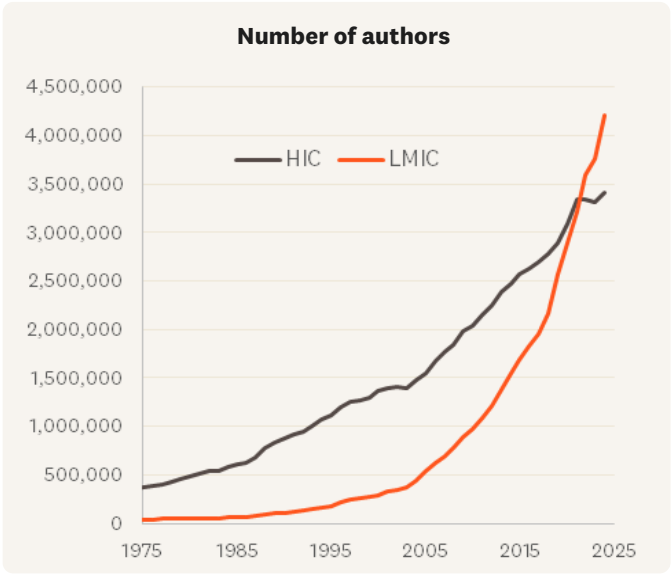
The changing geography of *research*

The global landscape of research is changing, reflecting political trends and economic transformation across the world. What are the implications for UK universities and funders in a changing world of research?

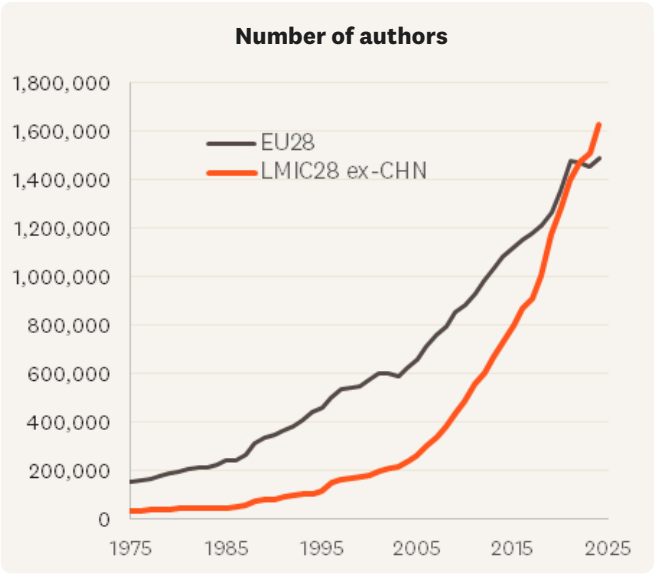
Over the past 30 years, the proportion of scientific articles with authors in Low and Middle-Income Countries (LMIC) such as China, India, Brazil, Iran, Turkey, Pakistan, Indonesia and Mexico has shot up. At the same time, the number of authors affiliated to higher education and research organizations in these countries has risen, overtaking the number in High Income Countries (HIC) in 2022.

This changing geography of research will have real-world consequences, such as in the approach taken by research funders and international bodies towards research collaboration, and the preferred destinations for graduate students to continue their research careers. What does future global research capacity mean for the UK in terms of remaining a leading research nation and attractive destination for research?



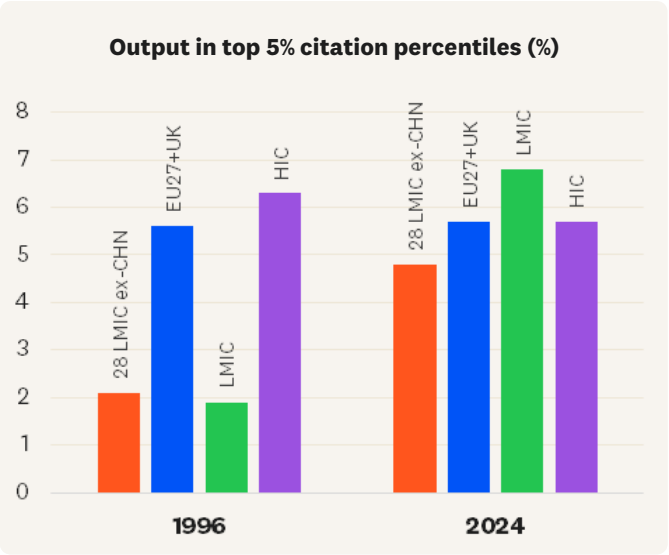
Fifty years ago, in 1975, 10% of the authors of research articles worked in LMIC. In 2024 the share grew to 56%.

