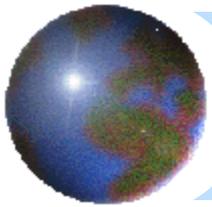


Education Quality and Economic Development

Eric A. Hanushek
Stanford University

Bank of Israel
Jerusalem, June 2017



Sustainable Development Goals (SDGs)

1 NO POVERTY

2 NO HUNGER

3 GOOD HEALTH

4 QUALITY EDUCATION

5 GENDER EQUALITY

6 CLEAN WATER AND SANITATION

7 RENEWABLE ENERGY

8 GOOD JOBS AND ECONOMIC GROWTH

9 INNOVATION AND INFRASTRUCTURE

10 REDUCED INEQUALITIES

11 SUSTAINABLE CITIES AND COMMUNITIES

12 RESPONSIBLE CONSUMPTION

13 CLIMATE ACTION

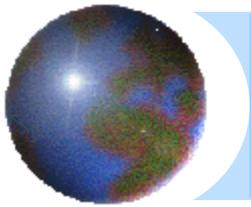
14 LIFE BELOW WATER

15 LIFE ON LAND

16 PEACE AND JUSTICE

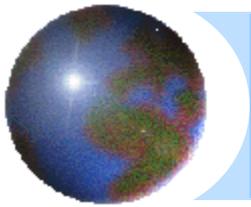
17 PARTNERSHIPS FOR THE GOALS

THE GLOBAL GOALS
For Sustainable Development

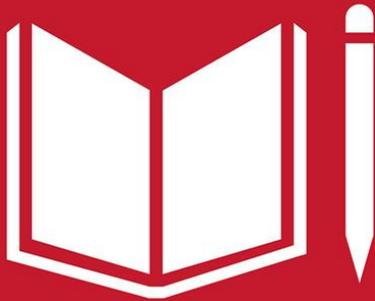


**Development =
Growth**



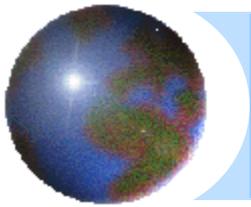


4 QUALITY
EDUCATION



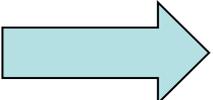
Growth = Skills

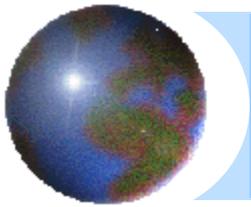




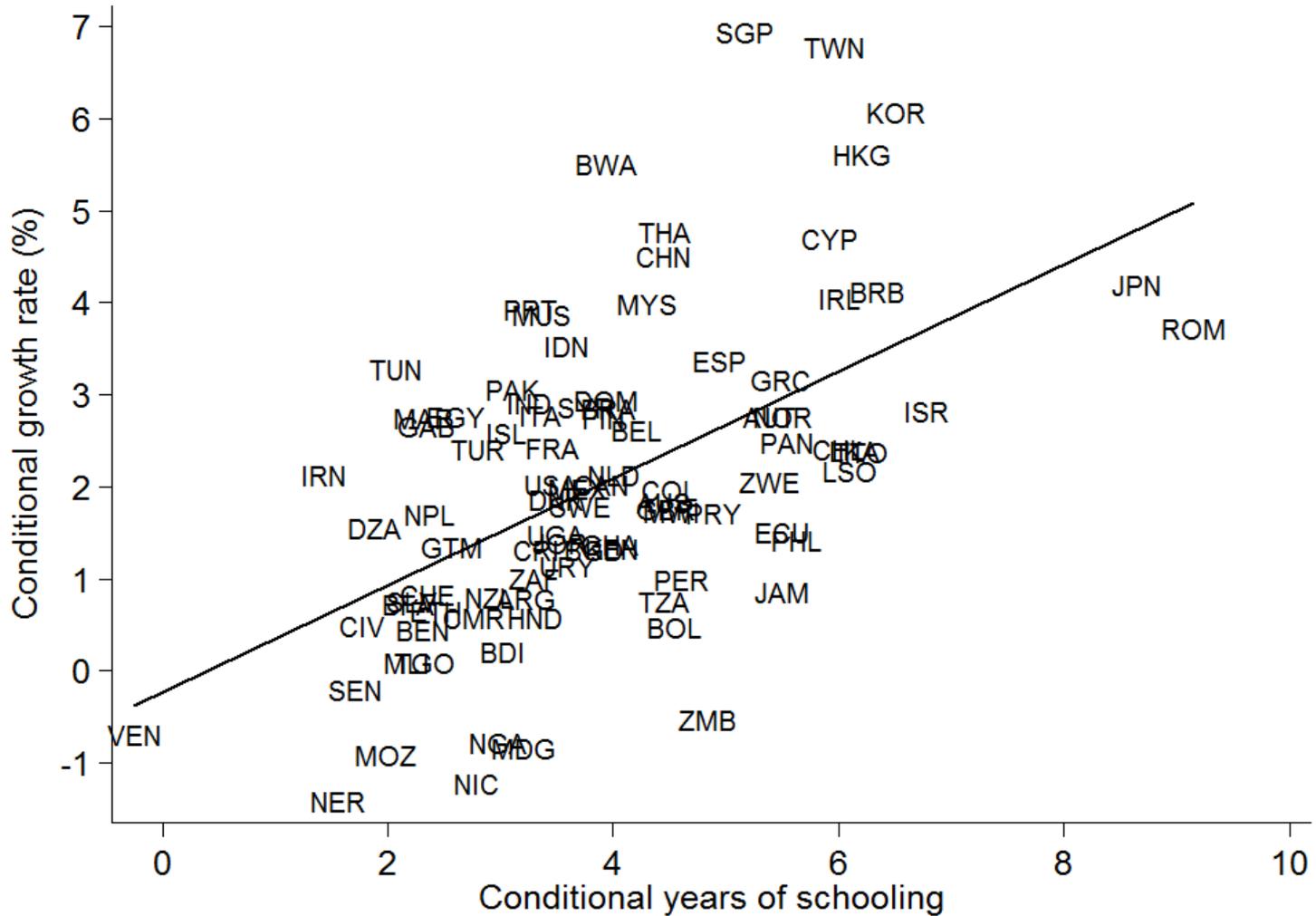
Conclusions

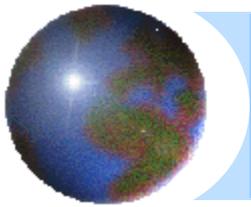
1. Development = growth
 - Recent focus on fiscal issues cannot neglect future

