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ІНТЕНСИФІКАЦІЯ ПРОЦЕСІВ СТАНОВЛЕННЯ НОВОЇ ЕКОНОМІКИ

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INTENSIFICATION OF THE PROCESSES OF ESTABLISHING A NEW ECONOMY

Анотація. Світ стрімко змінюється, переживаючи тектонічні трансформації. Змінюється як світова економіка, перетворюючись в реальну геоекономіку — єдину планетарну економічну систему, так і національні економіки, яким необхідно переглядати стратегії свого розвитку в мінливому середовищі. що в нинішніх умовах відбувається оновлення способу виробництва, що означає перехід від індустріальної стадії до постіндустріальної. **Актуальність теми даної статті** обумовлена тим, що на початку XXI століття глобальна економіка стає не просто постіндустріальною, в якій центр уваги переноситься на науку і освіту, а саме «постіндустріалізм» пронизує всю національну економіку, вимагаючи її переходу до інноваційного розвитку. Все це свідчить про те, що слід формувати новий світогляд, нову парадигму економічного розвитку, бо формується планетарна система, яка буде працювати за зовсім новим економічним законам. У свою чергу чинники переходу до постіндустріального та посткапіталістичного розвитку обумовлюють і зміну організаційних моделей розвитку, організаційно-технологічної взаємодії між економічними суб'єктами — акторами економіки. Вже на початку XXI століття в технологічно розвинених країнах, та й не тільки в них, відбувається перехід до нової координації діяльності економічних суб'єктів: від ринково-ієрархічної координації — до кластерно-мережевої, від вертикальної організаційної форми — до «плоскої» горизонтальної. В умовах формування неоекономіки головною **проблемою**, яка розкрита в цій статті є визначення головних характеристик, які є базою формування нової економічної парадигми. Треба зазначити, що не дивлячись на величезні дослідження розвитку

інноваційної економіки, інформаційної, знаневої тощо **недослідженими залишаються питання** визначення шляхів інтенсифікації процесів становлення нової економіки. Головним **завданням даної статті** є визначення шляхів інтенсифікації процесів становлення нової економіки та ключових факторів, які її формують. В статті наведена порівняльна характеристика трудової, натуральної, капітальної та нової економіки, проаналізовані такі форми інтенсифікації процесів становлення економіки як спільне творчість в сучасних ТНК, інноваційні інкубатори, творчі групи, науково-технічні конференції та інноваційні конкурси тощо. У статті зроблено **висновки** щодо шляхів і напрямків розвитку нової економіки.

Ключові слова: нова економіка, трансформація, процеси інтенсифікації, інновації, неоекономіка

Abstract. The world is changing rapidly, undergoing tectonic transformations. As the world economy changes, it becomes a real geo-economy — a single planetary economic system and national economies that need to rethink their development strategies in a changing environment. that under the current conditions there is an update of the production method, which means the transition from the industrial stage to the post-industrial one. **The urgency of the research** is due to the fact that, at the beginning of the 21st century, the global economy becomes not just post-industrial, in which the focus is shifted to science and education, namely, «post-industrialism» permeates the entire national economy, requiring its transition to innovative development. All this indicates that a new outlook, a new paradigm of economic development should be formed, because a planetary system will be formed that will operate under entirely new economic laws. In turn, the factors of the transition to post-industrial and post-capitalist development lead to a change in organizational models of development, organizational and technological interaction between economic actors — actors of the economy. Already in the beginning of the XXI century, in technologically developed countries, and not only in them, there is a transition to a new coordination of economic agents: from market-hierarchical coordination — to cluster-network, from vertical organizational form — to a «flat» horizontal. In the context of the formation of neo-economy, the main **target setting** that is revealed in this article is the definition of the main characteristics that underlie the formation of the new economic paradigm. It should be noted that despite the huge research on the development of innovative economy, information, knowledge, etc., **uninvestigated parts of general matters defining to** determine the ways of intensifying the processes of formation of a new economy. The main objective of this article is to identify ways to intensify the process of emerging new economy and the key factors that shape it. The **article's main statement of basic materials** describes the comparative characteristics of the labor, natural, capital and new economy, analyzes such forms of intensification of the processes of economic formation as joint creativity in modern TNCs, innovative incubators, creative groups, scientific and technical conferences and innovation competitions, etc. The article draws **conclusions** on ways and directions of development of the new economy.

