Tertiary Education and the MDGs: Carrying the Agenda Forward

The MDGs include

- "#8: Building Global Alliances for Development; and
- Target 18: in cooperation with the private sector make available the benefits of new technologies, especially information and communication"
- #1: Eradicating extreme poverty and hunger

Higher Education has had a bad name in development

- Overinvestment in higher education at the expense of primary and secondary
- Inefficiency and poor governance
- Poor link between university training and employment => unemployed graduates
- As a result social returns to education appear low

But the world is changing: knowledge matters

- The rich countries' generation of new technologies drove half of their economic growth
- Developing countries have been unable to take full advantage of new technologies because they do not or cannot harness knowledge
- Those that have benefited, invested heavily in secondary & higher education, openness, competition and technology adoption

Skills, technology & productivity

Growth of Productivity =

Improvements in Technology +

Growth of Skills +

Improvements in Complementarities

=> Quality of labor and capital matter

Education is key to a knowledge economy:

- Education and technological advances go hand-in-hand
- Skills, technology and their interaction => technological transformation and higher factor productivity => higher economic growth
- Higher education provides the nexus for skills upgrading and technological change

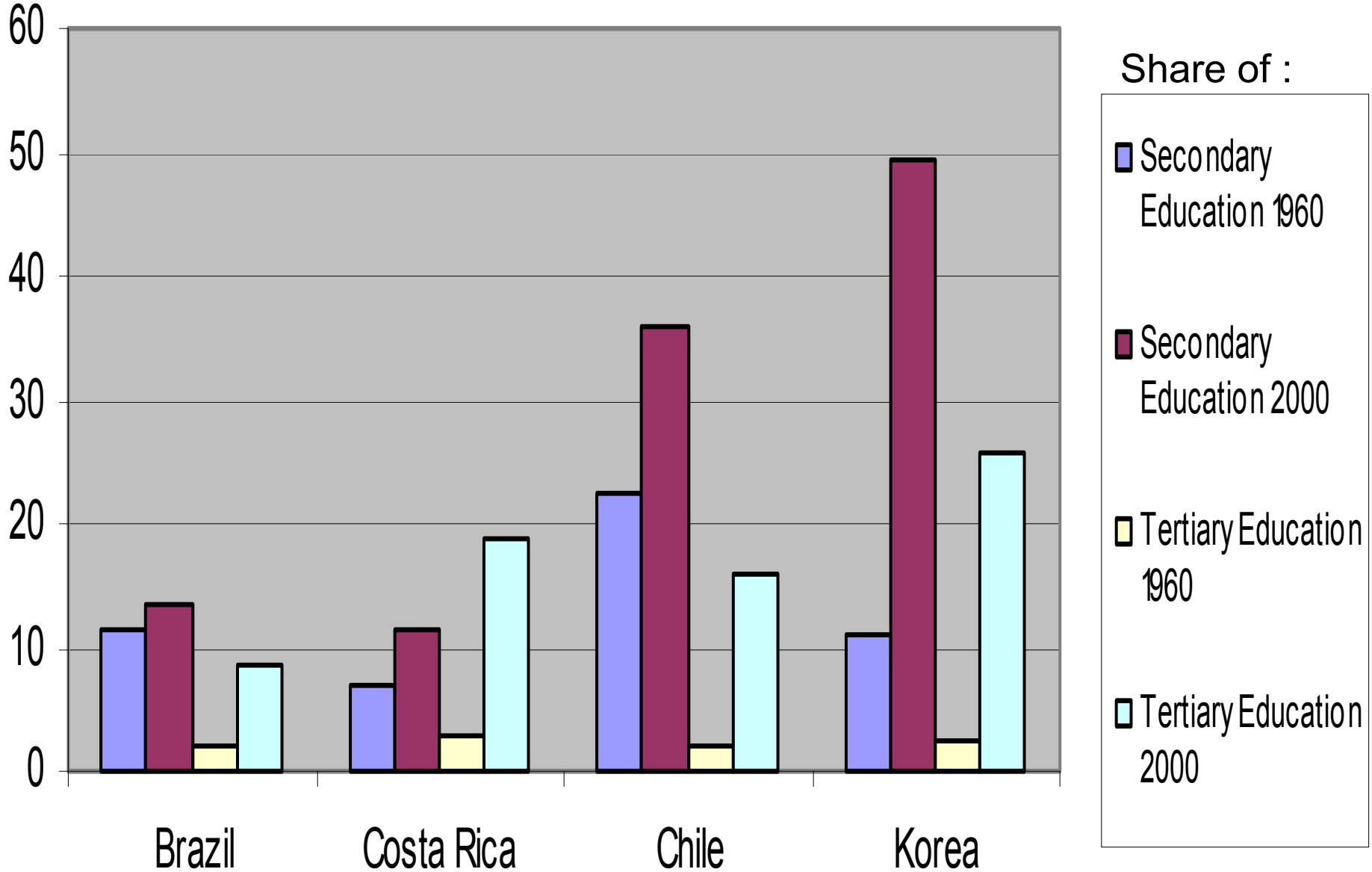
Poor countries can acquire and adapt existing knowledge