 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

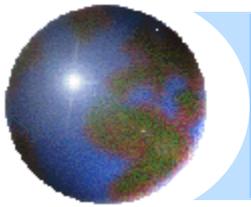




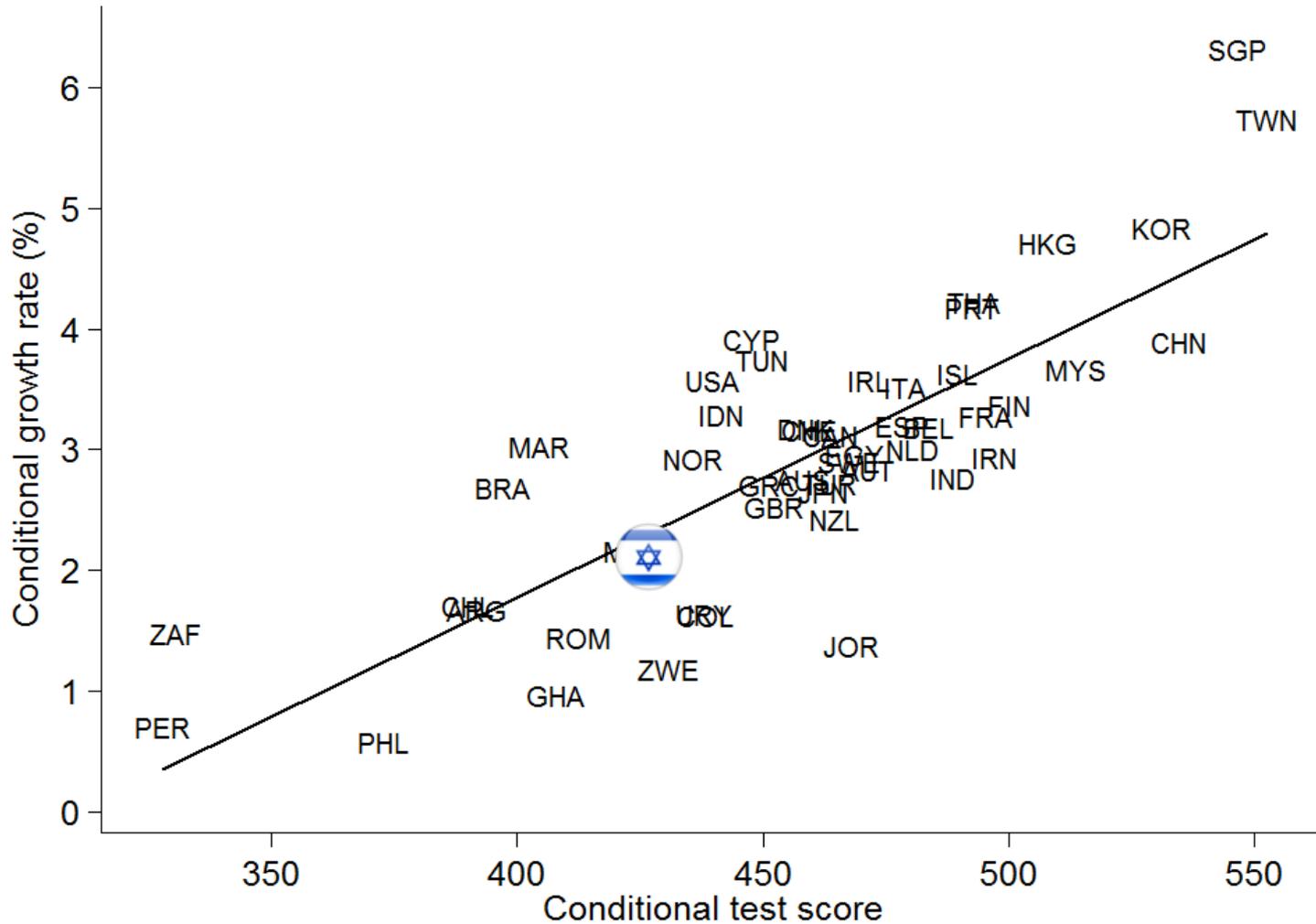
Expanding Access and School Completion

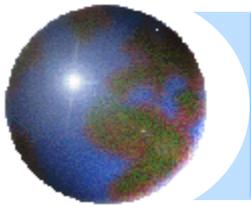
Considerable policy focused on school completion

1. This is not Israel's biggest problem
2. It reflects why previous figure is wrong



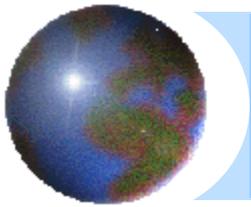
Knowledge Capital and Economic Growth, 1960-2000



