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THE HIGHER EDUCATION ADAPTABILITY TO THE DIGITAL ECONOMY

Absract. Digitalization processes are global and performed in all spheres of economic activities. The development of the digital economy correlates with the dynamics of educational, scientific and technical, and innovative activities in the country. Higher education particularly affects the development of the digital economy because it is a system training highly qualified personnel, conducting quality research, and generating innovations. The **purpose** of the article is the identification of promising vectors of higher education system development under the conditions of digitalization of national economy. *Section 1* of the article presents the authors' methodological approach to assessment the impact of educational, research, and innovation components on digital economy development. The implementation of the authors' approach covers the phased use of methods of statistical, index, cluster and system analysis. The influence of higher education on the structural components of the digital economy (educational, research, innovative ones) is grounded. The **result** of the study was the identification of main trends in the development of higher education under the conditions of digital economy. The problems of the development of higher education are systematized in the groups: contextual, legal, organizational and economic, financial, logistical problems, and problems of internationalization. Based on the results of the analysis, the authors conclude the necessity of development of a conceptual base for increasing the digital adaptability of the higher education system to new socio-economic conditions. *Section 2* of the article describes the concept of the digital adaptability strategy of the higher education system. The concept was developed on the base of structural and functional, systemic and synergetic, and institutional approaches. The proposed concept is based on the idea of deepening the long-term partnership of universities with stakeholders within the Quadruple Helix model. In the **conclusion** section, the authors highlight the key priorities of the digital adaptability strategy of the higher education system.

Key words: higher education, digital economy, adaptability, Quadruple Helix Concept, strategy, university.

Introduction. Digitalization is one of the main trends of social and economic development of leading countries. It increases the role of higher education as a knowledge-generating system that trains highly qualified personnel for needs of national economy, conducts high-quality research, and initiates innovative projects. Achieving positive synergy effects from the higher education institutions' activities requires the establishment of long-term cooperation with a wide range of stakeholders from different sectors: government, business enterprise sector, civil society (within the Quadruple Helix Model). In this context, it is growing the scientific and practical interest to assessment of interaction between these stakeholders under the conditions of digital economy. Moreover, it is becoming urgent to identify the main components of digital economy development, and to research the universities' contribution to their dynamics.

Brief literature review on digitalization of economy. Bell D. (1999), Castells M. (2000), and Masuda J. (1983) formulated the methodological basis for the study of information society. F. Machlup (1962), and Porat M. (1977) created the fundament of research of information (digital) economy. Shkarlet et al. (2017) and [16] Vdovenko et al. (2019) disclosed the basic descriptors of the national economy digitalization. Andriessen D. (2004), Schuller T. (2007), and Kalenyuk I. et al. (2020) studied the role of education and intellectual capital in the economic growth. The influence of science and knowledge in countries' socio-economic development was analyzed in research papers of Bekkers R. (2008), and Brenner Th. (2015). Some scholars (Kwiek, 2008; Oakeshott, 2003-2004) substantiated the contribution of higher education institutions in the development of society. Kasatkin et al. (2019) highlighted the aspects of modern universities impact on the formation of the digital wave of Kondratiev's long cycles. Cosmulese et al. (2019), and Donald E. Hanna (2019) identified the peculiarities of the development of education in the conditions of digitalization of society and national economy. Patsiorkovskiy et al. (2019) described the regional aspects of development of education in conditions of digital society. Tran et al. (2020) characterized the national specific of digitalization of educational system.

Brief literature review on Quadruple Helix Concept development. The methodological background of the Quadruple Helix Concept was made by Etzkowitz H. (2008) and Leydesdorff L. (2012), who have described the relationships of stakeholders with the framework of Triple Helix ("government – universities – industry"). The merit of Carayannis E., Campbell D. and Grigoroudis E. (2009; 2012; 2016) was the complement of Triple Helix Model with the fourth element – the civil society. Woo Park H. (2014) supported and developed the scientific and applied aspects of the Quadruple Helix Concept. Oscar A. et al. (2010) and Colapinto C. et al. (2012) disclosed the specific of using of Quadruple Helix Concept in issues of innovation development. Peshkova G. and Samarina A. (2018) highlighted the features of cooperation between universities and business in the conditions of digital economy. At the same time, the problem of identification of prospects of the higher education institutions integration into partnership within the Quadruple Helix Concept needs in-depth research in the context of national economy digitalization.

