

Draft of 7th July 2017

**MOSCOW INTERNATIONAL UNIVERSITY
RANKING
"The Three University Missions"
Methodology**

1. DEVELOPMENT BACKGROUND

Ranking of the new type is highly demanded not only in Russia, but also in the majority of other countries. University professors, students, researchers, employers and governments are experiencing problems due to the fact that most of the popular rankings evaluate universities rather one-sidedly. From one third to a half of their indicators account for reputation assessment, and it may account for up to 80% or even more in rankings by subject. At the same time the assessment takes into account neither the actual quality of the graduates' knowledge, nor the introduction of advanced education methods, nor the peculiarities of the national pedagogical and scientific schools.

Moscow International University Ranking "The Three University Missions" assesses higher education institutions according to the three traditional missions of universities. The first one is education. The primary function of universities has always been the same, to teach and to give knowledge to students. Surprisingly, the quality of education remains at the periphery of the global university rankings. The second is scientific research, without which high quality training of specialists is not possible today. It would seem that this area is carefully assessed by the existing rankings, but overemphasis on the data of the selected scientometric systems often leads to serious distortions. And finally, the relations between the university and the local community, which are now getting increasingly important as a condition for sustained development of regions, but are not yet considered by the compilers of existing rankings.

The principal difference of the new ranking is that it is based on the consistently measured quantitative indicators and rules out the use of the data based on reputation surveys, which significantly increases its level of objectivity.

Moscow International University Ranking is the first of the kind to have been widely discussed at international level from an early stage of the project. The initiative has particularly been discussed and supported by the leading universities of Russia, China, India, Iran, Turkey, and Japan. The open public discussion has been carried on by the MosIUR International Expert Council, which consists of more than 20 experts from 11 countries.

2. RANKING FOUNDER AND OPERATOR

The ranking founder is the Russian Union of Rectors.

The ranking operator is the Association of Rating Makers (ARM), which includes leading rating and research centres (Expert RA, VCIOM, Reputatsiya, etc.) as its members.

3. METHODOLOGICAL CONCEPT AND FEATURES OF THE RANKING

Ranking question:

Which university ensures a more balanced development of students?

The ranking arranges the universities in order according to the answer to the ranking question. By balanced development we mean ensuring the development in compliance with the three main university missions: education, research, and social impact.

Criteria (factors) selection principles:

- Ranking criteria in the aggregate shall comprehensively reflect all the three areas (missions)
- National specific features. We understand balanced development not as a matter of elitism or being close to the leading world centres (of economy, culture etc.), but rather in the context of global demand, and above all, in the university location region.

- We use objective criteria only (thus ensuring that the result is observable, verifiable and transparent). Consequently, any ranking user will be able not only to view a university score, but also to interpret it on their own.
- The number of criteria shall be kept reasonably small provided that the first principle is fully observed.

Notes:

