепить свою конкурентоспособность.

Ключевые слова: инвестиции, образование, человеческий капитал, здравоохранение, конкурентоспособность, потенциал.

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