What can be Gained From International Analyses? – An Economic Perspective

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Structure

1. **Introduction**
2. **Measuring Human Capital**
3. **Value of Cognitive Skills**
4. **Improving Cognitive Skills**
5. **Concluding Remarks**

1. Introduction

Background

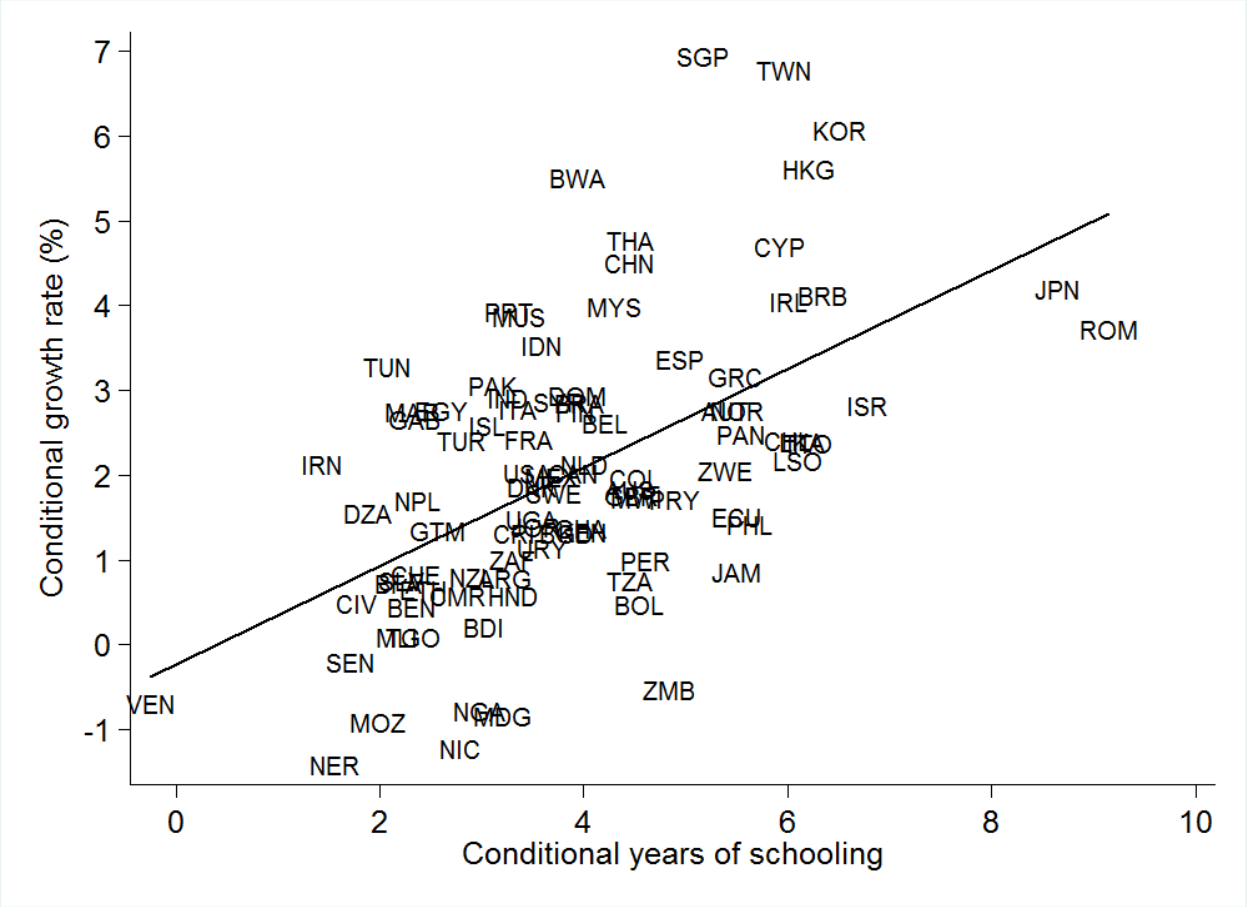
- Future depends on skills of the population
  - True for the nation *and* for individuals
- What drives the acquisition of skills?
  - Skills are acquired through schooling, training, and learning on the job
  - We decide on skill investments by weighing benefits and costs
- Issues of interest
  - Measurement of human capital and Jacob Mincer's success
  - Impact of human capital on individuals and nations
  - Sources of differences across countries

Advantages and disadvantages

- New information on institutions
  - Impossible to get within-country
- Identification of causal effects more challenging
  - Comparability of countries
- Budget constraints
  - Not equivalent to expanding national panels
  - Different perspectives
- Generalizability
  - When do institutions and impacts transfer across countries?

