

POST-INDUSTRIAL SOCIETY AS A VECTOR OF NATIONAL ECONOMY DEVELOPMENT

ПОСТІНДУСТРІАЛЬНЕ СУСПІЛЬСТВО ЯК ВЕКТОР РОЗВИТКУ НАЦІОНАЛЬНОЇ ЕКОНОМІКИ

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The end of the XXth century and the beginning of the XXIth century are marked by transition from the industrial stage of society development to the post-industrial one. In the present view it is an epoch of humanity transition to a new civilization stage caused by significant changes in society life. The academician A. Chukhno said that «transition to post-industrial society is a far deeper and more extensive process compared to transition from one social-economic structure to another as it is transition of the entire human civilization into a new state in terms of quality» [1, p. 31].

Emergence of post-industrial society was caused by the scientific and technical revolution which provides a high increase in labour productivity in material production and in the future results in reduction in the number of people employed in agriculture and industry, which, in turn, promotes an increase in the rates of the service sector development. Dominance of the service sector in economy, innovative technologies and production intellectualization characterize post-industrial society as post-economic and post-material. The new role of man in this society lies in a possibility to manifest his physical and mental abilities in full and realize his intellectual potential. The grounds of this society are humanistic and civilization values which form a spiritual kernel of civilization.

Beginning from the second half of the XXth century developed countries began their movement to post-industrial society. The countries of the post-Soviet space are also moving in this direction. Like any other society, post-industrial society can be characterized by contradictory development trends which became aggravated after the global crisis of 2008-2009. The consequence was a critical attitude to the theory of post-industrial society, which was manifested in the Russian economic thought and among the Ukrainian scientists as well. Anti-globalists support the criticism of post-industrial society too. But it should be noted that this society formation has just started. Criticism is a debate not a discourse as there is no scientifically substantiated theory of the present stage of economic development except for that of post-industrial society. In countries with a developed economy, especially in the countries of the «golden billion», the characteristic features of post-industrial society manifest themselves not only in theory but also act in practice. Nowadays in the countries of the post-Soviet space, including Ukraine, these features exist but are not dominant.

Any country carries a certain vector, i.e. chooses the way of economic development. In such a context, for the countries of the post-Soviet space, including

Ukraine, post-industrial society formation is a development line as well and requires further research.

The researches of post-industrial society as a general sociologic and economic theory were carried out by the following foreign scientists: Raymond Aron, Daniel Bell, Immanuel M. Wallerstein, John K. Galbraith, Peter F. Drucker, Manuel Castells, Lyndon H. LaRouche, Walt W. Rostow, Joseph Stiglitz, Tom Stonier, Alvin Toffler, Jean Fourastie and others [2-6]. The Ukrainian researchers also pay considerable attention to this issue, namely: V. Basilevitch, O. Bilorus, A. Galchynskyi, V. Geetz, N. Grazhevskaya, A. Philipenko, A. Chukhno and other scientists who mainly investigate the problems of society transformation in the countries of the post-Soviet space [1; 7-9]. Among the Russian scientists this issue is examined by A. Buzgalin, V. Inozemtsev, N. Kosolapov, A. Rakitov, Yu. Yakovets and others [9-12]. Today the global crisis forces both our theorists and practitioners to revise the approaches to researching the civilization evolution of society; to take into account the contradictions in the countries which entered upon the way of post-industrial society formation in the middle of the XXth century when shaping a long-term strategy of the Ukrainian society development.

The research objective is to ground the necessity of post-industrial society formation in Ukraine as of a civilization stage and to reveal the basic characteristic features of this society in the national economy; to distinguish the contradictions of post-industrial society development in countries with a developed economy and to search for their solution for countries with a transformation economy.

