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I. I. Cherlenjak, Doctor of Public Administration,
 Profesor,
A. M. Domyshe-Medyanyk, Candidate of
 Economic Sciences,
I. I. Hrubinka, Candidate of Economic Sciences

I. I. Черленяк, д. н. з держ. упр.,
 професор,
A. M. Домище-Медяник, к. е. н.,
I. I. Грубинка, к. е. н.

INNOVATIVE COMPONENTS OF ADDED VALUE AND THE PROBLEM OF FACTORS AND INCENTIVES OF ECONOMIC GROWTH IN UKRAINE

ІННОВАЦІЙНІ СКЛАДОВІ ДОДАНОЇ ВАРТОСТІ ТА ПРОБЛЕМА ФАКТОРІВ І СТИМУЛІВ ЕКОНОМІЧНОГО РОСТУ УКРАЇНИ

Urgency of the research. The formation of conditions for economic growth of the country is restrained by the lack of quality of added value systems in the produced national product.

Target setting. It is expedient to study the content of those features of economic processes inherent in modern production, the content of changes in the cyclic factors of the development of innovation "new economy" in Ukraine.

Actual scientific researches and issues analysis. The scientific works of such scholars as S. Biliatskyi [1], T. Blyzniuk [2], V. Heiets [3], V. Dubyk [4], N. Kondratiev [5], L. Nosach [6], O. Soskin [7], S. Yerokhin [8] were devoted to the problems of the features, as well as the relationship between the degree of innovation of the country's economic system and the level of added value.

Uninvestigated parts of general matters defining. The question of the role-place-cost of innovative components of economic growth in the focus of the problems of building a "new" economy to overcome the transformational decline of Ukraine remains insufficiently studied.

The research objective. Through the prism of economic indicators, to show the current state of the economic system of Ukraine, the trends of world production, to find possible ways to improve the efficiency of Ukraine's economy.

The statement of basic materials. To analyze the problem of management system of Ukrainian firms is expedient on the basis groups of indicators. The first group is a) the indicators of direct foreign investment in the economy; b) the indicators of added value in the sectors and spheres of the economy. The peculiarities of economic processes inherent in modern production, changes in the cyclical nature of the development of a "new" economy, the country's place in world production chains compared with the "parameters" of Ukraine have been considered. It has been proved that in the Ukrainian economy, in fact, there is no attraction of innovations and the expanded production of new resources, but the reinvestment of "old resources" in the old production of raw material and consuming mass-industrial era.

Conclusions. The transfer of the grounds for the production of added value occurs when establishing the status-programmable conditions for the self-reproduction of balances of market information.

Keywords: innovations; activators; state regulation; added value; economic growth; foreign investments.

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Актуальність теми дослідження. Формування умов економічного росту країни стримується недостатньою якістю систем оцінювання доданої вартості у виробленому національному продукті.

Постановка проблеми. Доцільним є вивчення змісту тих особливостей економічних процесів притаманних сучасному виробництву, змісту змін факторів циклічності розвитку інноваційної «нової економіки» України.

Аналіз останніх досліджень і публікацій. Проблематикою взаємозв'язку ступеня інноваційності економічної системи країни і рівнем доданої вартості в ній присвячені науковій праці наступних вчених Біляцький С. [1], Близнюк Т. П. [2], Геєць В. М. [3], Дубик В. Я. [4], Кондратьєв Н. Д. [5], Носач Л. Л. [6], Соскін О. І. [7], Єрхоїн С. [8].

Виділення недосліджених частин загальної проблеми. Недостатньо вивченими залишається питання ролі-місця-вартості інноваційних складових економічного росту у фокусі проблем побудови «нової» економіки з метою подолання трансформаційного спаду України.

Постановка завдання. Через призму економічних показників показати сучасний стан економічної системи України, тенденції розвитку світового виробництва навести можливі шляхи вдосконалення ефективності економіки України.

