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**MECHANISMS FOR SELECTING CRITERIA FOR WORLD
UNIVERSITY RANKINGS IN A POST-INDUSTRIAL SOCIETY**

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Abstract

Criteria for university rankings determine the degree of the university development in such a way that it includes certain positive aspects that are easily assessed without visiting an educational institution. However, separately selected aspects characterizing the education process in an educational organization do not determine the entire level of the university development and its potential. Mechanisms for selecting criteria for university rankings vary depending on the ranking originators, their main interests and resources. In case these criteria are used not as indicators of the university development, but as its directions, this can lead to setting goals that do not correspond to the overall strategy of the organization and its capabilities. However, the potential of the university, in turn, is largely determined by its geographical location, the socio-economic conditions of the state and/or a particular region. These features can be determined through the integrated use of other ratings, i.e. ratings of countries and regions. Therefore, when analysing the activities of a university, information describing both individual indicators of an educational organization and its educational space is useful. A joint analysis of the university and region rankings provides information for which areas of development in the region and country favourable conditions have been created or are being created at the moment. The authors show that the selection mechanism of criteria can take into account the interests of stakeholders, describe the ways of simultaneous use of rankings as correct indicators of development.

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Keywords: University rankings, ranking criteria, ranking approach.



1. Introduction

Currently rankings are being actively used as indicators of the development of education both of individual universities and as part of state educational development programs (Ivanova, 2016, p. 85). For example, they can be used to solve a number of tasks in several areas of the national project “Education” of Russia, in particular, to increase the competitiveness of vocational education in the framework of the federal project “Young Professionals”, the program “Global Competitiveness of Higher Education” and the federal project “Education Export”, etc. Therefore, rankings increase their influence, which in turn leads to the necessity for their detailed study.

However, a literature review shows that, firstly, for the analysis of the educational space, rankings are used 1) of narrow profile, such as university rankings, school rankings, local ones, etc., 2) isolated from the other ratings, able to show the other aspects of the region (country) development so that it is possible to make a complete picture and give forecasts of the development not only of the education system, but also of the region’s (country’s) economy in the most favorable and rational way, 3) the existing university rankings do not take into account personal indicators, which would allow to judge the quality of education received by an individual in the distant future (Ivanova & Serikov, 2017, p.6). However, this is the quality of education of the population which defines the quality of the society development.

2. Problem Statement

The problem can be formulated as follows: analysis of various rankings is able to provide a comprehensive picture of the development of a region (country), but rankings do not demonstrate clear connection with the needs of stakeholders – university applicants, their families, members of the board of trustees of a school or university, etc. In modern university rankings, the future professional skills of current students are not taken into account, while this is what determines the assessment of the quality of education provided by the university in the long term, and this directly affects the sustainable development of the region (country) as a whole.

3. Research Questions

How to predict the situation for a particular applicant, his/her family, that is, how to connect a personally significant indicator in the university ranking? How can the personal qualities of an individual involved in the educational process influence the selection of university ranking criteria, which will later set the vector for the development strategy of the educational organization and the region as a whole?

4. Purpose of the Study

to study the university rankings criteria and to substantiate the mechanisms of their selection in the conditions of a post-industrial society; to show, which rankings are preferable to be analyzed for the specific purposes of individual educational organizations.

5. Research Methods

Comparative analysis, system analysis, ranking approach

6. Findings

At the moment, three university rankings are the most popular in the world; getting into their first hundred has become the main indicator of the program to increase the competitiveness of leading Russian universities among the world's leading scientific and educational centers (5-100):

QS World University Rankings - the world ranking of the best universities in the world, provided by Quacquarelli Symonds (Humanitarian technologies, n.d.; University Rankings..., n.d.). It has been published annually since 2004.

The Academic Ranking of World Universities (ARWU) was compiled by Shanghai Jiao Tung University and has been published annually since 2003 (Shanghai Ranking's Academic Ranking of World Universities, n.d.).

World University Rankings Times Higher Education (THE) (Times Higher Education..., n.d.). From 2004 to 2009, the British Times Higher Education (THE) Publishing House published the annual Times Higher Education-QS World University Rankings in collaboration with the Quacquarelli Symonds (QS).

Ranking criteria vary depending on the originators, their main interests and resources, but the desire of the university to improve its position in the rankings makes it necessary to focus on the ranking indicators themselves as a direction of development. Under the conditions of limited resources, these areas may become the only reference point for the developmental trend of a certain university. Funds may be spent to the achievement of ranking indicators even at the expense of real quality. Priority will be given to areas of activity, the results of which can in the short or medium term yield an increase in university performance, rather than on long-term investment in research that will only likely increase the level of the university ranking position. Each of the criteria can lead to the opposite effect. The criterion for the number of foreign professors and students in the QS and THE rankings should indirectly show the university's popularity at the global level, but may be the result of a certain financial and migration policy. The citation in the world scientific databases (Scopus, Thomson Reuters, ERIH etc.) included in the rankings of THE and QS, the number of Nobel and Fields awards winners of the ARWU ranking are not criteria for the quality of teaching, but only assesses the popularity of scientific research.

