

Integrated Model of the Competitive Higher Education: Legal, Economic and Psycho-pedagogical Aspects

Nataliia Kholiavko^{1*}, Tetiana Chekhovych², Oleksii Mirshuk³ & Viktoriia Vovk⁴

Received 5 August 2020; Revised 5 September 2020; Accepted 17 October 2020; Published online 30 October 2020
© Iran University of Science and Technology 2020

ABSTRACT

In the era of digitization and globalization, national higher education systems face a number of challenges of the exogenous nature. Intensification of the competition in the educational services market necessitates the search for new ways of increasing the level of the competitiveness of universities and higher education systems as a whole. Development of theoretical, methodological and applied foundations of the formation and implementation of the integrated model of the competitive higher education becomes relevant. Application of the interdisciplinary approach to the research allows combining tools and techniques of different sciences. Economic, psycho-pedagogical, legal and managerial blocks are structural components of the proposed model of the competitive higher education. The effective implementation of such a model requires the involvement of a wide range of stakeholders and the impact of changing factors in the exogenous environment. Successful implementation of the model requires the existence of a developed regulatory framework harmonized with the provisions of the EU legislation. Practical implementation of the model concept proposed in this article will increase the competitiveness of the national higher education system in a highly competitive global scientific and educational area.

KEYWORDS: *Competitiveness of higher education; Legislation; Legal norms; Intellectual property rights; Commercialization; Internationalization.*

1. Introduction

1.1. Problem description

Globalization and digitization of the scientific and educational space form a set of challenges to the higher education system, requiring a significant transformation of the principles and directions of the activity of higher education institutions. In such circumstances, it becomes necessary to develop new approaches to ensuring the competitiveness of universities. A modern competitive educational institution cannot only be a re-translator of knowledge and information from professors to students. In the XXI century, their role in society is changing radically; universities are being turned into economic

actors, being moved away from a purely social function. In a highly competitive educational environment, universities are constantly looking for their own competitive advantages that can increase their ranking in the world rankings.

1.2. Literature review

The issues of ensuring the competitiveness of the higher education system are in the focus of attention of a number of scientists. However, most scientific publications focus on the analysis of certain aspects and perspectives of solving this research question. A number of scientists study the pedagogical aspects of increasing the competitiveness of higher education, in particular on the basis of strengthening the role of extracurricular work with students [1; 2; 5; 6; 9; 16]. Such scientists as Bennell R. [4], Choudaha R. [10], Killick D. [16], Knight J. [18], Wit H. et al [32] reveal the specific effects of internationalization on the universities' ranks in a highly competitive global scientific and educational area. Shkarlet S. et al [26; 27] study the economic factors that influence on the competitiveness level of higher education

*
Corresponding author: Nataliia Kholiavko
nateco@meta.ua

1. Department of Finance, Banking and Insurance, Chernihiv Polytechnic National University, Shevchenko str, Chernihiv, Ukraine.
2. Department, Taras Shevchenko National University of Kyiv, Kyiv, Ukraine.
3. Department of Psychology and Pedagogy, National Academy of the National Guard of Ukraine, Kharkiv, Ukraine
4. Department of International Management, Kyiv National University of Trade and Economics, Kyiv, Ukraine.

institution or national higher education system. Among such factors, a special role is played by the universities' R&D commercialization, the activation of which requires the modernization of the legal mechanism [26]. The above scholars have made a significant contribution to the development of theoretical and applied foundations for increasing the competitiveness of the higher education system. However, there is still a need to systematize existing research and to develop the integrated model of the competitive higher education.

The purpose of the article is to develop theoretical and applied foundations for the formation of the integrated model of the competitive higher education.

2. Results and discussion

In accordance with this goal, the research was conducted based on the interdisciplinary approach, which allowed the use of research methods of different sciences. Application of general scientific methods of analysis and deduction made it possible to study the component composition of the main blocks of the integrated model of the competitive higher education. Methods of synthesis and systematization allowed us to offer a comprehensive theoretical concept of such a model. The method of visualization in the article provides a graphical interpretation of the results. The article consists of three logically related sections that describe the content of the main

blocks of the integrated model:

Section I – psycho-pedagogical – conducting a pedagogical experiment allowed to test and evaluate the effectiveness of proposals formulated by the authors to improve the educational process, modernize methodological support, diversify forms of out-of-class work with students;

Section II – legal and managerial – the legislative framework and strategies of the state policy of the higher education internationalization were investigated on the basis of the system-functional method; the expediency of using the program-target method in developing institutional strategies for the internationalization of universities is substantiated;

Section III – economic - comparative analysis made it possible to study the world experience of the sources diversification of financing of higher education institutions and identify effective instruments of state stimulation of the cooperation of enterprises with universities.

Based on the postulates of systematic, synergistic and behavioral approaches, the results outlined above are generalized in order to construct a theoretical concept for the integrated model of the competitive higher education.

In our opinion, ensuring the competitiveness of the higher education system requires the interdisciplinary approach. The model of the competitive higher education proposed by us is an integrated one (see Figure 1).