Виклад основного матеріалу. В статті проаналізовано дві групи показників інноваційності економіки: показники прямих іноземних інвестицій в економіку; показники доданої вартості в галузях економіки. Розглянуто особливості економічних процесів притаманних сучасному виробництву, зміни у циклічності розвитку «нової» економіки, місця країни у світових виробничих ланцюгах у порівнянні із «параметрами» України. Доведено, що в економіці України відбувається не залучення інновацій, а реінвестування «старих ресурсів» в старі виробництва сировинно-затратної масово-промислової епохи.

Висновки. Передача підстав для продукування доданої вартості відбувається при встановленні статусно-програмованих умов самовідтворення балансів ринкової інформації.

Ключові слова: інновації; активатори; державне регулювання; додана вартість; економічний ріст; іноземні інвестиції.

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Urgency of the research. The formation of conditions for economic growth of the country is restrained by the lack of quality of added value systems in the produced national product.

Target setting. The improvement of the economic system of the country is impossible without an analysis of the current trends of economic progressive development, the identification of the peculiarities of the economic processes inherent in modern production, changes in the cyclical nature of the development of the "new" economy, the country's place in the world production chains. The study of these processes and phenomena will make it possible to formulate a set of tasks and measures for building a domestic effective economic system on a long-term production platform.

Actual scientific researches and issues analysis. The scientific works of such scholars as S. Biliatskyi [1], T. Blyzniuk [2], V. Heiets [3], V. Dubyk [4], N. Kondratiev [5], L. Nosach [6], O. Soskin [7], S. Yerokhin [8] were devoted to the problems of the development of the innovative component of modern economies and its features, as well as the relationship between the degree of innovation of the country's economic system and the level of added value.

Uninvestigated parts of general matters defining. The question of the role-place-cost of innovative components of economic growth in the focus of the problems of building a "new" economy to overcome the transformational decline of Ukraine remains insufficiently studied.

The research objective. Through the prism of economic indicators, to show the current state of the economic system of Ukraine, the trends of world production and production relations between the economies of the countries, to find possible ways to improve the efficiency of Ukraine's economy.

The statement of basic materials. To analyze the problem of the need for the creation and transference of innovative developments and technological innovations into the country's economy and the management system of Ukrainian firms is expedient on the basis of several groups of indicators. The first group is a) the indicators of direct foreign investment in the economy; b) the indicators of added value in the sectors and spheres of the economy.

Indicators of attracting direct foreign investment into the economies of individual countries and their averaged amounts for typical economies are shown in Tab. 1.

Table 1

Volume of direct foreign investments in individual countries, typical economies and regions, billion US dollars

Country	2011	2012	2013	2014	2015	2015 to 2011, %
World, including	1566839	1510918	1427181	1276999	1762155	112,5
Developed economies, including	817 415	787 359	680 275	522 043	962 496	117,7
Europe, including	478 063	483 195	323 366	305 988	503 569	105,3
European Union, including	425 843	446 454	319 457	292 025	439 458	103,2
Poland	15 925	12 424	3 625	12 531	7 489	47,0
Hungary	6 300	14 409	3 404	7 490	1 270	20,2
Slovakia	3 491	2 982	-604	-331	803	23,0
Romania	2 363	3 199	3 601	3 211	3 389	143,4
Czech Republic	2 318	7 984	3 639	5 492	1 223	52,8
Developing economies	670 149	658 774	662 406	698 494	764 670	114,1
Transitive economies, including	79 275	64 789	84 500	56 463	34 988	44,1
Ukraine	7 207	8 401	4 499	410	2 961	41,1

Source: on the basis of World Bank data [9]

