Innovative economy development factors are researched in this article. It is stated that the main factors assisting in development of Ukrainian innovative economy are internal current expenditures on technical scientific developments, scientific services and applied researches, performed by scientific organizations on their own. It is scientifically proved that the following items should be attributed to the list of urgent measures of the state innovative policy: fighting corruption intensification, political stabilization, strengthening of the Ukrainian Antimonopoly Committee role and responsibility for violation of Ukrainian antimonopoly legislation, increasing the intellectual property protection level and copyright up to international standards, increasing targeted state financing of scientific institutions, which produce innovative developments, demanded by the real economy sector, state development and private pilot projects of high-tech industrial parks based on leading domestic scientific institutions of respective profile.

Keywords: innovations, expenditures on scientific developments, corruption, political instability, inflation, intellectual property, antimonopoly regulation, targeted financing.

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Problem statement. The most important precondition for a successful reform in Ukrainian economy, improving its international competitive position and maximizing the benefits of deepening its integration into the global space is the technical and technological basis modernization of social production on an innovative basis. The innovative transformations necessity is subordinated to the main purpose of economy functioning - raising the living standards in the country's population. About these factors, is mentioned in “Global Competitiveness Report 2016-2017”: «Accelerating innovation will be crucial to maintain the current level of welfare, and Europe can expect a high return on focusing their resources on educating its talented citizens» [22, p. 11].

Analysis of Recent Publications. Innovative transformations and formation of knowledge economy - one of the most important research directions. Studying the innovation phenomenon and their impact on the social production dynamics reflected in the works of many foreign scientists. In particular, these are works of J.A. Schumpeter [21], G.O. Mensh [20], K. Schwab [22]. Among native scientists “innovation theme” is reflected in research M.A. Pavlovskyi [2], L.I. Fedulova [17], N.M. Kraus [1] and others.

Previously unsettled parts identification of the general problem. However, whereas large number of scientific works with innovative themes, significant aspects of the scientific problems studying is not fully understood. The majority native researchers focus on theoretical and methodological direction, carry out a comparative analysis in qualitative characteristics of innovation in the Ukrainian economy and the developed countries economies, offer a conceptual framework in the national economy transition to innovation framework and the appropriate strategies development. In this case, the applied aspect of the problem requires additional research attention. In particular, the practical filling needs tactical measures to neutralize the factors, which impede the innovative progress of the national economy, substantiation of specific managerial decisions on practical implementation of state innovation policy, etc.
The object of the article is to carry out a quantitative analysis of the factors influencing on the innovation transformations dynamics in the Ukrainian economy, measures validation to neutralize their destructive action.

Summarizing the main research material. According to the innovative development index Ukraine shows a very unstable dynamics (greater quantitative values of the rank means fall in respective rating) (Fig. 1) in Global Competitiveness Index Rankings. It is still to early to consider relative improvement of the analyzed index during marketing years 2015/16-2016/17 to be stable, since smoothing of the analyzed dynamic row with least-squares method provides no satisfactory result — credibility of approximation of all possible trend lines is not enough ($R^2<0.5$).

Figure 1 – Ukraine’s place in the global competitiveness ranking in terms of innovation, rank
(built by the authors based on [22-30])

This is confirmed with calculations based on national statistics data (Fig. 2).

Figure 2 – The volume of realized Ukrainian innovative products for the market in real terms, mln.
(built by the author on the basis of [14])

As we see, rather stable negative tendency in the decrease of production and realization volumes of innovative products by Ukrainian companies still continues (Fig. 2).

Taking into account that innovative transformations leave no alternative, as key condition of successful reorganization in Ukrainian economy, it is necessary to detect and neutralize factors, which impede it, in
time. This requires carrying out systematic monitoring of economic environment and including as many
direct and indirect factors influence in analysis as possible.