The **purpose** of the article is the identification of promising vectors of higher education system development under the conditions of digitalization of national economy. The achievement of the purpose requires a comprehensive approach to the analysis of effects of cooperation of stakeholders within the Quadruple Helix Concept. Such approach could be realized based on analysis of a set of indicators that characterize the results of universities educational, research, and innovation activities. In the conditions of digital economy development, it is becoming urgent to estimate the level of compliance of quantitative parameters and professional structure of universities graduates to the new needs of the real sector of economy. The analysis of the parameters of universities' research activity allows assessing the practical value of the R&D results, prospects of their commercialization, and adequacy to the needs of the business, government, and civil society on the stage of digitalization.

The hypotheses of research:

H1 – the higher education and the digital economy develop interconnected;

H2 – the development of the digital economy determines by three components: educational, research, innovative ones;

H3 – the higher education contributes to the dynamics of all three components of the digital economy;

H4 – the development of higher education under the conditions of digital economy requires the synchronization of the interests of universities, business, government and civil society (within the Quadruple Helix Concept);

H5 – the digital adaptability strategy of the higher education system could be developed based on the Quadruple Helix Concept.

Methods and materials. Conducting the research, we developed the authors' methodological approach to assessment the impact of educational, research, and innovation components on digital economy development. Constructing the approach, we have taken into consideration the following aspects:

- consider the current social-economical tendencies, and trends of scientific-technical development;
- comprise the set of official open-accessed statistical data;
- divide parameters into three groups according to educational, research, and innovation components;
- the higher education contributes the development of educational, research, and innovation components of digital economy;
- thorough analysis of identified parameters.

The developed methodological approach to assessment the impact of educational, research, and innovation components on digital economy development includes three blocks – table 1. Developing the methodological approach, we focus on the fact that higher education affects the dynamics of each of the three structural components of the digital economy:

- educational component - universities provide training and retraining of personnel, forming their ability to think in innovative way, as well as their ICT-skills;
- research component - universities conduct fundamental and applied research, generating new knowledge, inventions, as well as commercialize the R&D results in industry;
- innovative component - universities implement innovative projects, develop innovations, as well as transfer them to the national economy.

Table 1 – Methods of assessment the impact of educational, research, and innovation components on digital economy development

Block	Method	Characteristics	Results
1	method of statistical analysis	allowed to estimate the initial level of readiness of the higher education system for development in the conditions of the digital economy	Identified trends in Ukraine: reduction in the number of higher education institutions; decrease in the number of students; reducing expenditures on higher education in terms of aggregate government spending; reducing the share of higher education expenditure in the total GDP (Fig. 1)
2	index analysis method	revealed the trend of development of the digital economy, within which the educational, research and innovation indices were distinguished	The digital economy in Ukraine is at the stage of formation. Trends in the development of the national higher education system are correlated with the dynamics of the educational index. It confirms the necessity of the development of measures to ensure the adaptability of the higher education system to the conditions of digitalization.
3	clustering method	allowed to deepen the results obtained in the previous stages by conducting a meso-economic analysis on the educational, research and innovation components of the digital economy (on the base of K-means algorithm)	The existence of regional imbalances in the development of digital economy in Ukraine. Conclusion about the necessity of differentiated approach to identification of the higher education system potential in activation of digitalization processes at the mesoeconomic level, (taking into consideration the fact that the results of higher education institutions activities are reflected in educational, research, and innovation components of digital economy.

At the same time, the digital economy determines the transformation of the higher education system. To ensure competitiveness in the new socio-economic conditions, universities should be ready for digitalization and adaptation to external changes (both at the level of the national economy and at the level of the global scientific and educational area).

The stages of proposed methodical approach are described in table 2. The algorithm of presented in this article methodical approach allow:

- to identify the level of digital economy development;
- to specify the features of educational, innovation, and research component of the digital economy development;
- to identify problems;
- to develop the recommendations for activating the contribution of higher education into the development of digital economy in the country.

