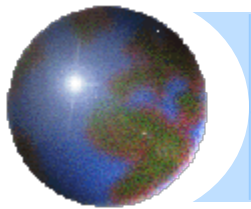# Globally Challenged: Are U. S. Students Ready to Compete?

Paul E. Peterson, Ludger Woessmann,
Eric A. Hanushek, and Carlos Lastra

Learning from the International Experience
Program on Education Policy and Governance
Harvard University
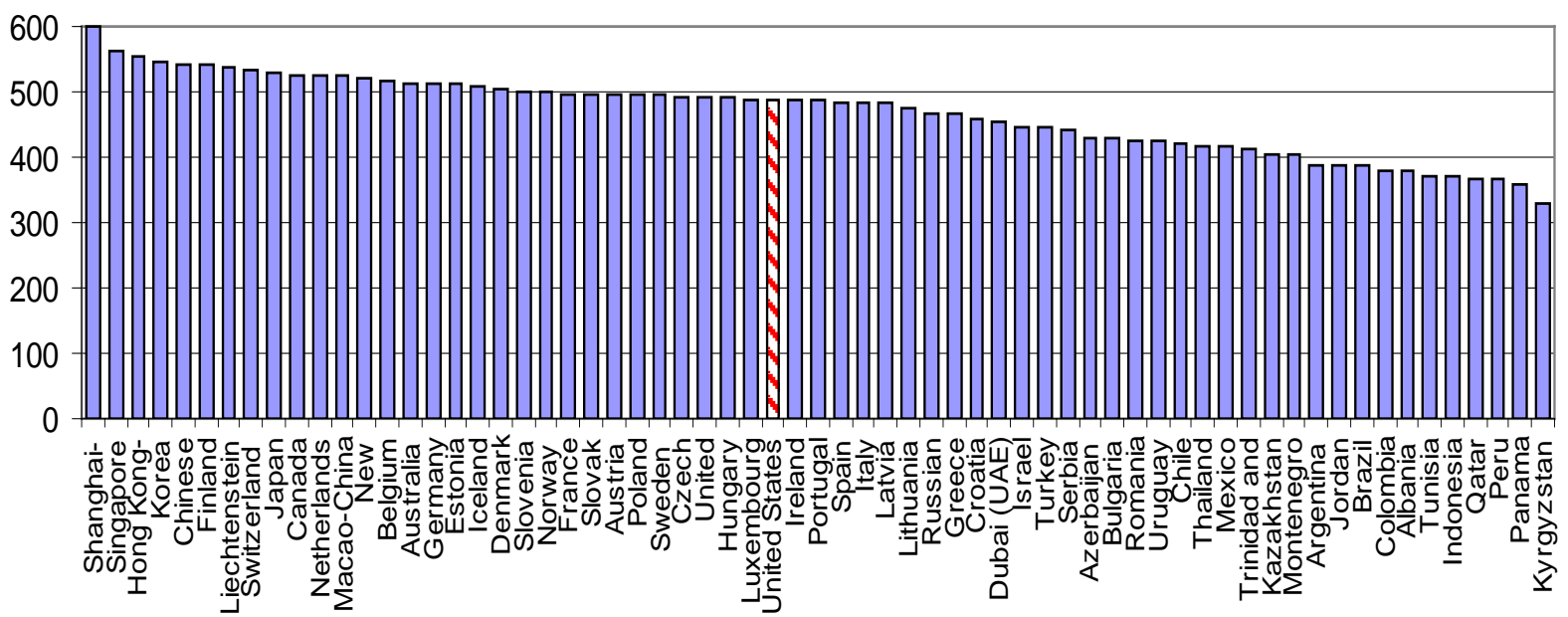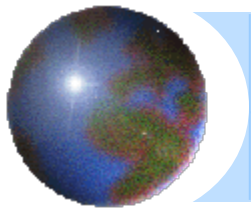**August 2011**

International Comparisons

- Extensive assessments of math, science, and reading skills

- International comparisons largely ignored by U.S.