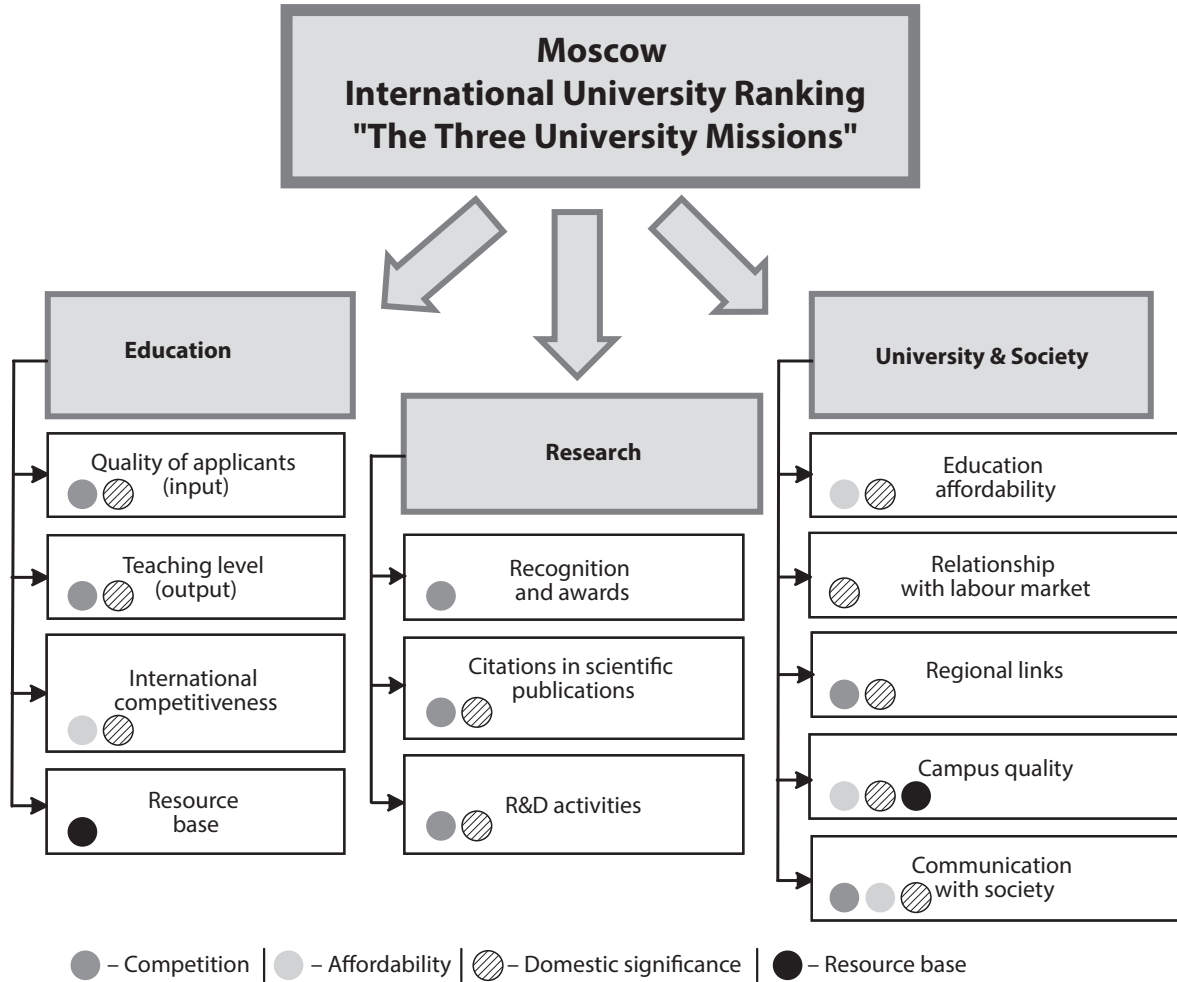
- The best known international university rankings do not reflect the first three principles. This fact and the ranking question comprise the unique feature of MosIUR.
- Observability includes being applicable to universities in most of the countries, being common and understandable for universities.
- Criteria number minimisation: the university questionnaire should contain at most 20-22 items. Adding information from other sources is possible provided that the sources are internationally reputable.

Characteristics measured (what criteria can reflect):

- Competition (especially among students), competitiveness
- Affordability, social elevator role
- Importance for the nation and the region (national specific features)
- Availability of necessary resources

Note: Ideally we would like our criteria to measure all the aforementioned features. Typically it is not possible, in such cases the priority should be given according to the listing order: for instance, competitiveness is much more important than the resources available.

