

*Maastricht, 6-7 October 2005*

# Emerging Knowledge Indicators

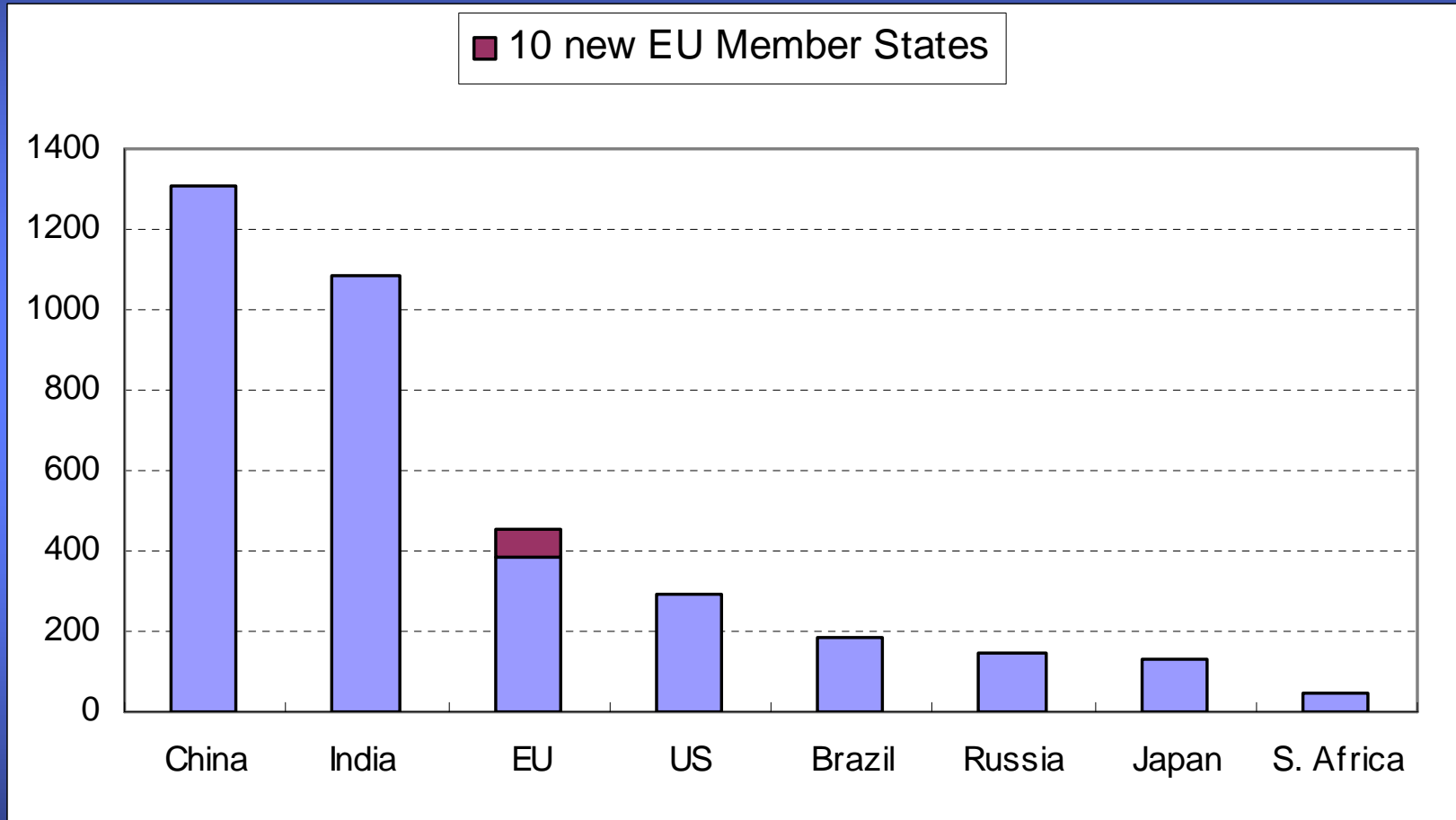
*Martin Schaaper*  
*OECD*

Economic Analysis and Statistics Division,  
Directorate for Science, Technology and Industry

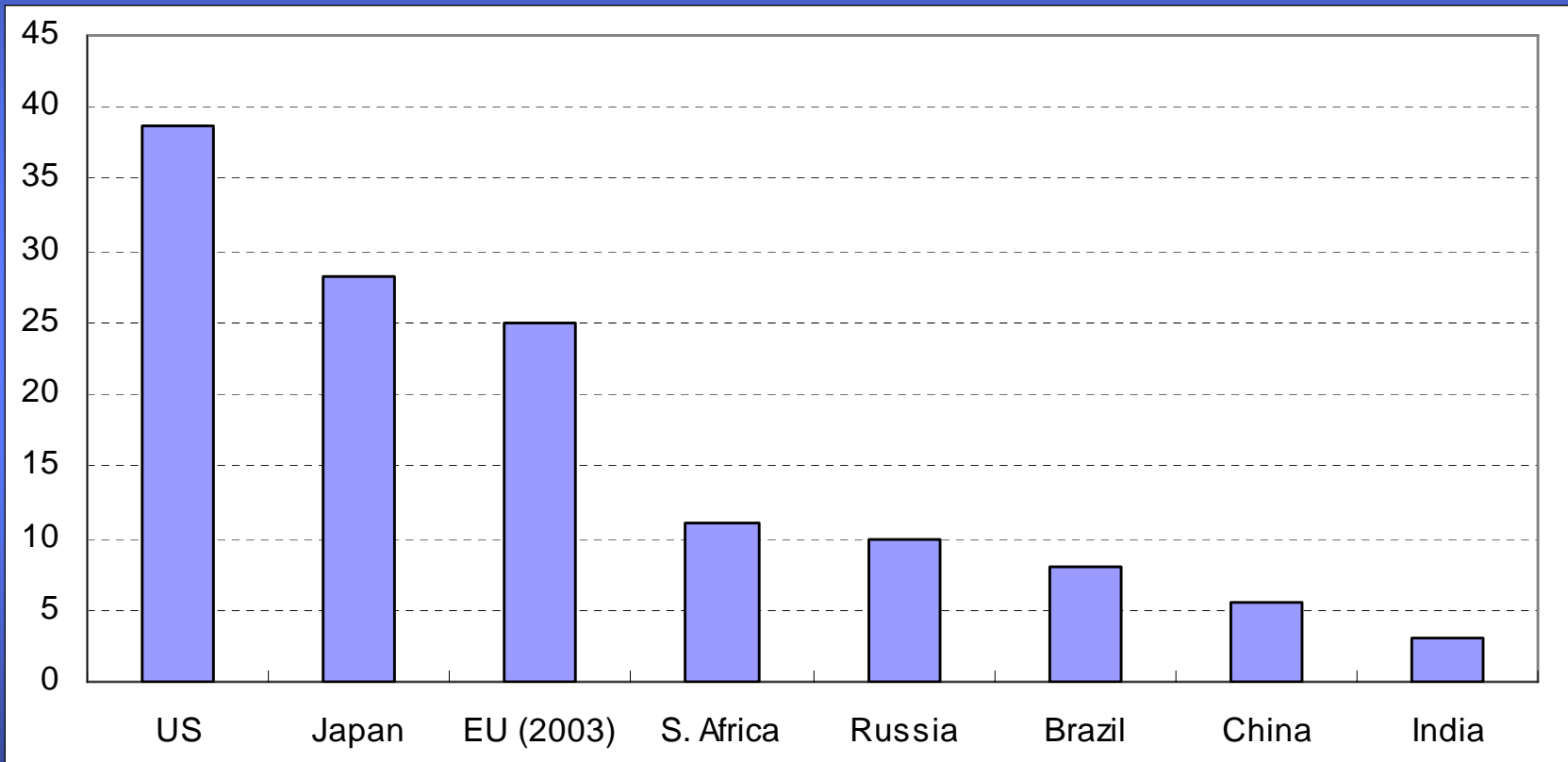
# Contents of this presentation

- Data and limitations
- Background indicators
- HRST and international mobility
- R&D
- Patenting
- Quickly some other indicators
- Some conclusions

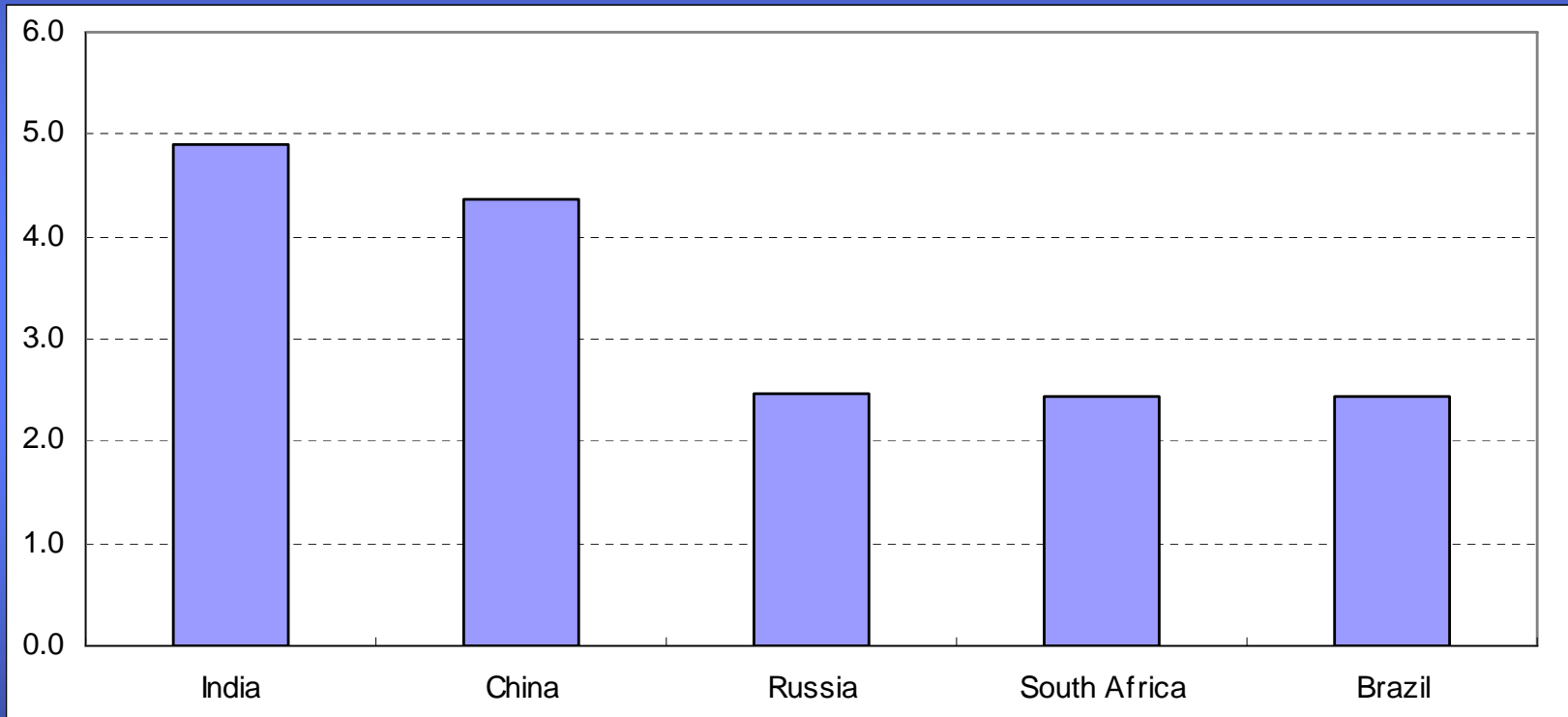
# Population, 2004 (millions)



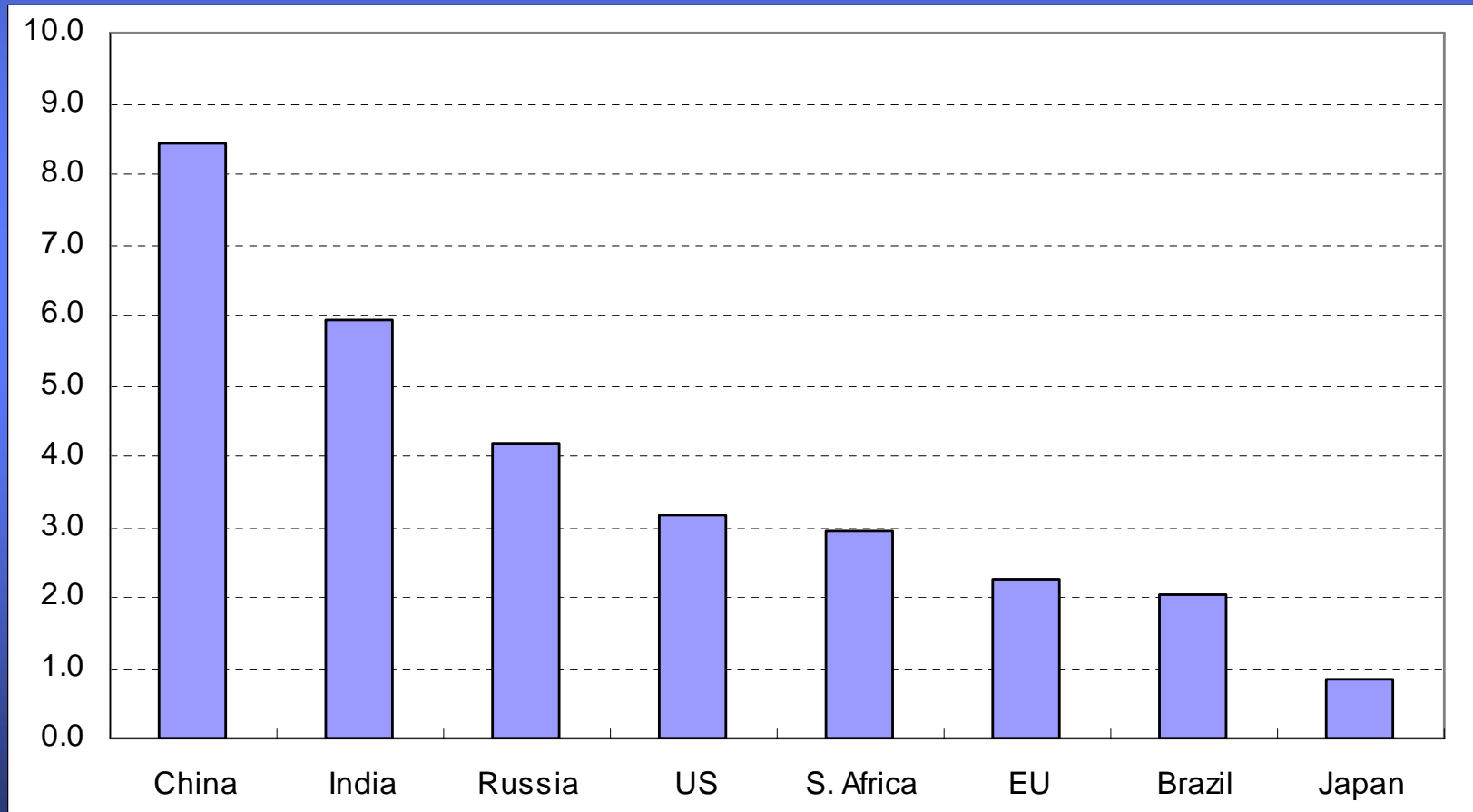
# GDP per capita, 2004 (1000 current PPP)



