

The concept of the „new economy” and specifics of its development

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Abstract

„New economy” is a term to describe the result of the transition from a manufacturing-based economy to a service-based economy. It is a set of new phenomena, processes and economic, financial and cultural dependency, based on new technologies. This relatively new concept applies particularly to industries where people depend more and more on computers, telecommunications and the Internet to produce, sell and distribute goods and services. The purpose of this article is to identify opportunities, as well as dynamic factors in the context of managing the formation of the new economy in the Republic of Belarus.

Keywords

new economy, Belarus

Introduction

The development of the world economy is associated with the change of the role that the major factors play in determining its development. Under current conditions, such factors as knowledge, information and innovation come to the fore and presuppose the formation of a qualitatively new stage of the national economies are functioning. The aforesaid may be defined as the stage of the „new economy” development. This article discusses a theoretical understanding of this phenomenon, identifies its features and specific characteristics as well as dynamic factors in the context of managing the formation of the new economy in the Republic of Belarus.

1. Literature review

The term „new economy” was introduced in the 90-s of the 20th century, but then came specifications which further connected it to the theory of postindustrial society and the economy of knowledge. Bill Clinton gave the most precise explanation of the „new economy” to the American and international community in his message to the Congress, the „Economic Report of the President” in January 2001. The USA was stated to have entered the 21st century with a new economy that was new with respect to the supply-side economics and Reaganomics pursued during the office of R. Reagan. The category of a new economy still has a diversity of interpretations. According to Russia’s Academy of Sciences’ full member V. Makarov, the new economy is a „type of economy in which knowledge and technological materialization branches play a crucial role, while the production of knowledge is a source of the economic advancement” (Макаров, 2003). A. Porohovskiy defines it as a set of producing data communications equipment and computer hardware and software branches, as well as the whole Internet system of formation, storage, distribution and receiving the information (Пороховский, 2002). I. A. Strelets sees the priority of the term’s interpretation in the idea that the major factor is not the information itself, but the information learned and transformed in the mind of an individual, i.e. knowledge (Стрелец, 2003). N.I. Bohdan defines it as economy based on scientific researches and works, characterized by the high-technology industry and service development, as well as by the involvement of highly skilled human resources (Богдан, 2007).

According to P.S. Lemeschenko, the diversity of the new economy’s interpretations can theoretically be viewed from two perspectives (Лемещенко, 2007; Стрелец, 2003). The first approach considers the new economy to be a part of the economy comprising high-technology industries. The second approach regards it as a technological impact on the economic environment, which leads to the alteration of certain macroeconomic parameters. Defining the essence of the new economy, the second approach seems to be reasonably grounded, as its understanding only in the context of the new industries has at least three drawbacks. Firstly, this term’s interpretation will be of a short duration as the concept of new is ever-changing; secondly, it does not take into consideration the nature of multiplicity relationships and involvement of other industries and sectors into the innovation process; thirdly, the impact of knowledge and information upon both macroeconomic parameters and their positive dynamics is ignored here. Thus, *the new economy is an innovative economy emerged as a result of globalization, based on the accumulation and usage of recent knowledge and information, as well as on the creation, spreading*

and introduction of modern technologies into production rapidly developing under low inflation, high employment and environmental protection. However, this definition will be further clarified.

2. Main features of the new economy

Analysts who study the phenomenon of the „new economy” have formulated a number of its distinctive features, but the priority in defining is frequently given to technical and technological aspects (Лазарев и Хижа, 2006; Игнацкая, 2006). It seems that the above-mentioned definitions of the „new economy” and its features specify mainly the technological and technical aspects of development without drawing due attention to social ones. Marking out features of the „new economy”, it is reasonable to combine technological, economic and social sides in interpreting these characteristics. This makes it reasonable to consider the following ones.

First, the economic growth is more provided not due to the agrarian and industrial components of production, but rather thanks to the introduction and development of new technologies and the increase science-intensive economy. It is possible to speak about the new economy’s expansion, when the economic system is based on the domination of 5 and 6 technological modes (robotics, electronics, telecommunications, fine chemistry and biotechnologies, space technologies and others).

Secondly, knowledge acts as a production factor and the main resource. Any economy to some extent is based on knowledge. However, until recently the new economy has not been spoken of. It is connected with knowledge-based fundamental changes in the production process which have taken place in recent years. It stimulated innovations which concern both tangible and non-tangible objects. Information and knowledge processing possibilities have been also essentially modified. The exchange of them became possible in volumes which earlier were regarded incredible and at the costs which are much lower than a decade ago.

