

**Fedulova Liubov**

Doctor of Economics, Professor, Department of Management,  
Kyiv National University of Trade and Economics, Ukraine,  
19 Kioto Str., Kyiv, 02156, Ukraine  
[fedulova2010@gmail.com](mailto:fedulova2010@gmail.com)

**Mykolaychuk Iryna**

PhD in Economics, Associate Professor, Management Department,  
Kyiv National University of Trade and Economics, Ukraine,  
19 Kioto Str., Kyiv, 02156, Ukraine  
[mykirina@ukr.net](mailto:mykirina@ukr.net)

**INFLUENCE OF NEOINDUSTRIALIZATION ON SOCIO-ECONOMIC DEVELOPMENT OF THE COUNTRY**

**Abstract:** In the article the essence and substantiated the preconditions for the implementation of neo-industrialization (re-industrialization) on the basis of the achievements of scientific and technological progress and the new technological structure in the world economic system. An analysis of US and European practice has shown that it is not just about the revival of production in its territory, but about a new concept of industrial development called Industrial Revolution 4.0, the main technological drivers of which are digital and additive technologies, as well as robotics, which penetrate traditional industries and radically change their nature. The state and problems of technological development of industry in Ukraine are revealed, the reasons, causing the process of deindustrialization, are substantiated. Proposals on the directions of realization of neo-industrialization policy are developed and it is proved that stimulation of structural changes in industry requires putting on the agenda economic reforms on the implementation of neo-industrialization policies in Ukraine. Its main principles in the modern sense should be an increase of the competitiveness of the national economy based on developing new and transforming traditional industries using the potential of high technologies according to “Industry 4.0.”

**Keywords:** industry, neo-industrialization, Industrial Revolution 4.0, technological development.

**JEL Classification:** F63, I16, O14.

The high pace of transformational changes in the technological sphere of the modern world economy, accelerated by geopolitical confrontation, requires the implementation of conceptual research and development in the field of managing socio-economic processes at different levels of the economy. At the same time, some researchers emphasize the need to recognize the crisis of the post-industrial model and the virtual economy and the transi-

tion to a new paradigm of development oriented to the real sector of the economy - the formation of a new industry based on the achievements of scientific and technological progress and the new technological system. This approach was called reindustrialization, new industrialization, neo-industrialization.

There is also another approach that is increasingly activated in contemporary discourse on models of economic development, and emphasizes that today the world community has taken the course of creating a new format of development - a creative economy, in which, first of all, the development of the entire socio-economic system on an intellectual basis, that is, on the foreground is the potential of the individual. This potential, in turn, is conditioned by the level of accessibility and quality of education, health care, information and communications, the achievements of economics, science and, especially, the strengthening of the role of culture.

Summarizing the research, it should be noted that in the literature neo-industrialization is considered as the second phase of the process of industrialization, which is associated with the use of information technology for the implementation of automation and fundamental change in the technological method of production [1]. Taking into account the evolutionary approach, we support the point of view that a post-industrial society can act only as a historical level of development, following neo-industrialization. This necessity is conditioned by the fact that neo-industrialization is aimed at providing a technological basis for post-industrialization. So, neo-industrialization should be considered as a process that has a certain purpose, methods, sources and socio-economic consequences that require a thorough research.

As it is fairly noted, the internal connection of neo-industrialization with the concepts of the post-industrial economy manifests itself, first of all, in the part of the priority development of such qualitative organizational and technological and socio-economic features as large-scale informatization, intellectualization of production, flexible forms and socio-humanistic principles of organizing economic activity in accordance with requirements of progressive tendencies in social life [2]. In this context, from the economic point of view, "neo-industrialization" is a phenomenon that fosters the new development of productive forces on the basis of high-tech and scientific manufacturing processes, for which a new institutional environment is underpinned [3].

