

## INFLUENCE OF UNIVERSITY INTERNATIONALIZATION ON THEIR POSITIONS IN WORLD RANKINGS

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**Abstract.** The purpose of this work was to study the relationship between the level of internationalization of universities and their position in authoritative world rankings. Nowadays, the process of integration into the international educational space is becoming a priority for many Russian universities. However, the issue of the impact level concerning an international component strengthening on the growth of their rating positions is still debatable.

The article attempted to determine the existence of a relationship between these indicators using mathematical statistics methods.

The study is based on factor correlation analysis. Such indicators such as the share of foreign student number in the total number of students (%), the share of the number of foreign citizens in the total number of scientific and pedagogical employees of the university (%), the share of joint articles with foreign scientists in the total number of publications of the university during the year, indexed by the Scopus database (%) were chosen as the key indicators characterizing the international activity of universities. The objects of research were 22 Russian universities, included in the global QS rating during 2016, as well as the universities that were included in the first hundred of this rating.

The correlation analysis demonstrated the presence of a weak, very weak and slightly negative correlation for Russian universities between the rating position and the indicators of international activity with the maximum closeness of the relationship between the share of joint articles and the place in the rating. The relationship between the indicators under study among the leading higher education institutions is more pronounced. The maximum closeness of relation is observed between the share of foreign teachers and the rating position of a university.

The results of the study may be of interest to the administrations of higher education institutions during the adjustment of strategic development plans.

**Keywords:** higher education, internationalization, foreign students, foreign teachers, international educational space.

## 1. INTRODUCTION

Recently internationalization of higher education has become one of the leading trends in the development of world education.

The internal policy of most modern universities is aimed at the embedding of an international component in a university mission and the involvement of all interested parties in it. The need for internationalization development is motivated by various factors, including the need to expand the access to the sources of advanced knowledge, new opportunities for partnerships and intercultural communication skill development, and by the increase of higher education institution reputation.

Internationalization of higher education is characterized by the level of academic mobility of students and teachers, the international orientation of curricula and programs, the implementation of joint scientific research.

A large number of scientific papers are devoted to the internationalization of universities, a considerable part of which is devoted to the analysis of the main terminological concepts and indicators of international activity measurement (Brandenburg, & Federkeil, 2007) (Jones, 2011) (Knight, 2009), the other part touches the current trends of its development in national practices at the institutional level and the level of individual states (Davis & Mackintosh, 2011) (De Wit, 2002) (Jowi, 2012).

A significant contribution to the assessment of international aspects concerning the activities of modern universities is made by global ratings using various indicators reflecting the multifaceted nature of internationalization process.

As a rule, the international component in most rating systems is described using a set of indicators related to the presence of foreign students and teachers, the availability of educational programs in foreign languages, as well as to international interaction in the context of research activities.

The global rating THE: World University Ranking is among the main indicators characterizing the international activity of universities. It takes into account the following indicators:

- The share of foreign teachers from their total number / Ratio of international to domestic staff (weight ratio makes 2.5%);

- The share of foreign students in the total number of students / Ratio of international to domestic students (weight ratio makes 2.5%);

- The share of publications from professors and teachers in scientific periodicals, prepared in co-authorship with one foreign author at least, in the total number of journal publications from university professors per year (Proportion of the university's total research journal publications with at least one international co-author (weight ratio makes 2.5%) (U-Multirank, n. d).

QS World University Rankings rating uses only two indicators to assess the level of internationalization among universities:

- the share of international students / International Student Ratio (weight ratio makes 5%);
- the share of foreign teachers and professors / International Faculty Ratio (weight ratio makes 5%) (Timeshighereducation.com, n. d).

The global rating U.S. News and World Report as well as the QS rating assesses the international activity of universities by two indicators - the share of foreign students and teachers with the same weight ratios.

Internationalization is seen as one of the key activities of a university in the multidimensional ranking of U-Multirank, along with teaching and learning, research, transfer of knowledge and the interaction with a region. In order to develop a general institutional ranking the following indicators are used: the proportion of programs in foreign languages; the number of joint international research publications; The percentage of foreign employees; The percentage of students studying in joint international programs; The share of foreign graduates-doctoral students; The percentage of foreign entrants; The percentage of foreign students who came by exchange programs; The percentage of university students participating in exchange programs (Vorob'eva, 2015).

In the context of Russia entry to the Bologna process, the issues of internationalization seem very relevant for most Russian universities.