An estimation methodology of quantitative and qualitative characteristics in the innovative economy
development level includes may approaches. The following are singled out:

- science and Research Potential Index (WEF). Three factors are analysed: macroeconomic
  environment, state institutions and technologies;

- system of Innovative Activity Estimation Indicators of the Committee of European Community (CEC).
  It includes 16 indicators, divided into 4 groups: 1) human resources; 2) new knowledge generation; 3)
  knowledge transfer and application; 4) innovative activity financing;

- system of Innovative Activity Estimation in the Country using indicators according to European
  Innovation Scoreboard (EIS);

- innovation Union Scoreboard (IUS);

- knowledge Assessment Methodology of the World Bank (KAM). It includes a complex of 109
  structural and qualitative indicators, united into four main groups: 1) The Economic Incentive and
  Institutional Regime; 2) Education and Human Resources; 3) The Innovation System; 4) Information and
  Communication Technology (ICT). As well, Knowledge Assessment Methodology offers determination of
  two consolidated index: The Knowledge Economy Index (KEI) and The Knowledge Index (KI);

- methodology of the Organization for Economic Cooperation and Development (OECD);

- unofficial approaches, offered and used by the economists and authors themselves in their
  researches in order to reveal the given tasks.

The following three methods are mainly used in Europe: evaluation method according to Organization
for Economic Cooperation and Development (OECD); Data-base of Innovation Policy Measures;
European Innovation Scoreboard (EIS) [18].

To determine the impact of individual factors on the dynamics of innovation in the Ukrainian economy,
we decided to apply the comparative analysis method. For this, we used the Ukrainian regions statistics,
based on regional differentiation in the sales volume of innovative products that are new to the market (Y).
When choosing the factors of influence, we proceeded from the methodological recommendations of the
leading organizations and available data presented in the free access by the State Statistics Service of
Ukraine (Table 1):

- x1 – capital investments (UAH million). Innovations are always investments in the development,
  promotion and use (commercial or non-commercial) of new knowledge embodied in information,
  technology, technology, designs, products, etc.;

- x2 – number of small and medium enterprises (per 10 thousand people of the existing population).
  Innovations are always associated with a serious commercial risk. Therefore, their promotion is impossible
  without the presence of a sufficient number of small and medium enterprises, which are the main recipients
  of venture capital;

- x3 – internal current expenditures on scientific and technical developments, scientific services and
  applied researches performed by the own forces of scientific organizations (thousand UAH). Scientific
  organizations are the main source of new knowledge potentially suitable for commercial innovation;

- x4 – foreign trade turnover (in % of gross regional product). As the “Global Competitiveness Report
  2016-2017” says: “Open, the trade economy creates incentives for innovation and investment in new
  technologies, as firms are exposed to competition and new ideas, can benefit from the transfer of
  technology that comes with imports and foreign Investments” [22].

From such factors of influence as: "foreign direct investment (equity)”, "the need of employers in
workers to replace vacancies (vacant positions)”, "The number of organizations that carry out scientific
and technical work”, "number of specialists who perform scientific and technical work” and the expansion
factor for x3-element components had to be abandoned because they showed collinearity.
Table 1 - Output information for the correlation-regression analysis according to the statistical data of regions of Ukraine for 2015 (built by authors based on [13])