However, neo-industrialization of the economy is not only significant changes in its technological and sector structure (the development of the latest high-tech industries, the integration of science and production), but above all the implementation of a systemic state policy for regulating the entire reproduction mechanism on an innovative basis, with the relevant economic relations in investment, capital accumulation, production and dis-

tribution of finished products. Such neo-industrial structural transformations must obligatory concern the social basis of qualitative changes, the spatial location of productive forces, and the technological basis of the economy.

The purpose of the article is to formulate a conceptual vision of the model of neo-industrialization, taking into account both its key qualitative features and tasks, as well as peculiarities of the state and prospects of development in the Ukrainian economic system and society as a whole.

In the twenty-first century, the challenges of global industry development are caused by the growing pace of creating new technologies that increase labor productivity and reduce production costs; growth in industry costs of product development; customization of production (adaptation of the mass product to the needs of a particular consumer); intellectualization and robotics of production; increasing tendencies of time reduction for introducing new products based on the concept of open innovations.

An example of initiatives to implement re-industrialization is the United States, where, in order to find a way out the global financial and economic crisis, the realization of the energy strategy was announced in terms of increasing availability and cheapening of energy resources - first of all for industry; the stimulation of the so-called "onshoring" ("reshoring"), that is, returning home the enterprises of the processing industry, that is caused by a number of reasons: among which one of the main is an access to skilled personnel. Many emerging markets today do not offer the cheap labor, which was their main advantage several decades ago. For example, in China, which has focused on the development of the domestic consumer market instead of the former export-oriented model, salaries have being risen rapidly, an average of 10-11% since 2013.

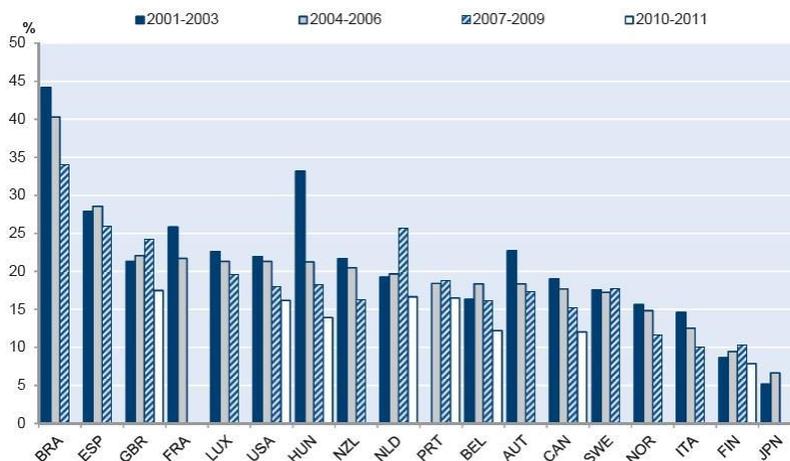
Among other arguments in favor of reindustrialization in the United States are as follows: the processing industry generates the effects of the spread of new knowledge - the so-called union-overs effect on the rest of the economy. New knowledge and technology, managerial innovations used in manufacturing new products, inevitably extend to other businesses. Conversely, reducing the market share in knowledge-based industries has a negative effect on the entire economy (degradation of the entire innovation ecosystem occurs, which complicates the development of new enterprises and the generation of new technologies). It is completely logical that in a situation when production goes abroad, then innovations usually follow there, weakening the international competitiveness of the country.

With regard to European countries, they also care of the conquest of European leadership, and give the industry a key role. Unlike the US, reindustrialization in Europe focuses on activating small innovative business and its own high-tech production.

Noteworthy, the OECD's The Future of Productivity [4] is devoted to fundamental changes related to the concept of productivity in a globalized

world, as well as the search for effective policy tools that stimulate its growth. Urgency of research in this direction is caused by a decline of productivity that had occurred in the OECD countries before the economic crisis, as well as the slowdown in the accumulation of science-intensive capital and lower rates of development of start-ups (Fig. 1).

