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## COMPETITIVENESS OF THE UNIVERSITIES: MEASUREMENT CAPABILITIES

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### ABSTRACT

In recent years, the issue of the competitiveness of the Universities has become very relevant. It is clear that this has not happened by accident - there are 51 Universities present in Bulgaria (37 public and 14 private ones), it is unacceptable to not move in a direction aimed at finding various sources of competitive advantages. This article reviews how well the term competitiveness of an University is understood. It also codifies the criteria used to measure the phenomenon - the competitiveness of the Universities.

**Key words:** Universities in Bulgaria, competitiveness, competitiveness evaluation indicators.

### INTRODUCTION

The contribution of Higher education to the functioning of society and the economy, to economic growth, development of innovations, development of the market, reduction in unemployment, enhancement of the quality of the human capital, improvement of R&D activity and the prosperity of every nation is indisputable. Education and training are one of the main challenges the EU faces in terms of building a globally competitive educational system. It is not by chance that one of the pillars of competitiveness set by the World Economic Forum is precisely the one for Higher education and training. Unfortunately, in the last report of the Forum – The Global Competitiveness 2016-2017 (1), Bulgaria is as far as 56<sup>th</sup> according to this indicator, from a total of 138 represented countries. As a part of the EU, Bulgaria is obliged to undertake the ambition for the creation of a European Education Area as an explicit condition for the development and enhancement of the competitiveness of the HEIs (Higher Education Institutions).

Undoubtedly, competition plays the role of a driving force of the development of the HEIs, which should meet the requirements of the labour market with adequate quality of the educational product and the meeting of its personnel needs. According to data from the Ministry of Education and Science (as of June 1 2017) 51 accredited HEIs operate in Bulgaria (2). In the presence of such a large number of HEIs, for a country with a population of 5 204 385 (3), naturally the question of the quality of education they offer rises, while on the other hand – the competition between the HEIs, in which the struggle to attract students is a question of survival for some of them. Thus, quite logically, among the HEIs, the imperative to search for various sources of competitive advantages rises with the view of increasing their own competitiveness.

**The purpose of this paper** is to clarify the essence of the HEI's competitiveness, the process of its formation, as well as the possibilities for measuring and enhancing it.

### *Competitiveness – essential aspects*

Competition is seen as a rivalry in a given field where each participant is guided by a quest for supremacy. It is a mechanism for development, a driving force of the economic growth, a process of interaction between business entities, in which each one protects one's own interests and is motivated to realize one's

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goals. Knowledge of its theoretical-methodological foundations is a condition for success in the competitive battle. In the newly created economic reality, in which there are conditions of globalization, liberalization, scientific and technological progress and rapid development of the information and communication technologies, as well as under the influence of the factors of the dynamic and continuously changing macroeconomic environment, there are also changes in the nature of the competitive battle itself. There is growing interdependence both between countries and between organizations. There are newly formed competitive models, adequate in relation to the new reality. They cover the multi-dimensionality of the "competitiveness" category, expressing the whole set of its characteristics, including economic, market, philosophical, social, legal, psychological (4). Researches for competitiveness agree in the understanding that it is a complex indicator, which is also the reason for it to be subject to scientific research, management and expert activity of a number of scientists, analysts, consultants and managers who are all seeking the possibilities for its control – identification, evaluation, analysis, potential to increase it. Despite the enormous amount of scientific research and the unending research interest, to this moment there is no commonly accepted definition nor a single methodology for its assessment and analysis. A number of definitions for the nature of competitiveness are used. The views on managing it also differ. The ambiguity in defining it as a concept is a result of existing differences in subject, objectives, measurement levels, sources of competitive advantages, measurement methods, etc. There are a number of interpretations and views, the most popular ones being the ones that define competitiveness as a fundamentally complex indicator (5), an ability (6, 7), a state of long-term profitability (8), an imperative requirement (9) and a pledge for sustainable development (10). The listed definitions visualize a small part of the existing variety of opinions regarding its nature. Either way, at its core lies the ability, the possibility to compete, that is, the competition itself. As Ts. Zafirova summarizes: "Given that the competition manifests itself as a general measure of the abilities of the organization to change the proportions of product exchange and the structure itself in the market, the term competitiveness has been adopted in theory and in practice" (11).

The assessment of the competitiveness of an organization aims to define its competitive position in relation to the other competitors in the field, in which it functions. The assessment is based on the analysis of the environment in order to identify the opportunities and threats that exist for the realization of the activity. It is also based on an analysis of the organization itself, highlighting its strengths and weaknesses, from which its significant advantages over the competitors could be determined. The organization chooses its competitive strategy for positioning and development based on these advantages. Additionally, since the competitiveness of the organization is defined as a position in relation to the competitors on one hand, and, on the other hand, as the ability to meet the needs of consumers for its products/services better than the competitors; its focus on the customer is the leading factor of its assessment. From the above statement, it follows that the competitive advantages that determine the competitiveness of the organization could be derived from the characteristics, qualities, properties of the offered product/service, from the opportunities of the environment and from the activities that bring additional value to the clients along the path of satisfying their needs.