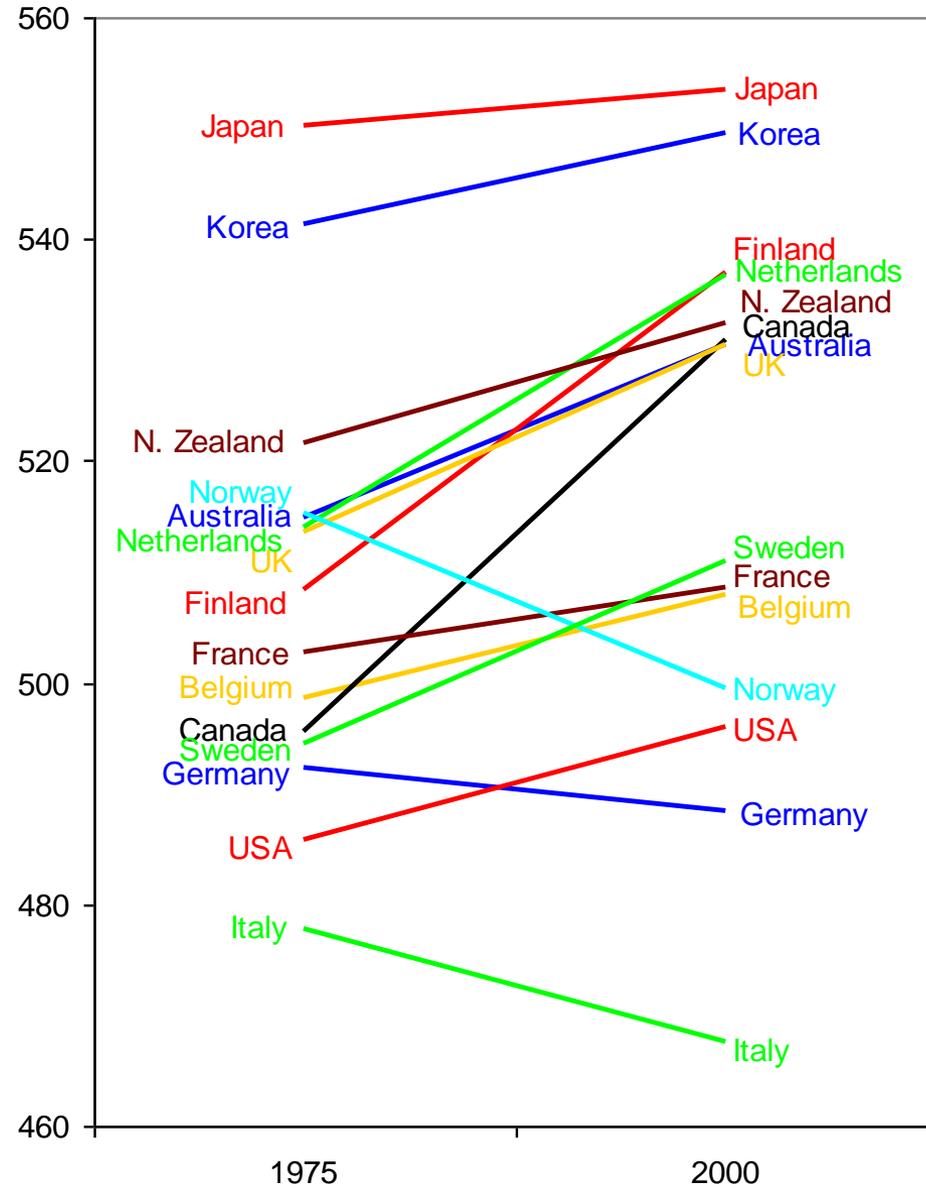


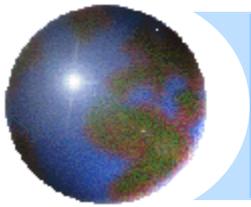
Too much attendance without learning



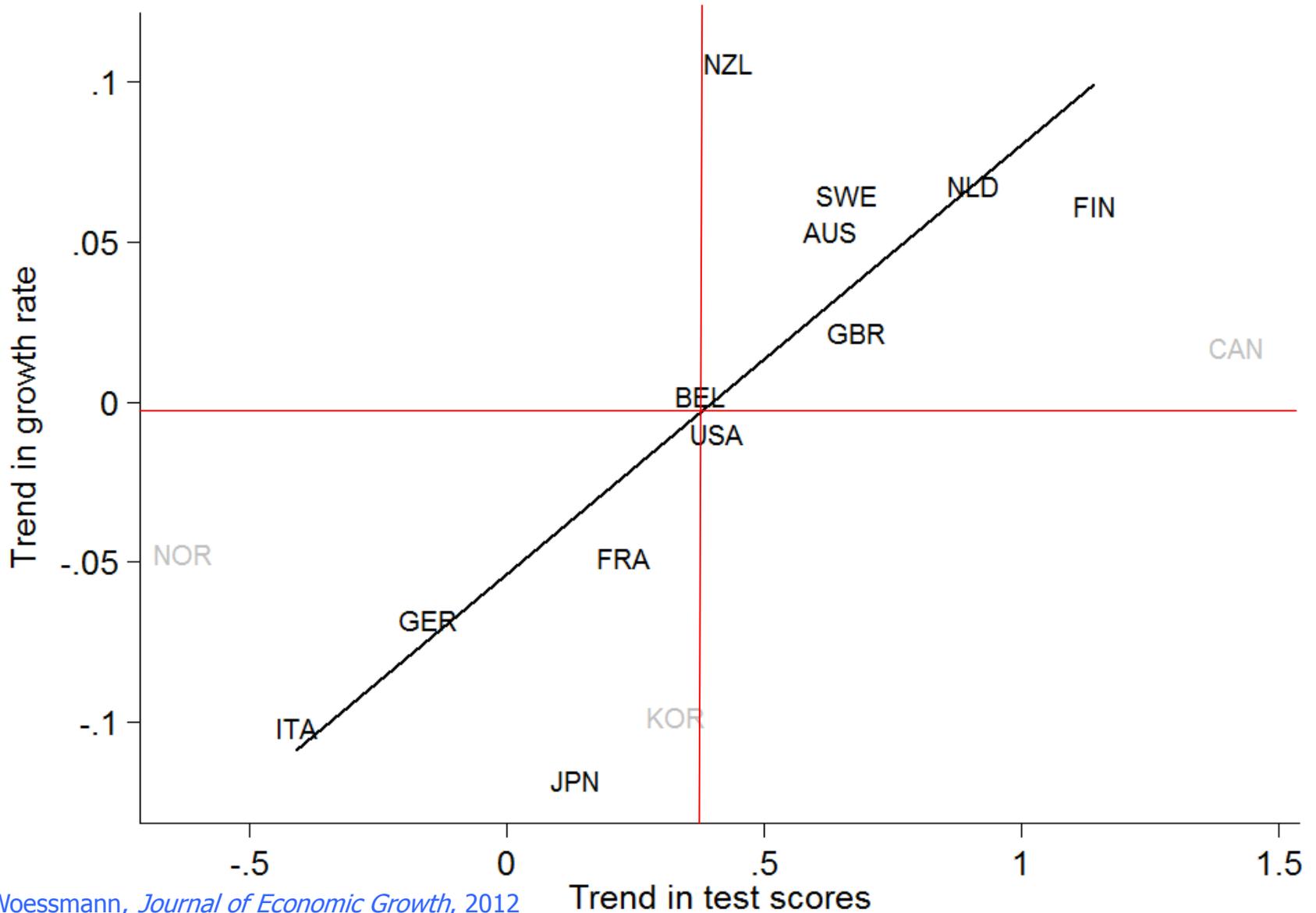


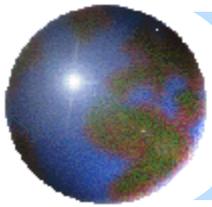
Trends in Test Scores





Trends in Growth Rates vs. Trends in Test Scores

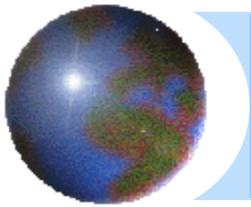




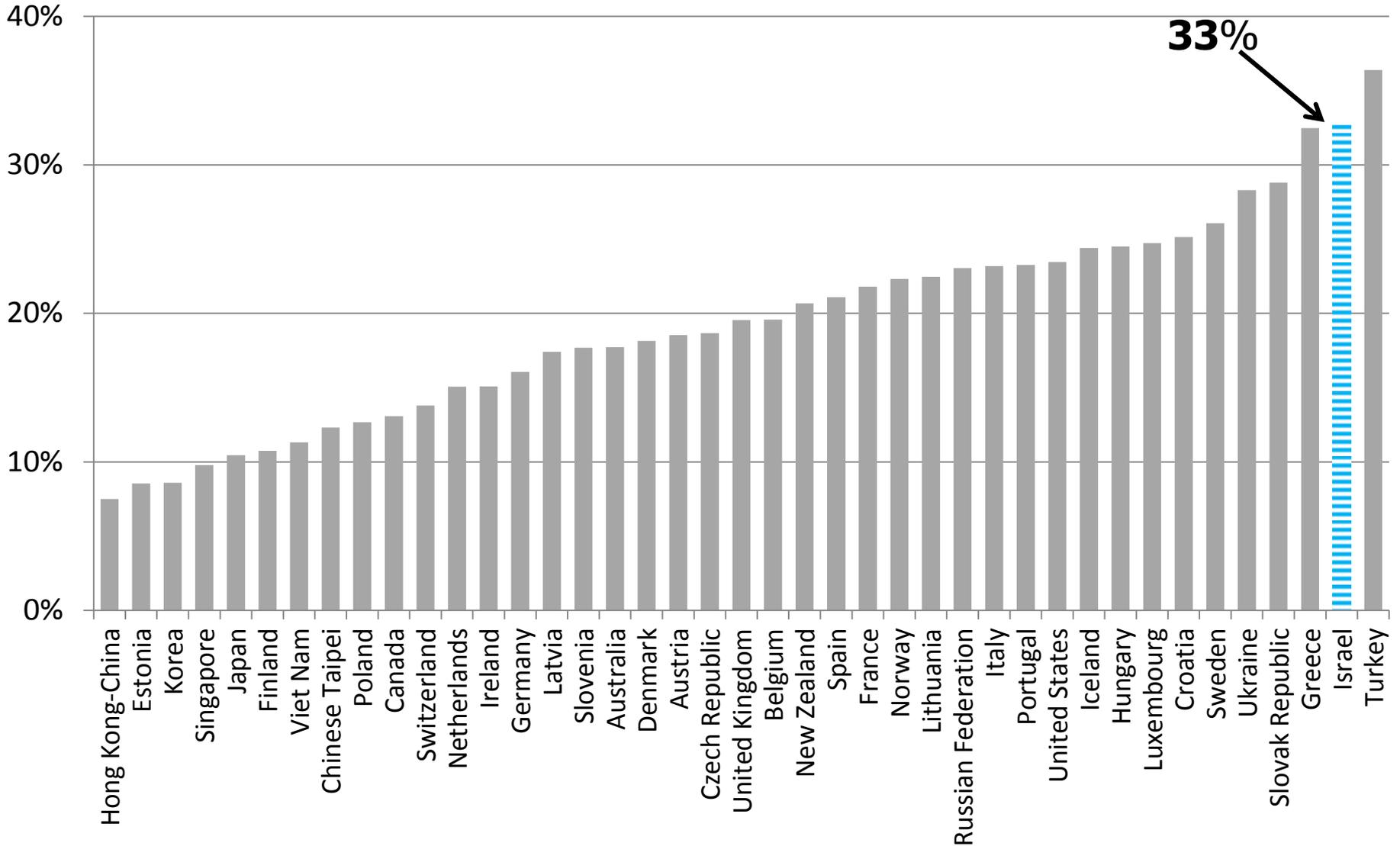
Example of Value of Improvement - 1

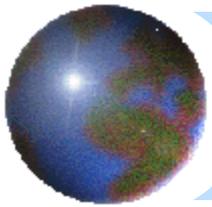
- Assuming historical patterns hold
- Present value over 80 years
- Improvement plan
 - Universal basic skills
 - 15 years (by 2030)

- Israel moves to **universal basic skills**



Students Lacking Basic Skills

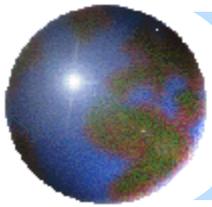




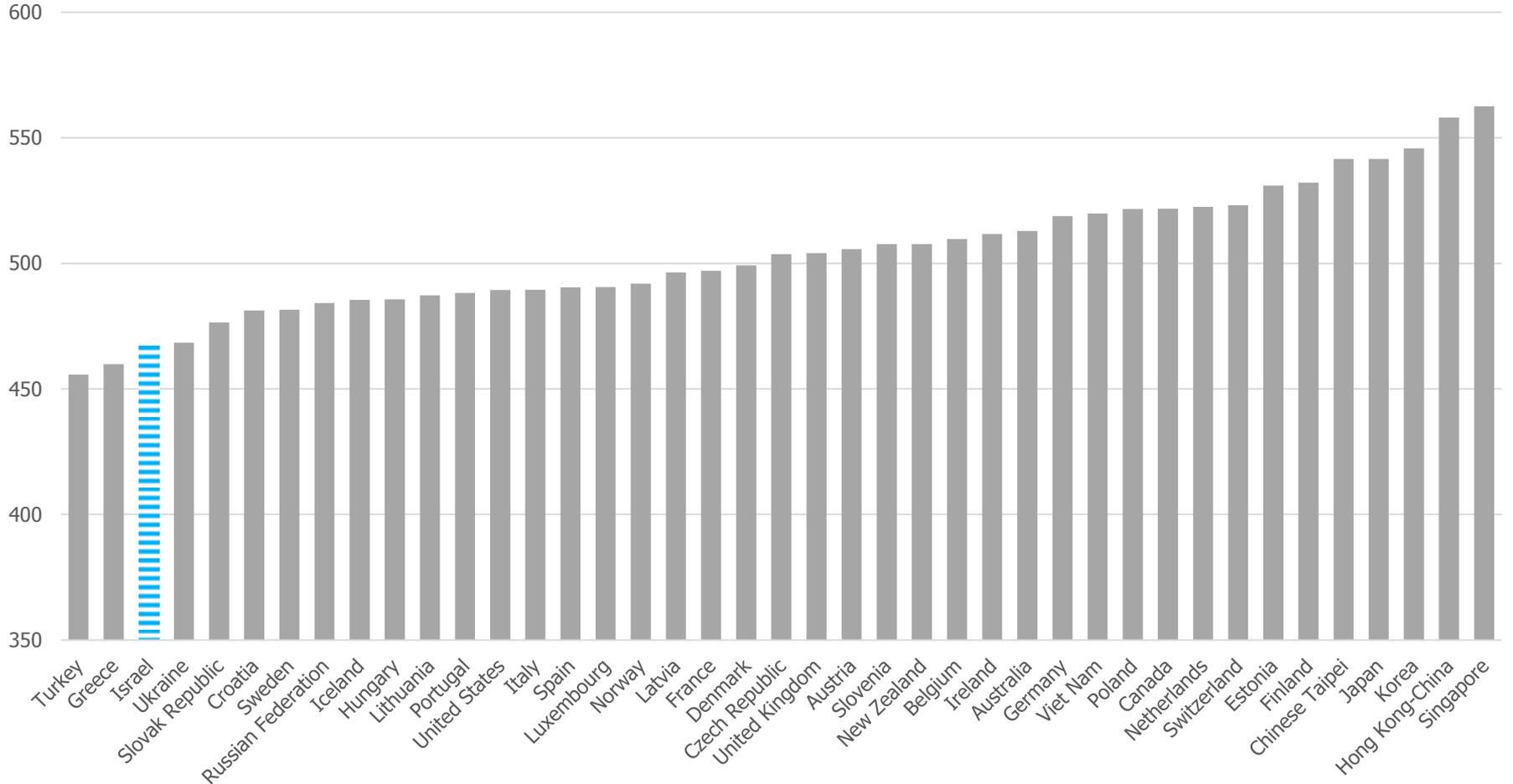
Example of Value of Improvement - 1

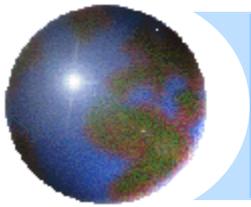
- Assuming historical patterns hold
- Present value over 80 years
- Improvement plan
 - Universal basic skills
 - 15 years (by 2030)

