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Competitive advantages of the national higher education system in the context of globalization

Annotation

The article reveals the essence and types of competitive advantages of the national higher education system. It features the analysis and assignation of priorities of formation of functional and structural competitive advantages of the higher education system in the context of increase of the number of external and internal challenges for development.

Keywords

higher education system, competitive advantages, globalization, university ranking

1 Introduction

Social and economic development of countries in the knowledge-based society is mostly ensured by the technological and innovational factors, instead of resources. With regard to this, a very important problem that arises for each country is the activation of these factors, among which an honourable place belongs to the higher education system. In the context of increase of the competition on the global level, the necessity of having a powerful and competitive higher education system becomes vital. This process must be based on the search and formation of exclusive competitive advantages, which will allow occupying the right niche in the world market of higher education and holding competitive positions in the modern dynamic education environment.

2 The analysis of the latest researches and publications

The fundamentals of the competitive advantage theory were introduced by the representatives of the classical school of economic theory, A.Smith and D.Ricardo, and further developed by E. Heckscher, B. Ohlin, P. Krugman, K. Lancaster, P. Lukas, M. Porter, P. Drucker, G. Hamel, K. Prahalad and others. The problem of competition and formation of competitive advantages in education system has become the subject of research for such national and foreign scientists, as V.Andruschenko, L. Antonyuk, A. Asaul, V. Bazilevich, A. Vifleyemskiy, A. Galichinskiy, V. Geyets, O. Grishnova, I. Grischenko, M. Sgurovskiy, V. Inozemtsev, O. Kuklin, V. Kutsenko, O. Levchenko, S. Nikolayenko, V. Novikov, I. Petrova, V. Radchenko, D. Salmi, B. Santo, L. Semiv, L. Tsimbal, L. Yaremenko and others.

3 The aim of the article

The definition of the essence and directions of formation of competitive advantages of the national higher education system in the context of globalization and development of the knowledge-based society.

4 The presentation of the material

The complex and diverse process of formation of

competitive advantages in the education market requires a powerful supply of resources and constant improvement of mechanisms of strategic management and integration of all its subjects. Ensuring competitiveness of the national higher education system is only possible through forming and holding firm competitive advantages, which, first of all, must be supported by the focused government policy based on the modern world tendencies of development. With regard to this, the research and improvement of scientific and methodological approaches to proving necessity, essence and components of state policy of formation and development of competitive advantages of the national higher education system becomes highly significant.

The competitiveness of the national education system can only be ensured with the powerful governmental support, which has to be based on the understanding of highly important role of higher education system as a factor of social development. Such support must also be provided taking into account the complexity of modern social and economic conditions of functioning of higher education, particularly, the sharpening of competition on the education market in the global context; the increase of the mass-type character of higher education; the necessity of implementing the innovative ways of development of national economy and facilitating innovative activity of higher education institutions. Ensuring competitiveness of the national higher education system must be based on the state policy of searching, forming and holding competitive advantages of both individual universities and the system as a whole.

Despite the significant number of theoretical and applied researches, the modern science still lacks the sufficient research on the questions of competitiveness of education system as an industry, designing effective mechanisms of forming and holding competitive advantages of the national higher education system. It seems that the complex (multi-level) definition of competitive advantages characterizes real and prospective possibilities of the national higher education system to adequately react at actual and potential challenges of the dynamic endogenic and exogenic environment, gain such competitive positions that result in significant presence on the regional and international education market.

The competitive advantages of the higher education system are such characteristics and properties that

allow it: firstly, to fulfil its general functions (prepare highly-qualified specialists, carry out research activities, economic and social functions, etc.); secondly, to act as an effective component of economy and a real factor of social and economic development of the country; thirdly, to obtain high positions in world international rankings and increase its share on the international education market.

The generalization of the competitive advantage theory has allowed to reveal the general categories of advantages: absolute advantages (A.Smith), comparative advantages (D.Ricardo), resource and technological advantages (M.Porter) [1]; definition of sources of advantages: possession of production factors (E.Heckscher, B. Ohlin), scale effect (P. Krugman, K. Lancaster), quality of human resources (R.Lucas), intellectual leadership (G.Hamel, K.Prahalad) [2]. It is important to distinguish functional and structural advantages related to education system. Functional advantages emerge from general functions of education institutions and the education system as a whole: these are characteristics of educational, scientific, innovational, international and managerial activity of universities that ensure obtaining and holding competitive positions on the education market.