Post-industrial society formation in the Ukrainian economy is not only the issue of theory but also a practical task. Taking into account society's civilization evolution, the Ukrainian economy cannot return to primitive tools in the primary sector, workers of the secondary sector will not be able to use hand tools and primitive technique; Ukrainian consumers will not drive cars made in the 1950ies-1970ies and will not be able to do without mobile telephones, the Internet and other conveniences. We have realized already that the acquisitions and achievements of post-industrial economy create and improve the conditions of work and life. But what should be done to the problems arising in this society? They should be solved both in terms of tactics and strategy. It means that both the theory of post-industrial society and its practical application should be improved. As there is no theory developed to be used for centuries. The major questions of economy:

У статті досліджуються ознаки постіндустріального суспільства в національній економіці, виділяються суперечності його розвитку в розвинених країнах та обґрунтовується необхідність пошуку їх рішення для зменшення негативного прояву в економіці України. Розглянуто секторальну структуру економіки України через валову додану вартість та зайнятість, виокремлено галузеву структуру сфери послуг. Досліджено динаміку формування секторальної структури національної економіки й здійснено порівняльний аналіз з країнами пострадянського простору та ЄС. Виділено роль освіти у формуванні постіндустріальної економіки в Україні. Охарактеризовано секторальну структуру зайнятості за трисекторною моделлю, показано її диспропорційність та деструктивність на сучасному етапі розвитку.

The article covers the research of the features of post-industrial society: the contradictions of its development in developed countries are distinguished and the necessity of search for their solution is grounded in order to diminish their negative display in the economy of Ukraine. The sectorial structure of the economy of Ukraine is examined in terms of gross value added and employment, the branch structure of the service sector is distinguished. The dynamics of formation of the national economy sectorial structure is investigated and its comparative analysis with the countries of the post-Soviet space and the EU is made. The significance of education in formation of post-industrial economy in Ukraine is revealed. The sectorial structure of employment by a three-sector model is described; its disproportion and destructiveness at the present stage of development are shown.

Table 1. The GDP structure by a three-sector model (% in basic prices)

Country	Years	Primary sector	Secondary sector	Tertiary sector
Ukraine	1991	22,4	50	27,6
	2001	16,1	34,2	49,7
	2011	7,7	21,8	68,5
Poland	1991	6,6	41,1	52,3
	2001	3,8	31,3	64,9
	2011	4,3	31,8	63,9
Germany	1991	1,4	36,3	62,3
	2001	1,2	29,3	69,5
	2011	1,1	29,1	69,8
The United Kingdom (Great Britain)	1991	1,8	32,1	66,1
	2001	0,9	25,9	73,2
	2011	0,9	24,7	74,4
Japan	1991	2,2	38,8	59
	2001	1,3	30	68,7
	2011	4	24	71
THE USA	1991	1,9	26,8	71,3
	2001	1,6	22,9	75,5
	2011	1,3	31,9	66,8

Developed by the author on the basis of the sources 16, 17 analysis

«What should be manufactured?», «How to manufacture?», «For whom?» will be on the agenda of the national economy but the present situation requires their constant filling with new contents.

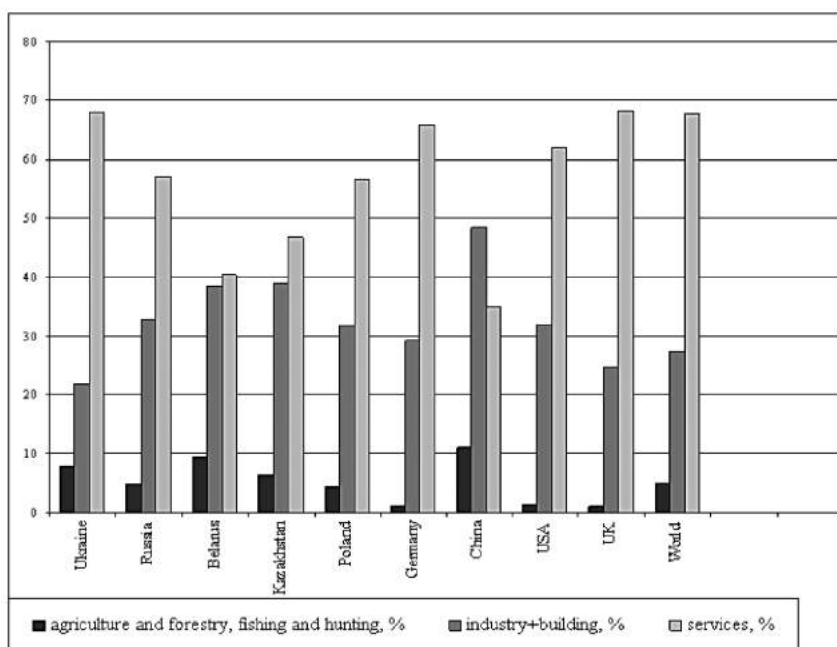
Post-industrial economy examination in terms of the sectorial approach based on the service sector dominance requires new theoretical content as not only a quantitative description of this sector dominance in the GDP structure but also its quality structural description should be given. For example, if we characterize the sectorial structure of the economy of Ukraine starting with the time of the market relations formation in the 1990-ies, we can observe a rapid increase in the service sector (Table 1).