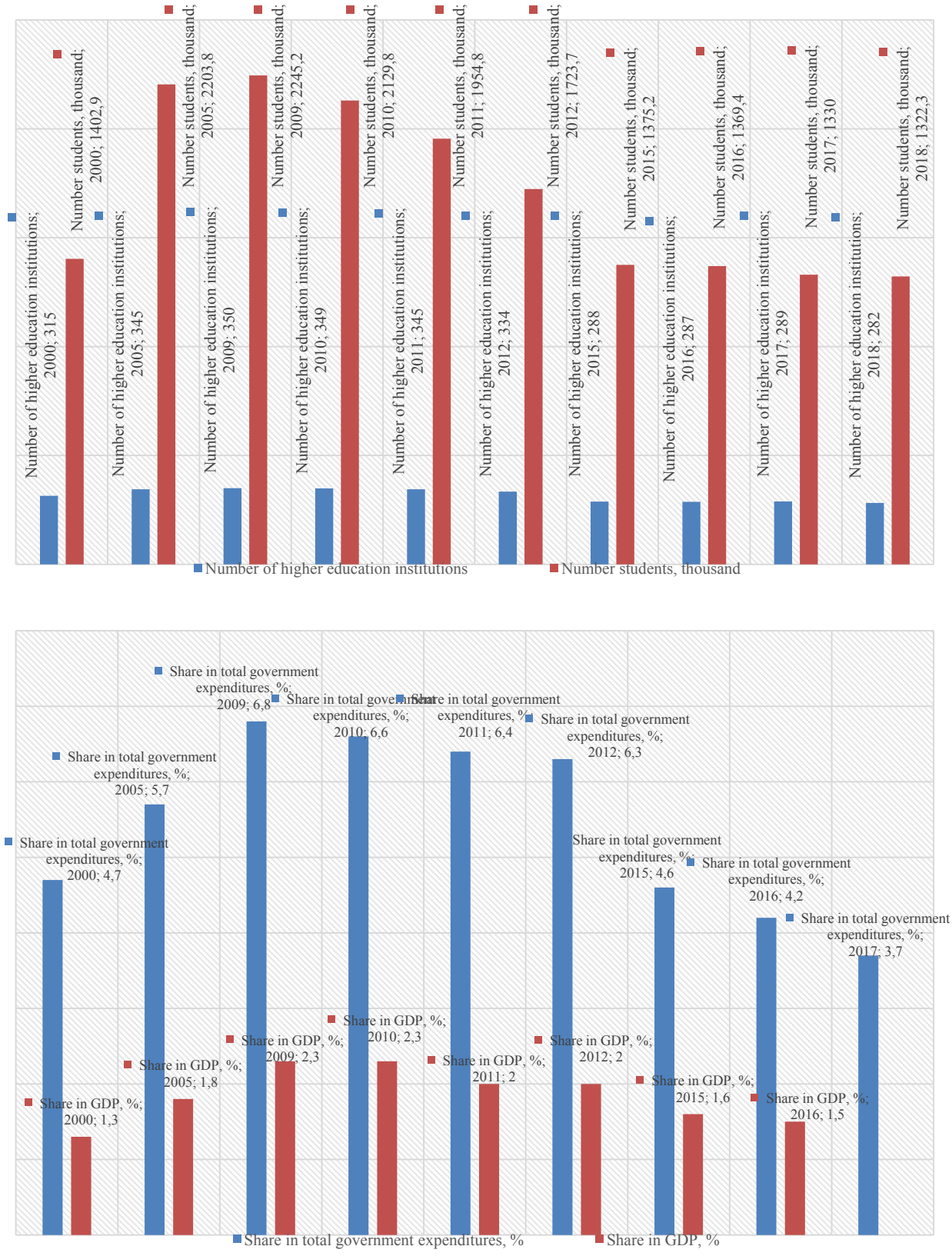


Figure 1 – Parameters of development of national higher education system of Ukraine

Table 2 – Methods of assessment the impact of educational, research, and innovation components on digital economy development

