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On the question of modern industrial reproduction specifics

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Abstract

One of the most important subjects in today's researches on reproduction processes is the functional role of industry in economic development. The purpose of this paper is to integrate the functional role of the industrial sector of the economy, which is to ensure the formation of a new reproductive structure. This structure will provide to combine the systemically important patterns of use of limited production resources on priority.

Keywords: Transformation, Industrial sector, Economy, Reproductive structure, Reproductive processes.

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Sobre la pregunta de las especificaciones modernas de reproducción industrial

Resumen

Uno de los temas más importantes en las investigaciones actuales sobre los procesos de reproducción es el papel funcional de la industria en el desarrollo económico. El propósito de este documento es integrar el papel funcional del sector industrial de la economía, que es asegurar la formación de una nueva estructura reproductiva. Esta estructura proporcionará combinar los patrones sistémicamente importantes de uso de recursos de producción limitados con prioridad.

Palabras clave: Transformación, Sector industrial, Economía, Estructura reproductiva, Procesos reproductivos.

1. INTRODUCTION

In the researches concerning the modern specificity of reproduction processes, the question about the functional role of industry in economic development becomes more and more actual. To a large extent, the emergence of this problem is connected with the process of social transformation, which has led to almost universal significant changes in the structure of national economies, accompanied by the creation of new types of economic activity and new forms of socio-economic relations.

As the post-industrial economy has begun to transform into a knowledge economy, the lack of a clear understanding of the place and role of industrial production can lead to serious strategic errors.

2. METHODOLOGY

The methodological basis of the work is, first of all, represented by the requirements and principles of the system approach. It has allowed to provide unity of a subject and a method of research, necessary and sufficient reliability of the theoretical results containing in article. Theoretical and analytical generalizations, functional-structural analysis, comparative and comparative methods were used as concrete basic scientific methods and methods of research.

2.1. The main part

Let is look at the background to this issue in more detail. Thus, in modern economic science, the approach of D. Bell has become widespread, according to which there are three main stages of socio-economic development: pre-industrial, industrial and post-industrial epoch (AMOSENOK, 2011). Pre-industrial society was characterized by close interaction between man and nature. The main forces of this type of society were concentrated in agriculture, forestry, fishing and mining.

The main resource was raw materials, not energy. Products were extracted from natural materials, not produced from them. The main factor of production was human labor. The perception of the surrounding world determined the experience of previous generations, as well as the natural conditions of the place of residence. According

to the UN data, by the end of XX century in the world the number of states of pre-industrial type included about 40% of all fears (DLIN, N.A. 2001).

The development of industrial society began about 300 years ago. This type of society is characterized by industrial organization (application of energy to machines), expansion of manufacturing industries, emergence of mass producers, high rates of urbanization, etc., which together led to a radical change in lifestyles and activities of people. It is believed that most countries nowadays correspond to the industrial type. However, the level of development of each of these countries may differ significantly.

In the 60s and 70s of the 20th century, post-industrial society began to emerge in the developed world. This concept was introduced by D. Bell in 1959, using it to designate the society, the increasing technologically of which caused a decline in the role of the industrial sector and the rapid growth of science. The development of a post-industrial society determines the amount of information and knowledge it possesses.

D. Bell in his work «The future post-industrial society» formulated the basic concept of post-industrial society:

> Assessment of the new society as sharply different from the society that dominated over the past centuries is primarily marked by a decline in the role of material production and the development of the sector of services and information, other

> nature of human activity, changed types of resources involved in the production, as well as a significant modification of the traditional social structure (BELL, D. 2004).

The most radical differences between post-industrial society and industrial and pre-industrial society concern (ORLOV, V.V. ET AL. 2012)

- The main production resource: in post-industrial society it is information, and in pre-industrial and industrial society it is raw materials and energy, respectively;

- The nature of production activity: in post-industrial society it is expressed in processing, and in pre-industrial and industrial society - in production and manufacturing;

- Production technologies: in post-industrial society they are knowledge-intensive, and in pre-industrial and industrial society they are labor- and capital-intensive.