Within this period of time the service sector became almost three times as large and accounted for 68,5 % in the GDP structure in 2011, while the developed countries experienced a gradual increase.

In particular, in Great Britain, Germany and Japan this share became 1,5 times as large. In 2011 in the USA the reduction of the service sector share is observed due to the consequences of the global financial recession.

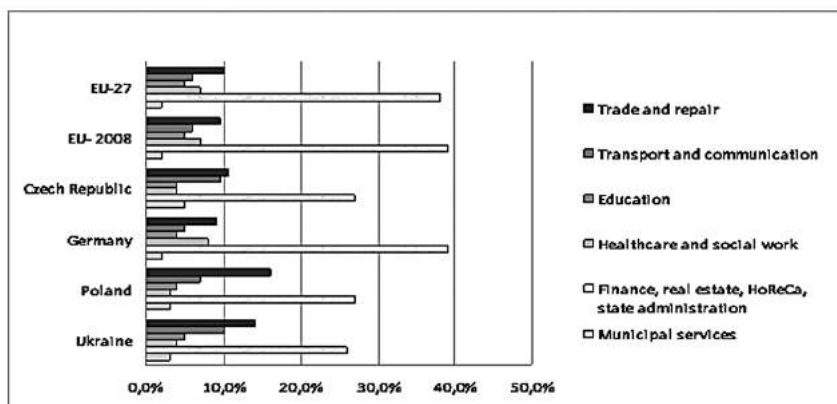
To research the trends of the sectorial structure, it is expedient to make a comparative analysis of the highly developed countries and the countries of the post-Soviet space (Picture 1).

Picture 1. Specific gravity of the sectors in the GDP structure in 2011, %



Developed by the author according to the data provided by www.worldbank.org

Picture 2. The share of the service sector branches in the GDP in 2011, %



Developed by the author according to the data provided by www.eurostat (*Data on Ukraine – www.ukrstat.gov.ua)

The diagram above shows that in the highly developed countries the service sector accounted for approximately 70 %, in Ukraine – 68,5 % respectively, i.e. the statistical data testify the national economy approach to the levels of the highly developed countries. In Belarus and Kazakhstan this index does not even made up 50 % but in our opinion it is an inessential drawback of these economies' development within the post-recession period. The realities of economic life show that the socio-economic situations in these countries are better than in Ukraine.

Most researchers characterize the increase of the service sector in the structure of the Ukrainian economy as an essential feature of post-industrial economy, others are critical to this tendency. We think it is a determinant feature of transition to post-industrial society. However, if to examine not only the quantitative indices but also the qualitative ones, we can see the negative consequences of this process. In particular, an increase in the service sectors in the countries of the post-Soviet space and in Ukraine took place not only due to the increase in labour productivity in the primary and secondary sectors but also under the effect of the disintegration processes and new integration processes which resulted in reducing the share of agriculture and industry. It should be marked that the service sector branch structure is also not quite progressive as trade and the financial sector make up a considerable share (Picture 2).

Comparing Ukraine to the 27 EU member-countries, in Ukraine the share of trade accounts for 14 %, in the EU-27 it is 10 % respectively; the financial sector in Ukraine makes up 26 %, in the EU-27 – 38 % respectively.

Wholesale and retail trade adds to the exaggerated trends in the Ukrainian economy structure. Trade makes up almost one third of the GDP, which is more than in highly developed countries including the USA, a leader of post-industrial countries. The great share of domestic trade in the Ukrainian economy is a consequence of performance of numerous ineffective (even criminal) intermediaries who do not render actual services but only create an «imaginary» product and increase speculative operations.

Before the post-recession period the dominance of the financial sector in sectoral structures of national economies was considered a positive trend as, according to the economic theory interpretation, there is a close co-relation between the level of the financial sector development and the rates of economy growth. Economic growth results in an increase in demand for financial services and inspires financial sector development. A more developed financial infrastructure allows to effectively allocate resources promoting further economic development of a country. World practice testifies that since the 90-ies of the XXth century there has been a rapid growth of the financial sector, which has resulted in a disbalance between the real sector and the financial one for benefit of the latter. As a result the contradictions between the real production and exchange are aggravating in economies of post-industrial countries. The assumption of the economic theory and practice is that the basic source of a country's economic development is growth of the real sector of economy and the essential function of the financial sector is attraction and redistribution of resources for providing stability and a long-term economic growth.

