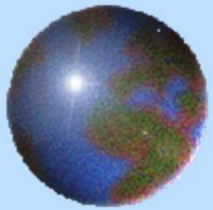


Education Quality and Economic Development

Eric A. Hanushek

Stanford University

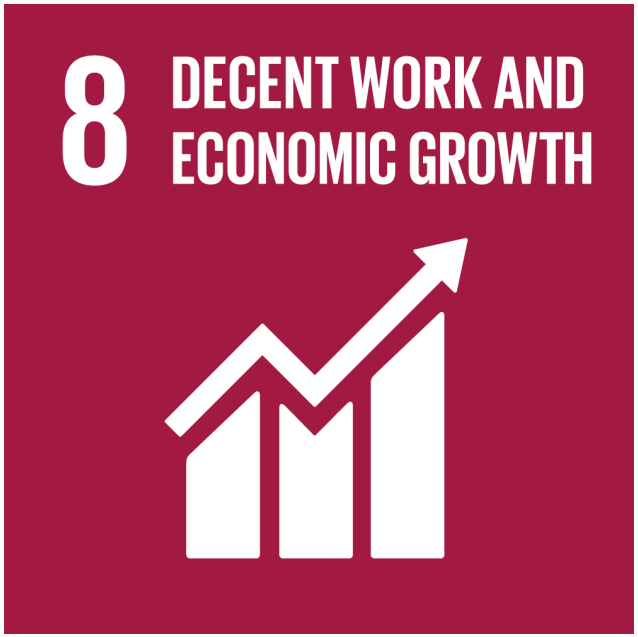
Bank of Israel

Jerusalem, June 2017

Sustainable Development Goals (SDGs)

