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INNOVATIVE DEVELOPMENT OF UKRAINE'S ECONOMY

Dynamics of scientific, technological and innovative development of economy of Ukraine was evaluated. Factors and trends in the changing of development level in the sector of science and technologies were determined. Results of comparative analysis of positions of Ukraine and other countries, in particular Poland, in the sphere of innovative activity were made. Resent problems and developed proposals according to adjustment of state innovation policy were discovered.

Keywords: research and development, innovative activity, innovative development, innovation policy.

Федулова Л. Инновационное развитие экономики Украины. Оценена динамика научно-технологического и инновационного развития экономики Украины. Определены факторы и тренды в изменении уровня развития сектора науки и технологий. Проведен сравнительный анализ позиций Украины и других стран, в частности Польши, в сфере инновационной активности и деятельности. Выявлены имеющиеся проблемы и разработаны предложения по корректированию государственной инновационной политики.

Ключевые слова: научные исследования и разработки, инновационная активность, инновационное развитие, инновационная политика.

Background. In Ukraine, the problems of scientific, technological and innovative development are ignored recently. In the Strategy of Sustainable Development "Ukraine–2020" [1] innovative factor is stated as a factor of pride, in contrast to developed countries, where innovations are the factor of economic growth. On the one hand, achievements in the military-industrial complex, ascertained were by experts, stipulated by scientific developments and appropriate technologies of breakthrough nature and intensified by military events, and on the other hand, the problematic issues of technological lag spheres withdrew to the background due to the recession of the domestic industry, that deepens the process of destructive changes and requires adequate innovative policy.

Analysis of recent research and publications. Design of economic aspects of national innovative system building, evaluation of innovative potential, determination of the role of the state and other entities in this process, as well as current and future innovative policy issues in modern Ukraine were investigated in the works of A. Mazaraki [2], C. Davymuka, H. Androshchuk [3], V. Lysenko, S. Yegorov [4] and others. Features and

prospects of the EU innovative system development and conditions of innovative processes intensification are revealed systematically in the works of national and foreign authors [5; 6], etc. But in conditions of changing geopolitical process and integration challenges the complex of issues of strategic nature appears before our country, particularly in the choice of priorities and directions of economic development based on innovative factor. The above mentioned requires system analytical assessment, identification of specific trends of scientific technological and innovative development of economy.

The **aim** of research is the identification of innovative development tendencies of Ukraine by analyzing of the main indexes of scientific, technological and innovative potential in comparison with other countries. According to the set aim the science-based solution is required for the following questions: identification of the dynamics and setting of the appropriate trends of scientific, technological and innovative development of national economy; comparative estimation of the innovative development of Ukraine and some other countries; definition of problem areas and working out of offers concerning activation of innovative policy in terms of strengthening of European integration processes.

Materials and methods. The methodological basis of research is the provision of innovation – science and practice of management with innovation processes on all the levels of economic system. Based on a systematic approach the analysis of innovation processes in Ukraine is made. Typical tendencies and problems of innovative development of Ukraine are defined using the methods of statistic and comparative analysis of international expert estimations and its innovational profile is created. By structuring and synthesis methods the proposals concerning adjustment of state innovation policy were developed towards strengthening of the role of intellectual resource in provision of implementation of planned reforms.

Results. The key factor in generating of new knowledge is scientific potential of Ukraine which is constantly under the direct influence and in great dependence on internal and external environment and still hasn't acquired structural and organizational form to this day, adequate to modern challenges. However, despite the insufficient development conditions due to low funding and absence of demand for innovations of domestic real sector of economy it continues to "survive" although the number of scientific organizations is declining (*figure 1*). At the end of 2014 it has become even less than the number of institutions 1991. Thus, according to data of official statistics of Ukraine 1 143 organizations were carrying out research and scientific and technical activity in 2013, which is 5.4% less than in 2012. 109.6 thousands workers (without dual jobholders), including researchers (58.7 thousands people), technicians (10.7 thousands people), additional staff and other workers by 20.1 thousands people were carrying out research and scientific and technical work in 999 organizations during 2014. Especially dangerous is the state of laying off scientists. In 2014 the number

of them became 2.6 times less than in 1991. In 2014 the part of executives of scientific research and developments (researchers, technicians and additional staff) in total number of occupied population was 0.5% including researchers (0.32 %).