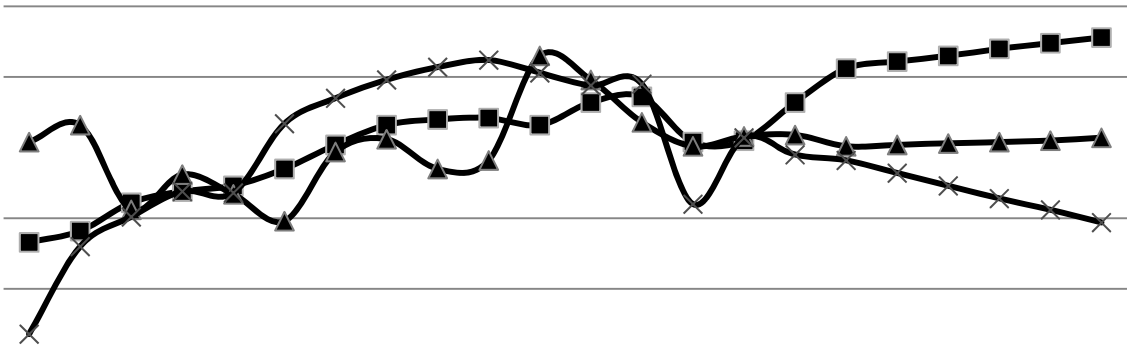
Stage	Characteristics
structuration of the comprehensive integral indicator	educational component, innovation component, and research components
identification of the system of partial indicators	for the characteristics of comprehensive index' components: - educational component – indicators characterizing the staffing potential of the digital economy development (number and structure of higher education institutions; number of undergraduate students, postgraduate students, doctoral students; funding of higher education); - innovation component – indicators characterizing the innovative development of national economy as the basis for its digitalization (introduction of innovative products and new technological processes; expenditures on innovation activity; applications for patenting inventions; agreements on intellectual property rights disposal; share of innovative active enterprises); - research component – indicators characterizing personnel and financial maintenance of scientific and technological development as a basis of the digital economy formation (number of research organizations; number of scientists; R&D expenditures; share of higher education institutions in processes of R&D implementation and financing);
choice of method for constructing a comprehensive indicator	multiplication method, sum method or geometric mean method
accumulation of statistical data array on identified partial indicators	in dynamics - to ensure the reliability of evaluation
determining the weight of each partial indicator within the components	– compiling a matrix of pairwise comparisons - for constructing a hierarchy of indicators according to the degree of influence on the components of comprehensive integral index; – compiling of calculation tables - for determining weight coefficients
formalization and normalization of analytical indicators	compiling of a matrix of standardized values
calculation of components indices	in terms of dynamics of three components. Calculation of forecast values of partial indices of the comprehensive indicator

Results. *Approbation of methodological approach to assessment the impact of educational, research, and innovation components on digital economy development*

The implementation of the first block of methodological approach to assessment the impact of educational, research, and innovation components on digital economy development as exemplified by Ukraine made it possible to come to the following conclusions. The national higher education system demonstrated a low level of adaptation to the current challenges of digital economy. The negative tendencies in the development of this system are caused by the following reasons: the state policy of optimizing of higher education institutions' structure; demographic and migration problems; low level of global competitiveness of domestic universities; reduction of state funding of higher education; low diversification of financial sources of universities.

The results of calculation within the second block of the authors' methodological approach are presented in figure 2. The index of innovation component *(Iinn)* demonstrates the fluctuations, and high elasticity to the transformations of external factors. Its dynamic correlates with the parameters of research activities *(Isc)*. During the index analysis, it was forecasted the downward dynamics of educational component *(Iedu)*. The mentioned tendency could negatively effect on digitalization of national economy, so it is important to identify the measures of effective realization of the higher education institutions' potential.

The analysis at the second stage allowed making the conclusions about the significant influence of higher education system on digital economy development. This conclusion could be explain with the fact that modern higher education institutions consolidate an intellectual capital of the country; they generate knowledge, innovations, inventions; and also train a new generation of entrepreneurs and professionals for national economy. The analysis identified some problem points, particularly the undeveloped cooperation of universities and business; inefficiency of public financing of higher education; outdated technical base of universities; "brain drain"; low parameters of commercialization of R&D results, etc.



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Isc	-0,67	-0,59	-0,39	-0,31	-0,27	-0,15	0,02	0,16	0,2	0,21	0,16	0,32	0,36	0,04	0,05	0,32	0,56	0,61	0,65	0,7	0,74	0,78
Iinn	0,04	0,16	-0,44	-0,19	-0,33	-0,52	-0,03	0,06	-0,15	-0,09	0,65	0,48	0,18	0,01	0,08	0,09	0,01	0,02	0,03	0,04	0,05	0,07
Iedu	-1,32	-0,7	-0,49	-0,31	-0,32	0,17	0,35	0,48	0,57	0,62	0,53	0,44	0,45	-0,4	0,07	-0,05	-0,09	-0,18	-0,27	-0,36	-0,44	-0,53

Figure 2 – Results of index analysis

The third block of the methodological approach cover the cluster analysis that allow deepening of results obtained on previous stages. The clustering divided the country's regions into groups in appliance with the development levels of educational, research, and innovation components of digital economy. The results showed that the educational component is promising in intensifying the digital economy in Ukraine. The effective realization of the higher education institutions' potential requires the state support of modernization processes in accordance with the challenges of digital economy, and the strengthening of cooperation of universities, enterprises, government and civil society within the Quadruple Helix Concept. Such partnership could solve the financial problems of higher educational institutions, because it allows commercialization of universities' R&D results; promotes the transformation of universities into the regional centers of innovations able to attract the best talents, and investment from diversified financing sources.

