

Embedding science and technology in society

How much science, technology and innovation can improve a country's prosperity is not only down to scientists' skills – it also depends on how much science and innovation is aspired to and embraced in the wider population and among decision-makers. Innovation activity is sustained by an innovation mentality and while the conduct of science is global, science culture remains local.

This is the background for MACAS (Mapping the Cultural Authority of Science across Europe and India), a network of Indian and European researchers which explores 'science culture' – the understanding, evaluation, aspirations and respect for science, technology and its relation to innovation in society. The MACAS researchers 'track the cultural authority of science' by developing science culture indicators based on large-scale national survey data, discourse analysis and computer-assisted text mining of mass media.

MACAS is led by Professor Martin W. Bauer (London School of Economics and Political Science), Petra Pansegrau (Uni Bielefeld) and Rajesh Shukla (IHD, New Delhi), with affiliates in China, in the Americas, Nigeria and South Africa.

"Innovation indicators tend to ignore culture and focus on competitive performance of innovative activities. However, indicators of innovation must consider not only the conditions of supply of innovations, but also the generic conditions of their adoption and uses," argue Bauer and co-author Ahmet Süerdem (Bilgi, Istanbul & LSE) in the recent OECD paper *Relating 'Science Culture' and Innovation*. "Hence, we need to broaden the approach and include indicators for mapping people's belief spaces and mentalities."

The MACAS researchers aim to curate a joint Indo-European database for micro-analysis of 'science culture' covering 1990-2015, collate a joint text corpus of science news for Europe and India for the same period, and construct a science culture index across European countries and Indian states. They are also designing the all India Scientific Temper Survey for 2017, and dispense advice on such matters globally.

"One must expect that the 'gap' between culture and science may manifest itself differently in the various regions of the world," Bauer and Süerdem point out in the OECD paper. MACAS research shows that not only different parameters, but different models might be required to understand the dynamics of the 'science culture' across different contexts. MACAS will specify a small number of different 'science culture' models in relation to innovation and in a global perspective.

Further information

- MACAS (project website)
<http://www.macas-project.com>
- Mapping the cultural authority of science across Europe and India (Gateway to Research)
<http://gtr.rcuk.ac.uk/projects?ref=ES%2FK005820%2F1>

The MACAS findings will be presented in an edited book for Routledge Studies on Science, Technology and Society.