The causal relationship between the competitive advantages and the competitiveness is obvious, a number of authors emphasize on defining the concepts themselves (12, 13, 14). In this sense, competitiveness can be defined as **the ability of an organization to create and maintain competitive advantages**. They express its strengths, its characteristics, which create uniqueness and advantages over competitors and to, furthermore, serve to better satisfy the consumers' needs. That is, the competitiveness can be presented as a process of management of competitive advantages, as essential strengths of the organization, and the activities themselves, focused at their creation and management, and at the same time, it is their result.

#### *Competitiveness of a HEI*

For the competitiveness of the public services, incl. education the so-called *managed competition* is characteristic (11), consisting of competitive and regulatory principles. On the one hand, there is an organization, established in accordance with the requirements of the public domain, while on the other, in order for it to exist, it should be competitive on the market, in which it operates, under the vigilant control of the state and the civil society (15).

That is for higher education there is a managed, regulated competitiveness present.

Starting from the essential characteristics of competitiveness, as an economic category, in the field of education the same can be adapted by offering a high quality educational product that satisfies both the consumers of educational services (students) and the consumers of the product of the HEIs (the labour market, where students realize themselves), to the fullest. Each HEI strives to manage the products and activities, so that it is preferred to its competitors, pledging on the marketing toolbox by providing the following to the consumers: quality, value, price, image, additional value, location, etc.

The quality of the educational product is precisely what has traditionally been linked to the competitiveness of a HEI. It manifests itself in the preparation of highly qualified staff with acquired knowledge and competencies. From a market point of view, the indicator of this competitiveness is the realization of the graduates on the labour market.

Thus, the relationship formed between the HEIs and the labour market is fundamental in shaping both the competitiveness of HEIs and that of the business, based on the fact that human resources are the most valuable resource of any organization. A well-educated workforce provides higher productivity and an economy based on a high amount of additional value (16). The specificity of the educational environment changes in relation to the dynamics of the macroeconomic environment. At present, there is a high internal competition caused by the increasing number of HEIs; the presence of international competition postulated by the single European system; the demographic crisis; the introduction of new forms of qualification and re-qualification and new methods and forms of training (including distance learning); The threat of new providers of educational services, such as private

universities, training companies, corporate universities, etc.

Considering adapting to the competitive environment, the HEI should respond by developing strategies that include new marketing approaches and tools to build competitive advantages that enhance their competitiveness.

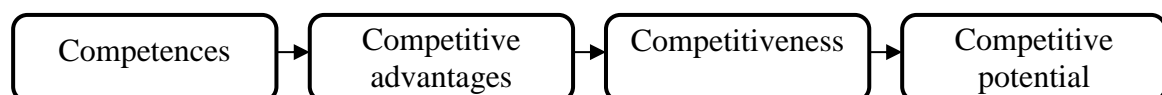
### *Competitive advantages of a HEI*

If Porter's general model is adapted to the field of educational services, it can be concluded that the competitive advantages (CA) of one or another HEI depend on:

- The present *production factors*, including the presence of highly qualified teaching staff, modern materials and technical facilities and infrastructure;
- The nature and the dynamic of the *demand for educational services*;
- The presence or absence of *related and complementary activities* (scientific research, consultancy, marketing management);
- A chosen sustainable *strategy, competitive structure* and a degree of *rivalry in the educational market*.

In this sense, CA can be differentiated into *external* and *internal* ones. The external environment forms the external competitive advantages: state policy, absence of competition, hyper-demand of educational services, etc. The internal CAs depend on the competencies that the HEI possesses. The key competencies in a given field are presented in a complex mastery of specific knowledge, skills and behavioural models in a flexible plan. All of the listed are precisely what determines the success of a HEI in reaching a unique combination of resources (physical, human and organizational capital).

The competencies of the higher education institution and its competitive advantages determine its model of development. (Figure 1<sup>1</sup>).



**Figure 1.** The chain of creating competitive potential by a HEI

According to the differing author's views, there exist different types of competitive advantages of a HEI, but one of (perhaps) the most correct approaches for the classification of a CA is that of the functional capacity of the

higher education institution to increase its competitiveness (Table 1<sup>2</sup>).

### *Measuring the competitiveness of a HEI*

Despite the rapidly increasing number of publications on the subject, no uniform methodology for the measurement of the competitiveness of a HEI has been offered.

<sup>1</sup>Adapted to (17)

<sup>1</sup>Adapted and updated to (18)

This fact is partly due to the impossibility of covering all (non-uniform) factors that have a significant impact on this multidimensional economic category. Among the focus the researches put on measuring it are the following: level of qualification of the providers of educational services; image of HEI (defined by the general awareness and reputation, innovation potential and its realization, speed of response to changes in

customer demand, prestige of the majors, advertisement policy, degree of international relations, financial security, competitive status) (19); satisfaction of the key players in the educational services market (high school graduates and their parents, current university students, personnel, young specialists, employers, graduated university students, PhD students) (20).