In Ukraine the financial sector occupies a considerable share (Picture 2); in our opinion, it is not a progressive trend in structuring the national economy as the GDP share in the secondary sector has decreased. It should be noted that for building a progressive society of a post-industrial type it is necessary to develop not only the financial sector of economy but also the real one. Industry remains a leading system-forming industry of the real sector of the Ukrainian economy preserving the largest share in its structure (in 2011 year it accounted for 42,8% of the total yield from goods and services and 25,3% of the GDP) [13; 18]. The negative feature of the industry structure is that more than two thirds of the total volume of industrial goods is due to the industries which produce raw materials, materials and power resources. Light industry accounts for an insignificant share, up to 0,8%; engineering industry, which only makes up 10,3%, sees insufficient development and insignificant growth rates. It should be noted that its rate is almost three times as low as that in the industry structure of the developed countries. In order to improve the national economy structure, the measures on all the levels of state administration are being developed. It was stated at the 5th International Investment Summit, which took place on 18 October, 2012 in Donetsk, where the President of Ukraine Victor Yanukovich emphasized the necessity of the investment climate improvement in the real sector of economy and stated that «...the development of the real sector is a guaranty of powerful state development. Competitiveness of domestic products of the real sector is extremely important in the modern world. To attain this goal, it is necessary to invest significantly in the real sector of economy, introduce innovative technologies to the manufacturing industry, aviation, agroindustrial complex, industry of tourism and transport infrastructure» [14].

The essential characteristic feature of post-industrial society is knowledge as one of basic factors of society development. In this society knowledge is not only gained but also produced and turned into sources of profits. In highly developed countries knowledge provides a dominant specific gravity of the GDP increment. The World Bank calculates a complex index, which characterizes the level of economy based on knowledge in 146 countries of the world; this index includes 109 structural and qualitative indices. In 2011 Ukraine took the 56 place in the rating, ahead of Russia on the 55 place. The Scandinavian countries take a lead on the list: Sweden, Denmark, Netherlands, Finland, i.e. countries with a high level of society socialization [15]. The constituents of this index are indices of economy, institutes, education, innovations, information and communication technologies, etc. It should be noticed that it is quantitative indices that characterize a society. To carry out a qualitative description, in our opinion, each index should be analysed separately. Let us take education as an example. There is a considerable educational and scientific potential in Ukraine, institutes which remained from the previous economic system (kindergartens, schools, institutes of higher education, scientific and research institutions) and educational

establishments of a new type (classical schools, lyceums, colleges, private higher education institutions). In the school year of 2011-2012 in Ukraine there were 345 higher educational institutions operating; the share of educational services in the GDP accounted for 5,3%; the amount of children's preschool establishments, which are the grounds for development of man and further studies, rose by 3% (after the late 1990-ies their amount started to rapidly fall); the number of textbooks provided for students of primary and secondary school increased [13]. Next to the positive facts there exist the negative tendencies in education and science, which require further research.

Having analysed the data on the volumes of the budgetary support of education per year: in 2000 – 4,2%; in 2005 – 6,1%; in 2010 – 6,56%; in 2012 – 6,99% respectively [16], we can observe a constant increase in the charges every year. However, it should be said that these indices are nominal not adjusted according to the inflation rate. There are also problems in distribution of financing between education and science. The law of Ukraine about education, scientific and technical activities provides for percentage from the GDP which is to be allocated to education and 1,7% to science [17]. In 2012 in the budget of Ukraine 6,99% was allocated to education and 1,7% – to science. It means that financing of education does reach its optimal value and science is financed within the limits of minimum norms. If financing of science is insufficient, innovative development of economy is out of question. According to V. Geetz, «...knowledge which comes into being and is disseminated owing to the system of research and design activities is the result of support of these activities; now the rational values of their volumes are considered to reach 3,5% – 4,0% of the country's GDP» [7, p. 640]. In the countries of the European Union this index accounts for 3% of the GDP, respectively considerable part of industries is science intensive. In Ukraine this part should be increased as well because development of science and production of innovative technologies will allow changing the national economy structure for benefit of high- and medium tech industries and will improve the population employment structure.

