

UDC 332.1

INFORMATION NETWORK ECONOMICS AND UKRAINE'S TRANSITION TO THE MODEL OF INNOVATIVE TYPE OF DEVELOPMENT

Kudrina O.Yu.

ІНФОРМАЦІЙНО-МЕРЕЖЕВА ЕКОНОМІКА ТА ПЕРЕХІД УКРАЇНИ ДО МОДЕЛІ ІННОВАЦІЙНОГО ТИПУ РОЗВИТКУ

Кудріна О.Ю.

The research identifies the main trends of the information and network market development in Ukraine and its regions. The rating of Ukraine, which is presented in several international indices, which assess innovation potential, technological innovation and competitiveness, is determined. The peculiarities and priority tasks of the information sphere development in the country and the level of IT penetration into the life of society are analyzed. The grounded directions of development and reform of the sphere of information technologies in Ukraine are grounded.

Key words: innovation, information technology, information society, network economy.

Formulation of the problem. In today's conditions, when the transition of different countries to the postindustrial economy is carried out, the role of information in the achievement of high rates and quality of economic growth is sharply increasing. For Ukraine, this process is complicated by the need for radical modernization of the economy based on the formation of holistic information network system and the continuous use of innovations.

Innovation is a key factor in economic growth and the welfare of any country. All successful modern innovation systems are based on the innovative business sector. Improving production processes and creating new products and services is vital for international competitiveness, business success, and the creation of high-value jobs and solving large-scale social and environmental problems. Therefore, in order to be prosperous and successful in the coming decades, the country's economy must rely on high-performance science and an effective innovation system.

The existence of market and system crashes means that government support for innovation is inadequate. This support should be consistent with the goals and instruments of other country's program and strategic documents, as well as the limited public finances, capital and human resources. This means that there is an urgent

need for high-quality analysis of the state of innovation and the assessment of progress in achieving the goals for better understanding of processes that stimulate or restrain innovation, and government actions to regulate innovation processes towards sustainable development.

The most important problems faced by the state are related to the formation of information conditions for innovation development. Today, no matter when the need for close interaction between the theory and practice of the information and network economy for the effective policy of the state increases.

In connection with this study of the basic concepts of the theory of information society, the nature, types and properties of information, the importance of knowledge, their place and role in economic activity is very important. An analysis of the impact of information and communication technologies on the formation of production and market processes is relevant. The results of the study will allow developing a Ukrainian innovation model for the growth of the information and network economy with the definition of the role of the state in the development of the information system.

Analysis of recent research and publications. Domestic and foreign scientists, in particular S. Andreev, D. Bell, P. Drucker, J. Jalil, M. Castells, E. Toffler and others, made a significant contribution to the study of the formation and development of the information economy. In particular, the available scientific works are devoted to the study of the economic aspects of the information economy, the successful foreign experience of its development.

The purpose of the article is to identify trends and explore the prospects for the development of Ukraine's information innovation economy.

Presentation of the main material. One of the factors shaping the information network economy is the formation of an information society. Elements of the information society began to emerge in our country since

the beginning of the period of perestroika. Ukraine, slowly moving away from totalitarianism, proclaimed a course on democracy, impossible without a well-developed information space. With the liberalization of social and political life, a huge stream of previously inaccessible information, both external and internal, migration of labor, capital, goods began to transform the economy of our country from a closed, command-administrative, totalitarian to an open, market-driven, democratic, causing an "information explosion" in our society.

At the international level, an integrated assessment of the state of development of the innovation system is widely used. Ukraine is represented in several international ratings assessing innovation potential, technological and innovative competitiveness. The most authoritative are the Global Competitiveness Index, the Global Innovation Index, the Doing Business Index, and the Human Development Index.

The Human Development Index (HDI) is presented with the aim of more balanced assessment of the country's progress and taking into account its efforts towards the development of the social sphere, in contrast to the assessment only in terms of innovation development, which mainly characterize the industrial sphere. HDI assesses progress in three of its key indicators: long and healthy life, access to knowledge and a decent standard of living. If a country is demonstrating progress in the HDI, then all economic and innovation activities are successful, even if the rating is lowered in other international indices.

An analysis of the Global Talent Index and the Global Talent Competitiveness Index, which is part of the Talent Enrollment Index, is included in the list of target quantitative indicators of the Medium-Term Plan of the Government's Priority Actions by 2020.

According to the report of the World Economic Forum on Global Competitiveness, "The Global Competitiveness Report 2016-2017," Ukraine lost 6 positions and ranked 85th among 138 studied countries. Greece ranked 86th and Namibia ranked 84th. Switzerland tops the rating for the eighth consecutive year. Singapore remained in 2nd place, the United States has maintained 3rd place in the ranking. The first five countries also included the Netherlands and Germany.