Development = Growth

SUSTAINABLE DEVELOPMENT GOALS



Growth = Skills

SUSTAINABLE DEVELOPMENT GOALS

Conclusions

1. Development = growth
   - Recent focus on fiscal issues cannot neglect future

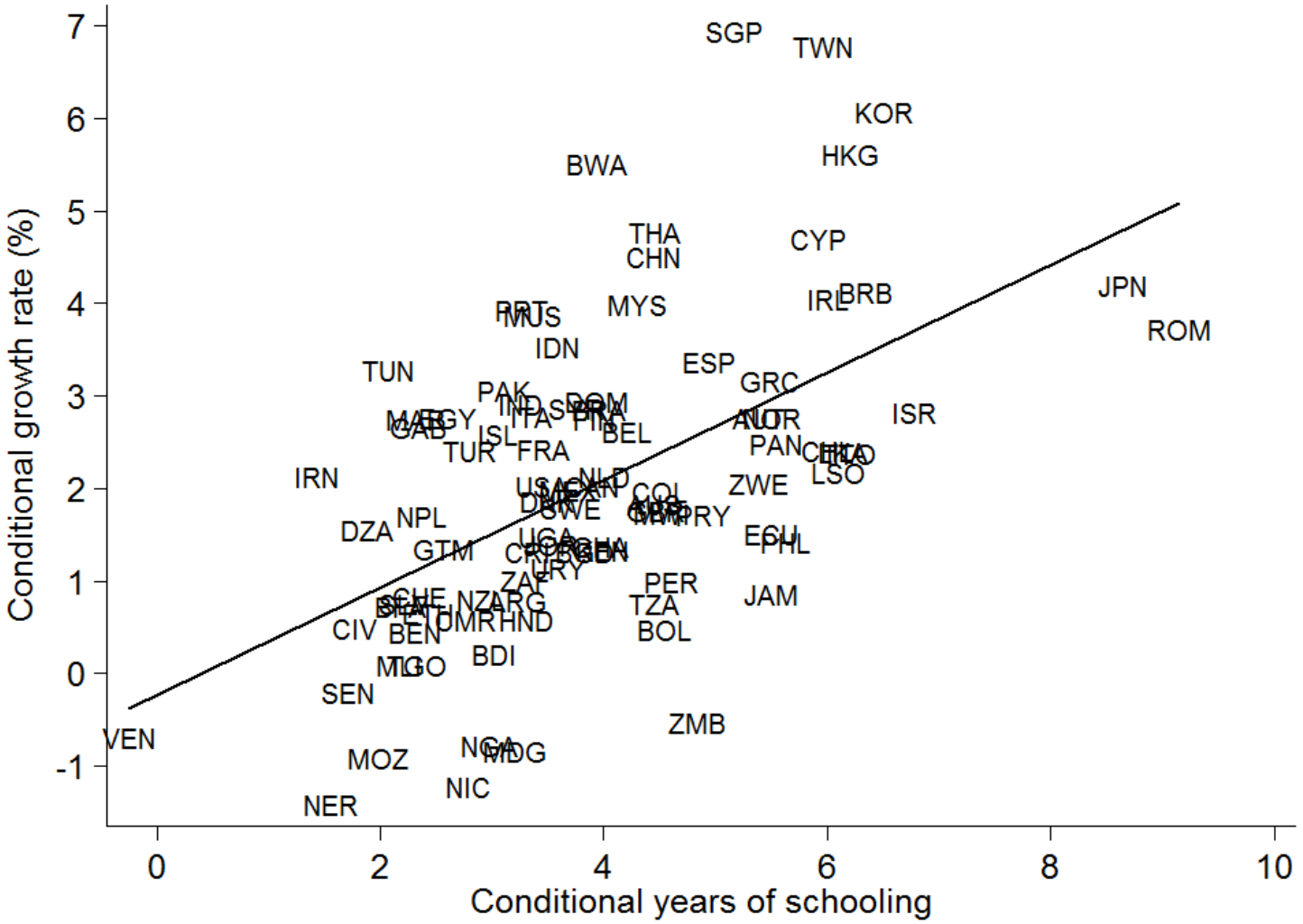
   ⇒ Growth = skills

2. Value of school improvement is enormous

3. Improvement is possible, in part as seen by recent advances in Israel

4. Improvement requires continued commitment

Years of Schooling and Economic Growth, 1960-2000



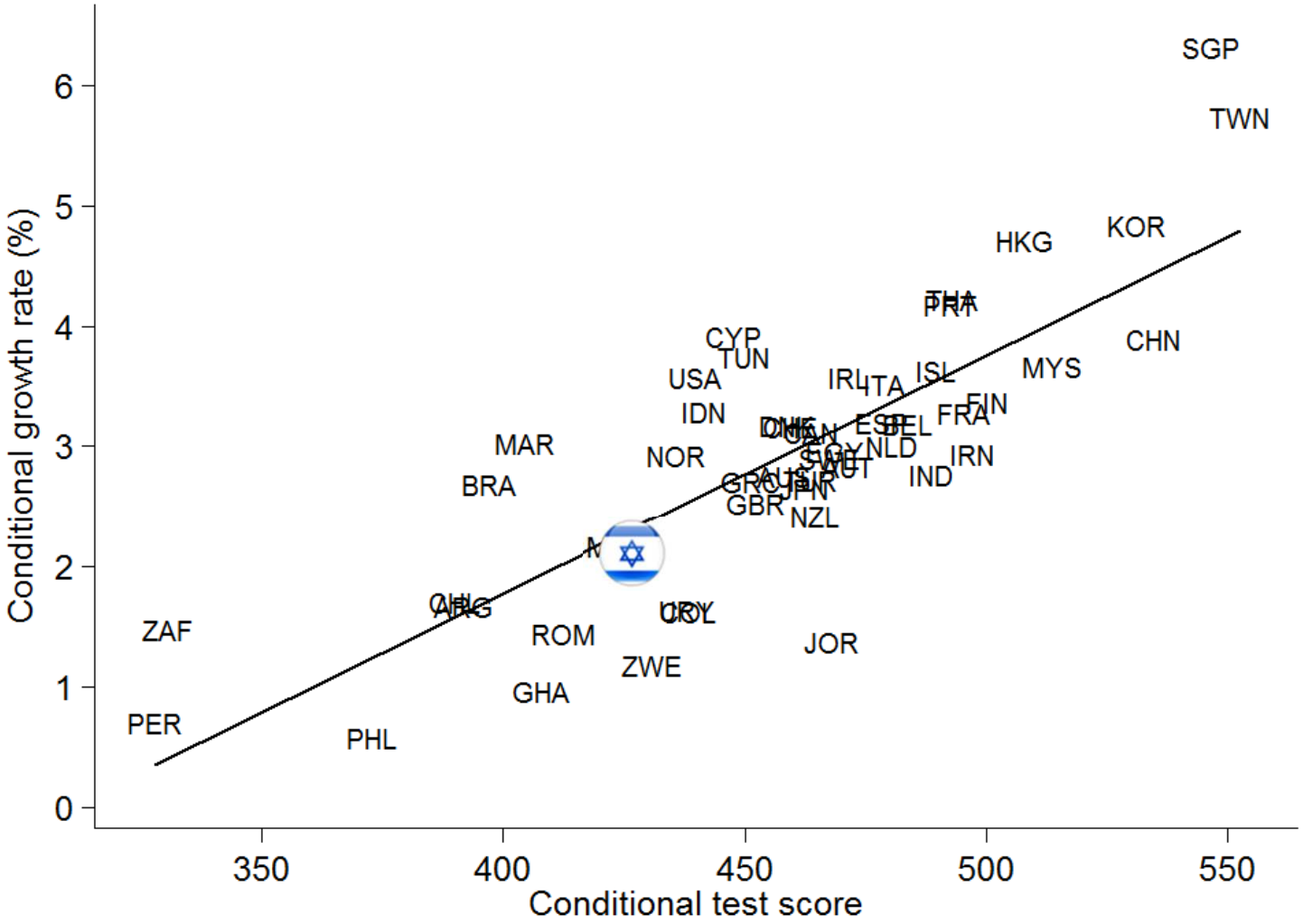
Expanding Access and School Completion

Considerable policy focused on school completion

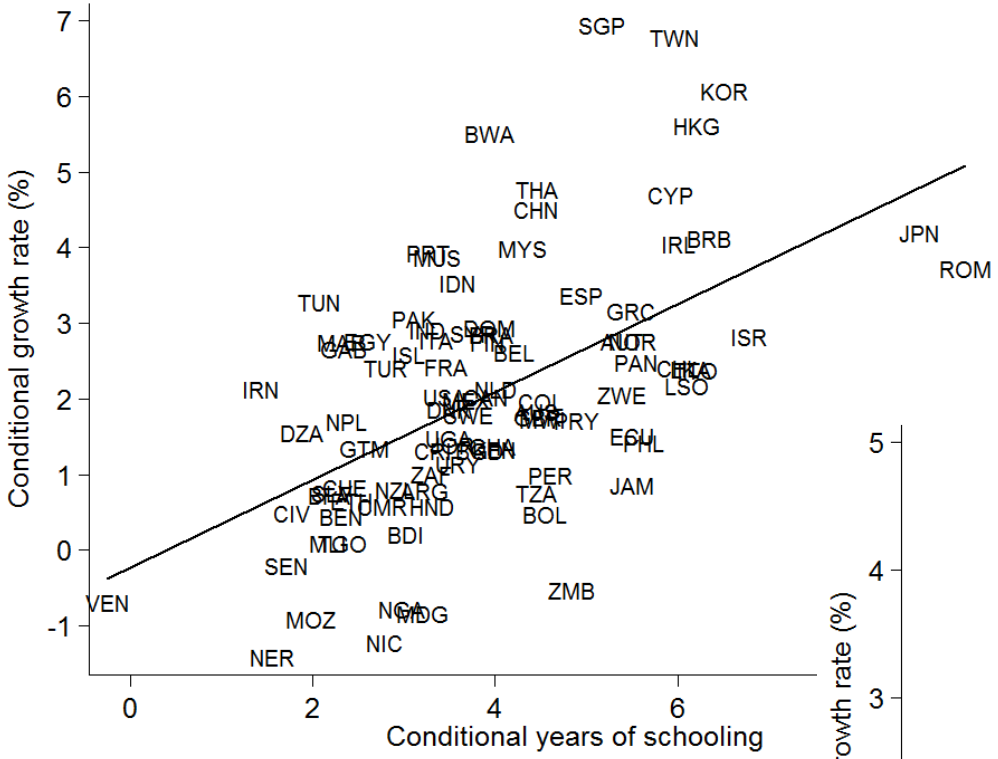
1. This is not Israel's biggest problem

2. It reflects why previous figure is wrong