OECD analysts, studying this trend [5], noted the regional rebalancing of some global cost-creating chains, which will allow making the production process more distributive and sustainable. It is expected that production will be concentrated closer to consumers in both developed and developing countries. Changes in cost structure, demand and technology factors force production to be based in certain regions. For some products, low labor costs and long chains of value creation will remain an important competitive advantage, but the production of other goods and services is increasingly concentrated at the regional level.



**Figure 1.** The share of start-ups in the total number of firms  
Source: The Future of Productivity. - OECD Publishing, 2015

Today, an important aspect of given process is that the concept of re-industrialization proceeds from the level of innovation already achieved and provides for the return of high-tech industries to the national soil and the formation of the internal potential of industrial development through the operation of transnational business. Therefore, in this context it is expedient to speak of neo-industrialization as a consequence of the transition to a new technological system, the activation and introduction of product, technological and managerial innovations.

At the same time, from the analysis of the practice of the USA and European countries within the framework of re-industrialization, it is not just about the revival of production in its territory, but about the new concept of industrial development called "Industrial Revolution 4.0", the main technological drivers of which are digital and additive technologies, as well as ro-

botics, which penetrate traditional industries and radically change their nature [6]. From the standpoint of technological development, there is not only one technology but a package of production technologies, launched on full digitalization of all stages of the life cycle and all stages of redistribution, which are based on Internet of Things, LOT, Big Data and Cyber-Physical Systems, CPSs. The synergy of all three given components is capable of providing decentralized autonomous resource-saving production in the cycle of “physical-to-digital-to-physical cycle” with widespread use of robotics, additive technologies, artificial intelligence and cognitive technologies, promising materials, complemented reality, etc. It will allow adapting to fast-changing customer requirements in close to real time and ensuring a sufficient profitability of production at minimum order volumes.

Already today, the modern era of fast innovation-technological development is taking place, when advanced technologies radically change the whole branches of economy at a rapid pace (cloud technologies, the development of methods for collecting and analyzing Big Data, crowdsourcing, biotechnology, unmanned cars, medicine based on 3D printing, cryptocurrency Bitcoin and Blockchain technology, etc.).

An entirely new type of industrial production, based on so-called large data and their analysis, complete automation of production, technologies of complemented reality, Internet of Things is appearing. So, according to the McKinsey Global Institute, today 1.7 trillion US dollars of the world GDP is related to Internet technologies, there is 1 trillion devices that can be connected to the industrial Internet (M2M). In 2025, the impact of M2M technologies on the world economy will be on the average 6 trillion dollars USA. The formation of a new environment under the influence of Industrial Revolution 4.0 will be manifested at three interconnected levels: at the macroeconomic level, in the form of regionalization and localization of cooperative ties (business clusters); at the microeconomic level - in the form of concentration of efforts on the effect of scale, save production, management of the life cycle of products and its customization (adaptation to the individual needs of the consumer); at the technological level - in the form of automation and robotic production, the use of promising materials, and so on.

Due to the widening gap between global leaders and other firms, the following questions arise: can national leaders take their experience and technology to reach a new level; if the transfer of technology from national leaders to backward firms is effective: and whether the know-how knowledge and uncoded information is a competitive advantage for global leaders? The nature of the answers to these questions is important not only for individual companies, but also for countries that are at the stage of so-called overtaking development, which include Ukraine.

For all the years of independence in Ukraine there were many initiatives, both in the institutional and organizational economic terms, regarding the

formation of effective mechanisms for the intensification of scientific and technological and innovation activities in industry. However, the state authorities have not achieved significant successes in creating an innovative climate in the country: measures for supporting innovation activity are local in nature and do not allow reversing the negative trends of the loss of scientific and technological capacity in industry.

