

Globalization Pillar

Eric Newman

Not all countries look like China



Or Brazil



Some look like this



National differences

- Social rather than legal contracts
- Corruption
- Postal systems
- Different rates and types of piracy
- General rule
 - Law, primary care, nursing, building, civil/electrical engineering veers toward local, culture bound
 - Math, hard sciences, medical specialties tend to be more universal

... different in

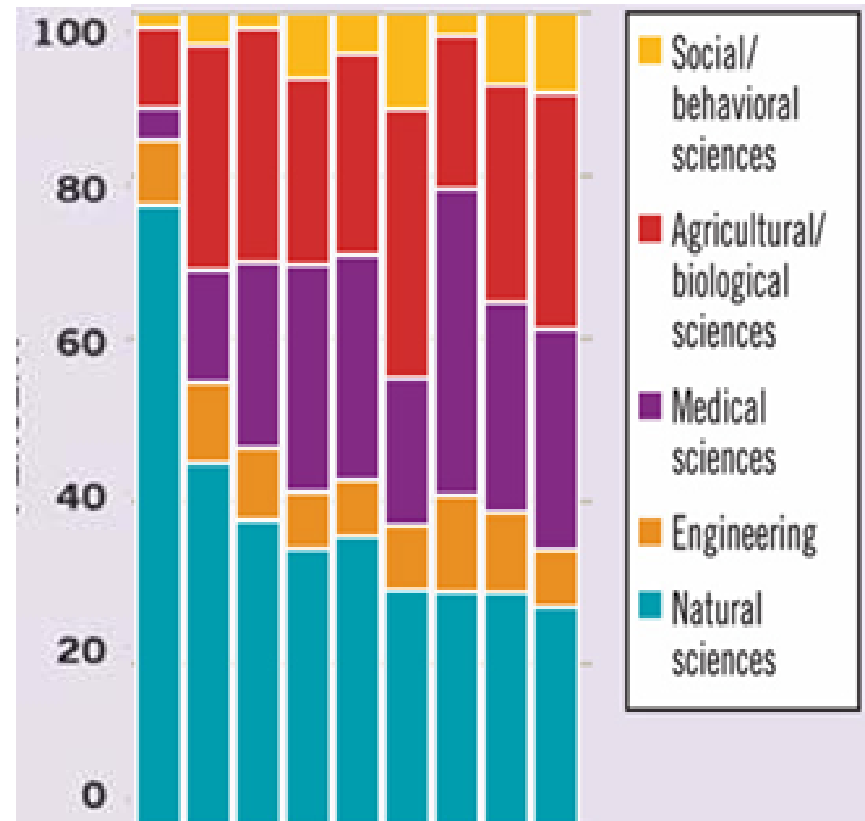
- The role of intermediaries can vary, e.g. in Japan, libraries have less influence on budgets, less command of English
- Demographics vary- China is building, opening universities; Japan is consolidating them.
- Prices
 - China are a fraction of ours (but so are salaries)
 - Imported book markup capped by law in India
 - Japan and Europe prices are higher.

Publishing issues

- Multiple publication, copyright and medical ethics
- English language ability may not match quality of the underlying science
- Large clinical studies less common
- Some places in China offer a bounty based on Impact Factor
- In Japan, books monitoring where your best chances of being published are based on nationality
- Cross-national cooperation growing in China- US, but also Australia, Japan, Korea

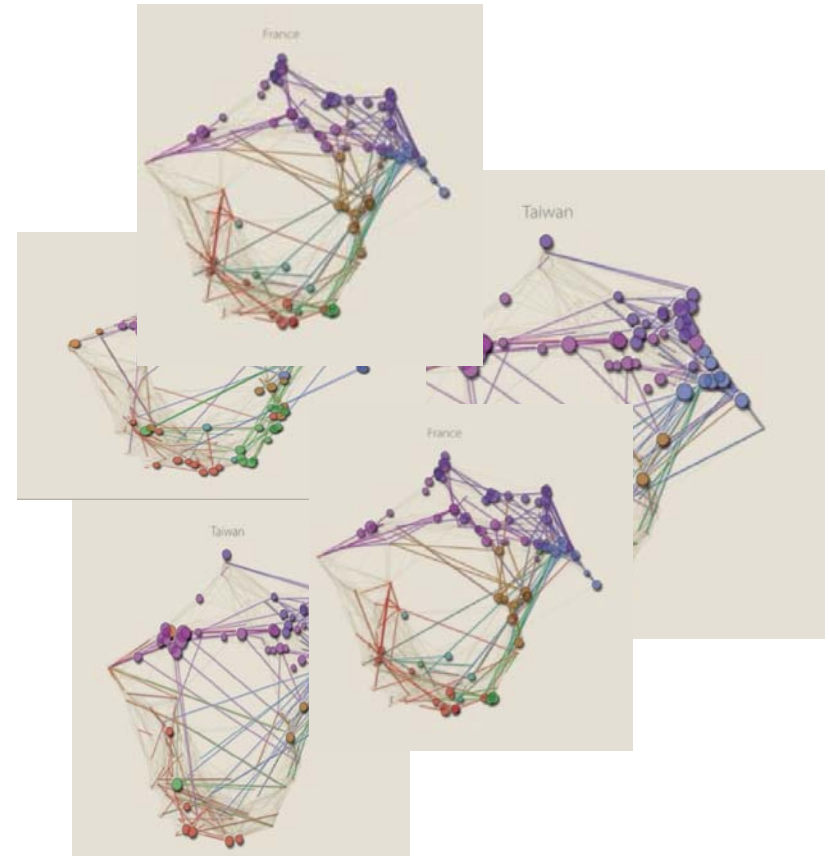
Areas of scholarly publishing vary

- Each column represents a country; each color a subject area
- Look at the different mix, one country with 75% of the papers from Natural Sciences, but negligible Medicine.