- U.S. scores portend bleak future

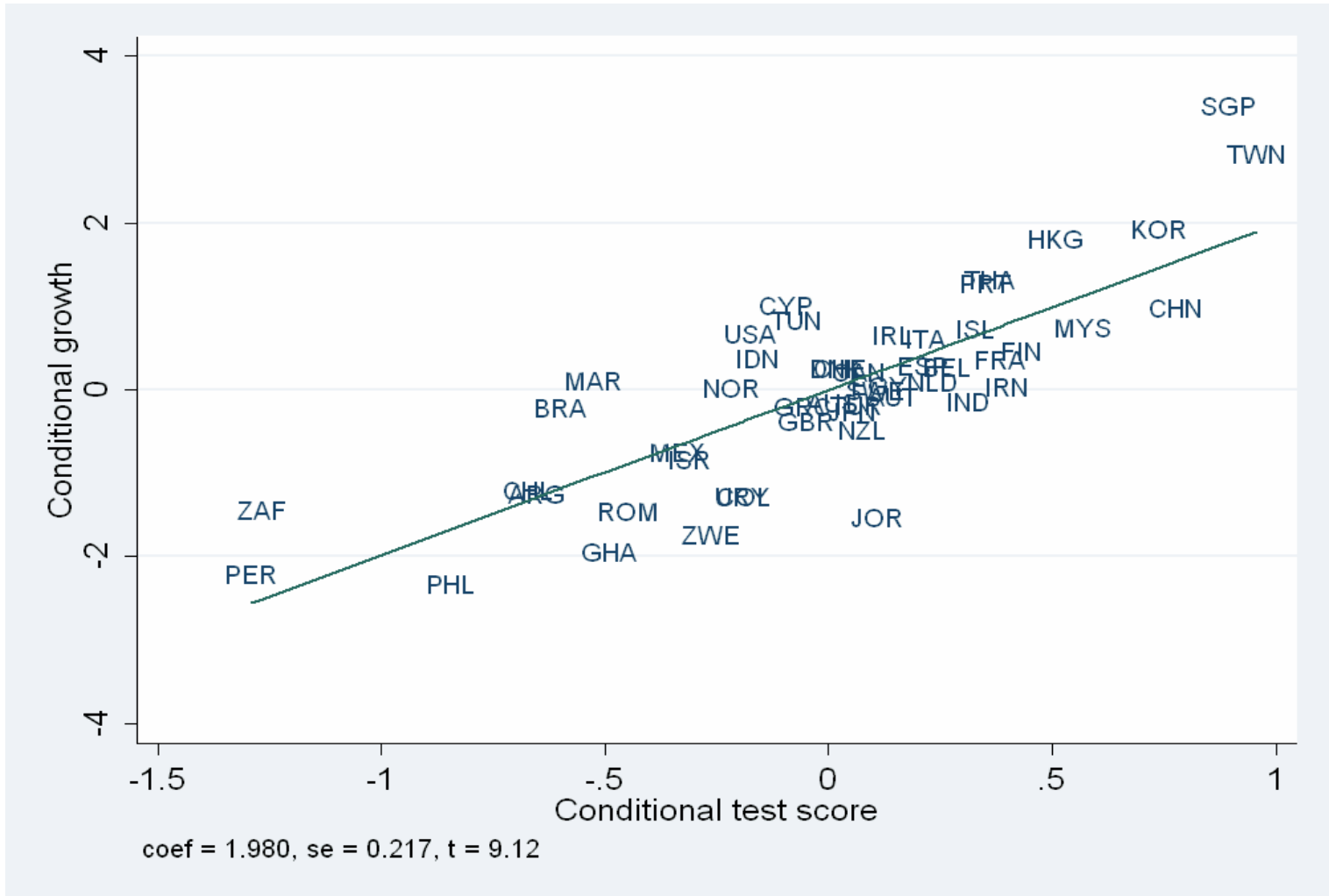- Current recession costs dwarfed by schooling crisis