At the same time, according to Eurostat, the highest part was in Finland (3.2 % and 2.28 %), in Denmark (3.2 % and 2.18 %), in Switzerland (2.66 % and 1.37 %), in Norway (2.56 % and 1.81 %) and in Slovenia (2.27 % and 1.34 %); the lowest part was in Romania (0.46 % and 0.3%), in Cyprus (0.71 % and 0.5%), in Bulgaria (0.74 % and 0.52 %) and in Turkey (0.74 % and 0.63 %).

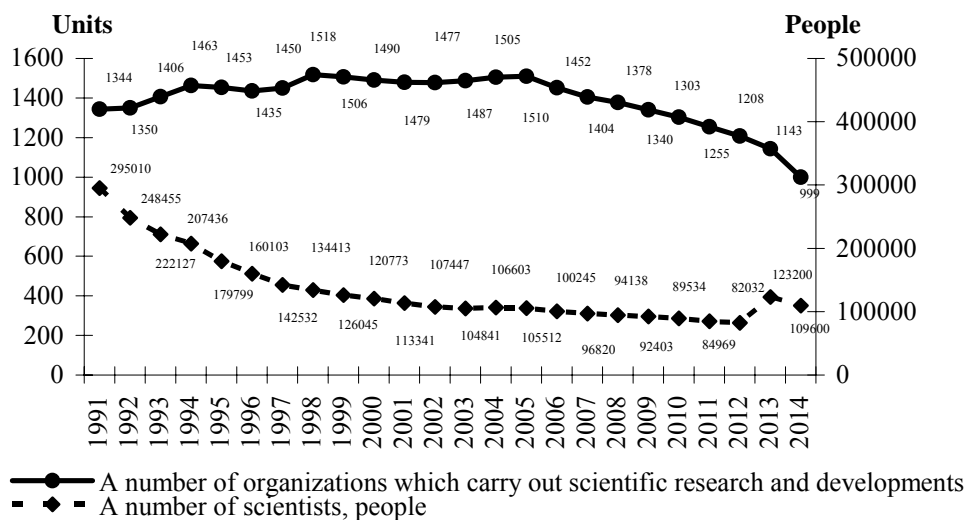


Figure 1. Dynamics in the number of scientific personnel and organizations in Ukraine (compiled according to the State Statistics Service of Ukraine [Electronic resource]. – Access : <http://www.ukrstat.gov.ua>)

One of the effectiveness indicators of scientific potential of the country is the volume of executed research and scientific and technical works, and although in the years 2010–2013 at actual prices it slightly increased, but the part of GDP remained low. In general, the dynamics of the number of executed research and scientific and technical works was unstable on the structure during the years 2002–2014, moreover, in 2014 almost all indicators decreased, except for the works on the creation of new plant varieties and animal breeds, where was an increase by 1.5 thousands units.

In 2014 the main executives of basic and applied research were public sector organizations (accordingly 90.4 % and 62.5 % of the volume of works), scientific and technical developments and scientific and technical services – organization of business sector (accordingly 93.1 % and 77.9 %). Dynamics of expenses on research and scientific and technical activity in GDP of Ukraine has the general downtrend. In particular, by the State Statistics Service of Ukraine preliminary estimation, in 2014 the part of total

expenditure on implementation of scientific and technical works in GDP amounted to 0.66 %, including the state budget – 0.26 % (table 1). For comparison, according to Eurostat, in 2014 the share of expenditure on research and developments of EU countries – 28 in GDP was 2.01 %. More than average part of expenses on research and developments was in Finland – 3.31 %, in Sweden – 3.3%, in Denmark – 3.06 %, in Germany – 2.85 %, in Austria – 2.81 %, in Slovenia – 2.59 %, in France – 2.23 %, in Belgium – 2.28 %; and less than average part was in Montenegro, Romania, Cyprus, Latvia and Bulgaria (from 0.38 % to 0.65 %).