4. RANKING MODEL



5. RANKING CRITERIA

No.	Short criterion name	Criterion details	Criterion meaning and justification	Information source
1. Criteria group: Education				
1.1. Criteria subgroup: Quality of Applicants (Input)				
1.1.1.	Admission quality	1.1.1. Average score of first year intramural undergraduate applicants according to the national test system, or respective admission examination score, or competition level	The criterion evaluates the quality of the enrolled students. The higher the average national test system score, the better the university's first year students are prepared for studying. This, in turn, increases the competition among students. Introducing such a criterion will make it possible to take national specific features into account, which is undoubtedly important. Globally competitive universities are first and foremost competitive in their own country: in particular, they win the battle for bright students. Most of the countries have some national test system. However, for those without, two alternative formulations are suggested: calculating the university's own admission examination score or the level of prospective students' competition (applicants per place).	Universities/national monitoring systems
1.2. Criteria subgroup: Training Level (Output)				
1.2.1.	Student competitiveness	1.2.1. Winners and awardees of international student olympiads and other prestigious international competitions among university students	Unlike common scientometric indicators, which measure achievements of university staff, the innovative criterion of the Moscow Ranking makes it possible to measure students' competitiveness. This criterion demonstrates the amount of knowledge, skills and competence students obtain, as well as their ability to use these resources to solve complex tasks. The number of winners of international student olympiads and other prestigious international contests cannot be big, but, nevertheless, the number of winners and awardees of prestigious contests can show in a focused way the effectiveness of education and students' aptitude for breakthrough scientific research.	Data from websites of international olympiads and contests
1.2.2.	Alumni success on the labour market	1.2.2.1. Alumni average wages during the first year following the graduation year 1.2.2.2. Proportion of students employed no later than during the first year, following the graduation year	This criterion demonstrates university alumni competitiveness on the labour market. This of one of the main university effectiveness criteria for many applicants, parents and students. It provides proof that the knowledge, skills and competence obtained by students are demanded by the labour market. The criterion calculation takes into account not only the alumni income, but also the period of unemployment after graduation, the changes in which appears to be an important factor amid the world trend towards growing youth unemployment.	Universities/national monitoring systems Universities/national monitoring systems
1.3. Criteria subgroup: International Competitiveness				
1.3.1.	Attractiveness for international students	1.3.1. Proportion of international students in the total number of students	This indicator demonstrates the proportion of international students in the total number of intramural students and is widely used by existing academic rankings. However, there is a factor that makes direct comparison of university internationalisation levels irrelevant. University internationalisation above all depends on the country and its geographical, economic, cultural and language features. For example, an average Swiss university is more internationalised than an average German one, which in turn is higher on this scale than an average Russian university, and so on. Therefore, we suggest introducing a normalising coefficient for this indicator: calculating the proportion of international students with reference to the country.	Universities

Table (continued)

No.	Short criterion name	Criterion details	Criterion meaning and justification	Information source
1.3.2.	National diversity of international students	1.3.2. Number of countries represented among university students	To evaluate the university's attractiveness for international students it is important to consider not only the proportion of foreign citizens, but also country coverage, national diversity of international students. The use of this criterion together with the "Proportion of international students" indicator compensates the advantage of near-border universities, which have all conditions for a high proportion of international students (which taken alone does not necessarily account for international competitiveness in attracting students from abroad). The criterion uses a threshold filter: countries represented by less than 20 students are not considered.	Universities
1.3.3.	Student mobility	1.3.3. The ratio of intramural university students of baccalaureate and master's programmes studying abroad to total intramural students	The ratio of intramural university students of baccalaureate and master's programmes and equivalent non-doctoral degrees, who have spent at least 3 months of the reported year abroad as part of cooperative double diploma programmes, student mobility programmes, and academic exchange programmes, to total intramural students. The criterion measures outward student mobility and shows opportunities for the university students to get education at foreign universities as part of cooperative double diploma programmes, student mobility programmes, and academic exchange programmes. This is a significant argument for choosing a university for many prospective and current students.	Universities
1.4. Criteria subgroup: Resource Base				
1.4.1.	Financial resources	1.4.1. University budget to student ratio	This criterion measures the level of the university's financial well-being. The higher the indicator, the wider the range of the university's opportunities to implement the three main missions: education, science, and contribution to society. Considering that the cost of products and services may significantly vary from country to country, the indicator will be calculated at purchasing power parity.	Universities
1.4.2.	Human resources	1.4.2. Student to academic staff ratio	This indicator actually demonstrates the sufficiency of the university's human resources. More faculty and research staff per student means more attention that university staff can afford to pay to each student, and, as a result, better conditions in the university.	Universities
1.4.3.	Material resources / real estate assets	1.4.3. Total area of education and laboratory facilities per student	The university should have enough education and laboratory facilities to maintain a decent quality level of education and research activities. The higher the indicator, the better is the infrastructure component of the university's resource base.	Universities
2. Criteria group: Science				
2.1. Criteria subgroup: Recognition and Awards				
2.1.1.	Outstanding scientific achievements	2.1.1. Awards from the IREG List won by university academic staff and alumni	This metric has been developed from the approach proposed by the Shanghai ranking. Calculating the number of laureates of prestigious prizes to evaluate the scientific potential of the university is fundamentally correct. However, using only two prizes, though the most prestigious ones, significantly limits the university evaluation capabilities. Therefore we propose using the IREG List of International Academic Awards, which includes the world's 99 most prestigious scientific awards (providing the opportunity to prolong the prize list later).	Data from websites of the international prizes