The data in Tab. 1 indicates a significant decline in direct foreign investments in 2014, which was due to the factors in the political and international environment, in 2015 there was a significant growth of these factors. We can argue about the lag in the rate of their involvement from such our EU neighbors as Poland or Romania, but this lag is not yet critical. Ukraine is still potentially attractive to investors. However, the very structure of investments is a significant problem: the main investor is an offshore harbor, such as Cyprus (28.7% of all direct investment). That is, in the Ukrainian economy, in fact, there is no involvement and increased production of new financial, intellectual and technological resources, but the reinvestment of "old resources" into old production. This is a fundamental problem

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for economic growth of the country, which precludes the effective use of "practically achievable" investment opportunities and resources. Another problem is, as can be seen from the data in the Tab. 1, is a tendency of direction-growth of "world" investments mainly into developed economies in comparison with transitive ones. One of its aspects is the new trend of placement of high-tech manufacturing productions only in developed countries. The second is the start-up development and commercialization of innovative developments (where developed countries have a significant advantage, having the appropriate infrastructure, experience, staffing reserves and other competitive advantages) is the same in developed countries.

The share of added value in the main sectors of the economy of Ukraine is presented in Tab. 2, which illustrates the period from the statehood to the present.

Table 2

The structure and dynamics of added value in the economy of Ukraine

Indicator	1992	2008	2009	2011	2012	2013	2014	2015
Agriculture, added value (% GDP)	20,4	7,9	8,3	9,5	9,1	10,2	11,8	14,0
Industry, added value (% GDP)	50,9	33,6	29,6	29,1	28,4	26,2	25,4	25,9
Services, added value (% GDP)	28,7	58,5	62,1	61,4	62,5	63,6	62,8	60,1
Total, %	100,0	100,0	100,0	100,0	100,0	100	100	100

Source: on the basis of World Bank data [9]

As can be seen from Tab. 2, the largest share of added value is observed in the services provided (the term for personal "manual" labor). There is a tendency to reduce the added value of industrial products and its growth in agriculture. That is, we can come to the conclusion about the intensification of the use of resources in this area, which is primarily due to the natural resources of the country (black soil, enormity). The data of Tab. 2 indicate that the restructuring of the industry does not occur or occurs slowly only in 2015 there is a low growth. This was influenced by opaque privatization (actual monopolization of the FIGs of individual industries), rather favorable conditions of the international commodity markets in fact until 2011, which allowed to receive the profits without modernization of production in accordance with modern technological processes. The result is the inability to withstand price competition with the production of goods with a high added value of firms in other countries.

It should be noted that according to the State Statistics Committee [10], 34.1% of all investments were directed into industry, that is, comparing their volume and the share of added value in industry (which should indicate the degree of renewal of production, including through innovation), we can conclude about the high degree of dependence between them and the importance of investments precisely in new innovative technologies into the innovation strategy of industry development. Since the total cost of added value in industry (as well as GDP in general) in Ukraine is very low, it is an indirect indication of the absence of innovative technology systems and innovative business systems in the country.

Table 3

Comparative dynamics of GDP volume and added value of Ukraine and Germany *

Country	GDP volume, Billion US dollars					
	1990	1995	2000	2005	2010	2015*
Germany	1765	2591,6	1955	2861,4	3417,3	3355,8
Ukraine	81,5	48,2	31,3	86,1	136,4	40,6
Added value in the country's industry, Billion US dollars						
	1990	1995	2000	2005	2010	2015*
Germany	..	772,8	543,7	761,2	927,5	922,9
Ukraine	..	18,4	9,6	24,5	35,2	10,7

Source: on the basis of World Bank [10]

Indicators of GDP and added value in Tab. 3 point at the clear correlation between the added value in the country's industry and the volume of its gross domestic product. GDP of Ukraine is less than

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GDP of the leading EU country Germany in 82 times, added value in 86 times respectively. The data of Tab. 3 shows, however, that without the modernization of production, the establishment of the system of "science-innovation-production", the domestic economy in the long-term perspective is aimed at reducing, due to increased cost component and reduced added value.