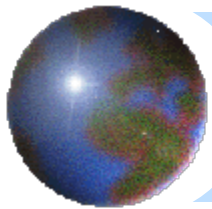
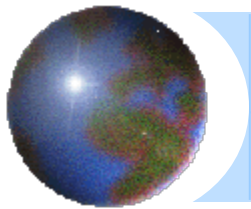# International Math Rankings – PISA 2009
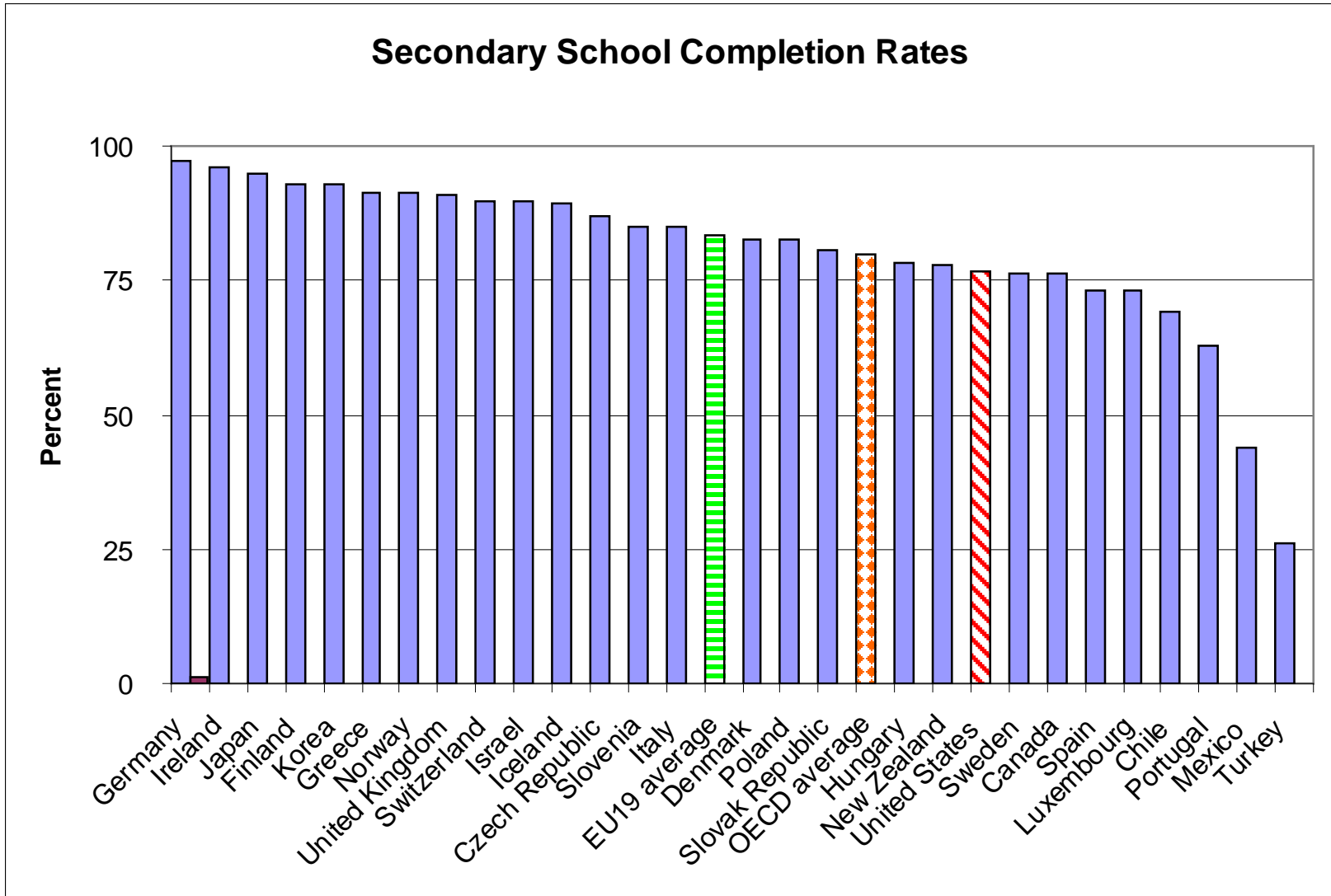