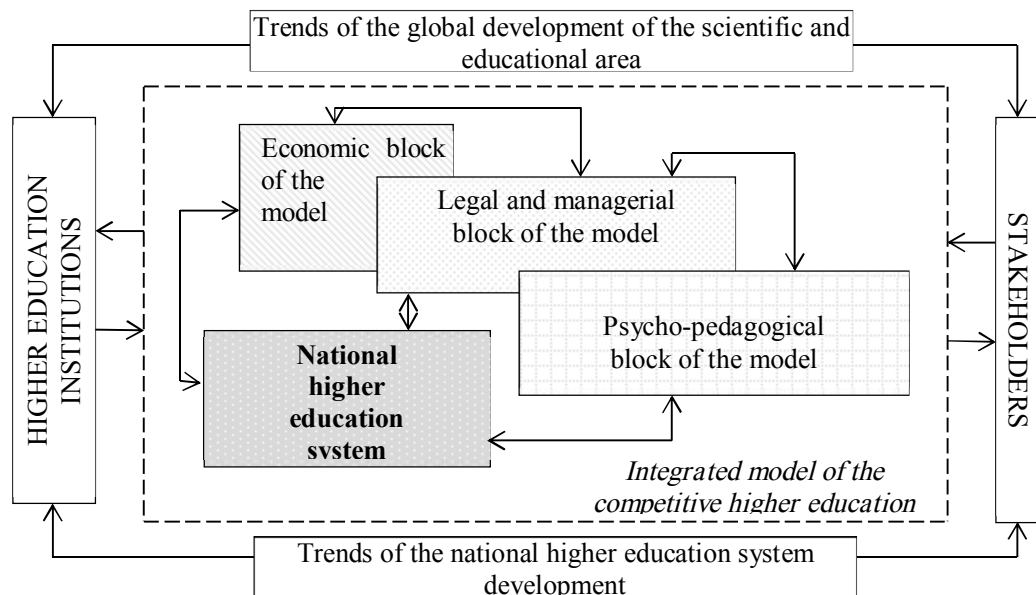


Fig. 1. Conceptual diagram of the integrated model of the competitive higher education

This is explained by first, the coverage of psychological, pedagogical, methodological,

socio-economic, legal and managerial aspects of this model implementation. Second, the model's focus on attracting a wide range of stakeholders, actors in different sectors of the national economy. Within the article, the author's vision of the internal content of structural blocks of the integrated model of the competitive higher education, i.e. psycho-pedagogical, economic,

legal and managerial blocks, is revealed.

Psycho-Pedagogical Block of the Integrated Model of the Competitive Higher Education

The psycho-pedagogical block of the model covers a complex of aspects on the modernization of the educational activity of higher education institutions (see Figure 2).

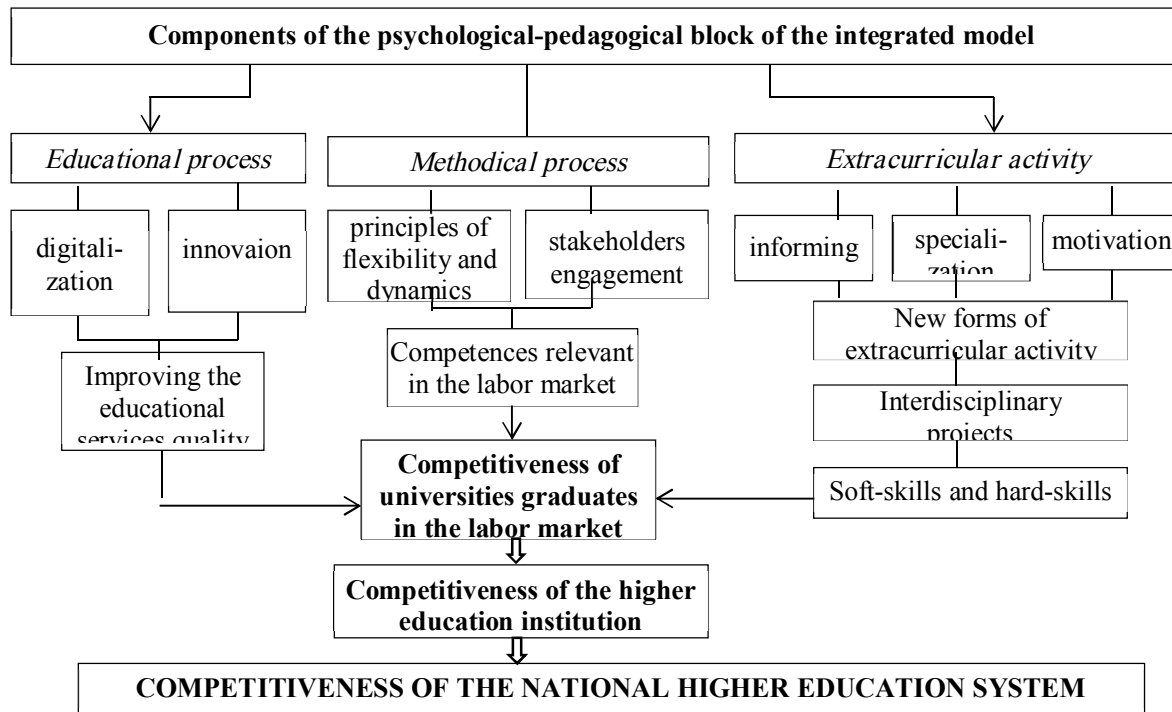


Fig. 2. Conceptual diagram of the psycho-pedagogical block of the integrated model of the competitive higher education

We can group these aspects into several groups, namely: those concerning the educational process; those concerning the methodological support of the educational process; those related to the extracurricular work with the youth. Transformation of the educational process should be carried out in the areas of digitization, that is, active introduction of information and communication technologies and distance learning [9]; and innovation, which means the development and implementation of pedagogical innovations, the latest educational technologies and approaches to working with students. Undoubtedly, the transformations outlined above require universities to be equipped with state-of-the-art equipment, devices, computer technology, and licensed software. Universities are faced with the challenge of attracting investment to implement such transformations and upgrade their logistics facilities.