Table 1

**Dynamics of expenses on research and scientific and technical activity
in Ukraine's GDP, % (research intensity of GDP) ***

Expenses	1990	2000	2004	2005	2007	2008	2009	2010	2012	2013	2014
Total to GDP	3.11	1.20	1.23	1.17	0.94	0.92	0.95	0.91	0.75	0.77	0.66
On account of state budget	2.3	0.36	0.42	0.39	0.39	0.41	0.37	0.34	0.33	0.33	0.26

* Compiled on the basis of data of State Statistics Service of Ukraine [Electronic resource]. – Access :<http://ukrstat.org>.

In recent years Ukraine has put forward many initiatives both in terms of institutions and organizations as to forming of an effective mechanism of intensification of scientific and technological and innovative activity. However, the state power has not reached significant success yet in creating of "innovation climate" in the country, measures as to supporting of innovative activities are local in nature and do not allow reverse current negative trends (especially it is concerned to the decrease of scientific and technological potential in the industry). The dynamics of innovative activity of enterprises in Ukraine has uneven character in part of the number of enterprises involved in innovative activity, although its number slightly decreased during the crisis of 2008–2009, and in 2012 compared to 2011 slightly increased. In the period of 2013–2014 innovative activity of industrial enterprises decreased. Thus, in 2014, only three quarters of them applied innovations (or 12.1 % of the inspected industrial enterprises).

According to preliminary official statistics, 1206 companies spent 7.7 billion UAH for the implementation of innovations in 2014, two thirds of which for the purchasing of machinery, equipment and software that indicates a completely natural process – the aspiration of enterprises to modernize its technological base to resist competition. And only 15.9 % spent money on research and development (R & D) by own strengths, 6.9 % – for the purchasing of the results of research in other enterprises (organizations), 0.6 % – for the acquisition of other external knowledge (new technologies) and 10.1 % – on education and training of personnel for the development and implementation of new or significantly improved products

and processes, on activity as to market innovation and other works, connected with creation and application of innovations (other expenses).

Traditionally, own funds of enterprises remain the main source of financing innovations, but differences were noticed: this is a significant decrease in funding in 2010 from own sources as well as from the state budget and the prominent role of foreign investors in 2009–2010. In 2011 the increase of funding from own sources and the state budget was observed, but there was a significant decrease of the role of foreign investors. In 2014 there was observed certain reduction of own funds (6540.3 mln UAH against to 6973.4 mln UAH in 2013); a significant increase of funding from the state budget (349.8 mln UAH against to 24.7 mln UAH in 2013) and a significant reduction of activity of foreign investors (146.9 mln UAH against 1253.2 mln UAH in 2013). Domestic investors spent a little on financing innovative activity of national industry – the proportion of their funds remains insignificant (at 0.3–0.5 %). Direct state support of industry innovative activity with state funds and local budgets is very limited. Usually it is given to fifty companies from the total amount and doesn't exceed 2 % in total funding costs on innovations.

Such trends significantly affect the dynamics of implementation of new technological processes: a slight increase of its number occurred during 2006–2011 (besides it was substantial during the crisis). However, the part of applying of low-waste and resource-saving technological processes was decreasing during 2009–2011 (*figure 2*). It demonstrates not only the absence of effective state incentives in the area of modernization of the industry, but it also reflects a structural feature – the prevailing part of low redistribution enterprises in technological complex whose owners are not interested in upgrading of technology in terms of obtaining of high rent on favorable conditions in the foreign markets. In 2014 the total number of implementation of new technological processes has increased, but the number and proportion of low-waste and resource-saving has decreased again.