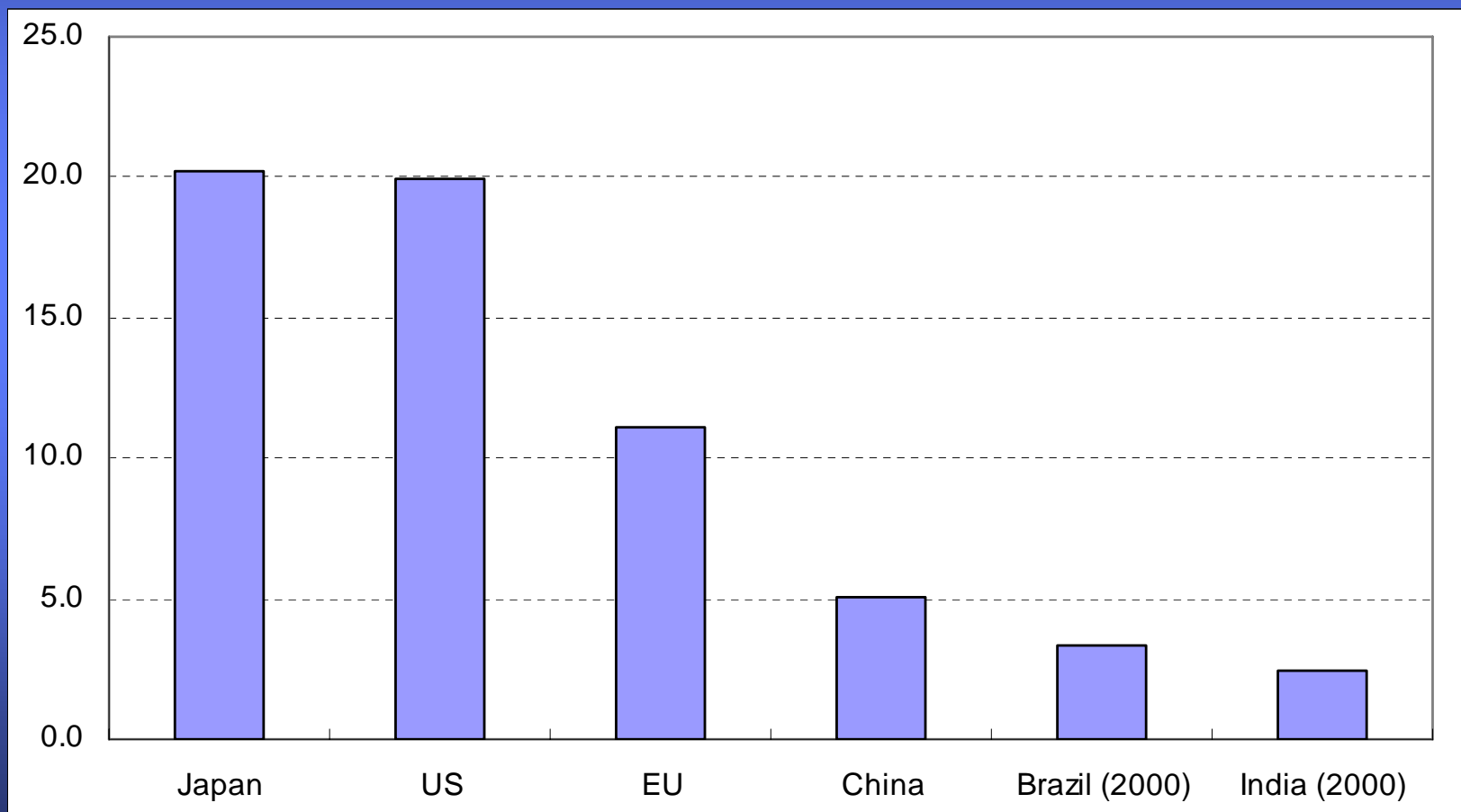
# Ratio of PPP to exchange rate



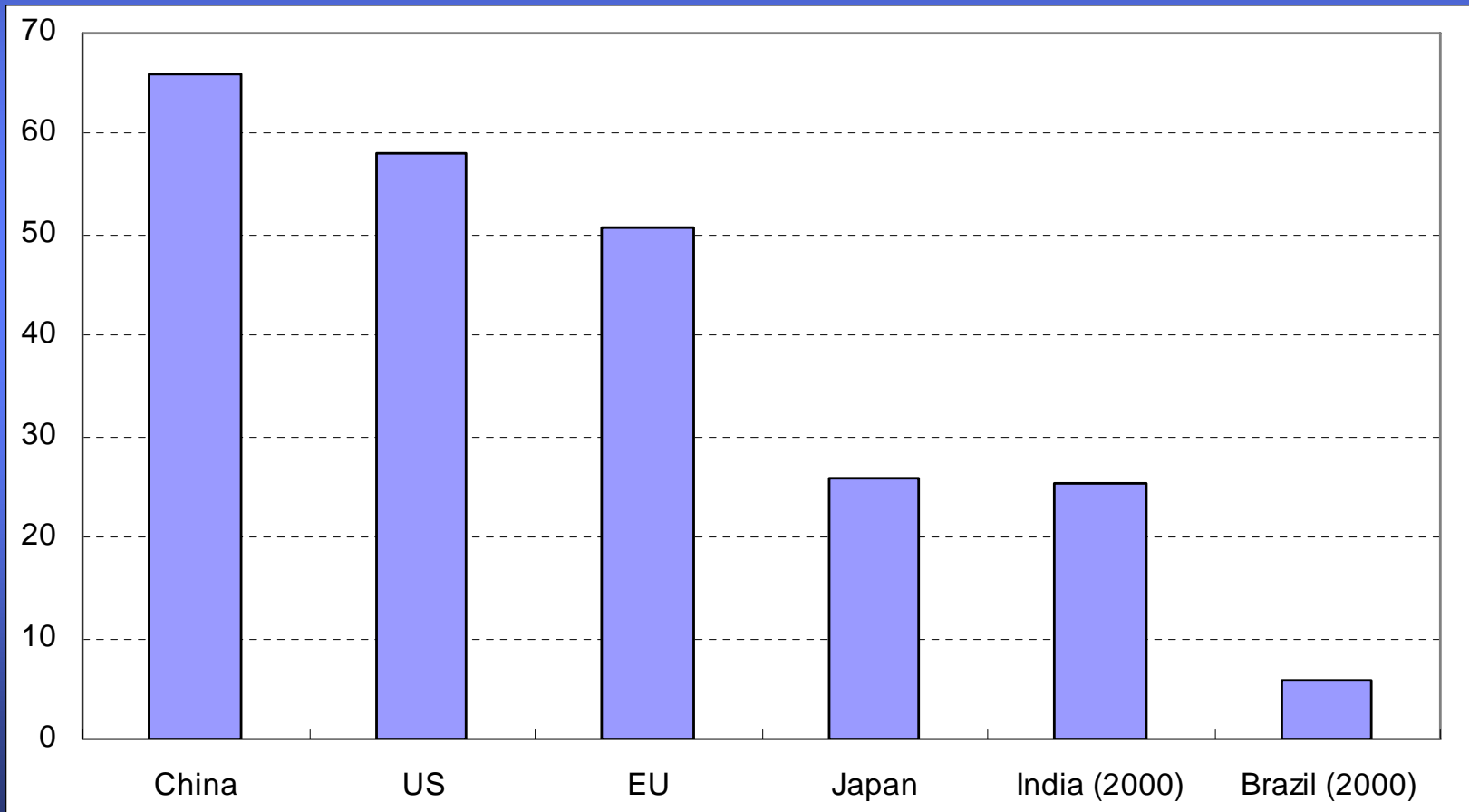
# Annual average growth of GDP, 1995-2004