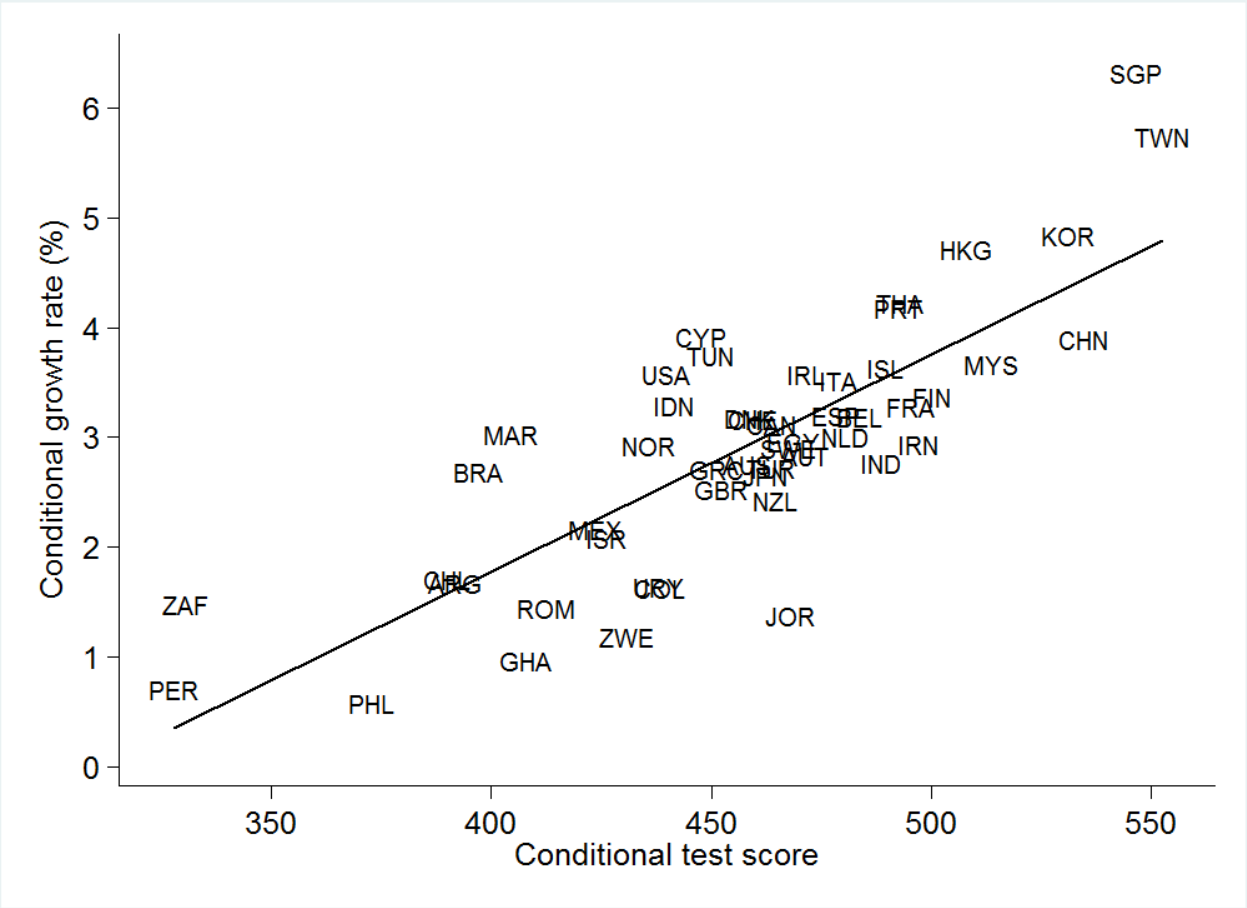
2. Measuring Human Capital

Years of Schooling and Economic Growth, 1960-2000



Hanushek and Woessmann, *The knowledge capital of nations (2015)*

