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INNOVATIONS AS A FORM OF GLOBAL SOCIAL AND ECONOMIC RELATIONSHIP

Setting the problem. Variety of prospects for socio-economic development of the states in modern conditions became the subject of numerous researches and debates between specialists in various fields and spheres of society. Significant influence on the formation of various scientific positions is made with the help of globalization processes which in economic sphere are mostly implemented through the activities of TNCs and which are represented by dual role: as “engine” of economic development and as “usurper "of the national market of the recipient country and therefore the activity of national commodity producers is significantly restricted.

Such relationships may gain particular manifestation in Ukraine as its enterprises stay in the global competitive environment only with the help of lowering product prices and the final product of most of them is solely raw, and this is because of the limited financial resources, technological backwardness, which is caused by the high depreciation of property and equipment, and because of the low level of management competence. Spreading of the aforementioned trends has led to such a situation that potentially highly profitable sectors of the national economy found themselves almost on the verge of depression and prospects for attracting foreign investments into their development are significantly obscured by opacity and low stability of the macroeconomic environment as a whole. In such conditions special actuality is in the recognition of the priority of innovative development of domestic enterprises through the establishment of an effective mechanism to attract foreign

investment as the direction of the socio-economic development of Ukraine in the context of globalization.

The analysis of recent researches and publications. Problems of the development of innovation are raised in the researches of such scientists as P. Drucker [1], I.M. Miroshnyk [2], Y.P. Morozov [3] who explore innovations as a product, novelty, improvement, and V.M. Kovalchuk [4] - as a process.

Global development of innovations and world experience of the TNCs in creating technologies based on R & D and market development of innovations are reflected in scientific publications of domestic researchers - Heyets V.M. [5], Kisterskyi L.L [6]. At the same time innovative software strategy is considered at the macro and the micro level in the context of globalization, integration and regional development. In the works of O. Bilous [7], A. Skalenko [8] mainly global-corporate approach to innovation development is observed.

However, despite the considerable scientific and methodological basis and the large number of applied researches, many aspects of the management of innovation potential of domestic enterprises in the context of stabilization of the socio-economic development of Ukraine in the conditions of globalization are still controversial and not enough studied. The main and the most expressed of them is the need to build a real existing innovative model of social and economic development of the country with limited financial resources and with the dynamics of global competitive environment.

Setting the objective. The objective of the work is scientific substantiation of optimization measures in the sphere of innovation policy for socio-economic development of Ukraine in the conditions of globalization.

The main material of the study. Modern interpretation of the concept “innovation” or “process innovation” is the result of the evolution of the understanding of this phenomenon, its development and its expansion to various areas of life. In the scientific lexicon, the term was first coined by Y. Schumpeter that literally means "the embodiment of scientific discovery, technical invention in a new technology or in a new kind of product" [9, p.159]. Also Y. Schumpeter considered

innovation as a new function of production, its new combination. Other scientists researching specific spheres of socio-economic development (capital formation, competition, welfare of the state, etc.) also have not passed over the question of innovation, but their interpretation of the concept of innovation has its own specificity, it depends on the specialization of the research of a scientist.

So, A. Smith considers innovations as the main factor in the general welfare as one of three factors of economic growth selected by him is precisely innovations [10]. A similar position is advocated in the work of D. Ricardo who clearly highlights the impact of progress on the capital of business entity in the context of reducing labor inputs. [11] In "Capital" Marx meant by innovation, any changes in the manufacturing process that release the capital, as any improvement that allows to reduce the required working space or to extend the operational lifetime of machines [12]. However, the scientific explanation of the nature of "innovation" has as evolved as the process of production itself. In particular, in the works of R.Solow, D.Sahal, E.Denison and others the focus when considering the economic problems of the use of limited resources is transferred to the modernization of the production process and search for more sustainable ways to its organization that is the implementation of innovations. M. Porter defines innovation as a method of ensuring competitive advantages [13].

Based on the rest of applied researches we can determine that there is no common vision about the nature of innovation in the scientific literature. Although at an intuitive level the concept “innovation” is clear to everyone, it is impossible to illuminate completely its essence today.

We understand the concept of innovation as a socio-economic category, which aims at ensuring the development of social relations in various spheres of life. As socio-economic category innovations in contemporary conditions can be structured into some forms of its manifestation and spheres of application (Fig. 1).

