

Degrees of success

# How global university rankings are changing higher education

*They favour research over teaching and the sciences over the arts*



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EARLIER this month Peking University played host to perhaps the grandest global gathering ever of the higher-education business. Senior figures from the world's most famous universities—Harvard and Yale, Oxford and Cambridge among them—enjoyed or endured a two-hour opening ceremony followed by a packed programme of mandatory cultural events interspersed with speeches lauding “Xi Jinping thought”. The party was thrown to celebrate Peking University's 120th birthday—and, less explicitly, China's success in a race that started 20 years ago.

In May 1998 Jiang Zemin, China's president at the time, announced Project 985, named for the year and the month. Its purpose was to create world-class universities. Nian Cai Liu, a professor of polymeric materials science and engineering at Shanghai Jiao Tong University, got swept up in this initiative. “I asked myself many questions, including: what is the definition of and criteria for a world-class university? What are the positions of top Chinese universities?” Once he started benchmarking them against foreign ones, he found that “governments, universities and stakeholders from all around the world” were interested. So, in 2003, he produced the first ranking of 500 leading global institutions. Nobody, least of all the modest Professor Liu, expected the Shanghai rankings to be so popular. “Indeed, it was a real surprise.”

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available. Hence the existence of national league tables, such as US News & World Report's ranking of American universities. But the creation of global league tables—there are now around 20, with Shanghai, the Times Higher Education (THE) and QS the most important—took the competition to a new level. It set not just universities, but governments, against each other.

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into the global consciousness. Governments realised that great universities were no longer just sources of cultural pride and finishing schools for the children of the well-off, but the engines of future prosperity—generators of human capital, of ideas and of innovative companies.

The rankings focused the minds of governments, particularly in countries that did badly. Every government needed a few higher-educational stars; any government that failed to create them had failed its people and lost an important global race. Europe's poor performance was particularly galling for Germany, home of the modern research university. The government responded swiftly, announcing in 2005 an *Exzellenzinitiative* to channel money to institutions that might become world-class universities, and has so far spent over €4.6bn (\$5.5bn) on it.