Cognitive Skills and Economic Growth, 1960-2000



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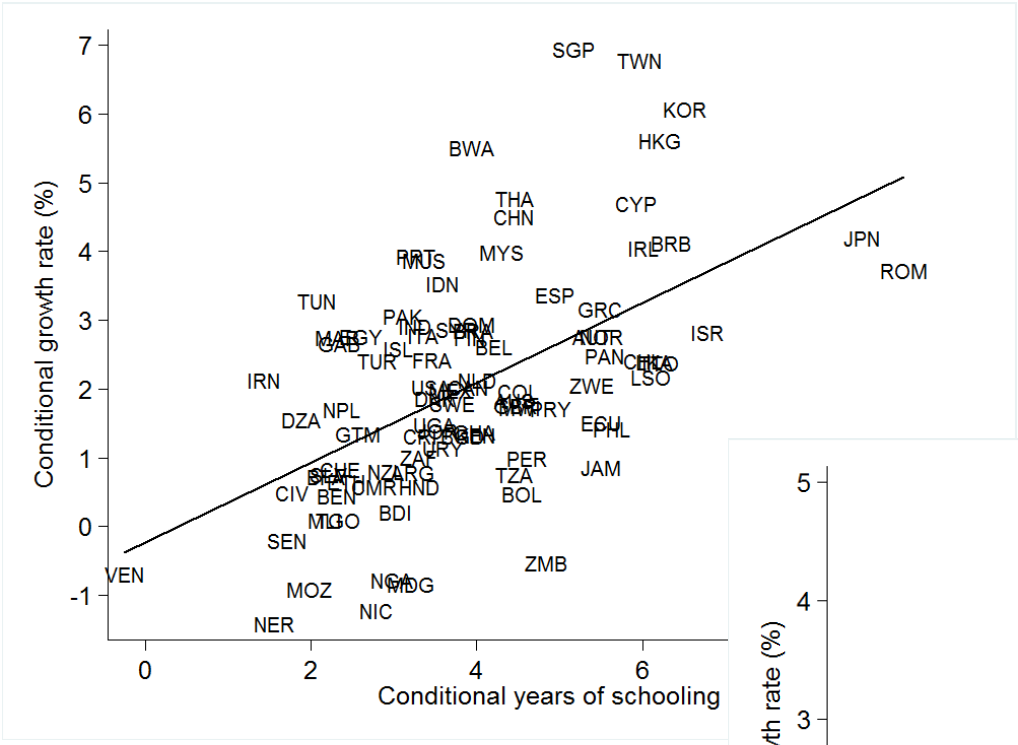
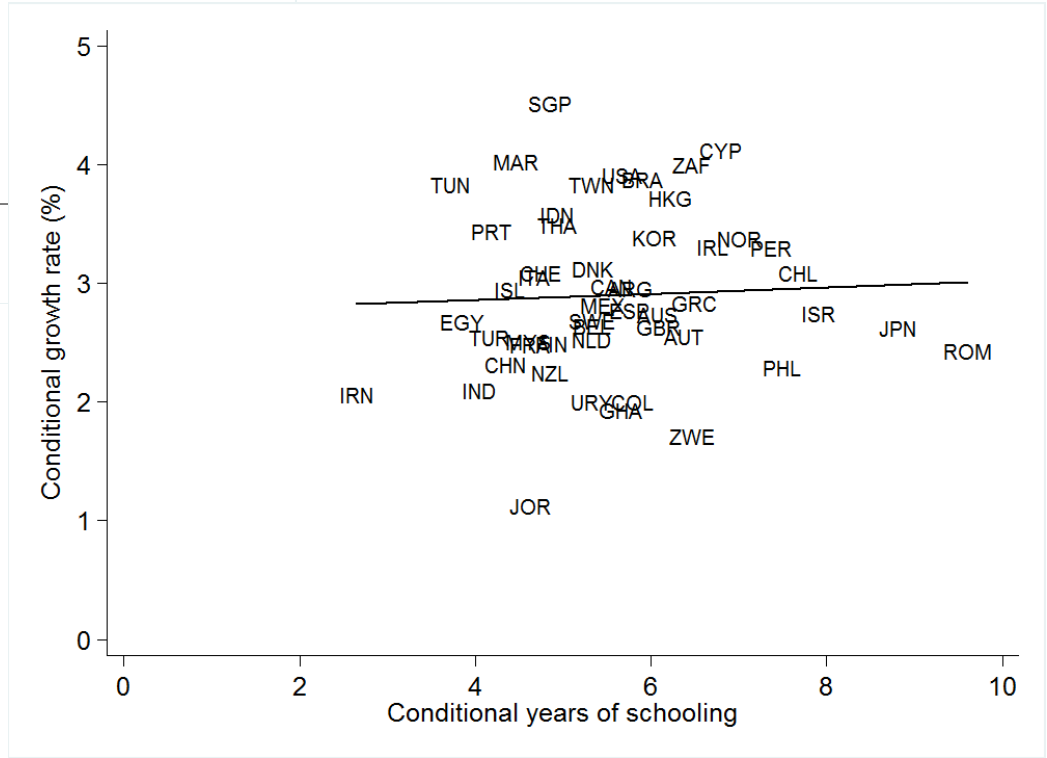
Years of Schooling and Economic Growth