The impact of Ukraine's industrial sector on the national economy has been steadily decreasing over the last decade. Thus, the share of industry in GDP reduced from 27% in 2006 to 20% in 2014. Such a decline of industrial production, especially in the eastern regions, had a direct negative impact on the employment market, which resulted in the release of large labor resources that filled the ranks of the unemployed. In addition to the direct dismissal of hired workers, the reducing number of working days, part-time employment, the practice to give people non-payment urgent or perpetual leaves, which is an example of hidden unemployment, is widely used. The military conflict in Donbas directly caused a further increase of unemployment, which have been observed in the region in recent years and was then related to the decline in industrial production, in almost all sectors.

After the drop of volumes of industrial production in Ukraine for 2012-2015, according to the results of 2016, the industry recorded an increase of 2.8%. However, the positive dynamics proved to be unstable, and in January-July 2017 the production of industrial products declined by 0.7%.

In general, scientific and technological and innovative development in Ukraine remains extremely uneven: on the one hand, there are advances in some spheres due to scientific developments and corresponding breakthrough technologies, and on the other hand, problem areas of technological lag prevail, which deepens the process of destructive changes, especially in the national industry. The noted state is regularly recorded both by domestic statistical surveys and by global ratings of competitiveness.

Thus, according to official statistics, in 2015, 17.3% of the total number of industrial enterprises in Ukraine with an average number of employees of 50 persons or more was engaged in innovation activity. The enterprises spent 13.8 billions UAH on innovation including for the purchase of machinery, equipment and software - 80.7% of the total amount of innovation costs, on internal and external - 14.8%, for the acquisition of other external knowledge (acquisition of new technologies) - 0.6%.

In 2015, innovation was implemented by 87.7% of enterprises engaged in innovation activities, of which innovative types of products - 57.3%, new technological processes - 55.3%.

According to the official statistics of Ukraine, the highest level of innovation activity in industry was observed at enterprises of the processing industry (19.5% of enterprises versus 16.1% in industry as a whole).

At the same time about 48% of enterprises introduced technological innovations, and the fourth - non-technological ones.

According to statistical data at industrial enterprises by 2015, 13280.1 million dollars (30.6%) of direct investments had been attracted, in the processing industry- \$11331.7 million. - 85.3% [7].

At the same time, almost 90% of enterprises annually do not innovate, that is, they exist on old technologies and developed products.

Some activation of this process took place in 2015-2016, which was stipulated, in the most part, by the reproduction of the defense industry of Ukraine.

The main directions of reforming the defense industrial complex are the introduction of the latest military technologies, creation of the most possible closed cycles of development and production of the most important models of weapons, special and military equipment, use of possibilities of military-technical cooperation with the states which are the strategic partners of Ukraine; providing financial rehabilitation of scientific institutions and production enterprises and their sustainable functioning through implementing a set of measures and economic mechanisms of target state support and state protectionism concerning direct purchases of products from enterprises of the defense and industrial complex to meet the priority state needs within the framework of the state defense order, and so on.

Thus, at the present stage, the defense industrial complex is crucial for the country, both in terms of maintaining national security, as well as promoting the innovative development of the economy as a whole, a notable driver of neo-industrialization.

At the same time, the most significant share of innovation financing falls on own funds of industrial enterprises (Table 1), although the financing of innovative activity from public funds increases. In particular, financing in 2016 compared to 2015 increased almost 3.5 times.

This is an important indicator that the state is beginning to support innovative activity, especially through defense orders. We can also see an increase of financing from sources such as local budgets, domestic investors, loans and others.

However, it should be noted that foreign investors funded innovation activities in 2016 2 times less than in 2015.

Consequently, traditional problems for the national economy in terms of creating a favorable investment climate remain, which jeopardizes the accomplishment of any programs on implementation of large-scale neo-industrialization.