The distinguishing of economic and social innovation sphere give an opportunity to highlight some features which by their nature can be identified with the economic nature of investment. In other words, it is necessary to make certain

investments for the formation of innovation and the appropriateness and effectiveness of innovation will be determined by its return on investment (cost recovery) or by its coverage of social effect or public utility. Frequently the investments are the main source of financing innovations and that's why in such conditions these categories are considerably connected. To prove the above formulated assumptions we shall characterize each type of innovations in economic and social spheres.

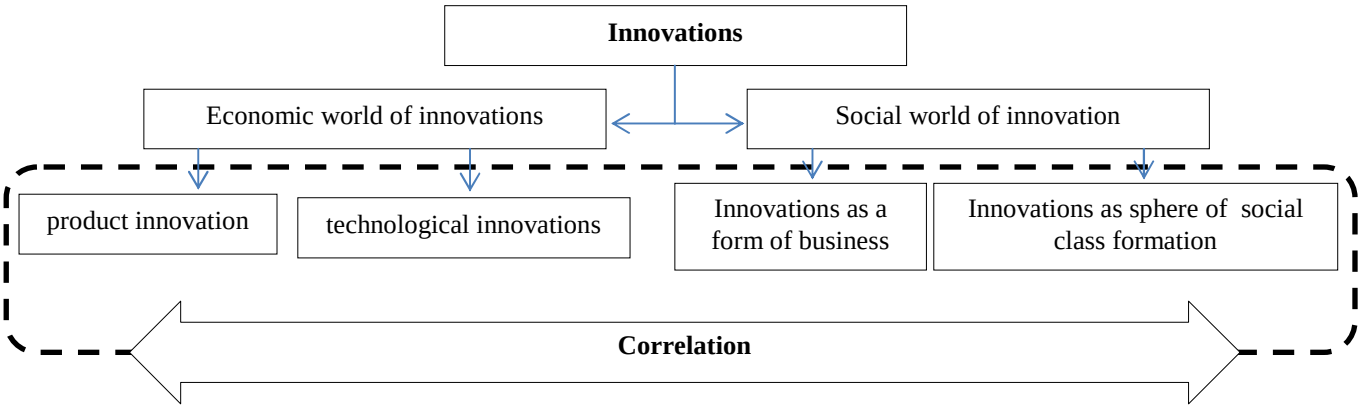


Figure. 1 The structure of the concept "innovations" as a socio-economic category.

The result of innovative activity in the sphere of commodity production (product innovations) is any improvement of existing products, or the invention of new products that can be consumed in the future. Such innovations are necessary for any entity (goods producer), as its activity is subjected to cyclic changes according to the stages of the life cycle. Peculiarity of product innovations is that they can be extended, as in the sphere of consumption, and in the sphere of production. That is to say, consumer product innovations at one time can be mobile telephones such as Smart-Rhone, tablet PCs, etc., and industrial product innovations are considered as new materials that are designed to optimize the production of certain consumer goods. At the time, thiscategory of product innovations may include the invention of carbon fiber, which is at a much lower mass characterized by a much greater stableness than any metal in particular steel.

Invention of any type of goods (formation of product innovations) requires some intellectual capital that is directed to the research and experimental activities

with different materials. The processes of acquisition of relevant materials (and essential services), organization of tests, wages of inventors and their maintenance staff, provision of appropriate infrastructure (laboratories, climatic conditions, measuring devices etc) and eventually the wastage that is the investments that are in the cost structure of the product displayed only as a non-current asset and that's why their payback demands serial production and corresponding sales.

Technological innovation is any novelty aimed at optimizing the production process of existing products, or the organization of industrial production for product innovations.

Example of technological innovations can be called the replacement of modular steel structures of stone building materials for the construction of high storeyed buildings that with the development of appropriate technology turned into building of skyscrapers. For the first time this technology is used by Denial Bernen in 1902 during the construction of Flatiron Building, which reached record 22 floors, but now this technology allows architects to perform design and construction of such "giants" as the Burdz Dubai, which consists of 163 rooms with a total height of 643.3 m (including spire 829.8 m) [14].