In addition to the above, it is important to find the

optimum between traditional (classroom) and innovative (remote, non-classroom) forms of the work with students. Transformations should be student-centered, based on the principle of individual approach, that is, focus on the maximum consideration of the psychological characteristics of each individual student of the higher education institution. Under this approach to transformation within the framework of the psycho-pedagogical block of the model, the educational process will allow to develop not only professional competences in students, but also develop their soft-skills (communication skills, leadership and organizational skills, ability to work in a team, etc.); this will enhance the students' self-fulfillment and self-actualization during their university studies. Modernization of the educational process of universities will improve the quality of educational services and thus can increase the competitiveness level of educational institutions both in the national and

international market of educational services. The latter is particularly relevant in the context of increasing the students' mobility in the world. Achieving changes in the activities of educational institutions, updating educational content is impossible without modernizing the methodological support of these processes. First, it must be flexible and dynamic, i.e. able to adapt quickly to new challenges of the external environment (global scientific-educational area, world information space, scientific and technological progress, local stakeholders, etc.). Second, development and updating of the methodological support of the university's educational process should be carried out by scientific and pedagogical staff in close partnership with representatives of local authorities, the public and business as potential employers. It will allow harmonizing the invasive programs with real demands of the labor market, in particular regarding the qualification and professional structure of university graduates, their knowledge, practical skills, abilities and competences. Moreover, wide involvement of stakeholders will allow to specify not only the set of hard-skills (professional competences and skills, determined by the specifics of the chosen profession by a student), but also soft-skills (skills and competencies, which will enhance the professional skills of students through the development of their team skills, developing their teamwork, work, management, innovation generation, etc.). In their totality, transformations in the educational process and appropriate methodological support are intended to increase the competitiveness of university graduates in the labor markets. In addition, the competitiveness of graduates directly affects the competitiveness level of higher education institutions.

Within the framework of the psycho-pedagogical block of the integrated model of the competitive higher education, apart from educational and methodological aspects, we have highlighted the aspect related to the extracurricular activity of the university. With a gradual decline in classroom learning, the role of extracurricular activities in the training of future professionals is increasing [1; 6; 9; 22; 24; 25]. Appearing in the United States (Yale and Harvard University) in the nineteenth century, the extracurricular activity changed significantly in the direction of expanding its forms. Over time, literacy clubs were supplemented by interest clubs, arts clubs, sports clubs (basketball, athletics, gymnastics, football, baseball, dance, etc.) [5; 10]. To date, the variety of forms of extracurricular activities is

much greater and largely dependent on the specifics of the higher education institution and the specialty mastered by students. In addition, some young people may be interested in participating in extracurricular activities that do not directly relate to their chosen specialty or participate in several extracurricular activities at the same time.

As evidenced by the research, extracurricular activities have a positive effect on the formation of personal and professional qualities of higher education applicants [11; 12; 19; 20]. Students participating in more than one extracurricular activity show an order of magnitude higher learning outcomes than youth not involved in the extracurricular activities of the university at all [17; 29; 28]. Participation in extracurricular activities has a powerful positive influence on the development of students' communication skills, as it involves establishing active communication of young people of different ages, various professions, different types of temperament and character. Their joint activities help widening the range of interpersonal contacts, improve speech behavior and develop the skills of establishing effective tolerant interpersonal contact.

In addition, adverse effects may occur, such as transferring student learning priorities to extracurricular activities, less attention, and time spent on studying. In order to avoid such manifestations, we consider it advisable to use the tools of psychological science to stimulate youth participation in extracurricular activities and maintain their interest.

The analysis of the existing extracurricular programs proves the expediency of their improvement in the following three main areas:

- 1) information - improvement of traffic channels and ways of presenting information on extracurricular activities to higher education applicants of various specialties;
- 2) profiling - deepening extracurricular programs by incorporating the components of professional competency formation according to the profile of student preparation;
- 3) motivation - expanding the system of moral and material incentives for higher education applicants to participate in extracurricular activities.