- Absorbing knowledge: sequential education expansion – higher education & science
- Acquiring knowledge: open economy to tap & adapt knowledge from elsewhere; applied R&D; "leapfrogging" technology
- Communicating knowledge: adapting new knowledge, fostering innovation, promoting networks and spillovers

How education promotes technology & growth

- Secondary and tertiary education enable firms to adopt and adapt new technology from OECD
- Post graduate education allows firms to create and develop new technology
- On-the-job training and job-training allow coordination and integration of technology

Share of Secondary and Tertiary Education



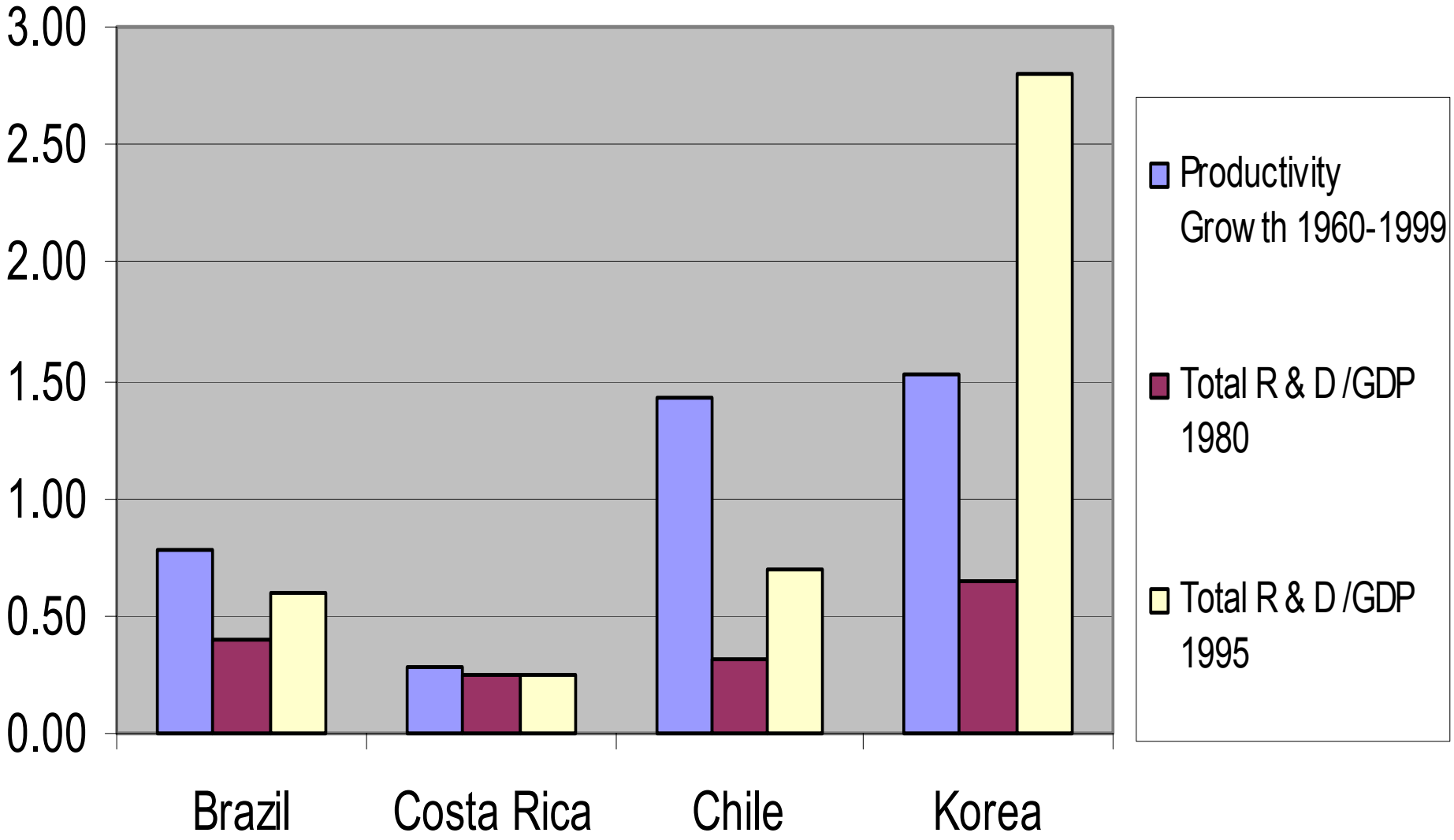
The Asian Tigers experience in education and technology