# % of population with higher education, 2003

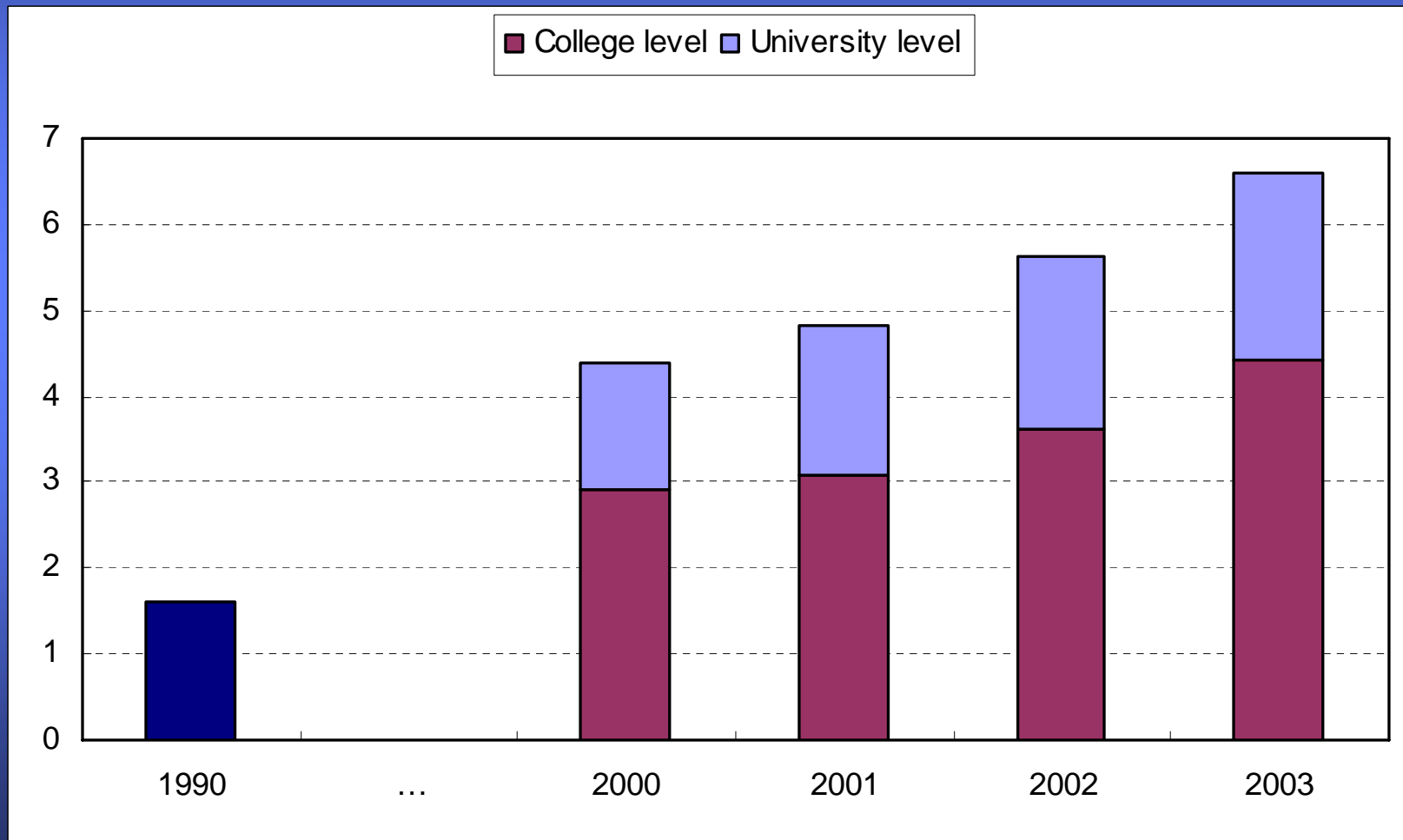


# Stock of people with higher education, 2003 (millions)

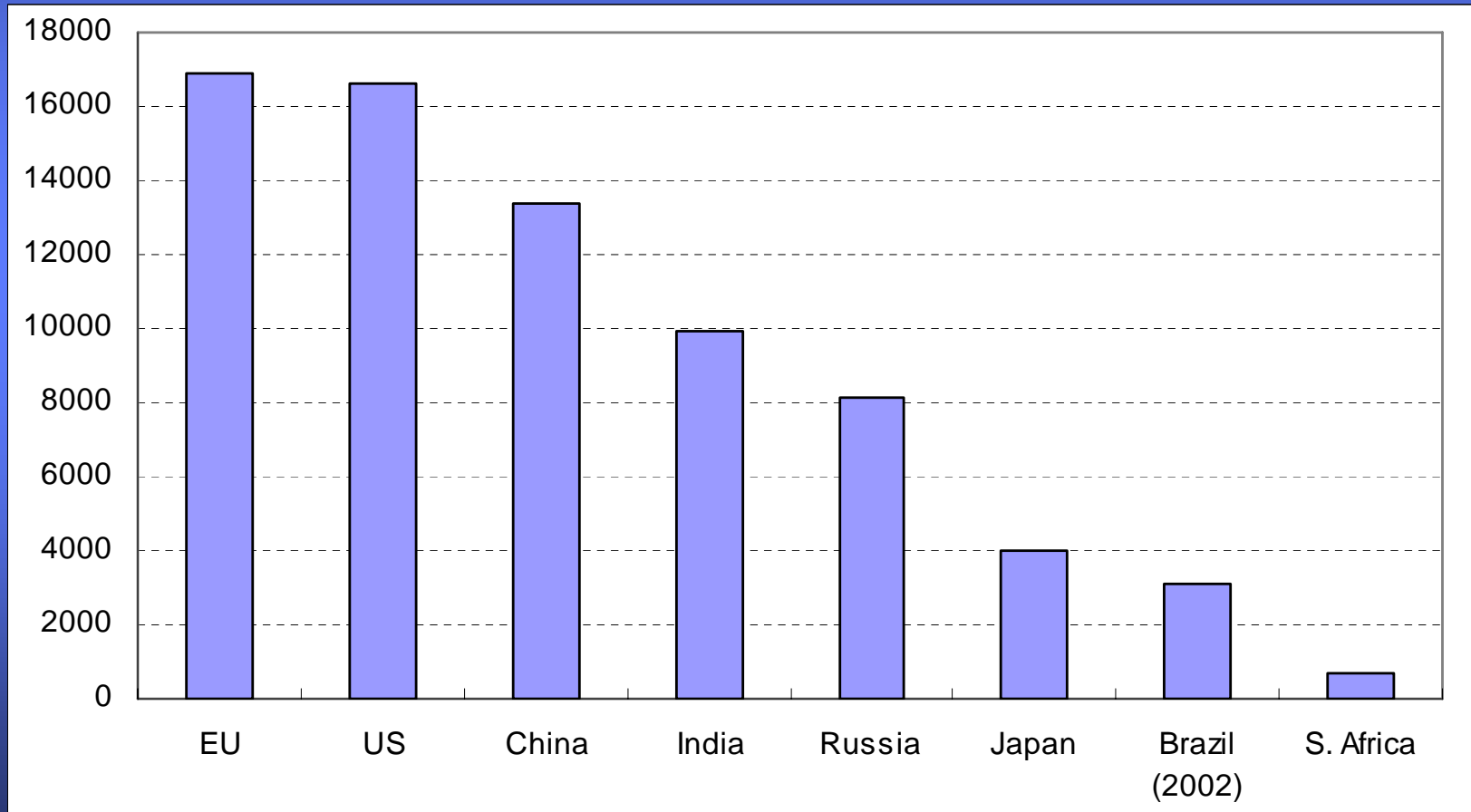




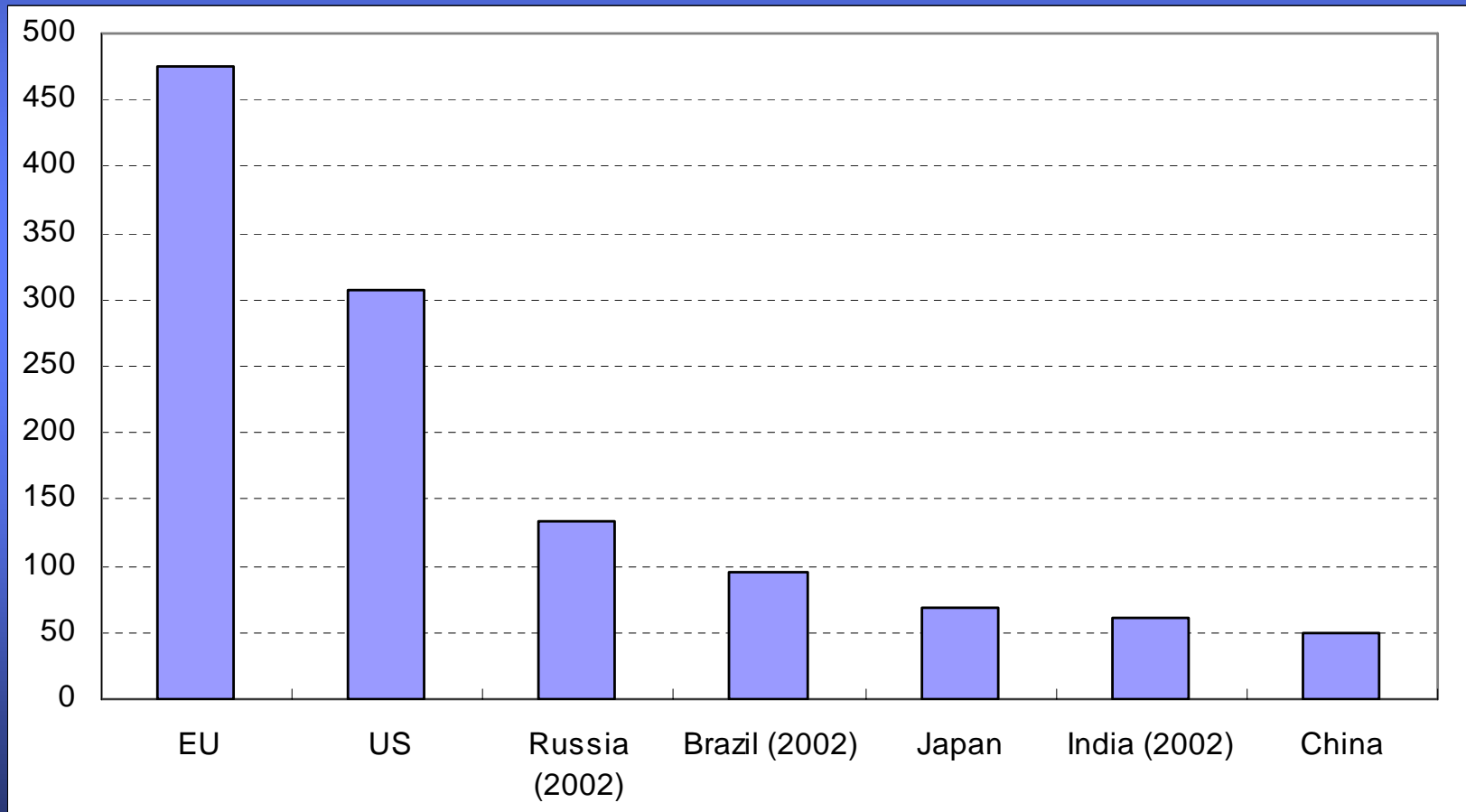
# China, evolution of HRSTE (millions)



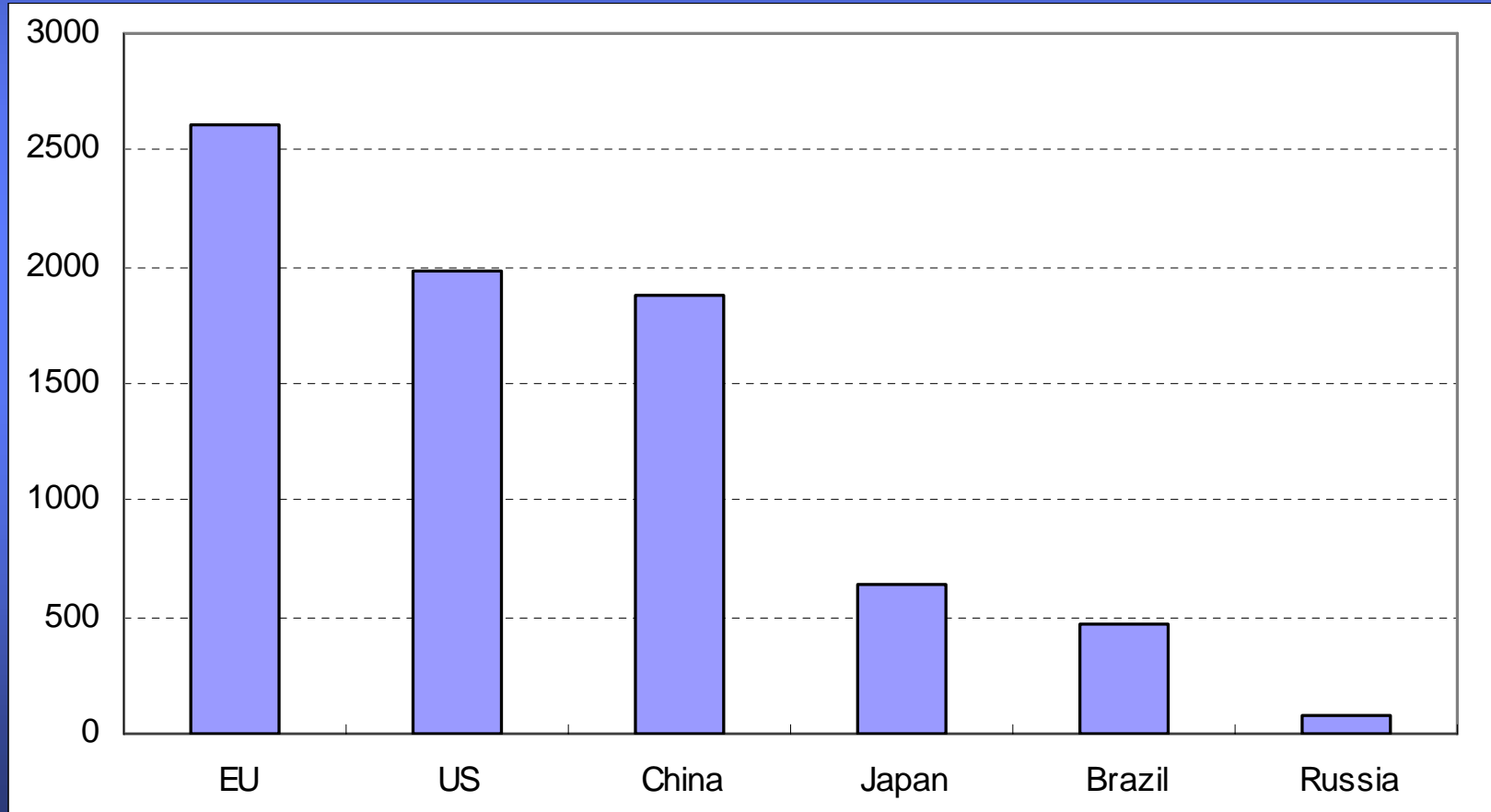
# Enrolment in tertiary education, 2003 (1000s)



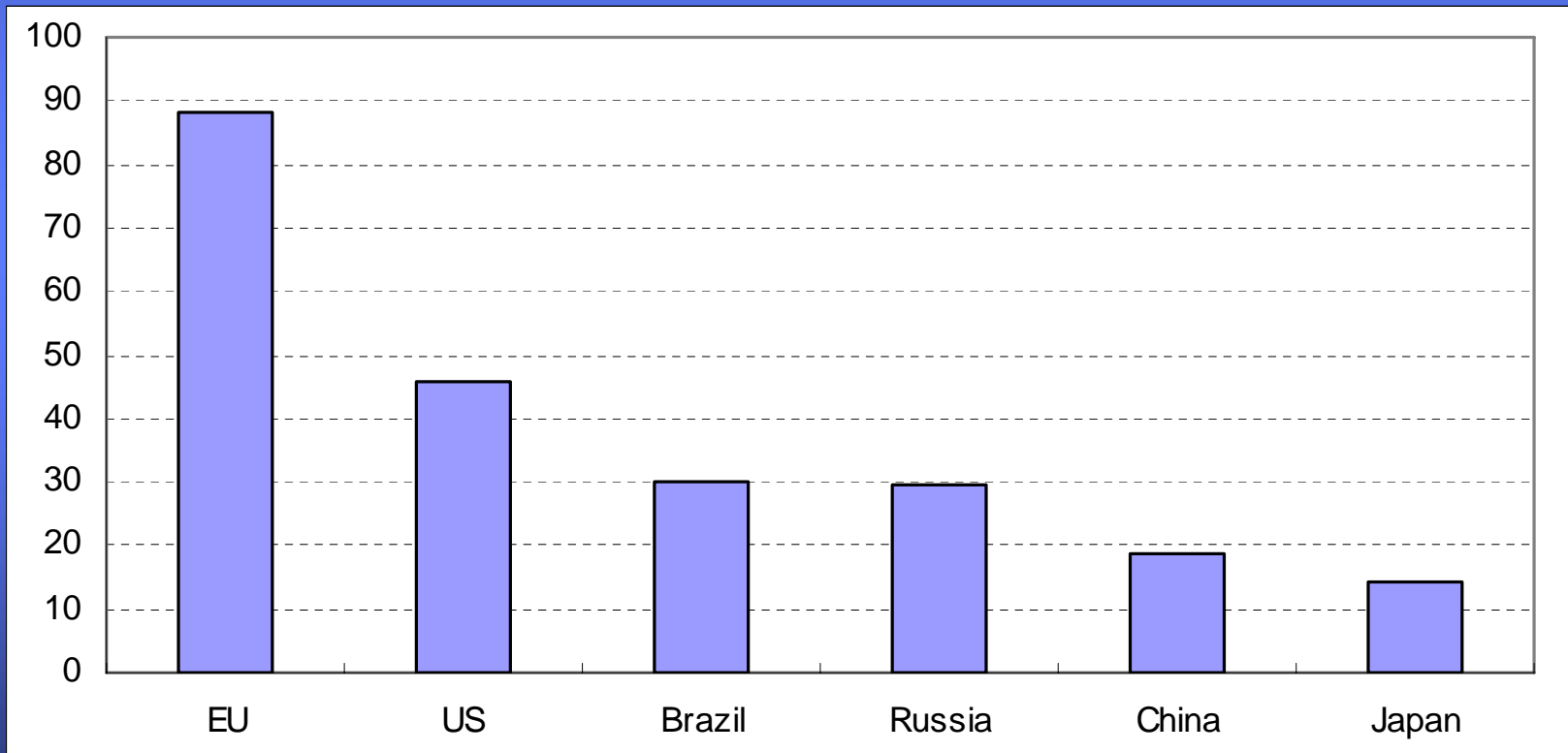
# PhD enrolment, 2003 (1000s)