The population employment structure is an important index of movement to post-industrial society. Civilization evolvement is characterized by a decrease in the share of the population employed in the agrarian sector, later on by a gradual reduction in the number of people employed in industry and an increase of this share in the service sector. Movement of labour force from the primary sector to the secondary sector and then to the tertiary one is a consequence of a labour productivity increase in these sectors. The figures of the Ukrainian economy testify this regularity (Table 2).

Within the period under research the share of people employed in the service sector increased by 3,4 times, in agriculture and industry it became twice as low. Unfortunately, these tendencies are not progressive as in the service sector the employment mainly raised in trade and financial activities.

As it is known, demand for labour force is a derivative from demand for goods. The raw material export model has resulted in destructive tendencies in employment as not all workers of processing industries

Table 2. The structure of people employed in economy by a three-sector model and its dynamics within the period from 1970 till 2011, % [16]

Years	Primary sector	Secondary sector	Tertiary sector
1970	30,6	50,8	18,6
1985	21,2	55,2	23,6
1995	28,4	35,5	36,1
2005	19,28	24,25	56,48
2006	17,53	24,23	58,24
2007	16,59	23,93	59,48
2008	15,74	23,43	60,83
2009	15,51	22,35	62,14
2010	15,27	21,73	63,00
2011	15,8	21,12	63,08



moved to the tertiary sector: the majority of them turned into unemployed people; they became underemployed; workers switched over to primitive work in other sectors. Imports of consumer goods decreased the employment in the agro-industrial complex and textile industry. It means there were no progressive changes in the employment structure. Although the post-industrial theory says that the employment structure is of a progressive character and improves by increasing employment in science intensive and hi-tech industries (mainly of the secondary and tertiary sectors). Negative tendencies of employment are observed not only in the countries of the post-Soviet space but also in the highly developed countries, in particular in the EU and the USA. The employment rate is the basic index of social and economic development of society and the modern global crisis promoted the disclosure of the hidden drawbacks of post-industrialism. As a result the countries began to seek for the ways to improve the employment. For example, in the USA there is a program of national development aimed to increase the employment in the economy real sector. In the EU the programs aimed at improving the employment both in the field of low-skilled work and high-skilled work.

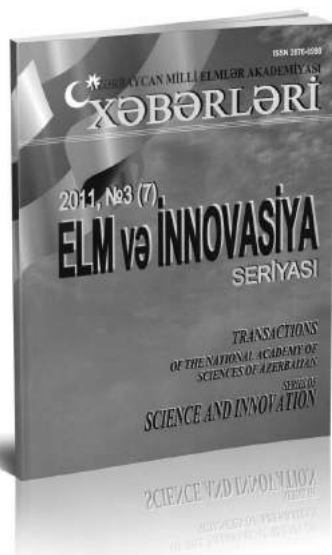
In Ukraine there is a powerful potential for development of the real sector of economy, which can improve the employment structure and situation. The development of science and education will make possible not only production of new technologies but also formation of a value-oriented personality. The man should create but not only gamble and speculate (gambling business, stock exchange trade, etc.). Society should consist of successful creative professionals who will be well provided for and will be constantly developing. In our opinion, the triad «knowledge-values-production» should operate in a progressive post-industrial society.

Post-industrial society formation is a long, «creative» process which requires not only introduction of innovative technologies, informational support, computerization, use of modern communication means. It is undoubted that this process also requires a «new» man formation, whose internal essence should remain unchanged (human values) while his professional and qualification level rises and his economic conditions are improved. In our opinion, society is only at the first stage of post-industrialism, which is mainly characterized by change of technologies. This stage is very impetuous and due to globalisation considerable technological achievements in the developed countries have been disseminated to other countries of the world. The next stage is formation of man per se, who possesses a system of moral values and ideals; who is educated, healthy, motivated to work and who strives for constant self-improvement.

The post-recession period demonstrates the contradictions in the world economy related to the technocratic approach to society formation. When developing a long-term strategy of the national development in Ukraine, we should use the experience of the developed countries of a post-industrial type and concentrate not only on modern achievements of technological development but also, first and foremost, on the internal potential of the nation, its culture, moral values and traditions as well as we should not forget that man is «the crown of divine creation».

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