PRACE NAUKOWE UNIWERSYTETU EKONOMICZNEGO WE WROCŁAWIU nr 221
RESEARCH PAPERS OF WROCŁAW UNIVERSITY OF ECONOMICS
Problemy regionalizmu i globalizacji ISSN 1899-3192

Daša Belkovicsová, Denisa Repková
University of Economics in Bratislava

QUALITY EVALUATION OF SLOVAK UNIVERSITIES IN TERMS OF INTERNATIONALLY RECOGNIZED RANKINGS

Summary: A new challenge for individual countries has become a phenomenon of building a knowledge-based society, where higher education institutions represent a decisive determinant. It is therefore necessary to ensure their adaptation to the requirements of a knowledge-based society. The main intention and strategic aim of every country should, therefore, be to ensure the access to qualitative higher education with international standards. Higher educational institutions must be regarded as high quality ones not only in their countries, but also abroad. This requires obtaining internationally recognized quality. The evaluation of quality of educational institutions is made at the country level, as well as from an international perspective.

Keywords: ranking, higher education, universities, quality, funding.

1. Introduction

The last period is characterized by a significantly expanding trend of converting the world economy to knowledge and brainwork based society. Growing international competition coming from a lot of world leaders requires to follow this trend and adapt to it. The European Union responded to it by passing the Lisbon Strategy in March 2000. Its aim was to make the European Union the most competitive and dynamic knowledge-based economy in the world by 2010 which would be capable of sustainable economic growth with more and better jobs and greater social cohesion. A new challenge for all EU member states, as well as the Slovak Republic, has become a phenomenon of building a knowledge-based society, where higher education institutions represent a decisive determinant. It is therefore necessary to ensure their adaptation to the requisites of a knowledge-based society. The main intention and strategic aim of each country should therefore be to ensure the access to qualitative higher education with international standards. Higher educational institutions must be considered to be qualitative not only in the home environment, but also in relation to abroad. This requires obtaining internationally recognized quality. The evaluation of quality of educational institutions is realized at the country level, as

well as from an international perspective. Currently there is a large increase of various types of evaluation of higher educational institutions and their quality at national and international level as well. Those rankings are based on predefined criteria. These criteria are often critically perceived not only by educational institutions but also by non-university environment. Individual evaluation criteria are based on objective data but also on subjective ratings. There is no perfect ranking assessment which is built on totally objective criteria. Considering that the order of individual institutions depends on the selected criteria and their weights, universities which come from the country making the evaluation are often favoured. This argument is often used to refute the objectivity of performed ranking evaluations.

2. International rankings of higher education institutions

The international realized significant rankings globally covering various higher education institutions in the world can be classified mainly as follows:

a) *Academic Ranking of World Universities (ARWU)* realized by Shanghai Jiao Tong University,

b) *Webometrics Ranking of World Universities* – the initiative of a research group Consejo Superior de Investigaciones Científicas (CSIC), the largest government research organization in Spain,

c) *Performance Ranking of Scientific Papers for World Universities* realized by the Higher Education Evaluation and Accreditation Council in Taiwan,

d) *QS World University Rankings*, which are published in the London Times Higher Education magazine, in partnership with Quacquarelli Symonds, the organization specializing in the field of education.

The most famous of them, known as the *Shanghai ranking* of top 500 universities from around the world is based on four main criteria:

Table 1. Criteria of ARWU

Criteria	Indicator	Weight
Quality of Education	Alumni of an institution winning Nobel Prizes and Fields Medals	10%
Quality of Faculty	Staff of an institution winning Nobel Prizes and Fields Medals	20%
	Highly cited researchers in 21 broad subject categories	20%
Research Output	Papers published in Nature and Science*	20%
	Papers indexed in Science Citation Index-expanded and Social Science Citation Index	20%
Per Capita Performance	Per capita academic performance of an institution	10%
Total		100%

* For institutions specialized in humanities and social sciences such as London School of Economics, N&S is not considered, and the weight of N&S is relocated to other indicators.

Source: www.arwu.org.

