THE WAYS OF RESTORATION OF EFFECTIVE SCIENTIFIC AND TECHNICAL ACTIVITY AS A CONSTITUENT OF INNOVATIVE INVESTMENT DEVELOPMENT OF UKRAINE

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Introduction. Innovative investment focus of the state was declared in the contents of Strategy of innovative development of Ukraine for 2010-2020, which is aimed at the use of innovative model of development of economy, providing growth of the labour productivity in the process of using intellectual and natural potential of country, conditioning for resumption of fruitful independent scientific and technical activity in the country. Implementation of innovations allows to be well adapted to the change of requirements of the market, to realize innovative existing potential of country to the full extent.

Review of the last sources of researches and publications. Innovation is the determining feature of modern scientific, technical, production, socio-economic and all public processes. The future of Ukraine depends on implementation of innovative mechanisms of development: whether the country will move towards being included to the list of developed countries, or it will remain a stagnating country on the margins of scientific, technical and social progress. It is related to objective laws of social development, according to which a transition from mainly reproductive to the innovative type development is taking place in the world [1].

In the modern understanding, depending on conditions, an innovation is referred to both as the process and as the end-point of activity (innovative), which represents the newest or improved product, new services, which have market demand or socio-economic meaningfulness for the society, newest or improved technological process which is used in practical activity. In accordance with a modern international standard, set forth in the documents of the European commission, an innovation is considered to be the end-point of creative activity, which takes the form of the newest or improved products which will be sold at the market[2].

Problems of innovative investment safety of economic development is urgent for many countries of the world, and research of its influence on the state of economic security of country and its regions enables to identify in time risks and threats which arise up in this sphere, to adapt the mechanisms of providing innovative investment development and to find out key problems in its realization taking into account influence of global, national, regional factors. The relevance of these problems becomes especially significant for Ukraine in the conditions of its integration to European space [3].
Modern tasks of realization of the Agreement about the association between Ukraine and the European Union consist foremost of overcoming the present gap from the newest innovative progress of the European countries trends. It requires implementation of new innovative investment policy, which must include effective mechanisms of stimulation of the economic growth, which have been tested in countries – innovative leaders and will provide innovative principles of structural changes in the national economy of the country. But the most important task of the state is determining the innovative investment priorities of forming the pattern of economic growth of the national economy, transition from declaring such priorities of development to creating the systemic support of their realization from the account of European experience. Consequently, at such terms, the question of evaluating the influence of innovative investment activity on the state of economic security of Ukraine acquires a particular importance, as well as establishing the effectiveness of the operating mechanism of providing innovative investment safety on state and regional levels [4].

Positioning of Ukraine in the world globalised space as a highly developed state with high competitive potential of innovative development of the national economy in the long-term prolonged prospect is not possible without a clear balanced methodology of estimation and research of processes of economic innovative development themselves, which take place in the domestic organizational economic system. The innovative theory of national economic development on the modern stage acquires a paradigmatic significance, simultaneously providing the succession of key positions of economic theories, concepts, schools in the process of evolution of opinions to its motive forces and mechanisms of providing [5].

Innovative transformations of the economy require from enterprises revision of their own business strategy. Today on the market only those enterprises survive and get profit that have chosen the path of innovation development. That is why a necessary condition of entrepreneurial potential realization in some country or region is determining the modern trends of innovative activity of enterprises. Research of existing experience of the developed countries of the world shows us that the innovative potential of small and medium-sized enterprises is one of the main directions of the state regulation policy of small and medium enterprises in the European Union [6].

The innovative vector of development has become a necessary attribute of strategy of the modern economic growth of the country. Innovative processes are directly related to investment and general economic activity. Therefore, among them only those provided with investments can be considered as accelerators of steady socio-economic development on different levels. On the modern stage of development of the economic systems there is a necessity of achievement of high and stable rates of the economic growth which is arrived at mainly due to innovative investment factors [7].

For developing economies, the typical focus is at realization of positive technological transformations of national economy. In a narrow sense, what is involved here is stimulation of investment activity, moreover, investments must be combined with innovations – therefore, result in the extended development on new technological basis. But in Ukraine only insignificant attention is attracted to the questions of stimulation of investment and innovative activity. Hence, research of problems of stimulating the investment and innovative activity as pre-conditions of steady development represents a considerable scientific and practical interest [8].