- 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)

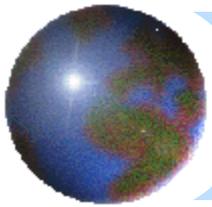




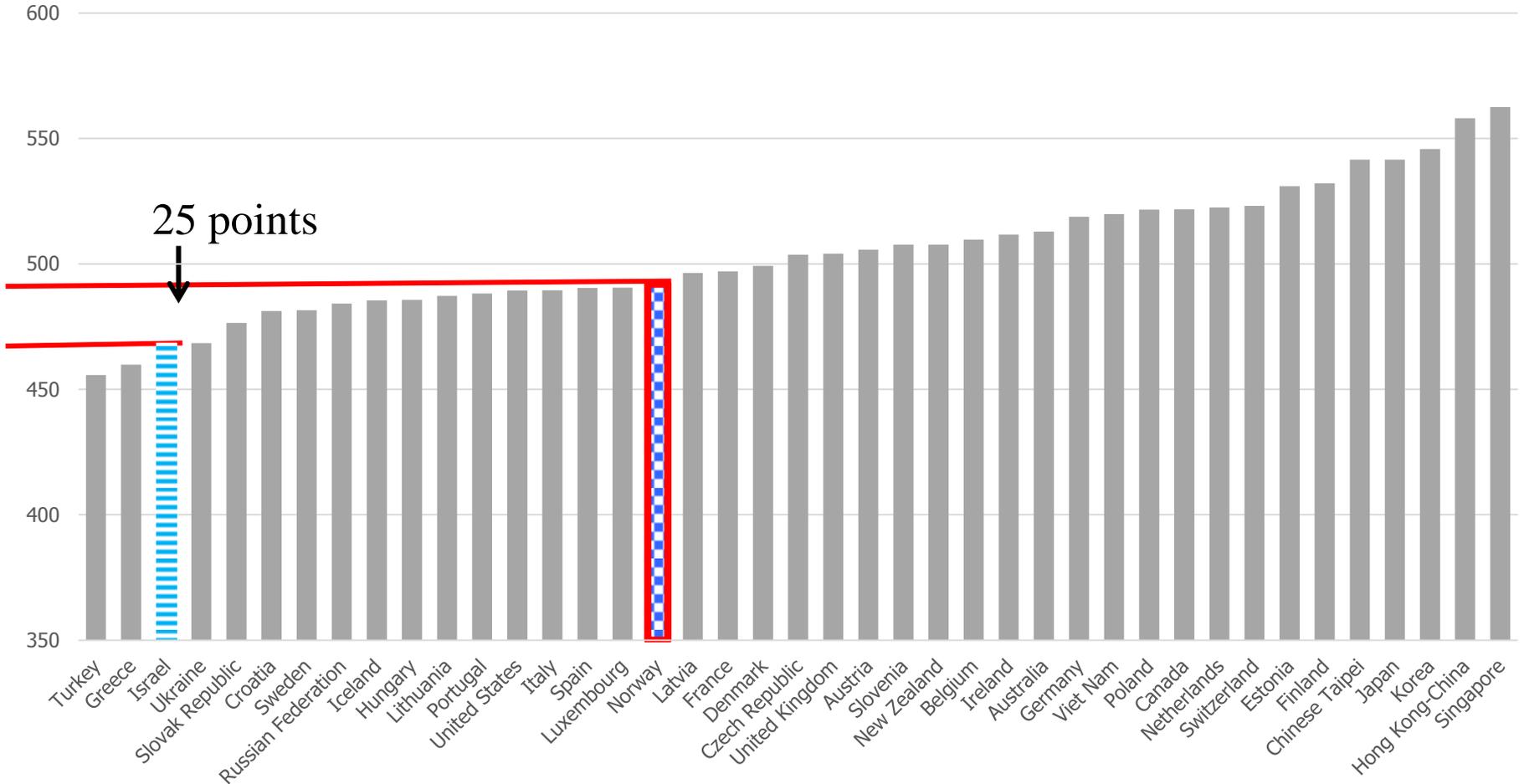
Value of Improvement - 2

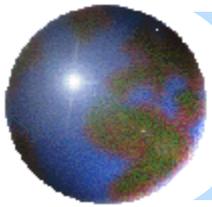
- Assuming historical patterns hold
- Present value over 80 years
- Improvement plan
 - 25 points on PISA
 - 15 years (by 2030)
- Israel moves to Norway level





PISA Math+Science Performance (2012)

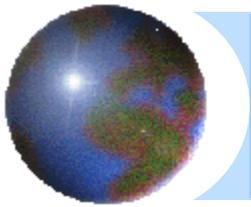




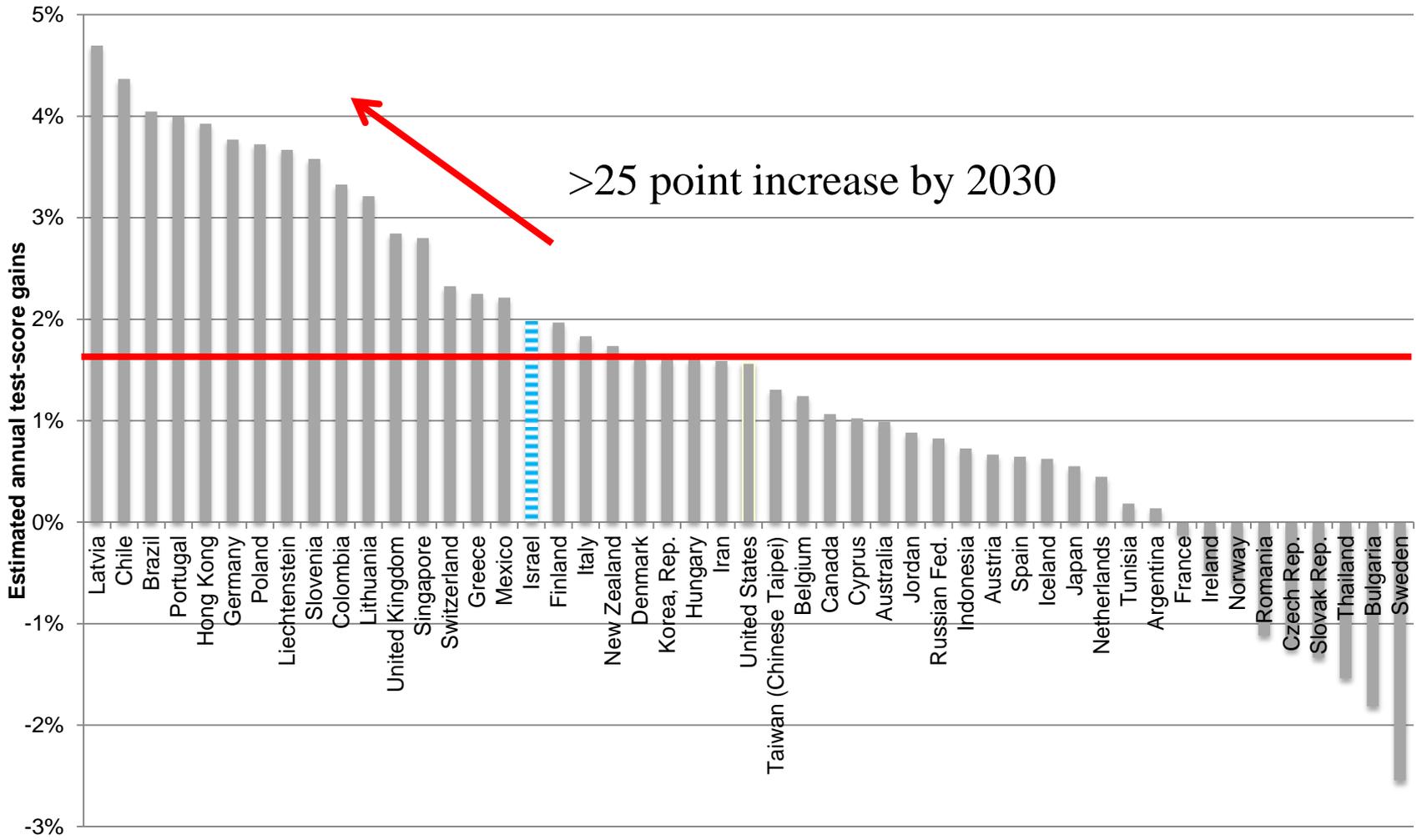
Example of Value of Improvement - 2

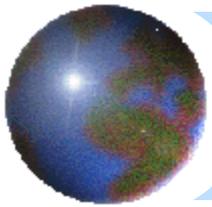
- Assuming historical patterns hold
- Present value over 80 years
- Improvement plan
 - 25 points on PISA
 - 15 years (by 2030)