Structural advantages are determined by the existing effective structure of the industry, they are formed both by positions of particular universities (the most powerful national entities) and the integrity of the whole system and its common characteristics. There can be two types of structural competitive advantages of higher education system: firstly, advantages from the existence and functioning of the leading universities; secondly, advantages acquired as a result of synergic unity of all components of the system.

The most powerful national universities, most often research-oriented, thanks to the concentrated human, resource and technological potential, can act as locomotives of the innovative processes in the country, and according to their main figures, can compete for high positions in international rankings. Besides, the higher education as a system has to consist of powerful regional universities and well-known vocational education centres (e.g. medical, art, technical, business, etc.) Structural advantages of another type depend on joint activity of all institutions and agencies of the education system; they can be formed in separate areas of activity or concern different components of educational potential.

The process of formation of competitive advantages of the national higher Education system goes through

the following stages: accumulation of resources, investment support and innovational development. The first stage features accumulation of different resources necessary for successful performance in the education industry, and specific competitive advantages are formed by availability or concentration of definite resources (human, financial, infrastructural, etc.). On the second stage the formation of competitive advantages is not so much defined by the availability of resources, but more by mechanisms of effective management and investment in development of resources. On the third stage the competitive advantages are formed according to the availability of exclusive results of innovational activity.

In Ukraine the government policy should not be too much concentrated on accumulation of resources. Much more important is the development of effective mechanisms of stimulation of educational, research, international, entrepreneurial and innovational activity. This activity should include clearly identified priorities, aims, objectives, stages and mechanisms of implementation. A very important component is the support that allows the most powerful national universities to evolve to the international level, enter the international ranking and become leaders of national higher education. Moreover, competitive advantages of the national higher education system may be formed by effective work of other higher education institutions.

Increased competition in the global education market in the context of globalization has resulted in the emergence of numerous university rankings: ARWU (China), QS Ranking, Times (UK), Webometrics (Spain), etc. The main aim of those rankings is the determination of leading world class universities, and key points that allow reaching high positions in these rankings are: size and financial potential, qualification of teaching and research staff, amount of research and commercialization of its results, international student and teacher mobility.

Vast majority of rankings is oriented at pointing out positions of particular universities, whereas the assessment of the national higher education system is carried out only in Universitas21 (U21), which has been published by researchers of University of Melbourne (Australia) since 2012 [3]. This ranking covers 50 countries; it is based on 29 figures in four categories: resources, environment, communications, effectiveness. U21 summary for years 2012 – 2015 helped identify the strongest and the weakest positions of Ukrainian higher education system, as well as

Table 1 Positions of Ukraine in U21 ranking, 2012-2015, percentage of the possible 100%*

Years	Resources	Environment	Communications	Effectiveness	Total
2012	76,0	84,6	39,2	23,7	58,6
2013	51,7	74,8	51,2	25,3	49
2014	49,9	75,2	31	23,7	43,9
2015	54,2	68,3	33,2	23	43,8

*Source: composed by the author using the data: <http://www.universitas21.com/>

tendencies of their changes (table 1).

In 2015 Ukraine took 41st place in the ranking, having the total ranking of 43,8%, Resources category – 54,2% (28th place), Environment – 68,3% (46th place), Communications – 33,2% (41st place) and Effectiveness – 23% (45th place). Ukraine is in top 10 by costs of

higher education as a percentage of GDP, however it has low positions in costs per student and costs of research (43rd place). The highest rating in Communications category is ensured by the percentage of international publications (33), although the 49th place – because of the number of joint publications

with industry representatives and rating of knowledge transfer. Ukraine is on the 48th place not only because of the total number of publications, but also because of the number of publications per inhabitant. The level of education of population is high enough (14th place), but at the same time Ukraine loses points because of the absence of Ukrainian universities in Shanghai ranking. Table 1 shows what percentage of the possible

100% Ukraine has in each category and in total.

The most positive dynamics are shown by the figures of qualitative component of staff (number of candidates and doctors) and specific indicators of effectiveness of scientific and research activity (dynamics of publications, international conferences, knowledge transfer, etc.) (Table 2) [4, 5].

