

# Shanghai Rankings of Global Universities (2020) and Status of Indian Universities

Hardev Singh Virk\*

## Abstract

*Academic ranking of world universities (ARWU) 2020 is released as usual on 15 August by Shanghai Ranking Consultancy of China. ARWU has been presenting the ranking of world's Top 500 universities annually since 2004 but in 2020, ranking of 1000 global universities has been projected. It is unfortunate that none of the Indian universities and IITs find a slot among the Top 500. Indian Institute of Science, Bangalore was placed among the Top 500 in 1919 ranking but it has slid down to lower rank in the 501-600 series. USA has maintained its position with 45 universities among Top 100, Europe has improved from 35 to 36, Asia-Oceania improved from 17 to 19, and Africa remains out of any reckoning as in the past. Individual ranking of European countries has improved, for example, UK (8), France (5), Switzerland (5), Sweden (3) have improved their ranking position, while Canada (4), Germany (4), China (6), Japan (3) and Russia (1) maintain the status quo. In subject-wise ranking, Punjab University, Chandigarh maintains its slot among top 201-300 in the subject of Physics. In Mechanical Engineering, Indian Institutions have the better ranking among Top 400 as compared with other subjects but in other branches they hardly find a slot among Top 500. The ranking of Indian Universities is dismal in Agriculture, Biological Sciences, Social Sciences and Education.*

**Keywords:** ARWU, Shanghai Ranking, Indian universities, IITs, Subject-wise ranking.

## INTRODUCTION

Shanghai rankings of global universities [1], publisher of Academic Ranking of World Universities (ARWU), has been released on 15th August for 2020. ARWU started its journey of global university ranking in 2003. The editor of Current Science [2] took notice of poor performance of Indian universities in 2004 and wrote an editorial with his critical remarks: "I found the Shanghai rankings provocative and disturbing. It is clear that academic ambience of our large institutions is decaying. The government which funds these institutions and the bodies that govern them need to take a long, hard and critical look at the higher education scene in India". I have been analysing the ARWU reports since its inception [3–6].

An analysis of Shanghai rankings 2020 reveals that Indian universities and IITs do not find any slot among Top 500 universities at global level (Table 1). Among Top 10 universities in World Ranking, 8

### \*Author for Correspondence

Hardev Singh Virk  
E-mail: hardevsingh.virk@gmail.com

Professor of Eminence, Sri Guru Granth Sahib (SGGS)  
World University, Fatehgarh Sahib, Punjab, India

Received Date: 11-March-2021  
Accepted Date: 16-March-2021  
Published Date: 26-April-2021

**Citation:** Hardev Singh Virk. Shanghai Rankings of Global Universities (2020) and Status of Indian Universities. OmniScience: A Multi-disciplinary Journal. 2021; 11(1): 1–5p.

slots are occupied by US universities with Harvard and Stanford ranking first and second as usual for the last four years (2017-20). Universities of Cambridge and Oxford in UK maintain their status quo occupying 3rd and 9th slot, respectively. Among Top 100 universities ranked globally, 45 belong to USA, 36 to Europe (including 8 of UK, 5 of Switzerland, 5 of France, 4 of Germany, 4 of Netherlands, 3 of Sweden, 2 each of Belgium and Denmark), 7 to Australia, 6 to China, 4 to Canada, 3 to Japan, 2 to Singapore, and 1 each to Russia, Finland and Israel. During the last four years (2017-20), ARWU rankings of Universities of

USA, Europe and Australia have shown consistency but China has improved its ranking from 4 to 6 in Top 100 while Japan and Singapore maintain their status quo. The only problem is with Indian universities missing slots among the Top 500; even Indian Institute of Science (IISc), Bangalore has slid down from 401-500 to 501-600 position in Shanghai ranking.

