
Knowledge Economies in China

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Conclusions

- China's place in a dynamic world economy
 - Snapshot of indicators underlying those growth prospects
 - Knowledge in economic performance
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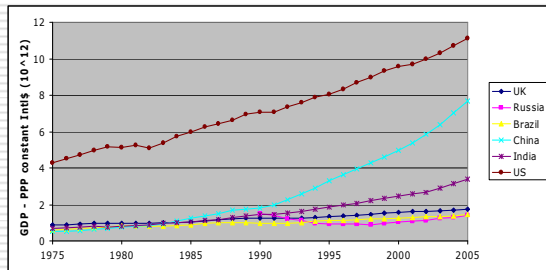
2003

- 6 economies (G6) > US\$ 1 trillion each in GDP
 - China, India, Russia, Brazil (g4) **total** < poorest G6
 - (Growth accounting)
 - g4 > G6 by 2040
 - China > all but US by 2016
 - (all at official exchange rates)
-

US\$ GDP catch up by

- China
 - De (2008), Jp (2016), US (2039)
- India
 - Fr (2020), De (2025), Jp (2032)

PPP adjusted



But ...

- People still poor; just economies large
- 10³ US\$/capita, 2050 (market exchange rates)

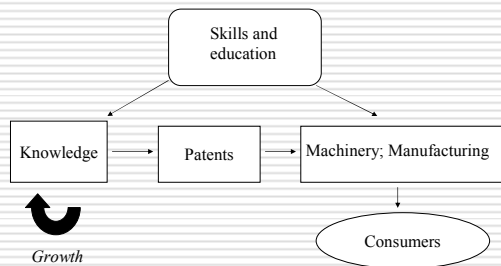
| | | | |
|----|----|----|----|
| Br | Ch | In | Ru |
| 27 | 31 | 17 | 50 |
| US | UK | Jp | De |
| 84 | 59 | 67 | 49 |

Even at PPP ...

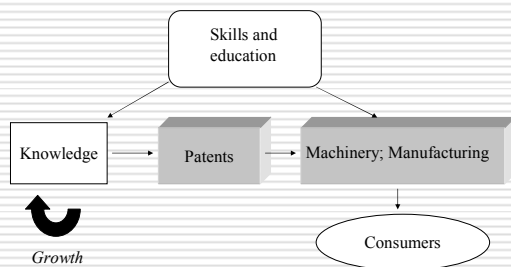
- People still poor; just economies large
- 10^3 US\$/capita, 2005 (PPP)

| | | | |
|------|------|-----|-----|
| Br | Ch | In | Ru |
| 7.8 | 5.9 | 3.1 | 9.7 |
| US | UK | Jp | De |
| 37.4 | 28.6 | | |

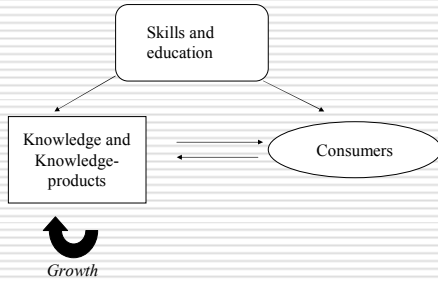
Technology and Growth: Old and New



Technology and Growth: Old and New



Growth in the Modern Economy



ICT helps

- 2000-2003; 50,000 firms in 56 countries:
Email vs non-email
 - 10X sales growth
 - 2X profitability
 - 2/3 higher labour productivity
 - Higher employment growth
- Similar results for computer usage, website interactivity
- Increasing Internet population 1% raises exports by 4.3%

A compact summary



Human capital development

| % gross enrollment | Primary | Secondary | Tertiary |
|--------------------|--------------|-------------|-------------|
| UK | 102.2 | 154.1 | 60.4 |
| Russia | 112.0 | 93.0 | 66.7 |
| Brazil | 147.8 | 104.3 | 18.1 |
| China | 116.6 | 66.6 | 11.8 |
| India | 102.4 | 48.6 | 11.0 |
| US | 100.7 | 94.0 | 76.0 |
| World | 102.3 | 64.2 | 21.8 |
| High-income | 100.3 | 103.7 | 63.4 |
| Middle-income | 112.8 | 72.6 | 20.2 |
| Low-income | 95.0 | 42.7 | 8.7 |

