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# *MANAGEMENT OF INNOVATION PROCESSES IN UKRAINE*

*The main aspects of innovation development of Ukraine's economy are considered, and also innovative activity of industrial enterprises in Ukraine is analysed, sources of financial support of innovation activity and trends of its development in future. The reasons of retardation are researched and the ways of competitiveness increase of our country in the global high-tech economy are proposed.*

*Key words: an innovation, activity, financial support, product competitiveness.*

***Statement of the problem.*** *Our country is already included in the category of countries with market economy, the government concludes new laws and improve existing regulations, introduces new tax, customs and other privilegs for small and medium businesses in competitive environment, establishes relationships not only economic, but also social and technology with other countries. Indeed , the transition of the economy to the new qualitative state is accompanied by innovative development of Ukraine as an independent state, which allows to reorganize the economy by introduction of advanced high-tech processes for productions competitive products.*

*Increasing of the productues competitiveness of Ukrainian enterprises is possible in case of technological upgrading and developing of industries. After implementing innovation of enterprises, products quality and volume of production will increase. It will be easier to conquer international markets for domestic enterprises. Experience of foreign countries clearly shows that innovations are of strategic importance for the future development of the economy. Economists have been associating economic development with innovativs for the past 20 years.*

*The nature of the transformation processes and the formation of post-industrial society are determined by the economic potential of the state, being is the basis of further innovation development. The economic and scientific potential of Ukraine are among the top five countries in Europe, but the efficiency of their use closes the first hundred countries. Choosing of anticipatory innovation model by Ukraine for further development is the objective natural process caused by endogenous and exogenous factors. Strengthening of innovation development as the basis for economic growth, reguires appropriate expenses [ 5, p. 35].*

*It is not the most important question of financial support among the components of the system of innovation development. It requires particular budget. It has great importance in the transformation of the economic system because of the main source of costs. The problem of balance, effectiveness of budgetary resources and their efficient use activing with the purpose of the development of scientific component of innovation is always relevant.*

***Analysis of recent researches and publications.*** *Problems of definition and research innovations and innovation processes and economic evaluation of innovative solutions have always been controversial and they are reflected in the works of many domestic and foreign scientists. However, a lot of points of the theoretical and methodical research on complex problems of management and evaluation of innovation activity require more detail activity development.*

*Fundamental researches aimed to the nature of innovations and innovation are reflected in the works of foreign scientists P. Drucker, A. Klaynknehta, E. Mansfield, K. Openlendera, P. Pildycha, B. Santo , R. Waterman, Schumpeter and domestic ones V.Aleksandrova, L. Antonyuk, A. Amosh, Halchynskiy A., B. Danylishyna, P. Pereiva, Stechenko D., D. Chervanyov.*

*Some issues of organizing, managing, financing, economic evaluation of innovative projects effectiveness are considered in the works of Ukrainian scientists V. Babich , I. Blanc, E. Vorobiev , G. Zadorozhniy , A. Marchenko , J. Petrovic , L. Ukrainska , V. and Foreign ones Vodachka L., A. Vodachkova , S. Tatsuno , B. Twiss , P. Yhite.*

*Despite of the great variety of scientific problems devoted to innovation activity, many issues remain unresolved and poorly understood even in theoretical aspect. In the works the common problems of innovation activity and the evaluation of investments are not generally considered. But level of innovative scientific invents and consumer demand of them are not taken into account. That's why studing analysis of current foreign theories and practices in the evaluation of innovative solutions have particular importance in the current economic conditions as well as adapting to these provisions Ukrainian enterprises, organizations, institutions and Ukrainian economy in general.*

***The aim of the article*** *is to deepen the theoretical and methodological bases and practical recommendations of the scientific component of innovation activity.*

***The main material of the research****. At the end of the twentieth century and the beginning of XXI century in the global economy innovation activity begins to develop increasingly and intense, in industry and science. In the economy of leading western countries innovative way of development became the main trend of improving technical base of production and economic growth. Thus the proportion of research, increased in the GDP, reaching in developed countries 50 % or more. The proportion of enterprises engaged in*