The attraction of foreign students is among the priority tasks for the development of the international educational sphere.

A positive dynamics is observed for Russia in general in terms of the number of students drawn from abroad (Figure 1). In 2016 the number of foreign students studied at Russian universities amounted to almost 240 thousand people - 5% from the total number of students. Most of them (79% are represented by the students from the countries of the former USSR, of which the most represented are Kazakhstan (36% of the total number of students from the former Soviet republics), Uzbekistan (11%), Ukraine (11%), Turkmenistan (9%) and Belarus (8%).

The largest number of foreign students from the countries that were not the part of the USSR comes from Asia (57% of students from such countries), almost half of the students from this region come from China. The next largest geographical region is North Africa and the Middle East (19%).

The largest share of foreign students in the total number of students is observed at higher educational institutions, where the education in the fields of health and medical sciences, mathematics and natural sciences, art and culture is predominant one (*Academic Mobility of Foreign Students in Russia*, 2016).

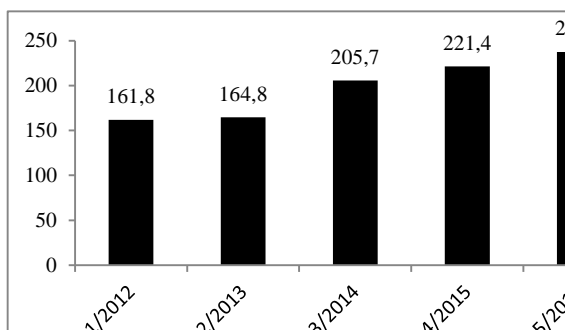


Figure 1. The number of foreign students at Russian universities, thousands of people.

Along with the need to attract foreign students, Russian universities have to increase the proportion of highly qualified foreign specialists.

To this end, Russian universities attract foreign teachers from abroad who already have the experience at leading world universities in order to

use their knowledge and skills to develop university competitive advantages, which include:

- The creation and implementation of new competitive and profitable educational products in English, corresponding to world standards;
- The creation of integrated training courses and joint training programs;
- The performance of active scientific activities, the development of new scientific directions and approaches to research;
- Brand recognition abroad.

The trend of internationalization at Russian higher school is also manifested in the expansion of international scientific cooperation, measured by the number of joint publications with foreign scientists.

The writing of articles with foreign colleagues not only significantly increases the chances of Russian researchers to publish their work in a prestigious foreign journal, but also acts as a strategy to improve its international positioning.

Besides, the articles of Russian scholars, prepared jointly with foreign specialists, are quoted much more often on average than purely Russian articles. According to V.V. Pisyakov's opinion (2010) there is a clear dependence of joint article citation on the authors' citizenship. For example, joint publications with German scientists bring their Russian colleagues 2.8 times more links on average in the journals indexed by the Web of Science, and the publications with British scientists increase the amount of links in 3.6 times.

Nowadays, the Russian market of scientific publications is still mostly locally oriented, and a significant part of Russian science is poorly integrated into the international scientific process. A high productivity of joint work with foreign colleagues is characteristic only for large metropolitan universities.

Russian universities, claiming high positions in the world rankings, single out internationalization as one of the priority tasks in the strategic plans of their development.

However, the issue concerning the extent of impact which makes the strengthening of the international component in the activity of Russian universities

on the growth of their rating positions is still debatable.

Considering the "lightness" of the internationalization indicator in most global ratings, a number of researchers agree that the focus on the number of foreign students and teachers increase cannot lead to a significant increase in the competitiveness of universities among authoritative rankings.

Others, on the contrary, rely on internationalization as a promising way of promotion in the world rating systems. So, according to I.M. Vorobyova (2015), despite the low weight of foreign students and teachers share in QS rating, these indicators form an indicator of academic reputation, accounting for almost half of the overall rating weight.

The purpose of this article was to study the relationship between the level of internationalization among Russian universities and their position in authoritative world rankings (using the example of QS rating).

## 2. METHOD

22 Russian universities were selected as the objects of the research, which were included in the global QS rating and the top ranking universities entering the first hundred of universities (2016).

The key indicators characterizing the international activity of universities were the following ones: the proportion of foreign student number in the total number of students (%), the proportion of foreign citizen number in the total number of scientific and pedagogical employees of a university (%), the share of joint articles with foreign scientists from the total number of university publications, indexed by the Scopus database (%).

