Global Challenges and Policy Responses

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World Bank

The Education System and the Economy: Building Human Capital in Greece
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Global Challenges and Policy Responses
The Global Education Revolution

Years of schooling

1900: 1.5
1950: 2.5
2000: 8
2050: 10
Global Enrollment in Tertiary Education is **Increasing** (millions of students)
Tertiary Enrollment Rates in Europe 2016 (or latest available)
Years of Schooling are not the same as Learning
Average years of schooling of 25-29 year olds, unadjusted and adjusted for learning
Every year of schooling raises earnings by 10%
Private Rates of Return to Education

Rising Returns 1970-2013

Returns to Schooling by Level (Latest)

- Sub-Saharan Africa: 17
- South Asia: 10
- Latin America: 6
- East Asia: 10
- World: 17
- High income: 6
- Middle East/North Africa: 10
- Europe/Central Asia: 6
Returns Higher for Women – Global

<table>
<thead>
<tr>
<th>Category</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>Primary</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>Secondary</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>University</td>
<td>15</td>
<td>17</td>
</tr>
</tbody>
</table>
Private Returns to Schooling in Europe
Returns to Schooling in Europe
Private Returns to Schooling & Growth in Europe
Returns to Higher Education & Proportion of Population with Higher Education
Returns to Other Investments

- Treasury Bill: 1.4
- Treasury Bond: 5.3
- Bank deposit rates: 4.7
- Housing: 3.8
- Physical assets: 7.4
Enter Technology
Type of Skills Demanded Changing

- Nonroutine analytic
- Non routine interactive
- Routine Manual
- Routine cognitive
- Nonroutine Manual

[Graph showing the trend of skills demanded from 1960 to 2002]
Automation is Coming
The Race Between Education & Technology in Europe

Higher education (%)

Returns to university

- Higher education (%)
- Returns to university
Top Performers Learning Outcomes

HLO (Harmonized Learning Outcomes)

- Kazakhstan: 537
- Russian Federation: 538
- Ireland: 538
- Estonia: 542
- Macao SAR, China: 545
- Finland: 548
- Hong Kong SAR, China: 562
- Korea, Rep.: 563
- Japan: 563
- Singapore: 581
Top 10 PIAAC (among those of university age)

1. Finland: 633
2. Netherlands: 628
3. Austria: 626
4. Sweden: 622
5. Belgium: 620
6. Germany: 615
7. Japan: 615
8. Norway: 606
9. Estonia: 605
10. Denmark: 603
High-income East Asia performs above High-income Europe in Learning Outcomes
What can we do?
Get the Basics Right
**Invest in Relevant Skills**

<table>
<thead>
<tr>
<th>Problem-solving</th>
<th>Learning</th>
<th>Communication</th>
<th>Personal</th>
<th>Social</th>
</tr>
</thead>
</table>

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Today

Under 20% of jobs require programming or technology design.

Over 80% of jobs require service orientation and persuasion skills.
Build Education 4.0

1st
Schoolhouse, teacher, students

2nd
Collaboration, technology, facilitator

3rd
Connected, personalized, open access

4th
Lifelong learning driven by autonomy & purpose
Finance University
What can be learned from successful systems?
5 Key Policy Domains

- **INSTITUTIONS**: Align institutions to ensure that basic conditions for learning are in place in schools.
- **ASSESSMENT**: Assess students to diagnose issues and inform instruction.
- **PUBLIC SPENDING**: Concentrate effective, equity-minded public spending on basic education.
- **READINESS TO LEARN**: Ensure children are ready to learn in school.
- **TEACHERS**: Select and support teachers throughout their careers to allow them to focus on the classroom.

**LEARNING**
Top Performing systems had an unshakeable commitment to developing skills for prosperity.

**Percent of population with no schooling in 1950**

- Singapore: 68%
- Taiwan: 55%
- Hong Kong: 42%
- Korea: 35%
- Japan: 8%
Top Performing systems had an unshakeable commitment to developing skills for prosperity

Percent of population with no schooling in 2010

- Singapore: 18%
- Taiwan: 5%
- Hong Kong: 8%
- Korea: 7%
- Japan: 0%
Below-Average Systems Struggle to Focus Spending on Basic Education

Percent of government education spending

<table>
<thead>
<tr>
<th>Year</th>
<th>Elementary</th>
<th>Tertiary</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>70%</td>
<td>0%</td>
</tr>
<tr>
<td>1980</td>
<td>35%</td>
<td>0%</td>
</tr>
<tr>
<td>2000</td>
<td>20%</td>
<td>0%</td>
</tr>
<tr>
<td>2011</td>
<td>15%</td>
<td>0%</td>
</tr>
<tr>
<td>2014</td>
<td>10%</td>
<td>0%</td>
</tr>
<tr>
<td>2016</td>
<td>5%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Japan

Indonesia
Successful systems recruit and develop the best to become teachers

In Japan, only 14% of applicants to education programs are accepted; only about 30–40% of graduates are hired annually.

In Singapore, the government recruits the top one-third of university graduates to become teachers.

In Korea, only 1 in 20 passes the exams for employment to become a teacher.

In Taiwan, China typically only the top third of applications are accepted into education programs which are highly competitive.
The Impact of the 1999 Education Reform in Poland
Poland: Change in Structure of System

- New structure of school system
- Changes in administration & supervision
- Curricular reform
- Independent assessment & examination
- School finance
- Qualification requirements for teachers
Impressive Gains

PISA Mean Score

OECD average
USA: A Nation at Risk

Figure 1. Trend in Main NAEP Scores Since 1990

Note: Reported relative to 1990 and 1992 in student-level standard deviation units.
Finland: School Tracking & Development of Cognitive Skills
Hong Kong (China) and Thailand

Hong Kong

Thailand
Since 1965

Japan
Focus on Results
Use Information for Improvement & Accountability
Expand Opportunities but Pay Attention to Equity
Thank you

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