Thirdly, goods and services’ life cycle is being reduced, their commodization is being developed, the terms of equipment depreciation are being shortened, and the knowledge exchange not only between various sectors of economy, but also at interstate level is being accelerated.

Fourthly, there is rapid knowledge market development in place, with a sharp increase in a share of the knowledge-intensive sector of economy and product vol-

ume made by it. Accelerated are the processes of information space computerization.

Fifthly, science becomes the main productive force and harmoniously enters a production process. Production costs decrease, the connection between scholarly research and corporate strategic activities become closer, and methodology and forms of scientific divisions change. The academic science becomes more and more applied.

Sixthly, advanced well-educated human resources are the crucial factor of economic growth, accumulation of which makes a person the main value of new economy. This modifies production function towards the increasing role of the human capital in it.

Seventhly, the system of the state priorities, in addition to science and education support, is directed on health care, creation of favourable conditions for creativity as basic conditions for life cycle optimization of the human resources.

Eighthly, the society structure transformation is in place. The proportion of intellectual owners, owners of information and knowledge expands and among them middle class representatives is considerably increasing.

Ninthly, the informal economic relations are developing as the new economy growth rates based on information technologies are so high that the legal basis regulating its functioning, essentially lags behind, and in fact it is not possible to change all the official regulations timely. Any innovation can objectively become part of the sphere of informal economy and remain there for a long time.

3. The new economy's management development features in the Republic of Belarus

On the basis of the revealed system of the new economy's indicators, I will identify the priorities of its formation management and features of this process in the Republic of Belarus. First, the new economy develops at the expense of high level technologies developed and introduced in production and is based on 5 and 6 dominating technological modes. The current state of Belarus's economy makes it possible to speak about the domination of the 3rd and 4th mode technologies (machine building and tractor building industries, organic chemistry, oil refining), a high degree of wear of fixed assets - 65-70% and quite a low share of innovatively advanced enterprises - 14-16%. The proportion of new production in the total volume of production accounts for as little as 11-13% whereas the expenditures on R&D are within 0.7-1% of the GDP (Шимов, 2008).

The most generalizing indicator in this context is the volume of the financing on science, as the percentage indicator of the Gross Domestic Product. During the period from 2003 to 2010 the internal expenditures on science in the Republic of Belarus have increased from 0.61% to 0.7% of the GDP, although the expenditures on science from the budget funds have decreased from 0.39% to 0.31% of the GDP, which signals the motivation growth on the part of the economic entities in financing science and reinforcement of its practical orientation (HCKPБ, 2011a).

What is noteworthy is that in terms of the absolute indicators the expenditures on science from the budget funds during the period of 2003-2010 have also increased. However, this is still not enough to provide an extremely high level of innovation development of Belarus's economy. As a result, the full science finance administration should be aimed not only at reasonable resource distribution but also at its growth.

Secondly, knowledge is a manufacturing factor and the main asset in conditions of the new economy. One of the indirect indicators estimates of its production usage is the level of export of high technologies. In the structure of country's foreign trade, the percentage of the high-tech output in the general export of the industry production according to the World Bank statistics in 2010 has been only 3 %; at the same time it is 9% in the Russian Federation and more than 20% in Japan, France, UK, and China (www.worldbank.org). The above mentioned statistics has underlined the necessity of the knowledge management efficiency improvement not only during the accumulation period but also during its technological application and product selling in the foreign markets.

Thirdly, a new economy is characterized by a considerable product life cycle reduction, innovation application increase, and knowledge flow between different economic sectors speed-up due to the information and service sector development. A share of the service sector of the post-industrial society's economy is a criterion of the formed economic system. It is necessary to underline, that the above-mentioned indicator of the Republic of Belarus is lower than that of the developed countries. However, the service sector share in the industrial structure of the Gross Domestic Product is constantly increasing, and it grew from 28.5% to 40.9% during the period of 1990-2010 (HCKPБ, 2011b).

According to the practical experience, developed countries have a high share of those employed in the service sector: 72.8% in Belgium, 74.3% in Denmark, 68% in Germany, 72.9% in France, and 77.7% in Luxemburg (www.nation-master.com). In Belarus, the share of employment in the services sector accounted for 53.9% (MЭPБ, 2011). As a result, we can see the necessity to take measures in

order to increase the level of employment in the service sector, as this tendency is fundamental for the development of the new economy.