One of the leading forms of technological innovations is the development of production and technological lines which with less (or the same) expenses provide greater productivity or quality (often scale) of the product. For example, tracking of the fourth physical aggregate state of matter, plasma, and its use in metal cutting (called plasma cutting, when compressed air passes through a high electric charge) helped to triple the amount of performed works in comparison with using of the most common autogenous cutting.

As product innovations, technological innovations also require various kinds of investments that must be purged by implementing appropriate technology into production. The source of such a payback is usually the cost-cutting in business, increasement of the productivity and the effectiveness of its work. Also, the introduction of technological innovations entails certain losses that have both purely productive character and social character. Purely economic losses are associated with

the dismantling of the existing technological lines and the need of specialist operators of new technologies. Social losses occur when most technologies are developed in the context of reducing human labor, reducing employment in the community, resulting in an additional burden for the social benefits from the national budget. The presence of economic and social losses from the process of technological innovations in contemporary conditions often leads to their restraining through some management and macroeconomic regulators that adversely affects the production itself, however stabilizes the proportion of the income distribution in society.

Formation of social sphere of innovations is closely related to the origin of the process. Being a product of scientific activity of individual members of society, or their totality, innovations create Institute of Intellectual Property, the use of which in the market economy is based on commercial relations, that is an innovative idea itself, and (or) the mechanism of its implementation become intangible product (business object), which in practice is called an intangible asset. Building up with the help of previously invested resources, any innovation (an intangible asset) has its cost price and its ability to provide economic effect causes the appearance of demand for them, under the influence of which the final price is formed. Market turnover of innovations in the social environment has a number of positive and negative aspects from its functioning.

The positive side of buying and selling of innovations is the ability of its author and developer to get a financial reward, and thus to pay their own intellectual work. On the other, negative side, buying of innovation (intellectual property) means the transition of ownership rights to the buyer, who in his (her) turn can either develop appropriate technology, or "freeze" it. Cases of containment of innovations is mostly under conditions in which its distribution would be unprofitable for the individual business areas (usually highly profitable). Special distribution similar processes get in the development of alternative energy sources and other related industries, however, such antisocial actions in a global scale are carefully hidden under the "guise" of trade secrets.

Another form of the manifestation of social sphere innovations as a new form of business is that some innovations are beginning to profit by extremely high demand in the community, which automatically converts them to the sphere of business. Development of computer technology and the global network Internet promoted special distribution of such processes. As an example of innovations that led to the emergence of new business areas we can determine the development of the global social network Facebook, which originated as a simple website and then turned into one of the most successful corporations in the world.

However, the sphere of the manifestation of innovation processes is not limited to commercial activity that is characterized by the possibility of obtaining additional profits or production optimization, it is often used for public interest. That is to say, a large number of modern developments concerns ecological production (without the influence of the state), which thus carry some losses to the manufacturers, as well as require innovative investment. In this context, it is also possible to define the application of innovations that emerged in the industrial and economic or military spheres to meet the general public interests. Thus, developed in the 70s GPS (GlobalPositionSystem) as a way to identify high-precision military installations in 1983, it was open for civilian needs by providing a significant increase in search and rescue operations, streamlining of tourist travel, avoiding emergencies in shipping etc.

Another, but not less important sphere of influence of innovations on social relations in society is that the innovations are the product of individual mental work of some people who have the appropriate skills, who subsequently form a new social class - class of scientists and inventors. The number of such entities characterizes the scientific potential of the state and usually forms the basis of innovation development. In business, this work is defined as intellectual capital. More accurate analysis of the characteristics of life of the scientists as social class gives the possibility to allocate some of their subtypes. The first subtype is scientists-ideologists and the second one is scientists-traders.

Scientists- ideologists are people engaged in research and innovation activities in order to implement the idea of "social breakthrough ' and their activity is associated with the desire to idealize certain branches of social and economic development for the benefit of society and the greatest reward is universal recognition. As an example of this type of scientists can be called the activity of an American engineer Elaysha Otis in 1853. Using spring-notched mechanism, he was the first who developed automatic brake for elevators. However, without talent to commercial operations he easily revealed the mechanism of its development, which later on was commercialized by construction companies. Moreover, without any redemption of the rights to use the name of the inventor and family involvement, company was founded by Otis, now it is a global leader in elevator industry. Typical scientists of such category can be called early historical scientists (those who operated prior to STD) and scholars of the period of "cold war."