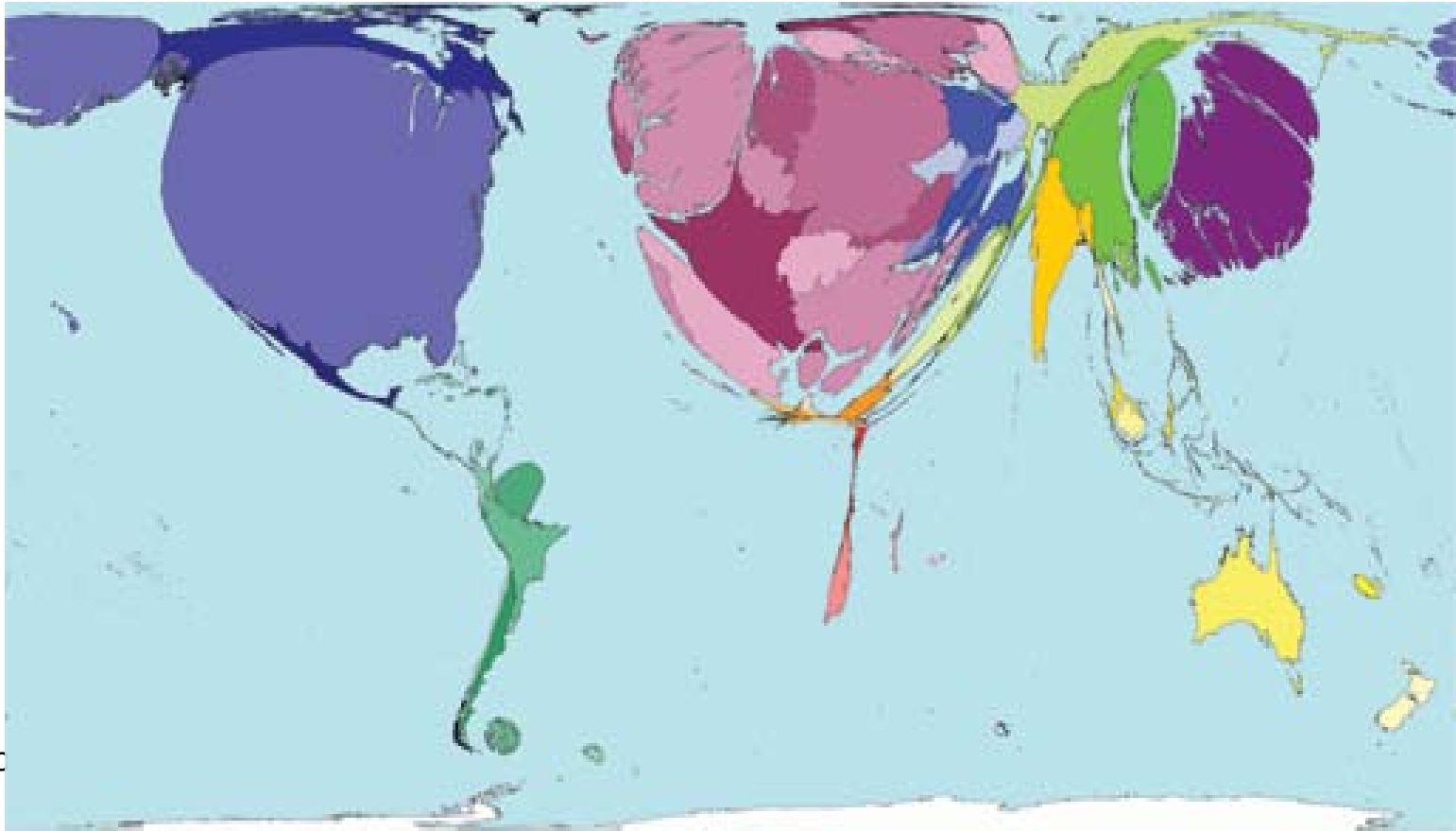


Patterns of Collaboration and Citation

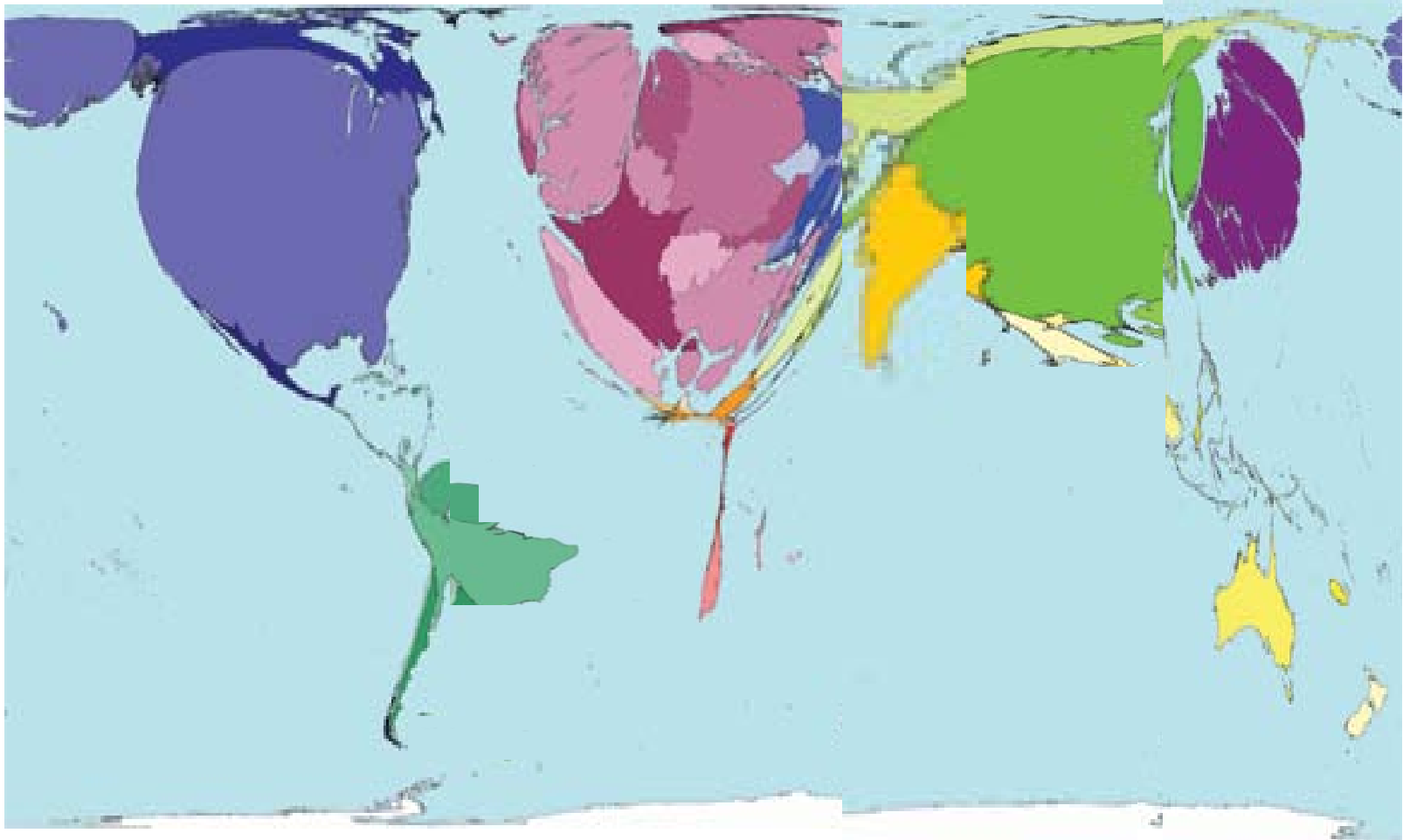
- France produces physics and chemistry papers with more engineering applications
- Germany more theoretical
- Spain emphasizes agricultural applications
- China and Japan applied mathematics