*innovation activities increased, reaching 70-80 % in the U.S., Japan, Germany and France. The volume of high-tech products of the EU , Japan , the United States exceeded 20-30 %. Share of innovation in the export increased. The share of R & D expenditurs is 3.4 % of GDP the most developed countries [3 , p. 368 ].*

*An important reason for the expansion and intensification of innovation area in the western economy was the development and implementation of national and international innovation systems, whose main goal is to provide an enable environment for enhancing innovation factor of economic growth. Impotent part of these systems is direct and extensive government intervention in the financing of high-tech and innovation orientated industries: full or partial funding of research, providing grants to cover part of the innovation costs and conomic incentives for innovation through taxation and financing (tax credits, government guarantees loans with high level of risk loans for small and medium enterprises) the creation of innovative infrastructure (scientific incubators, centers of collective use of expensive equipment, etc.) and providing infrastructure support for developers of innovations carried out especially in small and medium businesses. The government funding of innovative projects is particularly successful in the field of biotechnology, informatics, cybernetics and economic environment, etc. [ 7, p. 8-9 ].*

*To facilitate the transfer of innovative technologies, the development of innovative legislation, protection of intellectual property and for other new administrative structures are formed in the developed countries by the governments to implement targeted innovation policy. The significance of specific international organizations is increating promoting innovative progress and created by the European Union. It applies to organization particularly supporting the priorities spheres of innovations, the formation of international innovation programs, fostering regional scientific and technological innovation and cooperation within the EU. Integration of scientific and technological activities is wide spread by the creation of clusters. It is voluntary association of business entities territorial and sectoral type to consolidate part of their capital to launch large (often with innovative character) projects which individual capital can not afford.*

*Global positive experience in the development and diffusion of innovations, their financial coverage should be carefully studied and could used in the process of market transformation of the economy of Ukraine, of course, depending on specific conditions of innovation and investment mechanism of our country. Over the past 10-12 years, Ukraine remains behind developed economies comparing scope of industrial innovation processes due to decreasing in the proportion and number of enterprises engaged in innovation. The scope of the new processes implementation, the use of the means of innovation orientation production, development of new products have been narrowed. The only exception is such kind of innovations as the comprehensive mechanization and automation of production [ 2, p. 213-214 ].*

*Methodologically and practically innovative theory is necessary for the establishment, construction and development of innovative economy as an innovative type of development is the foundation of economic growth, economic security and stability of the state. But this type of development requires targeted funding and regulation of all system of innovation, first of all there are investments of foreign and domestic investors in the production of new competitive products [8, p. 105].*

*Products the economic development of the country is accompanied by increasing competitiveness, which should improve from to year economic, ergonomic, marketing and other indicators, as well as implement new technologies and update technical staff of enterprises [1, p. 30-33 ].*

*System reduction in funding science, the number of organizations and their staff, the deterioration of the material and technical basis happened in recent years affected the results of innovation industry in enterprises, as well as reducing the scale of innovation activity. Thus, in 2009 12.8 % of the total quantity of activity industry were brench engaged in innovation in the while in 2008 it was13.0%. The impact of the financial instability of the country affected the financial support of innovative technologies. In 2008, every second company lost money on product innovations, 48.7 % of enterprises lost money in process of innovations. In early 2010 quantity of companies engaged in innovative activity in the industry branch began to grow and at the end of the year it amounted to 13.8 % and in 2011 to 16.2 %. It was 2,4 % more compared to previous year, indicating progressive development of the economy to implement innovative projects (Table 1).*

*It should be noted that large enterprises were more receptive to innovations. Thus, among the enterprises employing 5 - 10 thousand and 10.1 - 25 thousand of people innovations were carried by 63.8 % and 62.5% of such enterprises 13.5 % and 8.7 % of enterprises employing 100-200 people and 50 - 99 people made innovations. As we can see, the number of industrial enterprises engaged in innovation activity in 2011 increased, the amount of innovation costs increased in the industry, which is largely justified by the price factor . But this is not the only explanation, because the index of innovative costs growth exceeded the average price index of industrial production and the average index of investment in fixed assets. Such excess of innovative costs increase above the general increase in prices could occur either by scaling up innovative embedded single products, or the growth of their value due to their complexity, increased quality, degree of*