Scientists-traders are people engaged in research and innovation activity, not only to ensure social breakthrough, but also to improve material welfare of their own life and their employment is directly connected with the sphere of scientific activity and their financial status depends on the commercial success of the developed innovations, and these innovations can be the components of any field of socio-economic development. As an example of this category of scientists we can show inventive and innovative activity of founder of the company “Apple “ Steve Jobs. The formation of scientists-traders was caused by active demand for the development of innovations in the economic activities of the twentieth century that historically was marked as scientific and technological progress (STP). In the sphere of global public relations NTP had mixed impact. On the one hand, the possibility of obtaining remuneration due to commercialization of scientific activity acted an additional incentive for its strengthening and activation, on the other hand, the high demand for innovation increased their cost significantly, limited natural and productive resources led to higher prices and cost of the process of the

Considerable payback of scientific work has led to the taking a wide range of people. At the same time the pace of innovation development (the results of science)

slowed down, exacerbating the emphasis on previously improved established developments which further reduced the effectiveness of their application use. That is to say, if the development of the first Internet browser Netscape Navigator has provided access to online resources for common users (whereby it was distributed free of charge), then all subsequent browsers along with their updates (Internet Explorer, Opera, Google Chrome, Yandex.Browser, Safari, etc.) are only more modern and advanced programs of appropriate type but they are produced by other companies only for the redistribution of the market.

So, when developing innovative models of socio-economic development of the country in the context of globalization we must take into account not only quantitative research capabilities (number of scholars, compensation of employees of scientific activity, etc.), but also the qualitative aspect of the use of the capability (how the proposed by individual scientists innovation influenced the field or area of socio-economic environment studied by him). This approach can not only ensure effective dissemination of innovations within a particular state, but also it can give an opportunity to trade them in the system of global economic relations, which further will ensure the welfare of certain social classes.

The reality of social and economic development of Ukraine is characterized by significant depression of most of the economic activities that are directly connected with inefficient production facilities and technologies. Therefore the process of further development of social and economic standards has to be ensured with a comprehensive creation and use of innovations both in economic and in social contexts.

Analyzed above features of creation and using innovations in the system of social and economic development provide an opportunity to distinguish two main factors that contribute their occurrence:

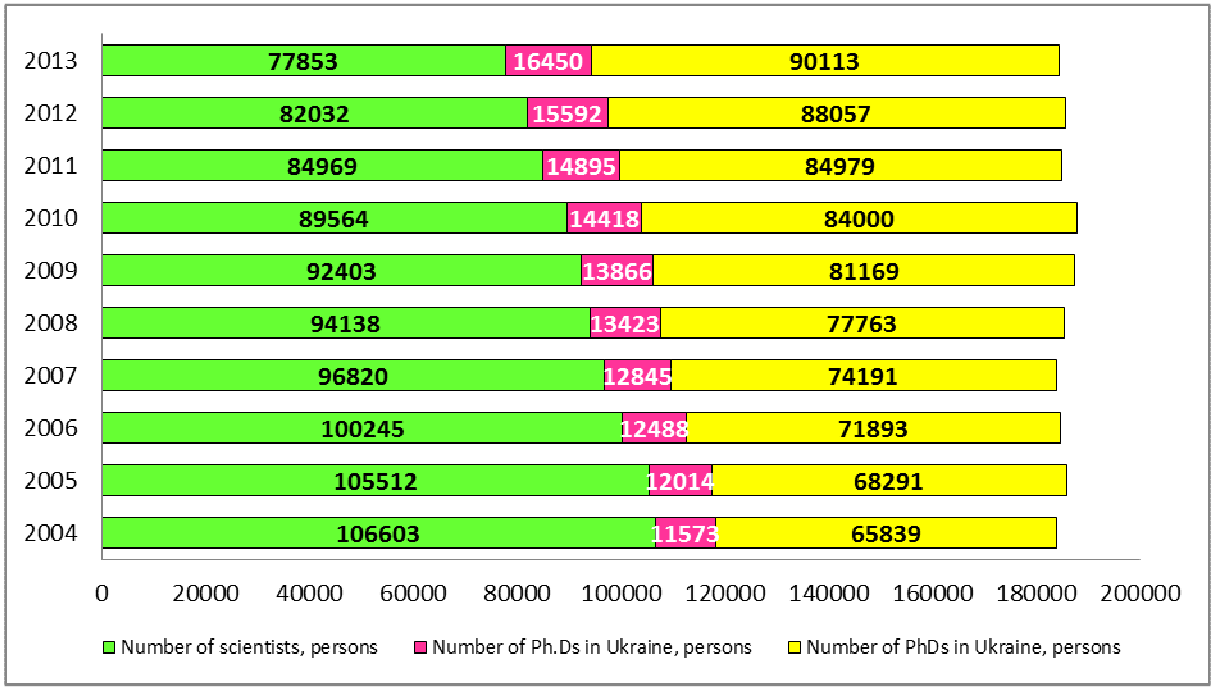
1. intellectual work (staff potential);