The result of ranking, which was realized in 2009, was the ranking of top 500 world universities. Within the top 200 universities around the world there were placed 96 from North America (90 from the USA and 6 from Canada), 78 from Europe (the most of them, 23, come from the United Kingdom, 14 from Germany, 9 from the Netherlands, 7 from France, 6 from Switzerland, and − 4 or less from each other country). Among the top 200 universities there were also 17 universities from Asia (the largest number of them, 9, from Japan and 4 from Israel), 3 from Latin America and 6 from Australia. Within the top 500 universities there was not any Slovak educational institution. The ranking by region is shown in Table 2. At the head of ranking there are universities from North America, reaching almost 50% of share of all universities. Universities from Oceania and Latin America represent a negligible part of top 200 universities around the world. European universities have gained nearly 40%. British, German and Dutch are mainly the most successful among them.

Table 2. Ranking by region

Region	Number of universities	Percentage
North America	96	48
Europe	78	39
Asia	17	8.5
Oceania	6	3
Latin America	3	1.5
Total	200	100%

Source: www.arwu.org.

Within the Webometrics ranking there are particularly taken into account the criteria relating to selected parameters of university web sites:

Table 3. Criteria of Webometrics ranking

VISIBILITY (external inlinks) 50 %	SIZE (web pages) 20 %
	RICH FILES 15 %
	SCHOLAR 15 %

Source: www.webometrics.info.

VISIBILITY

The total number of unique external links (inlinks) received by a site can be only confidently obtained from Yahoo Search. Results are log-normalised to 1 for the highest value and then combined to generate the rank.

SIZE

Number of pages recovered from four engines: Google, Yahoo, Live Search and Exalead. For each engine, the results are log-normalised to 1 for the highest value. Then for each domain, maximum and minimum results are excluded and every institution is assigned to a rank according to the combined sum.

RICH FILES

After evaluation of their relevance to academic and publication activities and considering the volume of the different file formats, the following were selected: Adobe Acrobat (*.pdf*), Adobe PostScript (*.ps*), Microsoft Word (*.doc*) and Microsoft Powerpoint (*.ppt*). These data were extracted using Google and merging the results for each file type after log-normalising in the same way as described before.

SCHOLAR

Google Scholar provides the number of papers and citations for each academic domain. These results from the Scholar database represent papers, reports and other academic items.

The results of the January 2010 rankings show that the institutions form North America clear led in the top 200 universities. These institutions were represented by 114 universities (100 from the USA , 14 from Canada). It is 57% of all top 200 universities. Within Europe there were placed 58 universities of which the largest share had Germany − 16 universities and the United Kingdom − 12 universities. Within the Asia region, the best ranked was Japan with its seven universities. The ranking was done within 8 000 educational institutions, at which also 21 Slovak universities were ranked. The top places from them were reached by the Comenius University in Bratislava, which gained the 431st position and The University of Economics in Bratislava the 2830th position. Ranking by region is shown in Table 4. At the head of ranking there are again the universities from North America, which represent almost 60% share. The dominant position was held by universities from the United States. The most successful universities within Europe are again from Germany, the UK and Netherlands.

Very similar results as in the previous cases come from the so-called "Taiwanese" ranking from 2009. This ranking is based mainly on the number of published articles and citations. The specified criteria are the following:

The ranking's result concerned the top 500 universities around the world, within which the first 200 were again mainly universities from the United States and the United Kingdom. There were 87 universities from the USA, representing almost

44% of all universities in the group, 19 from the UK and 18 from Germany. The Slovak educational institutions were not included in the top 500 ranking. The ranking by region is shown in Table 6. It can be seen in the table that 48% of the share was gained, the same as in previous cases, by universities from the United States and Canada. The second place was gained by universities from Europe, mainly British.

Table 4. Ranking by region

Region	Number of universities	Percentage
North America	114	57
Europe	58	29
Asia	18	9
Oceania	6	3
Latin America	4	2
Total	200	100

Source: www.webometrics.info.