**Table 1. Financing innovation activity of industrial enterprises in the context of sources**

	2015		2016	
	Hundreds UAH	Percents to total volume	Hundreds UAH	Percents to total volume
Total	13813674.4	100.0	23229458.1	100.0
including at the expense of funds				
own	13427034.7	97.2	22035970.7	94.9
state budget	55141.2	0.4	178965.0	0.8
local budgets	38361.9	0.3	99159.4	0.4
domestic investors	74277.6	0.6	134385.5	0.6
foreign investors	58633.0	0.4	23397.8	0.1
loans	113742.0	0.8	626018.5	2.7
other sources	45081.0	0.3	131561.2	0.5

Source: Compiled on the basis of the data of the State Statistics Service of Ukraine: <http://www.ukrstat.gov.ua/>

In a situation when there was some revival of innovation activity in industry, success has been achieved through the innovative development vector, which resulted in the improvement of Ukraine's position in the Global Competitiveness Index over the past two years under the "Innovation" subindex - compared to 2014. from 93 to 52 places. In the ranking of the Global Innovation Index 2016/2017 (The Global Innovation Index) Ukraine climbed 6 positions and ranked 50th.

Nevertheless, technological lag, dependence on imports, export orientation of raw materials and low-tech industries, tendency of influence of the world market conjuncture, low efficiency and competitiveness are typical features of Ukrainian industry at the present stage. In this regard, the relevance of researching the mechanism of realization of neo-industrial transformations in the Ukrainian economy during the process of changing its structure is growing. Ukrainian scientists tend to call this process "deindustrialization", which is associated with negative consequences such as reducing the technological level and depth of processing raw materials, equipping production systems, machine tools, equipment and devices; growth of labor dequalification (loss of skills and ability to produce, lower qualification level of staff, loss of working occupations); increase in the number of imported components, units and parts of machines in products of their own manufacture.

Unfortunately, for a long time the tendency of low reproduction of fixed capital and increase of level of depreciation of fixed assets have been persist-

ing. Although in 2014-2015 in the economy, the degree of depreciation of fixed assets decreased to 60%, but in industry it grew to 77%, and in the processing industry - up to 76%. At the same time, the main means of the domestic processing industry do not predominantly belong to the modern technological structure, as opposed to developed economies - a significant share of them relate to low and medium low-tech sectors, which deepens the technological backwardness of the industry. Consequently, with outdated fixed assets and the technological backwardness of the production base existing in the country's economy, the level of capital accumulation does not correspond to the needs for modernization, and especially neo-industrialization [8].

It is obvious that without the neo-industrial transformations, the restoration of the processing industry on a new convergent-technological basis and increasing the share of science-intensive industries instability of the macroeconomic system is growing, and the risks of economic and geopolitical security of the country are rising. An inseparable economic component of neo-industrial-oriented transformations must be the integration of technological solutions and investments in industrial production, the expansion of the national recycling complex in the world market with the subsequent change in the structure of exports. First of all, the government of the country has to promote neo-industrialization and the spread of new production technologies by supporting special technological hubs at the largest engineering universities, where the dissemination of new technologies and the training of workers with new production skills are carried out.

The new technology platform for the national industry should be based on nano, bio and information technology. Taking into account available limited financial and scientific and technical resources for accelerating the introduction of the latest production technologies, it is expedient to use the potential of active international scientific and technical cooperation and integration, intensification of high-tech imports, and the concentration of state budget funds on priority for the economy R & D areas.

Particular attention should be paid to the factor of human capital. The main feature of the system of growth factors in the national model of neo-industrialization must be the attracting human capital of high quality. The first condition for this is the rejection of the cheap factor "labor" as a determining property and a source of competitive advantages for Ukrainian industrial production. It is objectively required by the very idea of neo-industrial development as one that is based on the latest technological. Accordingly, its value increases, which should be reflected in the high level of remuneration. In addition, in Ukraine for two decades of market reorientation, the potential of cheap labor as a factor in the formation of a competitive price of products has been exhausted. The urgent task is to ensure the new quality of

workplaces and social and labor relations as the basis for a new motivation to work, professional development and improvement of living standards.