- 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

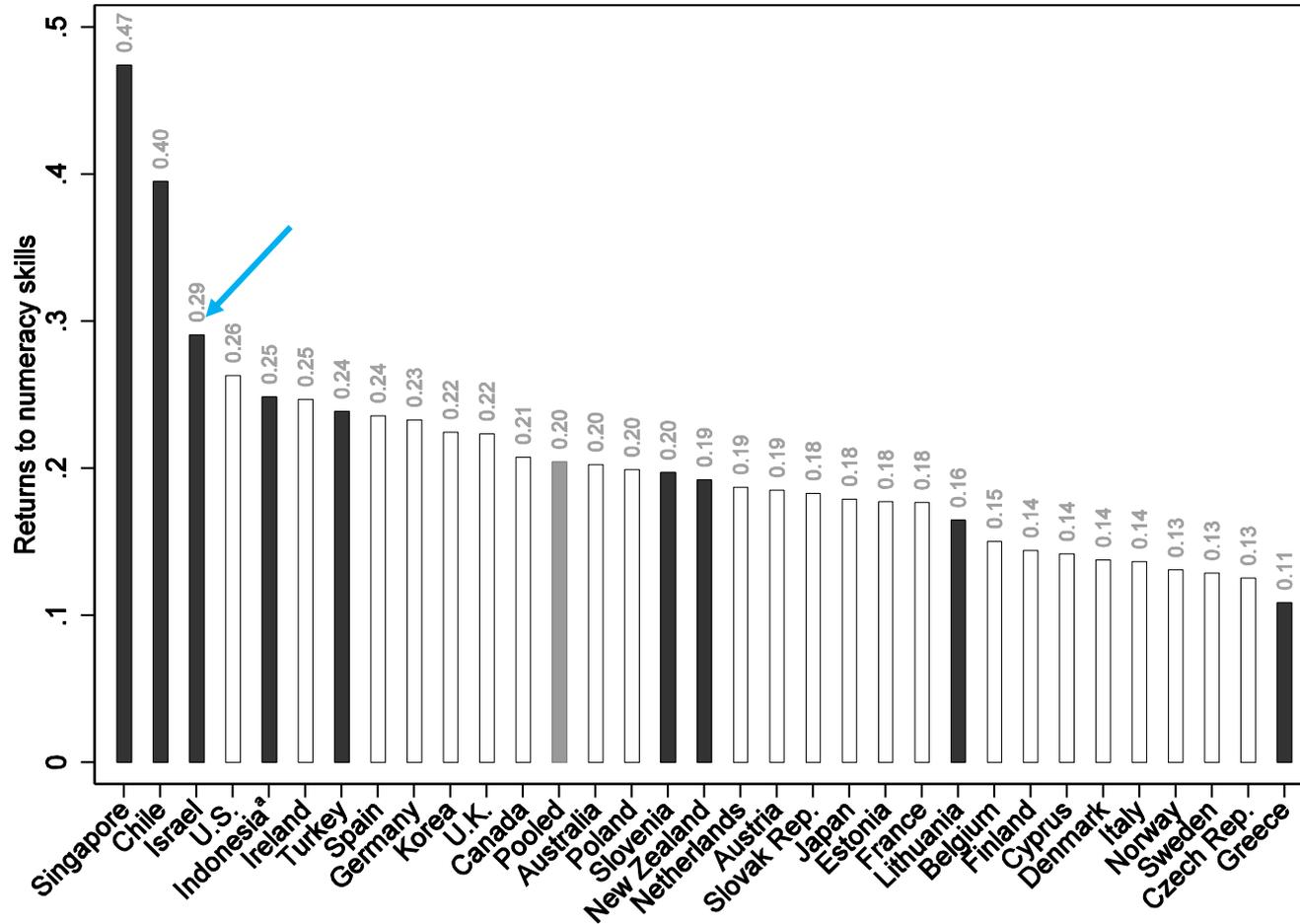


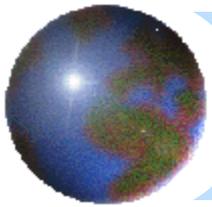
Achievement Growth, 1995-2009



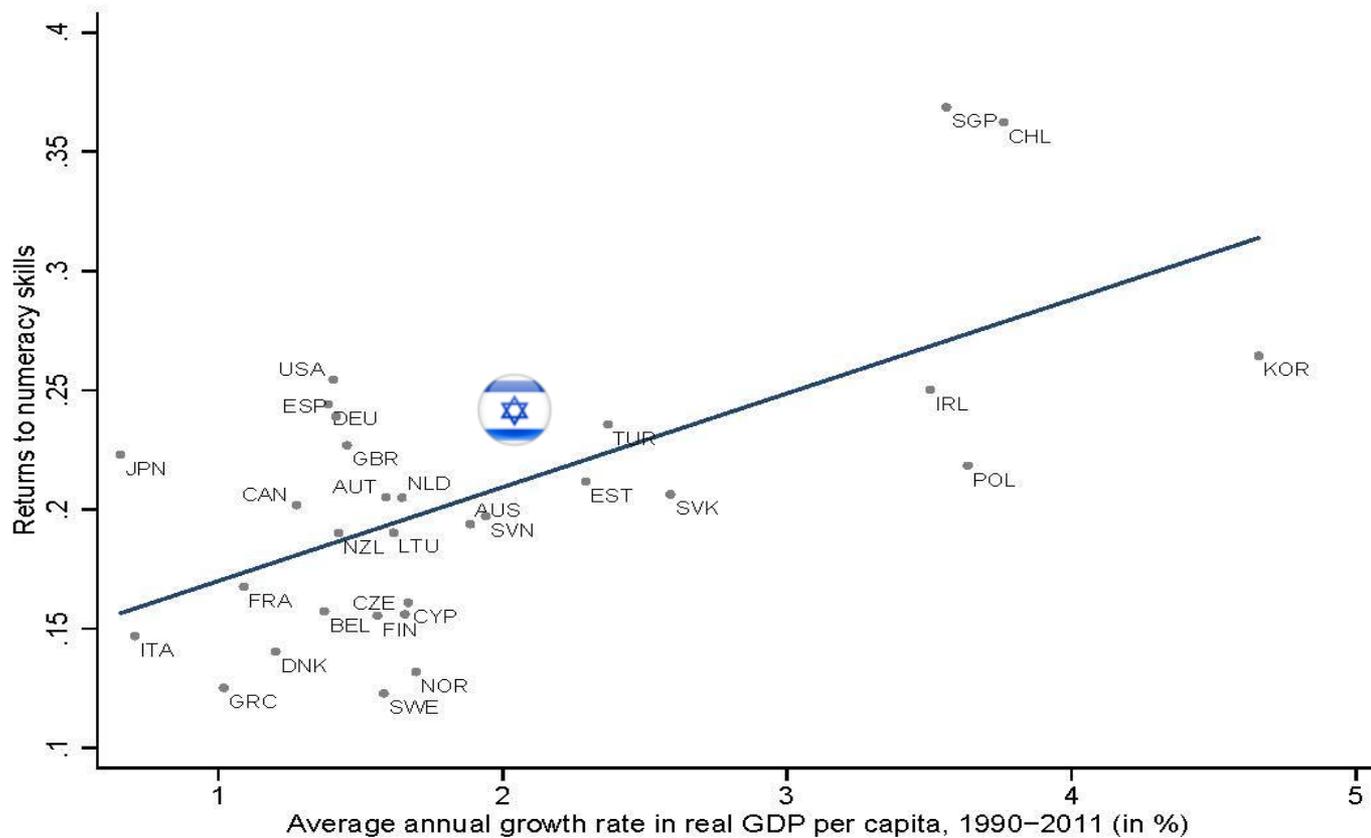


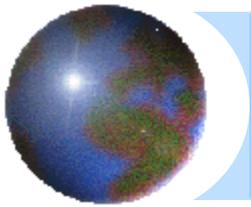
Returns to Skills – PIACC Round 2



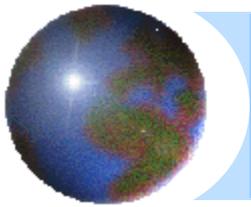


Returns to Skills across PIAAC Countries



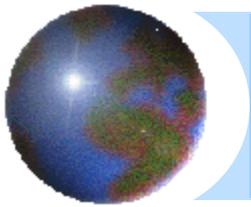


Are there things to be done?