As a result of the inconsistency and low efficiency of state innovative investment policy, our country falls behind the developed countries in technological development, the number of enterprises with active innovations diminishes, development of highly technological industries is braked, all above mentioned leading to the decline of the level of competitiveness of the national economy. To solve the mentioned problems of the state regulation of innovative investment activity in Ukraine, it is necessary to select the following strategic aims: to carry out adaptation of the innovative system of Ukraine to the terms of eurointegration direction and increase of competitiveness of the economy; to create a favourable investment climate; to redirect the system of production on the innovative way of development; to stimulate investments in innovative development of the national economy; to avoid “dispersion” of money and to concentrate finances
on basic innovative directions; to apply the systemic approach in regulating the innovative development and to improve legal and institutional regime [9].

In the modern world the level of scientific and technical progress is one of major indexes of not only socio-economic, technological development of the country but also the basic resource of the economic growth and the position of the state in the world economy. The pressing question at present is forming, development and effective use of innovative potential of the state, because it determines the competitiveness of the economic system of the state on the international market. However, without regard to understanding these strategic processes for years of transformational changes in the economy, Ukraine hasn’t been able to attain the level of the developed countries as for the parameters of innovative development, especially in the knowledge-intensive types of economic activity [10].

For ensuring the economic revival of the state it is necessary to form the effective system of interaction between science, state and regions. Innovations and investments as a result of their commercialization are the basis of development of regions and state. Main factors which reduce the level of investment-innovative development of the economy of Ukraine are: insufficient level of the gross gathering of the fixed assets; high degree of wear of the fixed assets; worsening of the index of investment attractiveness; general political and economic instability; negative expectations of enterprises in relation to the prospects of development of their business activity; insufficient volumes of direct foreign investments to Ukraine; low level of innovative activity of enterprises as well as the unsatisfactory level of financing from the state budget; strengthening of pressure on business from the side of authorities and market overregulation, corruption [11].

The purpose of the article is determination of ways of resumption of fruitful scientific and technical activity as a constituent to innovative investment development of Ukraine.

Basic material and results. Efficiency of realization of innovative potential is predetermined by occupying the proper positions of separate countries in scientific and technical development and determines the results of rivalry in science. Scientific and technical achievements allow to decide the task of innovative policy, prepare countries to the new calls; the new offer, more effective methods of their decision; provide formation of competitive fields during an economic competition. Commercialization of competitive fields generates additional financial possibilities in interests of economy of the state, additionally providing a multiplicative effect.

Fruitful scientific and technical activity is at present a priority, as it provides the subjects of economic activity with achievement of the best economic indexes, improvement of quality of products and more complete satisfaction of all spectrum of necessities of consumers. Unfortunately, the economy of Ukraine can not be acknowledged to be innovation-orientated, which is explained by modest specific gravity of innovative enterprises in the country. The acceptance of innovative investment method of developing the national economy is the unique expedient way for our state. Only this method is able to provide the proper competitiveness of the domestic economy, possibility of its participating in global integration processes as a subject having an equal status. In addition, this variant will be instrumental in the increase of rates of the economic growth, creating economic pre-conditions for the substantial improvement of life of the citizens.

According to the value of the global innovative index, which is used as a generalized index to measure innovative development of separate countries of the world, Ukraine took the unusual 60th place in the world in 2017. Clearly, this place in rating can arrange neither the authorities the state nor the public opinion. In fact, our country used to have a considerably higher potential in the past, proven by the developed space technologies, by the production of airplanes and other transport vehicles, complex equipment etc. Ukraine yet continues to elaborate inventions and innovative ideas which labour for a high estimation in the world.

It is not a secret, that the overwhelming amount of research-and-development in a market economy is carried out by business corporations, as they have the applied interest and proper financial possibilities. In fact, innovative activity is a rather complicated and capital-intensive process, which needs noticeable free money which can not always be invested by any economic subjects.
The estimation of current state of branches of economy testifies about expediency of the introduction of progressive technologies in the process of production of goods of metallurgy and chemical industry, and also engineering, where a relatively stable profitability is observed. In fact, enterprises of these industries are oriented to the export of own products and capable of introducing new, more perfect technological processes and mastering new types of products. And in its turn, it is related to the improvement of technologies. Unfortunately, only woodworking, pulp and paper industry and chemico-pharmaceutical industry work with almost permanent profitability.