The process of neo-industrialization also actualizes the issues of implementing the imperative of ecologization of industrial manufacture and production; formation of a parity dialogue and partnership cooperation between the public, state and business sectors in the processes of strategic economic development; achieving stable competitive status in strategically determining (important) markets, increasing the influence of the innovation factor on the growth, development and competitiveness of industry (growth of the share of innovative products in the volume of realized ones, increasing the level of science-intensive of industrial production, increasing the presence of national production in the global innovation market); formation of the labor market, adequate demand "industry 4.0", first of all, among highly skilled specialists in the sphere of the latest industrial technologies.

Recent trends show that the key peculiarity of the modern world economy is that the main driver for developing industrial sector became the realization of the concept of "smart production" with the use of a large number of robotic systems, which provides utilizing the most advanced technologies of total computerization. Therefore, special attention should be paid to the development of the IT industry sector. Its role in the growth of economies not only in industrialized countries, but especially in the so-called new industrial ones (India, China, Indonesia, etc.) is well-known. The level of competitiveness of the IT industry is a powerful argument in solving the issue for foreign investors to contribute money in the country. The current state of its development in Ukraine is highly estimated in international comparisons. Therefore, it is necessary to use the intellectual capital of domestic specialists for developing the IT industry as an effective element of the progressive structure of the economy.

In Ukraine in 2016 95.2% of enterprises (as in 2015) used computers in their work, 93.5% of them (in 2015 - 93.2%) had Internet access. [9]. The highest level of computerization was shown by enterprises that carried out activities in the field of information and telecommunications - 98.3% (in 2015 - 98.2%). High level of this indicator was demonstrated by enterprises operating in the field of water supply; sewage, waste management - 98.0% (in 2015 - 98.1%). The lowest level of computerization was observed in enterprises in the area of administrative and support services - 89.1% (in 2015 - 89.2%). Of the total number of enterprises that utilized computers, 65.9% used Intranet, which is almost triple compared to 2015; 62.5% used the local computer network (in 2015 - 61.6%); every eleventh enterprise had Extranet network (in 2015 - every seventh). Of the total number of enterprises that used the Internet, 71.8% of enterprises used fixed broadband access (65.7% in 2015), each third company had narrowband access (in 2015 - 29.7%), and every fourth - broadband mobile connection (in 2015 - every third). Howev-

er, out of the total number of enterprises having access to the Internet, social networks were used by 24.7% (in 2015 - 17.9%), knowledge sharing tools - by 12.7% (in 2015 - 19.1%), a website with multimedia content - by 12.6% (in 2015 - 11.1%), corporate blogs and microblogging - by 6.9% (in 2015 - 5.2%).

In our opinion, the strategic course for overcoming the systemic problems of reproducing the industrial complex should be the advanced development of the economy of Ukraine on the basis of increasing the technological level of industry. It should also be one of the key imperatives for the implementation of economic, institutional and technological reforms in the country, which will lead the Ukrainian economy on the way to innovation, technological and information advancement.

In the conditions of the loss of the fifth part of the industrial potential, the national concept of deindustrialization based on innovations becomes of particular importance for Ukraine. This envisages an increase of the role of information and communication technologies, growth of the share of science-intensive industries in the structure of production and exports, and so on. Ukraine retains significant intellectual potential and human capital to build new high-tech production chains. We should abandon the practice of permanent "cosmetic repair" of a morally obsolete base. The high cost of introducing new technologies into the national economy should not be seen as a burden for the financial system, but as an incentive to accumulate the funds.

Ukrainian companies and developers export services in the field of intellectual-information technologies in the amount of more than \$5 billion. USA. This source needs more involvement in the domestic market. It is necessary to make more active the program and projects of sector and industrial-technological cooperation, participation in international investment projects, including the development of infrastructure networks (transport, communication, technological, etc.), which will allow to create the preconditions for updating national competitive advantages.