As for the first direction, it is worth emphasizing the relevance of modernization of communication channels - use of the power of university sites, active use of social networks popular among the youth audience (Facebook, Twitter, Instagram, etc.). It is also advisable to change the way in which information is presented to modern youth,

which is mainly related to the so-called "generation Y". Psychological observations prove that traditional print ads near the deans are not able to interest students. It is necessary to take into consideration current trends in communication with young people. Information posts on social networks about organizing and conducting out-of-class events should contain little text material, have illustrated inserts and a call to action; high interest among young people is usually caused by audio and video information. Regarding the second direction of improving out-of-class work with students, we can emphasize the importance of using active methods of training, gaming, simulation and stimulation games in the obligatory organization of feedback from participants in out-of-class activities. The need for forms diversification of forms of out-of-class work of the university is urgent. Modern forms include intellectual youth clubs, social project agencies, tutor schools, training schools, volunteer associations, various interest clubs, and more. Traditional forms of extracurricular work can be combined with modern ones, as well as complemented by the use of pedagogical innovations and the latest information and communication technologies. From a pedagogical and psychological point of view, this will stimulate the interest of young people, increase their activity level and establish effective communication, which together will ensure the achievement of the goals of extra-curricular activities.

In our opinion, the most promising form of extracurricular work is the activity on the development and implementation of interdisciplinary projects, to which students of different faculties, specialties and areas of preparation are involved. Advantages of this form are the following: development of students' communication skills, their teamwork skills, leadership skills; development of interpersonal and communication skills; developing the ability to make decisions independently and find creative ways to solve common problems; development of students' professional competences in the course of fulfilling their assigned project tasks; development of inter-faculty interaction; increased interest of students due to the availability of specific applied results of the completed work; ample opportunities for

self-knowledge of students and implementation of their abilities and talents.

In our opinion, special attention needs to be given to the third direction of improving the extracurricular work with applicants for higher education. Methods of moral motivation, which from the standpoint of psychology can positively influence the involvement of young people in extracurricular activities, and they include the following: posting photos of the most active students on the Honors Board; coverage of activists' information, their achievements and activities in student media; awarding the best students with letters of appreciation; granting additional points in passing tests and exams; release of participants of extracurricular projects from carrying out some educational tasks in subjects; gratitude from partner organizations for non-audit activities; bringing all the achievements of students in extra-curricular activities into their characteristics. Material promotion methods include bonuses; personal scholarships; valuable gifts; delegation as participants to round tables, conferences; support of participation of activists of out-of-class activities in training programs, programs of international exchange of students; awarding medals, cups, valuable gifts; material encouragement of the winners of competitions and the like. Methods of moral and material motivation should be combined and modified in response to students' reaction to them.

Designing a psycho-pedagogical block of the integrated model of the competitive higher education, we emphasize the feasibility of integrating classroom and extracurricular work with higher education applicants. The theoretical knowledge obtained in the classroom should be practically implemented in the course of extracurricular activities. All extracurricular activities should be aimed not only at organizing meaningful leisure activities for students, but also at developing their professionally important abilities, skills and qualities.

Legal and Managerial Block of the Integrated Model of Competitive Higher Education

The second block of the integrated model of the competitive higher education - legal and managerial - covers the following components (see Figure 3):

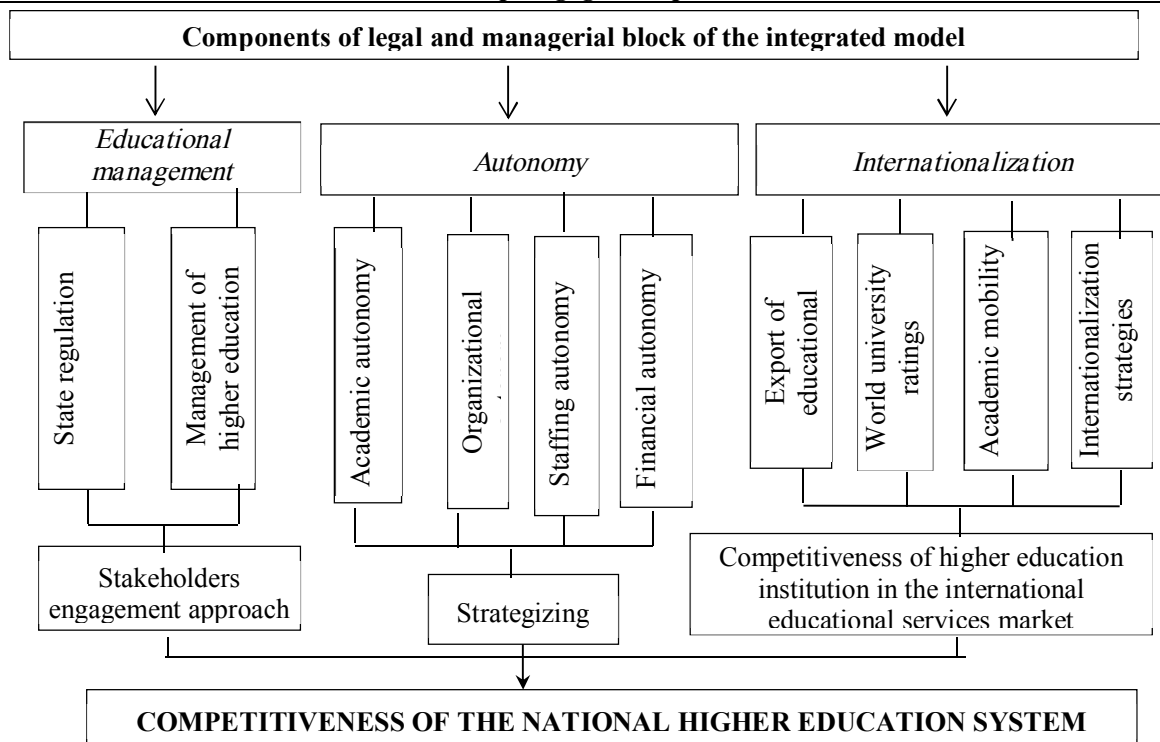


Fig. 3. Conceptual diagram of the legal and managerial block of the integrated model of the competitive higher education

I - educational management - includes a set of methods and principles of state regulation of the higher education system (national level) and management of the activity of higher education institutions (micro level).