<table>
<thead>
<tr>
<th>Region</th>
<th>Volume of realized innovative products, new for the market, millions UAH</th>
<th>Capital investments, millions UAH</th>
<th>Number of small and medium enterprises, per 10 thousand people of the existing</th>
<th>Scientific and technical developments, services and applied researches performed by own forces of scientific organizations, thousand UAH</th>
<th>Foreign trade turnover, % of gross regional product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinnitsa</td>
<td>73.053</td>
<td>7373</td>
<td>59</td>
<td>19314.3</td>
<td>55.3</td>
</tr>
<tr>
<td>Volyn</td>
<td>10.938</td>
<td>6167</td>
<td>54</td>
<td>13987.3</td>
<td>113.2</td>
</tr>
<tr>
<td>Dnipropetrovsk</td>
<td>203.067</td>
<td>25920</td>
<td>84</td>
<td>1296760.6</td>
<td>119.1</td>
</tr>
<tr>
<td>Donetsk</td>
<td>537.604</td>
<td>8304</td>
<td>27</td>
<td>163237.3</td>
<td>89.2</td>
</tr>
<tr>
<td>Zhytomyr</td>
<td>88.632</td>
<td>4044</td>
<td>53</td>
<td>13379.4</td>
<td>50.4</td>
</tr>
<tr>
<td>Zakarpattya</td>
<td>0</td>
<td>3778</td>
<td>49</td>
<td>28255.3</td>
<td>190.7</td>
</tr>
<tr>
<td>Zaporozhye</td>
<td>682.270</td>
<td>7794</td>
<td>82</td>
<td>470729.1</td>
<td>133.0</td>
</tr>
<tr>
<td>Ivano-Frankivsk</td>
<td>40.859</td>
<td>9609</td>
<td>57</td>
<td>34356.9</td>
<td>38.7</td>
</tr>
<tr>
<td>Kiev</td>
<td>236.902</td>
<td>24359</td>
<td>105</td>
<td>158026.3</td>
<td>117.4</td>
</tr>
<tr>
<td>Kharkiv</td>
<td>70.490</td>
<td>4057</td>
<td>79</td>
<td>53891.8</td>
<td>38.9</td>
</tr>
<tr>
<td>Rivne</td>
<td>360.890</td>
<td>2060</td>
<td>15</td>
<td>25891.9</td>
<td>40.1</td>
</tr>
<tr>
<td>Lviv</td>
<td>416.791</td>
<td>13387</td>
<td>73</td>
<td>162401.9</td>
<td>79.5</td>
</tr>
<tr>
<td>Nikolaev</td>
<td>11.036</td>
<td>5990</td>
<td>91</td>
<td>289069.1</td>
<td>134.4</td>
</tr>
<tr>
<td>Odesa</td>
<td>199.610</td>
<td>9884</td>
<td>100</td>
<td>173680.0</td>
<td>73.6</td>
</tr>
<tr>
<td>Poltava</td>
<td>0.269</td>
<td>8338</td>
<td>70</td>
<td>39389.9</td>
<td>71.8</td>
</tr>
<tr>
<td>Rivne</td>
<td>17.959</td>
<td>4334</td>
<td>45</td>
<td>8243.2</td>
<td>44.2</td>
</tr>
<tr>
<td>Sumy</td>
<td>1244.958</td>
<td>3663</td>
<td>52</td>
<td>111552.3</td>
<td>72.6</td>
</tr>
<tr>
<td>Ternopil</td>
<td>74.877</td>
<td>3828</td>
<td>48</td>
<td>8366.1</td>
<td>55.5</td>
</tr>
<tr>
<td>Kharkiv</td>
<td>2155.969</td>
<td>11247</td>
<td>92</td>
<td>1628420.3</td>
<td>59.3</td>
</tr>
<tr>
<td>Kherson</td>
<td>10.073</td>
<td>3107</td>
<td>75</td>
<td>20703.3</td>
<td>35.6</td>
</tr>
<tr>
<td>Khmelintsy</td>
<td>2.091</td>
<td>6809</td>
<td>54</td>
<td>13131.4</td>
<td>44.9</td>
</tr>
<tr>
<td>Chernivtsi</td>
<td>39.777</td>
<td>4486</td>
<td>67</td>
<td>76535</td>
<td>37.6</td>
</tr>
<tr>
<td>Chernihiv</td>
<td>38.945</td>
<td>3550</td>
<td>57</td>
<td>42849.3</td>
<td>72.3</td>
</tr>
</tbody>
</table>

Results of Correlation and Regression Analysis:
1) Correlation coefficient: R = 0.739; thus, relation is close (R> 0.7);
2) Coefficient of determination: R² = 0.546; thus, function variability is 54.6% determined by the variability of the selected factors;
3) Fisher's test: F₀ = 5.729, F₁ = 2.959, F₀>F₁; thus, there is a relation between the function and the factors;
4) Student's test: t₀ = 7.111, t₁ = 2.093, t₀>t₁, thus, regression coefficient is statically significant;
5) Regression equation: Y = 336.842 – 0.024x₁ – 0.844x₂ + 0.001x₃ – 0.587x₄.

Correlation matrix contains no pair correlation coefficients rᵢⱼ higher than 0.7, which shows the absence of correlated regressors, so the model is not multicollinear (Tab. 2).