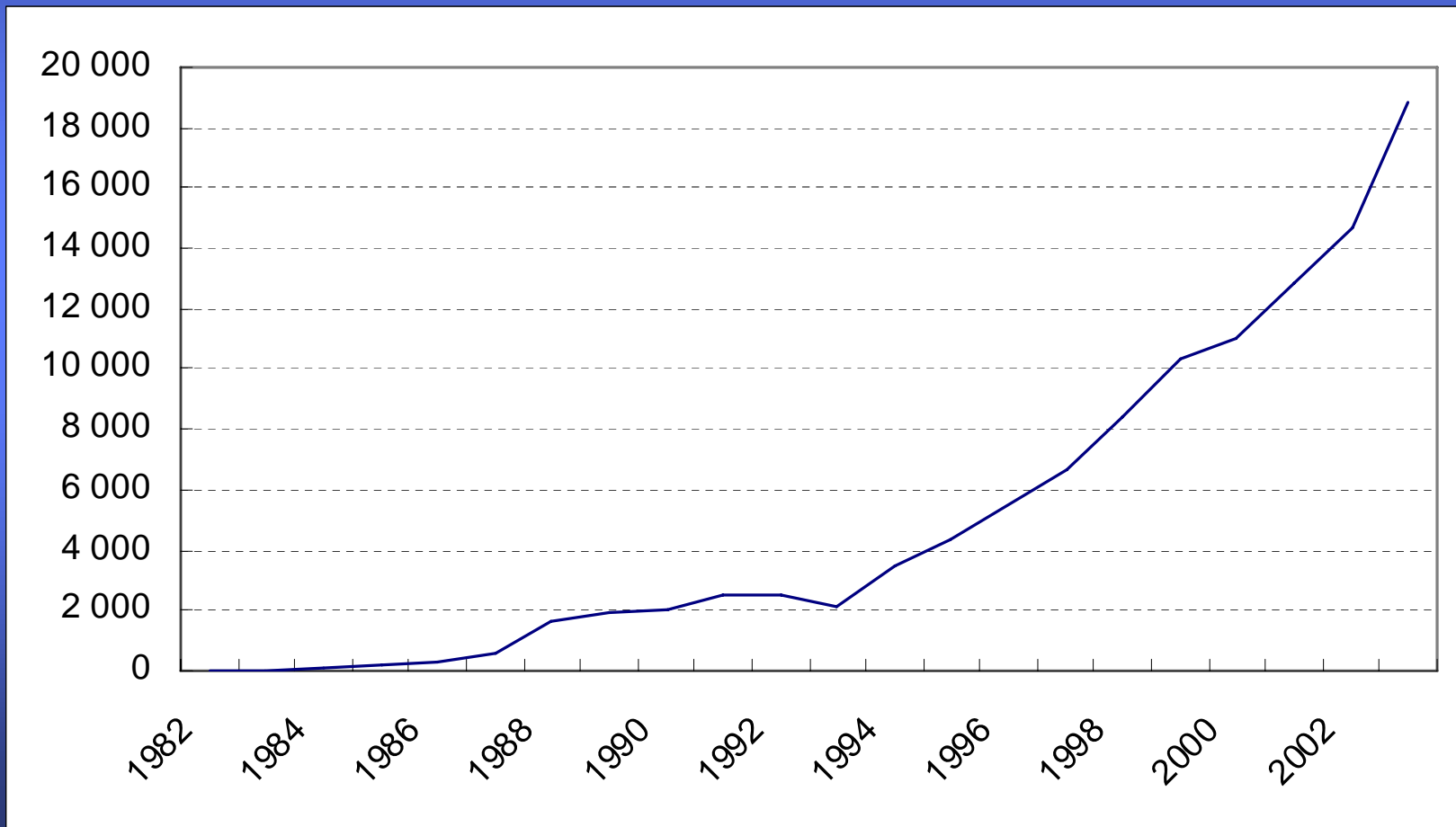
# University graduates, 2003 (1000s)



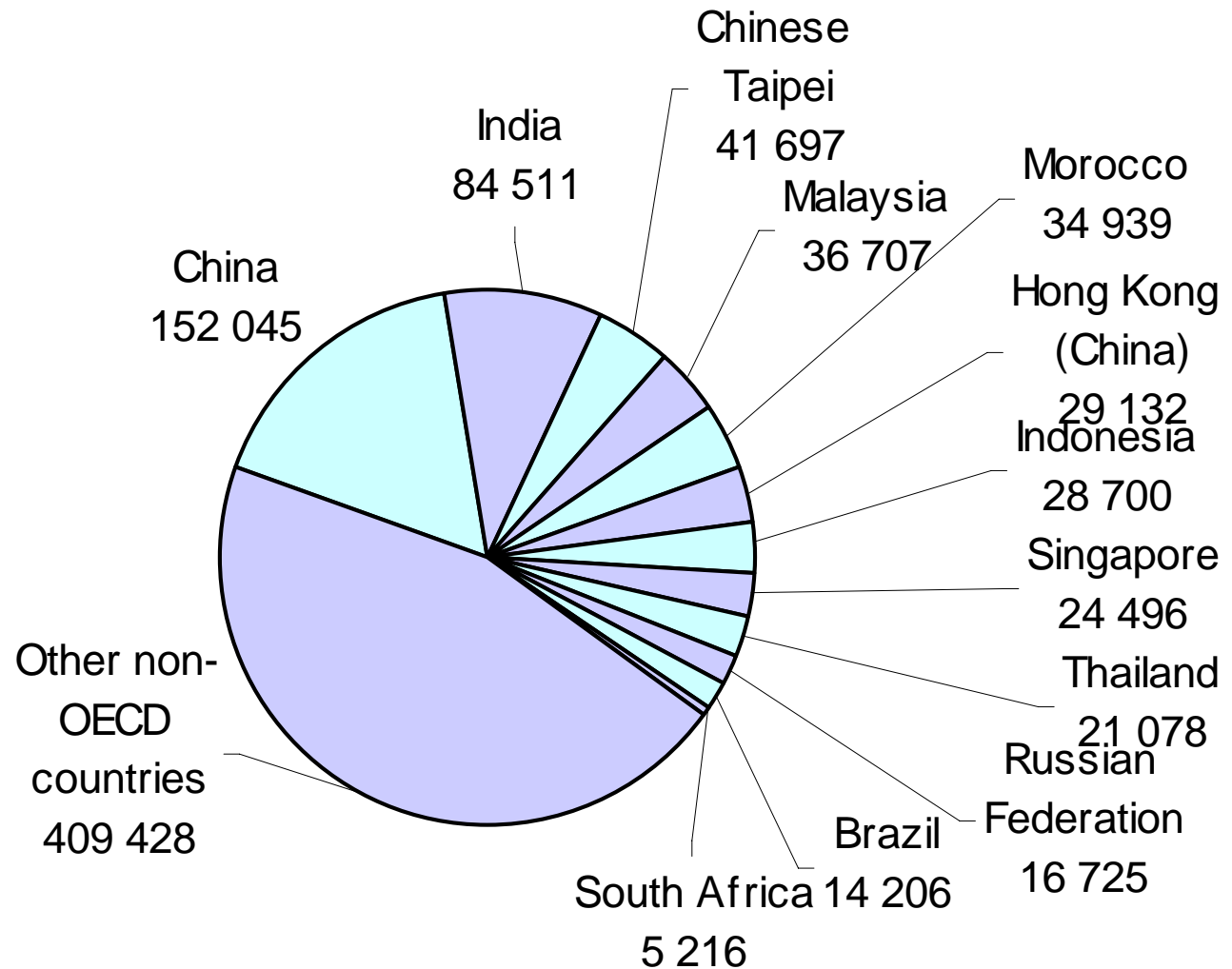
# PhD graduates, 2003 (1000s)



