Human Capital and Technology for Development: Lessons for Africa

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The Development Puzzle

- Why have East Asian economies grown so much faster than those in sub-Saharan Africa?
- How has investment in human capital development and technology contributed to the difference?
- What lessons can sub-Saharan Africa learn from the East Asian experience?
## Human Capital Development Trends

### Trends in average years of schooling across regions

<table>
<thead>
<tr>
<th>Region</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1980</td>
</tr>
<tr>
<td>East Asia &amp; Pacific</td>
<td>4.3</td>
</tr>
<tr>
<td>South Asia</td>
<td>2.6</td>
</tr>
<tr>
<td>Latin America &amp; the Caribbean</td>
<td>5.3</td>
</tr>
<tr>
<td>Middle East &amp; North Africa</td>
<td>2.7</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>2.1</td>
</tr>
</tbody>
</table>

Human Capital Development Trends

Children of school age not in school by region, 1999

Why Develop Human Capital?

- Human development is an organized process of enlarging people's choices, which are – or should be – infinite and which change over time.

- The three essential choices for people are to lead a long and healthy life, to acquire knowledge, and to have access to resources needed for a decent standard of living. If these choices are not available, other opportunities remain unattainable, including economic growth and development.

- Economic growth is a function of education among others, and productivity depends heavily on the level of education.

- Investment in education increases future productivity through changes in the production process due to changes in technology and the growth of a knowledge-based economy.
Education and Agricultural Productivity

Agriculture’s value added, 1970–2003 (% of GDP)

Source: World Bank, 2005
Education and Industrial Productivity

Industry's value added, 1970–2003 (% of GDP)

Percentage of GDP

Source: World Bank, 2005
Education and Health

- A well-educated population has longer life expectancy and lower child mortality rates.
- Health indicators (nutrition, mobility, morbidity and height) are positively correlated with education.
- Fertility tends to be lower where the levels of education are higher (Sackey, 2005; Cochrane 1986, 1988).
- Educated mothers have healthier children: mothers with primary schooling had fewer children, were more likely to seek pre- and postnatal care and to have their children immunized, and were generally better informed and able to take better care of their children (NCPD, 2004).
The Gender Issue

Net primary school enrolment/attendance ratio, by sex

<table>
<thead>
<tr>
<th>Region</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Saharan Africa</td>
<td>63</td>
<td>57</td>
</tr>
<tr>
<td>South Asia</td>
<td>74</td>
<td>68</td>
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<tr>
<td>Middle East/North Africa</td>
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<td>77</td>
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<td>Latin America/Caribbean</td>
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<td>85</td>
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<tr>
<td>CEE/CIS</td>
<td>92</td>
<td>91</td>
</tr>
<tr>
<td>East Asia/Pacific</td>
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<td>95</td>
</tr>
<tr>
<td>Industrialized countries</td>
<td>96</td>
<td>96</td>
</tr>
</tbody>
</table>

Investment in Human Capital and Technology in East Asia

- **Phase 1: Investment in education and health**
  - Universal primary education in the 60’s
  - Provision of health care
  - Continuous growth of government expenditure on education
  - Uniform spread of education at all levels of education
  - Focus on quality to prepare young people for the job market

- **Phase 2: Investment in both human capital and Information Technology**
Per pupil expenditures in PPP converted dollars: Primary vs. secondary levels

Investment in ICT

China –
- Building telecommunication infrastructure
- Allocating resources to competing state-owned enterprises
- Facilitating mixed ownership
- Prioritizing access to the Internet

India –
- Using government-led reform to open the economy
- Creating access through village level telecentres
Lessons for Africa

- Focus clearly on skill formation through increased investment in technical education at all levels.
- Ensure that the quality and relevance of education, especially science and technology, are sufficient to meet economic demands and contribute to development.
- Articulate policies with incentives to lure highly educated and skilled Africans to return home.
- Increase spending on education while emphasizing quality.
- Educate girls, especially in S&T, and open up higher education to women.
- Ensure broad opportunities for education so as to provide a continuous, well structured work force.
Lessons for Africa

- Put greater emphasis on widespread secondary and higher education (including S&T) to accelerate and sustain economic growth, stimulate innovation, and promote participation in the global marketplace.
- Sharpen Africa’s competitive edge through an effective legal and financial system, protection of shareholder rights, enforcement of contracts, and strengthening of governance and regulatory bodies.
- Gear up investment in ICT and make the Internet accessible.
- Consider the advantages of regional action:
  - Reduce costs through joint efforts to design, produce and distribute teaching materials and textbooks.
  - Harmonize curricula to facilitate the transferability of high school degrees.
Conclusion

- That targeted investment in human capital and technology plays a major role in economic growth is clear.
- That Africa’s present impoverished condition is due in part to lack of emphasis on human capital and technology is also clear.
- To enhance economic growth and human development, governments and the private sector in Africa should take the cue from their Asian counterparts and invest more in capacity development.
- Africa has the potential and the necessary resources to grow, if only the capacity to transform them is vested in its population.
Selected References