Ukraine's position deteriorated in 7 out of 12 criteria: the efficiency of commodity markets - 108th place (compared with 106th in 2015); development of the financial market - 130th (121st); the level of business development is 98th (91st); infrastructure - 75th (69th); health care and elementary education - 54th (45th); labor market efficiency - 73d (56th); The capacity of the market - 47th place (compared to 45th in 2015) [1].

The rating of Ukraine under the sub-index "Innovations" in the report 2016-2017 is 52nd, which means the growth is 2 positions.

Ukraine has improved its position in the ranking for all indicators of the innovation sub-index, with the exception of 2 components "Quality of Research Institutes" - 50th place compared to 43rd in 2015, "Research

and development expenditures (R & D)" - 68th place against 54 th in 2015. The greatest growth was noted according to the criteria: "State purchases of the newest technologies and products" - from 98 to 82 positions of the rating, "Relationships of universities with industry in the field of DIR" - from 74 to 57 positions [4].

Under the "Technological Readiness" sub-index, Ukraine ranked 85th in the ranking against the 86th in 2015.

According to all components of the "Technology Readiness" sub-index, Ukraine has improved its position in the rating. The share of Internet users increased from 43.4% to 49.3%, but Ukraine's position remained unchanged - 80th place in the rating. The most problematic indicator is "Foreign investment and technology transfer" (115th place), but positive dynamics have been observed since 2013 [6].

According to the Global Innovation index report 2017, co-sponsored by Cornell University, the INSEAD School of Business and the World Intellectual Property Organization (WIPO), the Global Indicator of Innovation (GII) 2017 covers 127 economies and uses 82 indicators across a range of topics.

Switzerland and Sweden lead the rating, just like a year ago. In the third position - the Netherlands, having improved its indicator for the year by six positions. Also, the ten most innovative countries include: USA, Great Britain, Denmark, Singapore, Finland, Germany and Ireland. In 2017 Ukraine occupied the highest position for the last 7 years - 50th place, and in the group below the average income level - 2nd place after Vietnam, bypassing Mongolia, Moldova, Armenia and India. Compared to 2016, Ukraine has risen by 6 points, which is due to a high coefficient of innovation efficiency, that is, the ratio of the result to innovative resources. The basis of Ukrainian innovation competitiveness is human capital. Its effective implementation is the main competitive advantage. However, compared with 2016, this figure has decreased due to the reduction of public spending on education (18th place in 2016, 22nd place - 2017) and science. Under the subheading "human capital" in 2017, Ukraine stands 41st against the 40th in 2016. The factor that holds back innovation is the low level of R & D spending (54th in 2017), which leads to the search for other sources of funding and migration scientists outside Ukraine [7].

In addition to the Global Innovation Index, the ranking of countries is based on the Innovation Efficiency Index, which is calculated on the basis of the same indicators and sub-indices as The Global Innovation Index, by ranking the ratio of Innovation Output Index to the Innovative Input Index. The index of innovation efficiency characterizes the creation of favorable conditions for innovative performance.

According to this indicator in 2017, Ukraine is in 11th place, which is one position higher than in 2016. This indicates an increase in the efficiency of innovation activity in the country.

One of the key drivers of economic growth is the ability of citizens to acquire, accumulate and use infor-

mation as a result of the dynamic development of information and communication technologies. The value of this factor for economic growth is confirmed by global research projects, according to which ICTs account for about a quarter of GDP growth and 40% growth of labor productivity in the European Union.

The rapid growth of the importance of information and electronic services and, consequently, the use of ICT in the economy, public administration and in everyday life of citizens caused a new direction of transformation - the transition to the information economy.

The development of society in the information economy is undergoing change as changes in infrastructure and technologies take place. Since the main product of the information economy is intelligent services and high-tech products, the information and knowledge on the basis of which information technologies are developing are the most valuable.

By 2020, Ukraine intends to become the leader in the field of IT outsourcing. A new project, which involves creating 100 thousand jobs in this area, launches the Ukrainian government together with representatives of IT companies. Expected revenues of more than \$ 10 billion from the export of IT services in the US and the EU, as well as \$ 1 billion in investment in expanding and modernizing the education system. In 2013, the first grants fund in the field of information technology, the Global Technology Foundation, was established in Ukraine to support IT projects in the field of public services, communication, media, education, healthcare, cloud computing [5].

Among the priority directions of development and reform of the sphere of information technologies in Ukraine are:

- IT outsourcing, that is, the transfer of the internal unit or units of the enterprise and all related assets to the provider of services offering a certain service for a specified period of time at a fixed price;
- research centers, which should be created on the basis of public-private partnership; e-commerce;
- startups, which, according to analysts, form an important sector of the IT market;
- IT in the public sector - the modernization of the automation system, ranging from customs control to the introduction of e-government, requires significant investments, but is justified in the long term;
- telecom [2].