**Table 1. ARWU Shanghai Rankings 2020 (Statistics by Country).**

| Country         | Top20 | Top100 | Top200 | Top300 | Top400 | Top500 | 501-1000 |
|-----------------|-------|--------|--------|--------|--------|--------|----------|
| United States   | 15    | 41     | 65     | 94     | 114    | 133    | 73       |
| United Kingdom  | 3     | 8      | 20     | 28     | 34     | 36     | 29       |
| France          | 1     | 5      | 8      | 12     | 16     | 17     | 13       |
| Switzerland     | 1     | 5      | 7      | 7      | 7      | 8      | 1        |
| Australia       | —     | 7      | 8      | 15     | 22     | 23     | 11       |
| China           | —     | 6      | 24     | 38     | 57     | 81     | 87       |
| China-Mainland  | —     | 6      | 22     | 32     | 49     | 71     | 73       |
| China-Hong Kong | —     | —      | 2      | 4      | 5      | 5      | 2        |
| China-Taiwan    | —     | —      | —      | 2      | 3      | 5      | 10       |
| China-Macau     | —     | —      | —      | —      | —      | —      | 2        |
| Germany         | —     | 4      | 10     | 19     | 24     | 30     | 19       |
| Canada          | —     | 4      | 9      | 12     | 18     | 19     | 9        |
| Netherlands     | —     | 4      | 9      | 10     | 10     | 12     | 1        |
| Japan           | —     | 3      | 7      | 8      | 10     | 14     | 26       |
| Sweden          | —     | 3      | 5      | 6      | 9      | 11     | 3        |
| Belgium         | —     | 2      | 4      | 5      | 7      | 7      | 1        |
| Denmark         | —     | 2      | 3      | 3      | 5      | 5      | 1        |
| Singapore       | —     | 2      | 2      | 2      | 2      | 2      | 2        |
| Israel          | —     | 1      | 4      | 4      | 4      | 6      | 1        |
| Norway          | —     | 1      | 2      | 2      | 3      | 3      | 2        |
| Russia          | —     | 1      | 1      | 1      | 2      | 3      | 8        |
| Finland         | —     | 1      | 1      | 1      | 2      | 3      | 5        |
| Italy           | —     | —      | 3      | 7      | 10     | 17     | 29       |
| Saudi Arabia    | —     | —      | 2      | 3      | 3      | 4      | —        |
| South Korea     | —     | —      | 1      | 6      | 9      | 11     | 21       |
| Spain           | —     | —      | 1      | 5      | 9      | 13     | 27       |
| Austria         | —     | —      | 1      | 3      | 5      | 7      | 7        |
| Brazil          | —     | —      | 1      | 1      | 3      | 6      | 16       |
| Portugal        | —     | —      | 1      | 1      | 2      | 3      | 3        |
| Ireland         | —     | —      | 1      | 1      | 2      | 3      | 2        |
| South Africa    | —     | —      | —      | 2      | 2      | 4      | 5        |
| New Zealand     | —     | —      | —      | 1      | 2      | 4      | 4        |
| Czech           | —     | —      | —      | 1      | 1      | 1      | 6        |
| Argentina       | —     | —      | —      | 1      | 1      | 1      | 2        |
| Mexico          | —     | —      | —      | 1      | 1      | 1      | 1        |
| Poland          | —     | —      | —      | —      | 1      | 2      | 6        |
| Iran            | —     | —      | —      | —      | 1      | 1      | 11       |
| Greece          | —     | —      | —      | —      | 1      | 1      | 5        |
| Malaysia        | —     | —      | —      | —      | 1      | 1      | 4        |
| Turkey          | —     | —      | —      | —      | —      | 1      | 10       |
| Egypt           | —     | —      | —      | —      | —      | 1      | 4        |
| Chile           | —     | —      | —      | —      | —      | 1      | 3        |
| Thailand        | —     | —      | —      | —      | —      | 1      | 3        |
| Croatia         | —     | —      | —      | —      | —      | 1      | —        |
| Estonia         | —     | —      | —      | —      | —      | 1      | —        |
| Serbia          | —     | —      | —      | —      | —      | 1      | —        |
| India           | —     | —      | —      | —      | —      | —      | 15       |
| Hungary         | —     | —      | —      | —      | —      | —      | 5        |
| Pakistan        | —     | —      | —      | —      | —      | —      | 4        |
| Colombia        | —     | —      | —      | —      | —      | —      | 1        |
| Costa Rica      | —     | —      | —      | —      | —      | —      | 1        |
| Cyprus          | —     | —      | —      | —      | —      | —      | 1        |
| Ethiopia        | —     | —      | —      | —      | —      | —      | 1        |
| Iceland         | —     | —      | —      | —      | —      | —      | 1        |
| Lebanon         | —     | —      | —      | —      | —      | —      | 1        |
| Lithuania       | —     | —      | —      | —      | —      | —      | 1        |
















|                   |    |     |     |     |     |     |     |
|-------------------|----|-----|-----|-----|-----|-----|-----|
| <b>Luxembourg</b> | —  | —   | —   | —   | —   | —   | 1   |
| <b>Qatar</b>      | —  | —   | —   | —   | —   | —   | 1   |
| <b>Romania</b>    | —  | —   | —   | —   | —   | —   | 1   |
| <b>Slovakia</b>   | —  | —   | —   | —   | —   | —   | 1   |
| <b>Slovenia</b>   | —  | —   | —   | —   | —   | —   | 1   |
| <b>Tunisia</b>    | —  | —   | —   | —   | —   | —   | 1   |
| <b>Uruguay</b>    | —  | —   | —   | —   | —   | —   | 1   |
| <b>Vietnam</b>    | —  | —   | —   | —   | —   | —   | 1   |
| <b>Total</b>      | 20 | 100 | 200 | 300 | 400 | 500 | 500 |