PISA Math Performance 2009

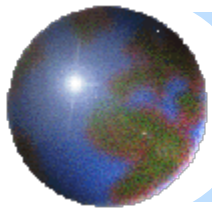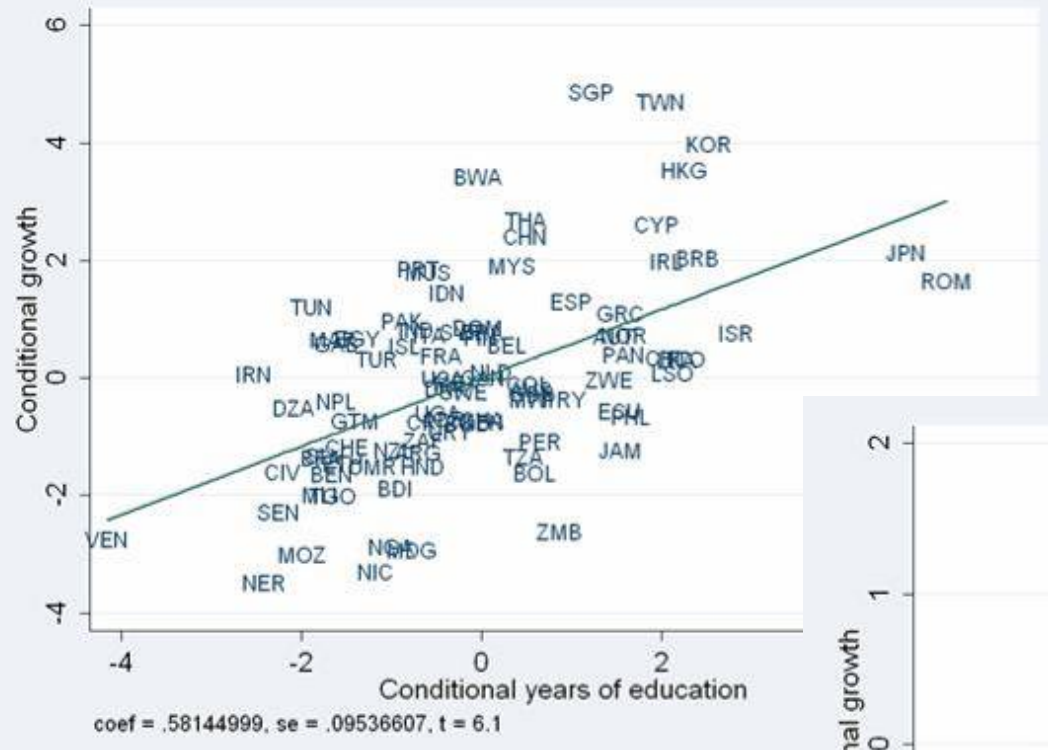# Cognitive Skills and Economic Growth