Without quality control

With quality control

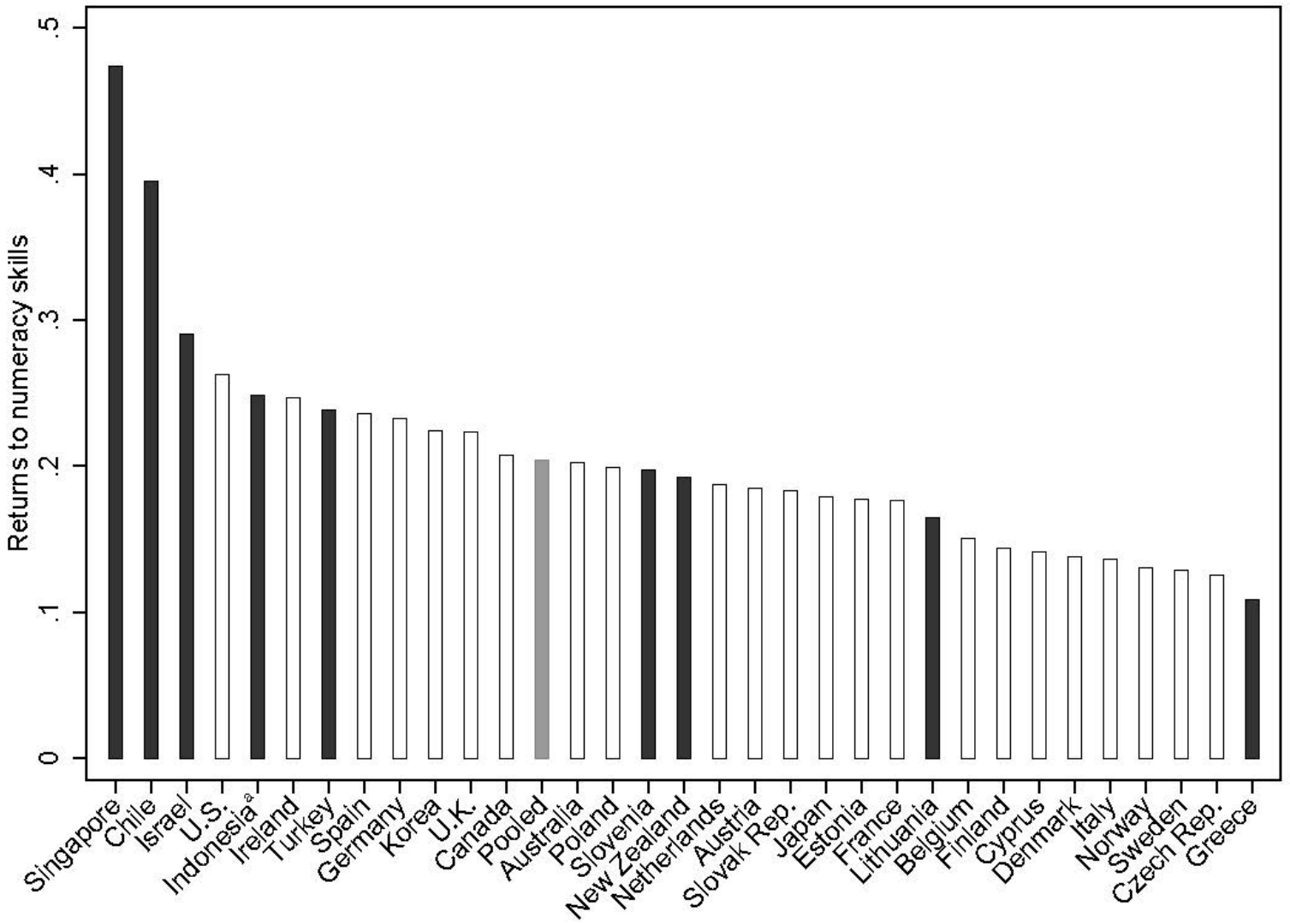


Do Skills Cause Growth?

- Simple reverse causation
- Omitted factors
  - Cultural factors
  - Regulations
  - Institutions (openness, property rights)

3. Value of Cognitive Skills

Returns to Skills in PIACC



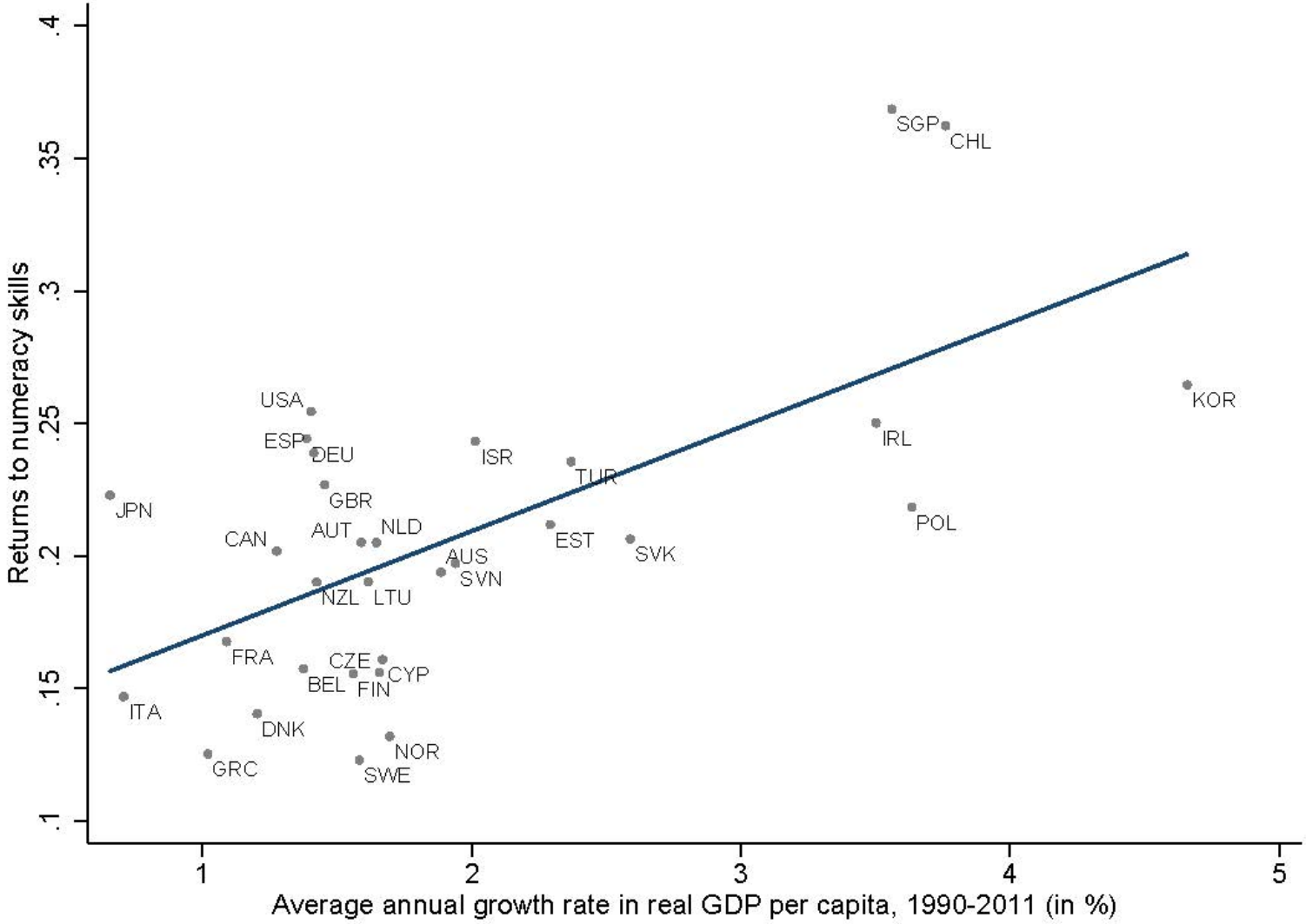
Hanushek, Schwerdt, Wiederhold and Woessmann *(2017)*

Cross-Country Differences in Returns

	(1)	(2)	(3)
Numeracy (γ)	.178	.184	.090
+union density		-.099	-.092
+emp. protection		-.036	-.037
+public sector		-.188	-.201
country fixed effects	yes	yes	yes
occupation x country fixed effects			yes
Estimated Returns at Country Range of Institutions			
union density		.141	.197
emp. protection		.151	.221
public sector		.157	.209