Table 2 - Correlation Matrix (author’s own calculations)

<table>
<thead>
<tr>
<th>Y</th>
<th>x₁</th>
<th>x₂</th>
<th>x₃</th>
<th>x₄</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.145602577</td>
<td>0.179221552</td>
<td>0.083904186</td>
<td>0.019234288</td>
</tr>
<tr>
<td>x₁</td>
<td>1</td>
<td>0.574778473</td>
<td>0.549277251</td>
<td>0.34956286</td>
</tr>
<tr>
<td>x₂</td>
<td>0.179221552</td>
<td>1</td>
<td>0.574778473</td>
<td>0.27664433</td>
</tr>
<tr>
<td>x₃</td>
<td>0.083904186</td>
<td>0.549277251</td>
<td>1</td>
<td>0.07603119</td>
</tr>
<tr>
<td>x₄</td>
<td>0.019234288</td>
<td>0.34956286</td>
<td>0.27664433</td>
<td>1</td>
</tr>
</tbody>
</table>
Correlation and Regression Analysis provided rather unexpected results, which need economic interpretation and form extremely important conclusions.

As it is seen from the regression equation, factors $x_1$, $x_2$ and $x_4$ have inverse influence on the function. In other words, the volumes of realization of innovative products, which are new for the market, decrease in case of increase of the amount of capital investments, small and medium-sized companies and foreign trade turnover. Taking into account the amount of pair correlation coefficients between the function and given factors: $r_{Yx2} = 0.146$; $r_{Yx2} = 0.173$; $r_{Yx4} = 0.019$ (Tab. 2), we may state that connection is rather not inversed, but generally absent. Detailed analysis of the reasons of the found phenomenon allowed us to determine the following:

1) research of the capital investments structure has shown that in 2016 such potentially innovative areas of investment as Information and Telecommunications, Professional, Scientific and Technical Activities and Education took only 4.7%, 1.1% and 0.3% respectively. We may conclude then, that the national capital investments are not innovation-oriented. In our opinion the main reason for that are excessive risks of carrying out commercial activity in Ukraine. Investments in innovations themselves are risky even in highly developed countries. If we add specific domestic business risks, then potential benefits from innovations implementation compensate no possible losses in case of risky situation occurrence. On the other hand, as a result of reinsurance, their price shall be so high that potentially successful innovative product shall find no ready sale. The main destructive factors of business activity performance include corruption, political instability and inflation (Fig. 3). Their share takes 39.1 % of influence.

2) developed small and medium-sized business is a necessary, but insufficient condition for innovative development of economy. Indeed, small and medium-sized companies are the main recipients of investments in venture capital. However, if donors of such capital are large companies, not interested in investments into innovations, these do not occur. Besides, the influence of negative factors, which impede conduct of business (Fig. 3), does not stimulate any small and middle-sized companies to invest into risky projects with long-term payback period, but orients them for business activity with much shorter production cycle.

3) the same concerns the open economy, which is not an automatic guarantee of import of new knowledge and progressive technologies. E.g., despite the growth of Ukrainian open economy, the volume of import of potentially innovative services had reduced during last 3 years (Tab. 3). In our opinion, the following are the main reasons of the low level of advanced technology transfer to Ukraine:

![Figure 3 - Factors that impede conducting business in Ukraine according to the Global Competitiveness Report in 2016-2017 (built by authors based on [30])](chart.png)
- insufficient level of intellectual property protection: according to the data of the annual report of the International Intellectual Property Alliance (IIPA) in 2016 Ukraine took the first place in rating of the countries, which violate the intellectual property rights the most frequently [16];

- more than a half of the national market still has a noncompetitive structure. According to the data of the Antimonopoly Committee of Ukraine in 2015 only 42.7 % of general volume of products were sold in markets with competitive structure; 16.7 % – in markets with signs of collective dominance or oligopol markets (where the share of the three largest business subjects exceeded 50%); 30.8 % of general volume of products realization fell to markets with signs of sole dominance (where the share of the largest business subject amounted to more than 35 %); 9.8 % of the general volume of goods, works and services were realized on monopolized markets (where the share of the largest business subject amounted to more than 90%). Analysis of tendencies of competitiveness structural preconditions changes since 2001 evidences that from the beginning of 2008 World Economic Crisis a tendency of the competitiveness level decrease has taken place in Ukrainian economy. At the same time, if within 2010-2011 the reduction of the level of competitive markets occurred at the cost of oligopol markets expansion, where competitiveness is possible under certain conditions, the gradual increase of the markets shares with signs of individual dominance or monopolized markets, where competitiveness is practically out of the question, has taken place since 2012 [3].