coef = 1.980, se = 0.217, t = 9.12

Secondary School Completion
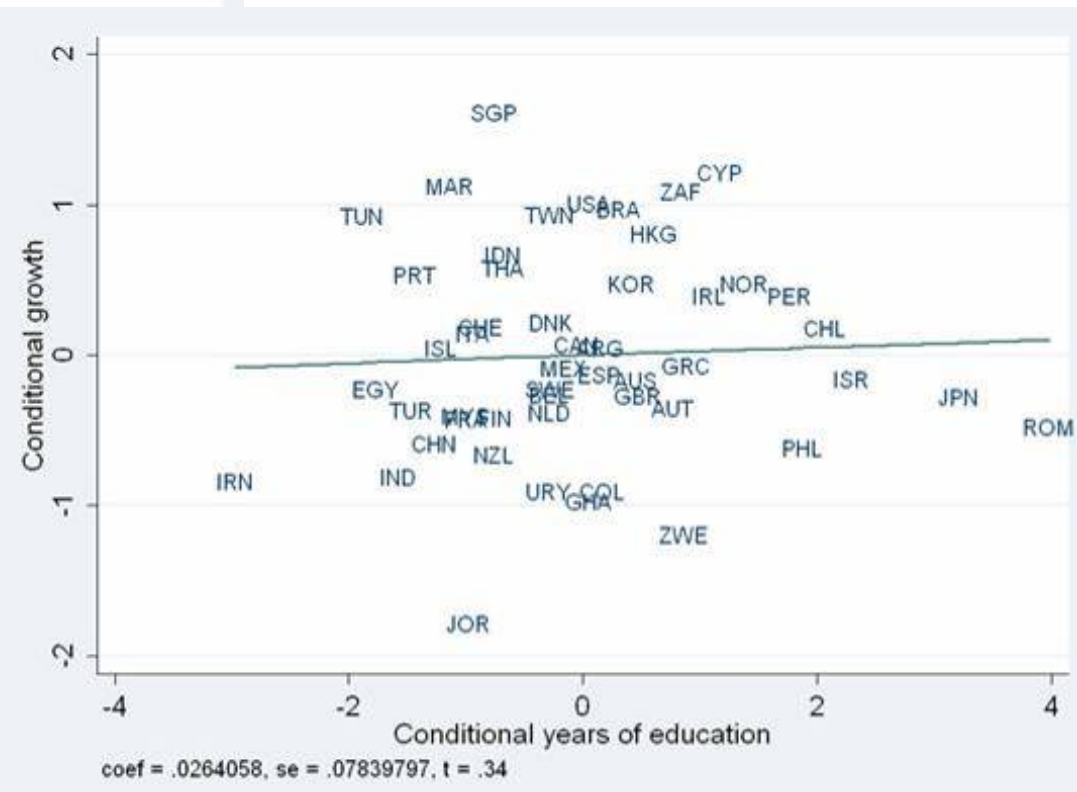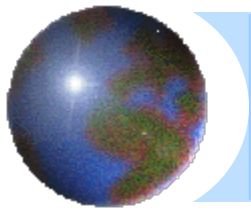

