

## The *Three University Missions* Family of Rankings has drafted the pilot ranking of BRICS universities

### ***Reasons to introduce a new ranking***

A new academic ranking compiled by *Association of rating makers* is timed to the BRICS Rectors' Forum held in Moscow on October 17–18. The ranking is one of the first milestones of the comprehensive evaluation system, which was a matter of concern for the Grouping countries multiple times. Specifically, this initiative was enshrined in the Declaration of the Meeting of BRICS Education Ministers held in Kazan on June 11.

The experts do not fortuitously pay heed to BRICS countries. To date, it is the world's largest educational market. It spans the states populated by roughly 3.6 bn people. Incremental rates of the Grouping expansion, substantial economic growth of BRICS member states, and the experts' unanimous approach to education as a pivotal economic growth factor boosted the development of the singular higher education quality assessment system. Nonetheless, BRICS universities are currently underrepresented in the international league tables. Most global ranking makers do not seek to unbiasedly assess BRICS higher education institutions (HEIs) and disregard their national specificity.

### ***Ranking compilation steps***

The approaches to compiling the global *Three University Missions* List were harnessed in BRICS university assessment. This first academic ranking project had been holistically addressed at the international scale since it was barely implemented. It also passed PwC audit. As pertains to the advantages of the *Three University Missions* Ranking compiled since 2017, it rests on verifiable objective data. Subjective expert surveys are excluded completely.

While BRICS ranking was prepared, the *Three University Missions* model was modified with due account of national specificity of relevant educational institutions. The tools included the special weighting factor calibration and search for the new parameters reflecting the interaction of BRICS universities. According to the new ranking, the weight value of several criteria, e.g. the number of students' victories in international contests and the share of international students, increased from 7% to 9% and from 8% to 10%, respectively. However, the weight value of some other parameters, such as the HEI budget-to-student and faculty-to-student ratios, shrank from 15% to 13%. The academic ranking was first supplemented with a new criterion, namely joint publications with BRICS partners, in the context of the research mission evaluation. It measures the number of scientific papers released in partnership with foreign BRICS counterparts over the past four years.

A total of 825 universities based in ten countries, i.e. Brazil, Egypt, India, Iran, China, the United Arab Emirates (UAE), Russia, Saudi Arabia, Ethiopia, and South Africa, are shortlisted in the ranking. The universities in question take leading positions in global academic ratings or national shortlists. The key selection criterion is the number of research papers released in 2018–2021 in certain cases.

The points were calculated as per each of the 17 rating criteria and then summed up. The ultimate score underpinned the HEI ranking in the final league table. The definitive list to be published encompassed 600 best BRICS universities.

### ***BRICS Ranking: geographical coverage of the leaders***

The pilot ranking of BRICS universities comprises educational institutions of ten countries. Most of the ranked universities (207) are located in China. The second (161) and third (93) largest numbers of featured HEIs are situated in Russia and India. Brazil, where 55 HEIs are based, comes next. This BRICS country hosts most of the top-performing non-Eurasian HEIs.

There are as many as 27 ranked universities in Iran. The definitive list contains fewer than 20 universities from other member states.

The ranking of BRICS HEIs is headed by Peking University, M. V. Lomonosov Moscow State University, and Tsinghua University. The University of Cape Town, ranking 18th, is acknowledged as the best one in South Africa. The Indian Institute of Science located in Bengaluru scores the highest (25th) among Indian HEIs. The 28th place of the final ranking belongs to King Saud University, which is the leading Saudi Arabian higher school. The University of São Paulo, ranking 39th, is a victorious one in Brazil. The American University in Cairo (63d) and the United Arab Emirates University (64th) are the top HEIs based in Egypt and the UAE, respectively. Tehran University of Medical Sciences taking the 90th place has outperformed all other Iranian HEIs. The best Ethiopian HEI called Addis Ababa University has entered the #351–400 interval group of the final ranking of BRICS HEIs.

### ***Strong points of BRICS countries***

The quality of education is the strongest point of **Russian** higher schools. There are 39 Russian educational institutions in the *Education* section of the top-100 HEI list. As many as 10 of them are among the top-20 HEIs. Referring to other sections, only nine national HEIs met the *Science* section criteria of the top-100 HEI list. As pertains to *the third mission*, it is implemented by 15 Russian universities out of top-100 HEIs.