Knowledge Capital and Economic Growth, 1960-2000

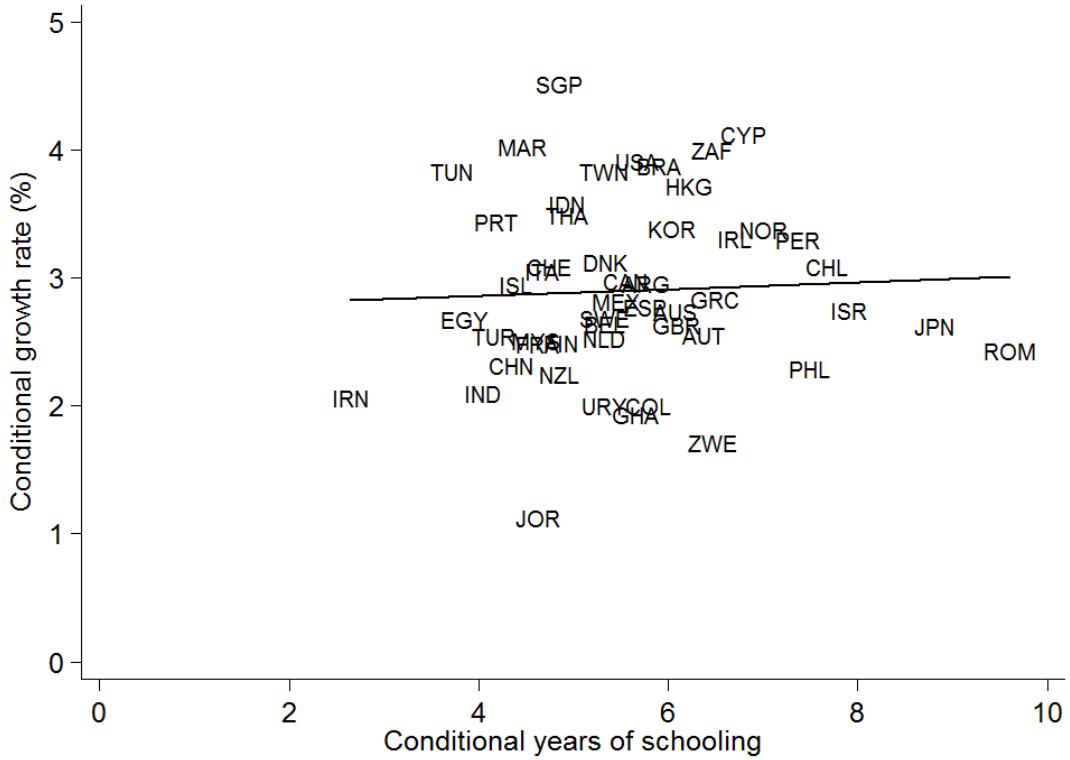


Years of Schooling and Economic Growth

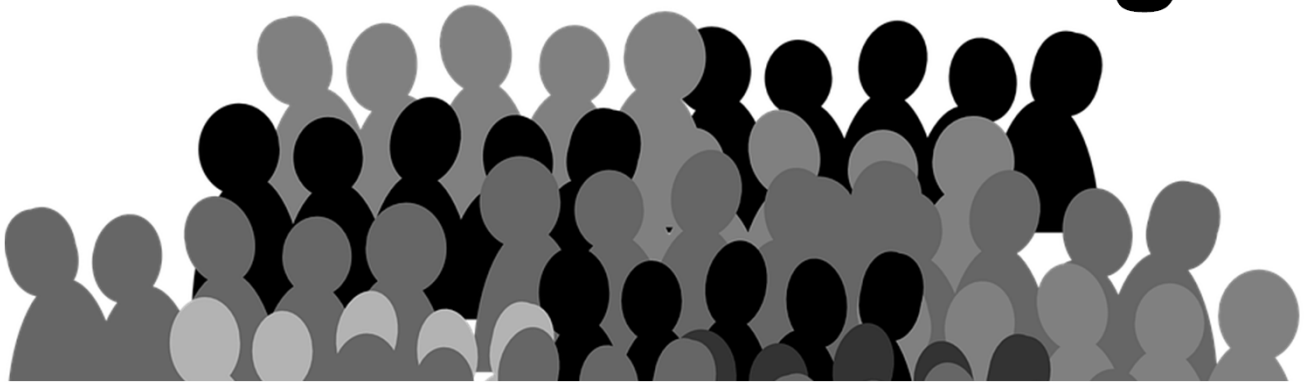


Without test-score control

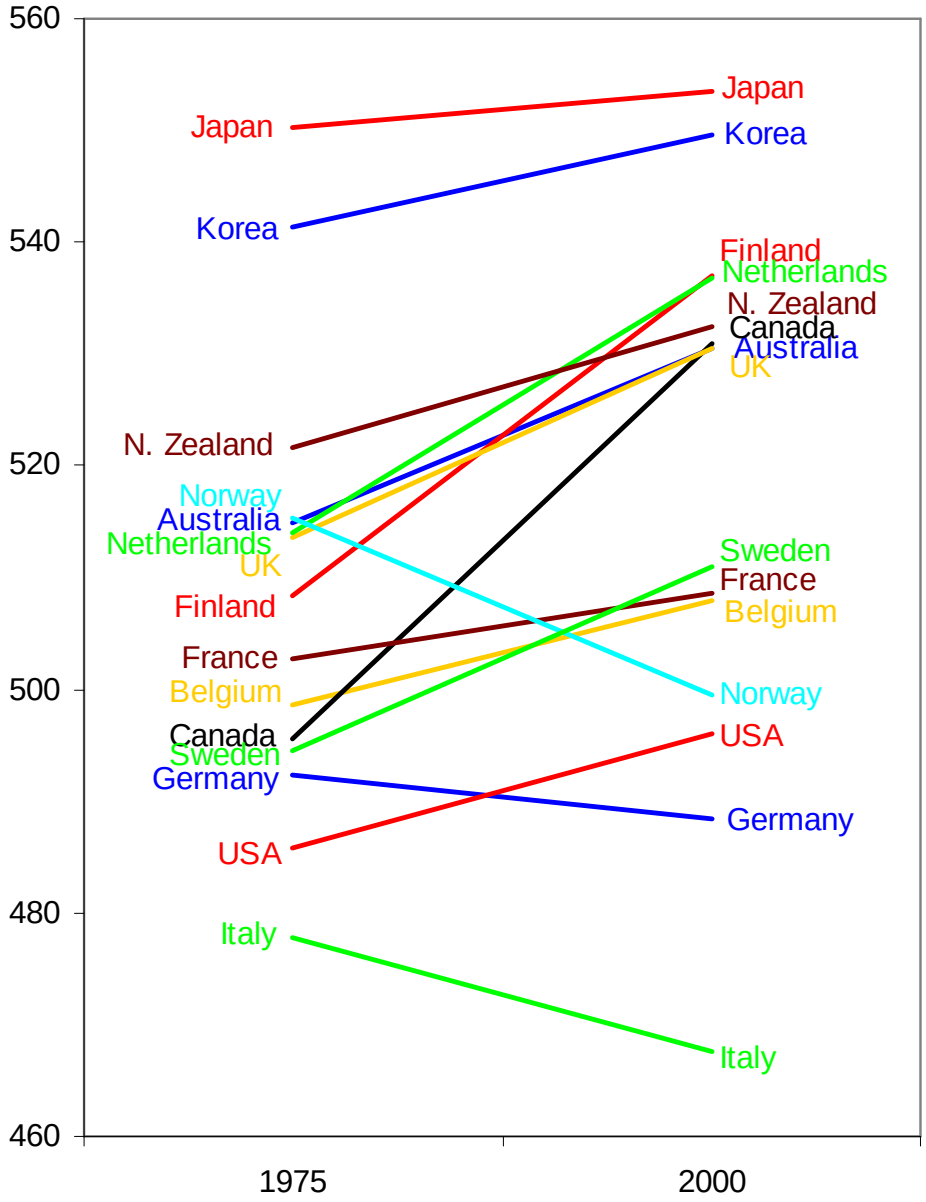
With test-score control



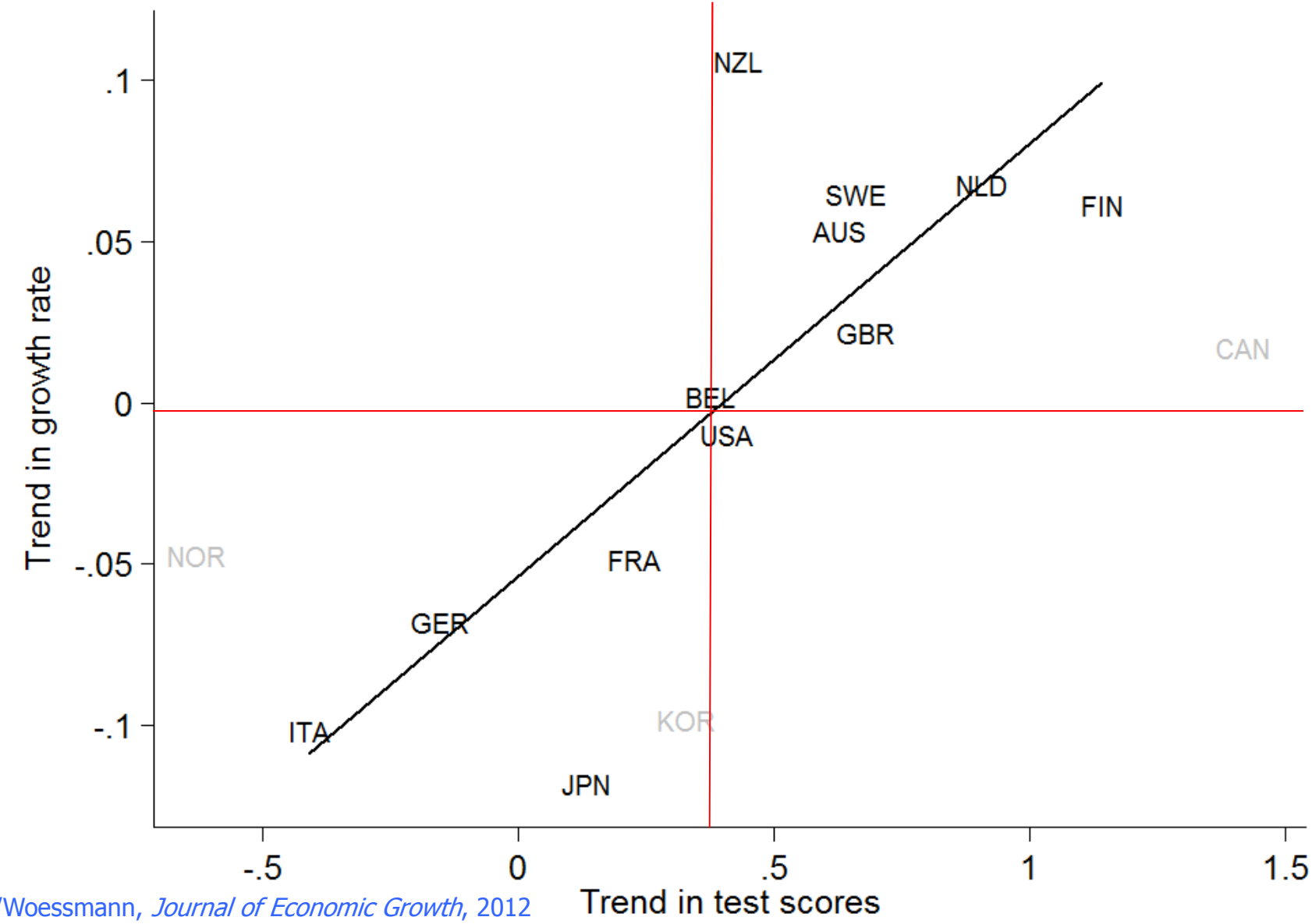
Too much attendance without learning



Trends in Test Scores



Trends in Growth Rates vs. Trends in Test Scores



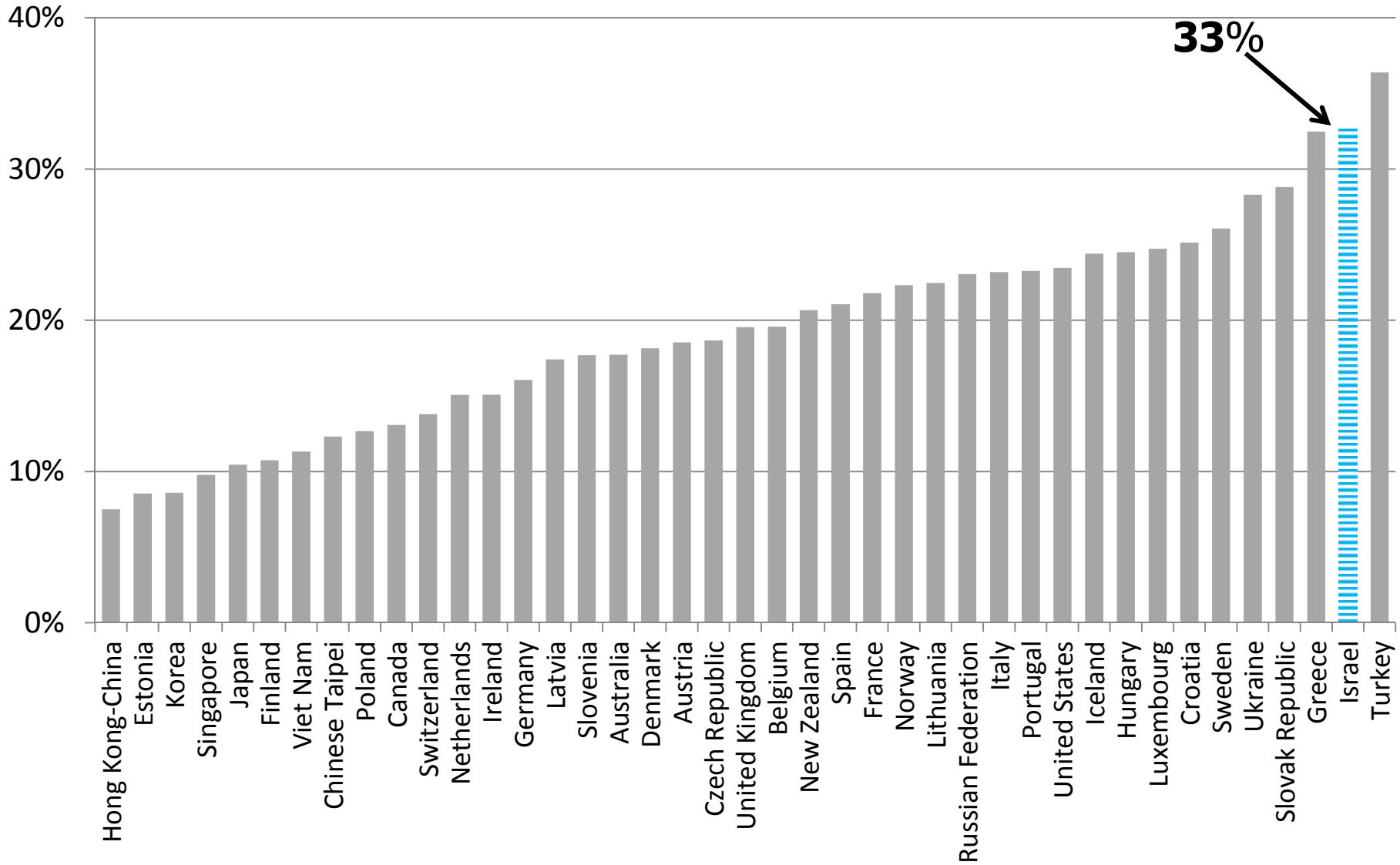
Hanushek/Woessmann, *Journal of Economic Growth*, 2012

Example of Value of Improvement - 1

- Assuming historical patterns hold
- Present value over 80 years
- Improvement plan
  - Universal basic skills
  - 15 years (by 2030)