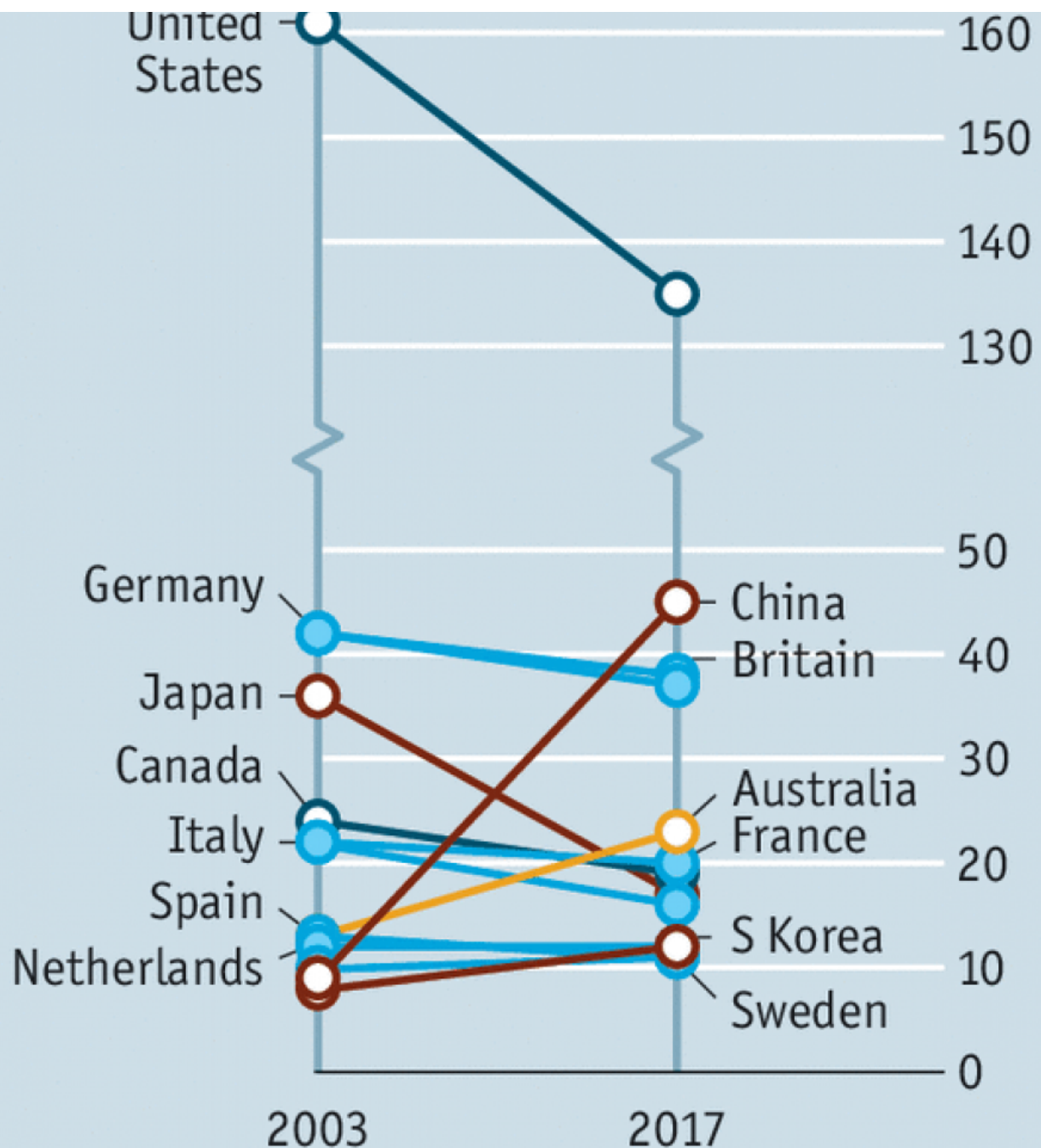
Propelled by a combination of national pride and economic pragmatism, the idea spread swiftly that this was a global competition in which all self-respecting countries should take part. Thirty-one rich and middle-income countries have announced an excellence initiative of some sort. India, where world rankings were once regarded with post-colonial disdain, is the latest to join the race: in 2016 the finance minister announced that 20 institutions would aim to become world-class universities. The most generously funded initiatives are in France, China, Singapore, South Korea and Taiwan. The most unrealistic targets are Nigeria's, to get at least two universities in the world's top 200, and Russia's, to get five in the world's top 100, both by 2020.

The competition to rise up the rankings has had several effects. Below the very highest rankings, still dominated by America and western Europe—America has three of the THE's top five slots and Britain two this year—the balance of power is shifting (see chart). The rise of China is the most obvious manifestation. It has 45 universities in the Shanghai top 500 and is now the only country other than Britain or America to have two universities in the THE's top 30. Japan is doing poorly: its highest-ranked institution, the University of Tokyo, comes in at 48 in the THE's table. Elsewhere, Latin America and eastern Europe have lagged behind.

# The academic ladder

Number of universities in the top 500, by country\*

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Source: ShanghaiRanking Consultancy

\*With at least ten in the top 500 in 2017



The rankings race has also increased the emphasis on research. Highly cited papers provide an easily available measure of success, and, lacking any other reliable metric, that is what the league tables are based on. None of the rankings includes teaching quality, which is hard to measure and compare. Shanghai's is purely about research; THE and QS incorporate other measures, such as "reputation". But since the league tables themselves are one of its main determinants, reputation is not an obviously independent variable.

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THE RESEARCH BOOM IS EXCELLENT NEWS FOR HUMANITY, WHICH WILL EVENTUALLY REAP THE BENEFITS, and for scientific researchers. But the social sciences and humanities are not faring so well. They tend to be at a disadvantage in rankings because there are fewer soft-science or humanities journals, so hard-science papers get more citations. Shanghai makes no allowance for that, and Professor Liu admits that his ranking tends to reinforce the dominance of hard science. Phil Baty, who edits the THE's rankings, says they do take the hard sciences' higher citation rates into account, scoring papers by the standards of the relevant discipline.