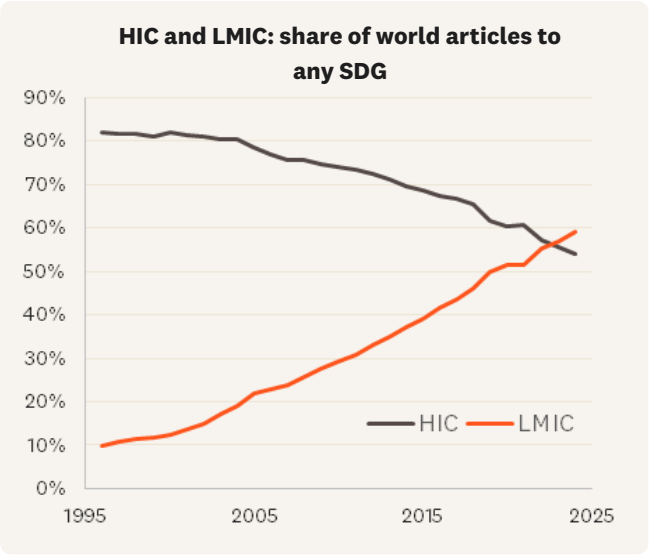
The growth rate for the number of authors in LMIC is 11% per year, while in HIC it is 3.3% per year.



This change is not only due to the growth in China. The 28 LMIC with most authors (excluding China) have now more authors than the 27 EU countries plus the UK.

Among 134 LMIC, 102 had growth rates for the number of authors above the average for HIC for the last 20 years.





There is convergence in many metrics, including the Field Weigthed Citation Impact...

...or the number of articles targeting U.N. Sustainable Development Goals.

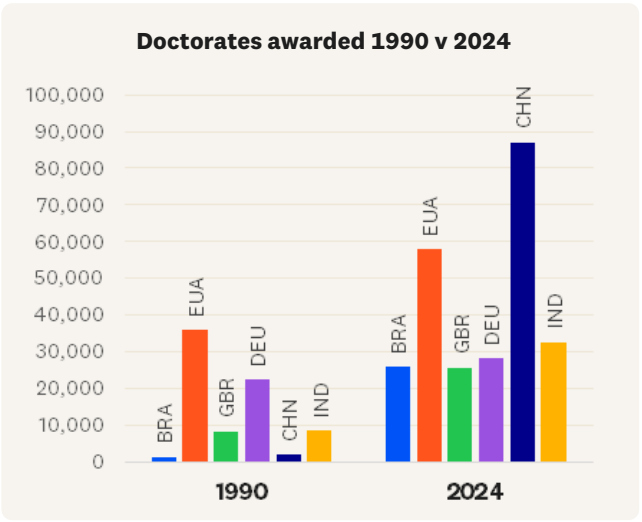
Weaker convergence occurs for the share of articles in each region co-authored with the business sector and for international co-authorship

An important driver for the advances in LMIC is the establishment of universities with graduate programs, national and subnational research funders, and national laboratories.

More training capacity in-country decreases the necessity to send graduate students abroad...

and increases the outflow of post-doctoral candidates.

It also stimulates local initiatives to bring early career researchers from abroad.



The geography of global research is changing. What does this mean for the future of the UK's research capacity, its partnerships and collaboration, and its attractiveness as a research destination? What are the opportunities of an increasingly global research capacity to energise economies and advance progress?

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