*innovation. Thus, we are dealing with two multi-directional tendencies: constriction areas of innovation in the industry is accompanied by simultaneous increase scale, complexity, degree of innovation, efficiency of some launched innovative products. Nearly one in three of innovative enterprises is engaged in industrial design and other types of design work associated with technological equipment, the organization of production and the initial stage of producing new products and implementing new methods of production .*

*Table 1*

***The innovative activity of industrial enterprises of Ukraine [4]***

| | The share of enterprises implemented innovations, % | Total amount of expenditure | Including areas for tenors | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Research and inventions including[1] | including areas | | The acquisition of other external knowledge[2] | Preparation of production for innovation implement[3] | Purchasing of machinery, equipment and software[4] | Other expenses |
| | | | | Internal research | External research | | | | |
| | % | mln.uah. | | | | | | | |
| 2000 | 18,0 | 1760,1 | 266,2 | X | X | 72,8 | 163,9 | 1074,5 | 182,7 |
| 2001 | 16,5 | 1979,4 | 171,4 | X | X | 125,0 | 183,8 | 1249,4 | 249,8 |
| 2002 | 18,0 | 3018,3 | 270,1 | X | X | 149,7 | 325,2 | 1865,6 | 407,7 |
| 2003 | 15,1 | 3059,8 | 312,9 | X | X | 95,9 | 527,3 | 1873,7 | 250,0 |
| 2004 | 13,7 | 4534,6 | 445,3 | X | X | 143,5 | 808,5 | 2717,5 | 419,8 |
| 2005 | 11,9 | 5751,6 | 612,3 | X | X | 243,4 | 991,7 | 3149,6 | 754,6 |
| 2006 | 11,2 | 6160,0 | 992,9 | X | X | 159,5 | 954,7 | 3489,2 | 563,7 |
| 2007 | 14,2 | 10850,9 | 986,5 | 793,6 | 192,9 | 328,4 | X | 7471,1 | 2064,9 |
| 2008 | 13,0 | 11994,2 | 1243,6 | 958,8 | 284,8 | 421,8 | X | 7664,8 | 2664,0 |
| 2009 | 12,8 | 7949,9 | 846,7 | 633,3 | 213,4 | 115,9 | X | 4974,7 | 2012,6 |
| 2010 | 13,8 | 8045,5 | 996,4 | 818,5 | 177,9 | 141,6 | X | 5051,7 | 1855,8 |
| 2011 | 16,2 | 14333,9 | 1079,9 | 833,3 | 246,6 | 324,7 | X | 10489,1 | 2440,2 |

*1 the number of internal and external research since 2007;*
*before 2 acquisition of new technologies since 2007;*
*before 3 the index figure included to other expenses since 2007;*
*4 acquisition of machinery and equipment related to the introduction of innovations before 2007*

*Over 80 % of firms engaged in different stages of innovation activity, implemented innovations. They sold products to 6.3 % of total industrial output. In 2011, the implemented number of advanced technological processes was 2510 and 517 are characterized as low-waste , energy saving and waste-free , but in 1991 these indexes were 7303 and 1825. That implementation of processes years has decreased by more than 5 times for last 20. Including low-waste , energy saving - 4 times. In 2011 the number of developed products compared to 2005 began to increase and achieve 86 items (Table 2).*

*Table 2*

***Implementation of innovations at industry enterprises [4]***

| | The share of enterprises implemented innovations, % | Introduced new processes, processes, | Including energy saving, low-waste processes | The production of innovative products,* appellation | Items are including types of technology | Share of sales of innovative products in industrial, % |
|---|---|---|---|---|---|---|
| 2000 | 14,8 | 1403 | 430 | 15323 | 631 | |
| 2001 | 14,3 | 1421 | 469 | 19484 | 610 | 6,8 |
| 2002 | 14,6 | 1142 | 430 | 22847 | 520 | 7,0 |
| 2003 | 11,5 | 1482 | 606 | 7416 | 710 | 5,6 |
| 2004 | 10,0 | 1727 | 645 | 3978 | 769 | 5,8 |
| 2005 | 8,2 | 1808 | 690 | 3152 | 657 | 6,5 |
| 2006 | 10,0 | 1145 | 424 | 2408 | 786 | 6,7 |
| 2007 | 11,5 | 1419 | 634 | 2526 | 881 | 6,7 |
| 2008 | 10,8 | 1647 | 680 | 2446 | 758 | 5,9 |