Hanushek, Schwerdt, Wiederhold and Woessmann *(2017)*

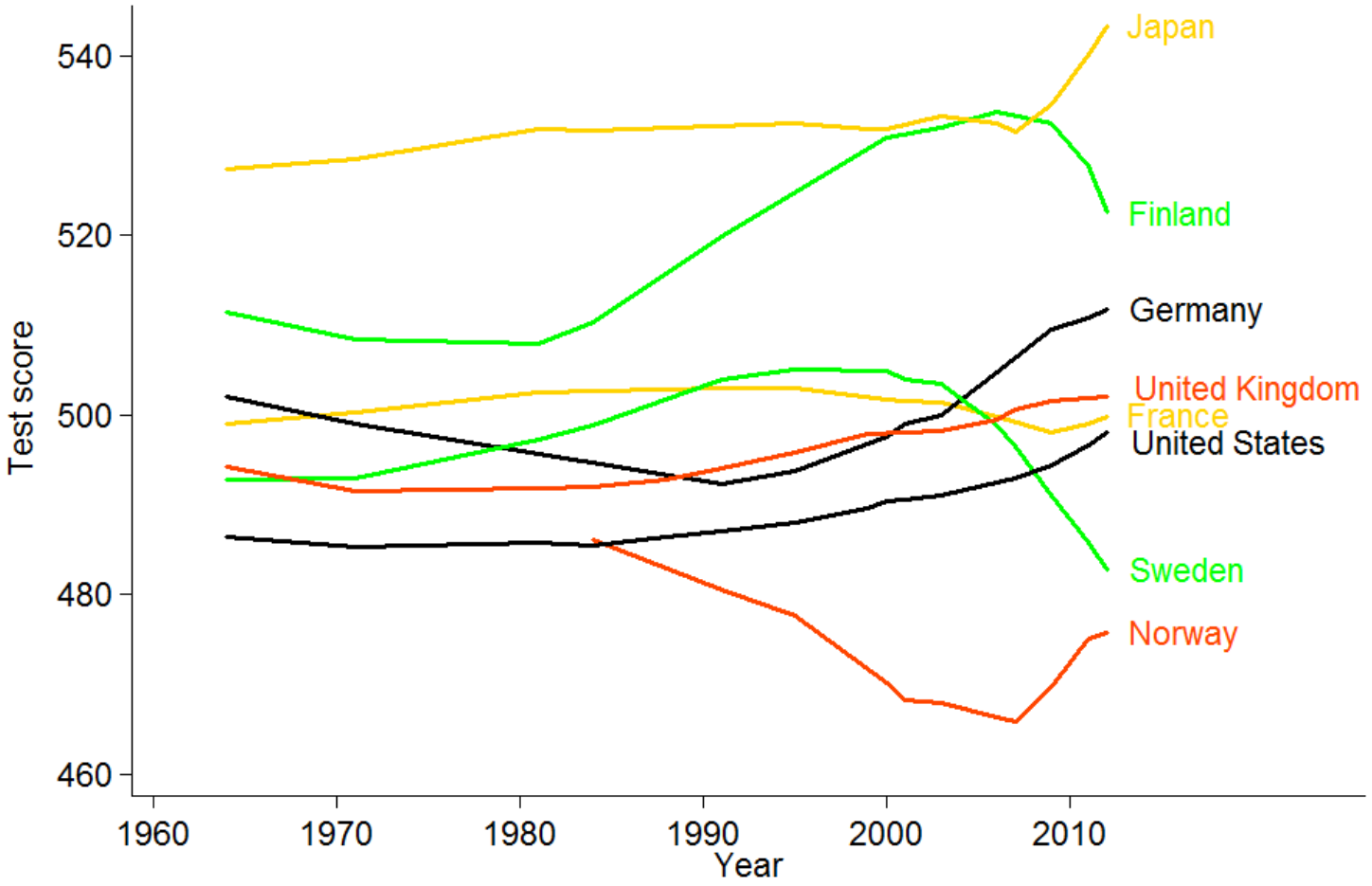
Returns to Skills and Economic Growth



Hanushek, Schwerdt, Wiederhold and Woessmann *(2017)*

4. Improving Cognitive Skills

Long-Run Test Score Trends in Selected Countries, 1964-2012