Fourthly, knowledge market's rapid development is characteristic for the new economy. Today we have the right to state that the knowledge market of the Republic of Belarus has reached significant development in the context of providing a high level of education services. Traditionally, our country has a high indicator of the educated. There is a tendency of an increasing number of both specialized secondary and higher educational establishments. Their number was 214 and 55, respectively in 2010 (НСКРБ, 2011а). As a result, there was a high indicator of the number of students per 10 000 people. This indicator corresponds to the general European one and accounts for 467 students per 10 000 people, which reflects the development of the higher education in Belarus (НСКРБ, 2011а). At the same time, the current accomplishments in the educational sphere don't justify some problems of the management system, especially of their quality aspect.

Fifthly, the new economy is characterized by complex processes in the sphere of science and technology. There is an urgent necessity to modernize the current economy by means of long-term policy of cooperation between science and technology. It should be based on the inner and in-depth analysis of the technical structure reasons for underdevelopment. There should be a developed system of the methods to make the mechanism of innovation more active. There should be a sustainable economic development. The analysis of the existing advanced technologies' structure shows that the highest proportion (38.9%) is of the technologies that have been used during 1-2 years. Following them (32.9%) are the technologies that have been used more than 10 years. The technologies that have been used during 6-8 years account for 18%. Alongside with the above, the number of the issued patent rights was 1222 units in 2010. At this point in time, there are 4444 patent units that are in use (НСКРБ, 2011с). In 2010 the number of the imported new technologies made up 37, high technologies accounted for 3, and the proportion of organizations implementing technological innovations was 15.4% of their total number (НСКРБ, 2011д).

Thus, in the course of managing the growth of technological innovations one should take into consideration that despite the large number of implemented technologies they have a rather long service life and, as a result, considerable obsolescence and physical depreciation. So, they cannot be regarded as „new”. Overcoming the tendency will enable to make a significant step on the way to the development of the new economy in the Republic of Belarus.

The sixth point is that highly developed human capital is considered to be the key resource of the new economy's development. Due to an active social policy

aimed at human development, the Republic of Belarus managed to keep a high level of human capital development and is taking measures for its further improvement.

Compared to the CIS countries, Belarus has the largest share of the human capital in the national wealth and ranks 65th in the world according to human development index (HDI), (IIPOOH, 2011). The main objective is not just to strengthen the existing parameters of the human development but to achieve better results. In this context, there is a necessity for records and government control of such phenomenon as „brain drain”, which can significantly change quite a favourable state of affairs in this sphere.

The process of control of the international migration of people should be based on the fact that along with economic losses caused by „brain drain”, this phenomenon encompasses a number of political, social, demographic and cultural problems. By virtue of the abovementioned reasons, any quantitative calculations of benefits and losses from international migration of human capital should be regarded as ballpark figures that enable to identify only prevailing tendencies of this complex phenomenon and its consequences.

It is noteworthy that the damage caused by the „brain drain” to a donor-state is much greater than direct economic losses, as it negatively affects the reproduction of scientific, technological and intellectual potential of the society. As a result of this process, the efficient cadre potential of scientific sphere is lost, the leading national scientific schools fail, investments in training of scientists and specialists are lost, and the profit that can be gained from keeping intellectual resources for dynamic development of national economy and science is decreasing. This means that countries that are not able to create and apply scientific knowledge within their national economy are doomed to be latecomers in terms of social and economic progress. In most cases they become the suppliers of intellectual capital for more advanced in technological and scientific respects countries. The most vivid example of such recipient-countries is the USA. It actively applies the intellectual capital received from other countries. A quarter of its scientific sphere is made up of foreign scientists, and there are more than 50% involved in priority sectors. Such immigration policy is made the U.S. official policy, which is not surprising. The USA gains direct economic profit from it, and its financial resources make it feasible. According to some sources, the USA saves up to 100 billion dollars annually due to employing scientists and highly qualified specialists from abroad.

All the above determines the urgency of taking at the state policy level efficient managerial decisions concerning the prevention of unreasonable losses of

highly qualified specialists who ensure a high standard of innovative potential of the national economy and science.