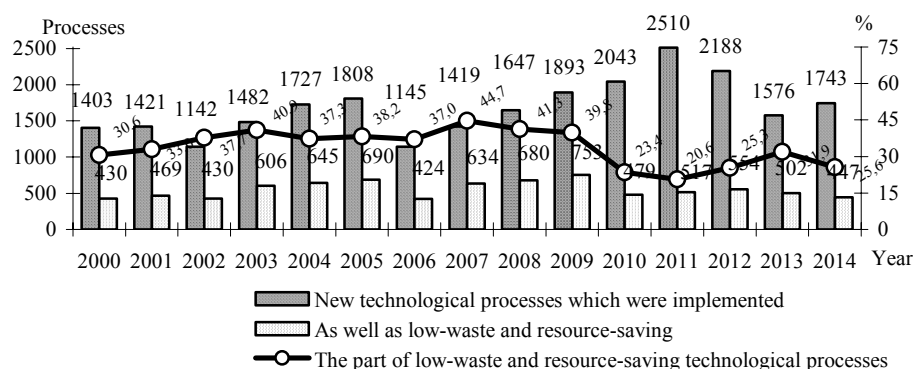


Figure 2. The dynamics of implementation of new technological processes (calculated on the base of data from the State Statistics Service of Ukraine [Electronic resource]. — Access : <http://www.ukrstat.gov.ua>)

In 2014 the increase of amount of commercialized production of innovative products, especially new machinery, was recorded, due to the intensification of OboronProm, but only 905 companies implemented innovative products on 25.7 billions UAH or 2.5 % of total volume of sold industrial products. Volume of products, which was sold outward of Ukraine by 295 enterprises, amounted 7.5 billions UAH.

The weakest link of the innovative process in Ukraine is technology transfer, especially because of inefficient organization of the economic system. It requires modernization, especially the change of technological structure of production towards the formation of the high-tech sector and the implementation of a job package as to the commercialization of scientific research, evaluation and intellectual property protection. Thus, in 2014 the number of enterprises of Ukraine, which created and used advanced technologies, objects of intellectual property rights (OIPR) and innovations, was 1.757 units. During 2014 the total number of advanced technologies developed by 106 companies was 309, 90.3 % of which were new for Ukraine, 21 % of which were created by the state contract. 769 protective documents were issued on advanced technologies in general or on its elements, that was created in 2014: 162 – for inventions, 418 – for useful models and 189 – for industrial samples.

Regarding foreign direct investments (FDI) by technological structure in production in Ukraine during 2010–2014 the tendency of increase of its share in low-tech manufacturing (respectively 18.6 % in 2010 and 19.6 % in 2014, against 8.8 % in 2009) was observed. The reduction of the share of FDI in middle-tech production should be considered as the negative trend (by statistical monitoring the process of decrease started since 2005, when the stage of large-scale technological modernization of the food industry finished) and a sharp decrease of FDI in high-tech industries since 2003 and as a result – almost complete loss. Such trend is caused by the same factors: the ownership of natural rent by domestic businessmen logically induced them to invest in upgrading of the technological base of production to stay competitive on foreign markets (that is harder) and not lose revenue sources on the domestic markets.

Under conditions of absence of an effective state policy concerning formation, development and implementation of intellectual resource is quite natural extremely low state of investments in intangible assets, including 3.36 % of the total capital investment in 2014 (*figure 3*). Innovators are unmotivated because of absence of policy of the internal market forming, including local innovation market, unformed demand for innovations of domestic enterprises.

It should be acknowledged that the conceptual statement is the fact that the positive social effect of scientific and technological, information and technology development is reflected in the improvement of industrial relations through intellectualization of labor, improvement of working conditions, increase of educational and cultural level and the quality of life.

The dynamics and tempos of transition of economy on the way of innovative development largely depend on the efficiency of using of results of a person's creative activity. Therefore, one of the main problems that needs constant attention from the state is the creation of production system, protection, reconstruction and use of intellectual potential of the nation. One of the key elements of this system is creation of effective economic-legal mechanism of protection of intellectual property.