| | | | | | | |
|---|---|---|---|---|---|---|
| *2009* | *10,7* | *1893* | *753* | *2685* | *641* | *4,8* |
| *2010* | *11,5* | *2043* | *479* | *2408* | *663* | *3,8* |
| *2011* | *12,8* | *2510* | *517* | *3238* | *897* | *3,8* |

** by 2003 new products*

*There are reasons braking the development and implementation of innovative processes (according to the results of expert studies in order of importance ): the lack of funding, high costs , lack of the customer , high interest rates , inadequate legislation, difficulties with raw materials and a high economic risk , lack of demand for products , the lack of information on markets. Most of these reasons have financial nature. Consideration of innovations funding in industry sphere of Ukraine in 2000-2011 indicates its instability. If it is analyzed own financial resources of the enterprises, we can see notice then every year they increase at the end of 2011 and reach amount of 7585.6 million. Other sources of innovations funding (local budgets and extra-budgetary funds, domestic and foreign investors) did not have systematic pronounced dynamics. General expenses spent on the development of innovations in 2011 reach amount of 14333 9 million., and in 2010 it was 8045.5 million., which was 6288.4 million. more. Increasing in the contribution of its own funds for the development of innovations attractiveness is obvious considering the structure of funding sources (Table 3 ).*

*Table 3*

*Sources of funding innovation activity [4]*

| | *Total amount of expenditure* | *Including funds* | | | |
|---|---|---|---|---|---|
| | | *own* | *budget* | *foreign investors* | *other sources* |
| | *mln.uah.* | | | | |
| *2000* | *1757,1* | *1399,3* | *7,7* | *133,1* | *217,0* |
| *2001* | *1971,4* | *1654,0* | *55,8* | *58,5* | *203,1* |
| *2002* | *3013,8* | *2141,8* | *45,5* | *264,1* | *562,4* |
| *2003* | *3059,8* | *2148,4* | *93,0* | *130,0* | *688,4* |
| *2004* | *4534,6* | *3501,5* | *63,4* | *112,4* | *857,3* |
| *2005* | *5751,6* | *5045,4* | *28,1* | *157,9* | *520,2* |
| *2006* | *6160,0* | *5211,4* | *114,4* | *176,2* | *658,0* |
| *2007* | *10850,9* | *7999,6* | *144,8* | *321,8* | *2384,7* |
| *2008* | *11994,2* | *7264,0* | *336,9* | *115,4* | *4277,9* |
| *2009* | *7949,9* | *5169,4* | *127,0* | *1512,9* | *1140,6* |
| *2010* | *8045,5* | *4775,2* | *87,0* | *2411,4* | *771,9* |
| *2011* | *14333,9* | *7585,6* | *149,2* | *56,9* | *6542,2* |

*Despite the increasing in total funding of innovations, their investment provision should be recognize as inadequate. This is confirmed, in particual, by the analysis of the structure of total innovation funding. It shaved primarily unacceptably small part of the state funding expendures of the state budget and local budget) of innovation activity. It is the level of 1% of the total financing of innovations. A small share of domestic and foreign investors to provide funding of innovations also shows large untapped reserves of growth. Overcoming the lack of investments in innovations requires searching for new funding sources and intensification of existing investments for recovery of the investment process in the country. Economic science is designed to justify the methodological foundations of selecting the most promising areas of innovation and innovative individual objects to transform them into odjects of investment priorities. Thus, at present the development of innovation sphere in Ukraine can be characterized not complying to international trends. Recently Ukrainian scientist have become more active in research related to innovation and investment processes [6, p.123-125].*

**Conclusion.** *The implementation of new technology is a complex process which is always accompanied by high costs and characterized by the uncertainty of results. Therefore, implementation of innovations faces by with obstacles which are often very difficult to overcome by legal entities.*

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