Summarizing the result of approbation of three blocks of authors' methodological approach to assessment the impact of components on digital economy development, we identified the system problems of higher education development in the conditions of digitalization of national economy:

- contextual problems – irrelevance or inconsistency of the educational and research processes to the needs of business enterprise sector, government and/or civil society;
- legal problems – inconsistency of the current legislation regarding the commercialization of intellectual property; low level of protection of intellectual property rights;
- organizational and economic problems – underdevelopment of mechanisms for commercial transfer of R&D results;
- financial problems – low diversification of funding sources; low level of universities' financial autonomy;
- logistical problems – outdated equipment of teaching and research laboratories; low development level of innovation and information infrastructure;
- problems of coherence – lack of effective motivational mechanisms for cooperation of economic entities in fields of higher education, science, innovation;
- problems of internationalization – weak competitive position of the national higher education institutions in the global area.

The problems of the higher education system development cannot be fully solved within the existing concept, because it does not take into account the dichotomous nature of the influence of the higher education and the digital economy. Within our research, we focus on the relevance of development of the digital adaptability of higher education that requires the formation of relevant strategy.

Concept of digital adaptability strategy of the higher education system. The development of the concept of digital adaptability strategy of the higher education system is caused by the following reasons: the need to modernize the national higher education system; updating of the integrated financing model within the Quadruple Helix concept ("government sector – higher education sector – business enterprise sector – civil society"); maximizing the positive synergistic effects of stakeholder interaction based on their function and target consent; ensuring the impulse response of the higher education system to the influence of exogenous and endogenous factors; raising the level of resilience, the system's ability to

withstand the external influences, and return to the desired trajectory of development after the impact of the challenges generated by digitalization of the national economy.

The study is based on the following methodological approaches:

- structural and functional approach – used in the analysis of the influence of the global educational area on the interactions between elements of the higher education system;
- systematic approach - in analyzing the essence of the higher education system and its modernization processes in order to ensure its digital adaptability to the challenges and perturbations brought by the digital economy;
- synergistic approach - to develop the mechanisms for effective interaction between the subjects of higher education sector, governance sector, business enterprise sector and civil society in order to minimize the effects of negative synergy and maximize the effects of positive synergy, which are able to ensure the resilient development of the higher education system in the conditions of national economy digitalization;
- institutional approach - to develop a theoretical basis for building a dense business environment within the national economy, based on function and target consent of the Quadruple Helix model entities. Such a business environment should be able to adequately respond to the challenges of the digital economy and to create the preconditions for ensuring the high resilience of economic agents.

The described conceptual approaches are used in developing the concept of digital adaptability strategy of the higher education system (figure 3).