Turning strong positions into actual competitive

Table 2 Dynamics of specific indicators of activity of higher education system of Ukraine*

Year	Financing of higher education, % GDP	Number of science candidates, persons	Number of doctors, persons	Number of international students	Number of international conferences, units	Number of printed works, units	Number of international grants, units
2000	1,3	39030	6681	17210	1031	*	1138
2005	1,8	61150	11309	29614	1768	241942	1464
2010	2,3	74637	13678	38166	2201	345338	1723
1014	1,8	86230	16090	56933	2023	327919	1885

*Source: [4, 5]

advantages requires targeted efforts. In modern world scientific recognition of potential of each country is determined by the number of publications in scientometric issues. The author of the article has summarized data about such publications. The statistics of these publications has been managed by SCIMAGO since 1996 [6]. Table 3 presents the data, which shows trends and dynamics of publications in the leading countries. Specific countries (China, Malaysia, Brazil, Iran, Latvia, etc.) demonstrate extremely high increase of cited publications, which definitely confirms the implementation of the targeted policy of these countries. In 2013 the top 10 countries in the number of publications were: USA (1), China (2), UK (3), Germany (4), Japan (5), France (6), Canada (7), Italy (8), India (9) and Spain (10). Unfortunately, Ukraine is on the 45th place with the total number of 9004 publications and Hirsch index 159. Nevertheless,

the carried out analysis has witnessed the national higher education having the great potential of increase of the number of publications, which is confirmed by the significant increase in the recent years.

The higher education system of Ukraine possesses powerful intellectual and human potential, which requires certain support to use it to full extent. At the same time, it is important to note that the modern higher education system has serious challenges caused both by general world tendencies and specific conditions of today. Risks of education are such challenges or threats to functioning and development of education system that can lead to significant losses. Economic losses in education can be: resigning of big number of highly qualified staff, closure of education institutions, loss of contingent, decrease or loss of financial resources. Equally important may be social losses (increase of social selection processes and decrease of social mobility,

Table 3 Total number of publications in scientometric issues, 1996 – 2013*

Countries	1996	2013	H index	%, 2013 vs 1996
	Number of publications	Number of publications		
USA	330 556	563 292	1 518	170,4
China	28 649	425 677	436	1 485,8
UK	83 214	162 574	934	195,4
Germany	72 577	148 278	815	204,3
India	20 625	106 029	341	514,1
Sweden	16 182	33 033	567	204,1
Poland	11 576	34 933	336	301,8
Korea	10 076	71 072	375	705,4
Taiwan	10 323	41 188	300	399
Iran	827	39 240	158	4 744,9
Malaysia	961	23 190	145	2 413,1
Brazil	8 728	58 537	342	670,7
Estonia	576	2 428	148	421,5
Russia	31 598	43 930	355	139
Turkey	5 622	37 446	237	666,1
Ukraine	5 668	9 004	159	158,9
Latvia	355	1 393	94	392,4

* Source: compiled by the author based <http://www.scimagoir.com/>

significant disproportions on labour market: unemployment of highly qualified staff, low salaries), pedagogical losses (low effectiveness of teaching technologies, insufficient general level of education or competence of graduates), political losses (loss of prestige of national education system through its low effectiveness or corruption, low ranking indicators, unsuitability for international students, etc.), etc.

The fundament for ensuring competitiveness of national higher education system should be government policy of forming of clearly stated competitive advantages on the basis of the existing potential and taking into account all exogenic and endogenic challenges of the competitive environment. Taking into account the powerful intellectual and human potential of the national higher education system, scientific traditions and experience, real competitive advantages may be form in the way of creating modern attractive and competitive educational products (unique, distant, online and other courses), strengthening of the innovational aspect (increase of scientometric publications, greater integration into international scientific space), consolidations with the real economic sector, activization of export strategy and academic mobility. A strategically important objective is to select not more than five universities among the leading ones that with the help of governmental support will become research universities corresponding to the

international criteria.

5 Conclusion

Ensuring development of the national higher education system in the complex, undetermined, fast changing external environment requires the complete analysis of the possible challenges. Ukrainian higher education faces great global political and economical challenges determined both by general world tendencies and specific conditions of today. An in-time deep analysis of all possible challenges and risks must be the basis of thorough decisions and their implementation in state education policy.

The implementation of measures of increasing the competitiveness of the national higher education system should be based on strengthening its competitive advantages as a complete, diverse and powerful system. Such system must have extremely powerful research universities, strong regional and classic universities, as well as small sized institutions. All of them perform their specific tasks, have their own advantages and all together ensure synergic unity and competitiveness of the higher education system. The basis of such system must be the synchronization and harmonization of activities in the aspect of key factors of development of education, science and innovational activity, harmonization of interests and demands of all subjects of the education market in Ukraine.

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