Secondary School Completion Rates

Years of Schooling and Economic Growth
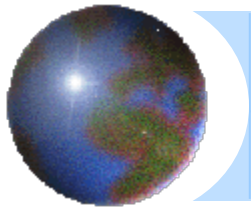

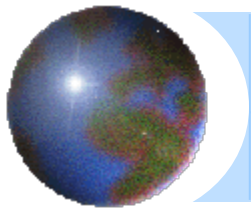With quality control

Without quality control

Projections of Value of Improved Schooling

- Assume future looks like past

- Improve schools over 20 years

- Calculate added GDP based on history

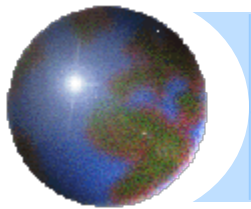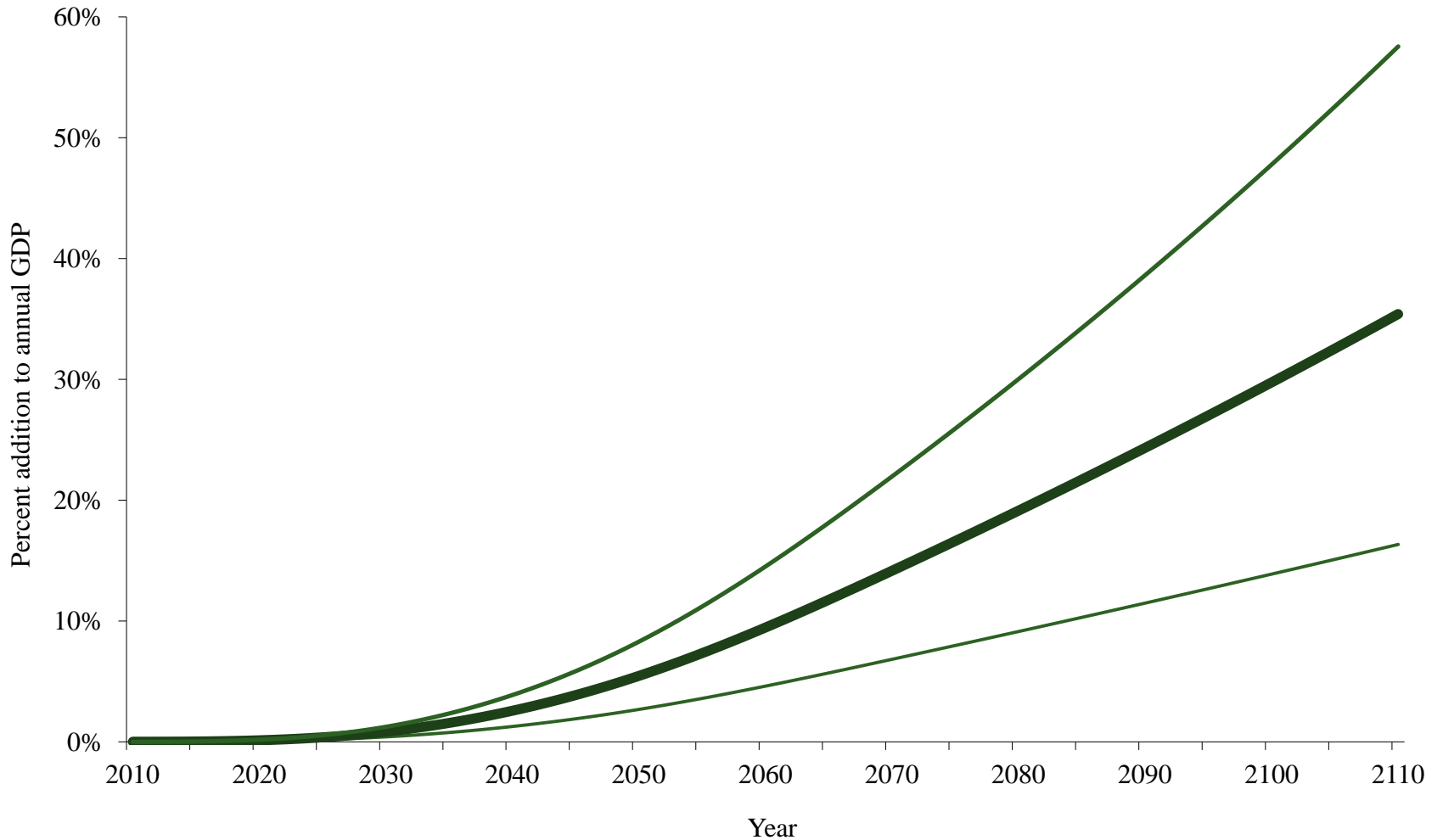- Discount future over lifetime of somebody born today