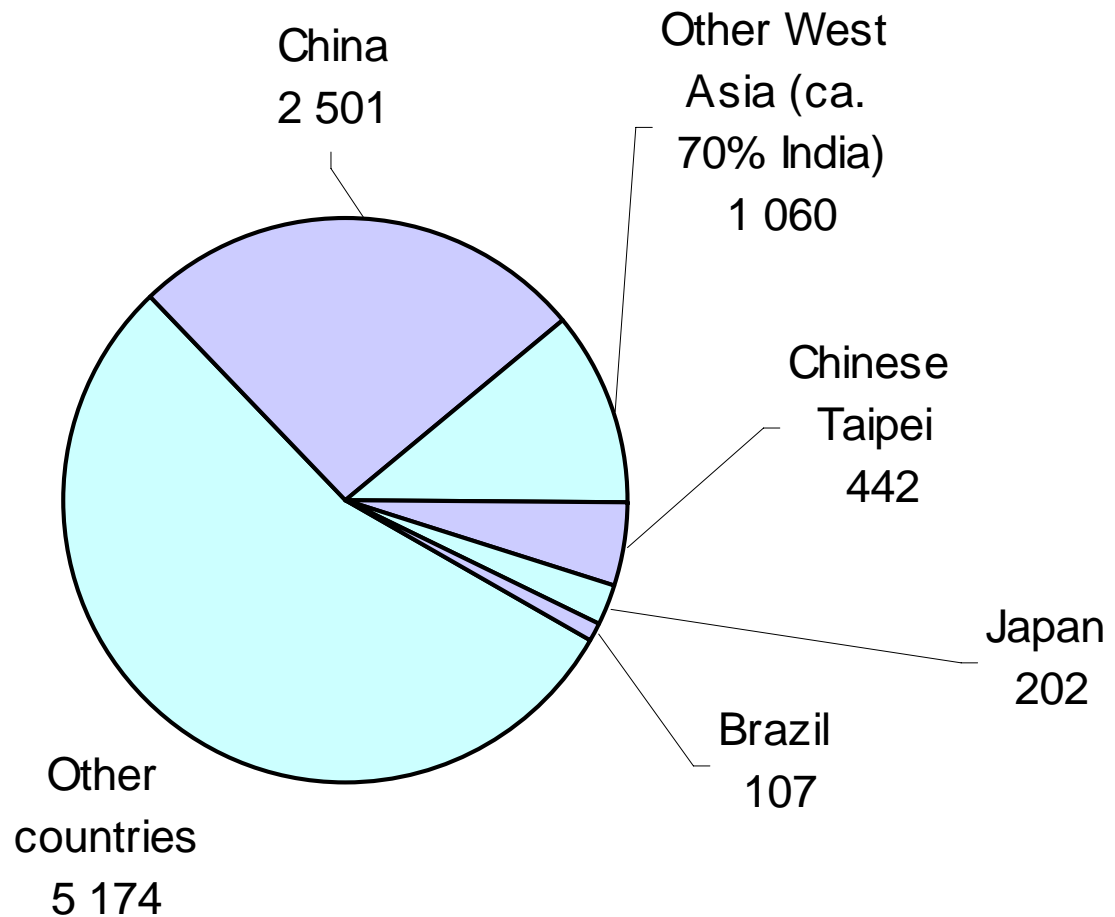
# China, number of PhD graduates



# Students from non-OECD economies enrolled in universities in OECD countries

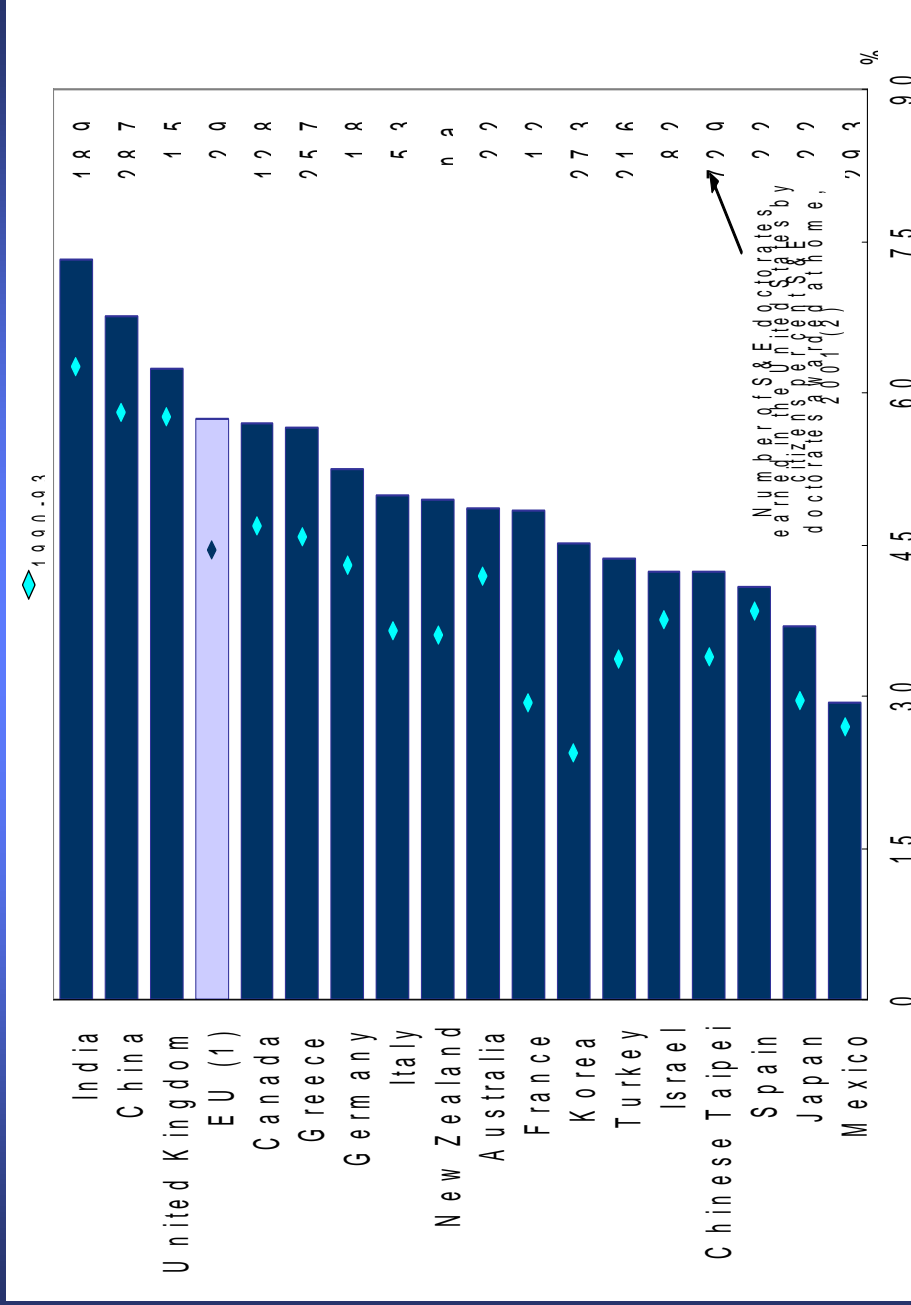


# Number of S&E doctorates awarded to non-US citizens in the US, by citizenship, 2003

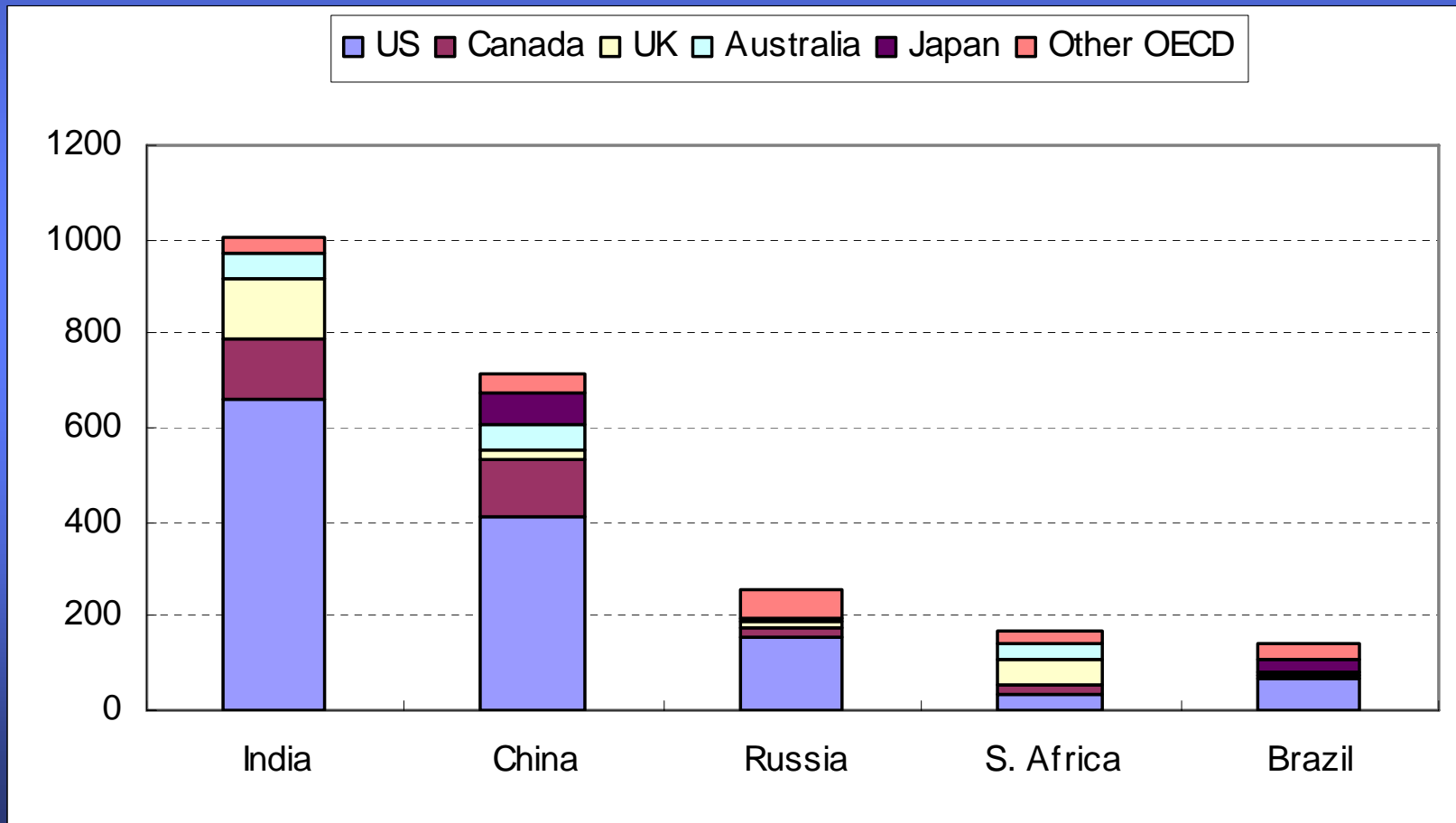




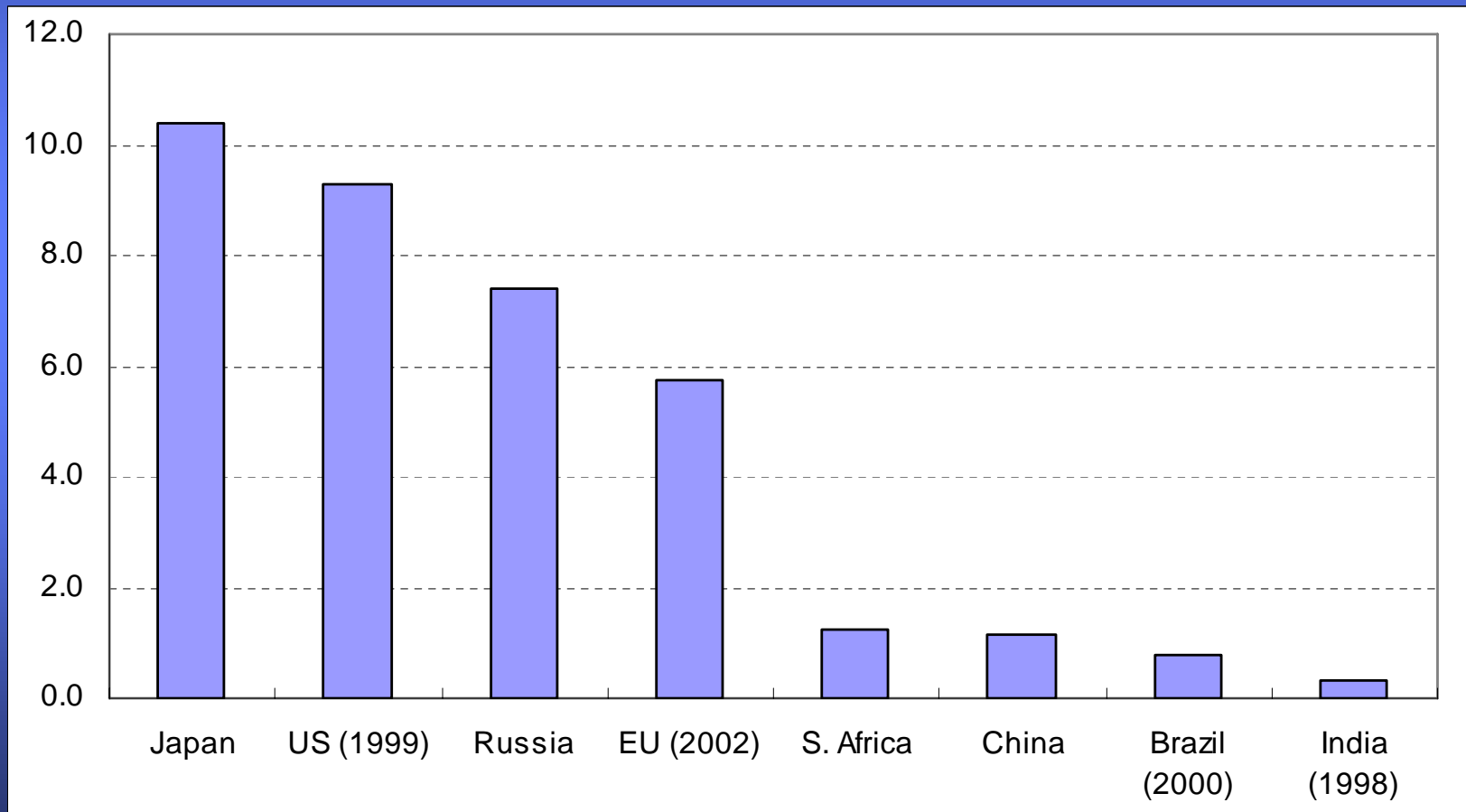
Stay rate of foreign S&E graduates at doctoral level in the United States, as a % of total foreign S&E doctorate recipients, 1998-2001.



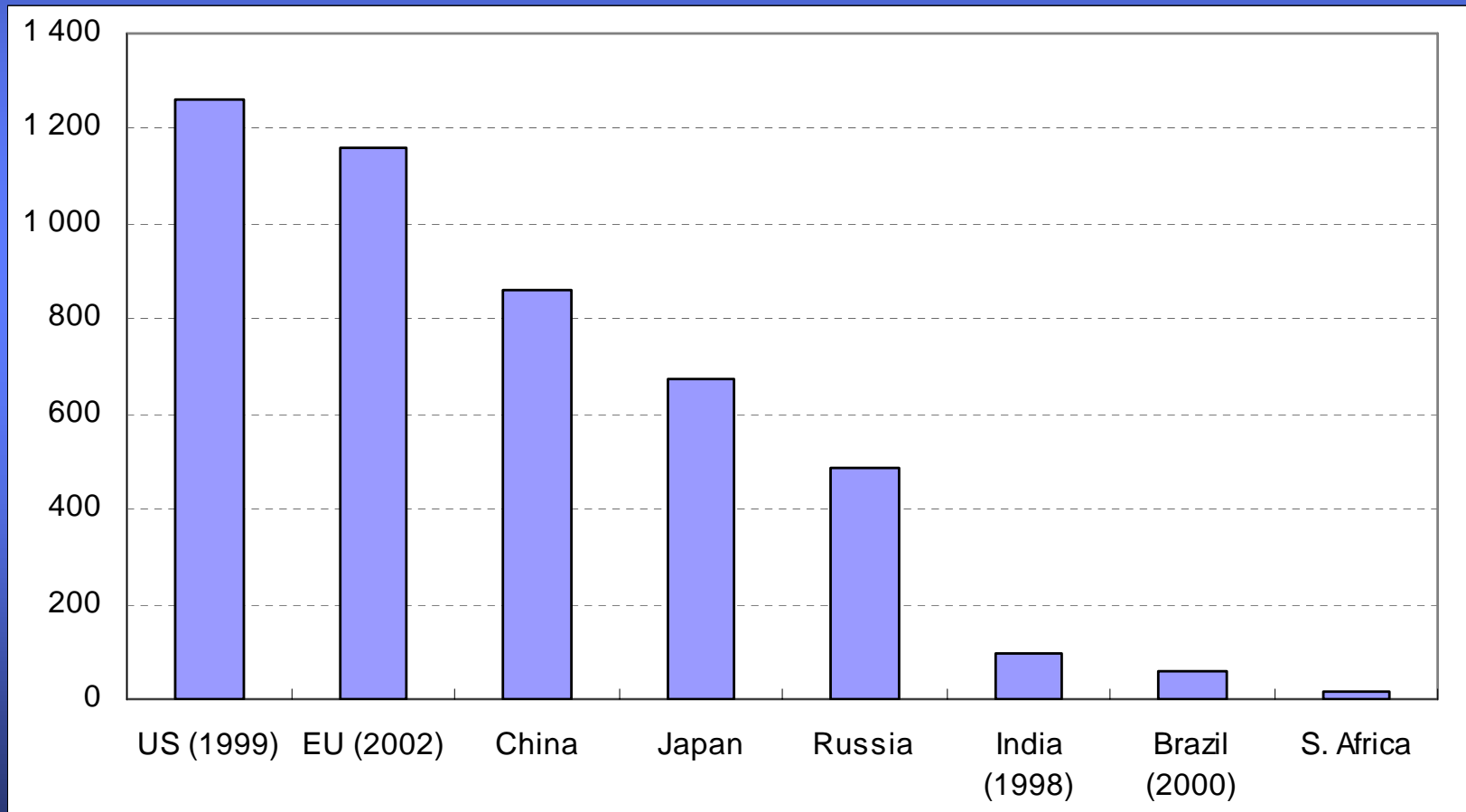
# Foreign born, highly skilled people in the OECD, by country of birth and country of residence (1000s)