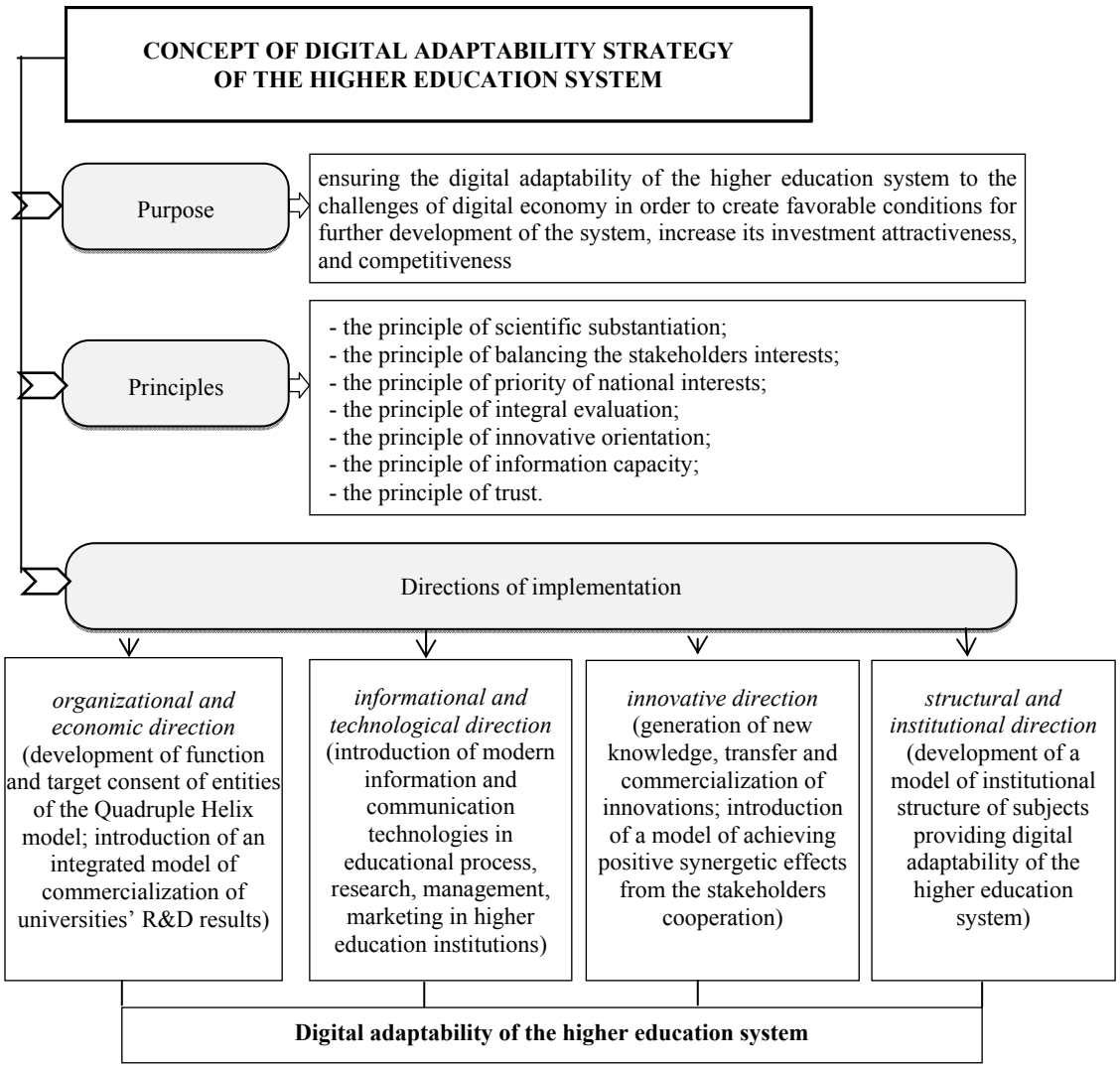


Figure 3 – Conceptual scheme of the digital adaptability strategy of the higher education system

The concept structurally contains the following components:

1) systemic-synergistic (a set of connection between stakeholders that could generate synergetic effects);

2) regulatory (a set of institutions - state, public, international, etc. - in the fields of higher education and science);

3) structural and functional (a set of functions and tasks oriented towards the achievement of the defined strategic goals);

4) informational and communicational (a set of technologies that allow to establish and develop communication channels between stakeholders).

The subjects of the proposed Strategy are: the state and its bodies; higher education institutions and their management (the manage subsystem). The objects are: universities, institutes, academies, their staff and activities (the managed subsystem).

The priorities and expected results of the Strategy should be consistent with the strategic and tactical goals of the state policy in the fields of higher education, scientific, technical and innovative development of the national economy. The implementation of the proposed Strategy is based on the establishment of long-term interaction of its main stakeholders (table 3).

Table 3 – Quadruple Helix entities synchronization matrix
for the implementation of the digital adaptability strategy of the higher education system

	Governance sector	*Business enterprise sector*	*Higher education sector*	*Private non-profit sector* *Civil society*
Governance sector	National interests	Fiscal stimulation of stakeholders cooperation	State orders	Equal access to quality educational services
Business enterprise sector	Taxation	Competition	Investment	Meeting the needs for goods and services
Higher education sector	Transfer and commercialization of R&D results	Skilled personnel; R&D results	Quality educational services	Meeting the needs for quality educational services
Private non-profit sector *Civil society*	Taxation	Needs, interests	Public monitoring	Development of information society

Presented in table 3 matrix contains the results of systematization of perspective directions of synergetic partnership of subjects of the Quadruple Helix model. It is important to emphasize that the entities in the Table 3 in the rows are mentioned as subjects (it means they act and influence), and in the columns are listed as objects (it means they are influenced by the subjects). At the intersection in the matrix are identified the priority vectors of entities cooperation under the conditions of digitalization of the economy.