Table 3 – Imports into Ukraine of potentially innovative services, mln USA
(built by authors based on [15])

<table>
<thead>
<tr>
<th>Service Type</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>2026.8</td>
<td>1392.7</td>
<td>1144.5</td>
<td>1101.3</td>
</tr>
<tr>
<td>including:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Royalties and other services related to the use of intellectual property</td>
<td>854.2</td>
<td>450.5</td>
<td>301.6</td>
<td>323.1</td>
</tr>
<tr>
<td>Services in the field of telecommunications, computer and information services</td>
<td>698.4</td>
<td>512.0</td>
<td>548.4</td>
<td>420.4</td>
</tr>
<tr>
<td>Research and development services</td>
<td>42.4</td>
<td>23.3</td>
<td>14.3</td>
<td>24.4</td>
</tr>
<tr>
<td>Scientific and technical services</td>
<td>221.6</td>
<td>140.9</td>
<td>127.2</td>
<td>69.9</td>
</tr>
<tr>
<td>Services on processing and elimination of environmental pollution</td>
<td>132.7</td>
<td>93.7</td>
<td>83.8</td>
<td>167.3</td>
</tr>
<tr>
<td>Operating lease services</td>
<td>77.5</td>
<td>172.3</td>
<td>69.2</td>
<td>96.2</td>
</tr>
</tbody>
</table>

The monopoly high price \((C_m)\) makes it possible to obtain a monopoly high profit \((p_1)\), which, in other equal conditions, in the presence of competition, is zero:

\[
C_m = c + v + p + p_1,
\]

where \(C_m\) – monopoly high price; \(c\) – fixed capital; \(v\) – variable capital; \(p\) – average profit; \(p_1\) – a monopoly high profit.

The essential difference between domestic and foreign markets prices means that producers or trading companies have a monopoly opportunity individually or in agreement influence the pricing in the domestic market.

The negative consequences of monopoly rule in the Ukrainian economy are the unfair prices establishment (monopoly overestimated) and the lack of incentives for modernization. A striking example of this problem is the economic activity result in the domestic automobile monopoly “Ukravto.” Thus, journalists from the Carreviewauto portal have published a comparative cost table of new cars in Ukraine and Russia as the prices for the end of January-beginning of February 2016 – ZAZ Lanos, which is produced in Zaporozhye, in the domestic market cost 9600$, about. While the Russian buyer he was available for 5182$.

The average difference in price for models that participated in comparison was over 68 % [19]. The losses caused by the monopolist to the Ukrainian consumers are not only in overpriced prices, but also
because they are forced to buy legally obsolete cars. After all, the preferential (uncompetitive) regime, which has been around for 25 years now due to the high collection of cars, did not stimulate the automobile monopolist to develop and serially produce their own competitive automobile model.

Therefore, according to our research, one of the several factors that stimulate the innovative economy development in Ukraine is the internal operating costs, research and development, scientific services and applied research performed by their own scientific organizations. Taking into account criticality of the factor, we should mention, that resource potential of domestic scientific organizations, which are able to produce competitive knowledge, is not endless. Moreover, we are referring not only to financial resources. Topical national problems are formation and accumulation of human capital.

Table 4 – Admission of Students to the Institutes of Higher Educations of Ukraine of the 3rd-4th accreditation level, for Initial Study Cycle (1st Year), in persons [4-9]

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Sciences</td>
<td>11395</td>
<td>8826</td>
<td>9815</td>
<td>9760</td>
<td>8460</td>
<td>7360</td>
</tr>
<tr>
<td>Physical and Mathematical Sciences</td>
<td>4063</td>
<td>3131</td>
<td>3908</td>
<td>3895</td>
<td>3368</td>
<td>2005</td>
</tr>
<tr>
<td>Systematic Sciences and Cybernetics</td>
<td>2735</td>
<td>2124</td>
<td>2847</td>
<td>3041</td>
<td>2588</td>
<td>2480</td>
</tr>
</tbody>
</table>

During recent years (Tab. 4) we observe a stable tendency to reduce the amount of persons interested in admission to Institutions of Higher Education of the 3rd-4th accreditation level for the 1st year of study specializing in natural, physical and mathematical, systematic sciences and cybernetics — sciences, which form a basis for knowledge economy. As a result, the number of scientists in these specialties reduces (Tab. 5).