Growth Projections

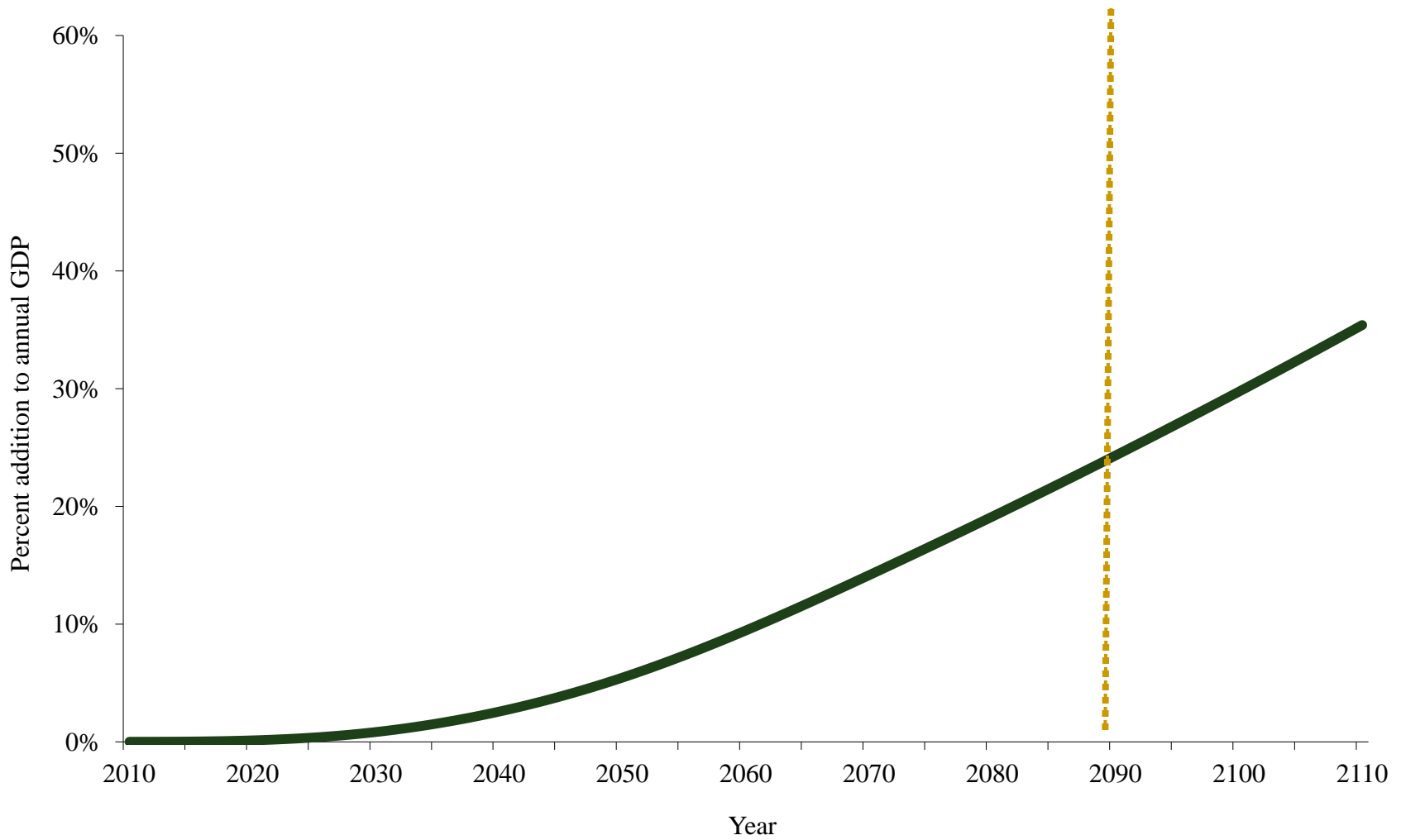- Scenario 1
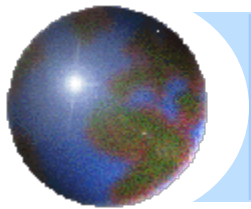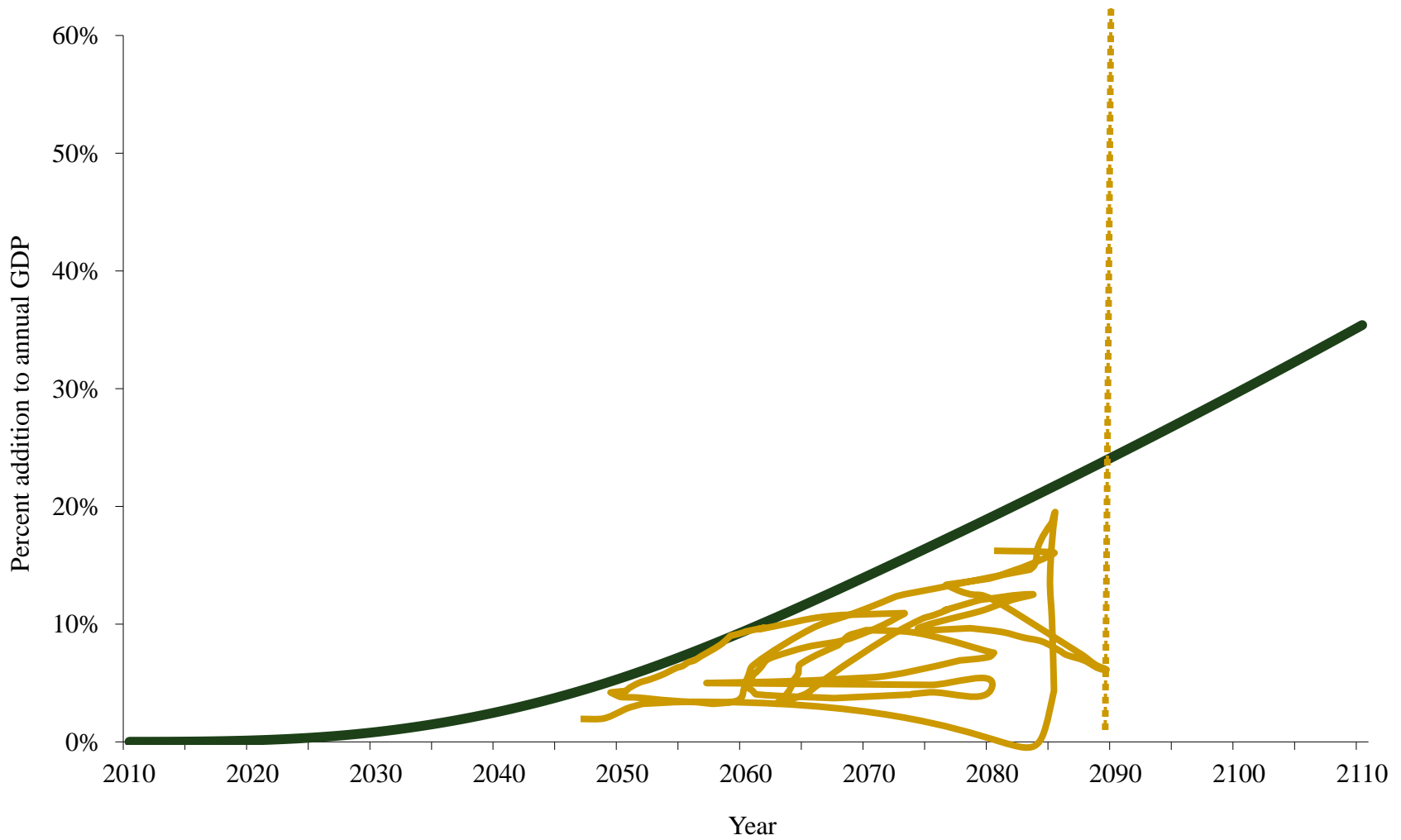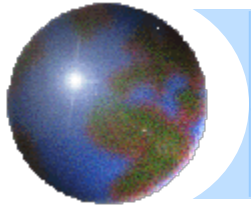 - Achievement improves by 25 points (1/4 s.d.)