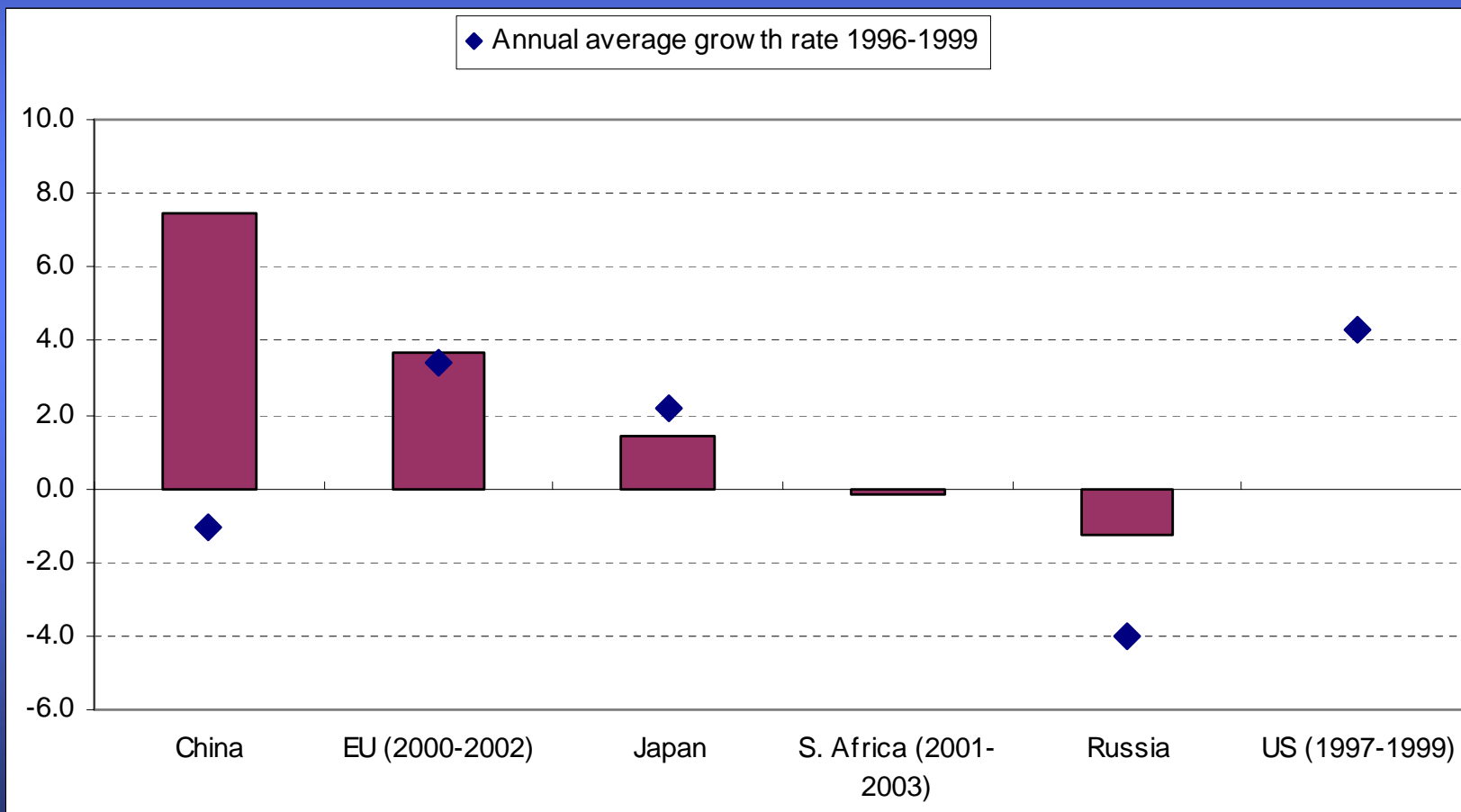
# Number of researchers (FTE) per 1 000 employment, 2003



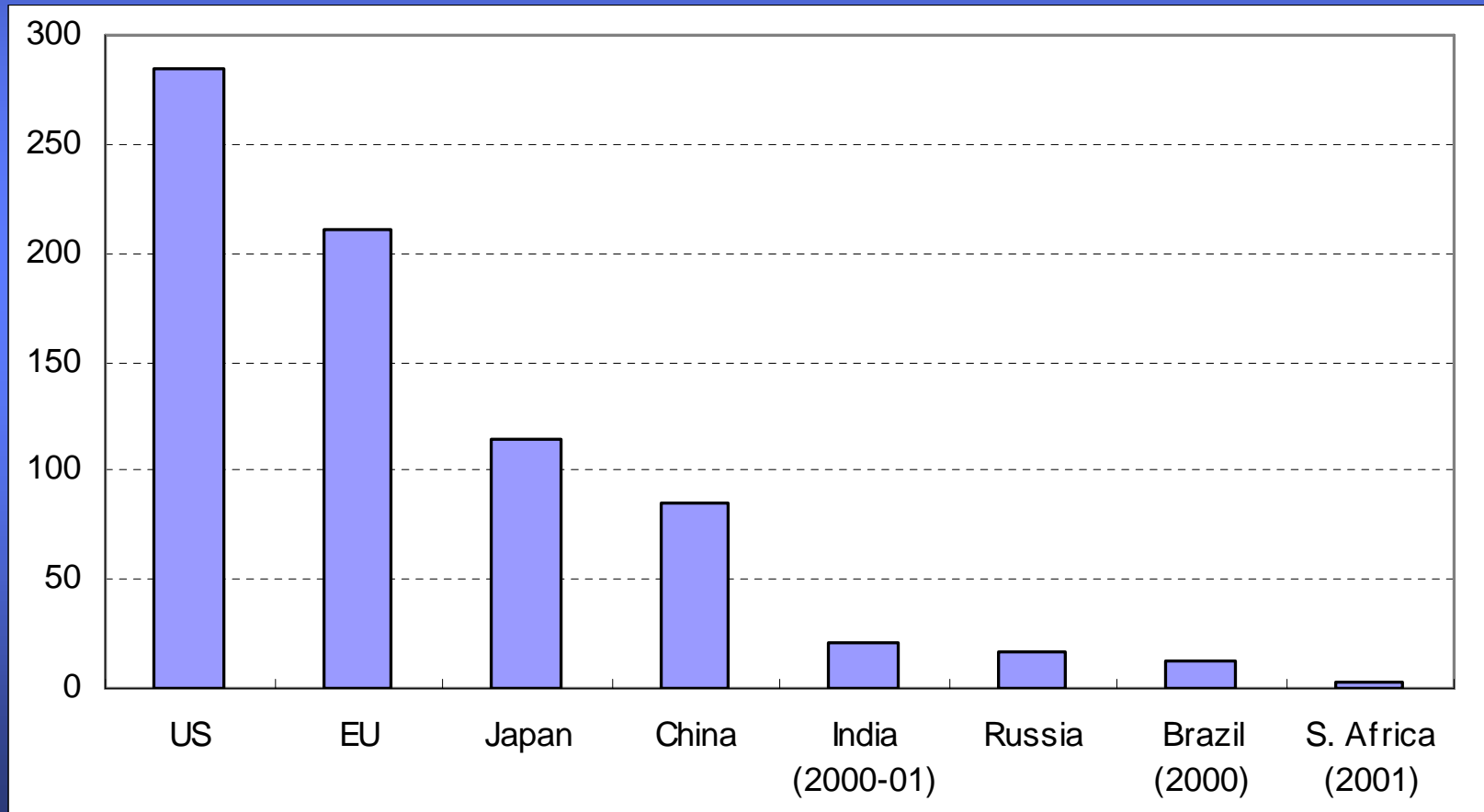
# Number of researchers (FTE), 2003 (1000s)



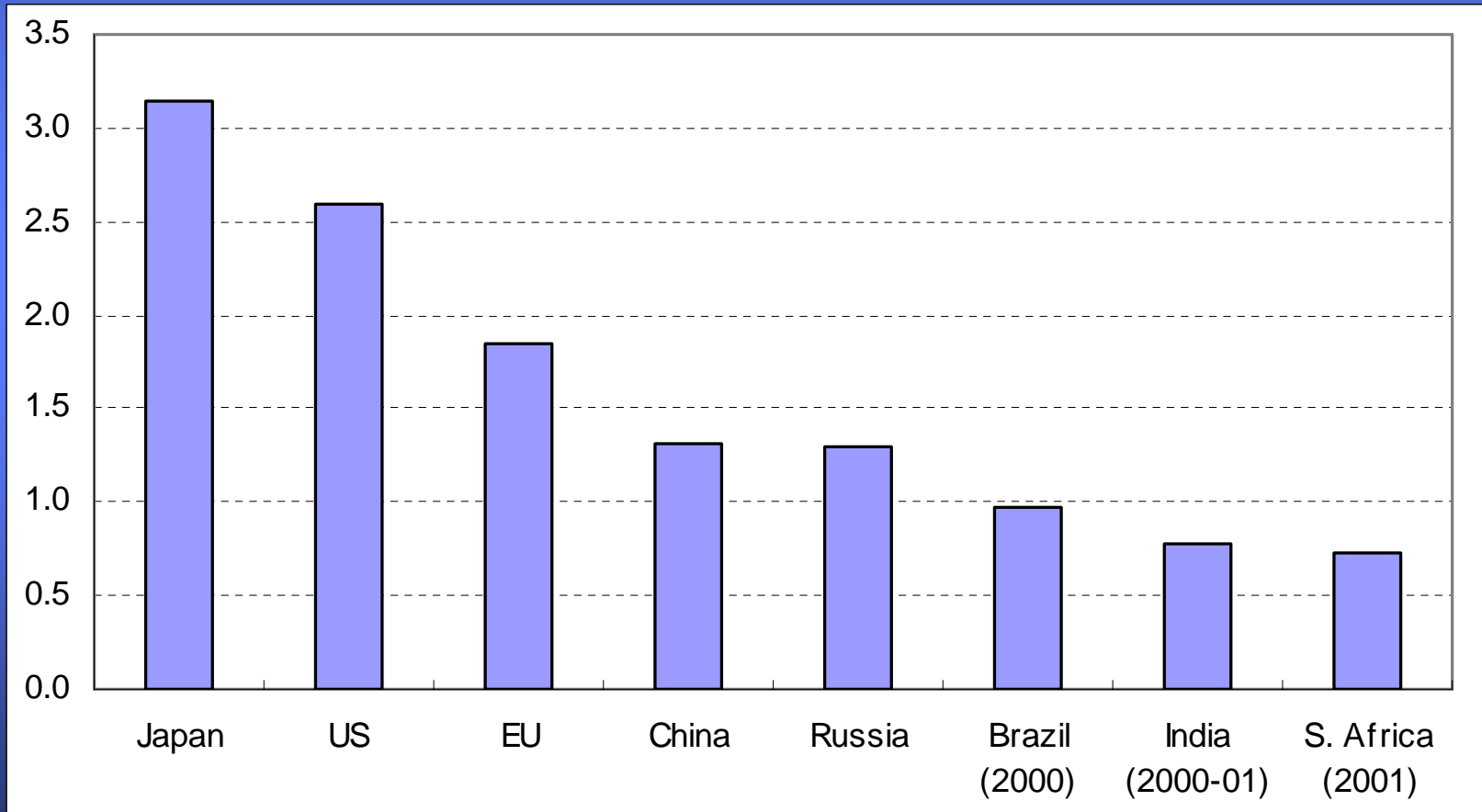
# Researchers, annual average growth rate, 1996-1999 and 2000-2003



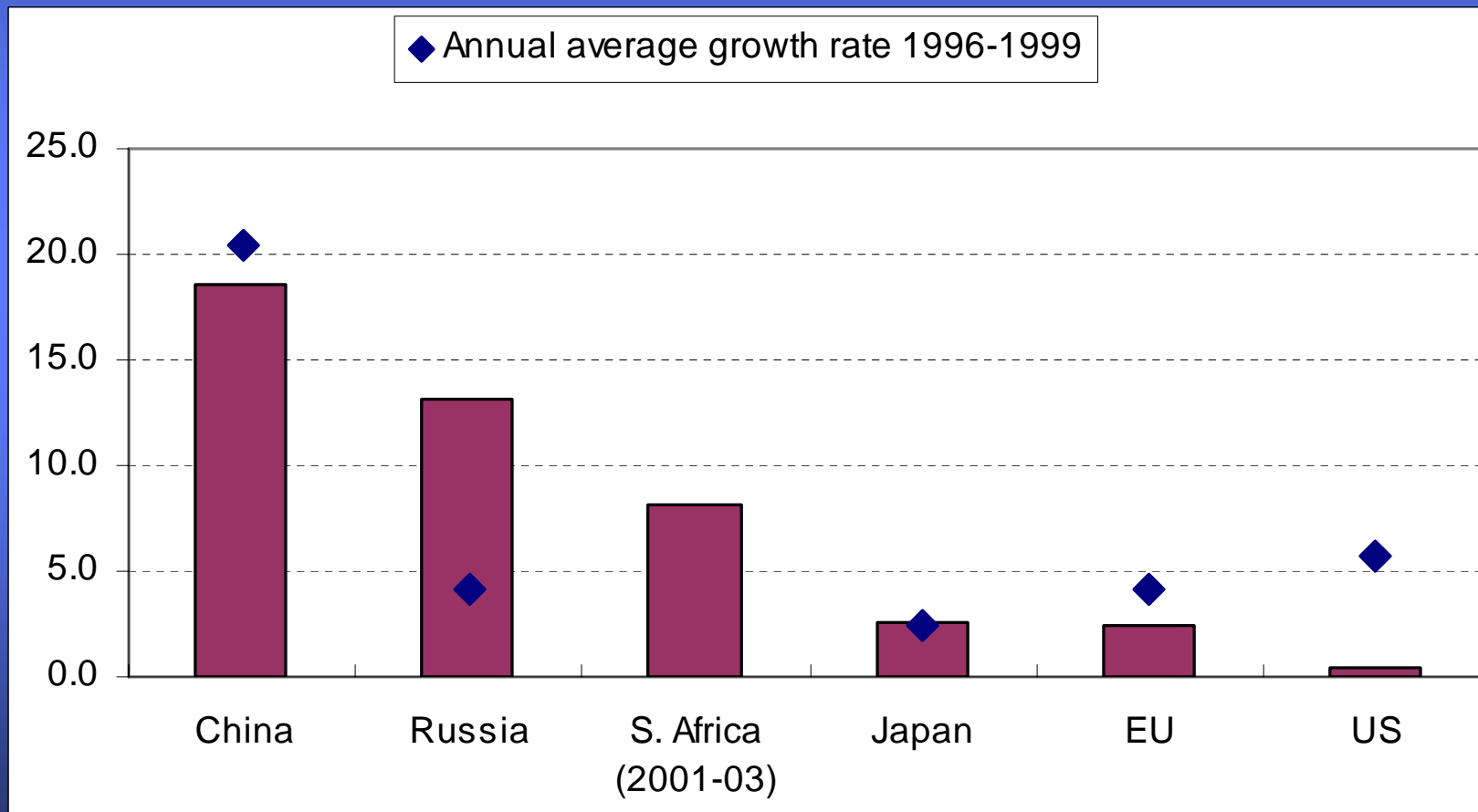
# R&D expenditure in billions of current PPP