Following the ranking criteria does not provide ways for the development of the best universities, but only identifies individual positive aspects that have numerical expressions and are obtained from third-party sources without visiting the university. Information obtained in this way allows monitoring data from several hundred universities around the world and identifying several hundred of them from the best, which, in turn, can be accurately ranked.

However, if university rankings describe only certain aspects that are not always suitable for constructing university development strategies, are there other rankings like countries and regions ratings which allow revealing the missing patterns of development and correcting the indicated inaccuracies of university rankings?

Previously, we conducted studies that suggest that the combined use of ratings of countries and regions is capable of obtaining new patterns or confirming those obtained through research of a different kind. Retrospective studies allowed us not only to identify existing patterns, but also to trace them in dynamics. For example, to check the availability of different strategies for investing in the human capital of countries that are differently endowed with natural resources (Bebenina, 2014; Bebenina, 2018; Bebenina, 2019 ; Bebenina & Elkina, 2018).

To do this, we considered retrospective data of the financing of education (in% of GDP) in the countries of the world, depending on what proportion of GDP natural resources constitute, that is, strategies for long-term investment in human resources with varying degrees of natural resources (The Worldwide Governance Indicators (WGI), n.d.).

The World Bank (World Bank Open Data, n.d.), being an international organization with 189 member countries, is a reliable source of information according to which the world as a whole shows a slight decrease in funding after the 1998 crisis and subsequent stable values. Countries that are more dependent on natural resources invest less in education than countries that do not have significant natural resources, and this stratification only grows over the years (Bebenina & Elkina, 2018).

However, the methodology of university rankings does not take into account the socio-economic conditions of countries and regions. While a university cannot develop in isolation from social, economic, political, and other conditions, then university development strategies cannot be compiled without taking into account the specifics, strengths and weaknesses of a country and a region (Ivanova, 2010, p.72; Ivanova & Serikov, 2017, p.3).

A joint analysis of university and region rankings provides information for which development trends favorable conditions are created in the region and country, as well as for which trends these conditions are not created yet; what else can be undertaken for the successful development of the region. Such a multi-component analysis during the subsequent expert assessment of cause-effect relationships can have a serious impact on the development strategies of universities. In this regard let us consider the typification of universities and students offered by Sokolov and Volokhonsky (2013):

University according to the main orientation in its activity:

- scientific (emphasis on the creation of personnel for science; fundamental areas of training; a high proportion of research);
- production (creation of personnel for a particular industry and services; a large proportion of practice-oriented training areas, subjects, teachers; research supported by partner enterprises);
- social (budget state university, the main goal is the socialization of young people, the removal of social tensions by creating useful activities and getting a profession);
- image (a kind of social university, where the purpose of study for the student is the very stay at the university and getting a diploma as evidence of this, but unlike the social one, this kind of the university can be commercial).

The main types of students, depending on the purpose of training:

- with long-term motivation, theorists, who are focused on fundamental training, self-development. Ready for long-term training as professionals;

- with short-term motivation, practitioners, who are aimed at obtaining the most useful information and commercially sought-after skills;

- moratorial students, who consider the university as a necessary pastime; they are focused on communication, dating, the use of sports and other non-core base of the university.

As for regions, we suggest them be distinguished according to their main trends of the development:

- innovative – those regions, where social and economic conditions are formed taking into account the main tendencies in science and technology;

- production – those, which develop a certain industry/industries;

- raw-material based – those, which main industry is mineral extraction;

- subsidized – regions, which receive subsidies from the state budget. (p.35-41).

An example of one of the possible representations of such an analysis is given below (Table 01):

Table 01. An example of a region, university and student interaction scheme

		University				Student			Region			
		Scientific	Production	Social	Image	Theoretician	Practitioner	Moratorial	Innovative	Production	Raw-Material Based	Subsidized
University	Scientific											
	Production											
	Social											
	Image											
Student	Theoretician											
	Practitioner											
	Moratorial											
Region	Innovative											
	Production											
	Raw-Material Based											
	Subsidized											

The most fruitful combinations are highlighted in green, then through yellow and orange to the red colour the degree of compatibility of the goals decreases to a conflict of interest.