These distinctions have contributed to the emergence of the famous formulation of three societies, the first of which is characterized by active interaction with nature, the second by interaction with human transformed nature, and the third, post-industrial, by active interaction between people (KON'KOV, M.P. 2011). At present, the position of post-industrial civilization is becoming increasingly stronger in society. The development of new theoretical approaches and concepts, in which the main attention is

paid to the processes and factors that reflect the essential characteristics of the new era of human development, determines the emergence of great terminological diversity in the definition of modern society.

The scientific literature uses many synonymous concepts such as «information economy», «new economy», «knowledge economy», «service economy», «service economy», etc. However, there is one crucial point here. Thus, the concepts of «service economy» and «service economy», which emphasize the fundamental role of the service sector in post-industrial society, are to a greater or lesser extent related to information resources. In the opinion of scientists, interactive and constantly monitored relations with consumers are established in the service economy in order to maximize their satisfaction (PRIGULNY, A.G. 2012)

In this regard, the efficiency of the service economy is largely determined by interaction factors, rather than technological factors. And that is why the most frequently used term for modern society is «information society». Often, this term is synonymous with post-industrial society. At the same time, the economy of post-industrial society can be viewed from different points of view, differing in completeness and depth. This explains the existence of approaches according to which the concept of information society is an integral part of the post-industrial theory.

For example, in recent decades, the term «new economy» has been widely used, which appeared in Western literature in the 1980s and was initially used to refer to the economy, in which the leading role is given to the production of services rather than material goods. In the 1990s, the term began to refer to industries with high-tech elements as opposed to the old economy. However, to date, the term «new economy» has been interpreted more broadly. Thus, the new economy assumes that the economic environment is conditioned and, as a consequence, changes in certain macroeconomic parameters are caused by the level of development of high technologies. According to E.F. Avdokushin, this definition of «new economy» pays special attention to the peculiarities of modern economic development (AVDOKUSHIN, E.F. 2011)

Meanwhile, a deeper understanding of post-industrial society, it is significant but not obvious at first glance problems, makes us recognize the significant role of information as a resource with certain characteristics that distinguish it from production resources in traditional society (ROMANCHEVSKY, B. 2012). In particular, new economic processes, which manifested themselves in the early 90s of the XX century, became possible due to cardinal changes in the field of information technologies, as well as the emergence of the Internet global network, the widespread use of personal computers, telecommunications systems and related software. All of this has had a significant impact on the technological basis of reproduction. Factors that were not decisive for the well-researched processes of the mid-1970s came to the fore.

Such factors include (MINDELI, L.E. ET AL. 2007)

- The growing importance of global processes. The demonstration of high competitiveness of production and goods in the global markets became the determining factor in demonstrating the economic power of developed countries. Even though such integration determined the dependence of these countries on each other;

- Widespread innovation as a fundamental factor in competition. Innovation activity had become very important in the context of the shrinking life cycle of goods and services, the further diversification of market niches for traditional goods, and the increasing individualization of supply and demand. However, innovation had become important not only for small forms of entrepreneurship operating in a highly competitive environment, but also for large businesses, whose sustainability could no longer be sustained by scale alone.

- Entry of economic processes into the phase of continuous technological revolutions causing not only continuous changes in the production base of industrial sectors, but also changing the structural characteristics of the entire complex of socio-economic relations. Thanks to this, other types of economic activities, including in the field of services, have been actively developed, new professions, company management systems,

educational technologies, new ways of organizing everyday life and cultural leisure have appeared.

In this case, the information refers to inexhaustible resources, and its dissemination leads to its self-increase (KASTELS, M. 2001). Taking into account these aspects, in the 90s of the last century, American and European scientists developing the information concept began to pay special attention to knowledge, which subsequently led to the emergence of the concept of «knowledge society». Many modern scientists express the position that the information factor as a whole, on a global-historical scale, plays a decisive role in understanding human history and prospects for the development of society. Thus, the type and level of civilization and culture of the society is determined by the volume and quality of information, while the lack of information resources has a strong deterrent effect. According to Robertson's point of view, civilizations that are on the same information level of development, despite many possible differences, are more similar than civilizations that are on different levels. The basis of all civilizations without exception are powerful «explosions» of the information space, each of which radically changes the economy, lifestyle, culture, etc (TAJVIDI & ARJANI, 2017).

