

driven economy include education and science, that define the presence of an educated and skilled population capable of production, distribution and use of knowledge.

According to the analysis it was established that at the present stage the main economic factors of formation and development of higher education in Ukraine are: the level of economic stability, GDP (including per capita), the level of education financing as % of GDP, the investment level of the education sector, demographic processes, the level of inflation, income, expenses and savings of population.

On the basis of the study of peculiarities of financing higher education institutions in Ukraine and generalization of foreign experience it was offered the usage of a multi-channel financing model for higher education, which, in addition to the legislatively defined sources of funding, involves uses of such instruments as: the state nominal financial obligations, education loan and endowment funds.

In short term, at the strategic level of higher education management there is a need to develop a program of actions (a strategy), to create a "margin of power" to enter the global education market, utilizing all available factors of competitiveness, the potential of Ukrainian education and science, and to create new features that require changing the vector of development of the national system of higher education. It will ensure the dynamic development of the education sector, will stimulate the processes of commercialization of knowledge, will strengthen the market position of state higher education institutions, will increase their competitiveness, because only under these conditions education will be able to fulfill its mission to develop the human potential of the country.

1.11. Modern trends in the education economy development in the context of information revolution and globalization

The work presents the main trends in the education economy development in the context of globalization, which, in our view, characterizes certain bifurcation points that have already occurred or will occur in the nearest future. Some elements of institutional economic theory methodological apparatus are used in the work, such as transaction costs, institutional environment, bifurcation point, competition of standards^{121, 122}.

The traditional "old good" university, although we do not like it, becomes history, however, just like the economy of education in the second half of the XX century. A distinctive feature of this process, sometimes imperceptible to the eye in the short term, but continuing, is the decline in the role of traditional libraries, with

¹²¹Nord D. 1981. Structure and Change in Economic History, New York: W. W. Norton, pp. 228.

¹²²Nord D. 1990. Institutions, Institutional Change and Economic Performance, Cambridge University Press, pp. 152.

which we will start a description of the main trends in the education economy development in the context of globalization.

1. The decline of the traditional libraries role, the urgent need for their modernization to create modern centers for providing access to information and knowledge. The library of the twentieth century provided an undoubted "fund of knowledge" for people who received education in the era of mass struggle against poverty, population illiteracy and the introduction of compulsory comprehensive primary and secondary education system. The creation of libraries in different forms and manifestations occurred both in the form of creating a public weal, and on the basis of private interest^{123,124}. A person who has the status of a "well-read person" and a large home library was perceived positively in society, and the desire for knowledge and high education occupied high positions in the hierarchy of human values, especially in the USSR. At the same time, the access to information and knowledge in libraries (both public and domestic) is associated with the presence of transaction costs, appeared in the costs of money and time to find the necessary information. Traditional library ensured their minimization in conditions of comparatively high cost and lack of printed editions.

Today the alternative cost of traditional library services is significantly increased in the context of human activities revolutionary informatization and the transformation of the information retrieval system and access to knowledge. Therefore, the traditional library of the twentieth century declined, and this phenomenon is not temporary, as library workers believe, as well as some representatives of higher education institutions administration, but it reflects the changes in the system of providing access to information and knowledge that have already passed the bifurcation point and led to the modernization of functions and the role of libraries in modern conditions. At the same time, facing expanded opportunities in the new conditions, a person is often lost in information flows, some of which have an unreliable component. Free access to ever-increasing information flows promotes the emergence of new types of transaction costs associated with its search and effective use for mastering new competencies^{125,126,127}. Therefore, the demand for the modernized services of libraries is formed, which facilitates their basic functions transformation. The modernized library should, first of all, meet modern requirements to the methods and forms of providing access to information

¹²³Edward Levitas, M.A.M., 2009. Managing liquidity in research-intensive firms: Signaling and cash flow effects of patents and alliance activities. *Strategic Manage. J.* 9999(9999) n/a.

¹²⁴Evenson, R.E., Y. Kislev. 1976. A stochastic model of applied research. *The Journal of Political Economy* 84(2) 265-281.

¹²⁵Acemoğlu D., J. Robinson (2012), *Why Nations Fail: The Origins of Power, Prosperity, and Poverty*, Hardcover, 2012, pp. 544.

¹²⁶Chirot D. 1977. *Social Change in the Twentieth Century*, New York: Harcourt Brace Jovanovich, 288 p.

¹²⁷Chirot D. 1986. *Social Change in the Modern Era*, New York: Harcourt Brace Jovanovich, 296 p.

and knowledge, offering systematization services, data synthesis and structuring, and also providing access to information that is hard-to-get in the free environment. Thus, the library will again acquire its lost organization functions, allowing minimization of transaction costs for its users.

The use of administrative methods of returning students and teachers to the library is illogical and inefficient. Otherwise, the free remote access providing to paid electronic publications will be perceived in a different way, the creation and maintenance of Wi-Fi zones and other services providing, possibly for extra charge, but minimizing the transaction costs of their users. It is very expensive to support a traditional library, and a modernized library can become a profit center, rather than a cost for universities and municipal authorities.

2. The research in English have won a global informal "struggle of standards", and today the knowledge of at least English is no longer desirable, but the necessary attribute of education economy as well as for all its participants - students, teachers, higher education institutions administration, the system of state and regional education management.

