WHAT CAN BE GAINED FROM INTERNATIONAL SURVEYS?

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Background

- Future depends on skills of the population
  - True for the nation and for individuals

- Multiple facets to consideration of international skill differences
  - Measurement of human capital and Jacob Mincer’s success
  - Impact of human capital on individuals and nations
  - Sources of differences across countries

- Advantages and disadvantages of international surveys
Years of Schooling and Economic Growth, 1960-2000


Years of Schooling and Economic Growth

With quality control

Without quality control
Long-Run Test Score Trends in Selected Countries, 1964-2012

What is Behind These Patterns?

- Family background
- School inputs
  - Expenditure
Changes in Educational Spending and in Achievement across Countries
What is Behind These Patterns?

• Family background
• School inputs
  • Expenditure
  • Real inputs – class size, teacher characteristics, . . .
• Teacher quality*
  • Within country but more difficult in international comparisons
• Institutions and incentives
  • Accountability
  • Autonomy
  • Tracking
  • Pre-primary

Teacher Quality

- Within-country analyses
- No impact of standard measures
- Value-added estimates

- Cognitive skills
  - Prior analyses
  - McKinsey
Math Skills: Teachers and College Grads

Panel A: Numeracy

Teachers and Student Achievement
Returns to Skills

\[ \ln Y = \alpha_0 + \alpha_1 G + \alpha_2 E + \alpha_3 E^2 + \gamma C + \varepsilon \]

\[ \ln Y = \alpha_0 + \alpha_1 G + \alpha_2 E + \alpha_3 E^2 + \gamma C + \delta T + \varepsilon \]
Teacher Wage Premiums around the World

\[ \ln Y = \alpha_0 + \alpha_1 G + \alpha_2 E + \alpha_3 E^2 + \gamma C + \delta T + \varepsilon \]
Teacher Skills and Teacher Skill Premium
Returns to Skills

\[ \ln Y = \alpha_0 + \alpha_1 G + \alpha_2 E + \alpha_3 E^2 + \gamma_n C + \varepsilon \]
Returns to Skills – PIACC Round 2

![Image of bar chart showing returns to numeracy skills across various countries.]
Returns to Skills in Alternative Subgroups

[Bar chart showing returns to numeracy skills for different subgroups including males, females, low par. edu., medium par. edu., high par. edu., private sector, public sector, natives, migrants, full-time, part-time.]
Returns to Skills

\[ \ln Y = \alpha_0 + \alpha_1 G + \alpha_2 E + \alpha_3 E^2 + \gamma C + \varepsilon \]

\[ \ln Y = \alpha_0 + \alpha_1 G + \alpha_2 E + \alpha_3 E^2 + \gamma C + \gamma^* (C \cdot X_n) + \mu_n + \varepsilon \]
## Cross-Country Differences in Returns

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<th>(1)</th>
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<tbody>
<tr>
<td>Numeracy (γ)</td>
<td>0.178</td>
<td>0.184</td>
<td>0.090</td>
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<tr>
<td>+union density</td>
<td></td>
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| other                        |      | min.wage, prod mkt reg, skill inequality, skill mean

Note: The table entries include coefficients for different factors affecting returns across countries.
Cross-Country Differences in Returns

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union density           | .141  | .197  |
emp. Protection          | .151  | .221  |
public sector            | .157  | .209  |
Returns to Skills across PIAAC Countries
The Challenge

- New information on institutions
  - Impossible to get within-country

- Identification of causal effects more challenging
  - Not equivalent to expanding national panels
  - Different perspectives

- Generalizability
  - When do institutions and impacts transfer across countries?