The basis for the development Strategy (figure 3) is the system-synergetic paradigm and theoretical results of generalizing scientific approaches to the study of the phenomenon of digital adaptability. In addition, current trends in the development of the national higher education system and exogenous factors of influence have been taken into account. The exogenous factors are the factors caused by the transformations of the global educational area that change the very nature and scale of the interaction of subjects. Internationalization and globalization factors need to be taken into account in the Strategy because they create additional risks for domestic universities. Increasing demographic difficulties are leading to a decrease in the student population in EU countries. In such circumstances, foreign education institutions are constantly searching for new markets. The Ukrainian domestic educational services market is attractive for foreign universities. The openness of the Ukrainian market causes the new challenges to higher education institutions of the country. In addition to mentioned above, there is a steady upward trend in the demand of Ukrainian students for foreign universities' educational services.

Therefore, the purpose of the proposed Strategy is to ensure digital adaptability of the national higher education system to the challenges generated by the processes of digitalization of economy in order to

create favorable conditions for further development of the system, increase its investment attractiveness, level of competitiveness and sustainability. The objectives of the Strategy in accordance with the defined purpose are the following:

- synchronization of interests by Quadruple Helix model entities;
- coordination of stakeholders activities;
- stimulating the private investment into the higher education system; activation of commercialization processes;
- promoting the effectiveness of international research and educational projects;
- ensuring the competitiveness of domestic higher education institutions;
- increasing the level of adequacy of educational and research activities of universities to the needs of the real sector of economy in the conditions of its digitalization;
- development of innovative infrastructure at higher education institutions, etc.

The key priorities of the digital adaptability strategy of the higher education system are the following:

1) harmonization with the priorities of the state innovation, scientific, educational policies, as well as harmonization with international programs in the fields of higher education and science;

2) encourage cooperation between the entities of the Quadruple Helix model in educational and research activities;

3) ensuring the effectiveness of the higher education financing model (with accent on diversification of financing sources, differentiation of universities services, expanding the universities financial autonomy);

4) activation of international scientific and educational cooperation of universities in response to the requirements of globalization and internationalization of the educational area;

5) increase of efficiency of universities' educational activity (indicator - level of competitiveness of graduates in the labor market), research (volumes of commercialization of patented inventions and developments), innovative (indicators of transfer of generated innovations to the real sector of economy) and international activity (number of joint research and educational projects);

6) accelerating the pace of implementation of modern information and communication technologies;

7) guaranteeing the effective functioning of the intellectual property protection system;

8) introduction of effective motivational mechanisms for the development of cooperation between higher education institutions and the business enterprise sector.

The implementation of digital adaptability strategy of the higher education system involves strengthening the responsibility of stakeholders:

- at the national level - parliament, government, specialized ministries and departments;
- at the meso-level - public organizations in the fields of higher education and science; employers' associations; business associations, etc.;
- at the local level - management, administrative and scientific-pedagogical staff of higher education institutions (table 4).

Table 4 – Levels of implementation of the digital adaptability strategy of the higher education system

Characteristics of regulation directions at different levels	Possible consequences of effective implementation of measures within the strategy
Macro level – Organization, regulation of modernization processes and the order of their implementation; resource provision; monitoring efficiency of use of resources	Formation at the national level of preconditions for the implementation of modernization changes in the higher education system; enhancing the competitiveness of the national higher education system; synchronization of development of subjects of the higher education system and business enterprise sector
Meso-level – Mobilization of resources and potentials of stakeholders; attraction of external resources for implementation of the Strategy	Reconciling the interests of stakeholders; ensuring the effective use of their potential
Micro level - Encouraging higher education institutions, scientific and pedagogical staff to support modernization changes in the system	Increasing the flexibility of higher education institutions and their management; development of their endogenous environment; increase of international competitiveness of domestic universities at the global educational services market

The joint effective activity of the subjects at the described above levels is possible on the basis of development of mutual trust. In the condition of digitalization of national economy such partnership requires the implementation of effective communication channels, providing high flexibility of information networks, rapid replenishment of information bases, guaranteeing wide and free access of stakeholders to information resources.

Discussion. The concept of digital adaptability strategy of the higher education system presented in the article is focused on increasing the competitiveness of the national higher education system. In this context, it correlates with the research results of Mok K.H. (2015) and Donald E. Hanna (2019). Developing the concept, we paid special attention to identifying promising directions for improvement of both educational policy (Vaughan & Walker, 2012) and approaches to the management of educational systems (Marchenko & Sydorenko, 2019). We agree with the findings of Kassymova et al. (2019) regarding the importance of the strategic planning of the innovative development of higher education, since this is an uncontested way of development within the highly-competitive global scientific and educational area under the conditions of digitalization and internationalization of higher education (Kim, 2016). Therefore we highlighted the innovative direction of implementation of the digital adaptability strategy of the higher education system.