World by Scientific Research 2001

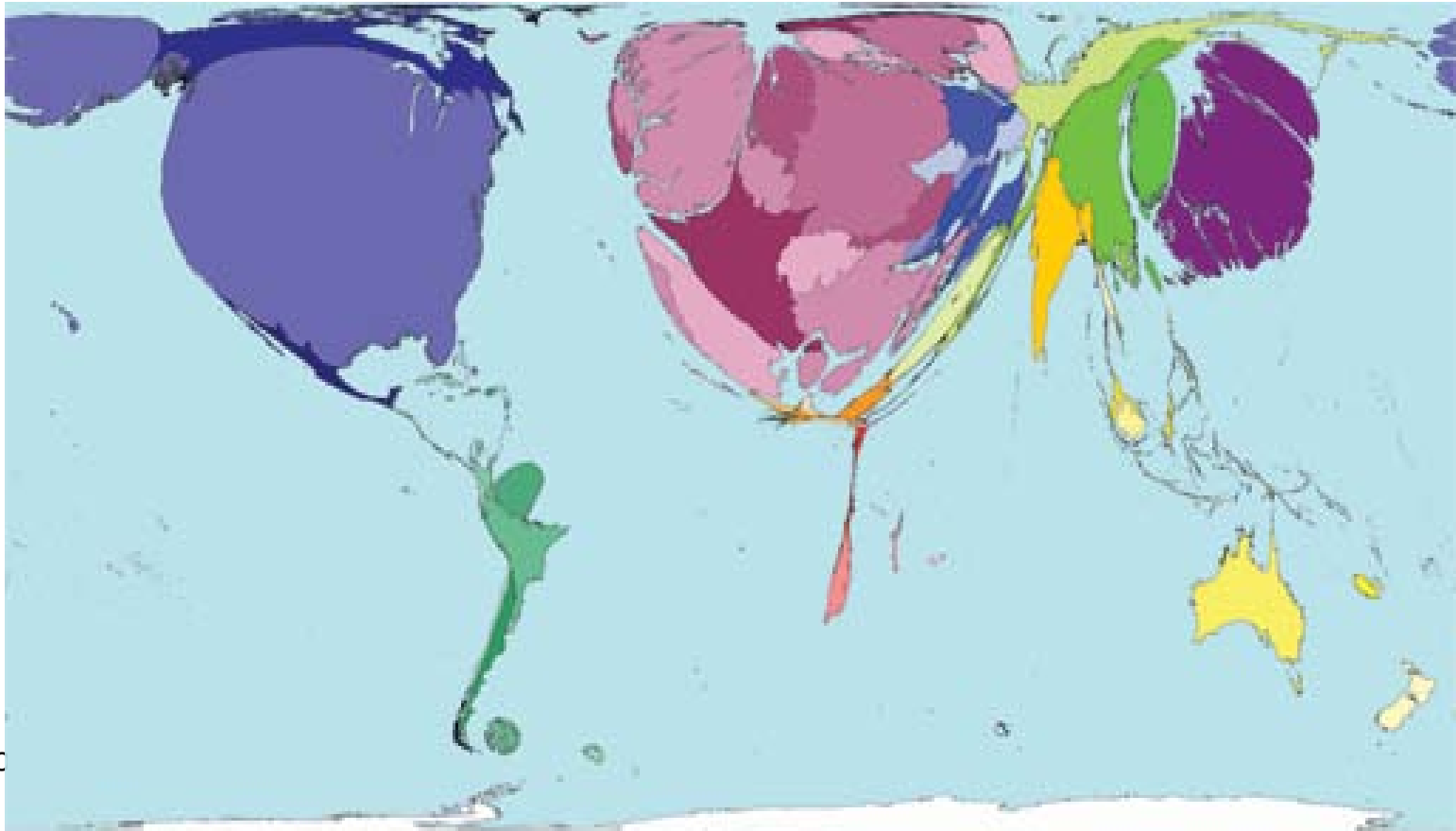


STMS in 2020? 2030?



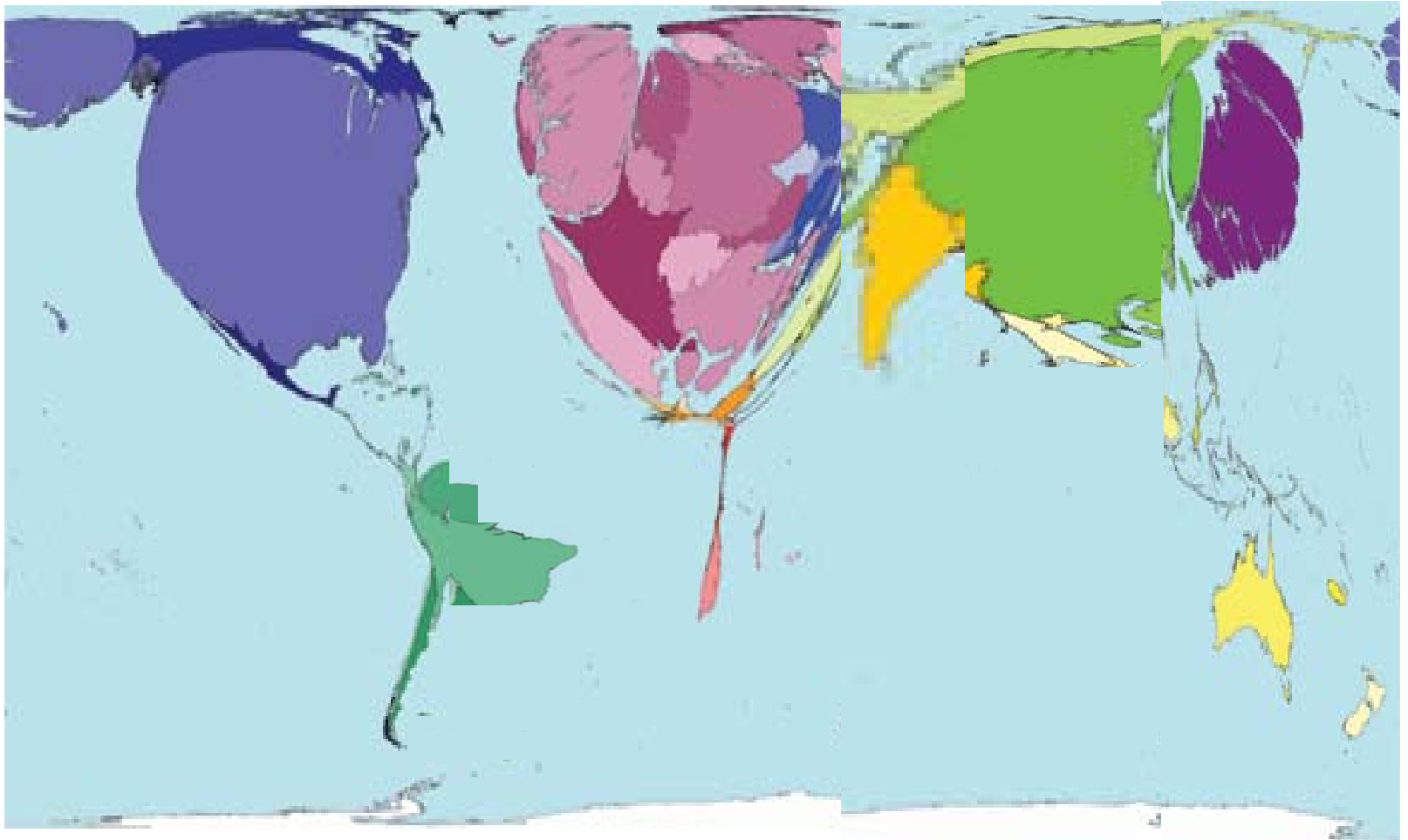
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2001, Watch China, India & Brazil