Keywords: new economy, transformation, intensification processes, innovations, neo-economy

JEL Codes: D83, J24, O30.

Raising of the problem. The most important global trend in the formation of modern society is the transition from a raw material and industrial economy to the so-called new economy, based on intellectual resources, knowledge-intensive and information technologies. At present, the high-tech sectors of the new economy play a decisive role in the economic development of not only advanced countries, as evidenced by the growth in annual turnover in the world market of high technologies

and high-tech products, which is several times higher than the turnover of the raw materials market. In this regard, the search for ways to ensure the development of a new economy is becoming increasingly relevant.

Analyses of publications. The scientific analysis of the creation, dissemination and implementation of new economy have been studied in works by D. Andrussen, N. Bonis, S. M. Klimov, R. Coase, B. Lev, B. B. Leontiev, LI Lukicheva, BZ Miller, IV Pronina, T. Stewart, R. Thyssen and others. The problems of the analyses of the role of innovation, creativity and technologies were considered in the works of E. Broking, L.G. Glushko, V.Yu. Zubko, R. Kaplan, AN Kozireva, D. Norton, A. Pulik, M. Meloin, L.V. Postanagov, K. Sweeby, K. Taylor, L. Edwinston and others. However, many scientific issues remain unresolved regarding the identification of the main elements of the development of the new economy and the ways of its identification.

The aim of the article. The goal of the article is to analyze the development of new economy and to come up with the main ways of the intensification of the processes of its formation.

The methodological basis of the article is the methods and forms of scientific knowledge adopted in domestic science, such as system approaches, comparative and synthesis methods, methods of abstract logical evaluation, methods of detailing, groupings and generalizations, experts evaluations.

Raising of the problems that were not solved before. Replaced by the economic models formed in the XX century (mass production of the same type of products, satisfaction of mass demand) new conditions are coming. First of all, it is the orientation to individual demand through the artificial production of products that are configured to meet the requirements of a particular consumer. In this case, the manufacturer of the final product is increasingly acting as an integrator whose main task is not only to develop the architecture of the new product, but also to create a network of partners who have the best competencies for the production of subsystems of the future product. In the new economic environment, the only relevant resource is knowledge — knowledge of consumer needs and knowledge of how to build an effective partnership network, knowledge of the latest scientific achievements and knowledge of how to implement them in products and technologies. Companies that rely on traditional factors of production — financial capital, cheap labor and natural resources — are being pushed to the economic periphery. Therefore, for nowadays it is very important to understand the main ways where actually new economy is developing.

Presenting main materials. The term «new economy» or «neo-economy» has been actively used since the mid-1990s. The first attempts to explain the phenomenon of the new economy appeared in 1976 in the works of an employee of the American Stanford Center Mark Porat and M. Rubin. In this work, a large and intensively growing information economy sector was highlighted and a system of basic concepts and basis of methodology for studying the impact of the information sector on the rest of the economy was developed. In the future, the processes of informatization of the economy and the formation of a new type of economy were considered in the works of RI. Tsveleva, I.A. Lazareva, IS Melyukhin and several other authors.

There are four approaches to defining the concept of «new economy». According to the first approach, the «new economy» means a complex of scientific industries involved in the production and maintenance of information and communication equipment, the

creation and distribution of software products, the development of communication networks, as well as the system of formation, storage, dissemination and receipt of information. Internet. According to this approach, the «new economy» refers to all business activities using modern electronic information and communication technologies.

The second approach involves the concept of a «new economy» of organizational and institutional innovations in the activities of different (traditional) industries of developed countries. This definition of a «new economy» appeared in the concepts of the Council of Economic Advisers under the President of the United States. According to its American economy, the last decade of the twentieth century is generally characterized as a «new economy» due to the extraordinary nature of its indicators, which was the result of the combined effect of the interaction of technology, business practices and economic policy.