2. Innovative investment (resource potential);

As a result of the relationship of these factors innovative potential is formed and its efficiency depends both on their size, and on the level of balance. Taking this

into account, research of directions and prospects of the development of innovation sphere in socio-economic development of Ukraine, it is necessary to build the formation of innovation potential in the context of the analysis of the above mentioned factors.

Years of the Ukrainian state for human resources component of its innovation potential are remembered by mixed trends (Fig. 2).



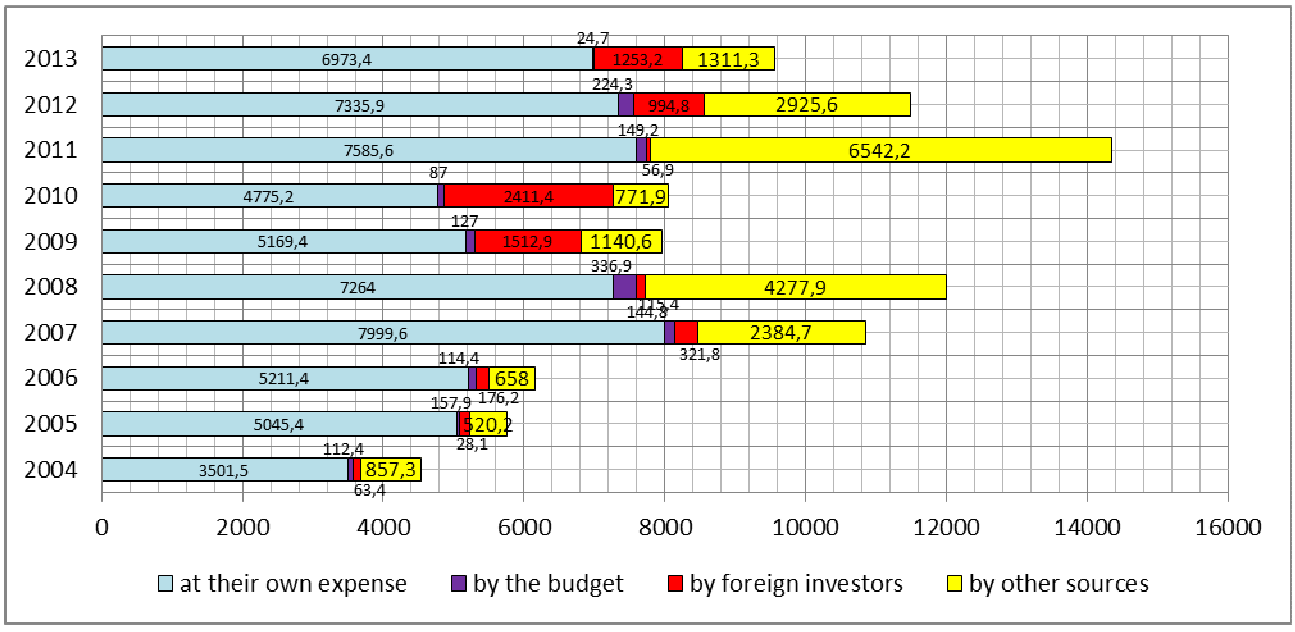
Source: Constructed on the basis of data[15]

Figure 2. Structure of the staff potential of the implementation of innovations in socio-economic development of Ukraine for 2004-2013.