- Israel moves to **universal basic skills**

Students Lacking Basic Skills



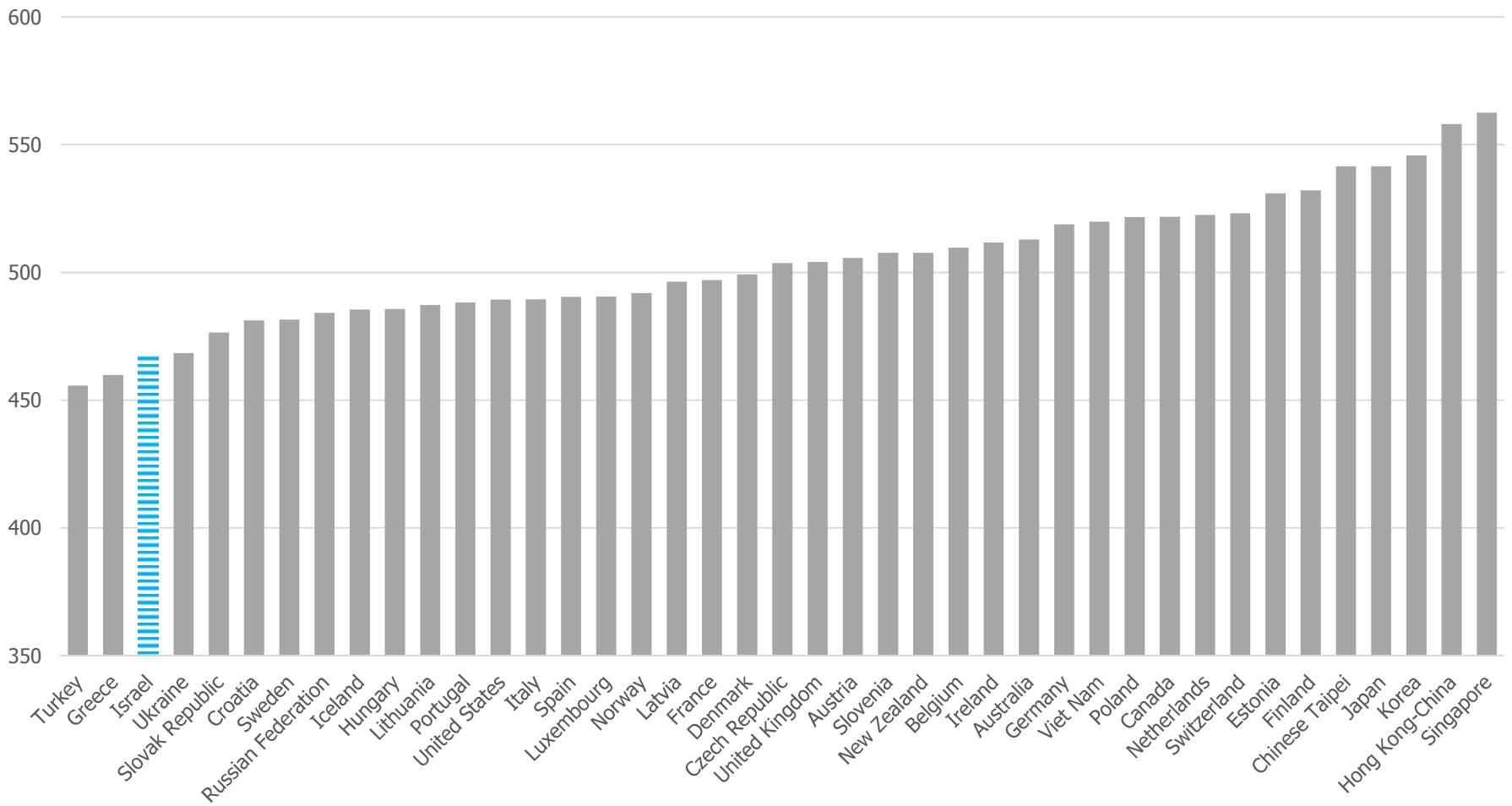
Example of Value of Improvement - 1

- Assuming historical patterns hold
- Present value over 80 years
- Improvement plan
  - Universal basic skills
  - 15 years (by 2030)

- Israel moves to **universal basic skills**

  - Present value of **353% of GDP [USD 991 billion]**
  - Average **7.6% higher GDP/pop**
  - **≈ 15% higher paychecks** for all workers every year

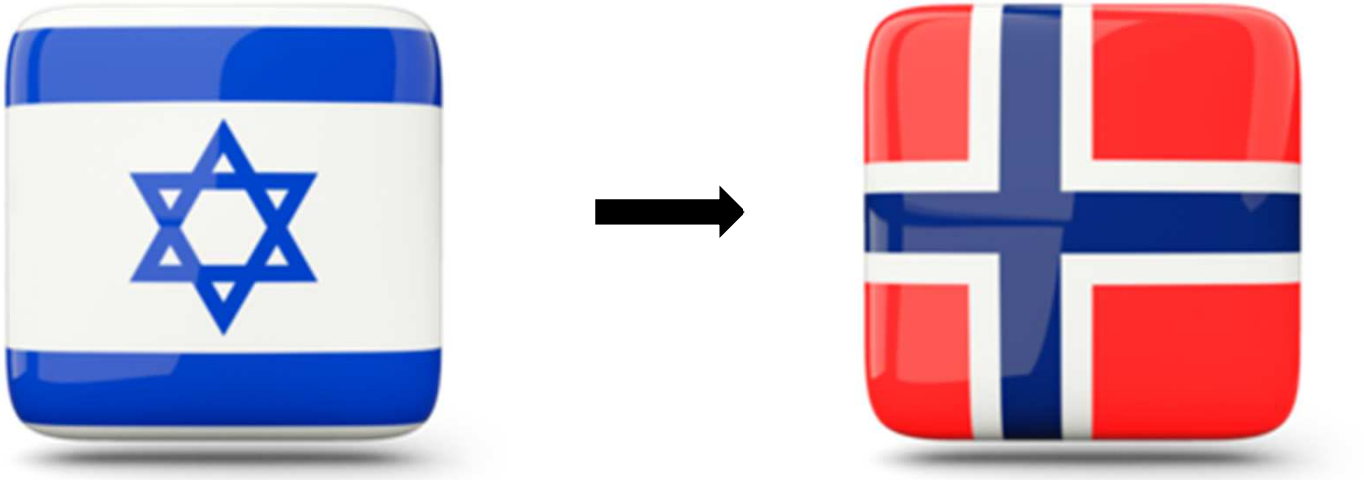
PISA Math+Science Performance (2012)



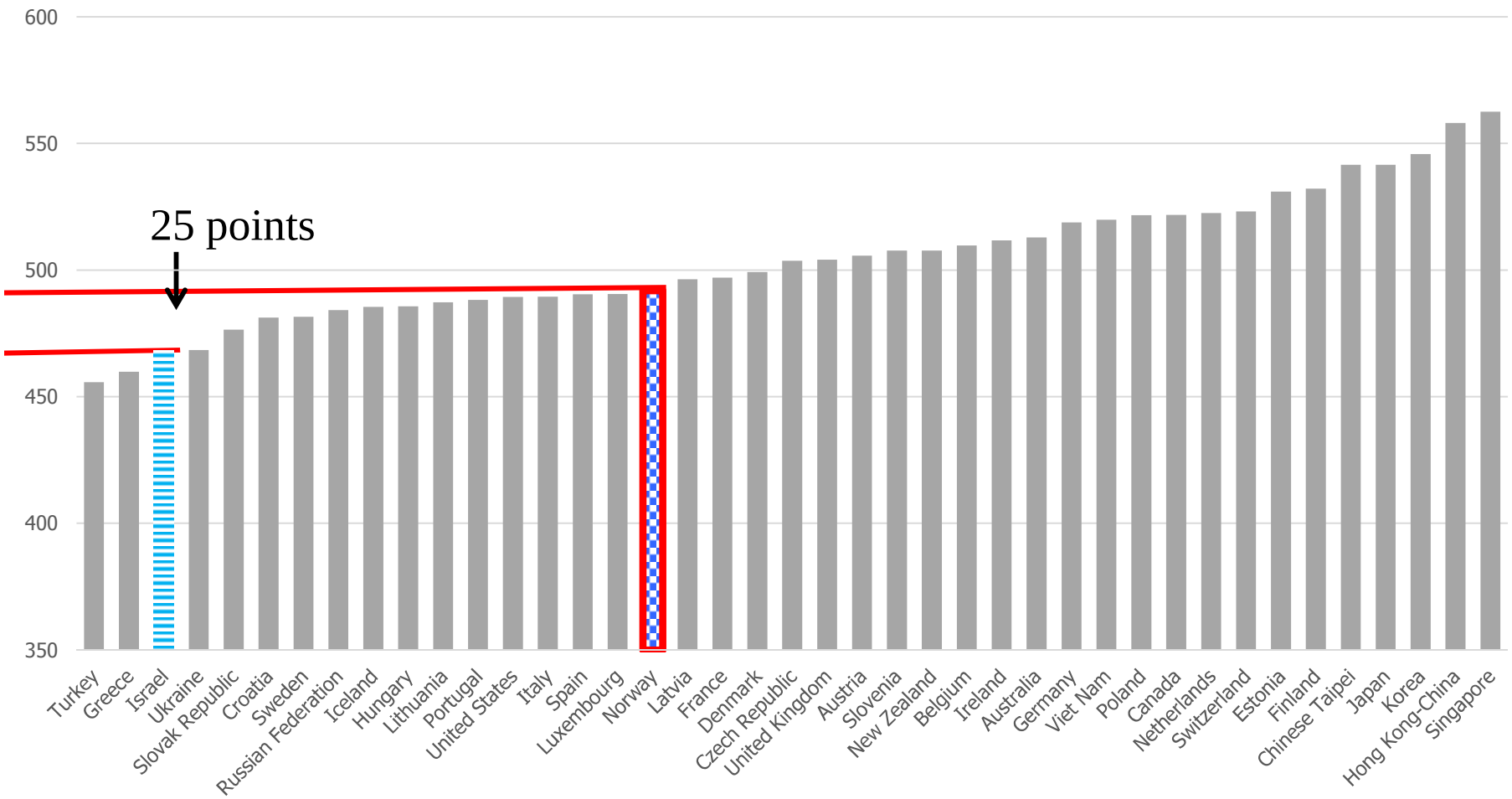
Value of Improvement - 2

- Assuming historical patterns hold
- Present value over 80 years
- Improvement plan
  - 25 points on PISA
  - 15 years (by 2030)

- Israel moves to Norway level



PISA Math+Science Performance (2012)