The source of information on the number of foreign students and teachers for Russian universities was the data from the monitoring of educational activities in 2016. The data on foreign universities were taken from university profiles posted on the official QS rating website (Topuniversities.com, n. d).

Information on the share of joint articles with foreign scientists was obtained from the information-analytical system SciVal.

The relation between the rating position and the level of a university international activity was based on factor correlation analysis.

## 3. RESULTS AND DISCUSSION

### Stage 1

At the first stage of study the comparative analysis was performed concerning the internationalization indicators at Russian universities included in QS rating and the top universities of the first hundred.

The analysis of the sample concerning the studied indicators allowed us to fix the following results. The average value of foreign student share at Russian universities makes 9.7%, while the rates vary from 3.1% to 25%. While the same indicator for high schools from the top-100 rating has an average value of 24.5% and the fluctuation interval makes [3.8; 69.4]. Comparing these values, we see that the average value of the indicator among the rating leaders is 2.5 times higher than that of Russian universities.

The share of foreign teachers at Russian universities is in the range of 0.2-6.1%, with an average of 1.8%, which is 18 times lower than the same indicator among top-ranking universities.

The average share of joint articles with foreign scientists at Russian universities makes 28.8% and varies from 3.1 to 44.7%. The leading universities outstrip Russian universities by almost 2 times concerning this rating. The results are shown in Table 1.

*Table 1: Internationalization indicators of Russian universities and universities top-100 QS rating (2016)*

Indicator name	Russian universities of QS rating	The universities of top-100 QS rating
<b>Foreign students,%</b>		
Average value	9,7	24,5
Minimum value	3,1	3,8
Maximum value	25	69,4
<b>Foreign teachers,%</b>		
Average value	1,8	32,2
Minimum value	0,2	2,8
Maximum value	6,1	76,4
<b>Joint articles,%</b>		
Average value	27,5	47,9
Minimum value	3,1	25,7
Maximum value	44,7	70,6

## Stage 2

Within the framework of the study, the hypothesis was put forward about the direct relationship between the rating position of universities and the indicators of their internationalization, in particular, it was required to prove whether the low positions in the rating were conditioned by inefficient international activity.

The factor correlation analysis was carried out and the Spearman rank correlation coefficients were calculated in order to check this.

The analysis of the obtained results showed that Russian universities have a weak and very weak correlation between the rating position and the indicators of international activity. The maximum closeness of communication is recorded between the share of joint articles and the rating place (0.22).

The relationship between the rating position and the share of foreign teachers and students for leading higher education institutions is more pronounced than that of Russian universities (0.34 and 0.29 respectively), but the correlation coefficient between the share of joint articles and the rating place is much lower (0.016).

Thus, the correlation analysis proved the hypothesis put forward by us on the existence of a direct relationship between the rating position of a university and the level of its internationalization. However, the tightness of the relationship between the indicators under study is not strong enough to

speak about the reliability and significance of the obtained results.

*Table 2. Spearman's rank correlation coefficients (r) between the rating position and the indicators of international activity (2016)*

Indicators	Russian universities of QS rating	Top-100 universities of QS rating
The share of foreign students in the total number of students	0,04	0,29
Specific weight of foreign citizen number from the number of academic staff in the total amount of academic staff	0,13	0,34
The share of joint articles with foreign scientists in the total number of university publications	0,22	0,016

## 4. CONCLUSIONS

1. Nowadays Russian universities in terms of internationalization level are much inferior to authoritative universities in the world. Thus, the average values of foreign student, foreign teacher and joint article with foreign colleague share from Russian universities are 2.5, 18 and 2 times lower than those of higher education institutions from the top-100 QS rating.

2. The correlation analysis demonstrated the presence of a direct but weak dependence between the rating position and the internationalization indicators of Russian universities and the universities of top-100 QS rating.

3. The maximum closeness of communication for Russian universities is noted between the share of joint articles and the rating place (0.22). For the universities of top-100 QS rating the relationship between the rating position and the share of foreign teachers is more pronounced (0.34).

4. In general, despite the ambiguous results of mathematical analysis, the internationalization of Russian universities can still be attributed to the number of indirect mechanisms to increase their competitiveness in world ratings. Considering that the methodology of authoritative rating systems gives reputational criteria the maximum weight coefficients, it is perfectly justified to rely on the growth of the foreign contingent of employees and students as a direct channel for the integration into the world educational space and the basis for university reputation development.

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