To continue our research it makes sense to use the results of the ranking approach (Bebenina, 2018), distributing universities by position in them. Development strategy depends on the type of university; it sets the conditions for the implementation of a quality education that is in demand not only here now, but also in the medium and long term, when the development strategy of the region (country) as a whole is determined. The applicant, choosing a university, understands whether he/she needs to chase the name and high position in the rankings that belong to the university now, or decide where he/she will work after completion the course of studies. So, it makes no sense to study at a pedagogical university if a student wants to be engaged in agriculture; there is no point in wasting time studying nuclear physics and trying to find a job in a region specializing in car manufacturing, etc.

Matrix shown in Table 01 allows us to get an idea of the possibility of building a successful career taking into account the specific interests of the student, the direction of university specialization and sectoral priorities of the region, which certainly will have a beneficial effect on personal (human capital) development, university development (education quality), development of the educational space (strategy of educational development, socio-economic development, etc.).

With this study, we begin to search for mechanisms for selecting criteria for university rankings that take into account the personal interests of stakeholders. Statistical rankings work inefficiently for the future development of the education space and the development of the region (country). Taking into account personal interests, including them in the rankings will allow for building interdisciplinary development scenarios and proposing mechanisms for implementing the most promising of them in the field of both education and, we repeat, in the social sphere (in a post-industrial society this factor is more important and stronger influences the choice of an individual defining his/her future).

7. Conclusion

In conclusion, the authors would like to note that the prospects for using the ranking approach increase with an increase in the number of rankings and the duration of their conduction. This increase in the data set will allow for more in-depth retrospective studies, to make more accurate models, to build more weighted forecasts. On the other hand, behind a large data array it is more difficult to see the personal goals of the compilers and isolate other subjective factors. Therefore, the development of ranking studies should be accompanied by a study of the methodology for their use.

Thus, it is shown that using the rankings of countries and regions makes it possible to identify hidden dependencies in the development of states and territories, to test the hypotheses of the reasons of these dependencies, to compare the level of development of universities with the development of states using the example of the level of innovations. In addition, the ranking approach in determining the state and conditions of development of education in the region (country) provides an opportunity to predict their future for today's applicants, allowing them to design their careers, style of lifelong learning, etc. A simultaneous analysis of educational institution rankings and country ratings can be an effective mechanism for the mutual adjustment of development strategies, showing joint readiness for changes and their vector.

References

- Bebenina, E. V. (2014). Analysis of the distribution and evaluation of the use of socio-economic resources for education. *Economic Theory, Analysis, Practice, 1*, 104-117.
- Bebenina, E.V. (2018). *Methodology of application of rankings to study education space*. (Doctoral thesis). Moscow: ISED RAE.
- Bebenina, E. V. (2019). Using of Rankings for Optimizing Universities Development Strategies. *ETAP: Economic Theory, Analysis, Practice 1*, 146-155
- Bebenina, E. V., & Elkina, I. M. (2018). World tendencies of education financing for countries with different natural resources supply. *The European Proceedings of Social & Behavioural Sciences (EpSBS)*. <https://dx.doi.org/10.15405/epsbs.2019.02.02.3>
- Humanitarian technologies (n.d). Retrieved form <http://gtmarket.ru/ratings/qs-world-university-rankings/info> (date of access: 05.12.2016).
- Ivanova, S. V. (2010). Basics for developing a model of the external environment of the educational process. *Bulletin of the Russian Philosophical Society, 2*, 71-78.
- Ivanova, S. V. (2016). Modern trends for comparative research of educational space. *Pedagogy, 7*, 82-88.
- Ivanova, S. V., & Serikov, V. V. (2017). Strategy of education development as a subject of interdisciplinary research. *Pedagogy, 2*, 3-12.
- Shanghai Ranking's Academic Ranking of World Universities. Retrieved from: <http://www.shanghairanking.com/ru> (date of access: 17.07.2017).
- Sokolov, M. M., & Volokhonsky, V. L. (2013). Political economy of a Russian university. *Domestic notes, 4*, 31-48.
- The Worldwide Governance Indicators (WGI) (n.d). The World Bank. Retrieved from: <http://info.worldbank.org/governance/wgi> (date of access: 15.10.2017).
- Times Higher Education: Rating of the best universities in the world (n.d). Humanitarian technologies: analytical portal. Retrieved from: <http://gtmarket.ru/news/2015/10/01/7248> (date of access: 05.12.2016).
- University Rankings. Quacquarelli Symonds Top Universities (n.d). Retrieved from: <https://www.topuniversities.com/university-rankings> (accessed: 27.02.2017).
- World Bank Open Data (n.d). Retrieved from: <http://data.worldbank.org> (date of access: 15.12.2016).