A significant step towards the development of industry on an innovative basis was the approval of the medium-term priority directions of innovation activity of the national level for 2017-2021; the most important vectors of high-tech development in Ukraine, in particular, in the fields of machine building, agro-industrial complex, pharmaceuticals and medical care, as well as environmental protection, resource-saving, information and nanotechnology were identified. However, the adoption of the Strategy for the Development of the Industrial Complex for the period up to 2025 (to be approved in 2015), as well as the State Program for the Development of Domestic Industrial Enterprises, should be extremely important for the industry. It can create favorable conditions for the development of the domestic market of industrial products, and import substitution in key industries. The Ministry of Economic Development has been submitting for a long time the Strategy for the

Development of High-Tech Industries up to 2025, the implementation of which should create conditions for activating innovations and introducing high technologies in the real sector of the economy.

Consequently, the stimulation of structural changes in the industry requires the inclusion in the agenda of economic reforms the issue of implementation of neo-industrialization policies in Ukraine. Its main principles in the modern sense are increasing the competitiveness of the national economy through the development of new and transformation of traditional industries using the potential of high technologies according to Industry 4.0. It should provide for the initiation and support of pilot projects on the development of integrated solutions for industry with the attraction of the potential of the Ukrainian IT sector, in particular, in the areas of "Industrial Internet of Things", whose contribution to the world economy, according to the World Bank estimates by 2030 p. will make 14 trillion dollars USA [10], that combines various digital devices and physical objects into a single, interactive network for maximum productivity, security and automation of production.

Ukrainian manufacturing enterprises have all chances to become competitive at the global and European level due to technological innovations. I4MS (ICT Innovation for Industrial SMEs) is a large-scale EU initiative (budget ~ 110 million euros) to facilitate the introduction of innovation among manufacturing enterprises. Launched in 2013, it is a network of 30+ digital innovation hubs and centers of expertise that is the platform for collaboration among the various players in the innovative ecosystem: innovation developers, manufacturing enterprises and research centers. The specificity of the program is targeting small and medium companies. Innovative hubs provide producing enterprises with an access to high-tech businesses, including Internet things (IoT), high-end computing, laser technology and robotics, and to attracting grants. Developers of technological solutions get an opportunity to quickly and easily commercialize new products.

At the accelerated pace, the introduction of Cloud Technologies in the industry, which replace server technologies and allows to significantly reduce the transaction and operating costs of enterprises due to creation of joined databases and web services for storing and processing information and providing access to it for industrial enterprises, increasing the level of cooperation and inter-organizational interaction in the production process.

In general, the factors of economic dynamics according to the neo-industrial model should be: in the production-reproductive aspect - competitive technological and product innovations; R & D (in the economy as a whole and in industry in particular); human and social capital; in the macro-economic aspect - dynamic and structurally balanced domestic demand (with the dominant final consumption of products of the investment and consumer groups); export (external demand) in economically efficient volumes and structure; in the international aspect - scientific and production cooperation,

especially in the field of R & D and high-tech manufacturing; integration into modern production and economic structures.

The processes of neo-industrialization cause essential changes in the social sphere (new quality of engineering education, ecological standards). In the context of spatial development, the regional aspect of neo-industrialization manifests itself in the activation of public-private partnership at the local level, in the development of interregional supply chains and the creation of value, clusters, and other network-type links; formation of effective information space of business entities. Among the possible social consequences associated with the widespread use of new technology of industrial production there are the following: 1) the ability to print products directly at home or in the next office will change the very culture of ownership and deprive the need for accumulation of things; 2) it will be precious not possession of a thing, but its information model; 3) owning digital information will allow to reproduce the product at any time again and again. - after all, a technological environment that will act like a natural biosphere - the obsolete facility will be immediately redesigned, taking into account new requirements- is formed. In this case, it will be more important not the quantity of products that determine the modern understanding of the way of life, but the number of such updates.