Later on, this ensures the transition of the society to a new stage of its development - to a new civilization. At the same time, the ability of civilization to solve this or that task of development is directly determined by the volume of available information. Thus, information determines the development of civilization, stimulating its

development or setting its limit (YUN, O.M. 2011). On the basis of the presented provisions, the key points that distinguish the knowledge economy from the industrial economy based on traditional factors of production - labor and capital - are singled out (AILAROVA, Z.A. 2011)

- While in the traditional economy production is accompanied by reduction of the main factors, in the knowledge economy information and knowledge are not depleted, but spread among all participants of the economic process and multiplied. Therefore, the knowledge economy is not considered to be an economy of scarcity of resources and benefits, but rather an economy of abundance.

- Information and communication technologies used in the knowledge economy contribute to the creation of virtual marketplaces that minimize the time and transport costs of access to resources and products. Therefore, the knowledge economy significantly reduces costs mediated by the effects of isolation, localization and territorial limitations. In general, the important features of the modern post-industrial economy, where the main factors of production are information and knowledge, can be highlighted (BURMENKO, T.D. 2011).

- Qualitative change of a person's role and place in production;

- Complication and appearance of new types of property relations, increasing the role of intellectual property, including in the economic turnover;

- The fundamental role of highly developed material production, the priority of consumption in the interrelation «production-consumption» (realization of freedom of consumer choice);

- The role of the network principle of production organization and the corresponding new system of requirements to employees;

- The increasing role of the institutional system, including the state;

- Leading positions of the service sector in terms of employment and GDP creation in it.

The last aspect of post-industrial society - the leading position of the service sector in terms of employment and GDP creation - should be discussed in detail here. Thus, 2/3 of the total structure of economic production in the ten most developed countries of the world, which account for about 2/3 of the total world GDP, is represented by the services sector. And only the remaining 1/3 of the volume is the sphere of material production (EVSEEVA, M.N. 2012). That is why the level of development of the sphere of services in the economy began to judge the level of development of this or that society.

Taking the above into account, we can talk about strengthening the sphere of intangible component in the structure of modern economic reproduction. In general, this indicates the entry into a fundamentally new stage of social division of labor, in which the sphere of intangible production acquires the status of the main factor of economic growth, including the development of material production. At the same time, the efficiency of the latter is increasingly determined by factors that are not directly related to the material production: training and cultural level of workers, their health, social skills, quality of management, the level of development of banking, auditing, legal, and insurance and other activities. It is this moment that characterizes the specifics of post-industrial society and underlies the opinion that industry has lost part of its reproductive role in the modern economy and society.

3. RESULTS AND DISCUSSION

The analysis of reproductive processes in the most developed countries of the world allows us to identify two trends. The first one is to increase the knowledge intensity of material production. The second trend shows the transformation of some categories of goods into services. The scientific synthesis of these aspects allowed to form the concept according to which the main factor of development of the sphere of services is scientific and technical progress, development and introduction of innovative technologies into production.

As a result, the functional content of industrial production is undergoing a qualitative transformation and contributes to the formation of new service industries focused on servicing the industrial sector of the economy (transport, insurance and financial services, science and education services). Also, in the context of technical complexity of products, industrial enterprises are increasingly expanding the network of services and customer service centers (KARANOVICH, M.K. 2013). Partly, these processes are accompanied by retraining of labor resources (KLUKA, K.O. 2012). That in aggregate leads to an accelerated increase in the share of the service sector in the structure of employment and GDP production.

At the same time, this concept has a scientific basis. Thus, the sectoral structure of the economy, as a rule, is divided into two groups of industries: tangible and intangible industries. The main difference between these groups is that in the branches of material production material products are created, and in the branches of intangible - spiritual, intellectual and informational.

However, the fairness of such a division may in some cases be called into question.

Thus, some types of services contain material components to some extent. Such services result in the creation of new or restored value in use. This type of service is usually based on the individual needs of consumers. In particular, there is a classification according to which services differ in their specific content. According to this

principle, services can be divided into the following categories (BURMENKO, T.D. 2011).

- Services that create a new consumer value (cooking lunch, sewing an individual costume, etc.);

- Services aimed at restoring any consumer property of tangible goods (service repair and maintenance);

- Services to serve the domestic needs of the person (hairdressing, courier services, etc.).