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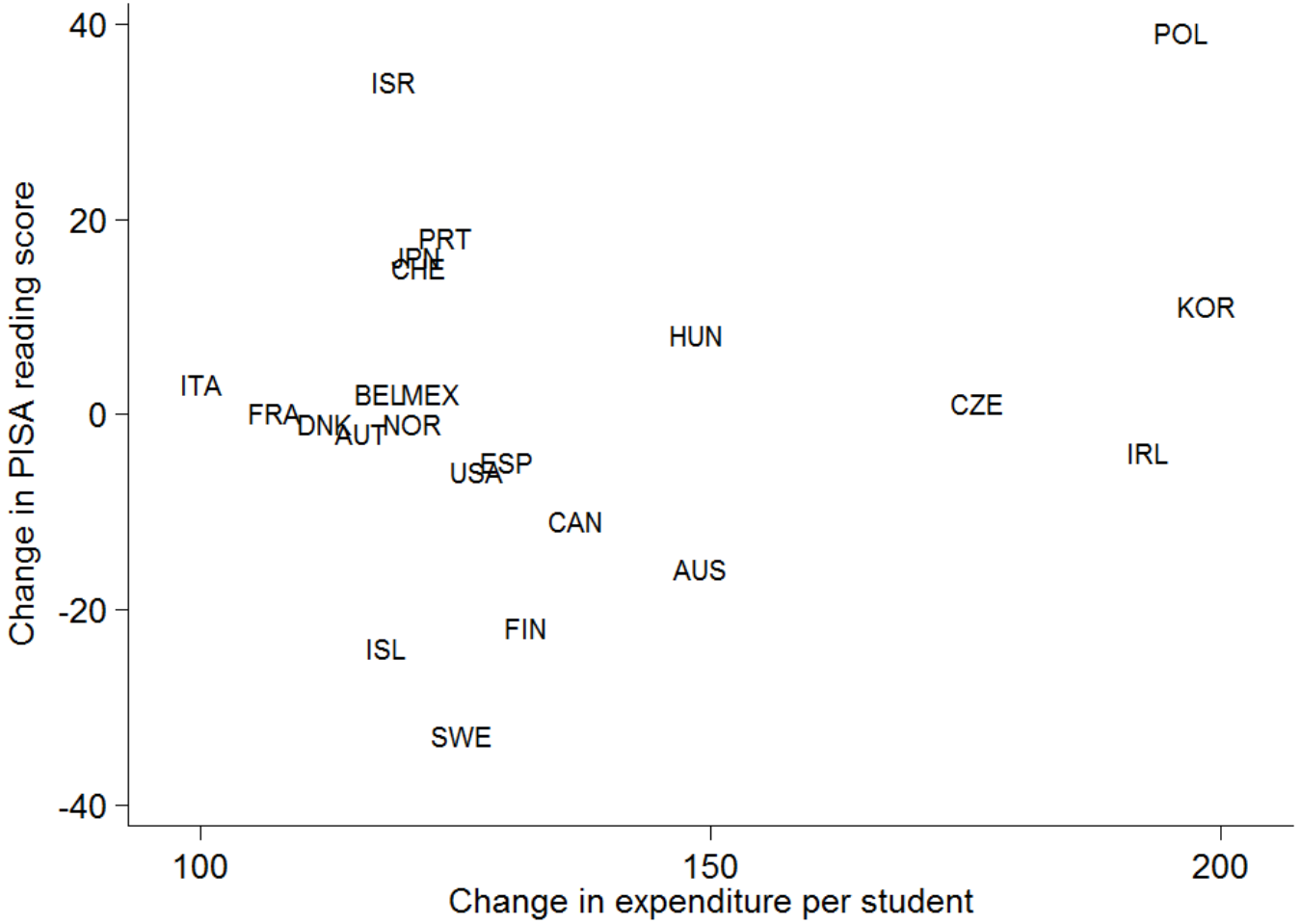
What is Behind These Patterns?

- Family background
- School inputs
  - Expenditure

Changes in Educational Spending and in Achievement across Countries

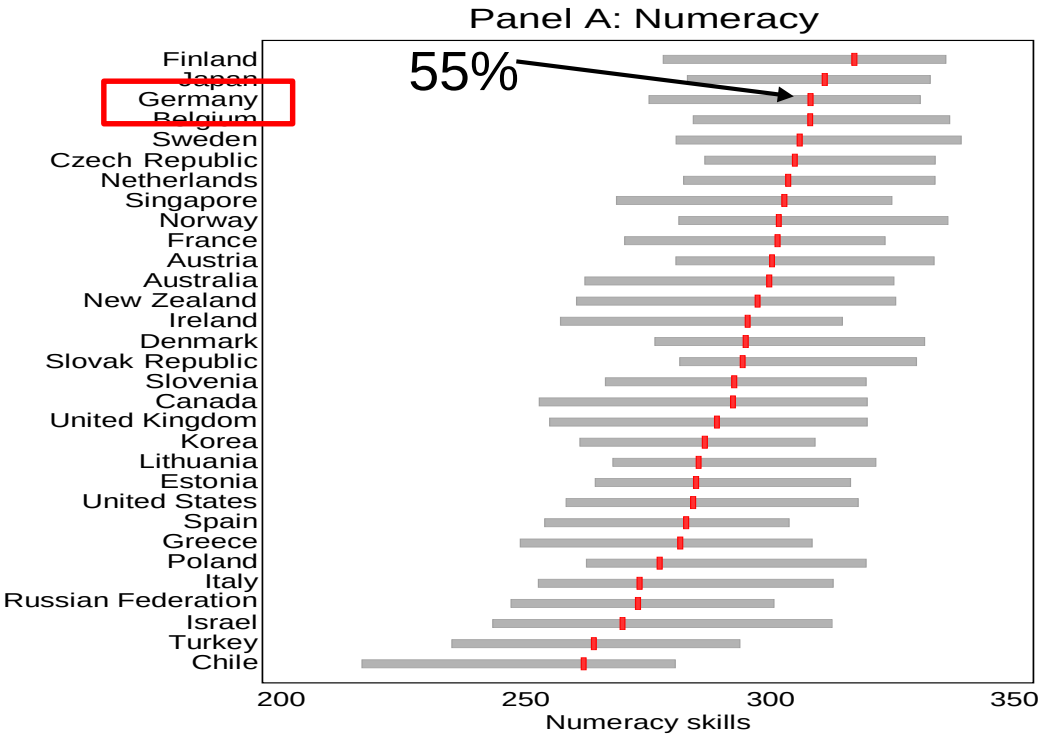


What is Behind These Patterns?