The risk of inefficient deindustrialization in Ukraine is conditioned by underestimating the leading role of technology and the technological homogeneity of the inter-sector structure of production, which led to a decrease of the competitiveness of Ukrainian industries. Keeping such a trend will only aggravate the country's backwardness, manifesting itself in "digital inequality." Therefore, state program documents should include proposals on directions of implementing the country's industrial and innovative policies in terms of enhancing social inclusion, in particular, the need to consider inclusive business models as an element of a common business strategy aimed at involving vulnerable strata of society in business activities in various sectors of industry. In the context of the aforementioned, the policy in the field of innovation and industry is recognized as a fundamental factor in the development of innovation in the direction of greater inclusiveness. In recent years, not only in scientific circles but also in the international expert environment, the question is about a qualitative revival of industrial policy, and an increasing role of the state in this area. In particular, the United Nations Summit on Sustainable Development, held on September 25-27, 2015 in New York, the Agenda of Development for the period after 2015 was adopted, in which one of the goals of sustainable development - No. 9 calls for "Create a flexible infrastructure, promote inclusive and sustainable industrialization and encourage innovation," noting that without technological progress and innovation, the process of industrialization is impossible, and without industrial production, in its turn, development is impossible.

In the future, it is necessary to assess the impact that technological and structural changes can have on the country's economy, how they will be reflected in employment, property inequalities, etc.

### **Bibliography**

MARSH, P., 2012. *Financial Times Levelling out: emerging markets and the New Industrial Revolution*. Retrieved from <http://blogs.ft.com/beyond-brics/2012/08/27/levelling-out-emerging-markets-and-the-new-industrial-revolution/#axzz24j1FDDdD>

OECD, 2015. *The Future of Productivity*. Retrieved from [http://www.oecd-ilibrary.org/economics/the-future-of-productivity\\_9789264248533-en](http://www.oecd-ilibrary.org/economics/the-future-of-productivity_9789264248533-en)

OECD, 2016. *Reshoring: Myth or Reality?* Retrieved from <http://www.oecd-ilibrary.org/content/workingpaper/5jm56frbm38s-en>

PRUSHKIVSKA, E. V., 2013. Neoliberalization as a process of the secondary economic sector rejuvenating in the period of economic instability. In: *Theoretical and practical aspects of economy*, 28(1), pp. 191-197.

SHOVKUN, I. A., 2016. Neoliberalization in Ukraine: are there macroeconomic prerequisites and investment potential? *Economy and Forecasting*, 4, pp. 48-69 (in Ukr.).

SHWAB, K., 2016. *The fourth industrial revolution*. Switzerland: The World Economic Forum.

STATE STATISTICS SERVICE OF UKRAINE (2017). *Scientific and innovative activity in Ukraine for 2016*. Retrieved from <http://www.ukrstat.gov.ua/>

STATE STATISTICS SERVICE OF UKRAINE (2017). The use of information and communication technologies at enterprises in 2016. Retrieved from [http://csrv2.ukrstat.gov.ua/druk/publicat/kat\\_u/publinform\\_u.htm](http://csrv2.ukrstat.gov.ua/druk/publicat/kat_u/publinform_u.htm)

THE UNITED NATIONS, 2015. Draft resolution referred to the United Nations summit for the adoption of the post-2015 development agenda by the General Assembly at its sixty-ninth session «Transforming our world: the 2030 Agenda for Sustainable Development». - [http://www.un.org/disabilities/documents/gadocs/a\\_69\\_l85.docx](http://www.un.org/disabilities/documents/gadocs/a_69_l85.docx)

THE WORLD ECONOMIC FORUM, 2017. The Internet of Things and connected devices: making the world smarter. Retrieved from <http://reports.weforum.org/digital-transformation/the-internet-of-things-and-connected-devices-making-the-world-smarter/>

ZBARAZKA, L. O., 2016. Neoliberalization in Ukraine: a concept of the national model, *Economy of Industry*, 75(3), pp. 5-32 (in Ukr.).