Effectiveness of the educational management is determined by the ability of management to identify key trends in the development of the global scientific and educational space, predict the dynamics of key performance indicators of universities, develop and implement strategic development plans. The latter, from a legal point of view, requires professional development of legal acts, guidance letters, orders at the national level, as well as orders and instructions at the institutional level. Educational management should be based on the principle of equal partnership and involvement of a wide range of stakeholders in important decision-making in higher education and science.

II - autonomy - covers a complex of legal aspects of expanding the autonomy of higher education institutions, including amendments to the current legislation in terms of providing:

- academic autonomy - the ability of the university to make its own decisions regarding the volume of students' preparation, structure and content of educational programs;
- organizational autonomy - independence of the university in the election of executives and

creation of legal entities (with profitable status);

- personnel autonomy - ability to make their own decisions about hiring and firing employees, remuneration for their work, and promoting their professional growth;

- financial autonomy - independence of the university in attracting and managing financial resources, real estate, as well as in obtaining loans.

III - internationalization - in the context of the study refers to a set of measures to develop and implement a national strategy for the internationalization of higher education [2; 7; 13; 20; 21]. In turn, such a strategy should be consistent with the current legislation of the country in the fields of education, science, international activity and European integration, as well as with other previously approved government programs and strategies. Integration into the global scientific and educational space requires not only a national strategy, but also institutionalized and internationalized strategies for the internationalization [14; 15; 28-32]. The latter, in our opinion, it is advisable to focus on the following aspects:

- promotion (information, marketing, promotion) of educational services of universities abroad;
- ensuring the flexibility of integration mechanisms;
- implementation of modern instruments of the

internationalization of higher education institutions;

- intensification of international research activities (including implementation of international scientific and educational projects);
- guaranteeing the transparency of nostrification procedures for educational documents;
- increasing the effectiveness of cooperation with stakeholders (including collaboration in the transfer and commercialization of research results of university scientists in the real economy);
- legal registration of business contacts between higher education institutions and foreign universities, innovatively active enterprises;
- improvement of approaches to the organization of study, leisure, adaptation and support of foreign students.

The comprehensive approach outlined above to promote the internationalization of higher education and higher education institutions, based on science-based strategy and stakeholder engagement, will increase academic mobility, increase export volumes of educational services of universities, intensify international scientific and technical cooperation and increase the competitive position of the national higher education system in world rankings.

Economic Block of the Integrated Model of the Competitive Higher Education

The economic block of the integrated model of the competitive higher education includes a complex of aspects related to the financing of universities; their economic security and commercialization of research results in the real economy (see Figure 4). The state budget is one of the main sources of funding for higher education systems in several countries. However,

in the face of diminished state funding, deficits in the state budget, and the ever-increasing needs of universities, the need to diversify sources of financial resources is urgent. We can point out promisingly the extension of the practice of forming university endowment funds and obtaining grants of international funds and organizations for the implementation of scientific and educational projects [3; 4]. The matter of expanding the cooperation between universities and the business sector is particularly acute for higher education systems. The imbalance of interests of higher education institutions and business limits the opportunities for universities to attract private investment [17; 23].

The researchers [24; 25] forecast the growing of business interest in collaborating with higher education institutions in the nearest future. This is explained by the search for new tools for enterprises to increase their competitiveness and their growing attraction to the innovative path of development. Collaboration with higher education institutions increases the access of entrepreneurs to information on prospective, capable graduates; an opportunity to consult highly qualified experts; up-to-date scientific developments and their operational commercialization with further introduction into economic activity; provides opportunities for permanent development of ideas, cost-effective use of information and innovation infrastructure of universities (including start-up centers, business incubators, science parks, techno polis, etc.). In other words, the University-Business collaboration enables business entities to be up-to-date, innovative and, on that basis, competitive.