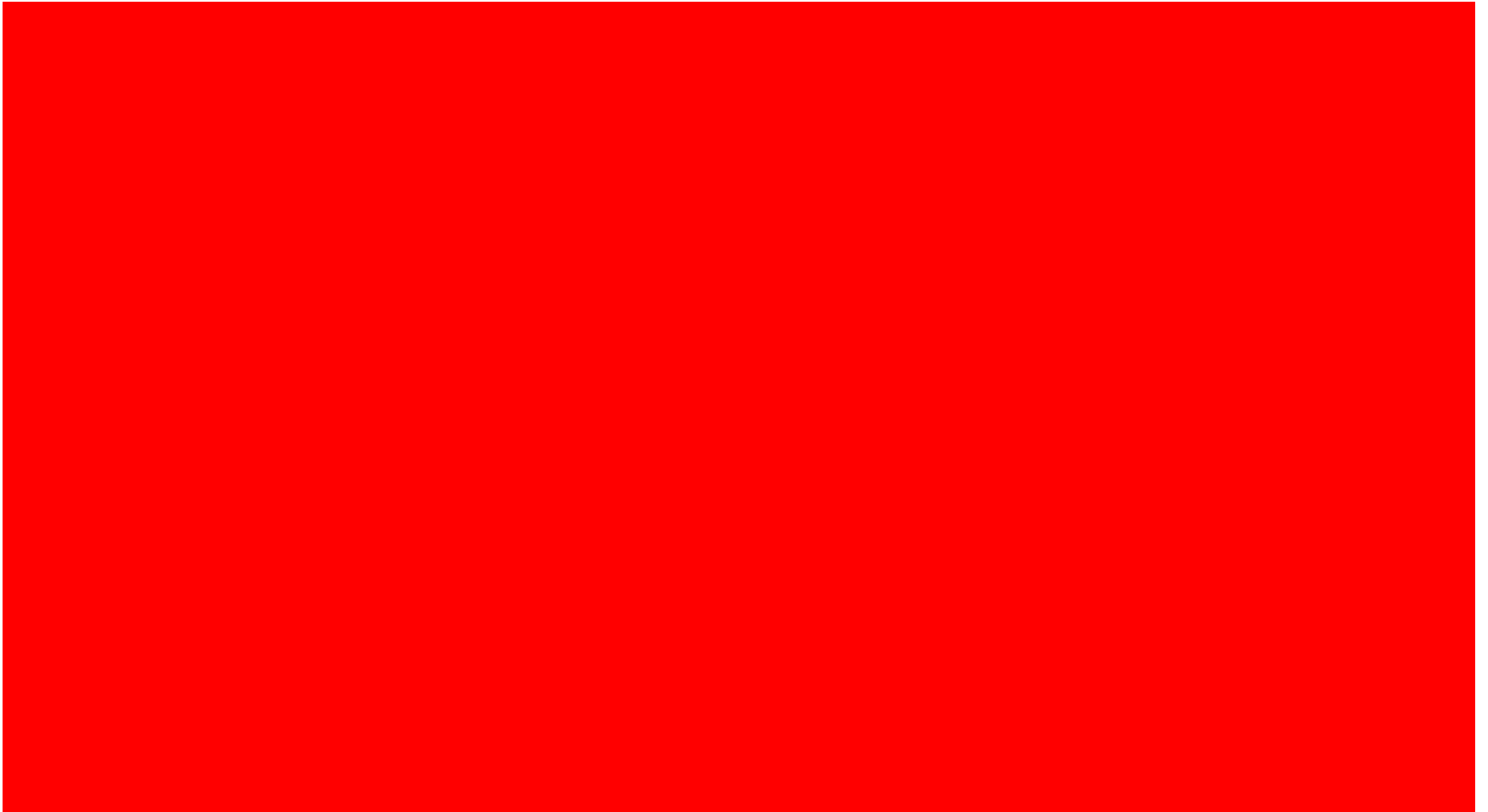
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2020, 2030 Again-China, India, Brazil



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Global Forecasting



BRICs

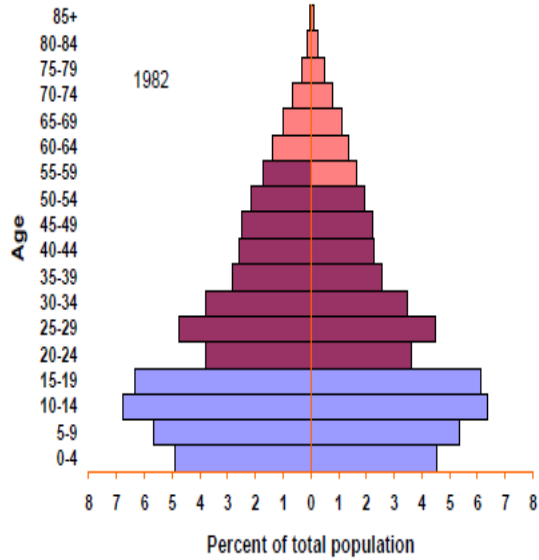
- Goldman Sachs coined the term BRIC (**Brazil, Russia, India** and **China**) in 2001
- Drew attention to the growing importance of these economies to world growth
- Forecast China surpassing Germany, UK and Japan in the size of its economy



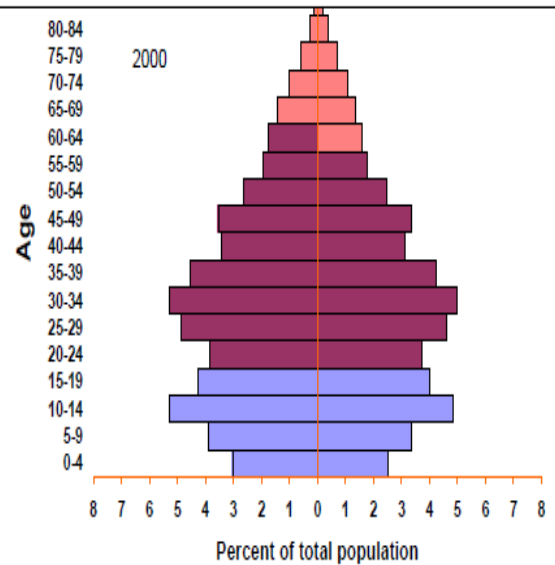
Key Economic Drivers

- Demographic trends
- GDP trends
- Exchange rates trends
- Research and Development spending
- Education
- Political and Currency stability
- Legal system and corruption