# GERD as a percentage of GDP

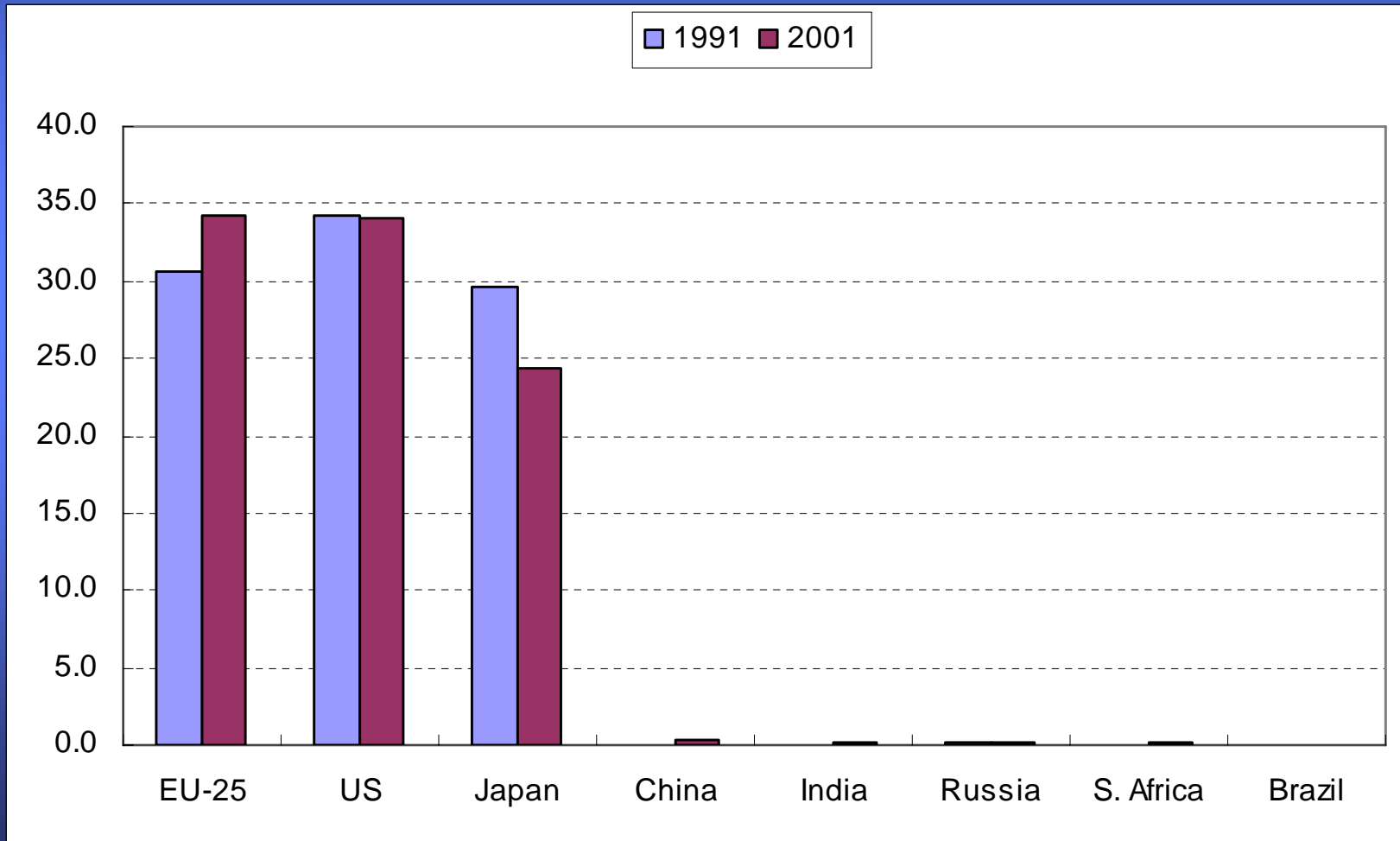


# R&D expenditure, annual average growth rate, 1996-1999 and 2000-2003

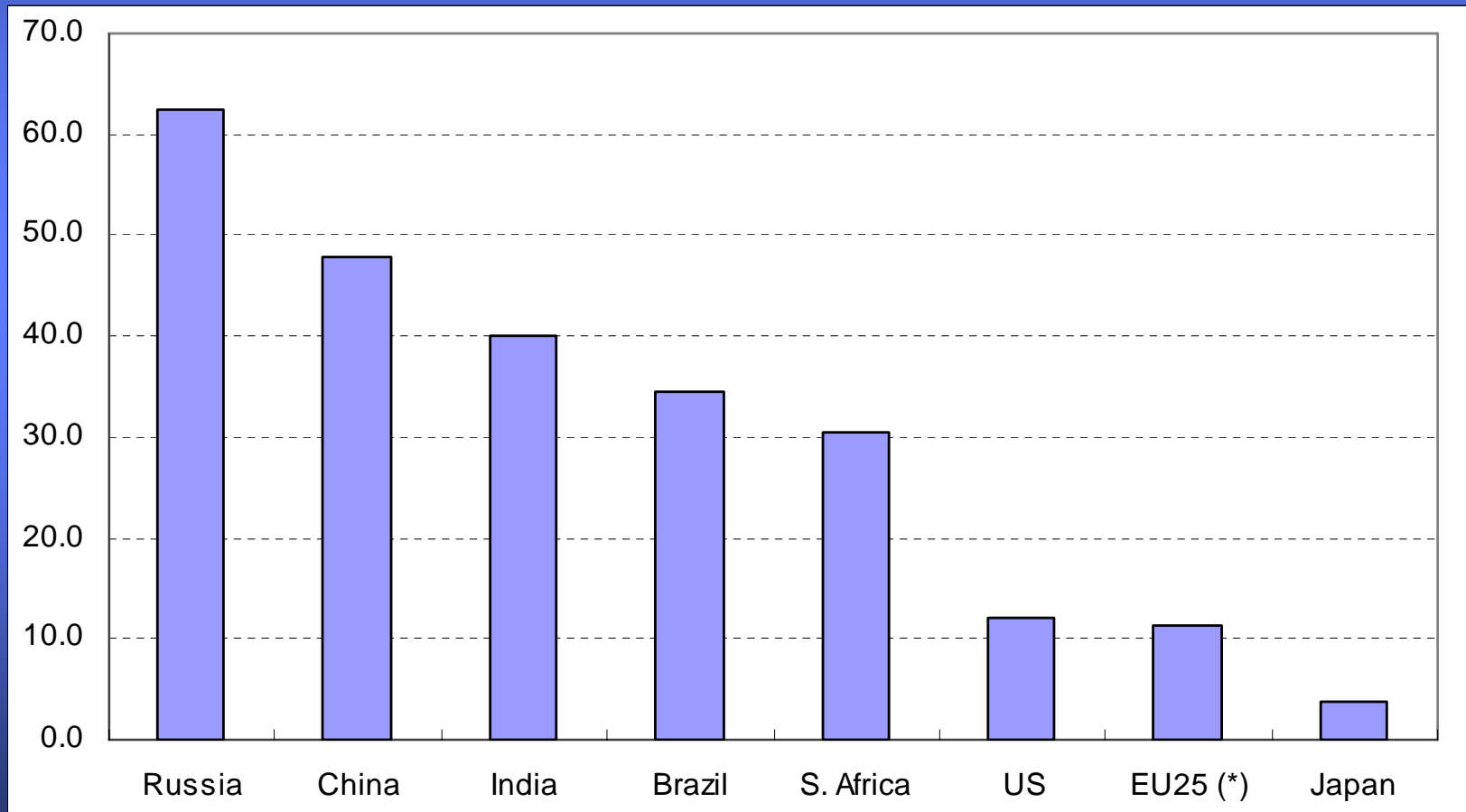




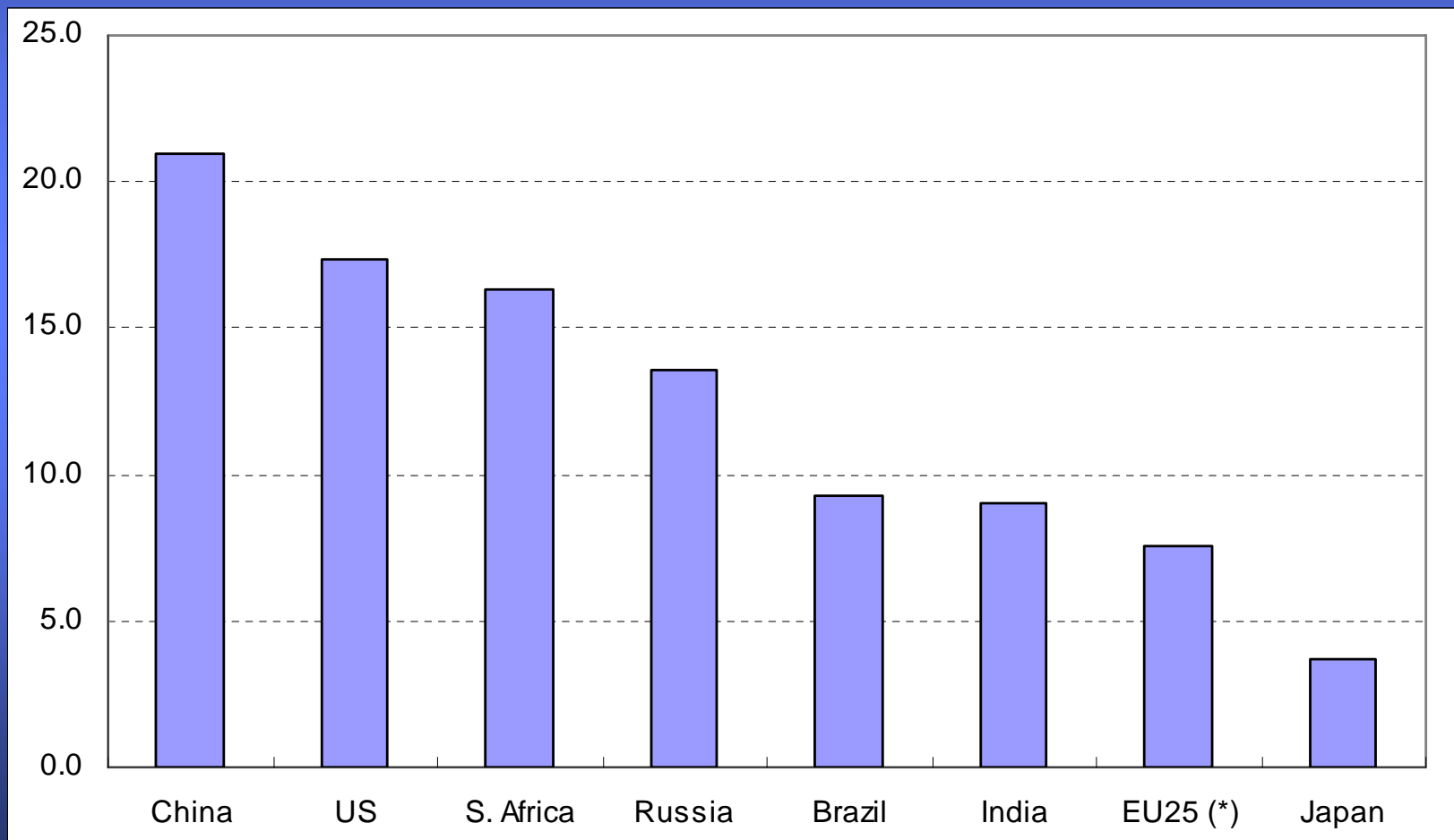
# Share of countries in triadic patent families, 1991 and 2001



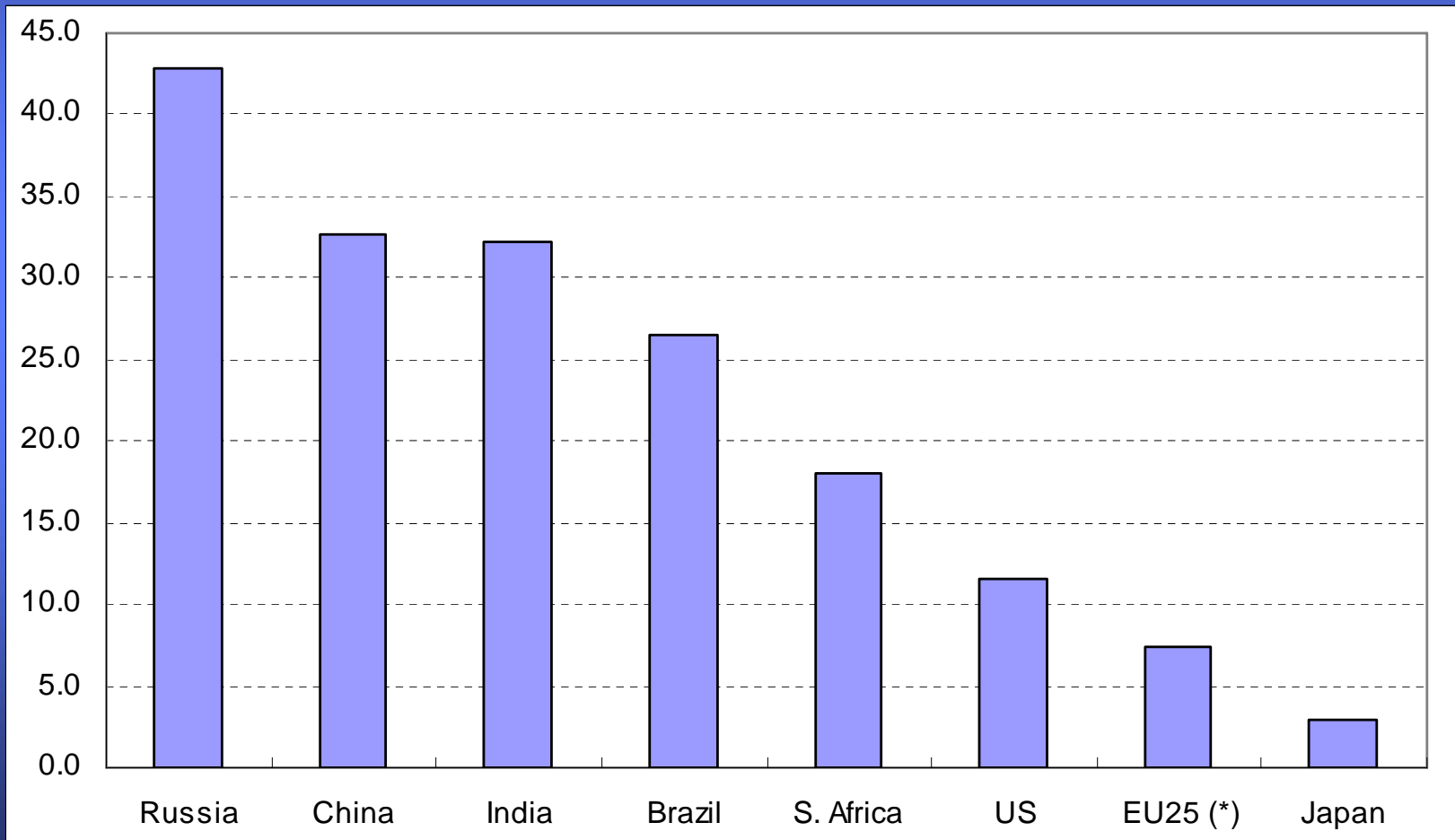
# Foreign ownership of domestic inventions at the EPO by partner country, 1999-2001.