Table 5 – Admitted to Post-Graduate Courses in Ukraine, persons [10-12]

<table>
<thead>
<tr>
<th>A branch of Science</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics and Mathematical</td>
<td>678</td>
<td>644</td>
<td>632</td>
<td>585</td>
<td>525</td>
<td>419</td>
</tr>
<tr>
<td>Chemical</td>
<td>156</td>
<td>139</td>
<td>154</td>
<td>140</td>
<td>110</td>
<td>116</td>
</tr>
<tr>
<td>Biological</td>
<td>417</td>
<td>416</td>
<td>414</td>
<td>370</td>
<td>326</td>
<td>313</td>
</tr>
<tr>
<td>Technical</td>
<td>2170</td>
<td>2174</td>
<td>2066</td>
<td>1874</td>
<td>1573</td>
<td>1426</td>
</tr>
</tbody>
</table>

We should name the following reasons in the first place among the reasons, causing the given consequences:

1) Threatening low level of school-leavers' basic knowledge in mathematics, physics, chemistry and computer science. E.g., 25.3 thousand participants of the external independent evaluation, or 24% of all registered ones, did not pass test in mathematics in 2015. This is caused, first of all, by the catastrophically low level of professional training in elementary, middle and high school teachers, especially in countryside. Today the teacher career is not popular due to unjustified low salary. As a result, young people often go into educationalists not by vocation, but those, who are unable to compete for relatively highly paid jobs by force of subjective reasons in other economy sectors. Non-transparency of many domestic institutions in higher education functioning allows them to buy their diplomas not only in a literal, but in a figurative sense also;

2) The reduction of scientists in physical, mathematical, natural and technical sciences is a decrease direct consequence in the number of admissions to higher educational institutions in the related training area. Equally important is the funding of domestic scholars. We are talking not only about low wages, but also about the critical shortage of funds needed to equip and operate modern laboratories, conduct experiments and field research, purchase consumables, travel abroad for conferences, internships, publication of research results, etc.
Розділ 4 Проблеми управління інноваційним розвитком

In addition to purely internal risks, the loss threat of "brain" comes from the outside. Thus, the report of the Global Competitiveness 2016-2017 (The Global Competitiveness Report 2016-2017) stating that the EU one of the most critical aspects in the innovation factor in the competitiveness human capital formation problems. In the analysis of seven important human capital indicators (the quality of education in mathematical and natural sciences, the quality of the education system, Internet access in schools, the local availability of specialized training services, the ability of the country to retain talent, the presence of scientists and engineers), draws attention to the fact that the group education indicators most problems occur on education of mathematics and natural sciences. Europe feels a lack of gifted youth with respective knowledge. At present, there is a low index of attraction and keeping of gifted people in EU from people outside the Community [22]. This creates some threats for development of dynamic European knowledge economy, which is forced to compete with the analogical systems of the other countries of the world – US first of all. Such authoritative remarks are an immediate call for action for public administrations of highly developed EU countries. There are no doubts, that the nearest European neighbours such as Ukraine, Moldova, Belarus, Georgia and Russian Federation come to EU focus first of all. Absorbing ability of state and private scientific institutes of EU also alarms us – they are able to absorb the most part of domestic mathematical and other talents without some problems. We should not forget that beside EU, the USA is even much more successful “hunter” of foreign “brains”.

In the context of the given problem, Ukrainian authorities, large industrial and agrarian companies face a very complicated task of not only directing enough organizational efforts and financial recourses to increase the supply of competitive knowledge, but forming demand on it inside the country. Probably, one of the ways to solve this task is to create the national analogue of the Silicon Valley.