The financial structure of the «new economy» has been taken into account. This approach defines the «new economy» as one of the versions of the international financial economy, a financial model of economy that is symbolically broad [1, p. 11—16].

Within these approaches, important elements of a new economic reality created by information technology at both the sectoral and national levels are within the field of view of researchers. However, these interpretations of the «new economy» do not sufficiently reveal the dynamics of the current stage of social progress.

The fourth approach considers the «new economy» as a set of industries characterized by a greater proportion of human capital than material elements. In these fields, technological realization of knowledge plays a crucial role, and knowledge production is a source of economic growth. In this interpretation, «new economy» includes the sphere of education, information and communication markets, production of innovations, provision of intellectual services (consulting, information mediation, analytics, marketing).

The term «new economy» appeared in the early 1980s, but then it was used to describe an economy that relies more on the sphere of production of services than on the sphere of production of goods.

This term is interpreted today as a synonym for the post-industrial stage of development, in which the traditional sector of the economy is organically intertwined with new elements, giving the whole system a fundamentally different quality.

If we understand by the new economy the post-industrial stage of development of human civilization, it becomes clear its historical place (place in history — after the industrial economy). According to Olvin and Heidi Toffler, new phenomena that have arisen in the global economy are «a new civilization in which» neo-economics «is only one of the components»

Collaborative creativity in modern TNCs. The appeal of social psychology to the problems of collaborative creativity in 1990—2000 was dictated, first of all, by the growing need for new methods of improving the efficiency of innovative groups in contemporary organizations. Today, individual creativity has given way to collective forms of generating and implementing new ideas. Previously, companies focused on financial and moral incentives for disparate inventors, but today innovation is built on the basis of bringing together innovators into communities, creative groups and innovation platforms, and is stimulated primarily through the creation of a creative environment. Next, we will demonstrate this through a number of examples, showing how modern companies organize and stimulate the collaborative creativity of their employees.

Table 1

THE CHARACTERISTICS OF LABOR, NATURAL, CAPITAL AND NEW ECONOMIES

Characteristics	Labor economy	Traditional economy	Capital economy	New economy
Factor-driver	Labor	Land	Capital	Information and knowledge
The beginning of formation	The smart person	Neolithical revolution	Production revolution	Technological or information revolution
Main sector of economy	Uncertain due to lack of exchange	Promaraly	secondary	Third, fourth
Appropriate way of production	Appropriation	Output	Production	Processing
Technology	Based on labor force	Based on labor force	Machine technologies	Intellectual technologies
Means of production	primitive means of labor	Handicrafts, mechanical equipment	Machines, equipment	High-tech equipment
Key work resources	Hunters, gatherers	Artisans, peasants, unskilled workers	Engineers, mid-level workers	Scientists, highly skilled workers
Methods of analyses of economic processes	Analyses	Methods of tries and mistakes	Emperism, experiments	Abstract theories, models, stimulation, decision theory, system analysis
Просторово-тимчасові характеристики виробництва, розподілу і споживання благ	Production, distribution and consumption occur almost simultaneously among a small number of individuals in the area of limited habitat, they have a geographical and temporal inseparability	The production, distribution and consumption of goods can be time-bound and territorially divided	The possibility of territorial and temporal division of production, distribution of production, and consumption has increased	The geographical distribution of production, distribution and consumption has become global and rapid in nature, and temporary distribution has gained potential and considerable variability.
Key labor resources	Physical ability of the person	Nature's energy: wind, water, animals	Produced energy: coal, oil, gas, nuclear power	Computer systems (+ technologies of the future)
Main principle	Survival	Traditionalism	Economic growing	Growing the income of the nation
Advanced organizational structures	Tribe, race, community	City, village, principality, etc.	Country	Upnational education
Main ways of communication	Language	Letter	Print	Internet

Source: created by author based on [2, p. 21—26]