- Broad skill base: sequential investment in education especially of secondary/technical
- Open, regionally integrated economies
- Governments promote adoption and adaptation of new technologies by firms
- Well integrated innovation systems: harness the private sector, link universities and firms, focus on **applied** R&D

Why countries have fallen behind

- Lack broad based education (production bottlenecks)
- Inability to foster skills and technology to increase productivity
- Not open to technology transfer
- Heavy reliance on only government education, training, R&D

Productivity Growth and R&D/GDP in Selected Countries



Why donors (and government) need to finance higher education

- Social benefits of higher education and of research exceed private benefits
- University research in particular has minimal private benefits but big spillover effects => creates jobs
- Technological innovation or adoption takes place only when there are reasonably high levels of human capital

In higher education government and donors need to:

- finance upgraded and improved infrastructure and management
- promote university entrepreneurship
- subsidize students (scholarships)
- establish strong linkages with OECD universities & research institutes especially for post-graduate training
- provide research grants on applied R&D

Unique role of donors:

- Providing international public goods: through worldwide sponsorship of research and financial incentives for research on development problems
- Acting as intermediary in the transfer of knowledge: amassing knowledge about what works from policy and technical perspectives
- Building alliances with OECD institutions

Recommendations for Donors

- Improve relevance and efficiency of secondary and higher education
- Bolster science and engineering study
- Develop standards an rules for research funding of university research
- Provide long term stable funding for applied research across countries

Recommendations for Donors

- Foster links among universities and firms from OECD and local institutions
- Promote relationships with OECD institutions for graduate training
- Assist in expanding on-the-job training
- Network of universities in small/low income countries (Univ. of West Indies)
- Support research networks (African Economic Research Consortium)

Conclusions

- If the MDG for primary education is met and secondary and tertiary are ignored, growth will be compromised as will achievement of other goals: MDGs offer a call to action
- Increasing secondary and technical education is fundamental but not enough
- OECD involvement is crucial to the education and economic growth agendas