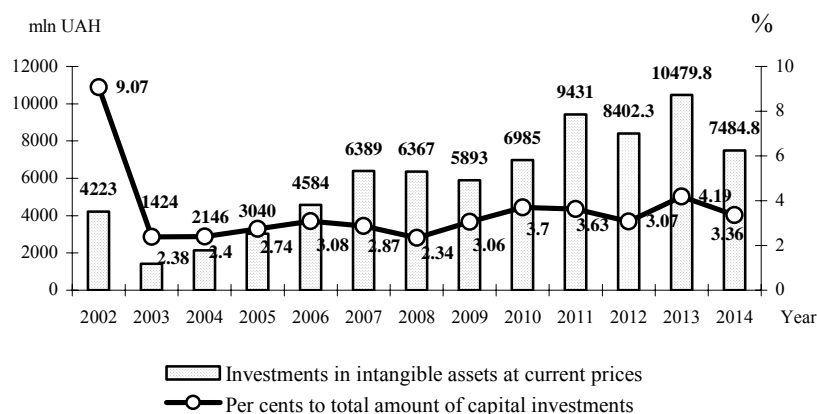


Figure 3. The dynamics of investments in intangible assets
(compiled according to the Statistical Yearbook of Ukraine for the relevant years and site [Electronic resource]. — Access : <http://www.ukrstat.gov.ua>)

The indicator characterizing the effectiveness of new technologies application (process of intellectualization) is the use of inventions, useful models and industrial samples, e.g. commercialization of results of scientific and technological activity and introduction of them into economic turnover. However, in recent years a steady trend of decrease of OIPR application is observed, that is connected with low inventive activity in the sectors of industrial production, the scientific staff reduction and slow tempos of scientific and technical works.

At the same time, while during the 1995–2012 trend of increase of the number of applications to the State intellectual property service (SIPS) almost 4 times and received protective documents almost 16 times on the objects of industrial property was observed, in 2014 the activity decreased in applying for all OIPR. SIPS received more than 44.3 thousand of applications. From its total number, only 11 % are the applications for inventions, 21 % were for useful models and 62 % were for the marks of goods and services (20 % of them applied through the Madrid system). The number of applications for industrial samples was 6 %. The sphere of education keeps the first place in this process: in recent years its part is more than 60 % of applications for inventions and useful models (*table 2*), indicating a powerful intellectual potential, which requires an effective state policy according to its implementation.

Table 2

**Receipts of applications for inventions and useful models by type
of economic activity (national applicants, legal entities) for 2005–2014***

Type of economic activity	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Application filed										
Total, units	7274	7381	8242	7582	7025	8141	8139	7858	7565	7334
Education, units	3999	4123	4940	4399	4561	5320	5549	5159	5028	4662
% of total	55	55.9	59.9	58	64.9	65.3	68.2	65.7	66.5	63.6
Research and developments, units	2086	1960	2129	1947	1718	1990	1721	1778	1717	1805
% of total	28.7	26.6	25.8	25.7	24.5	24.4	21.1	22.6	22.7	24.6
Machinery and equipment manufacturing, units	212	227	201	217	82	112	118	118	101	71
% of total	2.9	3.1	2.4	2.9	1.2	1.4	1.4	1.5	1.3	1.0
Metallurgy and finished metal products manufacturing, units	208	197	182	155	84	84	97	102	106	40
% of total	2.9	2.7	2.2	2.0	1.2	1.0	1.2	1.3	1.4	0.5
Health care and public assistance, units	126	102	88	95	67	62	85	103	152	155
% of total	1.7	1.4	1.1	1.3	1.0	0.8	1.0	1.3	2.0	2.1

* Compiled according to: Industrial property in figures [Electronic resource]. — Access : <http://www.uipv.org>

Traditionally, the most active are companies and organizations located in the industrialized regions. So, during the analyzed period the applicants of Vinnytsia, Dnipropetrovsk, Donetsk, Zaporizhzhya, Lviv, Odessa, Kharkiv regions and Kyiv granted about 80 % of the total number of applications for inventions and useful models. In 2014 502 applications from national applicants for international registration of trademarks of goods and services were sent to the International Bureau of WIPO, which is 12 % less than in the previous year.