- Family background
- School inputs
  - Expenditure
  - Real inputs – class size, teacher characteristics, . . .
- Teacher quality
  - Within country but more difficult in international comparisons

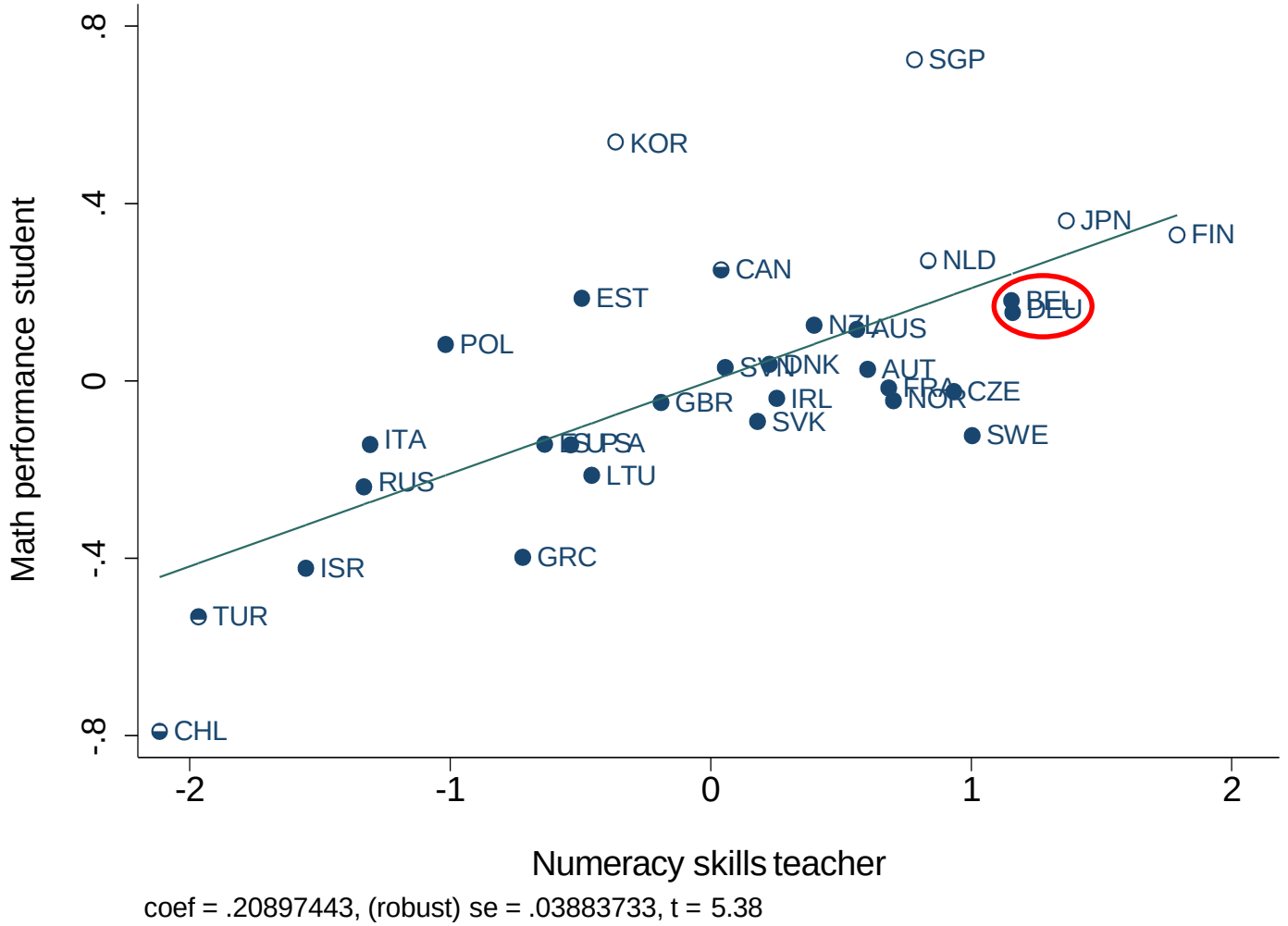
Teacher Skills

Math Skills: Teachers and College Grads



Hanushek, Piopiunik, and Wiederhold *(2018)*

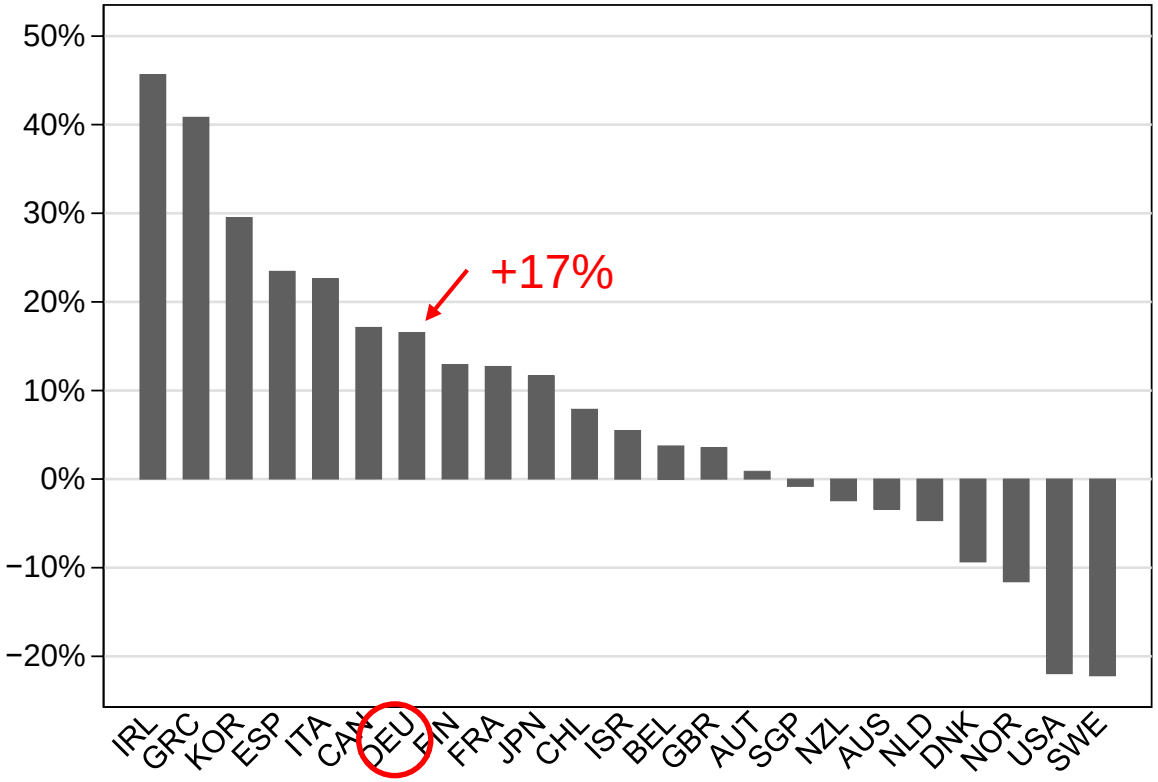
Teacher Skills and Student Performance



coef = .20897443, (robust) se = .03883733, t = 5.38

Hanushek, Piopiunik, and Wiederhold *(2018)*

Teacher Wage Premiums around the World