Besides, the question of mastering scientific technological advances by the production capacities of enterprises remains far unsolved, as financial possibilities of their majority do not enable to them to apply new technologies and attract the acknowledged specialists. And in its turn, it is negatively reflected at the level of profitability of production of most domestic commodities and competitiveness of enterprises on the whole.

It is necessary to notice that the constantly growing necessities of society can be satisfied, in our opinion, only due to materialization of results of scientific-technical achievements. The receipt of results of scientific researches and amount of innovative developments is in direct dependence on the financial providing of this process from the side of the economic system of the state. In the leading countries of the world and those which are developing, the increase of knowledge-intensiveness of GDP is marked. The level of their charges on scientific research-and-development varies within the limits of 2-4% from the volume of GDP which testifies that they accept the importance of the value of scientific sphere for the improvement of life. Without regard to it, and also approval of necessary knowledge-intensive index of GDP at the level of 2,5-3,0% by the in the Strategy of innovative development of Ukraine for 2010-2020, we observe, beginning from 2005, the opposite phenomenon of diminishing of charges of the state on the necessities of scientific activity [12].

Unfortunately, absolute charges on these necessities have been substantially shortened, when most of other countries have increased the proper charges, and China for the last 10 years has doubled them. Insufficient funding negatively affects the effectiveness of scientific searches. Except for that, market actuality of the obtained inventions diminishes [13].

There is a parallel outflow of scientific human resources, preparation of which needs considerable time and money which are the direct loss of innovative potential of country.

Thus, in Ukraine through the deficit of financing of R&D there is a fast outflow abroad of research workers. At the same time, the amount of researchers in the countries of EC has increased for the last decade more than in 3 times. It took place also due to the increase of financing by them (as well as by the non-European leading countries of world community) to the process of bringing in of scientific resources from other countries and from Ukraine in particular.

According to the Law of Ukraine "On scientific and scientific and technical activity", the budgetary duty of the state in relation to providing the financing of scientific and technical activity in a size a not less than 1,7% GDP has not been executed already 15 years. Thus, a part of budgetary charges on science yields to the part of charges of budget on providing of activity of public and law enforcement authorities in 10 times, while in the leading countries of the world the situation is opposite.

In the structure of sources of receipt of financial resources on the leadthrough of scientific and technical activity there is an increase of specific gravity of own money and other sources in Ukraine. Personal interest to the sector of economy in scientific results diminishes in connection with the unfavorable market state (reduction of purchasing power of population and better quality of the imported commodities) and low outof the scientific sector through the lack of funding. In the industrial sector the basic sources of innovative activity in Ukraine is own money of enterprises, which provide forming 97,2% of the total sum [14].

For reasons of the unstable insetting of money in innovations in Ukraine from the side of foreign investors there are problems of socio-economic situation in the state, which result in a number of risks.
In connection with reduction of financing of innovative activity, accordingly diminishes specific gravity of enterprises which are engaged in innovations among the general amount of industrial enterprises of Ukraine.

In the developed countries of the world innovations come forward as the key factor of socio-economic development, exactly for their account they obtain a 50-95% increase of GDP, moreover one forth of working population is employed in the innovative business. In Ukraine the same index does not drag as far as to one percent. The experience of foreign countries testifies that, if the part of innovative products in composition of GDP is less 20%, then national products lose competitiveness. Thus, this index in the countries-members of ES oscillates in an interval 25-35%, and in China it attained 40% [15].

Strengthening of dependence of profits of countries as a result of export-import operations, achievement of particular volumes of production and consumption on the international centers of economic influence is stipulated by active development of scientific and technical activity, liberalization of world trade, deepening of international division of labor, development and competition of financial instruments. The highest status of influence belongs to such effective subjects in international economic life as multinational corporations. Taking into account the current situation, the necessity of creating strong national corporate structures appears in order to accelerate the development of economy of our country and to increase competitiveness of its economic subjects.