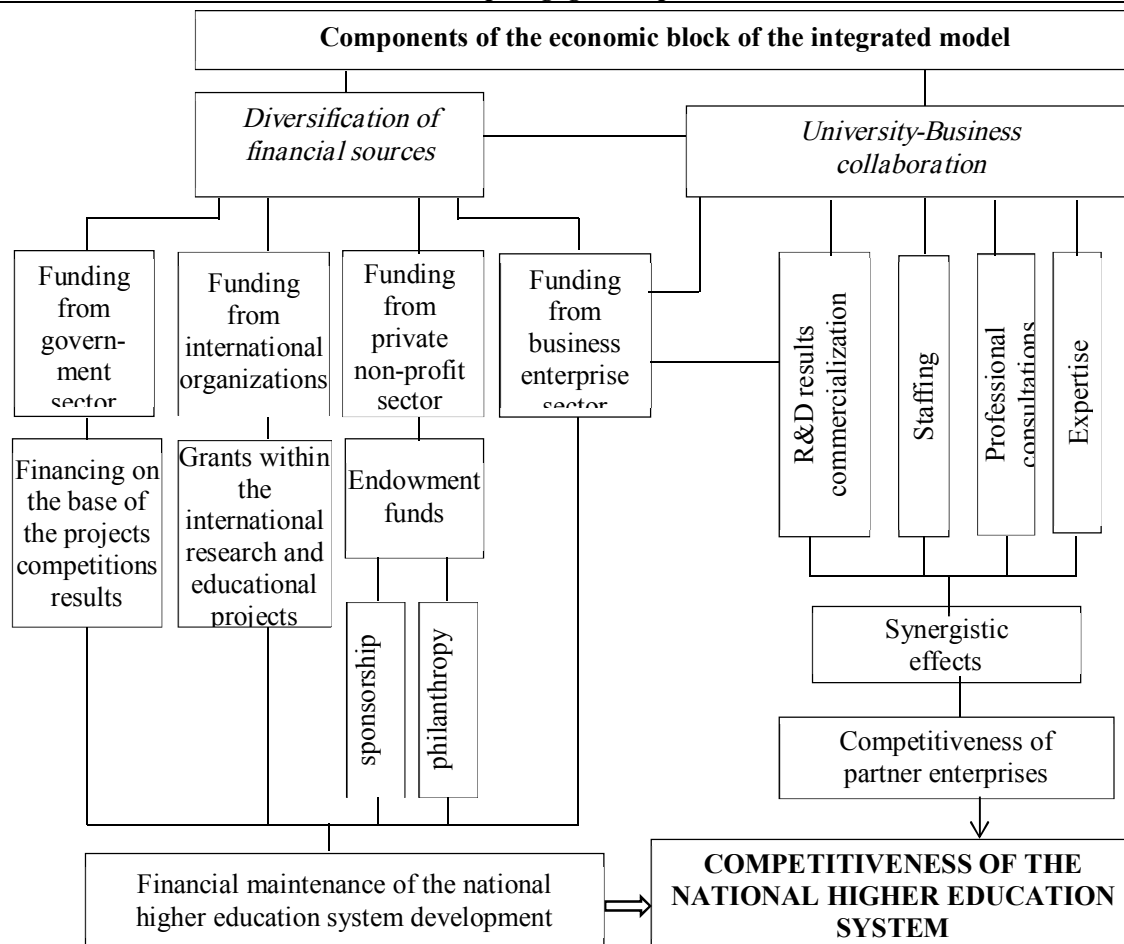


Fig. 4. Conceptual diagram of the economic block of the integrated model of the competitive higher education

The main motives of higher education institution to cooperate with enterprises are: 1) possibility of carrying out its intellectual mission - generation and transfer of knowledge and information; 2) possibility of its intellectual mission implementation - generation and transfer of knowledge and information; 3) opportunity to test the results of scientific research with useful effects for the development of the national economy and society as a whole; 4) expanding employment opportunities for graduates; 5) diversification of sources of financing and attraction of additional private investments (payment of the cost of education and training of personnel, payment of royalties, etc.). Overcoming the problems of inconsistency, haphazardness, fragmentation, regional disparities in the development of university and business collaboration requires the development of tools to stimulate the business sector to invest in the university's R&D. First of all, it is about improving tax legislation, introducing tax incentive instruments, the most effective of

which are the following:

- targeted tax breaks - in conducting research in certain areas (positive experience of the United States of America - in the field of energy);
- tax breaks for newly established research and development organizations (Belgium, Portugal, France);
- exemption from social security contributions (Belgium);
- tax rebates on income (Austria, Belgium, Brazil - as a percentage of the cost of research; Belgium - as a percentage of revenue from the use of patents; Brazil - from the cost of patents);
- accelerated depreciation of equipment used in the field of information and communication technologies (USA, Germany, Finland, France, Sweden, Japan, Canada, Spain, United Kingdom, etc.).

Among the promising areas of diversification of sources of funding for higher education institutions, we can single out the commercialization of scientific research results in the real economy. The transfer of intellectual

property rights by the universities brings additional financial resources to the budgets of the educational institutions. Instead, the implementation of research results by enterprises helps to increase their level of innovation, competitiveness, and allows increase the productivity of personnel, optimize the production process, reduce the cost of production, etc.

3. Conclusion

To sum up, we'd like to emphasize the urgency of introducing the integrated model of the competitive higher education, which involves synchronizing the interests of the entities of business, government, public and educational sectors, and also covers a range of psychological, pedagogical, legal, managerial and economic aspects of the competitiveness at both macro and microeconomic levels. The legal and managerial block of the integrated model aims at improving the educational management system; integration of the national higher education system into the global scientific and educational space; stimulation of innovative development of universities; modernization of approaches to strategic planning and forecasting; accelerating digitization and ensuring the transparency of the activities of higher education institutions. The psycho-pedagogical block of the model is aimed at improving and providing flexibility in the educational process in universities; involving a wide range of stakeholders in the development and updating of training courses and programs; deepening the research component in the curriculum structure. The economic block of the model includes aspects of diversification of funding sources; fundraising; optimizing the cost structure of higher education institutions; intensification of the processes of commercialization of research results in the real sector of the economy (including enhancement of practical and scientific value of research results, organization of their transfer, patenting of inventions and developments by universities). Implementation of the proposed integrated model, based on the impact of a complex of exogenous and endogenous factors and with the optimal combination of efforts of all stakeholders, can become one of the major catalysts for the development of the national higher education system and increase its competitiveness in the world market of educational services.