**Table 1.** CA of a higher education institution by types of functional capacities

<b>Functional capacities</b>	<b>Competitive advantages</b>
<b>Teaching-methodological and innovations</b>	Product mix of the HEI Quality of the teaching-methodological work Securing of the learning process with teaching-methodological literature Quality of the disciplines taught Level of the information technology used Level of computerization New learning courses and methods of teaching implemented (adapted to the requirements of the labour market) Existence of education programs taught in foreign languages Possibility to learn on an individual study plan Renovation of the building stock Evolution of the social material-technological infrastructure (dormitories, canteens, sports facilities, recreational facilities, etc.)
<b>Scientific Research</b>	Existence of a research unit Focus on fundamental and applied research Existence of patents and inventions Participation in international research Partnership with external organizations in the implementation of scientific research projects Annual Scientific Conferences under the auspices of the HEI Inclusion of students in the scientific research activity in the HEI Existence of accredited doctoral programs
<b>Human</b>	Qualification of the teaching staff Creative potential of the academic staff Publications and citations Attraction of foreign lecturers Attraction of practical specialists Payment and additional material incentives for the administrative and teaching staff
<b>Financial and economic</b>	Financial sustainability of the HEI Existence of additional sources of financing (sponsorships, outside investment, etc.) Budget policy
<b>Social</b>	Relationships at all levels between - the management of the HEI, the teaching staff, the assistants and the students Relationship of the HEI with the local authorities Relationship of the HEI with the stakeholders
<b>Management</b>	Quality of the high-level management Quality of faculty and department level management Quality of the activities performed by the collaborators Corporate culture Flexibility and adaptability to changes in demand
<b>Marketing</b>	Positioning of the HEI in the rating system on a national and international scale Quality of the educational service provided Brand awareness Consumer satisfaction Efficiency of the pricing policy Effective implementation of the marketing communication programs Reputation of the HEI on the labour market

Regardless of the differing opinions it should be clear that the methodology of assessment of competitiveness of a HEI has to be multidimensional. That is to say, including various criteria that determine the competitive opportunities and the results of the activity of

the HEI. It should also show the degree of superiority that the CA of the HEI provide over their competitors on the educational market. The measurement of the degree of competitiveness of a HEI can be performed for each of the competitive advantages shown in

Table 1. However, in practice, only the CAs that are key to the HEI are subject to assessment. To this end, the chosen advantages are considered as criteria that are quantified through a system of specific indicators.

### **Competitiveness and rating of a HEI**

The concept of *competitiveness of a HEI* is closely linked to the rating assessment of the universities. One of the most popular international and national ratings (with their respective indicators) are:

- Academic Ranking of World Universities (Alumni of an institution winning Nobel Prizes and Fields Medals 10%, Staff of an institution winning Nobel Prizes and Fields Medals 20%, Highly cited researchers in 21 broad subject categories 20%, Papers published in Nature and Science 20%, Papers indexed in Science Citation Index-expanded and Social Science Citation Index 20%, Per capita academic performance of an institution 10%);
- QS World University Rankings (Academic Reputation 40%, Employer Reputation 10%, Faculty/Student Ratio 20%, Citations per faculty 20%, International Faculty Ratio 5%, International Student Ratio 5%);
- Times Higher Education (Teaching 30%, Research 30%, Citations 30%, International outlook 7.5%, Industry income 2.5%);
- National Rating of Universities (*from Russian "Национальный рейтинг университетов"*) (Education 20%, Research 20%, Social Environment 15%, Internationalization 15%, Innovation and entrepreneurship 15%, University Brand Assessment 15%).

Through the provision of a public and global assessment of the quality of the student's education, the educational, scientific research and entrepreneurial activity of a HEI, the ratings become instruments used to increase the competitiveness of a HEI. Objectively, the conclusion can be drawn that all factors (indicators) that assess the ratings are of particular importance in reaching a specific degree of competitiveness. That is, the concepts of *competitiveness* and *rating of a HEI* cannot and should not be considered independently. Moreover, ratings are a reference point for prospective students and their parents when choosing one or another higher education institution. They guide government policy in the creation of programs for the improvement of competitiveness in the field of higher education and in the defining of the HEI funding system.

Despite the advantages of the rating systems it should be noted that the results received from

them are not always, objective and do not always correctly reflect the actual situation in the higher education institution.

### **CONCLUSION**

The situation, in which HEIs operate in Bulgaria, is characterized by an overrun in supply of educational services and an exacerbation in the competitive relations. The request made (by the Ministry of Education and Science) for a change in the financing model and the significant decrease in the number of student in the last three years makes the HEIs face a challenge of seeking and undertake to create their own competitive advantages. In this sense, the assessment of the competitive position in relation to the other rivals in the sector players the role of a mandatory element and a supplementary instrument in the process of restructuring and adapting to the new conditions.

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