The main strategic goal of the development of the information society in Ukraine is accelerating the development and implementation of the latest competitive information technologies in all spheres of public life, in particular in the Ukrainian economy, which will enable to increase Ukraine's competitiveness, labor productivity in all spheres of the economy, the degree of development of information infrastructure, in particular, Ukrainian Internet segment, increase the share of high-tech products, promote quality and accessibility of edu-

cation, science, culture, health through the introduction of information technology, to expand the human's access to access to national and world information electronic resources, to create new jobs, improve the working conditions and human life [3].

For the successful development of the IT sphere of Ukraine, the state needs: to create transparent and stable business rules; guarantee business security; to promote the development of the domestic market, in particular food companies; to provide high-quality training of professional personnel for the IT sphere; to form a positive IT image of Ukraine; create an "adequate" and transparent fiscal system.

Conclusions from the conducted research. Thus, the network economy in this case acts as a platform for innovation, efficiency, expansion of regional cooperation, increase of economic development as a separate region or country as a whole.

At the core of the formation of the state regional policy for the development of a network economy in the context of international cooperation there should be an approach aimed at strengthening the role of regions in intensifying the integration processes of Ukraine and the development of transnational, transfrontier co-operation, increasing the competitiveness of individual regions of the country, which ultimately strengthens the economic potential of the state.

References

1. Analitichna dovidka. Stan innovacijnoi' dij'al'nosti ta dij'al'nosti u sferi transferu tehnologij v Ukraini u 2016 roci. – 2017. – K.: MON Ukrainy, UINTEI. – 131 s.
2. Kulynych O. O. Naprjamy rozvytku IKT-sfery u zabezpechenni nalezhnogo rivnja konkurentospromozhnosti na mizhnarodnomu rynku IT-poslug / O. O. Kulynych, S. V. Vojtko // Ekonomika. Upravlinnja. Innovacii'. – 2014. – № 1. – Rezhym dostupu: http://nbuv.gov.ua/j-pdf/eui_2014_1_60.pdf.
3. Pyrig S. O. Informacijni tehnologii' ta i'h vykorystannja na pidpryjemstvah Ukrainy / S. O. Pyrig, O. A. Nuzhna // Ekonomichnyj forum. – 2014. – № 3. – S. 190–195. – Rezhym dostupu: http://nbuv.gov.ua/j-pdf/ecfor_2014_3_30.pdf.
4. Rejtyngovi ocinky Ukrainy za Indeksom merezhevoi' gotovnosti 2016. – Rezhym dostupu: <http://edclub.com.ua/analitika/rejtyngovi-ocinky-ukrayiny-za-indeksom-merezhevoyi-gotovnosti-2016>
5. Sedikova I. O. Suchasnyj stan rozvytku telekomunikacijnogo prostoru Ukrainy / I. O. Sedikova, D. V. Sedikov // Ekonomika harchovoi' promyslovosti. – 2014. – № 4. – S. 74–78. – Rezhym dostupu: http://nbuv.gov.ua/j-pdf/echp_2014_4_13.pdf.
6. Global Information Technology Report 2016. - Access Mode: <http://reports.weforum.org/global-information-technology-report-2016/>
7. The Global Innovation Index 2014 [Electronic resource]. - Access mode: <http://www.globalinnovationindex.org/>.

Кудріна О.Ю. Інформаційно-мережева економіка та перехід України до моделі інноваційного типу розвитку

У дослідженні визначено основні тенденції розвитку інформаційно-мережевого ринку України та її регіонів. Визначено рейтинг України, який представлено у кількох міжнародних індексах, які оцінюють інноваційний потенціал, технологічну та інноваційну конкурентоспроможність. Проаналізовано особливості та пріоритетні завдання розвитку інформаційної сфери в країні і рівень проникнення ІТ у життєдіяльність суспільства. Обґрунтовано пріоритетні напрямки розвитку та реформування сфери інформаційних технологій в Україні.

Ключові слова: інновації, інформаційні технології, інформаційне суспільство, мережева економіка.

Кудрина О.Ю. Информационно-сетевая экономика и переход Украины к модели инновационного типа развития.

В исследовании определены основные тенденции развития информационно- сетевого рынка Украины и ее регионов. Определен рейтинг Украины, представленный в нескольких международных индексах, которые оценивают инновационный потенциал, технологическую и инновационную конкурентоспособность. Проанализированы особенности и приоритетные задачи развития информационной сферы в стране и уровень проникновения ИТ в жизнедеятельность общества. Обоснованы приоритетные направления развития и реформирования сферы информационных технологий в Украине.

Ключевые слова: сетевая экономика, инновации, информационные система, информационное общество.

Кудріна О. Ю. – завідувач кафедри економіки та бізнесу Сумського державного педагогічного університету імені А.С.Макаренка, д.е.н., доцент

Рецензент: д.е.н., проф **Костирко Л.А.**

Стаття подана 25.05.2017.