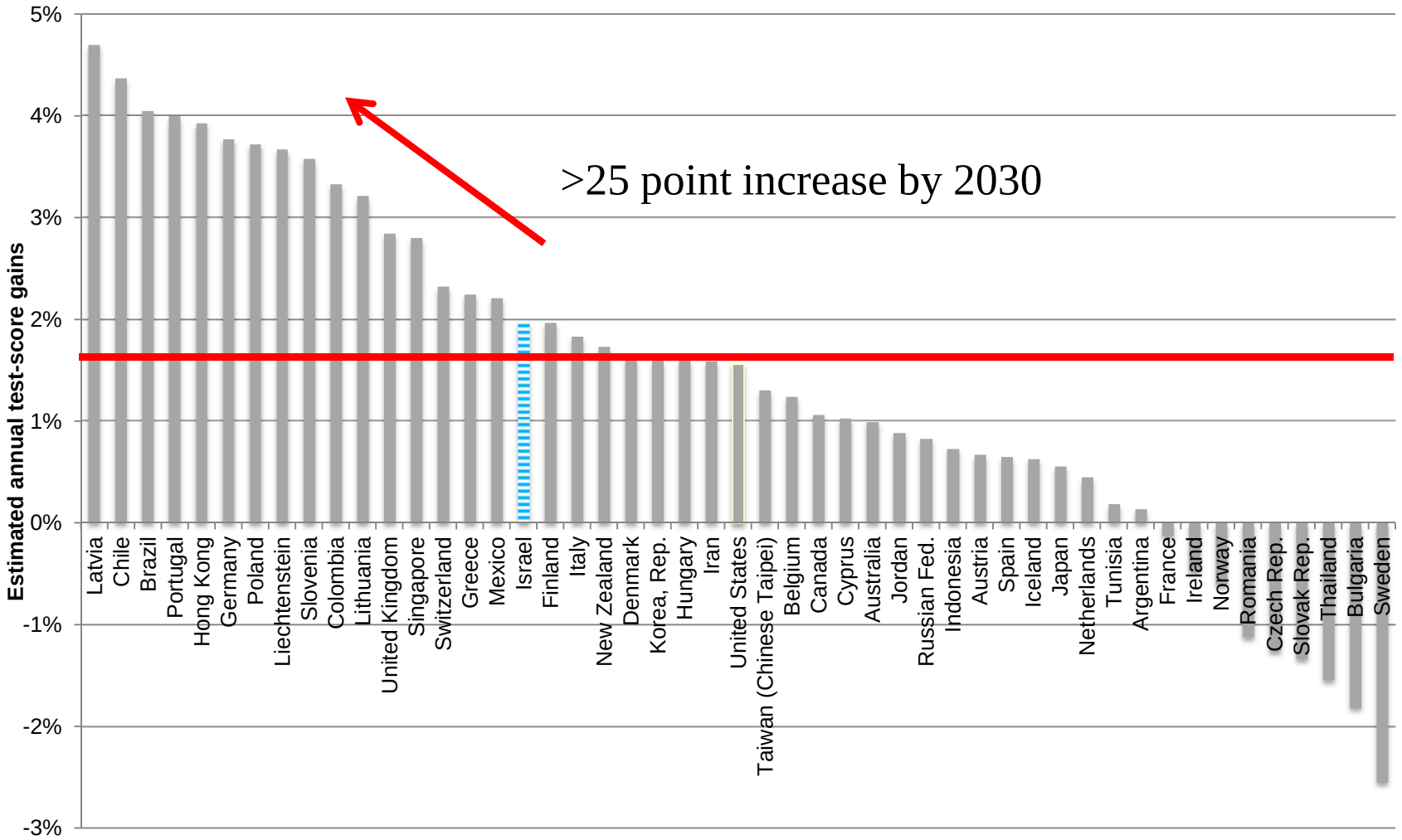
Example of Value of Improvement - 2

- Assuming historical patterns hold
- Present value over 80 years
- Improvement plan
  - 25 points on PISA
  - 15 years (by 2030)

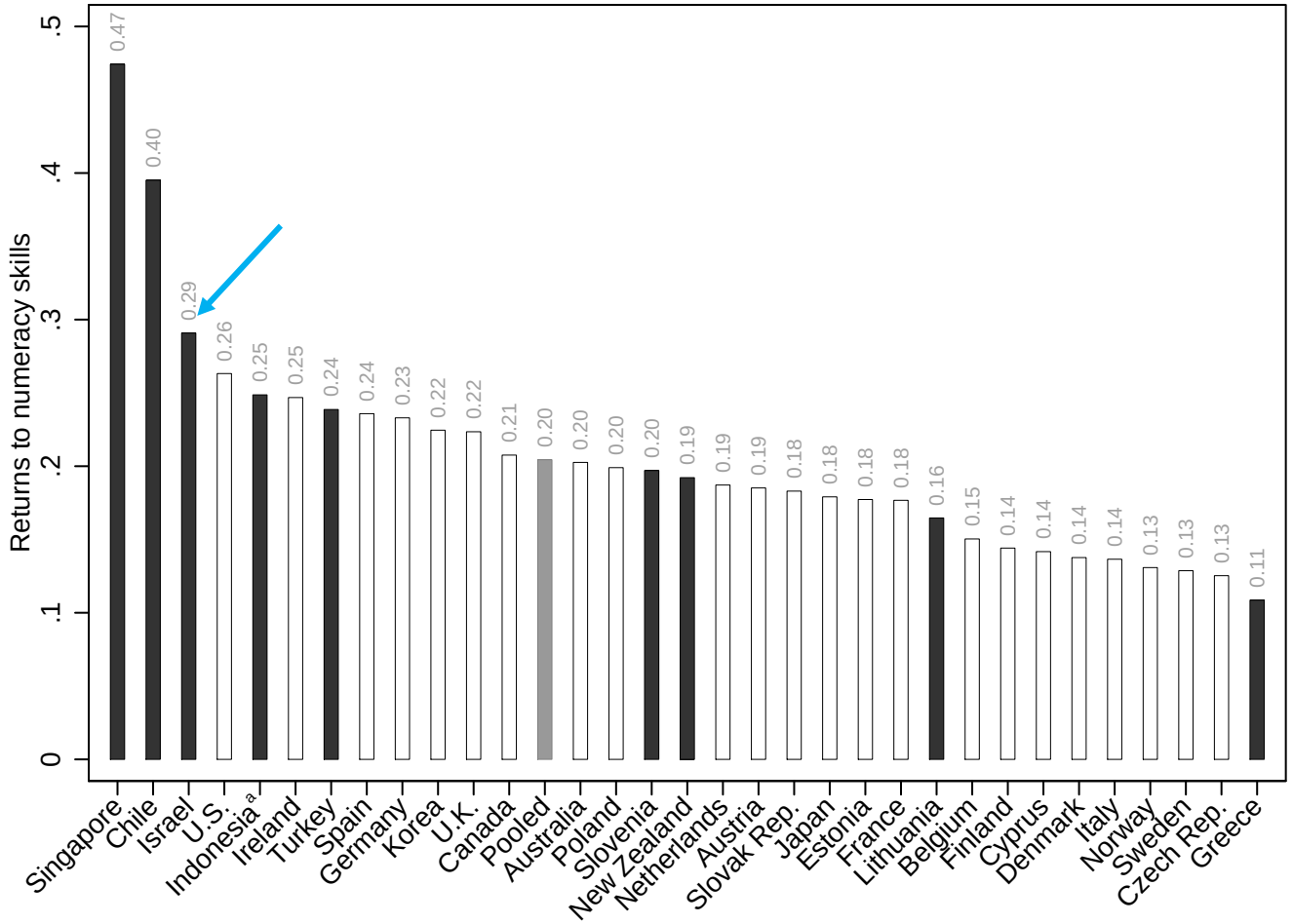
- Israel moves to Norway level

  - Present value of **322% of GDP [USD 905 billion]**
  - Average **6.9% higher GDP/pop**
  - **≈14% higher paychecks** for all workers every year