Table (continued)

No.	Short criterion name	Criterion details	Criterion meaning and justification	Information source
2.2. Criteria subgroup: Citations in Scientific Publications				
2.2.1.	Quality of scientific publications (international level)	2.2.1. Average normalised citation impact (global level)	The normalised citation parameter demonstrates quantitatively, to which extent a particular publication is better or worse cited than worldwide average. The indicator demonstrates global relevance of the university's research activities within the academia, reflecting its relevance and quality. Normalised citation indicators are widely used by academic rankings.	Web Of Science, Scopus
2.2.2.	Quality of scientific publications (national level)	2.2.2. Average normalised citation impact (national level)	This indicator demonstrates relevance of the university's research activities within the academia of the university's location country. Introducing this criterion contributes to better consideration of achievements of national science schools and more accurate measurements in humanities.	Web Of Science, Scopus
2.3. Criteria subgroup: R&D Activities				
2.3.1.	Staff involvement in R&D	2.3.1. University research income to academic staff ratio	This indicator actually shows the amount of R&D finance per staff member. The higher the amount of finance per staff member, the more relevant is the university's research. For universities gathering statistics on expenses rather than income, the indicator is calculated as expenses (budget) per academic staff member.	Universities
2.3.2.	Commercialisation of R&D results	2.3.2. Relative share of financing obtained from intellectual property	The suggested indicator is important for evaluation of the university third mission, part of which is the university's capability to commercialise its research and development results.	Universities
3. Criteria group: University & Society				
3.1. Criteria subgroup: Education Affordability				
3.1.1.	Social elevator support level	3.1.1. Proportion of first year intramural students receiving education free of charge to the total first year enrolment	The indicator is calculated as proportion of first year intramural students of all programmes that lead to a degree of Bachelor and equivalent first degrees, whose tuition fees are compensated to them by external funds, including those of governmental and non-governmental organisations, and employers, among the total number of enrolled first year students. The indicator measures education affordability regardless of income of applicants and their families' income and social status. If the state or private organisations provide students with free education, it not only broadens the "funnel" of bright young people, but also makes it possible for the university to play the role of a social elevator.	Universities
3.1.2.	University's contribution to affordable online education	3.1.2. University's online courses published on the biggest global online platforms	This innovative indicator has never been used in global academic rankings before. It measures the university's activity in the area of massive open online courses. There is a clear public demand for open online courses, and the fact that this education activity is rapidly developing is beyond doubt. The more courses published on global online platforms, the wider and more diverse is the knowledge transferred by the university via the internet, and the more significant is the university's contribution to education affordability worldwide.	Ranking operator / biggest platforms.