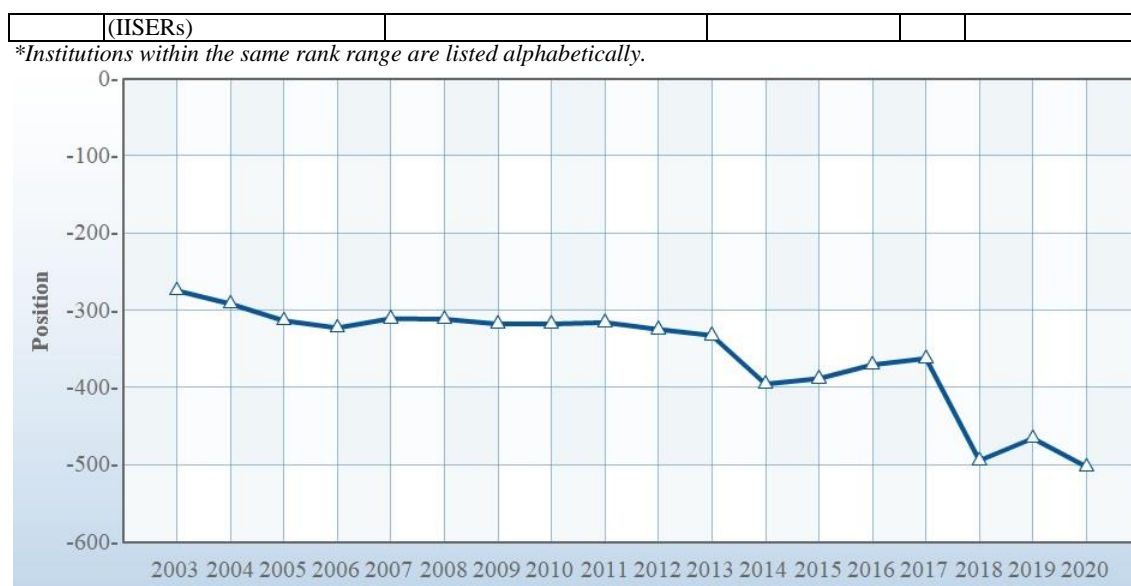
Another shocking revelation is that small Asian countries like South Korea, Singapore, Hong Kong, Taiwan, Israel, Saudi Arabia, Thailand and Iran are performing much better than India in global ranking among Top 500. Very small European countries like Serbia, Croatia, Estonia, Austria and Greece find a slot among Top 500 global universities in Shanghai ranking.

Among Top 1000 universities in Global Ranking, India has 15 Institutions (Universities and IITs) included in the list (Table 2). China, Japan and South Korea are much ahead of India in ARWU ranking of Top 1000 universities. IISC Bangalore is at the top (ranked 501-600), followed by IIT Madras, University of Calcutta and University of Delhi (601-700). Overall, there are six universities (Calcutta, Delhi, AMU Aligarh and JNU, Anna and Bharathiar); five IITs (Madras, Delhi, Kanpur, Kharagpur and Roorkee); one IISER, Kolkatta, VIT Vellore, and AIIMS Delhi ranked among Top 1000 in global ranking. Anna, Bharathiar and VIT maintain their status quo but BHU Varanasi is replaced by AMU Aligarh in global ranking.

The dismal picture of Indian universities is represented by the falling graph of IISC, Bangalore (Figure 1), the topmost Indian Institution in research in areas of Natural Sciences & Engineering. In subject ranking, IISC had a slot among Top 500 in Physics, Chemistry and Computer Sciences up till 2016 but it has lost its ranking slot in later years.

**Table 2.** ARWU Academic Ranking 2020 of Indian Universities among Top 1000.

| World Rank | Institution*  | By  | Location | National/Regional Rank | Total Score | Score on |
|------------|---|---|----------|------------------------|-------------|----------|
|            |   | India   |          |                        |             | PUB      |
| 501-600    | Indian Institute of Science, Bangalore              |  |          | 1                      |             | 41.4     |
| 601-700    | Indian Institute of Technology Madras               |  |          | 2-4                    |             | 32.5     |
| 601-700    | University of Calcutta                              |  |          | 2-4                    |             | 20.1     |
| 601-700    | University of Delhi                                 |  |          | 2-4                    |             | 27.0     |
| 701-800    | Indian Institute of Technology Delhi                |  |          | 5-7                    |             | 30.4     |
| 701-800    | Indian Institute of Technology Kharagpur            |  |          | 5-7                    |             | 32.9     |
| 701-800    | Jawaharlal Nehru University                         |  |          | 5-7                    |             | 19.3     |
| 801-900    | Aligarh Muslim University                           |  |          | 8-9                    |             | 21.2     |
| 801-900    | Vellore Institute of Technology                     |  |          | 8-9                    |             | 28.3     |
| 901-1000   | All India Institute of Medical Sciences             |  |          | 10-15                  |             | 25.1     |
| 901-1000   | Anna University, Chennai                            |  |          | 10-15                  |             | 26.5     |
| 901-1000   | Bharathiar University                               |  |          | 10-15                  |             | 17.0     |
| 901-1000   | Indian Institute of Technology Kanpur               |  |          | 10-15                  |             | 24.8     |
| 901-1000   | Indian Institute of Technology Roorkee              |  |          | 10-15                  |             | 26.8     |
| 901-1000   | Indian Institutes of Science Education and Research |  |          | 10-15                  |             | 26.3     |