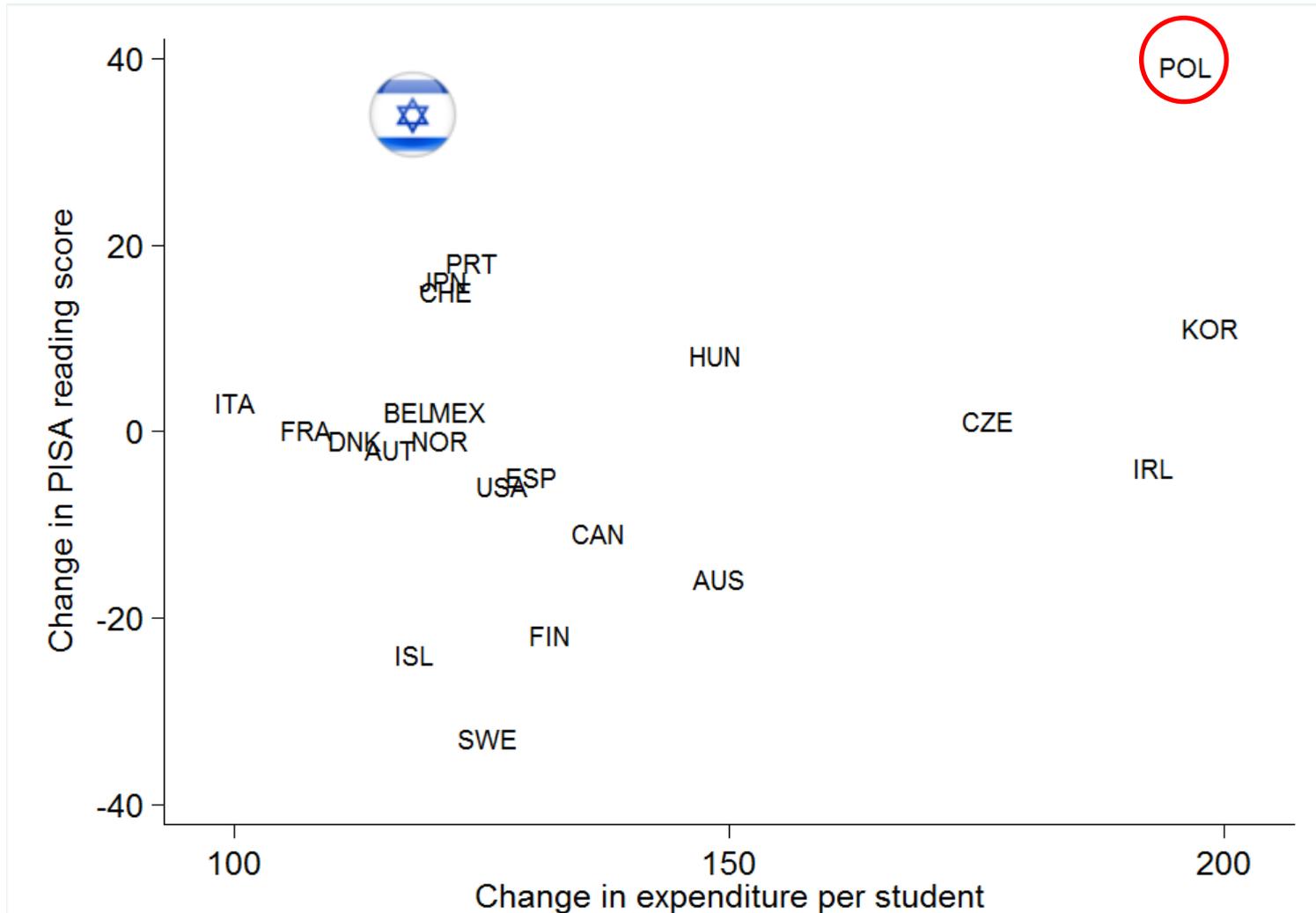


Resource Policies

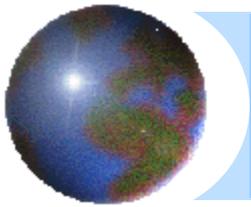
- Little evidence of success
 - Cross country evidence
 - Within country – developed
 - Within country – developing



Changes in educational spending and in student achievement across countries

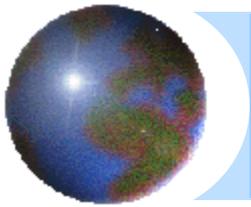


Scatter plot of the change in expenditure per student, 2000-2010 (constant prices, 2000 = 100) against change in PISA reading score, 2000-2012. $r = -0.22$ but $r = -0.008$ without Poland.



Resource Policies

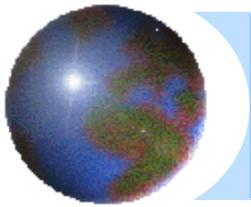
- Little evidence of success
 - Cross country evidence
 - Within country – developed
 - Within country – developing
- Consistent with detailed analysis
 - class size
 - school characteristics



Resource Policies

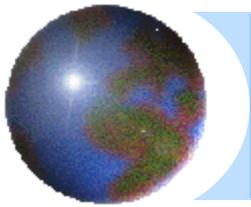
- Does not say “resources never have effect”
- Does not say “resources cannot have effect”

No expectation within current incentive structure



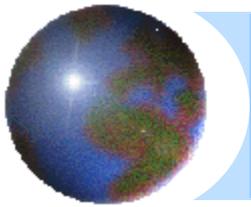
Teacher Quality

- 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

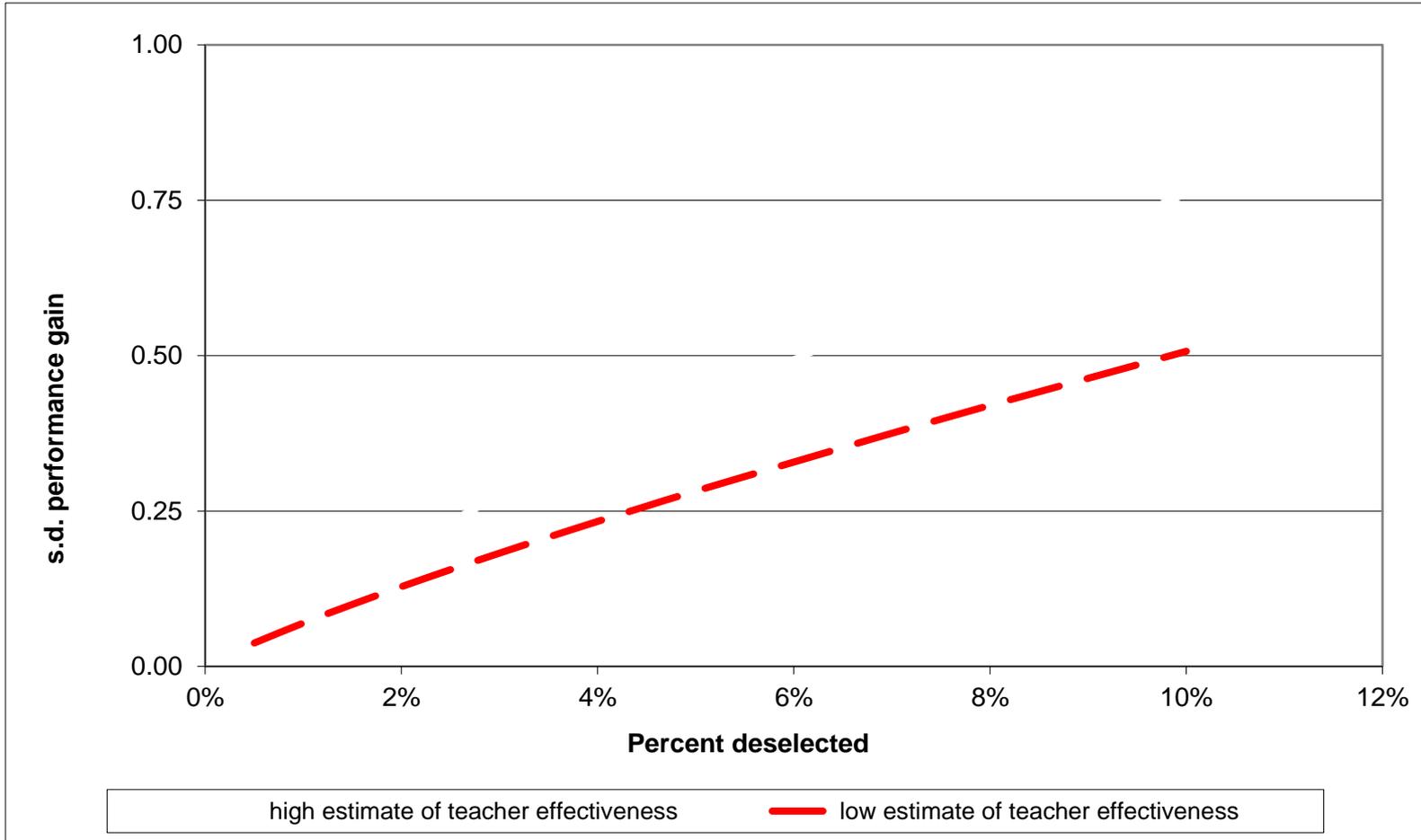


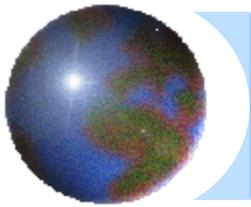
Institutional Reforms Supported by Evidence