International experience and experience of our country made it possible to determine the main social and economic factors that can facilitate a decline of „brain drain” weakening as well as „brain gain”. The most important factor here is a high salary guaranteed by the state. The second factor is providing the scientists with all the necessary laboratories and research centres with modern equipment. The other significant factors include a high level of information and communication facilities, availability of high-class professionals, a possibility of professional career, and providing a high social status of intellectuals.

Nowadays suppression of intellectual migration by direct administrative and legislative methods is unrealistic and can be hardly considered politically expedient. There should be a certain system of compensational mechanisms in place. It will stimulate work in the home country and repatriation of highly-qualified specialists. Special attention should be paid to risk groups. They are young scientists and postgraduate students who work as interns or study in foreign scientific centres and middle-aged scientists who work under contract abroad who are the driving force of the intellectual capital and the most flexible group of workers.

Many countries which used to experience a large-scale emigration of intellectuals have worked out relevant managing mechanisms which allow to act upon the process of external intellectual migration and to considerably decrease its negative consequences. And on the contrary, the absence of adequate management of external intellectual migration processes causes a range of negative consequences such as a deeper disequilibrium of professional qualification structure of the research personnel; an increase of the national intellectual property losses; underuse of professional knowledge of the research personnel and scientific and pedagogical personnel for national and state purposes both in the country and abroad.

The seventh point is that state priorities in the modern economy are moving to strengthening the health care of the population and providing decent living conditions and intellectual development of people. The Belarusian state, due to its welfare economic system, has traditionally put into practice these priorities. Expenditures on education in the country make up 5.1% of the GDP and are considerable even if compared with the developed countries (HCKPБ, 2011e). It is significant that the Republic of Belarus ranks higher than such countries as Italy, Greece, etc. as far as the educational parameters are concerned. With regard to the expenditures on health care (they have risen up to 4.3% of the GDP and 7040 billion rubles in absolute terms) they provide its development though many developed countries have better results (HCKPБ, 2011f). Therefore, the management of a series of so-

cial and cultural branches of the state should be aimed at an integrated solution to the problem of harmonious and all round development of the Belarusian citizens.

The eighth point is that a new transformation of qualification and educational structure of an average worker is growing (Бондарь, 2006а; Бондарь, 2006б; Бондарь et al., 2007). Analyzing employment in different sectors of the economy with regard to the level of education, we can state that science and scientific service accumulate the biggest part of the educated employees, followed by education, culture and arts, trade and public catering, communication, health care, industry and construction. By the beginning of 2011, as many as 25.4% of employees had higher education countrywide (www.belstat.gov.by). This indicator is quite high, but the qualification and educational structure transformation management of an average employee requires special managerial measures to optimize the staff training structure. Since human resources should be aimed at most at solving problems of the modern economy.

Conclusions

To conclude, it is possible to state that it is premature to speak about large scale development of the modern economy in the Republic of Belarus, but the country can provide necessary conditions for its development. A number of features inherent in the modern economy have been embodied in its economic system: it is connected with the process of human capital asset development, a governmental welfare priorities system, the transformation of the qualification and educational social structure. Nevertheless, certain measures should be taken to provide technological and innovative components of the modern economy that's why its development involves careful attention to these components added by investment activity. To activate these components they should induce a complex of administrative actions aimed at reaching absolutely new decisions in science and technology, science and production integration, forming a new type of an employee who is professional, well-educated, disciplined and able to use complex technical information management system, to work out resource saving, low-waste technologies, new tools with predetermined features, appearance of new energy sources, new creative forms of organizing work and production.

It is necessary to create favorable conditions for the innovative activity of institutional and legal environment, to intentionally manage restructuring of the existing structural and functional blocks of the research centre (scientific sector, sphere of education, and a manufacturing complex), to provide their integration and effec-

tiveness in market conditions, to create an innovative infrastructure, to develop the innovative business and the motivational mechanism of the innovative activity. It is especially important to strengthen the institution and to provide effective protection of intellectual property, to develop a state support system of the process of intellectual activity commercialization results, and training the staff for innovative activities and modernization of technologically-based innovations is to be systemic and intentionally managed on the micro- and macro-levels.

