# Are China's universities really the best in the world?

Nature's prestigious index says yes

The Economist, June 28th

A decade ago Nature, a scientific publisher, began tallying the contributions made by researchers at different institutions to papers published across a set of 145 respected journals. When the first such *Nature* Index was published in 2016, the Chinese Academy of Science (CAS) ranked first, but American and European institutions dominated the top ten. Harvard placed second, with Stanford and MIT fifth and sixth; the French National Centre for Scientific Research (CNRS) and the German Max Planck Society were third and fourth; Oxford and Cambridge took ninth and tenth (seventh and eighth place went, respectively, to the Helmholtz Association of German Research Centres and the University of Tokyo).

Gradually, however, the table has turned. In 2020 Tsinghua University, in Beijing, entered the top ten. By 2022 Oxford and Cambridge were out, replaced by two Chinese rivals. Come 2024 only three Western institutions remained in the top ten: Harvard, CNRS and the Max Planck Society. This year, Harvard ranks second and Max Planck ninth. Eight of the top ten are Chinese.

The shift reflects a real and rapid improvement in China's research capabilities. Over the past decade the country has increased its spending on research and development by roughly 9% annually in real terms. In 2023, adjusting for purchasing power, China outspent both America and the European Union on combined government and higher-education R&D. The country has also drawn back many Chinese researchers who were once based abroad, a cohort known as *haigui* (sea turtles), a homophone for "returning from across the sea".

All this has paid off. The country now publishes more high-impact papers (those in the most-highly cited 1%) than either America or Europe. In fields like chemistry, engineering and materials science the country is now considered a world leader. China also produces a huge volume of high-quality computer-science research. Zhejiang University, fourth in the 2025 index, was the alma mater of Liang Wenfeng, the founder of DeepSeek, China's cutting-edge artificial-intelligence (AI) company.

Yet the way the rankings are created plays to China's strengths. The journals included in the index are chosen to be representative of top-tier research across the natural sciences, with the composition regularly tweaked to reflect the state of the field. A growing number of publications in chemistry and physical-science journals has led to their share increasing to just over half those used in the 2025 index. Papers from health and biological-science journals, however, which remain an area of Western dominance, account for only 20% of the index.

China's research centres also tumble down the table when the studies under consideration are limited to those published in *Nature* and *Science*, the two journals widely regarded as the most prestigious. CAS is the only institution in that country near the top of that leaderboard, placing fourth.

Observers should treat these rankings with caution. Although the *Nature* Index is a useful measure of an institution or country's scientific might, its assessments are inevitably incomplete. Plenty of valuable research is published in lower-tier journals, and world-changing innovation will not always come from high-scoring institutions. That being said, Zhejiang, Peking and Tsinghua universities have earned their place with CAS among the world's best. ■