Taking into account the specific features of the results of production activities in the field of intangible and material production, among the most common definitions of a service are those that focus on changes in the quality of the object to which the service is directed. According to these definitions, an economic product in the form of a service represents a new quality that arises in the process and due to economic activity (BURMENKO, T.D. & ET.AL 2010). Some services are just before the creation of physical goods (public administration, education), and some - can be created only if there are appropriate physical goods (television, security, art). In other words, it becomes clear that the production of some material goods is preceded by the consumption of intangible services (PEREPELKIN, V.A. 2013). In this connection, there is an opinion that the human need for intangible benefits is the primary one, and the need for material benefits is a side effect, the production of which has become possible

due to changes in the course of consumption of intangible benefits (ABRAMOVA, L.A. 2013).

However, this point of view contradicts the theory about the nature of human needs, the main provisions of which are reduced to the impossibility of the existence of society without production, because all the essentials are created in the process of social and production activity by transforming natural resources. In this case, the emergence of the economy occurs with the beginning of production of material goods aimed at meeting various human needs (SYCHEV, N.V. 2010)

In this case, production and consumption are closely and inextricably linked. On the one hand, demand is the driving force behind production, but on the other hand, the production of specific types of goods creates a need for them. At the same time, needs play a significant role in public life and in the process of stimulating production and economic activity.

In general, the production of material goods can also be organized in the absence of intangible assets. However, certain material goods are required to produce intangible assets. In addition, the creation of intangible goods is also driven by the need to produce improved or fundamentally new material goods. Therefore, modern services act as a catalyst for the development of material production. At the same time, material production, even in the modern post-

industrial economy, plays the role of the main source of satisfaction of various needs of society.

The feasibility study presented thus highlights a number of specific features inherent in the links between the tangible and intangible production sectors. The main thing is to preserve the fundamental role of tangible production in the functioning of the economy. At the same time, the reduction of the share of employed in the industrial sphere does not indicate a decrease in the importance of commodity production for the modern economy.

On the contrary, there is a constant growth in the volume of created and consumed goods (material goods). In addition, the material base of modern production determines the emergence and development of new economic and social processes. For example, according to calculations, at present, the creation of up to 95% of value added in the sphere of services of developed countries would be impossible without an appropriate industrial base (FAIRUSHIN, A.F. 2012). However, the continuously developing conditions of the post-industrial economy make it impossible to reduce the processes of social reproduction exclusively to the factor of material production.

4. CONCLUSION

On the basis of this, it is possible to conclude that there is an insolvency of judgments about the loss of the industry's functional role

in the conditions of modern reproduction. This is partly explained by the following provisions (BUKHTOYAROV, A.S. 2013).

- A society that has reached a sufficiently high level of wealth and well-being, i.e., with a large middle class, is characterized by a developed and steadily developing service sector. In modern Russian practice, however, this is also confirmed by the method «from the opposite». Thus, negative trends in the development of material production and, as a consequence, the need to ensure a minimum material and product type of production, together with limited resources, have determined the secondary role of socially significant sectors of the service sector;

- The interconnectedness of the two spheres of public production is significantly influenced by the time factor. Thus, in the short term, the functioning of material production affects the sphere of services, and in the long term the scale and quality of functioning of the intangible sphere (development of science, education, health care, etc.) determine the nature of the development of material production.

Summarizing the current specifics of reproductive processes presented in the course of the study, we can conclude that in the post-industrial era, the service sector is closely integrated into virtually all sectors of the economy of developed countries, including the national economy of Russia. On the one hand, this aspect complicates the

definition of the exact boundaries of this sphere. In some sectors of the economy, the service activity acts as a system-forming one, while in others, though it takes a smaller share, it is an irreplaceable element. On the other hand, this aspect illustrates the close relationship between tangible and intangible production.

At the same time, the sphere of non-material production prevails in the structure of the world economy and national economies of developed countries, and considers that material production: in some cases, it is impossible without the consumption of non-material goods, which are not primary needs in themselves. It precedes the satisfaction of society's needs for material goods; it can be argued that it is the material production represented that determines the production of a number of services and the satisfaction of society's needs for them.

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