**Figure 1.** Graph showing Academic Ranking of Indian Institute of Science, Bangalore among World Universities from 2003 to 2020

If we look into the Subject ranking [7] in the ARWU list of top 500 universities, we have some big surprises. In Physics, PU Chandigarh tops the list from India with ranking of 201-300 among top 500 universities, followed by IISc, Bangalore, IISER Kolkatta, IITs Bombay, Madras, Hyderabad, and University of Delhi, Visva-Bharati (Santiniketan) and Jammu University, Jammu ranked among top 401-500 among global ranking.

In Chemistry, IISC Bangalore, ACSIR (Academy of Scientific and Innovative Research), IITs Bombay, Kanpur, and IISER Pune find a slot among top 500 in ARWU list. In Mathematics, India is represented by Indian Statistical Institute, Kolkatta among Top 500 in global ranking. In Nanoscience & Nanotechnology, IISC Bangalore (151-200) and Academy of Scientific and Innovative Research (ACSIR) (301-400) are in the ARWU list. IITs Delhi, Bombay, Madras and Kharagpur have lost their ranking among Top 500 during 2020. In Clinical Medicine, AIIMS Delhi, CMCH Vellore and BHU, Varanasi find a slot among Top 500.

In Mechanical Engineering, Indian Institutions have excelled in ranking as compared with other subjects with 11 among the Top 400. IIT Madras is ranked among the Top 76-100; IIT Bombay and Kharagpur among the Top 101-150; IISc Bangalore, IITs Delhi, Kanpur and Roorkee among the Top 201-300; followed by IITs Roorkee, Indore, NIT Rourkela and Jadavpur University among the Top 301-400. In Biotechnology, ACSIR (Academy of Scientific and Innovative Research) is ranked among Top 201-300; IITs Delhi, Guwahati and Kharagpur among Top 301-400; followed by BHU Varanasi, IITs Bombay, Madras, Universities of JNU and Delhi among the Top 401-500 in global ranking. In Civil Engineering, IITs Delhi, Bombay and Madras are ranked among Top 201-300 among global ranking of 300 institutions.

The situation is far from satisfactory in Agricultural, Life (Biological Sciences) and Social Sciences. None of the Indian universities occupy any slot among top 500 in Shanghai global ranking. The only saving grace is Indian Statistical Institute, Kolkatta which has been ranked among top 401-500 in the subject of Economics. India boasts of one of the biggest network in the field of higher education but to our dismay, none of the Indian universities finds a slot among Top 500 in the subject of Education.

## CONCLUSIONS

1. India must improve upon the criteria used for ranking of Indian Universities. The National Institutional Ranking Framework (NIRF) was approved by the MHRD and launched by the Minister of HRD in 2015.
2. Indian universities must get rid of 50% reservation policy adopted by the Government in admissions and faculty recruitments. Ignoring merit in recruitment of faculty will play havoc with the quality of education in the Indian universities.
3. Private universities are being run on commercial basis. Some of these are selling degrees at a pittance.
4. There is a dire need to investigate the results of Shanghai ranking consultancy and determine the factors responsible for the poor performance of Indian universities and IITs at global level.

#### REFERENCES

1. <http://www.shanghairanking.com/ARWU2019.html>
2. Balaram, P. The Shanghai Rankings. *Curr Sci.*, 2004, 86 (10), 1347-48.
3. Virk H.S., Shanghai rankings and Indian universities. *Curr. Sci.*, 2004, 87(4), 416.
4. Virk H.S., Shanghai rankings 2016: poor performance of Indian universities. *Curr. Sci.*, 2016, 111(4), 601.
5. Virk H.S. Shanghai Rankings 2018: Poor Performance of Indian Universities and IITs. *OmniScience: A Multi-disciplinary Journal*. 2018, 8(3): 6–10.
6. Virk H.S. A Critical Evaluation of Ranking of Indian Universities among Global Universities based on ARWU Shanghai Rankings 2019. *OmniScience: A Multi-disciplinary Journal*. 2019; 9(3): 47–55p.
7. <http://www.shanghairanking.com/Shanghairanking-Subject-Rankings/Methodology-for-ShanghaiRanking-Global-Ranking-of-Academic-Subjects-2019.html>