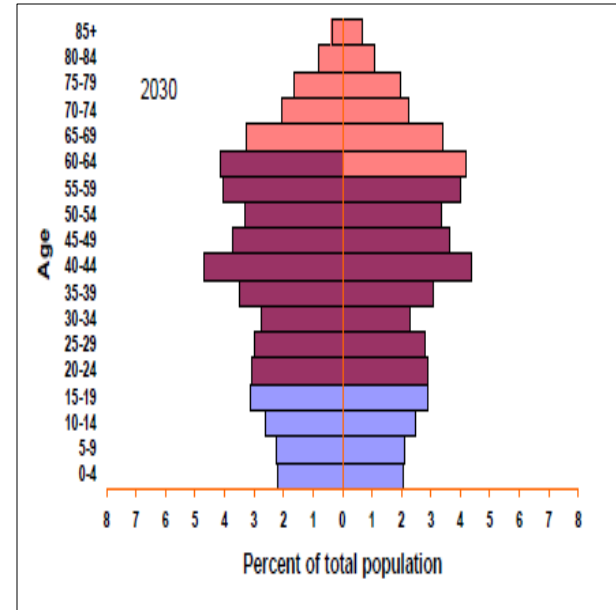
Population Pyramids as destiny



China 1982



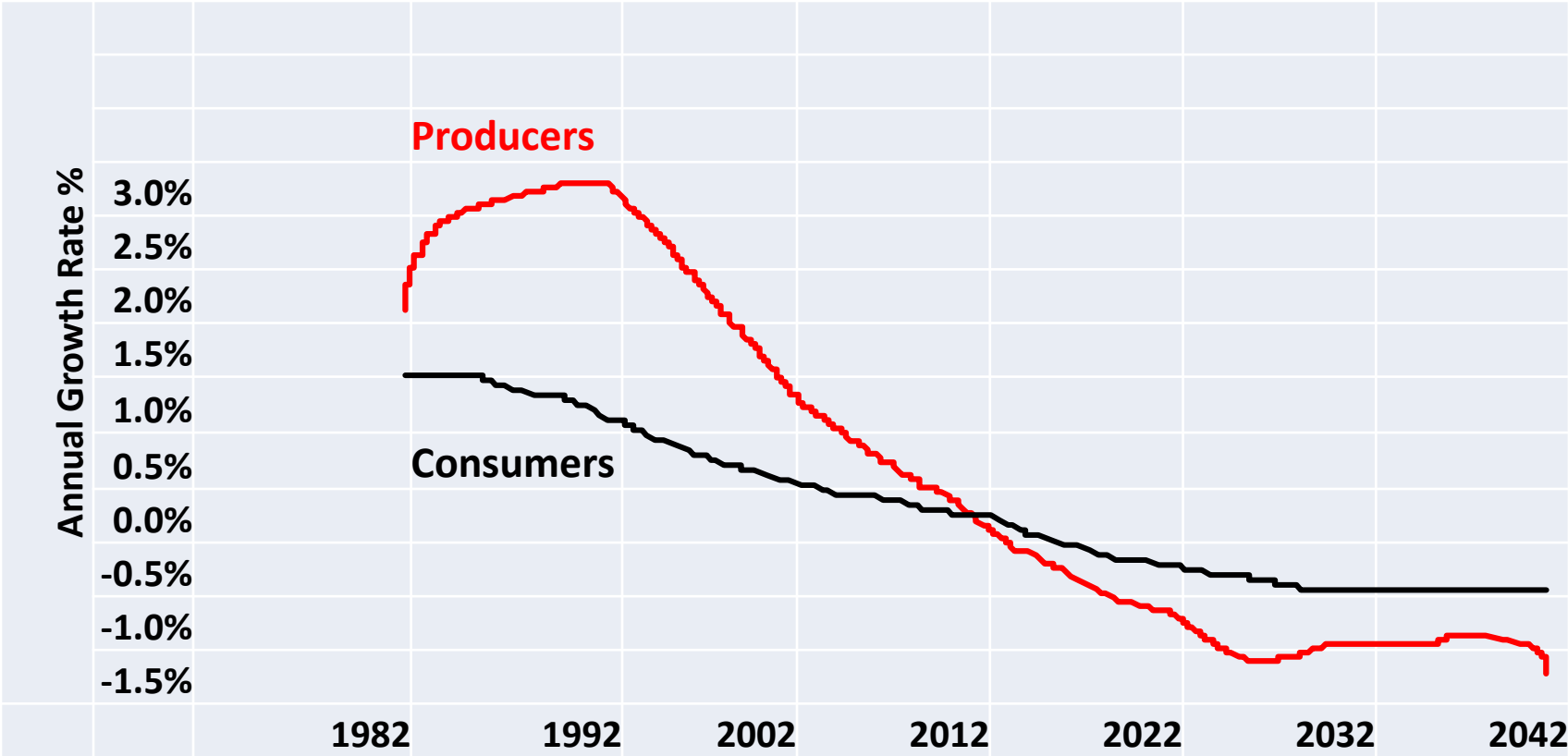
China 2000



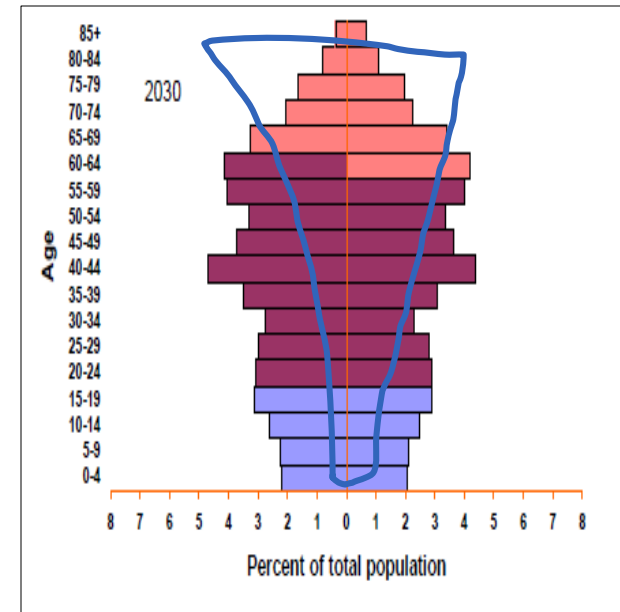
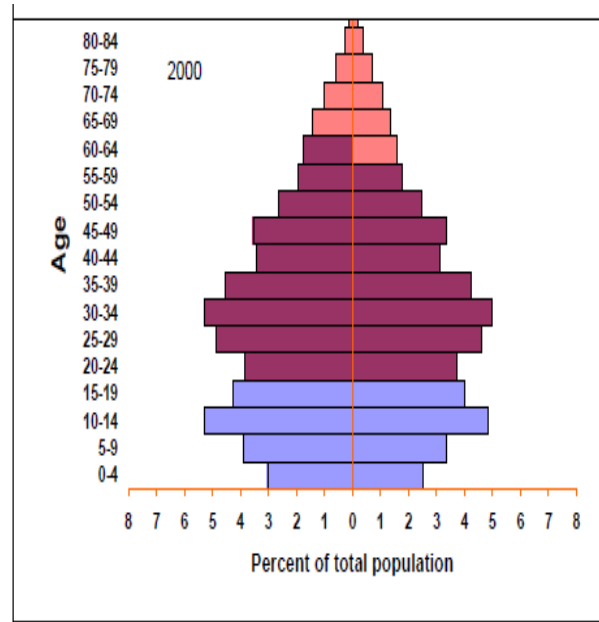
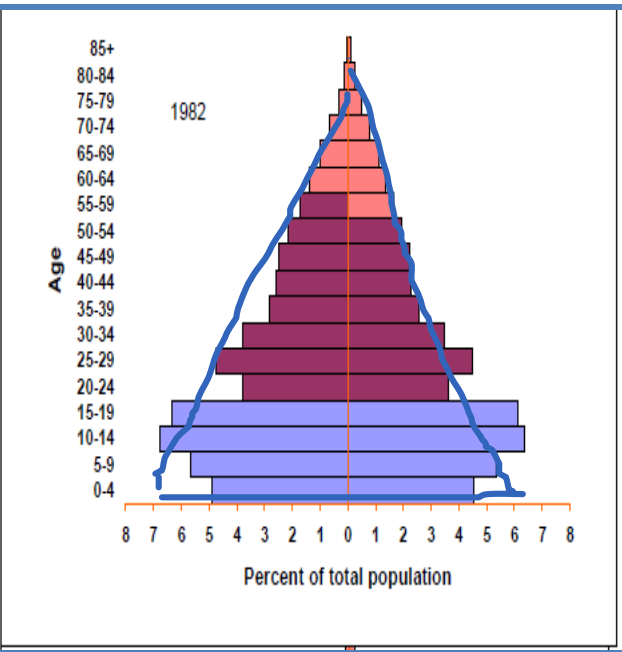
China 2030