Prospects for further research are the identification of effective tools to increase the impact of digital higher education on sustainable development. This issue has been partially investigated by Giesenbauer B. and Müller-Christ G. (2020), but only at the microeconomic level (at the level of higher education institutions). At the same time, the relevance of this research question requires its in-depth study at the macroeconomic level (at the level of national higher education systems).

Conclusion. Therefore, in our opinion, ensuring the digital adaptability of the higher education system in the medium and long term is impossible without establishing effective synergetic cooperation of domestic universities with enterprises, state authorities, and public organizations. Taking into account the imbalance of activities of the subjects of different sectors of the national economy, their non-synchronization with the higher education sector, the attention of scientists is concentrated on issues of development and implementation of effective motivational mechanisms and appropriate tools for promoting partnership. Achieving synergies from the interaction of Quadruple Helix model entities requires reconciling their interests (coherence principles), pooling resources and potentials (consolidation principle), and coordinating activities (based on trust and information capacity).

The implementation of digital adaptability strategy of the higher education system contributes to the convergence of education, science and business; ensures diversification of funding sources for higher education institutions; enhances the investment attractiveness of education and science; provides for increased international competitiveness of the national higher education system. The digital adaptability of the higher education system will ensure its sustainability in dynamic exogenous conditions, the ability to restore the desired trajectory of development after shock perturbations, to reorganize or adapt to the conditions of digitalization of the national economy.

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ЖОҒАРЫ БІЛІМ БЕРУДІҢ ЦИФРЛЫҚ ЭКОНОМИКА ЖАҒДАЙЫНА БЕЙІМДІЛІГІ

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АДАПТИВНОСТЬ ВЫСШЕГО ОБРАЗОВАНИЯ К УСЛОВИЯМ ЦИФРОВОЙ ЭКОНОМИКИ

Аннотация. Процессы диджитализации являются глобальными и проявляются во всех сферах хозяйственной деятельности экономических субъектов. Развитие цифровой экономики коррелирует с динамикой образовательной, научно-технической и инновационной деятельности в стране. Особенное влияние на развитие цифровой экономики осуществляет высшее образование как система, осуществляющая подготовку высококвалифицированных кадров, проведение качественных исследований и генерацию инноваций. Целью исследования является выявление перспективных направлений развития системы высшего образования в условиях цифровизации национальной экономики. В Секции 1 статьи представлен авторский методический подход к оценке влияния образовательной, исследовательской и инновационной компонент на развитие цифровой экономики. Реализация авторского подхода предусматривает поэтапное использование методов статистического, индексного, кластерного и системного анализа. Доказано влияние высшего образования на выделенные структурные компоненты цифровой экономики (образовательную, исследовательскую, инновационную). Результатом исследования стало определение ключевых тенденций развития системы высшего образования в условиях цифровой экономики. Проблемы развития высшего образования систематизированы в такие группы: контекстуальные, правовые, организационно-экономические, финансовые, логистические проблемы и проблемы интернационализации. На основании результатов проведенного анализа авторы приходят к выводу целесообразности формирования концептуальной базы повышения цифровой адаптивности системы высшего образования к новым социально-экономическим условиям.

В Секции 2 охарактеризована концепция стратегии адаптации национальной системы высшего образования к вызовам цифровой экономики. Разработка концепции реализована с использованием структурно-функционального, системно-синергетического и институционального подходов. В основу предлагаемой концепции авторами положена идея углубления долгосрочного партнерства университетов со стейкхолдерами по модели Quadruple Helix. В выводах авторами выделены ключевые приоритеты имплементации стратегии адаптивности системы высшего образования к условиям цифровой экономики, в частности: гармонизация с приоритетами государственной инновационной, научной, образовательной политики; стимулирование образовательного и научно-технического сотрудничества субъектов модели Quadruple Helix; внедрение эффективной модели финансирования высшего образования; активизация международного научно-образовательного сотрудничества вузов; ускорение темпов внедрения современных информационных и коммуникационных технологий; обеспечение эффективного функционирования системы защиты прав интеллектуальной собственности; активизация процессов коммерциализации результатов научных исследований.

Ключевые слова: высшее образование, цифровая экономика, адаптивность, концепция Quadruple Helix, стратегия, университет.

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