Table (continued)

No.	Short criterion name	Criterion details	Criterion meaning and justification	Information source
3.2. Criteria subgroup: Relationship with Labour Market				
3.2.1.	Postgraduate Training Relevance	3.2.1. Amount of finance obtained by the university from additional training programmes during the reported year	In an ever-changing modern world and with the technological advance there is a need for regular refreshment of knowledge and skills of professionals from various areas of economy. The university's capability to provide such training means that the university's training level, vision and planning are ahead of the real economy. That, in its turn, also indicates a high level of the university's education, science and management. The criterion demonstrates relevance of the university's education among professionals and evaluates its applied focus, which is in public demand. Considering that the cost of education may significantly vary from country to country, the indicator will be calculated at purchasing power parity.	Universities
3.2.2.	Partnerships with employers	3.2.2. Proportion of students trained by cooperative university-and-employer divisions	Being of high national importance, the criterion evaluates the strength of partnership ties between the university and employer companies.	Universities
3.3. Criteria subgroup: Regional Links				
3.3.1.	University's contribution to the country's scientific research	3.3.1. University's share of the total scholarly output of its country's universities	This innovative ranking criterion measures the national significance of universities for scientific development in their respective countries. The higher the university's proportion in the country's total university publications, the bigger is its contribution to research in the country, and consequently, the more important and valuable such a university is for society.	Web Of Science, Scopus
3.4. Criteria subgroup: Campus Quality				
3.4.1.	Accommodation affordability	3.4.1.1. Residence hall living area to intramural students ratio. 3.4.1.2. Average residence hall accommodation cost	High affordability of housing in a university's residence halls (dormitories) reflects the university's capability to provide equal opportunities for its students regardless of their socioeconomic status. Absence of residence halls or inadequately high cost thereof may prevent socially disadvantaged groups, including highly trained applicants, from studying at the university.	Universities
3.4.2.	Resource base for creative development and sport	3.4.2. Total area of sport, creativity and athletic rehabilitation facilities per student	Balanced development of students not only requires high-quality education and research resources. Conditions for comprehensive student development, including creative activities and sport, are important, too. This criterion is important in the context of the three university missions.	Universities
3.5. Criteria subgroup: Communication with Society				
3.5.1.	Web presence	3.5.1. Total web pages of the university's website indexed by biggest search engines	This indicator reflects a number of important aspects of university's communication with society: openness, transparency, information accessibility, university's commitment to information exchange.	Ranking operator

Table (end)

No.	Short criterion name	Criterion details	Criterion meaning and justification	Information source
3.5.2.	Web popularity	3.5.2.1. Views of the university's article on Wikipedia 3.5.2.2. Followers of the university's Twitter account	Along with the official website the university's article on Wikipedia is an important source of information. A high number of views of the university's page show the university's societal impact. The criterion will cover the number of views during the year preceding the ranking compilation year. Twitter is one of the most prompt means of communication between a university and stakeholders. In spite of the service's popularity varying from country to country, a significant number of universities are using Twitter to keep public informed of their activities.	Wikipedia Twitter
3.5.3.	University's impact on society	3.5.3. University's alumni with an individual article on Wikipedia	High-quality education consists to a large extent of incommensurate phenomena, among other things it can be measured by university's impact on society. One of the most effective ways of such a measurement is counting the number of successful alumni in different areas of activity (innovation, creative activities, art, business, charity, etc.). This criterion will calculate the number of a university's alumni with an individual article on Wikipedia about them. The indicator quantitatively evaluates the university's impact on society.	Wikipedia
3.5.4.	Scientific cooperation with non-academic organisations	3.5.4. Proportion of publications written in academic-corporate collaboration	This criterion measures the strength of the university's scientific ties with non-academic organisations, including private and state establishments. The higher the indicator, the more intensive is the university's joint research with business, public organisations and state bodies.	Scopus