China's Demographic Dividend

UN/POP/PD/2005/5 25 July 2005, p. 14



Population Pyramids as destiny

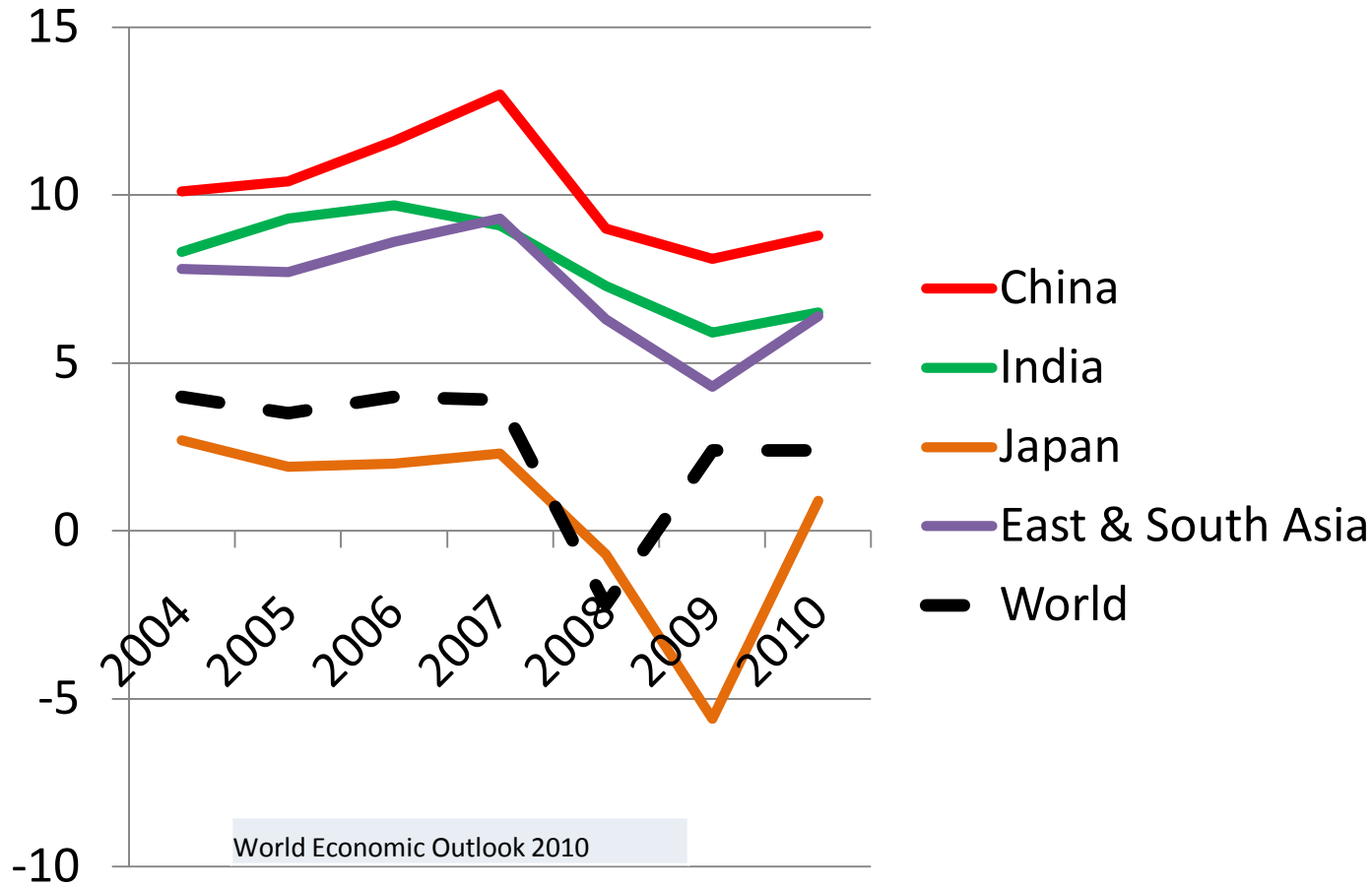


**China 1982,
India, Africa 2010**

China 2000, Japan 1950

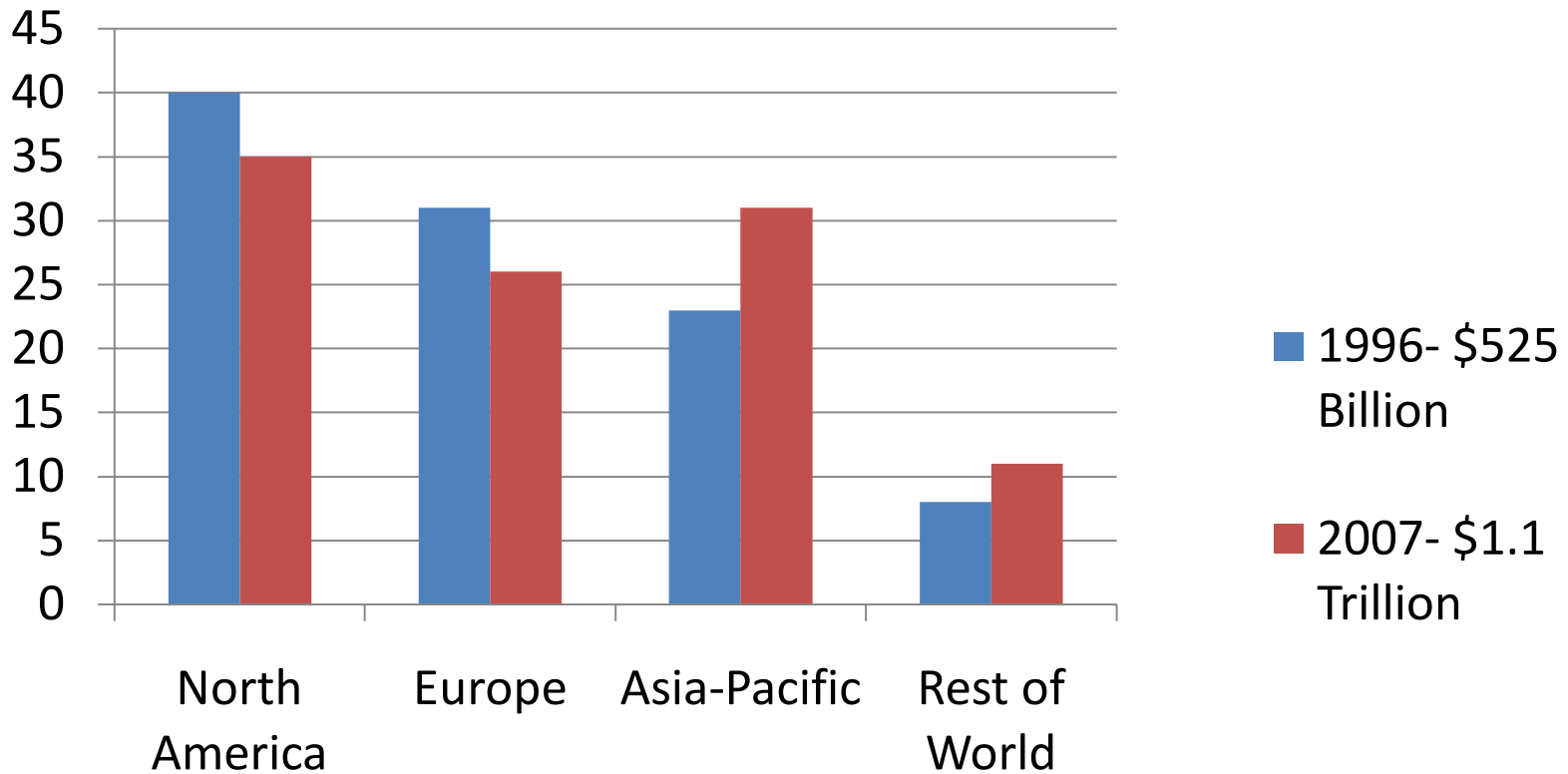
**China 2030
Japan 2010, 2030
Europe 2020**