The priorities of patenting of domestic and foreign applicants are significantly different. Thus, the largest number of applications, granted by national applicants in 2014, belongs to the fields of "Mechanical Engineering" and Chemistry – 20.1 % and 25.1 % respectively; about 14% of applications – to the field of Devices. Among the applications in mechanical engineering areas dominated fields are Special machines, Motors, pumps, turbines and Transport, in chemistry area the dominated fields are "Food chemistry", Materials, metallurgy. Foreign applicants are different in more clearly defined priorities. Over 60 % of their submitted applications belong to the field of Chemistry, the vast majority of them is distributed between the areas Organic fine chemistry (26.6 %), Drugs (21.9 %), Biotechnology (13.3 %) and Chemical raw material (12.2 %) [7].

The state of innovativeness of economic development is regularly recorded as domestic statistic research and international rating of compete-

tiveness. So, according to results of the world economic forum (WEF) (the global competitiveness Report 2014–2015), Ukraine took the 76th place (+8 positions compared to 2013–2014). The number of evaluated countries was 144 and 148 in the previous year [8]. Overall, among the components of the Index, the highest in Ukraine are indexes of the market size, higher education and training, and also health and primary education (*table 3*). The most problematic factors for doing business in Ukraine remain limited access to financing and corruption.

Table 3

Ukraine's positions on components of the Global Competitiveness Index 2013–2015 *

Component	Position in rating		
	2013–2014	2014–2015	The change in comparison with the last year
Institutes	137	130	+7
Infrastructure	68	68	0
Macroeconomic environment	107	105	+2
Health and primary education	62	43	+19
Higher and professional education	43	40	+3
goods Market efficiency	124	112	+12
Labor market efficiency	84	80	+4
Financial market development	117	107	+ 10
Technological readiness	94	85	+ 9
The market size	38	38	0
Business sophistication	97	99	-2
Innovation	93	81	+12

* Compiled according to *The Global Competitiveness Report for the relevant years*

In this context, research of the International business school INSEAD, Cornell University and the World intellectual property organization (WIPO), which presented an analytical report for Global Innovation Index 2014, which is called "the Human factor in innovation process" and devoted to the role of creative individuals and teams in the innovation process are noteworthy [9]. The document emphasizes that innovative human factor is one of the reasons through which leaders in the field of innovation remain at the head of ratings and through which some of the large countries with emerging market have different indicators of innovations. In 2014, the indicated research covered 143 countries, which together produce 99.5 % of the world GDP and have 95 % of the world population. The global innovation index (GII) is calculated as a weighted sum of ratings of two groups of indicators: available resources and conditions for innovation (Innovation Input); the practical results of the implementation of innovations (Innovation Output). Thus, the final index is the balance of expenses and effect, that allows objectively evaluate the effectiveness of efforts as to development of innovations in this or any other country.

The dynamics of this rating for Ukraine is as follows: in 2012 it took the 63rd place between Macedonia (61) and India (64); in 2013 – the 71st place – between Tunisia (70) and Mongolia (72); in 2014 – the 63rd place between Bahrain (62) and Jordan (64). For comparison: In 2014 Poland took the 45th place. Comparison of some indicators between Poland and Ukraine (*table 4*) shows that the advantage of Ukraine in this rating fairly recognized as human capital (particularly students reach the third level of education, graduates in the field of natural sciences and engineering); the creation of knowledge and technology (applications for patents and useful models by residents of the country), creativity in part of applications for registration of the trade mark. The institutional environment, business environment, infrastructure, creativity in part of accounting for intangible assets and using of information and communication technologies (ICT) in modeling of business processes and creating of organizational models found weaknesses in Ukraine GII.