The hard sciences have benefited from the bounty flowing from the "excellence initiatives". According to a study of these programmes by Jamil Salmi, author of "The Challenge of Establishing World-Class Universities", all the programmes except Taiwan's focused on research rather than teaching, and most of them favoured STEM subjects (science, technology, engineering and mathematics). This is no doubt one of the reasons why the numbers of scientific papers produced globally nearly doubled between 2003 and 2016.

The rankings may be contributing to a deterioration in teaching. The quality of the research academics produce has little bearing on the quality of their teaching. Indeed, academics who are passionate about their research may be less inclined to spend their energies on students, and so there may be an inverse relationship. Since students suffer when teaching quality declines, they might be expected to push back against this. But Ellen Hazelkorn, author of "Rankings and the Reshaping of Higher Education", argues that students "are buying prestige in the labour market". This means "they want to go to the highest-status university possible"—and the league tables are the only available measure of status. So students, too, in effect encourage universities to spend their money on research rather than teaching.

The result, says Simon Marginson, Oxford University's incoming professor of higher education, is "the distribution of teaching further down the academic hierarchy", which fosters the growth of an "academic precariat". These PhD students and non-tenured academics do the teaching that the star professors, hired for their research abilities, shun as a chore. The British government is trying to press universities to improve teaching, by

creating a “teaching-excellence framework”; but the rating is made up of a student-satisfaction survey, dropout rates and alumni earnings—interesting, but not really a measure of teaching quality. Nevertheless, says Professor Marginson, “everybody recognises this as a problem, and everybody is watching what Britain is doing.”

A third concern is that competition for rank encourages stratification within university

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children of the well-off. “Those at the top get more government resources and those at the bottom get least,” points out Ms Hazelkorn. That’s true even in Britain, which, despite not having an excellence initiative, favours top universities through the allocation of research money. According to a study of over 120 universities by Alison Wolf of King’s College London and Andrew Jenkins of University College London, the Russell Group, a self-selected elite of 24 universities, get nearly half of the funding for the entire sector, and increased their share from 44.7% in 2001-02 to 49.1% in 2013-14.

The rankings race draws other complaints. Some universities have hired “rankings managers”, which critics argue is not a good use of resources. Saudi Arabian universities have been accused of giving highly cited academics lucrative part-time contracts and requiring them to use their Saudi affiliation when publishing.

### **Intellectual citizens of nowhere**

Notwithstanding its downsides, the rankings race has encouraged a benign trend with far-reaching implications: internationalisation. The top level of academia, particularly in the sciences, is perhaps the world’s most international community, as Professor Marginson’s work shows. Whereas around 4% of first-degree students in the OECD study abroad, a quarter of PhD students do. Research is getting more global: 22% of science and engineering papers were internationally co-authored in 2016, up from 16% in 2003. The rankings, which give marks for international co-authorship, encourage this trend. That is one reason why Japan, whose universities are as insular as its culture, lags. As research grows—in 2000-14 the annual number of PhDs awarded rose by half in America, doubled in Britain and quintupled in China—so does the size and importance of this multinational network.

Researchers work together across borders on borderless problems—from climate change to artificial intelligence. They gather at conferences, spend time in each other’s universities and spread knowledge and scholarship across the world. Forced to publish in English, they share at least one language. They befriend each other, marry each other and support each other, politically as well as intellectually. Last year, for instance, when Cambridge University Press blocked online access to hundreds of articles on sensitive subjects, including the

Tiananmen Square massacre, at the request of the Chinese government, it faced international protests, and an American academic launched a petition which was signed by over 1,500 academics around the world. CUP backed down.

The rankings race is thus marked by a happy irony. Driven in part by nationalistic urges, it has fostered the growth of a community that knows no borders. Critics are right that

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**Correction (May 22nd, 2018):** An earlier version of this piece suggested that non-English data and books are not included in the rankings. This is incorrect. The article has been amended to remove that assertion.

*This article appeared in the International section of the print edition under the headline "Higher and higher education"*



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