In order to understand the complexity of the problem of forming a chain of accumulation of added value, it should be considered as a special self-organizing process-mechanism. Actually, it is a process of coevolution of systems: management, economic, trade, financial, technical and technological, political, economic and other authorities. In addition, to understand the essence of the mechanism, it is necessary to represent the integral (total) cost of added value in the form of interaction (often cross-referencing) of the three semantic process-functional levels: 1) the formation of the basis for the production of added value; 2) the use of already formed grounds for the production of added value; 3) the production of added value. In the process of activity, including economic activity-interaction between countries, between countries and such global economic actors as TNCs, the channels of transfer of the grounds for the production of added value are established.

Such an opportunity is formed primarily by the autonomous business logic, combined with the logic of the development of systematic technologies, oriented at the interests of business owners. Such a problem always existed, but today it is particularly aggravated because of the domination of the logic of the evolution of technology systems as a self-sufficient actor of "second nature." Technology systems do not only provide competitiveness in the modern economic conditions of globalization but also provide a link between the competitiveness of micro and macro levels. Technology systems become "actors" of dual factor influence in production functions: as a factor component of capital, as a factor component of labor, a factor component of knowledge-information, which is a direct "actor" of the production function. Therefore, today, in addition to the "extra" factor of creation of added value, technologies become a stimulator of changing the quality of the production function. This is due to the fact that technology systems as "eco-systems of activity" have their own development logic. This "self-organized logic" of development is influenced by the conditions of competition and the conditions of partnership. Special partnership conditions arise in different types of lace structures.

Consequently, in the growth economies, there appear: a) changes in the sources of production of innovative added value and the transformation of the connections between fundamental and productions-sciences; c) the change of the paradigm of engineering science and penetration of the engineering paradigm into all spheres of management. From the side of business in the growth economies, the change in the demand for innovation is induced. It establishes the need for the creation of a system of requests for an innovative product and for innovative, high-capacity goods.

In growth economies, in contrast to the traditional economic role of fundamental science and applied science of sectoral scientific institutes of economies of the previous historical stages, the actors of the innovation economic space directly need-require-use the share of added value that "was-is-will be" formed in the production chains of the added value created on the basis of attracting their creations (inventions).

The Ukrainian economy has sunk in the past. The organizational and innovative crisis of the Ukrainian economy consists in the fact that traditional, fundamental and applied sciences "hung in an airless space". That is, their development is not induced by the demands of the legal business, and the new meaning and meaning of innovation-oriented systems of scientific research in Ukraine has not yet been formed. Thus, science, knowledge and information are not incorporated into the system of production function of Ukraine as mechanisms and factors for the creation of added value.

How has such a catastrophic gap between the needs and possibilities of upgrading the production function appeared? In the national economy of the Ukrainian SSR, there were no traditions and practices for the autonomous distribution of the shares of added value between industries and enterprises. The "transition" to an innovative type of the development of the production function of Ukraine is a strategic gap between the previous practice of financing state budget, practices of the developing of innovative technologies for budget enterprises and the practice of self-financing by private owners of enterprises for the development or transfer of innovative technologies.

Moreover, with the transition of the Ukrainian economy from planned to capitalist one the actual

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sectoral research institutions gradually ceased to be funded. And the emerging Ukrainian capitalists attract only short-term-oriented innovations into a product or imitation technology. A catastrophic gap has emerged both in the industry and the agrarian sector, the service sector between the need for innovation and the existence of the levels of economic organization capable of promoting the birth of domestic inventions and the spread of innovation in the system of managing firms, industries and the country as a whole. What is the reason for such a catastrophic break from the position of the meso-level? It seems that modern mobile innovation entrepreneurship at micro- and meso-levels can only exist as a dual network of links: centers capable of producing innovations almost instantly suitable for the production of new products; centers that are ready and able to produce these innovative products at once, creating added value and business rent. All centers should work on a private basis. And this requires a special type of market-non-market coordination.