The important feature of modern development of production forces is the construction of connections which combine producers with the users of products. Their result is formation of so-called production-consumption networks which get possibility to influence both on the process of regulating the production of goods and on the order of distributing money.

The Strategy of innovative development of Ukraine for the period 2010-2020 has marked the necessity of increase of such parts: technologically high productions – to 35-40%, knowledge-intensive products – to 25-30%, and part of enterprises which inculcate innovations must grow in 3,0-3,5 times. The substantial increase of financial inflowing which strengthens importance of efficiency of functioning of the proper mechanism in interests of Ukraine becoming an innovative type of economy is needed for this purpose.

Defining the innovative way of development of national economy, the necessity of the rational use of natural riches of Ukraine appears sharply. For the present potential natural resources, after creation of the proper terms for investment support of innovative activity, results of researches and their successful commercial embodiment are able to attract interest of investors for the subsequent financing of innovative searches.

So far the parameters of scientifical and technological development in Ukraine have been fixed outside maximum intervals, the construction of innovative investment models of its socio-economic development on the basis of up-to-date technologies and highly technological industries hasn’t been carried out. There is an unequal external economic exchange with the nearby states, Ukraine comes forward as the supplier of labour and natural resources for the countries of Europe, ex-USSR countries, which, besides, actively attract its intellectual potential, taking into account low efficiency of its use in Ukraine. And that is why the task of construction of competitive national economy, achievement of steady development and increase of welfare of society remain unrealized.

We will underline a ponderable value in the increase of competitiveness of economy due to innovative stimulation of efficiency of functioning of financial market. It is in a position to generate the desired scientific-industrial results, support their commercialization and generate the increase of own standards in this direction. Unfortunately, almost all indexes of financial market of Ukraine development have worsened. The durability of the bank sector rotined the worst rating in the world at the calculation of index of competitiveness of country. Worsening of financial climate, as a background of innovative development in Ukraine, can explain the increase of macroeconomic risks which complicated functioning of the sector. And it testifies to the necessity of strengthening of government control in the field of realization of innovative model of development of the Ukrainian economy.
Thus, worsening of the macroeconomic state of the country as a result of short-sighted management of its economy, did not allow to Ukraine in good time to conduct the proper structural changes for the perceptible improvement of socio-economic life. During the greater half of term of introduction of the declared Strategy, the stable economic growth, based on the results of scientific and technical searches is not attained, the financial mechanism hasn’t been built for productive realization of innovative activity and successful adaptation of national economy to the loud calls of the XXI century.

Conclusions. The liquidation of technological lag of Ukraine from the developed countries of Europe is possible only due to resumption of fruitful independent scientific and technical activity within the framework of grounded and financially ensured national strategy (creation of new knowledge and more progressive technologies), comprehensive (state, European, Asiatic, American, including grants) support of efforts of middle and small enterprise (especially in the industrial sphere) and competent legislative providing, adjusting and support of innovative processes. Thus, the reliable personal interest of effective investors, providing state guarantees of ensuring the financial interests will play an important role as well.

The activation of scientific and technical potential of the country must be examined as a means of innovative investment way of its development. The main task in the indicated direction of efforts must be forming competitive advantages in lead industries from the technological point of view. And it certainly requires substantial transformation in the system of organization of scientific researches, revision of its labor resources, stimulation of employing the valuable researchers in domestic structures, increase of prestige of scientific and technical workers.

The major priority in development and proper financing of scientific and technical activity must be the strategically precise determination of directing effort in the scientific sphere. And for providing the proper financing of fruitful scientific and technical activity it is needed to conduct the complex search of necessary resources, to use different sources and stimuli, to form a favourable investment climate through efforts of state administration.