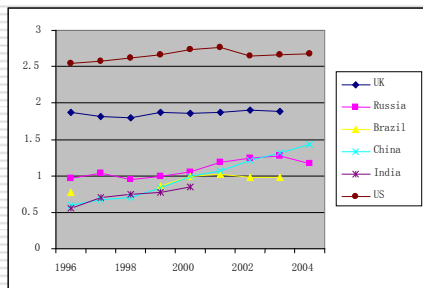
Paying for that human capital

| Expenditure per student (% GDP per capita) | Primary | Secondary | Tertiary |
|---|---------|-----------|----------|
| UK | 15.7 | 16.0 | 25.9 |
| Russia | na | na | na |
| Brazil | 11.4 | 11.0 | 55.7 |
| China | na | na | na |
| India | 11.5 | 20.8 | 73.9 |
| US | 20.4 | 24.2 | 27.9 |
| World | 14.6 | 19.1 | 34.5 |
| High-income | 19.0 | 24.0 | 31.0 |
| Middle-income | 12.5 | 16.9 | 35.5 |
| Low-income | na | na | na |

Using that human capital

| R&D environment | R&D expenditure (% GDP) | Researchers in R&D (per 10 ⁶ population) |
|-----------------|----------------------------|--|
| UK | 1.86 | 2572 |
| Russia | 1.10 | 3458 |
| Brazil | 0.94 | 344 |
| China | 0.98 | 539 |
| India | 0.72 | 138 |
| US | 2.66 | 4487 |
| World | 2.15 | na |
| High-income | 2.40 | 3622 |
| Middle-income | 0.69 | 707 |
| Low-income | 0.68 | na |

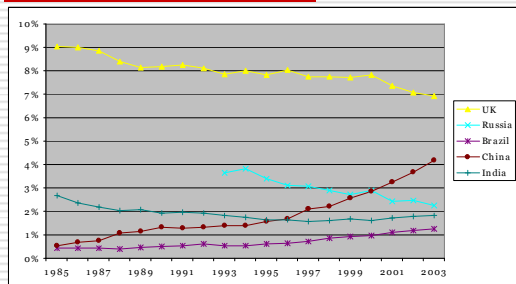
R&D Expenditure (% GDP)



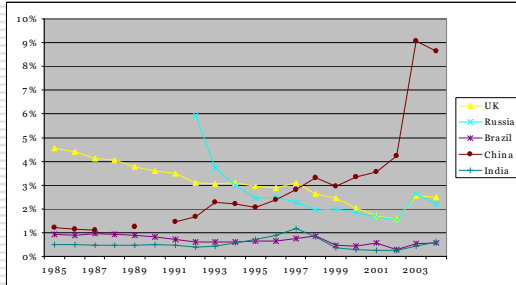
What to show for it?

| Percentage of world totals | Scientific and technical journal articles | Patent applications |
|----------------------------|---|---------------------|
| UK | 8.1 | 3.1 |
| Russia | 3.0 | 2.6 |
| Brazil | 0.7 | 0.7 |
| China | 1.8 | 3.0 |
| India | 2.0 | 0.5 |
| US | 36.0 | 20.3 |
| High-income | 88.4 | 83.8 |
| Middle-income | 9.3 | 12.5 |
| Low-income | 2.4 | 3.7 |

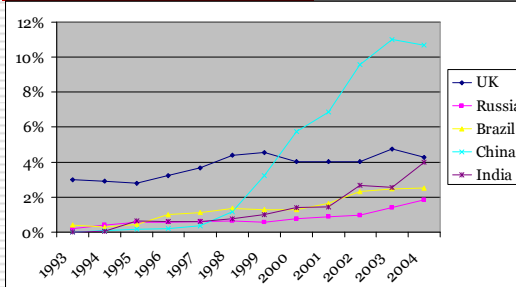
Science and technology publications (% world total)



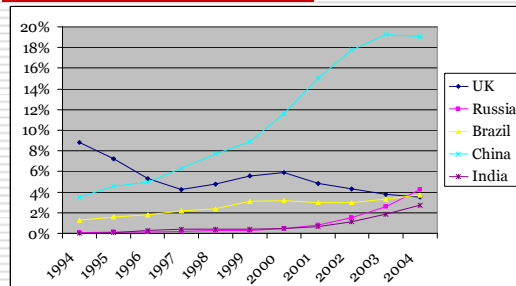
Patent applications (% world total)



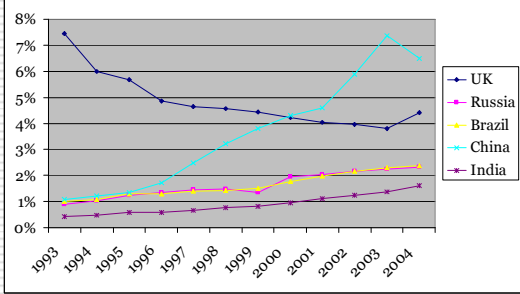
Internet users (% world total)




Mobile phones (% world total)

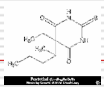


PCs (% world total)



Intellectual property rights

- Music, digital entertainment
 - MP3s, DVDs 
- Computer software, operating systems
 - MS Windows, Linux
- Pharmaceuticals
 - AIDS antiretrovirals



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