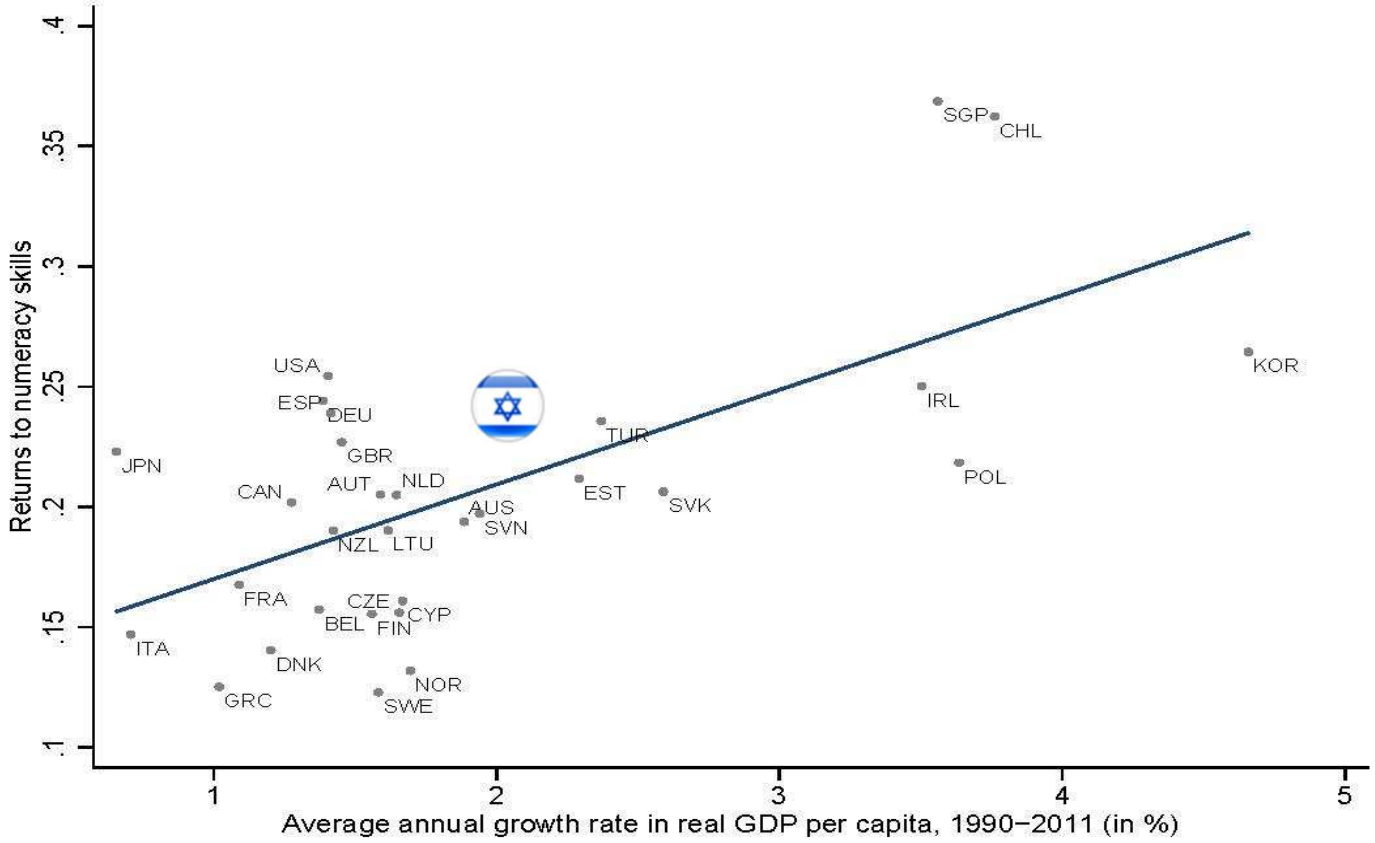
Achievement Growth, 1995-2009

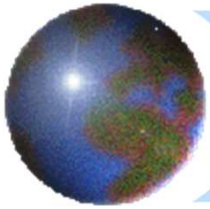


Returns to Skills – PIACC Round 2

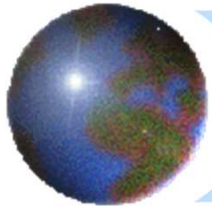


Returns to Skills across PIAAC Countries





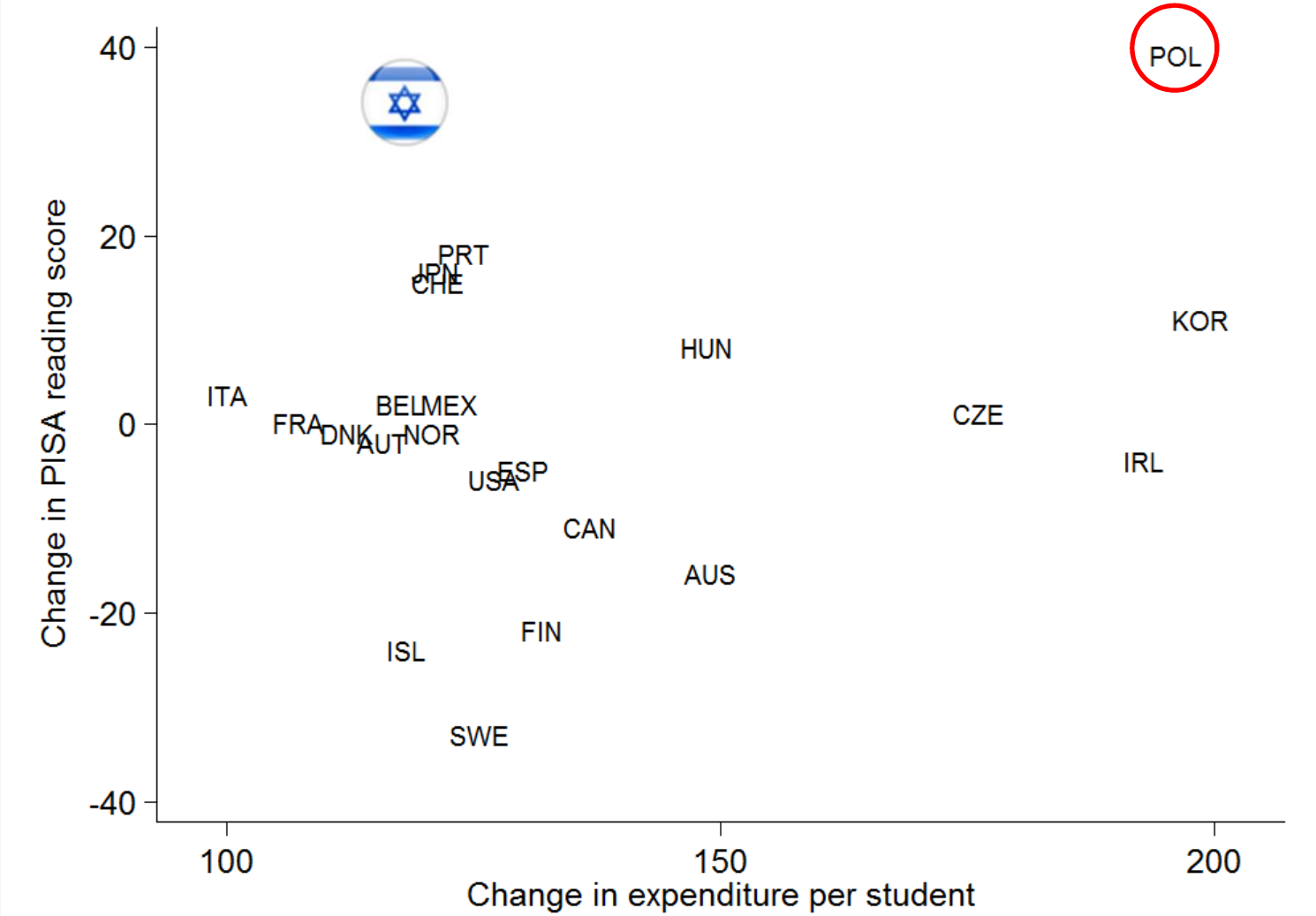
Are there things to be done?



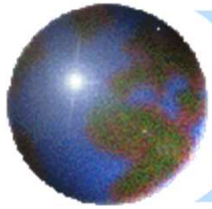
Resource Policies

- Little evidence of success
  - Cross country evidence
  - Within country – developed
  - Within country – developing

Changes in educational spending and in student achievement across countries

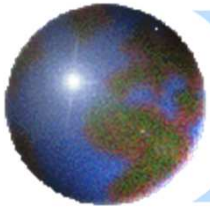


Scatter plot of the change in expenditure per student, 2000-2010 (constant prices, 2000 = 100) against change in PISA reading score, 2000-2012. r=0.22 but =-0.008 without Poland.



Resource Policies

- Little evidence of success
  - Cross country evidence
  - Within country – developed
  - Within country – developing
- Consistent with detailed analysis
  - class size
  - school characteristics



Resource Policies

- Does not say “resources never have effect”
- Does not say “resources cannot have effect”

No expectation within current incentive structure

Teacher Quality

- Teachers most important input

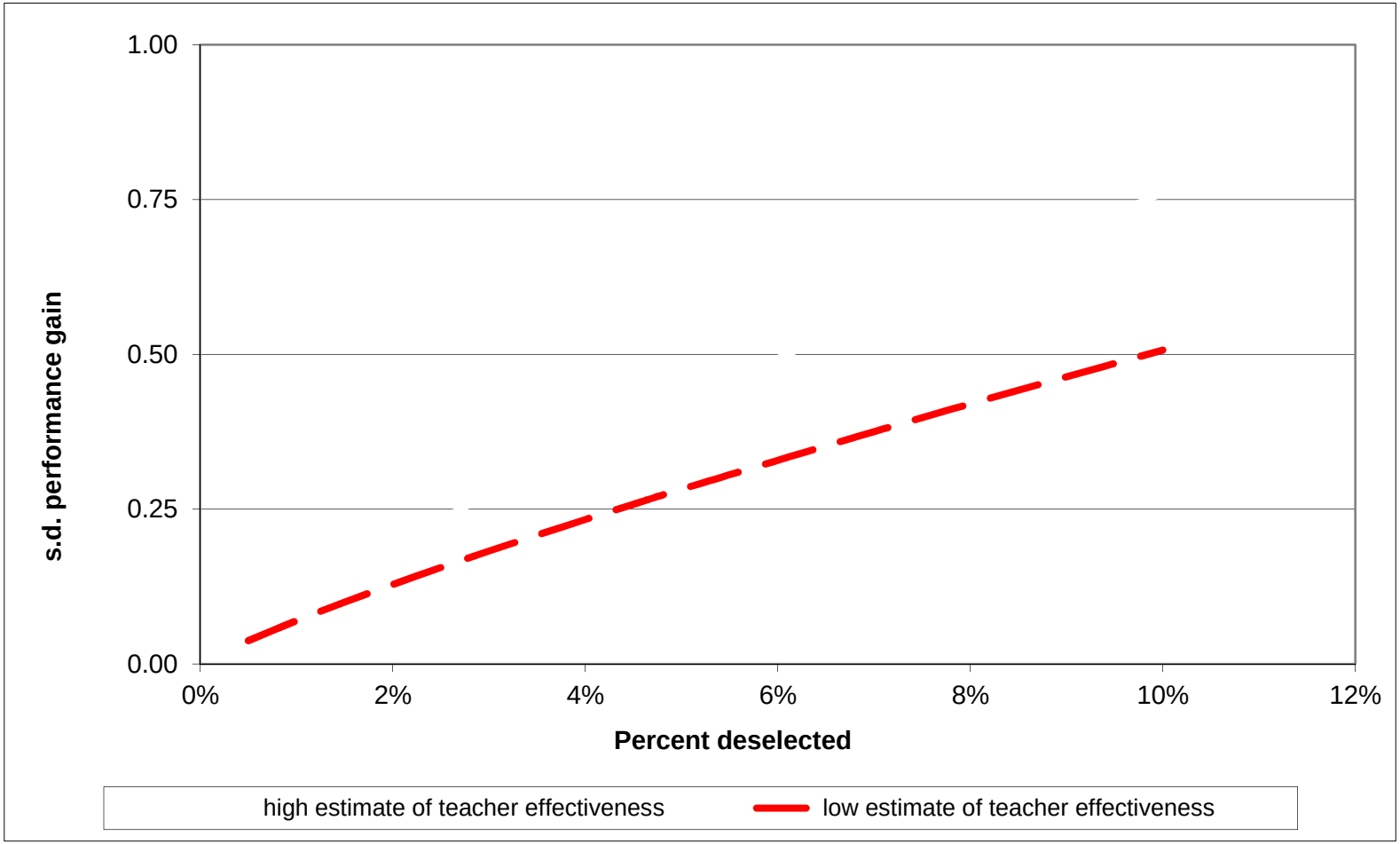
- No identifiable characteristics
  - Master's degrees
  - Experience*
  - Certification
  - Preparation
  - Professional development