International expert assessments show that intellectual potential of the nation is on a high level, however, there is no state role in the creation of the environment for its realization as a key innovation factor of social and economic development of the country and provision of its competitiveness. In such a situation the state can't solve the problem of joining the cognitive society (a society where the role of continuous cognitive (informative) activity of all the economical active population is determinative for increase of human capital).

Generalized results of the analysis indicate a general tendency of preservation of all the signs of stable running innovation and technological process. But it is not enough for economy which strives for growth. Among the reasons which control realization of the role of innovation factor in increase of competitiveness of the Ukrainian economy are following.

- Uselessness of innovations as the Ukrainian economy in its current state insufficiently forms active interest of the majority of entities in the results of scientific developments or it turns out that the last ones are not able to use innovation developments effectively.

- Absence of modern development institutes which provide functioning of the economy of innovation type in all its components (organization and management of developments; its financing, marketing, commercialization, etc.).

- Insufficient number of highly qualified specialists which are able to work in the innovation sphere.

- Absence of effective coordination of state economic, educational, scientific and technological, industrial and innovative policy.

The practice of modern Ukrainian reality indicates that on all the levels of economy management there is an absence of serious attention to the role and importance of organizational innovations implementation of which would not only increase of effectiveness of management system but also accelerate the development of economy on the innovation basis.

Comparison of some indicators of GII-2014 of Ukraine and Poland
(position in the rating) *

Indicators for groups	Ukraine	Poland
Human capital and research	45	43
Expenditure on education, % of GDP	26	53
State expenditure on secondary level education, % of GDP per person	29	43
The coverage % of pupils to third level education	11	21
Graduates in natural and technical sciences	23	69
Creation of knowledge and technology	32	53
The creation of knowledge	15	41
Applications for patents by residents of the country	15	23
Applications for useful models by residents of the country	1	30
Market environment	90	70
The ease of getting credit	13	3
Protection of investors	105	42
Investing	127	90
Business environment	87	64
Work in knowledge-intensive industries, %	37	33
Gross expenditures on R & D, performed by business, % GDP	35	41
Gross expenditures on R & D, financed by business, % GDP	29	49
Communication in innovation	105	103
State of cluster development	126	99
Gross expenditures on R & D, financed by abroad, %	17	35
Joint Ventures and strategic alliances	103	95
Institutes	103	35
Effectiveness of the government	109	42
Quality of regulation	115	34
Rule of law	112	88
Ease of solving insolvency issues	132	33
Infrastructure	107	49
General infrastructure	100	61
Gross capital investments, % in GDP	121	90
Production of GDP per unit of used energy (\$ Kg of oil equivalent) PAC 2005	117	46
Creativity	77	51
Intangible assets	112	118
Applications for registration of trademark in GDP	20	52
Applications for registration of trademark according to Madrid agreement on 1 milliard \$ GDP	31	40
ICT and creations of business models	120	102
ICT and creation of organizational models	122	92
Printed publishing matter, %	43	64
Export of creative goods	51	14
Monthly edits to Wikipedia (per 1 thousand of population on 15–69 years old)	43	36
Video on You Tube (per 1 thousand of population 15-69 years old)	28	21

* Compiled by author according to data [9]

Today, when the world is divided into the main markets including high-tech, there are alternative strategic objectives concerning opportunities to use their scientific achievements face Ukraine for realization of the policy of European integration and activation of the role of member of a free trade zone with the EU.

- To mobilize available technologies of mass consumption and revive full internal market – maximum encouragement to "technological raise" and elimination of "bottlenecks"; concentration of technologies and investments on the basis of regional innovation clusters; to fit into the budget constrains (state target programs) and attract private capital (public-private partnership); mechanisms of realization of innovation policy (effective management system); technological audit, stimulation of extra-budgetary funding sources; focus of instruments of state support on the stimulation of demand; further development of National Innovation System (NIS) and its sub models (regional innovation ecosystems).