GDP % Growth

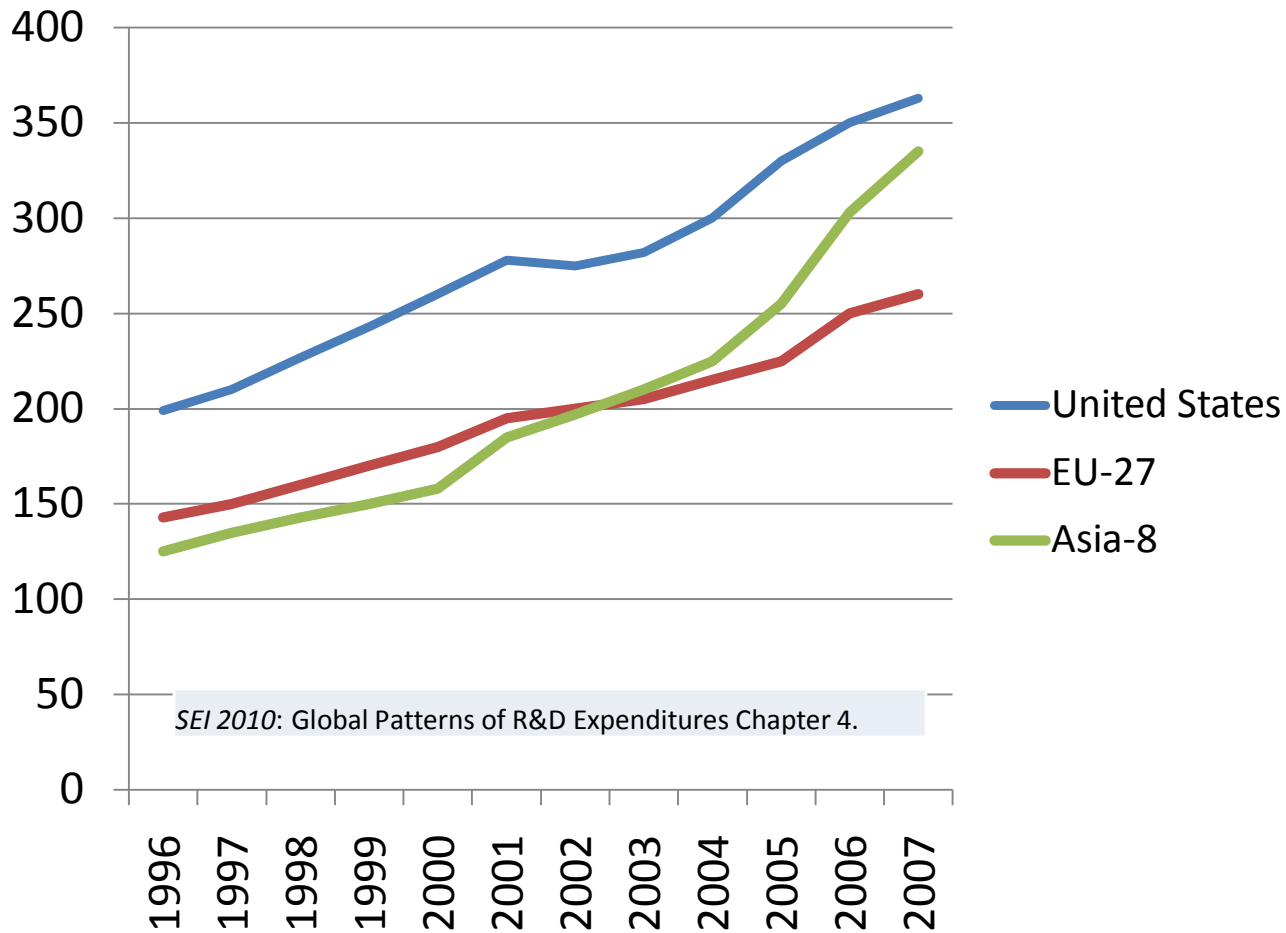


R&D % Spend by Region

SEI 2010: Global Patterns of R&D Expenditures Chapter 4.