- Observable through both student performance *and* supervisor ratings
- Cannot regulate and pay on characteristics

Institutional Reforms Supported by Evidence

- Centralized exams
- Accountability
- Autonomy/decentralization
- Choice
- Direct performance incentives

Alternative Estimates of Least Effective Teachers (United States distribution)



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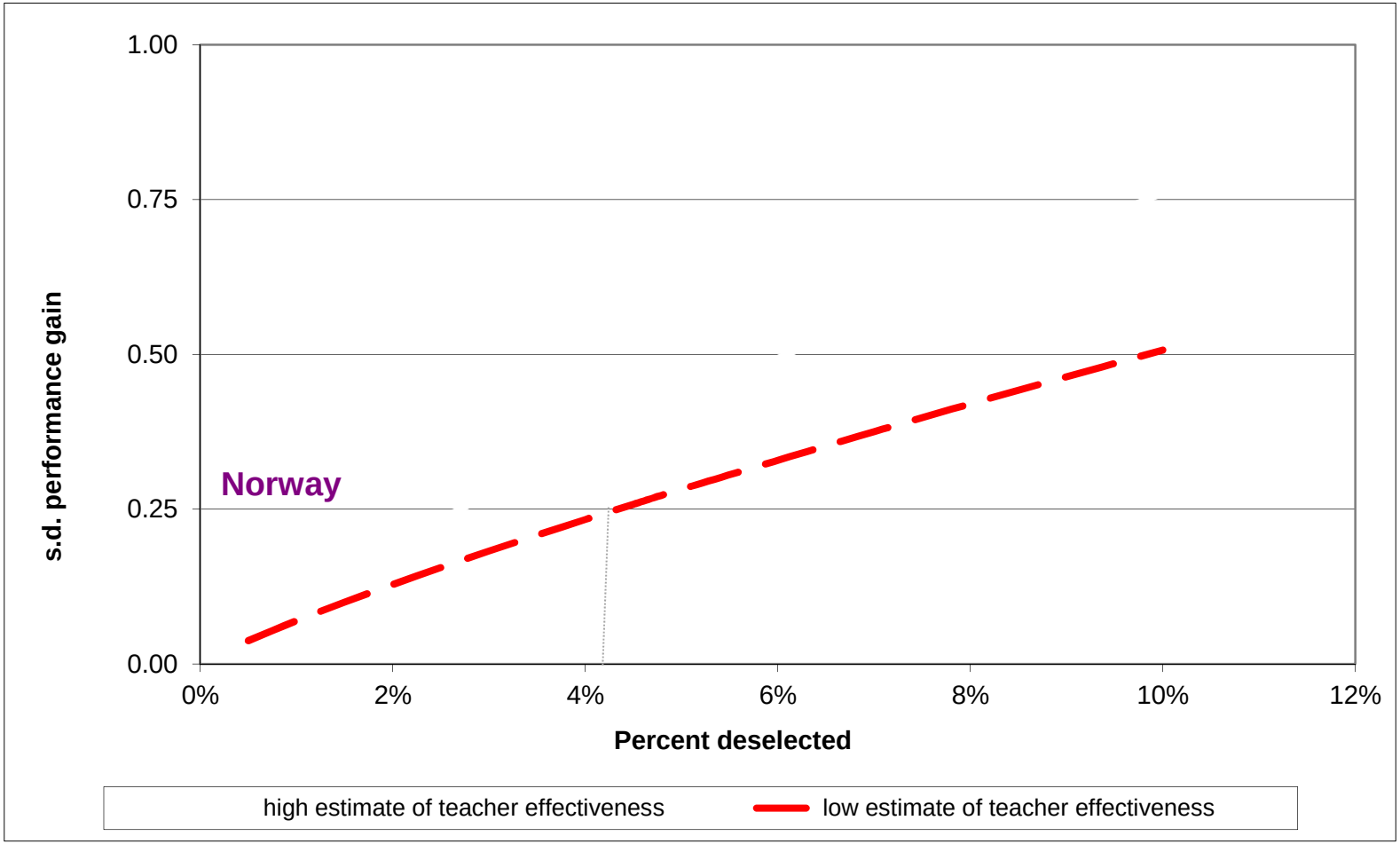

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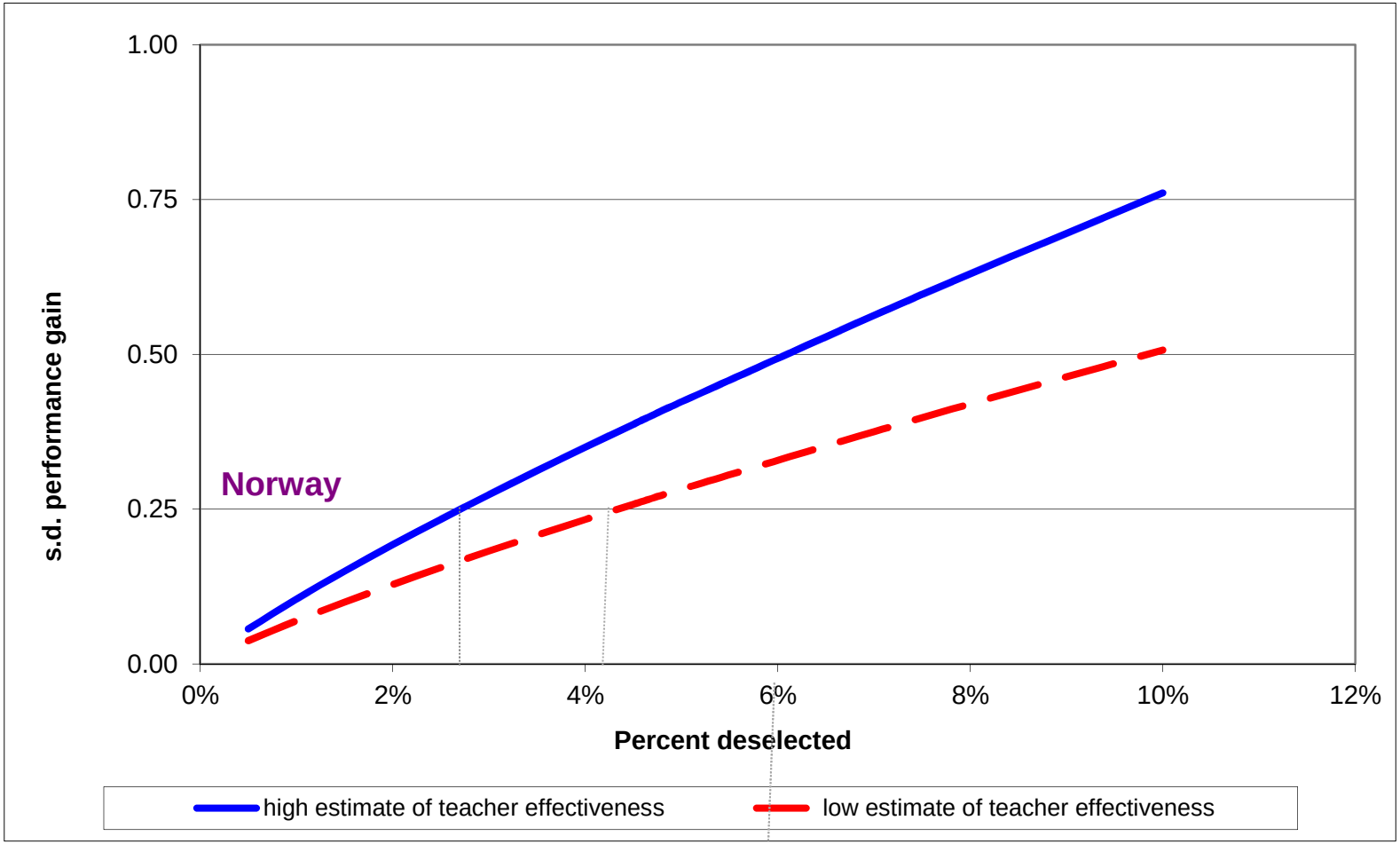