From the standpoint of institutional economic theory, the language environment is a superconvention, a necessary component of the modern global institutional environment, along with the legislative system and the system of monetary circulation. A certain language is not only a necessary attribute of the state, but also the means of communication between different languages speakers. Therefore, the use of a specific language in the global communications system can be analyzed from the position of the "standard theory" known in institutionalism. Different languages in this regard can be viewed as different standards and as a result of evolution the more popular (not always the most effective) standard wins the competition of standards. The winning standard allows you reducing transaction costs in the process of using it for various purposes. For example, this sentence is written with a keyboard with a "QWERTY" layout using the Microsoft Word text editor by Microsoft, the "TNR" font on an A4 sheet. The more often and more users use the standard, the greater is the global effect of its use.

Due to various reasons and as a result of various processes, knowledge of English today is necessary for the teacher, striving to work on relevant scientific research and to have access to the results of recent achievements, including in the field of education, as well as for the student seeking to master competencies, which significantly increase their competitiveness in the modern global labor market. In this case, knowing English is not just a competence, but often opens or simplifies access to mastering other necessary competencies, thus referring to the basic competencies in the current labor market.

In this context, in our view, a demonstrative event is the inclusion into the order of academic title of associate professor and professor granting (and this is a classical institution from the standpoint of institutional economic theory) of new mandatory conditions^{128,129}. Moreover, along with the availability of publications in foreign (mainly English language) publications and participation in international projects, internships or conferences, which does not directly provide the proficiency in English, it is proposed to introduce an obligatory international certificate that first of all confirms knowledge of English.

3. Informatization of education economics. Creation of complex modern information education systems at higher education institutions which allows solving the following tasks:

- to provide access to relevant and reliable knowledge and information, which makes it possible to offer a competitive educational product on the market;
- to master competences in the field of information and computer technology by all participants of the educational process, and, unlike the knowledge of foreign languages, they can vary greatly in their quality and composition;
- an access to mastering new competencies in various fields and areas;
- a reduction of transaction costs associated with modern educational services provision;
- the presence of a visible synergetic effect of increasing the overall level and quality of human capital in conditions when informatization processes simultaneously and with steady speed affect the activities of teachers, students and administration of universities.

Education economics informatization is a continuous and constant process, which is an integral part of the modern society development, i.e. this is not the point of bifurcation, but the result of the transition to the new conditions of the dynamic process of modern education economy formation, within which it is necessary to carry out its activities^{130,131,142}.

4. Creation of a globalized educational space that provides an opportunity not only to unify educational procedures, but also significantly strengthen the competition between universities in conditions of creating a relatively homogeneous institutional environment and reducing transaction costs associated with the possibility to adequately assess the educational product quality and the transition from one university to another. And in the future, these types of transaction costs will

¹²⁸Fleming, L. 2001. Recombinant uncertainty in technological search. *ManagementScience* 47(1) 117-132.

¹²⁹Fleming, L., O. Sorenson. 2004. Science as a map in technological search. *StrategicManagementJournal* 25 909-928.

¹³⁰David, P.A., B.H. Hall, A.A. Toole. 2000. Is public R&D a complement or substitute for private R&D? *A review of the econometric evidence. ResearchPolicy* 29(4-5) 497-529.

¹³¹Eisenhardt, K.M., C.B. Schoonhoven. 1990. Organizational growth: Linking founding team, strategy, environment, and growth among U.S. semiconductor ventures, 1978-1988. *Adm. Sci. Q.* 35(3) 504-529.

only decline, which will positively affect the development of both students and teachers academic mobility.

5. Self-education as an integral part of the educational process and the formation of knowledge economy new segments, forms and methods of educational services providing.

The information systems development, the emergence and accelerated development of new means of communication have contributed to the new forms of education occurrence as well as the rapid development of popular educational resources, such as Coursera, Prometheus and others. Already, the certificates received in the training process using these resources are recognized by many universities; moreover, they are recognized in most states, unlike national diplomas^{132,135}. In addition, the education process is significantly cheaper, which largely addresses the urgent problem of lack of access to quality education for the general population in developing countries.

In the future, it seems relevant and expedient to investigate the modern university (higher education institution) as an institutional unit in the constantly changing institutional environment which functions and role in the socioeconomic system performance are also characterized by the bifurcation point existence, and the changes in the backbone elements condition have already begun, or are going to begin.

1.12. Modernization of university management system

Entered the third millennium as an independent state Ukraine has been building a national education system. The main priorities in the modernization of the education system are its democratization, fundamental improvement, use of new learning technologies, integration of various training forms and systems. The strategic objective of the state educational policy in Ukraine is competitive entry in the world market of education services, deepening international cooperation.

However, nowadays the majority of Ukrainian universities are facing the managerial crisis caused by discrepancy between the existing system of management and new economic conditions. The traditional management of HEI is inefficient, and the desire to preserve financial stability only affects the quality of education and research activities.

Reformation of the universities' system of management is of a particular relevance in connection with passing the new Law of Ukraine "On Higher Education" (2014), where universities have considerable autonomy in academic, financial and

¹³²Immanuel Maurice Wallerstein, Carlos Antonio Aguirre Rojas, Charles C Lemert. 2012. Uncertain worlds: world-systems analysis in changing times, Publisher: Boulder, CO : Paradigm Publishers, 235 p.