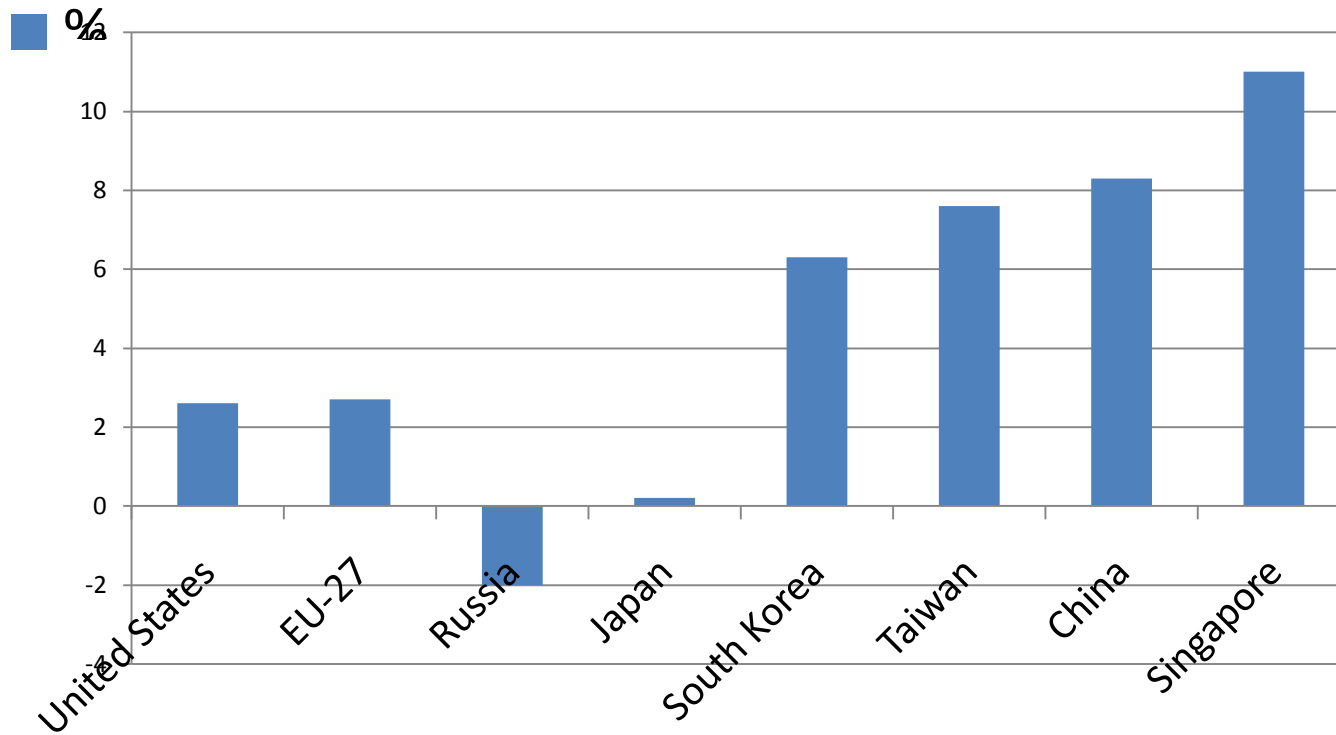
R&D Spending \$ Billions



R&D Demographics

Average Annual Growth % in number researchers 1995-2007

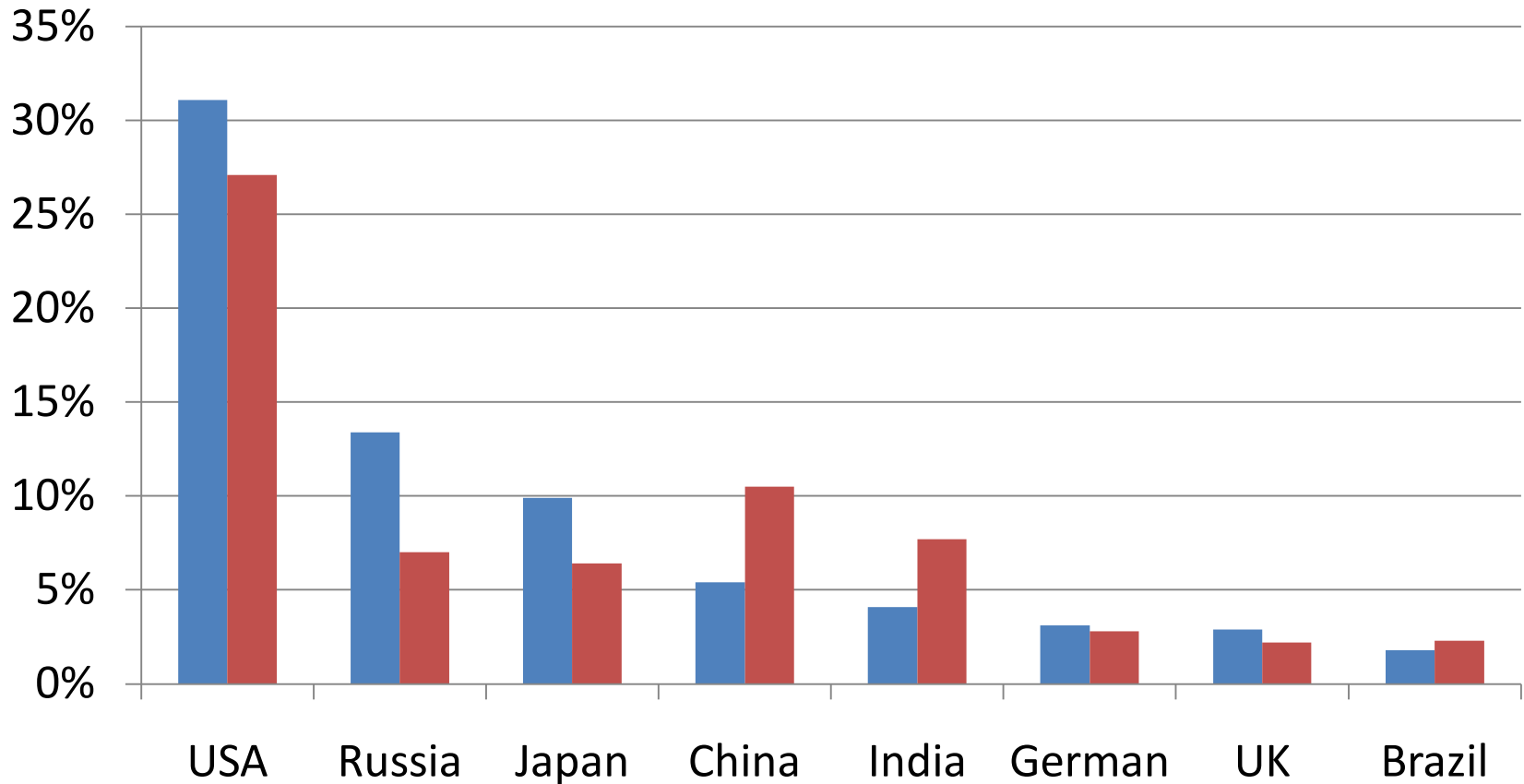
SEI 2010: Global Patterns of R&D Expenditures Chapter 4.



Tertiary Education by Country

• 1980 (73 million)

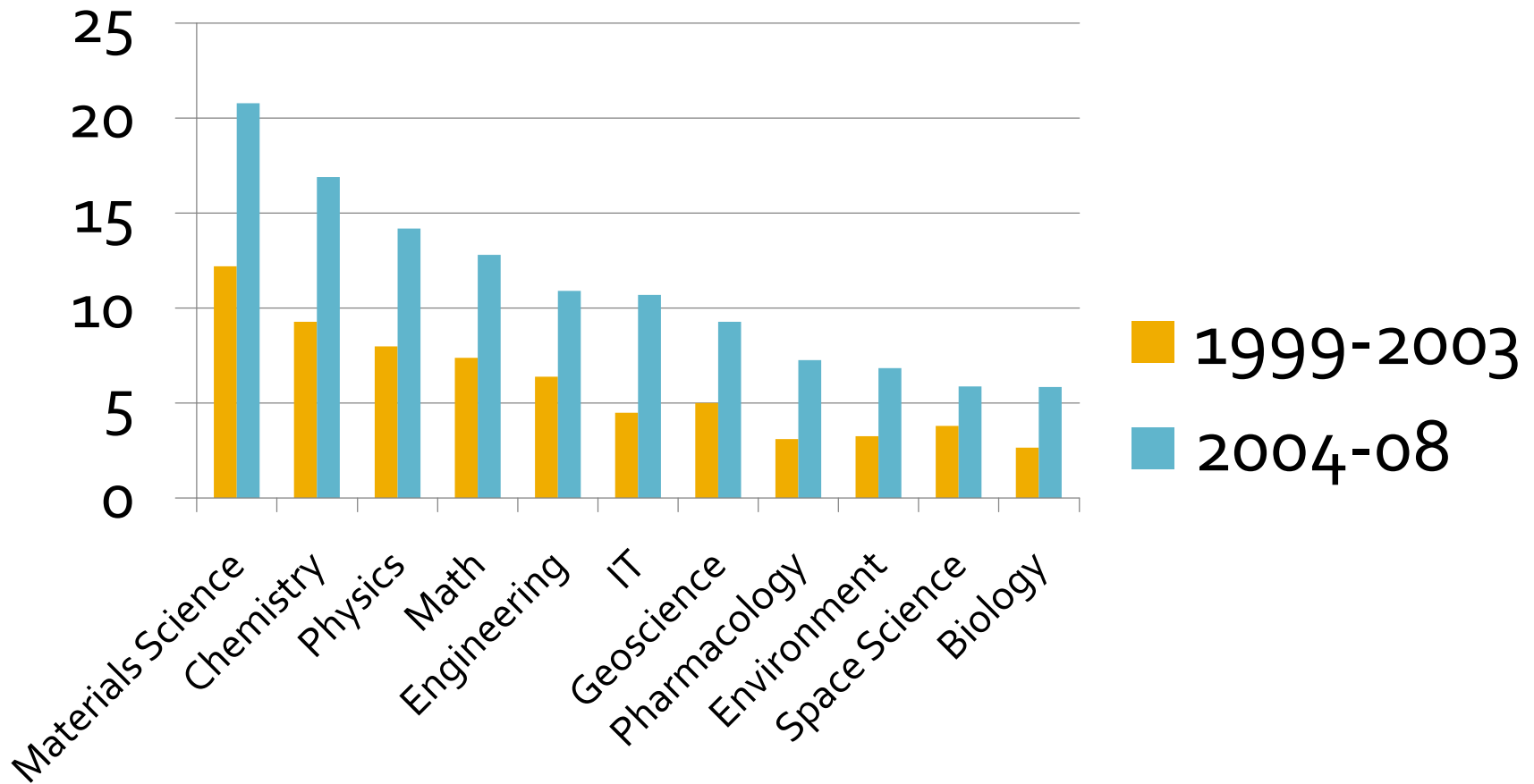
• 2000 (194 million)



Scholarly Publishing Drivers

- Educational spending and enrollment
- Numbers of and income of professionals
- Government policies and library budgets
- Patents, pharmaceutical spending
- Language:
 - English completely supplants the local language in India and some small but rich markets- SE Asia, Scandinavia.
 - But local language predominates for Practitioners in larger countries- Germany, Japan, China, Brazil

Payoff: China's % share of research



Dan Stempel

- Simba Information has been serving the publishing industry since 1975
- Dan and I working together since 2007
- Goldman Sachs also uses Simba!