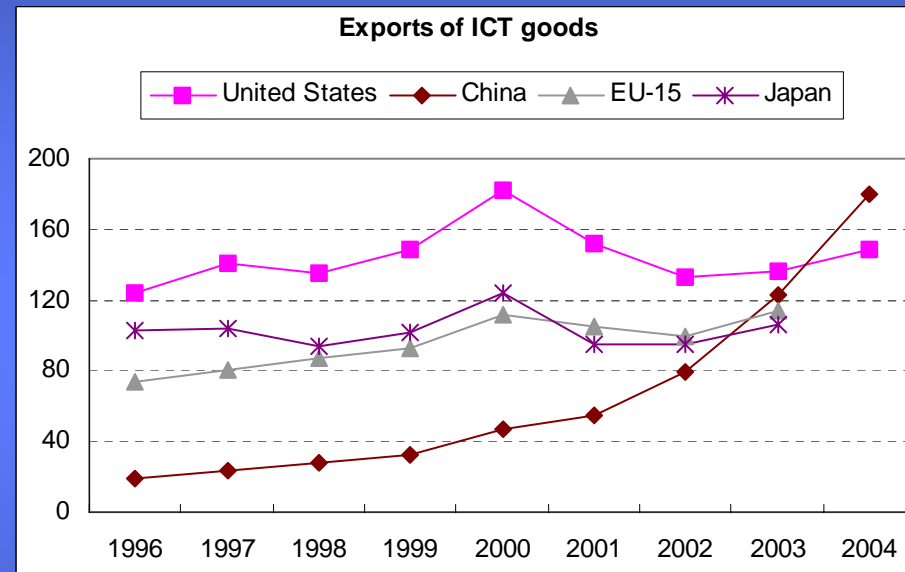
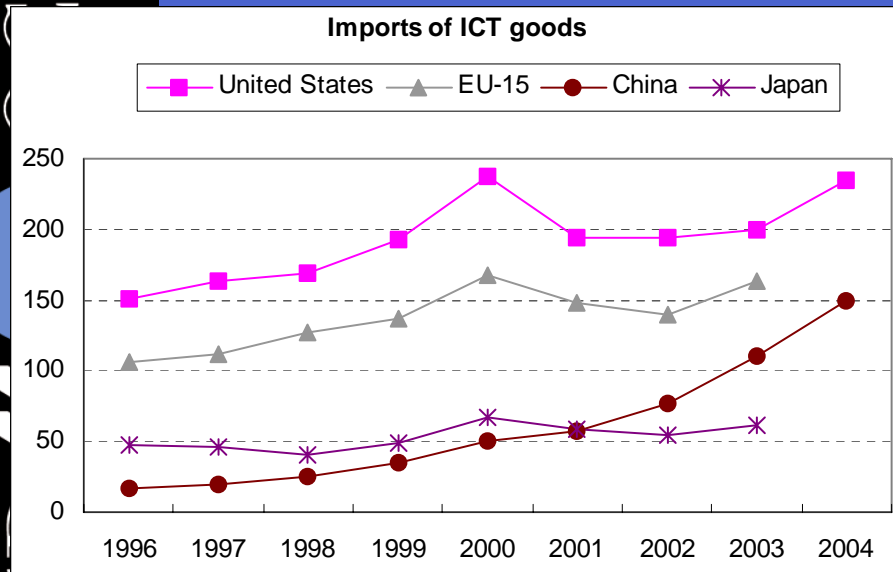
# Domestic ownership of inventions made abroad by partner country, 1999-2001.



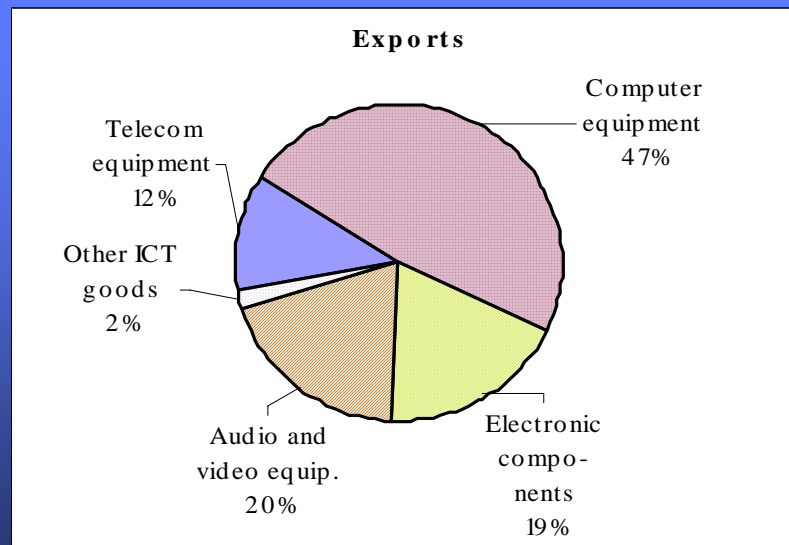
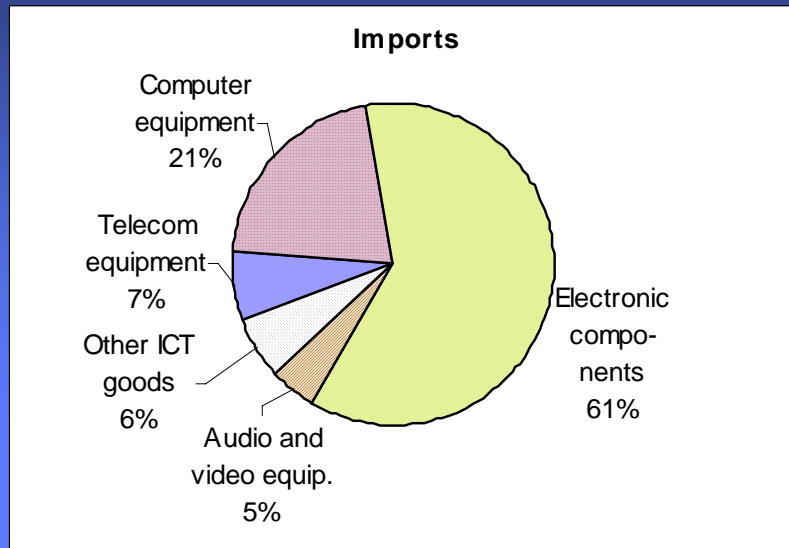
# Share of patents with foreign co-inventors by partner country, 1999-2001.



# Trade in ICT goods, billions of current USD



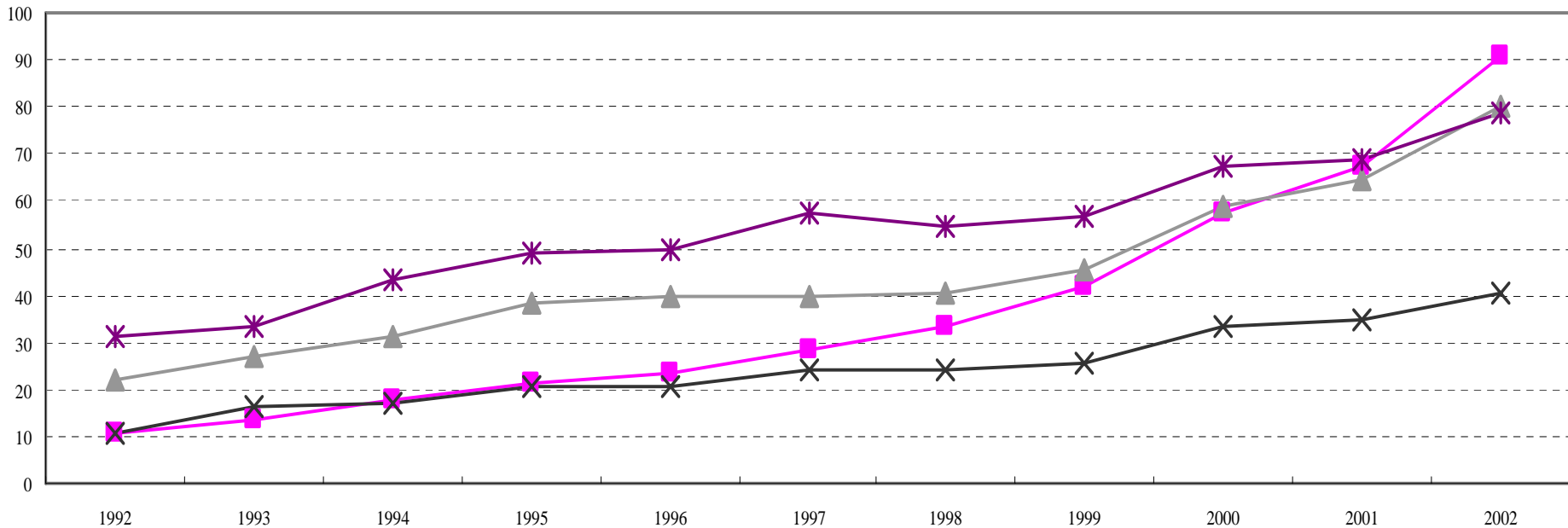
# Composition of Chinese trade in ICT goods



# Chinese manufacturing trade by technological intensity, billions of current USD (average of imports and exports)

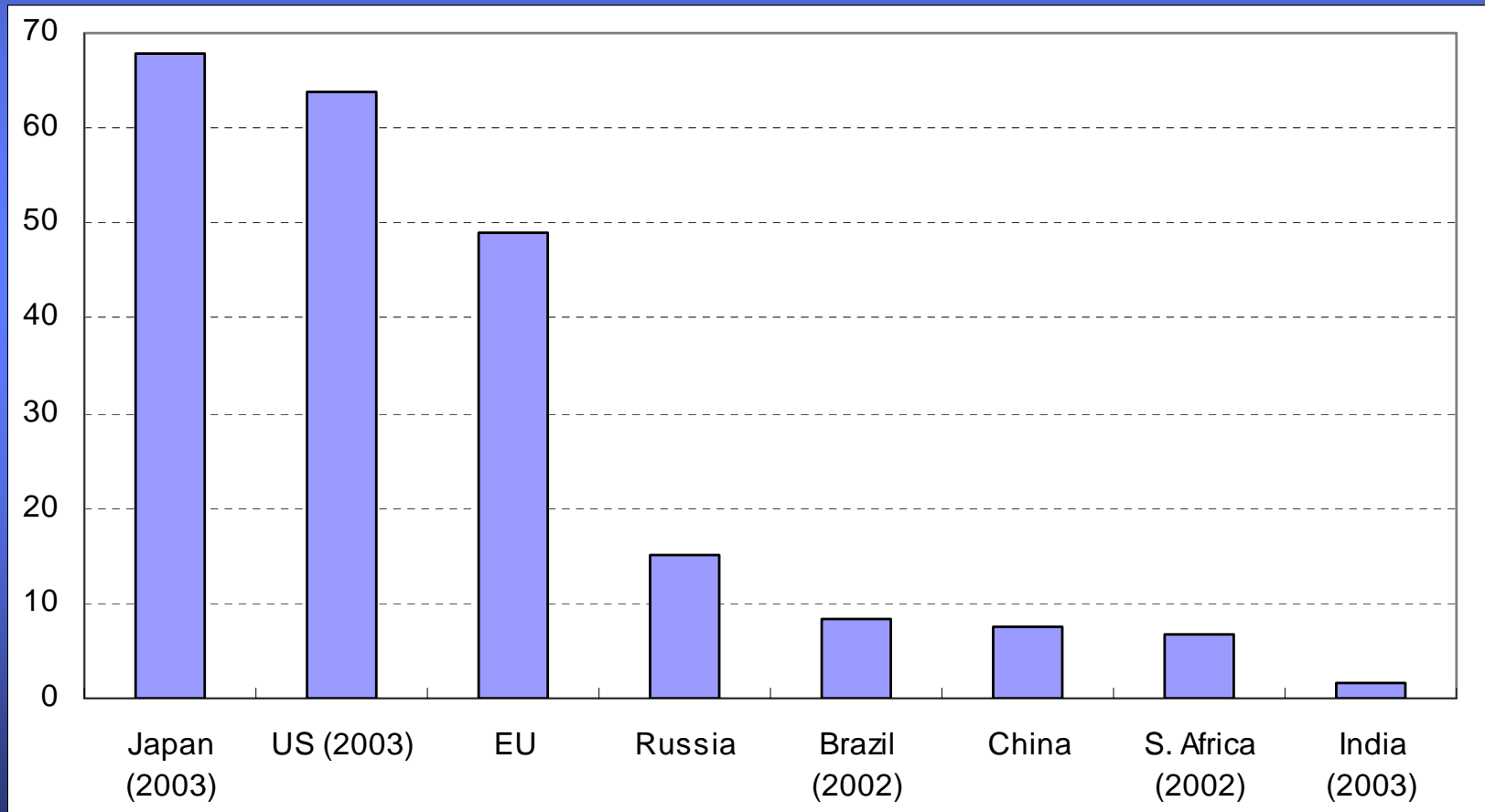
OE

■ High-technology    ▲ Medium-high-technology    × Medium-low-technology    \* Low-technology



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# Percentage of individuals using the Internet, 2004





# Conclusions

- ❑ Size matters
- ❑ Low intensities, but high absolute values
- ❑ Quality?
- ❑ Transfer of foreign technology
- ❑ Need for more data!

THANK YOU!

<http://www.oecd.org/sti/statistical-analysis>

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