- To provide implementation of breakthrough technologies and win back lost external markets of high-tech products; priority areas are: a new generation of aviation technology; development of space systems; new models of weapons; building of machine tools; new technological markets: ICT-4G, M2M, "clouds", IT in social sector; biotechnology (implementation of programs), nanotechnology (realization of projects).

- To integrate with TNK on the technological chain of the manufacturing process (in case of saving its competitive advantages with the full opening of EU markets).

In developed countries innovative component of the economy is harmonically incorporated into the process of expanded reproduction. In Ukraine, for all the years of its existence as an independent state it remains foreign component and human (intellectual) capital has not formed as a real factor of economic development. So, the most important condition of reforms of Ukrainian economy must be the formation of national innovation system which has to eliminate institutional and organizational gaps between fundamental, applied, industry, university and corporate (factory) sectors of national science; to concentrate necessary material, financial and human resources on strategic directions of innovation development; to expand scientific and applied research in priority sectors of economy and, the most important, to eliminate the gap between science and industry.

Conclusion. Modern Ukrainian economy needs specific, different from the traditional economy, approaches for definition and implementation of innovation policy. These features in generalized form are limited to: orientation of policy on provision of balance of state and market efforts for getting maximum result from knowledge for economic and social development; integration of social and political, scientific, educational, economic, ecological and other public interests through effective impact of state policy on the creation and assimilation of new knowledge; formation of conditions for development of private investment, saving of resources and funds, increase of manufacturing on innovative basis; improvement of taxation through

gradual reduction of tax rates on savings and investments and increase on consumption; creation of modern infrastructure of innovation sphere, provision of state responsibility for personnel training for the needs of innovative economy; orientation of state policy, mainly on economic growth and thereby improving of the quality of life of citizens.

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Articles submitted to editors office of 09.09.2015.

Федулова Л. Інноваційний розвиток економіки України.

Постановка проблеми. Останніми роками в Україні не приділяють достатньо уваги проблемам науково-технологічного та інноваційного розвитку. Проблемні питання галузей технологічного відставання відійшли на другий план у зв'язку з рецесією вітчизняної промисловості, що поглиблює процес деструктивних змін й вимагає адекватної інноваційної політики, системного аналітичного дослідження й визначення характерних трендів науково-технологічного та інноваційного розвитку економіки країни.

Метою дослідження є визначення тенденцій інноваційного розвитку України на базі аналізу основних показників науково-технологічного та інноваційного потенціалу порівняно з іншими країнами та обґрунтування перспектив інноваційних змін.

Матеріали та методи. Методологічною основою дослідження є положення інноватики – науки і практики управління інноваційними процесами на усіх рівнях економічної системи. Застосовано аналітичний системний підхід, методи статистичного та порівняльного аналізу міжнародних експертних оцінок, визначено характерні тенденції та проблеми інноваційного розвитку України, складено її інноваційний

профіль. Методами структурування та синтезу розроблено пропозиції щодо корегування державної інноваційної політики у напрямі посилення ролі інтелектуального ресурсу в забезпеченні виконання запланованих реформ.

Результати дослідження. На основі системного підходу здійснено аналіз інноваційних процесів в Україні. Виявлено динаміку та встановлено характерні тенденції науково-технологічного та інноваційного розвитку національної економіки. Надано порівняльну оцінку інноваційного розвитку України та деяких інших країн, на основі чого встановлено проблемні зони національної інноваційної системи та розроблено пропозиції щодо активізації інноваційної політики в умовах посилення євроінтеграційних процесів.

Висновки. Сучасна українська економіка потребує специфічних, відмінних від традиційної економіки, підходів до визначення і реалізації інноваційної політики. Ці особливості повинні зводитися до її орієнтації на забезпечення збалансованості зусиль держави і ринку для отримання максимального результату від знань для економічного і соціального розвитку; інтегрування соціально-політичних, наукових, освітніх, економічних, екологічних та інших інтересів суспільства.

Ключові слова: наукові дослідження і розробки, інноваційна активність, інноваційний розвиток, інноваційна політика.