Conclusions:

1) studying the effect of capital investments size (x1), the number of small and middle-sized business (x2), the internal current expenses on scientific and technical developments, scientific services and applied researches, performed by the scientific organizations on their own (x3), foreign trade turnover (x4), on the volume of sales innovative products that are new to the market (Y), revealed the following:
   - the relation between Y and x1 is absent. This means that the domestic capital investment is not innovation-oriented. The main reason of it is the excessive risks of economic activities in Ukraine. Three main destructive business factors are: corruption, political instability and inflation;
   - the relation between Y and x2 is absent. This means that developed small and medium entrepreneurship is necessary, but insufficient condition for innovation economy development. Small and medium-sized enterprises are the main recipients of investment in venture capital. However, if donors of such capital are large enterprises that are not interested in investing to innovation, then they do not happen. The influence of negative factors – corruption, political instability and inflation, does not stimulate any small and middle-sized companies to invest into risky projects with long-term payback period, but orients them for business activity with much shorter production cycle;
   - the connection between Y and x4 is absent. This means that growth of economy openness is not an automatic guarantee of the new knowledge import and advanced technologies. For the period of 2013-2016 years, the imports volume of potentially innovative services declined despite the growth of Ukrainian economy. The main reasons of the low advanced technology transfer level in Ukraine are insufficient level of intellectual property protection and non-competitive structure of the national market;
   - the connection between Y and x3 is high. This means that one of the many factors that stimulate the development of an innovative economy is the internal running costs of scientific and technical development, scientific services and applied research carried out by the own forces of scientific organizations;

2) the list of urgent measures in state innovation policy can include:
   - strengthening the fighting corruption;
- political stabilization. The most effective instruments for its achievement are to build an trust atmosphere between citizens and public authorities, an information campaign aimed at destroying political populism, comprehensive measures of patriotic education;
- strengthening the role of the Ukrainian Antimonopoly Committee and responsibility for violation of Ukrainian anti-monopoly legislation;
- raising the protection level of intellectual property and copyright to international standards;
- an increase in the targeted state financing of scientific organizations that produce innovative developments that are in demand from the side of the economy real sector;
- development of state and private pilot projects of high-tech industrial parks based on leading domestic scientific institutions of respective profile.

Perspectives of further developments: an upcoming trend for further research is the pilot projects development in the form of technology parks and innovative business incubators.
Розділ 4 Проблеми управління інноваційним розвитком


І.О. Піюренко, О.М. Гаркуша. Фактори динаміки інноваційних перетворень української економіки: суть та особливості впливу


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Фактори динаміки інноваційних перетворень української економіки: суть та особливості впливу

Інновації, витрати на наукові розробки, корупція, політична нестабільність, інфляція, інтелектуальна власність, антимонопольне регулювання, адресне фінансування високотехнологічних технопарків на базі провідних вітчизняних наукових установ відповідно до загальноприйнятих стандартів, збільшення законодавства України, підвищення рівня захисту інтелектуальної власності та авторського права до міжнародних стандартів, збільшення адресного державного фінансування наукових організацій, які продукують інноваційні розробки, що користуються попитом з боку реального сектору економіки, розробка державно-приватних пілотних проектів високотехнологічних технопарків на базі провідних вітчизняних наукових установ відповідного профілю.

Ключові слова: інновації, фінансування, наукові дослідження, корупція, бюджетна політика, інфляція, відповідальність, інтелектуальна власність, антимонопольне регулювання, адресне фінансування високотехнологічних технопарків.

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Фактори динаміки інноваційних преобразований українською економікою: суть і особливості впливу

В статті досліджуються фактори динаміки розвитку інноваційної економіки. Створюється, що головним фактором, який сприяє розвитку інноваційної економіки України є внутрішні поточні витрати на науково-технічні розробки, наукові постули та прикладні дослідження виконані власними силами наукових організацій. Доходиться, що до переліку невідкладних заходів державної інноваційної політики слід віднести такі: політику стабілізації, посилення ролі міжнародних стандартів, збільшення компенсації, які продукують інноваційні розробки, що користуються попитом з боку реального сектору економіки, розробка державно-приватних пілотних проектів високотехнологічних технопарків на базі провідних вітчизняних наукових установ відповідного профілю.

Ключові слова: інновації, витрати на наукові дослідження, корупція, бюджетна політика, інфляція, відповідальність, інтелектуальна власність, антимонопольне регулювання, адресне фінансування високотехнологічних технопарків на базі провідних вітчизняних наукових установ відповідного профілю.

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