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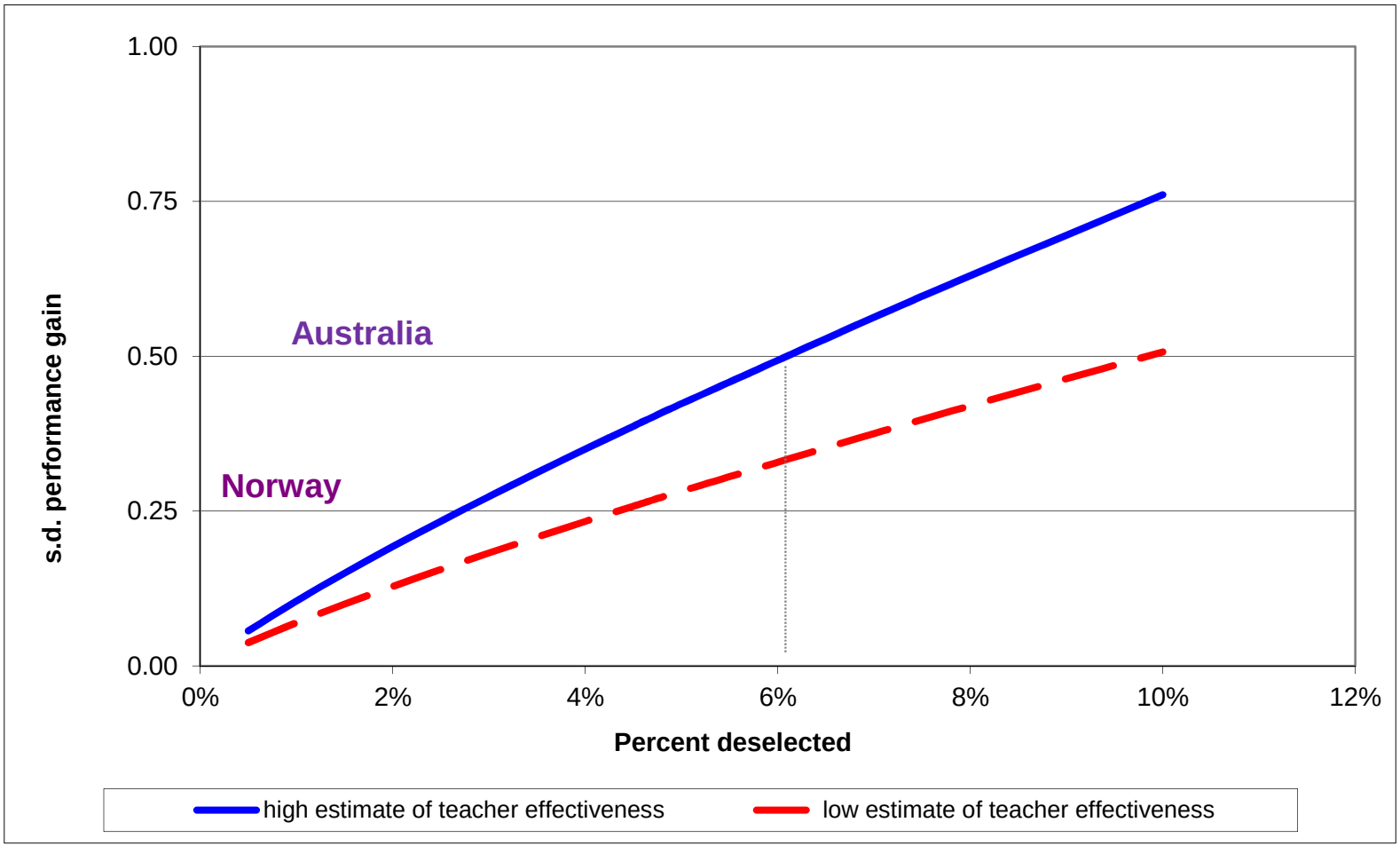
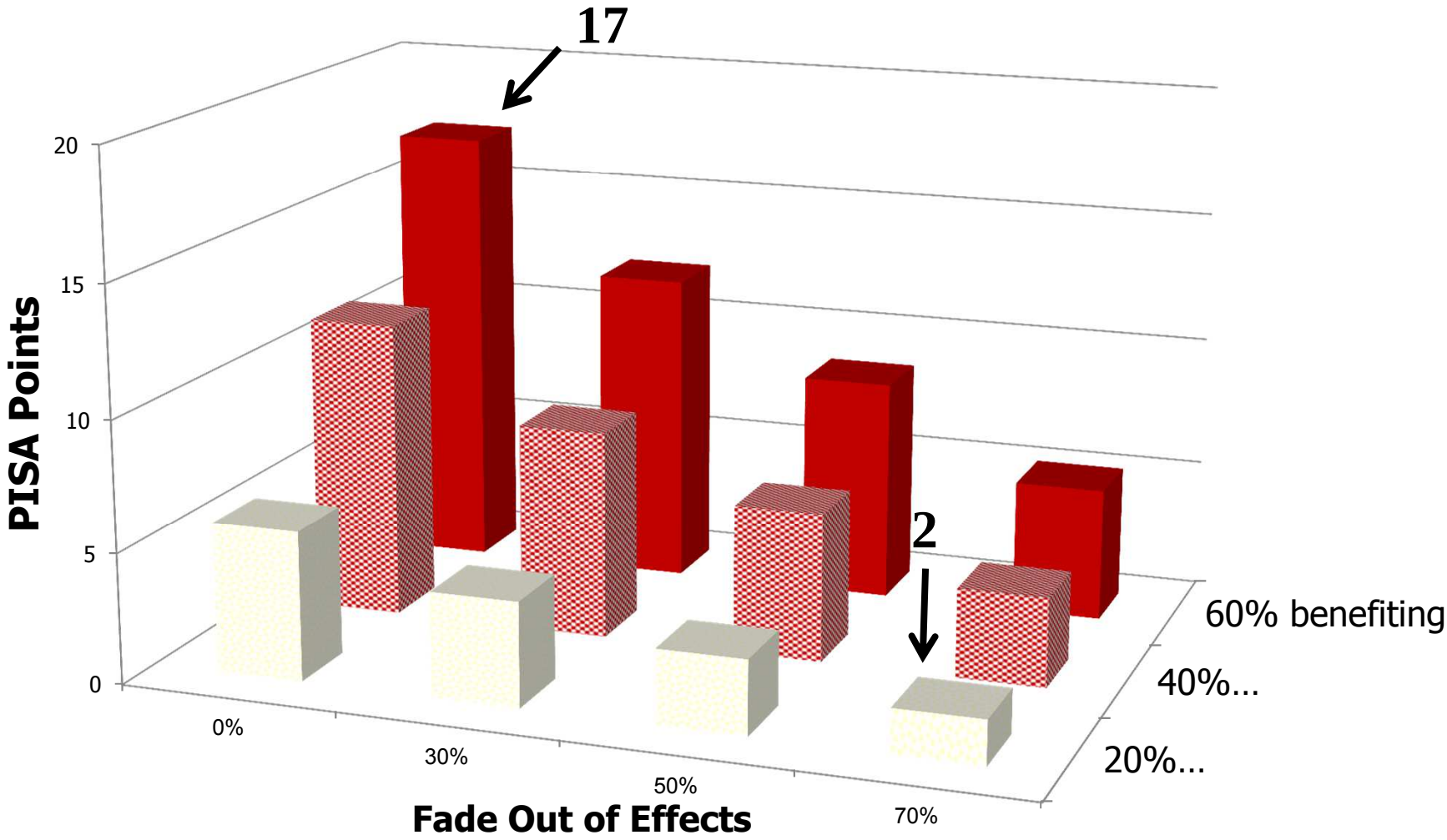


Preschool – Promise and Issues

- Evidence of success
  - Strongest with demonstration programs
  - Varied across operational programs

- Key uncertainties
  - Relevant population
  - Dimensions of program

PISA Points with Varying Programs



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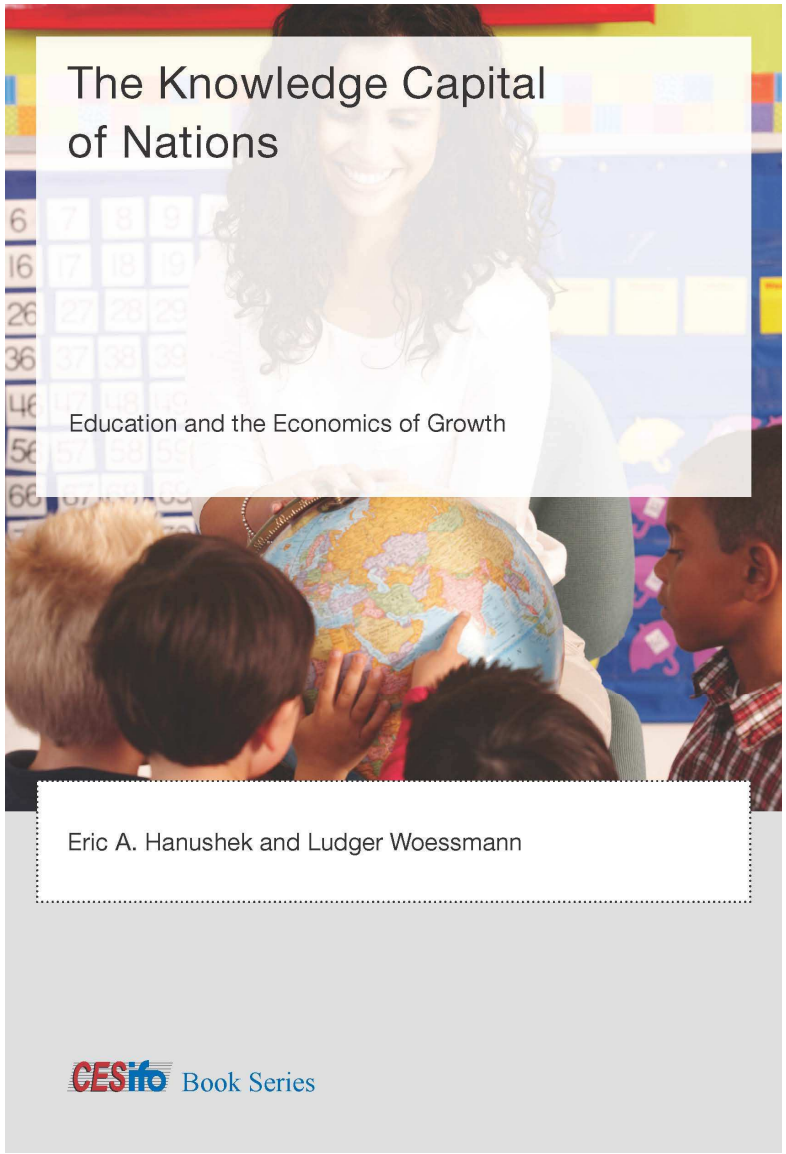
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