References

1. Богдан Н.И. (2007), *Инвестиции в знания: мировые тенденции и проблемы Беларуси*, Белорусский экономический журнал 3, pp. 75-86
2. Бондарь А.В. (2006а), *Человеческий капитал в контексте макроэкономической стабилизации и конкурентоспособности национальной (малой открытой) экономики*, Минск, Настаун. газ, 336 p.
3. Бондарь А.В. (2006б), *Новая экономика на рубеже веков*, in: Мясникович М.В., *Белорусская модель социально-экономического устойчивого инновационного развития и пути реализации*, сборник материалов Междунар. науч.-практ. конф., Минск, 19-22 апреля 2006, Институт экономики НАН Беларуси, 615 p.
4. Бондарь, А.В., Корнеевец И.В., Яхницкая Н.А. (2007), *Человеческий капитал - стратегический ресурс новой экономики*, Белорусский экономический журнал 2, pp. 56-69
5. *Employment in services % of total employment (most recent) by country*, http://www.nationmaster.com/graph/lab_emp_in_ser_of_tot_emp-labor-employment-services-total, [17.01.2013]
6. Игнацкая М.А. (2006), *Новая экономика: опыт структурно-функционального анализа*, КомКнига, 304 p.
7. Лазарев И.А., Хижа Г.С. (2006), *Новая информационная экономики и сетевые механизмы развития*, Дашков и К, 240 p.
8. Лемешенко П.С. (2007), *Новая экономика: онтологические изменения и теоретические начала*, Новая экономика 9-10, pp. 5-20
9. Макаров В.Л. (2003), *Контуры экономики знаний*, Экономист 3, p. 3-15
10. МЭРБ - Министерство экономики Республики Беларусь - Новости (2011), *О реализации Комплексной программы развития сферы услуг в 2010 году и за 2006-2010 годы*, http://www.economy.gov.by/ru/news/o--realizatsii-kompleksnoj-programmy-razvitiija---sfery-uslug--v-2010g-i-za--2006-2010-gody_i_0000000627.html, [17.01.2013]

11. НСКРБ - Национальный статистический комитет Республики Беларусь (2011a), *Статистический ежегодник Республики Беларусь 2011*, Минск, 633 р.
12. НСКРБ - Национальный статистический комитет Республики Беларусь (2011b), *Сфера услуг Республики Беларусь в 2010 г.*, Минск, р. 37
13. НСКРБ - Национальный статистический комитет Республики Беларусь (2011c), *Наука и инновационная деятельность в Республике Беларусь - статистический сборник*, Минск, 146 р.
14. НСКРБ - Национальный статистический комитет Республики Беларусь (2011d), *Об инновационной деятельности в Республики Беларусь*, Минск, 99 р.
15. НСКРБ - Национальный статистический комитет Республики Беларусь (2011e), *Беларусь в цифрах 2011*, Минск
16. НСКРБ - Национальный статистический комитет Республики Беларусь (2011f), *Здоровье населения Республики Беларусь – статистический сборник*, Минск, 160 р.
17. *О качественном составе работников организаций в Республики Беларусь*, [http:// www.belstat.gov.by](http://www.belstat.gov.by), [17.01.2013]
18. Пороховский А.А. (2002), *Феномен «новой экономики» и функции государства*, Российский экономический журнал 9, pp. 63-73
19. ПРООН - Программа развития ООН (2011), *Доклад о человеческом развитии 2011. Устойчивое развитие и равенство возможностей: лучшее будущее для всех*, Весь Мир, 188 р.
20. Стрелец И.А. (2003), *Новая экономика и информационные технологии*, Экзамен, 256 р.
21. Шимов В.Н. (2008), *Структурная трансформация экономики Беларуси: предпосылки и приоритеты*, Белорусский экономический журнал 2, pp. 4-11
22. World Bank, *Доля экспорта высокотехнологичной продукции в общем экспорте - Статистические данные*, <http://www.worldbank.org>, [17.01.2013]

Koncepcja „nowej gospodarki” i specyfika jej rozwoju

Streszczenie

Nowa gospodarka to termin opisujący wynik przechodzenia od gospodarki opartej na produkcji do gospodarki opartej na usługach. Jest to zespół nowych zjawisk, procesów i zależności ekonomicznych, finansowych oraz kulturowych, opierających się na nowych technologiach. Ta stosunkowo nowa koncepcja ma zastosowanie w szczególności do sektorów, w których ludzie zależą coraz bardziej od komputerów, telekomunikacji i Internetu

w procesie produkcji, sprzedaży i dystrybucji towarów i usług. Celem niniejszego artykułu jest wskazanie możliwości, jak również dynamicznych czynników, w kontekście zarządzania procesem tworzenia nowej gospodarki w Republice Białorusi.

Słowa kluczowe

nowa gospodarka, Republika Białoruś