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

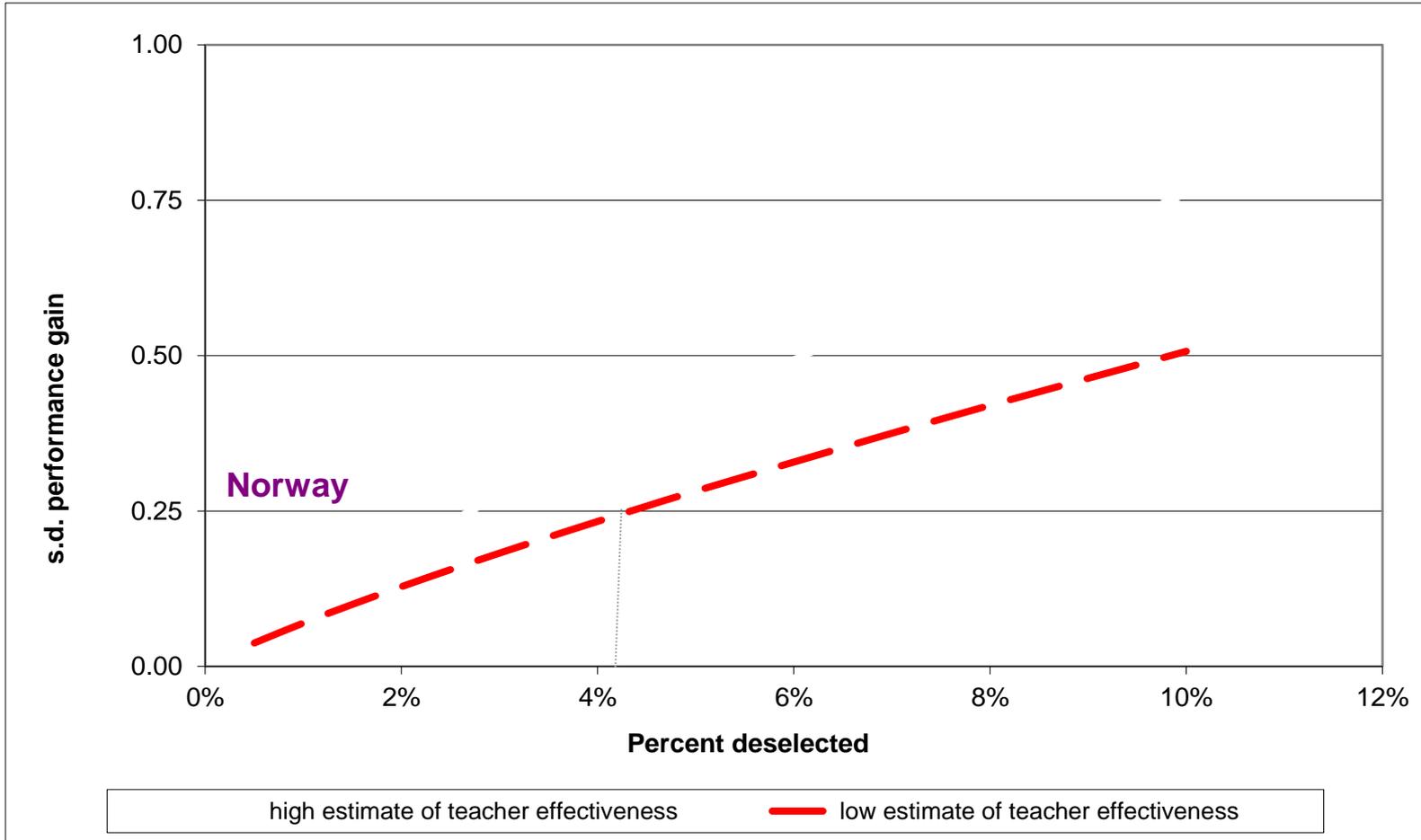


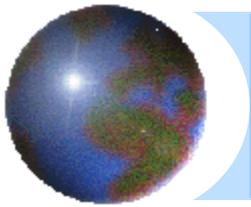
Alternative Estimates of Least Effective Teachers (United States distribution)



