Productive transformation, employment and education in Tanzania

Learning to Compete: Industrial Development and Policy in Africa
2013 UNU – WIDER Development Conference

Helsinki, 24-25 June
Overview

- Economic and labour market context in sub-Saharan Africa
- Growth and structural change in Tanzania
- Structural change and education
  - Education intensity framework: decomposition
  - Structural change and job quality
- Rate of return and qualifications mismatch analysis
- Conclusions
  - Educational advance barely keeps up with structural change
  - Limited productive transformation translates into demand for secondary education
Labour productivity levels and average annual growth rates, by region

Vulnerable employment in sub-Saharan Africa

Economic growth and structural change in Tanzania

- Economic growth averaged 7.2 per cent annually from 2001 to 2006
- Productivity growth averaged 3.3 per cent in this period
- Vulnerable employment rate decreased by only 2.6 percentage points

Average annual growth of value added, employment and productivity by broad economic sector, 2001-06 (%)

- Value added
- Employment
- Productivity
Employment and education in 2001 and 2006

Distribution of employment by broad sector (%)

Education intensity by broad sector (share of workers with at least lower secondary education, %)
### Decomposition of structural change and education intensity

<table>
<thead>
<tr>
<th>Period</th>
<th>Between sector change in education intensity (%)</th>
<th>Within sector change in education intensity (%)</th>
<th>Education intensity (end of period, %)</th>
<th>Share of agriculture in the labour force (end of period, %)</th>
<th>GDP per capita (constant 2000 US$; end of period)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tanzania</td>
<td>2001-2006</td>
<td>88.3</td>
<td>11.7</td>
<td>5.9</td>
<td>70.0</td>
</tr>
<tr>
<td>India</td>
<td>1993-2004</td>
<td>37.3</td>
<td>62.7</td>
<td>21.5</td>
<td>51.3</td>
</tr>
<tr>
<td>Indonesia</td>
<td>1994-2004</td>
<td>9.6</td>
<td>90.4</td>
<td>45.9</td>
<td>40.5</td>
</tr>
<tr>
<td>Philippines</td>
<td>1991-2004</td>
<td>29.0</td>
<td>71.0</td>
<td>50.9</td>
<td>33.1</td>
</tr>
<tr>
<td>Thailand</td>
<td>1995-2005</td>
<td>17.0</td>
<td>83.0</td>
<td>36.5</td>
<td>42.0</td>
</tr>
</tbody>
</table>

Note: education intensity is defined as the proportion of workers with at least secondary education.

Sources: ADB (2007); Sparreboom and Nübler (2013); World Bank (2012b).
Structural change, job quality and education

- Advance in education hardly sufficient to keep up with the pace of structural change
- But large differences in dynamics within sectors between vulnerable and non-vulnerable employment segments
- In contrast to the change in education intensity across all workers, education intensity decreased in non-vulnerable employment at the national level
- Productive transformation within sectors was mostly limited to vulnerable employment, i.e. the low productivity segment of employment

**Education intensity by broad sector (%)**

**Vulnerable employment**

**Non-vulnerable employment**
Demand for education: wage returns

• Rates of return for education are high in Tanzania, but slightly declined between 2001 and 2006
• Returns to years of schooling increased strongly in mining and construction
• Rates of return to secondary education rose sharply
• Decreasing returns for tertiary education reflect:
  • Lack of productive transformation within sectors
  • Quality of some tertiary qualifications

![Rates of return to levels of education (%)](chart.png)
Skills mismatch: underqualification

- Skills and qualifications mismatch can be measured based on the correspondence between the occupational distribution and levels of educational attainment.
- Underqualification is widespread in Tanzania, and is decreasing only slowly.
- Mismatch analysis confirms the need for secondary education across all jobs.

<table>
<thead>
<tr>
<th>Underqualification (%)</th>
<th>2001/02</th>
<th>2004</th>
<th>2006</th>
<th>2008</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>36.4</td>
<td>34.5</td>
<td>32.0</td>
<td>31.5</td>
<td>28.6</td>
</tr>
<tr>
<td>Philippines</td>
<td>35.9</td>
<td></td>
<td></td>
<td></td>
<td>29.4</td>
</tr>
<tr>
<td>Tanzania</td>
<td>93.5</td>
<td>90.7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: ILO (2013b); Sparreboom and Nübler (2013); El Achkar Hilal et al. (2013).
Conclusions

• Educational advance barely keeps up with structural change

• Large differences within economic sectors mask the dynamics of productive transformation: structural change in non-vulnerable employment is far more limited

• Limited productive transformation translates into demand for secondary education

• Industrial development policies need to support productive transformation patterns that create more decent jobs; these policies need to be aligned with education and training policies
Thank you for your attention