Analyzing the given statistics, we can say that in Ukraine over the past decade number of researchers who have a scientific degree of candidate of science or doctorate has increased. Thus, over the investigated period the number of Ph.Ds increased from 11,573 persons in 2004 to 16,450 persons in 2013, making in total increase of 42.1% . Similar trends were also marked in the dynamics of population of the scientists who were awarded a PhD degree in science, in particular their number in 2004 was 65,839 people, in 2013 – 90,113 persons that provided increase of 36.9%.

In such a situation, one could emphasize the rapid growth of innovative potential, but the aforementioned perspectives are obscured by other related parameters. According to the data of the statistics, the number of researchers has decreased from 106,603 in 2004 to 77,853 in 2013 and continues to decrease, that testifies to brain drain from the socio-economic environment of Ukraine. Moreover, despite the ever-increasing number of graduate researchers (and as a result a large number of approved scientific researches), national industrial and economic activity declines, continuously reducing the economic competitiveness and innovation activity is increasingly offset by the real sector. All these trends indicate a low quality of innovative developments in domestic science and little social awareness of the nature and value of intellectual capital.

As a proof of this there are the results of the researches concerning the sources of financing research activities in Ukraine (Fig. 3) as the second factor in the formation of innovative potential of social-economic development.



Source: Constructed on the basis of data[15]

Figure. 3. Structure of the financial sources of innovation activity in Ukraine for 2004-2013, in millions of hryvnias.

Resulted indicators show that the majority of innovations developed in Ukraine are financed by their own sources (that is the investors of innovations are their authors themselves). In particular, in 2004 77.2% of scientific innovations were financed by their own sources, and in 2013 this figure was 72.9%, more than 2/3 of their value. Low participation of financing innovation by entities of real sector of economy in Ukraine at the same time describes the low use of existing developments and their low economic return, which does not meet the interests of domestic business. low competence of management at the enterprises does not play the least role in this situation.

In numerous scientific researches one can observe a kind of justification of the situation regarding the financing of innovations in Ukraine. Allegedly low share of financing of innovations developed by domestic science from the side of entities is caused bytheir low profitability, primarily, and by lack of government support. However, the value of such a position substantially is undermined by the fact that in the structure of financing of innovative activity there is an insignificant share of financing from the side of foreign investors (13.1% in 2013), who actually in the present conditions form the basis of demand for those or other technologies. These entities may perform a powerful "Sponsor"of innovation, but their requirements are quite stringent and only "breakthrough" innovations can satisfy them.

An equally important problem of innovations in Ukraine is the low level of funding for scientific developments from the side of the state, and negative trends only exacerbate every year. That is, if in 2004 112.4 million. (2.4%) were financed by the state budget, in 2013 this amount was only 24.7 million. (0.25%), indicating a fivefold reduction in physical terms and tenfold one - in relative terms. Along with the reduction of the financing from the state budget in Ukraine there is unsolved problem of transparency in the allocation of these funds, most of which are not used in financing innovation needs of the state (such as the development of alternative energy sources, the introduction of biofuels, as part of the process of agrarian sphere of business, etc.), but in financing the "scientific activity" of people who are lobbied

by individual governmental authorities or by the leadership of state educational establishments.

The conclusions and further research. Thus, innovations as a factor of social and economic development are the indispensable thing in this process and are characterized not only by the commercialization of inventions, equated with their payback, but can (or even must) provide social impact. Receiving new technologies, products and services, decisions of the organizational, technical, economic, social and other results of innovation is the result of not only the mercantile interests of the author but is formed under the influence on the application of scientific skills and initiatives of individual members of society.

Policy of Ukraine to stimulate the development of innovation is marked by extraordinary inefficiency, as annually the needs grow but the amount of funding for this sector is substantially reduced. Moreover, excessive bureaucracy and poor quality control and application effectiveness of scientific developments almost completely transformed innovation into a formalized process for obtaining academic degrees, particular positions, including expert committees in particular the work of, etc.

Reforming of negative events should be implemented on a priority basis to stabilize the innovative process as a factor of social and economic development of Ukraine in modern globalization. Development of methodological basis of such a formation constitutes perspectives for further investigations in the relevant field.