Table 5. Criteria of "Taiwanese" ranking

Criteria	Indicator	Weight
Research productivity	Number of articles of the last 11 years (1998−2008)	10
	Number of articles of the current year (2008)	10
	Number of citations of the last 11 years (1998−2008)	10
Research impact	Number of citations of the last 2 years (2007−2008)	10
	Average number of citations of the last 11 years (1998−2008)	10
	h-index of the last 2 years (2007−2008)	20
Research excellence	Number of Highly Cited Papers (1998−2008)	15
	Number of articles of the current year in high-impact journals (2008)	15

Source: http://ranking.heeact.edu.tw.

Table 6. Ranking by region

Region	Number of universities	Percentage
North America	96	48
Europe	78	39
Asia	19	9.5
Oceania	6	3
Latin America	1	0.5
Total	200	100

Source: http://ranking.heeact.edu.tw.

The universities from Asia, Oceania and Latin America represented only a negligible proportion.

The last ranking from the above mentioned is created in partnership with Quacquarelli Symonds organization and published in the London Times Higher Education magazine. The ranking was obtained through the 6 main groups with different weight.

Table 7. Criteria of QS ranking

Indicator	Weight
Academic Peer Review	40%
Employer Review	10%
Citations per Faculty	20%
Student Faculty	20%
International Faculty	5%
International Students	5%

Source: www.topuniversities.com

As a result of the ranking in 2009 there was the location of universities from 65 countries in the top 200 (54 from the USA and 11 from Canada). There were also 83 institutions from Europe (mainly from the United Kingdom – 29 universities, the Netherlands – 11 and Germany – 10), 11 from Japan (the best place among Asian universities) and 9 from Australia. The ranking by region is shown in Table 8, in which less changes compared to the previous cases can be seen. The major share was represented by universities from Europe (from the United Kingdom, Germany and the Netherlands again). The second position, over 30%, was gained by the universities from North America, mainly from the United States again.

Table 8. Ranking by region

Region	Number of universities	Percentage
North America	65	32.5
Europe	83	41.5
Asia	38	19
Oceania	12	6
Latin America	1	0.5
South Africa	1	0.5
Total	200	100

Source: www.topuniversities.com.

3. Conclusion

The results from the most famous international rankings of higher education institutions show that in the specified evaluation parameters the quality of Slovak universities are significantly behind the level of prestigious universities around the world. Ineffectualness of Slovak universities is driven mainly by the lack of funds that do not allow to increase their quality.

Concerning this lack of funds (compared with the most developed countries in the world) and based on the relationship between quality and funding it is possible to conclude that the presumption of improving the quality of higher education in Slovakia is the increase of public and private sources of funding at least at the level of average country which belongs to the most developed ones. Improving the quality of higher education without necessary financial resources is impossible.

Literature

Education at a glance, OECD Indicators 2009, OECD, Paris 2009.
http://ranking.heeact.edu.tw.
www.arwu.org.
www.minedu.sk.
www.topuniversities.com.
www.webometrics.info.

OCENA JAKOŚCI SŁOWACKICH UNIWERSYTETÓW W KONTEKŚCIE UZNANYCH MIĘDZYNARODOWYCH RANKINGÓW

Streszczenie: Nowym wyzwaniem dla krajów stało się w ostatnich latach zjawisko budowy społeczeństwa opartego na wiedzy, którego istotny element stanowią instytucje szkolnictwa wyższego. Niezbędne zatem staje się zapewnienie ich adaptacji do potrzeb takiego społeczeństwa. Głównym celem strategicznym każdego państwa powinno być więc zagwarantowanie dostępu do wysokiej jakości kształcenia na poziomie międzynarodowym. Instytucje szkolnictwa wyższego muszą spełniać standardy jakościowe nie tylko w otoczeniu krajowym, ale również w odniesieniu do zagranicy. To wymaga osiągnięcia standardów uznawanych na świecie. Ocena jakości instytucji edukacyjnych jest dokonywana zatem nie tylko na poziomie narodowym, ale i z perspektywy międzynarodowej.

Słowa kluczowe: ranking, szkolnictwo wyższe, uniwersytety, jakość, finansowanie.