Innovator community. One of the most common forms of bringing together innovators within companies is to create professional communities. Several companies have organized innovative societies, such as the Victor Mills Society at Procter & Gamble, the IBM Fellows program at IBM, the Carlton Society at 3M, and the PPG Collegium at PPG Industries. Throughout IBM's history, only 209 employees have been awarded the prestigious IBM Honorable Mention until 2018, of which 70 are still in the company. Each year, no less than 5—7 employees receive this title for their outstanding contribution to the company's innovative development. Procter & Gamble has created a similar Victor Mills Society, consisting of several dozen prominent developers. Hitachi has been serving as the Hitachi Honorary Employee since 1999, awarded by the Board of Directors for outstanding contribution to the company's innovative development and giving the owner the freedom to choose research topics, receive financing for development and outside business .

Rewarding innovative teams. Innovations are increasingly awarded not individual but collective awards. For example, the pharmaceutical company GlaxoSmithKline has established a Green Technology Award, which is awarded to project teams or units for innovation that promotes the environment and allows the company to use human, natural and economic resources more economically. At the end of each year, the board of directors selects the winning team from the list of nominees. In this case, each team receives a special prize and the right to sponsor assistance at the expense of the company of any non-profit organization at its own discretion. Reasons for the award may be the strategic impact of innovation or financial performance. For example, in 3M, the Golden Step Award is awarded to those teams whose innovative developments have brought companies more than \$ 2 million in the United States or more than \$ 4 million in the global market. All members of the team are awarded the prize in the form of a winged foot, many of them receive a pay raise and move up the career ladder. [3, p. 30—33]

Temporary creative groups. Temporary creative groups are created in companies to develop new products and services, and after the completion of the development phase, the group members return to their main work. For example, in the early 2000s, Philips created up to 150 temporary teams working each year to improve the product and production methods, which after 5 days of brainstorming began to translate their ideas as usual. At NUMMI, a subsidiary of Toyota, a cross-functional design team is organized to design the model production of new cars, whose participants, after completion of the development, return to the workshop to their main work. In companies such as Motorola, Mayo Clinic, Fisher-Price and Procter & Gamble, cross-functional teams are formed to develop new products that work separately from the main office and are called «innovation labs». Procter & Gamble regularly hosts Innovation Reviews to share experiences and find new solutions. Such meetings are the responsibility of specially trained professionals, the so-called «innovation coaches». When developing new products, Toyota also uses special regular cross-functional meetings, when every month for two years, employees of different units — design, engineering, production, logistics and marketing — gather in one large room. [4, p. 54—49]

Venture teams. In a number of companies, employees are given the opportunity to devote themselves to the implementation of a new idea, gaining freedom and becoming venture entrepreneurs. At IBM, if an employee idea has not been approved

by management, it has the right to offer it anywhere in the company: to other business units, R&D units, or venture capital firms. The idea can be funded by those units that found it valuable. An employee with a promising idea can call team members across the company. These commands are called «action commands». If the idea is successful, this team can start their own venture company. IBM has created a \$ 100 million fund to support the innovative ideas offered by its employees. Lockheed Martin Corporation has a long-standing program that allows employees to take a two-year unpaid vacation and venture into entrepreneurship by forming their own Entrepreneurial Leave of Absence Program. At the end of this period, the employee returns to work or can leave permanently, paying the company health insurance costs. If the employee idea is successful, Corporate Venture Fund Innovative Ventures Corp. invests in its initial development up to 250 thousand dollars in exchange for 10 % of share capital. The patent is owned by Lockheed Martin Corporation. At the same time, the venture company pays the license fee — from 5 to 20 thousand dollars, depending on the scale of the potential market for the product being developed — and also transfers from 1 to 5 % of the profit share for the use of the patent. [5, p. 29—44]

The small size of the venture team allows it to act creatively, without regulations and long-lasting decisions. That is why venture capital teams use giants such as Exxon and British Petroleum to develop ideas. [6, p. 132—140]

