

**36th Conference of Rectors and Presidents of
European Universities of Technology
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Internationalisation of Universities
Introduction to the Conference

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Changing university environments

- **New powers of knowledge production**
- **World-wide connectivity, accessibility and mobility**
 - **Globalisation and globality of STI**
 - **International competition/cooperation of universities**
- **Grand global societal challenges**
- **Large scale international research initiatives**
- **New approaches towards innovation**

The new global setting of STI

A multi-polar world of STI is developing

“Europe and the USA are still in the lead, but their future is uncertain ...” (UNESCO Science Report)

“Emerging economies” are developing substantive capacities in STI and education

E.g. Developments in China:

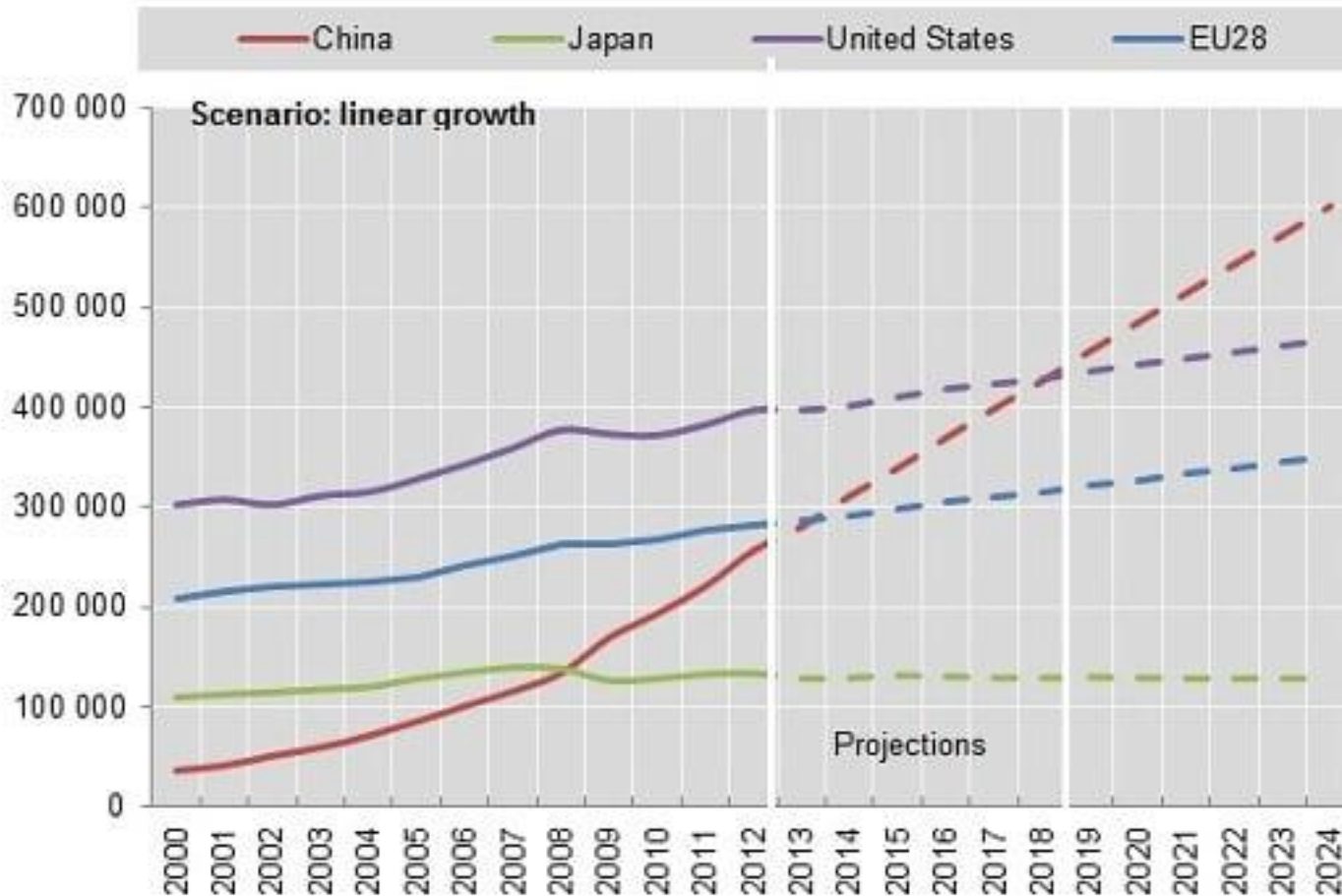
- **Expenditures for R&D: € 17,6 bn in 1995 to € 287,5 bn in 2014**
- **GERD / GDP: from 0.57% in 1997 to 2.07% in 2014**
- **Number of researchers: 0,443 mio in 1997 to 1,518 mio in 2014**
- **Scientific publications (SCI): second only to US**

The number of internationally mobile students will increase from 1,8 mio to 7,2 mio from 2000 to 2025

Researchers are more mobile than ever using funds available for international STI cooperation (e.g. EU)

China poised to outpace the US in R&D spending around 2019

GERD, millions of 2005 USD PPP, 2000-12 and projections to 2024



Source: The Guardian, 17 April 2017; China poised to outpace US in R&D spending Photograph:

OECD Science, Technology and Industry Outlook 2014 - © OECD 2014

<https://www.theguardian.com/business/economics-blog/2014/nov/12/china-surpass-united-states-r-and-d-spending-role-west>

The new global setting of STI

Internationalisation of STI: Some indicators

The global workforce of researchers increased from 5,7 mio in 2002 to about 10 mio researchers in 2015

35% of articles in international journals are co-authored, up from 25% 15 years ago

The size of author teams of scientific publications almost doubled – from 1,9 to 3,5 authors per article

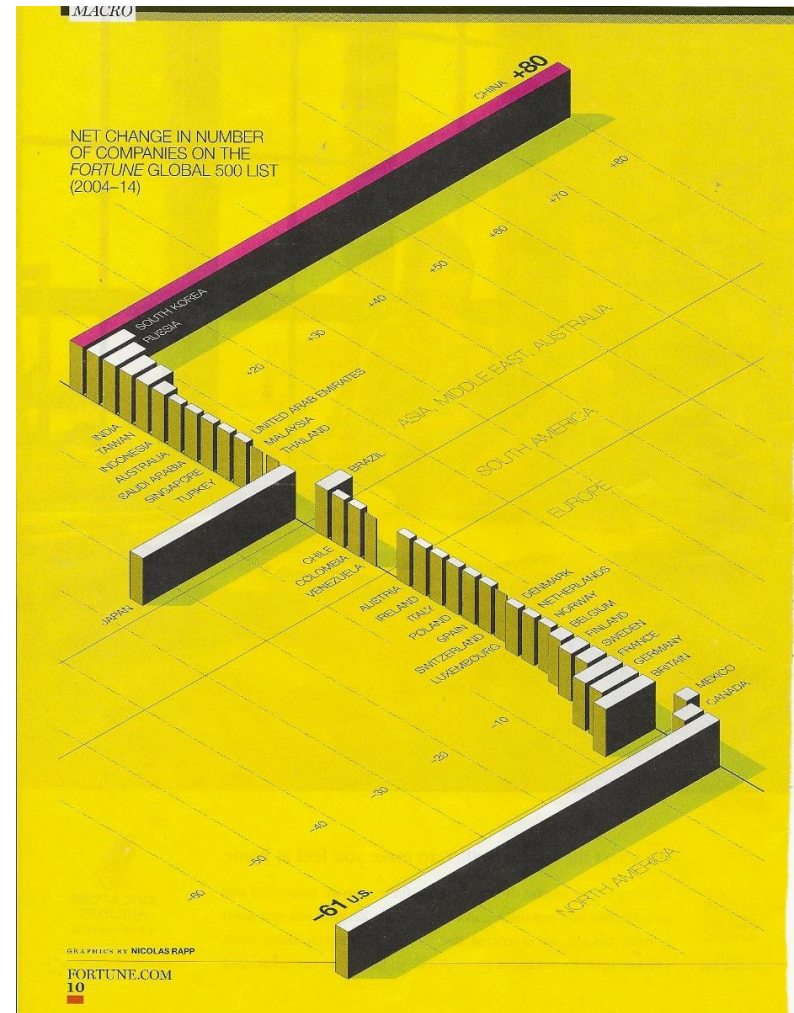
The average distance of co-authors increased from 334 km in 1980 to 1,553 km in 2009

Changes of the global company landscape

GLOBAL 500: A new world order

Net Change in number of companies on the FORTUNE GLOBAL 500 list 2004-2014:

- **80 Chinese newcomers**
- **New European companies from Austria, Ireland, Italy, Poland, Spain, Switzerland**
- **New companies from Russia; South Korea, India, Taiwan, Indonesia; Australia; Saudi Arabia, United Arab Emirates; Turkey; Brazil, Chile, Colombia; Mexico**
- **61 USA companies out**
- **25 Japanies companies out**
- **Also firms from other countries are out: Britain, Germany, France, Sweden, Finland, Belgium, Norway, Netherlands, Denmark; Canada**



Benefits of international cooperation

- **Raising visibility of the university at the international stage**
- **Strengthening excellence, improving outputs (publications, co-operations) and impact (citations, patents, licences)**
- **Educating graduates for working in international settings**
- **Learning from other approaches, methods for education, research, and innovation**
- **Addressing problems that need collaboration**
- **Utilizing synergies of complementary resources**
- **Developing assets for academic and other careers**
- ...

Some points for discussion

- **University strategies for internationalisation**
 - Drivers and objectives of institutional strategies
 - Supporting individual initiatives
 - Setting priorities at institutional level
- **Choosing the right measures**
 - Mobility of students and faculty
 - Joint study programmes and research activities
 - Joint institutes or labs, off-shore campuses, ...
 - International university networks or associations
- **Institutional structures, management and services supporting internationalisation**

The Conference

- **Keynote lectures setting the stage**
- **University leaders presenting examples**
- **Conclusions**
- **Outlook to crp2018 in Glasgow**
- **Social programme**
 - **Continuing the discussion, exchanging views**
 - **Strengthening existing contacts**
 - **Establishing new partnerships**

Thank you for your attention!

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