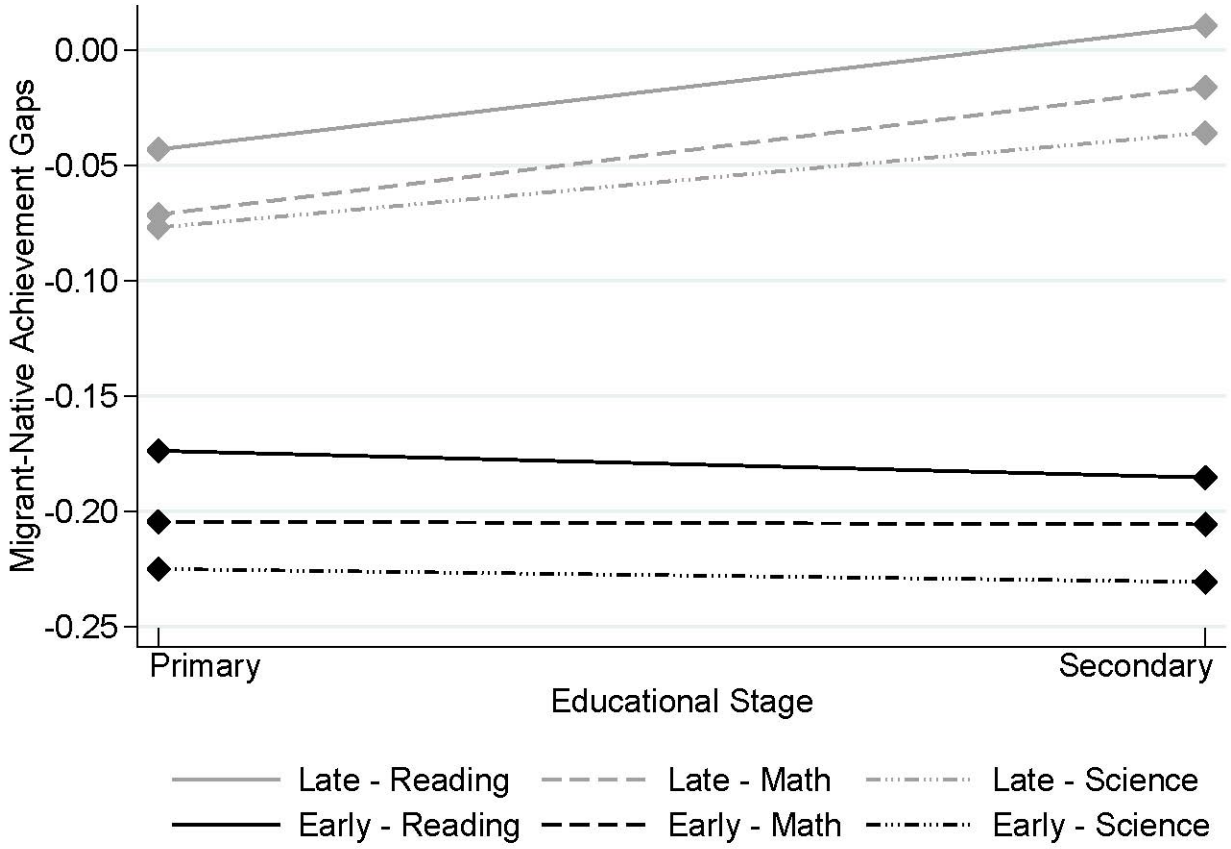


Hanushek, Piopiunik, and Wiederhold *(2018)*

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
  - Central Exams
  - Autonomy
  - Competition
  - Tracking

Tracking


Migrant-Native Achievement Gaps
0.00
-0.05
-0.10
-0.15
-0.20
-0.25
Primary
Secondary
Educational Stage
Late - Reading
Late - Math
Late - Science
Early - Reading
Early - Math
Early - Science

5. Concluding Remarks

Conclusions

- Trade-offs in analysis
  - Broad policy questions
  - Analytical difficulties
- Valuable insights from international studies
  - Institutions
  - Economic impacts