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Михайлишин Л.І. ІННОВАЦІЇ ЯК ФОРМА ГЛОБАЛЬНИХ СОЦІАЛЬНО-ЕКОНОМІЧНИХ ВІДНОСИН

Мета. Наукове обґрунтування оптимізаційних заходів в сфері становлення інноваційної політики для соціально-економічного розвитку України в умовах глобалізації.

Методика дослідження. В процесі дослідження використовувались загальнонаукові методи, зокрема: метод порівняння використано для обґрунтування поняття інновацій як соціально-економічної категорії; метод статистичного аналізу і синтезу застосований для оцінки стану розвитку наукового потенціалу в Україні; метод дедукції та гіпотетичний метод використано для обґрунтування економічної та соціальної сфер розвитку інновацій.

Результати. Визначено особливості розвитку інновацій в соціально-економічному середовищі держави. Обґрунтовано поняття комерційного і особистого інтересу в сфері розвитку інновацій, як соціально-економічної категорії. Визначено фактори малоефективного розвитку інноваційної діяльності в Україні.

Наукова новизна. На основі гіпотетичного методу обґрунтовано поняття інновацій як соціально-економічної категорії, що забезпечує можливості для проведення реформ з активізації стимулювання інноваційної діяльності в державі.

Практична значущість. Результати дослідження можуть використовуватись менеджментом підприємств різних галузей промисловості, а також бути впровадженими в практичній діяльності науково-дослідних установ і органів державної та місцевої влади.

Ключові слова: інновації, товарні інновації, технологічні інновації, інноваційна діяльність, науково-дослідні розробки, бізнес-інновації, інноваційні ініціативи.

Михайлишин Л.И. ИННОВАЦИИ КАК ФОРМА ГЛОБАЛЬНЫХ СОЦИАЛЬНО-ЭКОНОМИЧЕСКИХ ОТНОШЕНИЙ.

Цель. Научное обоснование оптимизационных мероприятий в сфере становления инновационной политики для социально-экономического развития Украины в условиях глобализации.

Методика исследования. В процессе исследования использовались общенаучные методы, в частности: метод сравнения использованы для обоснования понятия инноваций как социально-экономической категории; метод статистического анализа и синтеза применен для оценки состояния развития научного потенциала в Украине; метод дедукции и гипотетический метод использован для обоснования экономической и социальной сфер развития инноваций.

Результаты. Определены особенности развития инноваций в социально-экономической среде государства. Обосновано понятие коммерческого и личного интереса в сфере развития инноваций, как социально-экономической категории. Определены факторы малоэффективного развития инновационной деятельности в Украине.

Научная новизна. На основе гипотетического метода обосновано понятие инноваций как социально-экономической категории, обеспечивает возможности для проведения реформ по активизации стимулирования инновационной деятельности в государстве.

Практическая значимость. Результаты исследования могут использоваться менеджментом предприятий различных отраслей промышленности, а также быть внедренными в практической деятельности научно-исследовательских учреждений и органов государственной и местной власти.

Ключевые слова: инновации, товарные инновации, технологические инновации, инновационная деятельность, научно-исследовательские разработки, бизнес-инновации, инновационные инициативы.

Mykhailyshyn L.I. INNOVATIONS AS A FORM OF GLOBAL SOCIAL AND ECONOMIC RELATIONSHIPS

Purpose. Scientific substantiation of optimization measures in the sphere of innovation policy for socio-economic development of Ukraine in the conditions of globalization.

Methodology of research. In the process of investigation we used general scientific methods in particular: comparative method was used for the substantiation of the concept innovations as socio-economic category; method of statistical analysis and synthesis was applied for the evaluation of the development of scientific potential in Ukraine; method of deduction and hypothetic method were used for the substantiation of economic and social spheres of innovation development.

Findings. The peculiarities of innovation development in social and economic environment of the state are defined. The concept of commercial and personal interest in the sphere of innovation development as a socio-economic category is substantiated. The factors of ineffective development of innovation in Ukraine.

Originality. Based on a hypothetical method the concept innovations as socio-economic category is substantiated and it ensures opportunities for carrying out reforms to intensify innovation activity in the country.

Practical value. The results of investigation can be used in the management of enterprises in different industries and also they can be applied in practical activity of research establishments and state and local authorities.

Key words: innovations, product innovation, technological innovations, innovation activity, scientific and research development, business-innovations, innovative initiatives.