References

- [1] Bartkus, K.R., Nemelka, B., & Nemelka, M. Clarifying the meaning of extracurricular activity: A literature review of definitions. *American Journal of Business Education*, Vol. 5, No. 6, (2012), pp. 693-703. <https://doi.org/10.19030/ajbe.v5i6.7391>.
- Babenko, V.O., Yatsenko, R.M., Migunov, P.D., Salem, A.-B.M. MarkHub Cloud Online Editor as a modern web-based book creation tool. *CEUR Workshop Proceedings*. Vol. 2643, (2020), pp. 174-184. URL: <http://ceur-ws.org/Vol-2643/paper09.pdf>.
- [3] Bennell, P. & Pierce, T. The Internationalisation of Tertiary Education: Exporting Education to developing and Transitional Economies. *International Journal of Educational development*, Vol. 23, (2003), pp. 215-232. [https://doi.org/10.1016/S0738-0593\(02\)00024-X](https://doi.org/10.1016/S0738-0593(02)00024-X).
- [4] Bila, O., Gontareva, I., Babenko, V., Kovalenko, O., Glielova, N. Organizational and Methodological Guidelines for Training Education Managers to Implement the Strategy of Corporate Social Responsibility. *2019 3rd European Conference on Electrical Engineering and Computer Science (EECS)*, (2019), pp. 140-146. DOI: [10.1109/EECS49779.2019.00037](https://doi.org/10.1109/EECS49779.2019.00037).
- [5] Bilovodska, O., Golysheva, I., Gryshchenko, O., & Strunz, H. Theoretical and practical fundamentals of scientific and educational projects: a case of Ukraine. *Journal of International Studies*, Vol. 10, No. 2, (2017), pp. 119-128. <https://doi.org/10.14254/2071-8330.2017/10-2/8>.
- [6] Bilovodska, O., Gaidabrus, N., & Ruban, D. An analytical study on logistics outsourcing impact on logistical service quality in supply chains (case study: industrial enterprises of Sumy region). *Problems and Perspectives in Management*, Vol. 3, No. 15, (2017), pp. 201-211. [http://dx.doi.org/10.21511/ppm.15\(3-1\).2017.04](http://dx.doi.org/10.21511/ppm.15(3-1).2017.04).
- [7] Casinger, J. *College extracurricular activities: the history of activities*. Retrieved from:

- <http://www.articledashboard.com//Extracurricular-Activities--the-History-of-Activities/>.
- [8] Chan, Y-K. Investigating the relationship among extracurricular activities, learning approach and academic outcomes: A case study. *Active Learning in Higher Education*, Vol. 17, No. 3, (2016), pp. 223-233. <https://doi.org/10.1177/1469787416654795>.
- [9] Choudaha, R. & Wit, H. *Challenges and Opportunities for Global Student Mobility in the Future: a comparative and critical analysis. Internationalisation of Higher Education and Global Mobility*. Oxford: Symposium Books. (2014), p. 320. <https://doi.org/10.15730/books.87>.
- [10] Cosmulese, C.G., Grosu, V., Hlaciuc, E. & Zhavoronok, A. The Influences of the Digital Revolution on the Educational System of the EU Countries. *Marketing and Management of Innovations*, Vol. 3, (2019), pp. 242-254. <http://doi.org/10.21272/mmi.2019.3-18>.
- [11] Eccles, J. Extracurricular activities and adolescent development. *Journal of Social Issues*, Vol. 59, No. 4, (2003), pp. 865-889. <http://doi.org/10.1046/j.0022-4537.2003.00095.x>.
- [12] Eccles, J. S., & Barber, B. L. Student council, volunteering, basketball, or marching band: What kind of extracurricular involvement matters? *Journal of Adolescent Research*, Vol. 14, (1999), pp. 10-43. <https://doi.org/10.1177/0743558499141003>.
- [13] Fredricks, J. A., & Eccles, J. S. Is extracurricular participation associated with beneficial outcomes: Concurrent and longitudinal relations? *Developmental Psychology*, Vol. 42, (2006), pp. 698-713. <https://doi.org/10.1037/0012-1649.42.4.698>.
- [14] Keser, F., Akar, H., & Yildirim, A. The role of extracurricular activities in active citizenship education. *Journal of Curriculum Studies*, Vol. 43, No. 6, (2011), pp. 809-837. <https://doi.org/10.1080/00220272.2011.591433>.
- [15] Killick, D. Developing the Global Student: Higher education in an era of globalization. *Internationalization in Higher Education Series*. New York: Routledge. 1st Edition. (2015), p. 205. <https://doi.org/10.1080/2194587X.2015.1091364>.
- [16] Knight, J. *Internationalization: Three Generations of Crossborder Higher Education*. New Delhi: India International Centre. (2012), p. 32. Retrieved from: http://www.iicdelhi.nic.in/ContentAttachments/Publications/DiaryFiles/53511July92012_IIC%20Occasional%20Publication%2038.pdf.
- [17] Knight, J. Updated Internationalisation Definition. *International Higher Education*, Vol. 33, (2003), pp. 2-3. <https://doi.org/10.6017/ihe.2003.33.7391>.
- [18] Kuznetsov, A., Shekhanin, K., Kolhatin, A., Kovalchuk, D., Babenko, V., Perevozova, I. Performance of Hash Algorithms on GPUs for Use in Blockchain. *2019 IEEE International Conference on Advanced Trends in Information Theory, ATIT 2019 – Proceedings Kyiv, Ukraine, (2019)*, pp. 166-170. DOI: [10.1109/ATIT49449.2019.9030442](https://doi.org/10.1109/ATIT49449.2019.9030442).
- [19] Massoni, E. (2011) Positive Effects of Extra Curricular Activities on Students. *ESSAI*, 9, Article 27. Retrieved from: <http://dc.cod.edu/essai/vol9/iss1/27>.
- [20] McAdam, M., Miller, K., & McAdam, R. Understanding Quadruple Helix Relationships of University Technology Commercialisation: A Micro Level Approach. *Studies in Higher Education*, Vol. 43, No. 6, (2016), pp. 1058-1073. <https://doi.org/10.1080/2F03075079.2016.1212328>.
- [21] Perevozova, I., Babenko, V., Krykhovetska, Z., and Popadynets, I. (2020). Holistic approach based assessment of social efficiency of research conducted by higher educational establishments. *E3S Web Conf.*, Vol. 166 (2020), 13022. <https://doi.org/10.1051/e3sconf/202016613022>.
- [22] Reeves, D. B. The extracurricular advantage. *Education Leadership*, Vol. 66, No. 1, (2008), pp. 86-87. Retrieved from: <http://www.ascd.org/publications/educationa>