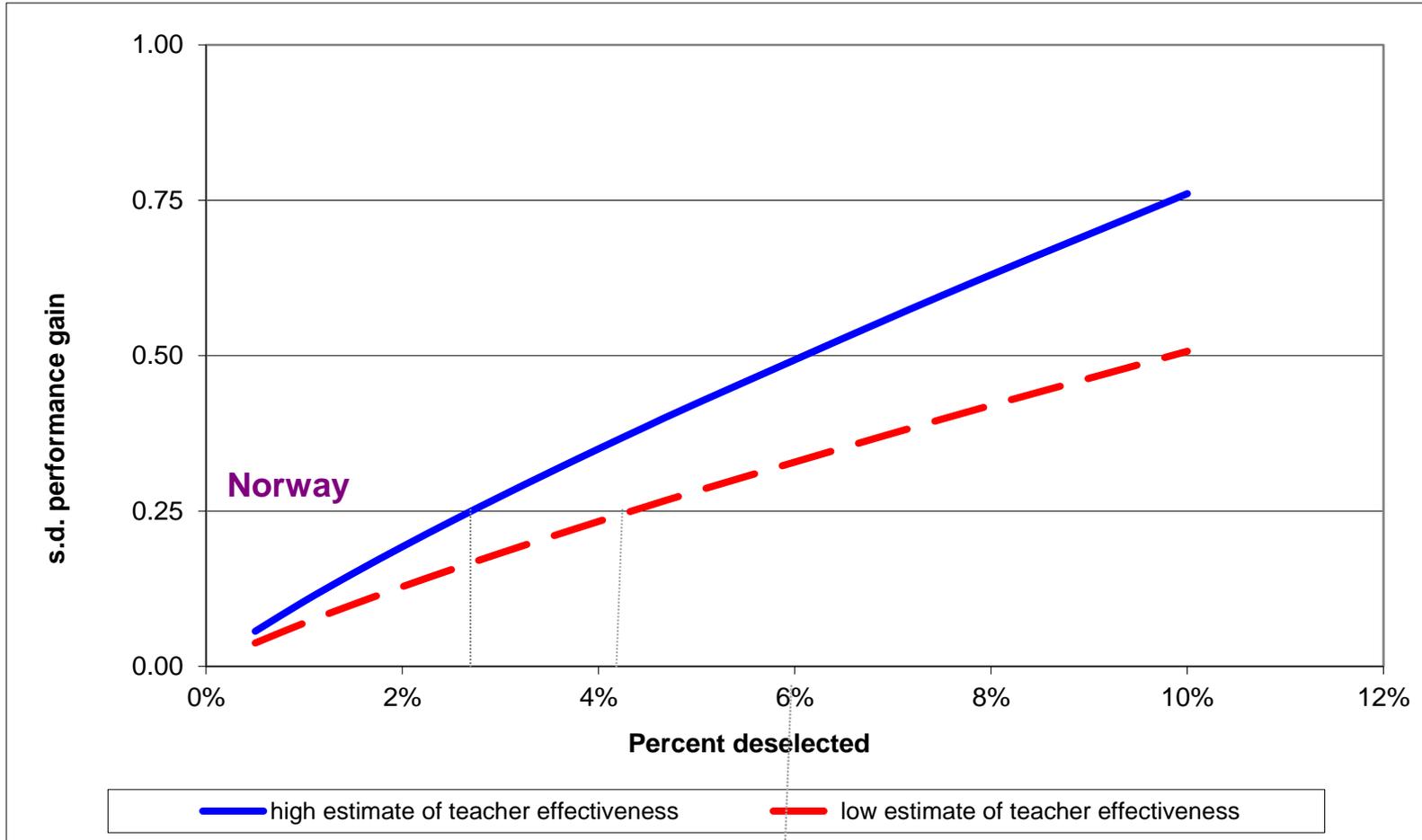


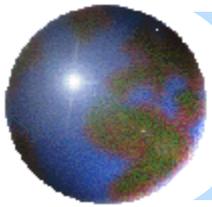
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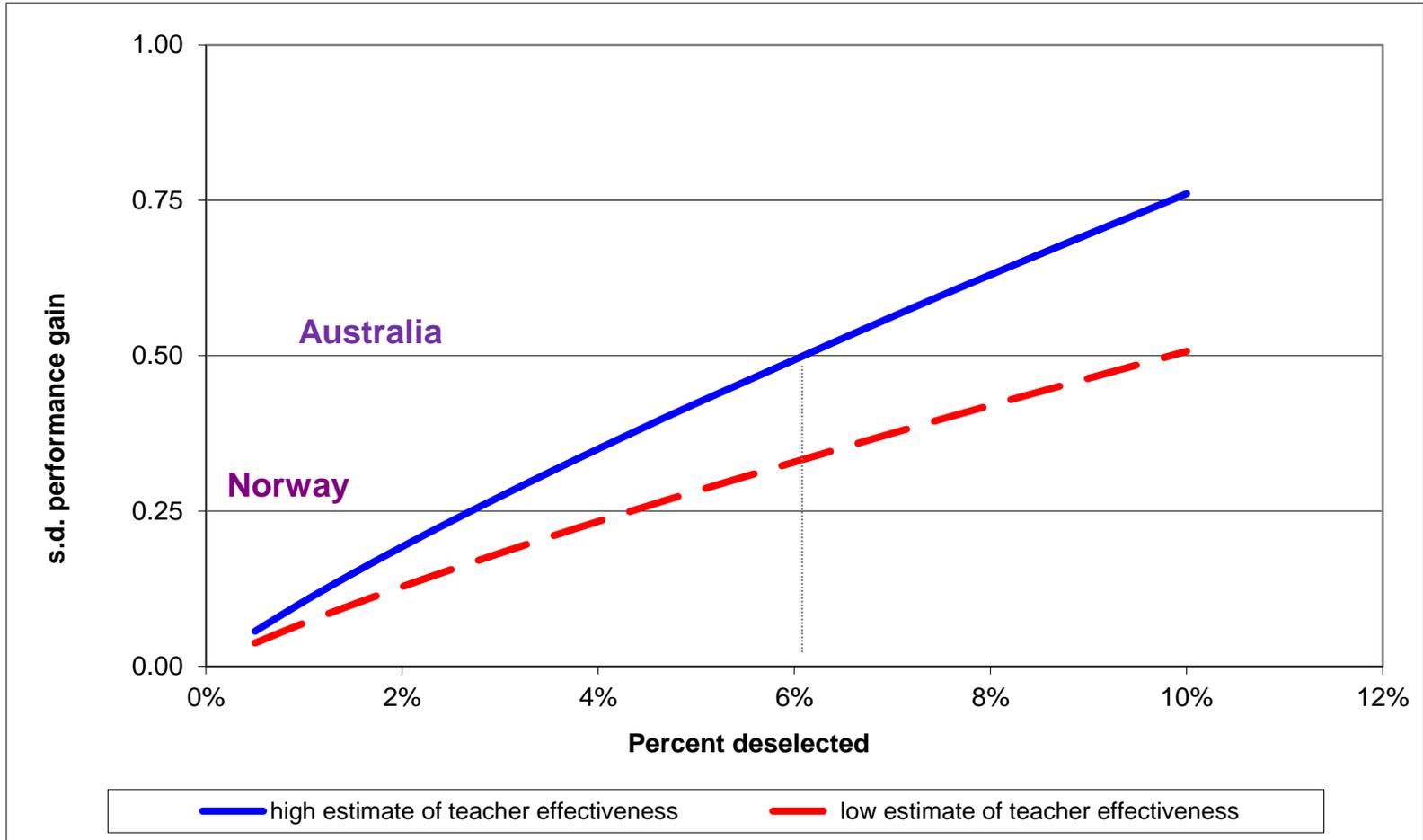


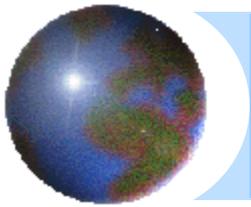
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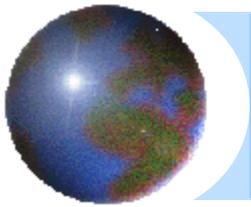




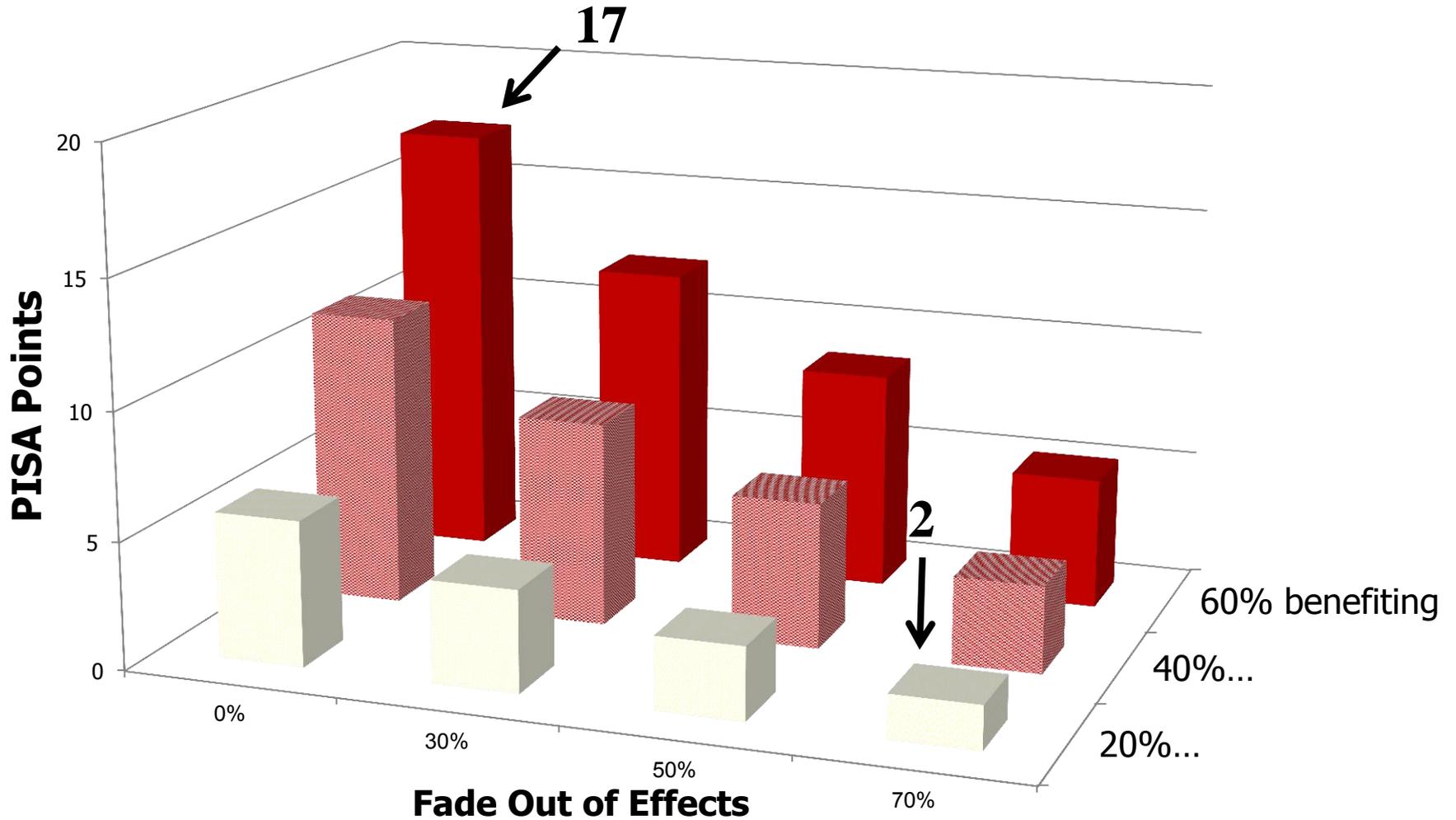
Preschool – Promise and Issues

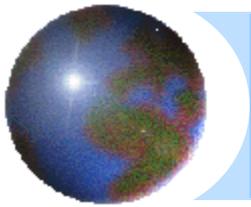
- Evidence of success
 - Strongest with demonstration programs
 - Varied across operational programs

- Key uncertainties
 - Relevant population
 - Dimensions of program



PISA Points with Varying Programs

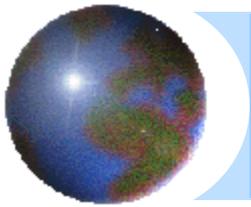




Conclusions

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



Sources

The Knowledge Capital of Nations

Education and the Economics of Growth

Eric A. Hanushek and Ludger Woessmann

CESifo Book Series



Universal Basic Skills
WHAT COUNTRIES STAND TO GAIN



 **OECD**