In addition, the basis of functioning-reproduction and the substrate of self-organization of these networks is the stock of innovative resources and the reserve of reproduction processes, which indirectly reflects the very system of social relations.

At the macro level the most painful is the problem of commercializing scientific developments in technological innovations and product innovations on the scale of the national business environment. Indeed, even the availability of innovative infrastructure, innovative resources and innovation processes does not in itself provide the effectiveness of innovative business. Although these components together form the country's innovative potential and form the basis of the innovation system, they are only a prerequisite for innovation development.

The basis of the innovation system and, accordingly, the innovation development of the economy there must be such constantly renewable resources and organizational condition as: knowledge, information, experience, proper innovation culture, appropriate normative and institutional support of firms, businesses and research organizations. But this is just the basis of intellectual-engineering nature. The bases of energetic, resource, material and financial nature are needed. It is also necessary to pursue a government policy that sets the game forward as a practice of business in the real sector of developed countries. On the basis of the industrial policy of the government, a pre-emptive practice of forming systems of technologies and systems of added value of foreign firms should be formed.

In the conditions of a new economy an important, generating national wealth, an addend of the chain of pricing is precisely the "temporal addend" of added value. In the new product the factor of the "temporal addend" becomes an innovative component of production activity. Moreover, it is not a factor component, which is far removed from the production by many stages of the order, development and implementation of innovation activities, but the one that is directly connected with the opportunities and evolutionary prospects of production, which is oriented "on the future that comes today". This implies the deployment of human capital growth factors, the creation of centers for the growth of intellectual capital aimed at specific applied sectoral problems, the creation of conditions for the motivation of the patent activity, the identification of cycles of reproduction of incentives for financing applied sectoral research and development.

Conclusions. Economic growth is associated with innovative factors in two complexity terms: dynamic and algorithmic. On the basis of the production and commercialization of innovations, the algorithmic and dynamic complexity of economic growth arises simultaneously, because the speed of production and dissemination of innovations is different for the differentiator of the classes of firms. The dynamics of stimulation, production, distribution, as a rule, has the architecture of three levels: followers – outsiders – leaders. Algorithmically, the speed of the first, second and third levels of enrichment of the growth economy by innovations nonlinear (that is, unevenly both in time and in space) depends on the already established level of competitiveness, efficiency of innovations, and the activity of business practices. Conversely, the competitiveness and effectiveness of each class of firms depends on the temporality of enriching the national system with innovations and enriching the system of innovation as a whole.

The uncertainty of the innovation factor of economic growth creates risks. It is the risks that are the basis for the business implementation of new opportunities for the formation, reproduction and

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consumption of temporal added value terms. First-class firms have a reserve capital share of risk coverage, which is replenished primarily by outsiders. To use new opportunities for firms of catching-up economies, it is necessary to design an adequate model of business practice and practice based on the formation of conditions for the creation of innovative grounds for the creation of added value on a national scale. It should taken into account that the transfer of the grounds for the production of added value occurs when establishing the status-programmable conditions for the self-reproduction of balances of asymmetry-symmetry of market information. Due to the long-term asymmetry of market information and the slow "diffusion" of innovations in "catching-up economies", technologically advanced countries most often pricelessly "assign" for reasons to produce added value created by catching-up countries.

This is possible due to the policy of forming asymmetric market information when selling and buying components and intermediate semi-finished products. The lack of symmetry appears to be supposedly "natural" due to such a hierarchical "in price" inductively dependent between the four levels of the system-process of commercialization of innovative solutions and technologies:

- 1) the grounds for the production of added value of traditional-repetitive reproduction;
- 2) the grounds for the creation an extended traditional reproduction;
- 3) the grounds for the innovative type of production of added value;
- 4) the grounds for the temporal production of heuristic innovative extra-added value.

Catching-up economies can bridge the gap and asymmetry of market information on innovative growth factors of economic growth only by forming their own cluster of commercialization of innovative solutions and technologies.

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