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Шляхи відновлення плідної науково-технічної діяльності як складової інноваційно-інвестиційного розвитку України. Проаналізовано наукову літературу, що дозволило виділити такі взаємопов’язані поняття, як науково-технічна діяльність, технологічні досягнення, інноваційний розвиток. Розглянуто проблеми відновлення науково-технічної діяльності як складової інноваційно-інвестиційного розвитку України. З’ясовано стан розвитку науково-технічної сфери діяльності й виявлено основні шляхи вдосконалення за вказаним напрямом. Розглянуто досвід розвинених країн з розв’язання вказаної проблеми. Проаналізовано забезпечення фінансуванням наукової та науково-технічної діяльності в Україні. Виконано оцінювання поточного галузевого економічного стану в країні й виявлено перспективи впровадження прогресивних технологій у процесі виробництва продукції металургії, хімічної промисловості, машинобудування. Установлено можливість плідного науково-технічного розвитку деревообробної, целюлозно-паперової та хіміко-фармацевтичної галузей промисловості. З’ясовано необхідність раціонального використання природних ресурсів України. Доведено актуальність інноваційної підтримки інноваційної діяльності з метою вдалого комерційного втілення її результатів. Запропоновано шляхи ліквідації технологічного відставання України від розвинених країн Європи за рахунок відновлення плідної самостійної науково-технічної діяльності у рамках обґрунтованої та фінансово забезпеченої національної стратегії, уособленої приєднанням зусилля середнього і малого підприємництва та грамотного законодавчого забезпечення, регулювання й підтримки інноваційних процесів. Підкреслено важливість зацікавленості дієвих інвесторів, надання державних гарантій забезпечення їх фінансових інтересів. Указано на необхідність суттєвої перебудови в системі організації наукових досліджень. Підкреслено актуальність активізації зусиль державного управління з метою формування сприятливого інвестиційного клімату в країні.
Ключові слова: науково-технічні досягнення, технологічний розвиток, інновації, інноваційно-інвестиційний розвиток.

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The ways of restoration of effective scientific and technical activity as a constituent of innovative-investment development of Ukraine. It is analysed scientific literature, which allowed selecting such interconnected concepts, as scientific and technical achievements, technological development, innovations, innovative-investment development. It is considered the problems of resuming scientific and technical activity as a constituent of innovative-investment development of Ukraine. The authors worked on the development of scientific and technical sphere of activity status and basic ways of its perfection. The scientists studied the experience of the developed countries in solution of the indicated problem. It is analysed financing of scientific and technical activity in Ukraine. It is underlined the importance of the personal interest of active investors, grants of state guarantees of providing of their financial interests. The authors indicated the necessity of substantial changes for the system of organization of scientific researches. It is proved the urge of activation of efforts of state administration for forming the favourable investment climate in the country.

Keywords: scientific and technical achievements, technological development, innovations, innovative investment development.

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Пути обновления результативной научно-технической деятельности как составляющей инновационно-инвестиционного развития Украины. Проанализирована научная литература, что позволило выделить такие взаимосвязанные понятия, как научно-технические достижения, технологическое развитие, инновации, инновационно-инвестиционное развитие. Рассмотрены проблемы обновления результативной научно-технической деятельности как составляющей инновационно-инвестиционного развития Украины. Выяснены состояние развития научно-технической сферы деятельности и основные пути совершенствования по данному направлению. Рассмотрен опыт развитых стран по решению указанной проблемы. Проанализировано обеспечение финансированием научной и научно-технической деятельности в Украине. Дана оценка текущего отраслевого экономического положения в стране, и выявлены перспективы внедрения прогрессивных технологий в процессе производства продукции металлургии, химической промышленности, машиностроения. Установлена возможность результативного научно-технического развития деревообрабатывающей, целлюлозно-бумажной и химико-фармацевтической отраслей промышленности. Высказана необходимость рационального использования естественных богатств Украины. Доказана актуальность инвестиционной поддержки инновационной деятельности с целью удачного коммерческого воплощения ее результатов. Предложены пути ликвидации технологического отставания Украины от развитых стран Европы за счет возобновления результативной самостоятельной научно-технической деятельности в рамках обоснованной и финансово обеспеченної национальной стратегии, всесторонней поддержки усилий среднего и малого предпринимательства, а также грамотного законодательного обеспечения, регулирования и поддержки инновационных процессов. Подчеркнута важность заинтересованности активных инвесторов, предоставления государственных гарантий обеспечения их финансовых интересов. Указано на необходимость существенной перестройки в системе организации научных исследований. Подчеркнута актуальность активизации усилий государственного управления для формирования благоприятного инвестиционного климата в стране.

Ключевые слова: научно-технические достижения, технологическое развитие, инновации, инновационно-инвестиционное развитие.