[l-leadership/sept08/vol66/num01/The-Extracurricular-Advantage.aspx.](#)

- [23] Rubin, R.S., Bommer, W.H., & Baldwin, T.T. Using extracurricular activity as an indicator of interpersonal skill: Prudent evaluation or recruiting malpractice? *Human Resource Management*, Vol. 41, (2002), pp. 441-454.
<https://doi.org/10.1002/hrm.10053>.
- [24] Scott, P. Globalisation in Higher Education: challenges for the 21st century. *Journal of Studies in International Education*, Vol. 4, No. 1, (2000), pp. 3-10.
<https://doi.org/10.1177/102831530000400102>.
- [25] Scott, P. Massification, Internationalisation and Globalisation. *The Globalisation of Higher Education*. Society for Research into Higher Education. Open university press. (1998), pp. 108-129.
- [26] Seow, P-S. & Pan, G. A literature review of the impact of extracurricular activities participation on students' academic performance. *Journal of Education for Business*, Vol. 89, No. 7, (2014), pp. 361-366.
<https://doi.org/10.1080/08832323.2014.912195>.
- [27] Shestakovska, T. & Kholiavko, N. The economic and legal mechanism of commercialization of R&D results. *Economics&Education*, Vol. 3, No. 01, (2018), pp. 23-29.
- [28] Shkarlet, S., Dubyna, M., & Zhuk, O.
- Determinants of the financial services market functioning in the era of the informational economy development. *Baltic Journal of Economic Studies*, Vol. 4. No. 3, (2018), pp. 349-357.
<https://doi.org/10.30525/2256-0742/2018-4-3-349-357>.
- [29] Shkarlet, S., Dubyna, M., Hrubliak, O., & Zhavoronok, A. Theoretical and applied provisions of the research of the state budget deficit in the countries of Central and Eastern Europe. *Administratie si Management Public*, No. 32, (2019), pp. 120-138.
- [30] Stuart, M., Lido, C., & Morgan, J. The impact of engagement with extracurricular activities on the student experience and graduate outcomes for widening participation populations. *Active Learning in Higher Education*, Vol. 12, No. 3, (2011), pp. 203-215.
<https://doi.org/10.1177/1469787411415081>.
- [31] Wang, J., & Shiveley, J. (2009) *The impact of extracurricular activity on student academic performance*. Retrieved from: https://www.researchgate.net/publication/228472976_The_impact_of_extracurricular_activity_on_student_academic_performance.
- [32] Wit, H., Hunter, F., Howard, L., & Egron-Polak, E. (2015) *Internationalisation of Higher Education*. Brussels: European Parliament. Retrieved (14.11.2018) from: [http://www.europarl.europa.eu/RegData/etudes/STUD/2015/540370/IPOL_STU\(2015\)540370_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2015/540370/IPOL_STU(2015)540370_EN.pdf).

Follow This Article at The Following Site:

Kholiavko N, Chekhovych T, Mirshuk O, Vovk V. Integrated Model of the Competitive Higher Education: Legal, Economic and Psycho-pedagogical Aspects. *IJIEPR*. 2020; 31 (4) :535-545
URL: <http://ijiepr.iust.ac.ir/article-1-1129-en.html>