Innovative incubators. Philips has three incubators to build venture teams and enterprises based on ideas not found in existing divisions. Venture enterprises are directly subordinate to the top management of the company. It is this flow of new ideas that has provided Philips with a 56 % increase in 2016. At the same time, 70 % of ideas come from company employees. Venturers' executives and employees carry risks, but if successful, take part in equity and earnings. Similar incubators have been created by companies such as Boeing, Adobe Systems, UPS, Ball Aerospace and others. They have different names, such as «innovation group» or «green house», but they have the same function: to provide funding for a business plan offered by an employee and to provide him with consulting support, premises and equipment. Nokia has set up a Nokia Ventures Organizations (NVO) development center for the purpose of finding, developing and testing employees' ideas. The center has a creative atmosphere that supports the exchange of ideas and experimentation. If the project is successful, it is implemented in one of Nokia's divisions — already in accordance with «bureaucratic» corporate regulations and procedures [55]. Such innovative units support not only the ideas of their employees, but also those projects whose idea was born outside the company. For example, Kodak has set up its Open Innovation Center, Kodak European Research (KER), in Cambridge, with an innovative ecosystem. To find ideas and launch projects, the KER team uses an external business network from venture capital firms, research centers and universities. [7, p. 216—245]

Scientific-technical conferences and innovative competitions. Another innovation tool is innovation conferences. For example, corporate scientific and practical conferences are held at OJSC TNK-BP Holding to support young specialists with leadership potential and technical talents. In 2015, 86 young professionals from more than 20 divisions of the company, which were selected from 450 applicants who participated in regional conferences in the previous stages, attended this conference

(the sixth in a row). Within the framework of the conference, knowledge and best practices are exchanged, winners are identified on several criteria, including in the category «Best Innovation Project». Cisco announces an I-Prize Ideas Contest in 2017 — a \$ 250,000 prize for proposing a new business direction in which Cisco is ready to invest \$ 1 billion. As a result, the company receives 1200 unique ideas from 2500 contest participants. Of these, the idea, most relevant to the company's strategy and competencies, was chosen — a project of a sensor-based automatic energy-saving system.

Nokia has introduced a range of innovative behaviors into its individual performance appraisal system: 1) analytical thinking, 2) creativity, 3) initiative, 4) openness to new ideas, 5) use of knowledge, 6) customer focus, 7) risk management. 3M has also included such behavioral indicators of innovative behavior in the leadership competency model as: creates and maintains an atmosphere, facilitates experimentation; rewards willingness to take risks; encourages the curiosity of subordinates; calls into question the existing order because of its openness to the new and its lack of bias; influences the future in the interests of 3M. At Skandia Insurance, the HR department conducts a regular staff survey to assess how they believe the work organization and leadership style in their unit contributes to innovation. Top management relies on the results of this survey to evaluate and plan for the development of mid-level executives. At the same time, we can state the general tendency for modern companies — to focus not on material stimulation of innovation, but on building systems of interaction and internal communications that increase the creativity of employees and their interest in implementing their decisions. For example, in comparison with 3M and IBM, in companies like Toyota and General Electric, there is no system of financial incentives for innovation — the focus here is on team forms of work organization and horizontal communications, facilitating exchanges and innovative ideas and best practices. The examples we have shown above show that creativity and innovation in modern organizations are realized through various forms of joint activity. At the same time decisive importance is not individually-psychological, but socio-psychological factors of creativity [8, p. 298—316].

Conclusion. At the present stage, the growing inefficiency of the current economic model, its inadequacy to the global challenges facing our country, requires the development of a new paradigm of development. First of all, it is an economy with a developed complex of science-intensive industries and information electronic communication networks, characterized by a more significant proportion of intellectual capital than material elements. A distinctive feature of the innovation economy is the increased attention to knowledge as a direct productive force and a major productive resource. Knowledge production is a source of economic growth and includes the fields of science, education, production of innovations, provision of intellectual services. Due to its specificity, the knowledge economy has a developed system of flexible horizontal links and, accordingly, a developed institute of contractual contractual agreements. However, the existing institutes of innovation development in our country do not take full advantage of the potential of horizontal connections and interactions, and management systems tend to be rigid and hierarchical in nature and do not meet the goals of innovative development.

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