An in-depth analysis of educational activities reveals the highest competitiveness of Russia in terms of *the number of students' victories in international contests*, as the Russian students' score exceeds the average one of the students of top-600 ranked HEIs by 22%, and *the share of international students*, which constitutes 11.9% in Russia vs 7% in all BRICS countries.

The success of **Chinese** HEIs in BRICS ranking preeminently relates to their outstanding fulfillment of the research mission. 57 universities of Tianxia account for over 50% of the top-100 HEIs of *Science* subranking. On average, the budget per employee of Chinese HEIs exceeds the aggregated value of all the ranked HEIs by 44%. The value based on the purchasing power parity constitutes 62.6 thousand currency units (c.u.), as opposed to the average value of 43.4 c.u. pertaining to top-600 ranked HEIs. Furthermore, China has outpaced all BRICS countries with regard to scientific paper citation rate. Its score is 1.20, given that the average one is 0.88.

**India** is the third widely represented country following China and Russia in the ranking. Its research mission is the most highly rated. The corresponding top-100 subranking comprises 13 Indian HEIs. One of its driving forces is a number of academic awards mentioned in *IREG Observatory Catalog* and granted to the faculty and university alumni. Indian universities' average score (0.15) is higher than the overall ranking value (0.09) by 66%. Another major indicator is a research revenue-to-faculty ratio. India outstrips all BRICS countries in this domain, except for China.

The key areas of **Brazil's** excellence are primarily *the third mission* indicators, which reflect the relevance of universities in the society. The BRICS rating is led by Brazilian universities with respect to the number of the website online users. Approximately 576 thousand unique users go to the webpages of Brazilian featured HEIs, whereas the websites of the HEIs of 2nd-placed Saudi Arabia are visited by 487 thousand users. As for the average number of views of HEIs' *Wikipedia* entries, Brazil notably surpasses all BRICS countries, except for China.

The advancement of **Iran** is predominantly attributed to top positions of medical universities in BRICS ranking. Seven Iranian HEIs out of the top-300 ones specialize in medical sciences. Tehran University is the only traditional university thereof. Iranian Sharif University of Technology is also one of the top 50% of the best HEIs. The aforementioned HEIs showcase national leadership and high competitiveness in two areas among BRICS higher schools. The first one is victories in student contests. The average score of Iranian HEIs represents 0.57 points, while the one

of all BRICS institutions is 0.41 points. The second area is a number of winners of prestigious academic awards. Following Russia and India, Iran rounds out the top three countries.

**Saudi Arabia** and **Egypt** are the leading countries in terms of the number of joint scientific papers released in partnership with foreign BRICS counterparts. The average values per HEI constitute 3.8 thousand and 3.1 thousand, respectively. They exceed the triple score of South Africa (1.3 thousand), which is a so-called *bronze-medal winner* in this domain. A high staffing level is another competitive advantage of Egypt and Saudi Arabia. The faculty-to-student ratio amounts to 0.089 and 0.085, respectively, which is above the average ranking value of 0.083. Two *third mission* indicators reveal the strong points of universities of the Republic of South Africa. It is a top-performing country with regard to the number of HEI alumni who have an individual *Wikipedia* page. The national HEI value exceeds the double overall ranking value, 88 vs 40. As pertains to the number of unique website users, the HEIs of South Africa are superior to an average one of BRICS countries by a factor of 1.7.

Taking into account the share of international students (41%), the **United Arab Emirates** is way ahead of their competitors. It is extraordinarily high in the UAE HEIs compared to other BRICS member states. On top of that, the Emirati universities are the most generously funded ones. The HEI budget (based on the purchasing power parity)-to-student ratio is 51.9 thousand c.u. It is almost twice as high as the Chinese one (26.7 thousand c.u.). As for research activities, the UAE also demonstrates a relatively high score. Particularly, the UAE is ranked among the top five BRICS countries, when it comes to the citation rate and the specific research budget. The least number of ranked universities, i.e. only two of them, are based in an African country called **Ethiopia**. *The third mission* indicators, which show the interaction with the society and are especially relevant for national progress, are the strong point of Ethiopian HEIs. To put that in context, the average number of views of HEIs' *Wikipedia* entries is higher than in other BRICS countries, except for China and Brazil. In addition, Addis Ababa University is on the verge of entering the top-100 list of BRICS universities. It takes the 111th place among all the ranked institutions. As regards the number of social media followers, Ethiopia is one of the top five BRICS member states.