Annual Gains from 25 PISA-Points Improvement

Annual Gains from 25 PISA-Points Improvement

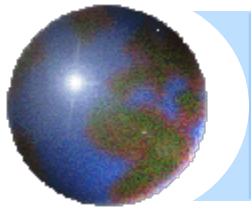# Annual Gains from 25 PISA-Points Improvement

Year

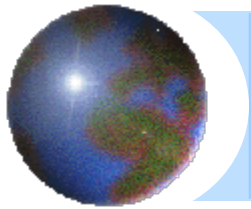*Percent addition to annual GDP*

Growth Projections

- Scenario 1
  - Achievement improves by 25 points (1/4 s.d.)
    - PV = 288% of current GDP
   - **$44 trillion for United States**

Growth Projections

- Scenario 1
  - Achievement improves by 25 points (1/4 s.d.)

- Scenario 2
  - U.S. achieves at level of Finland
    - PV = 737% of current GDP in United States
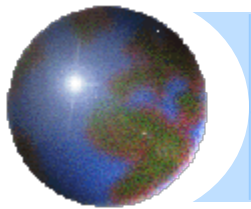   - **$112 trillion for United States**

Growth Projections

- Scenario 1
  - Achievement improves by 25 points (1/4 s.d.)

- Scenario 2
  - U.S. achieves at level of Finland

- Scenario 3
  - All students to 400 points (basic skills) [19% in U.S.]
    - PV = 567% of current GDP in United States
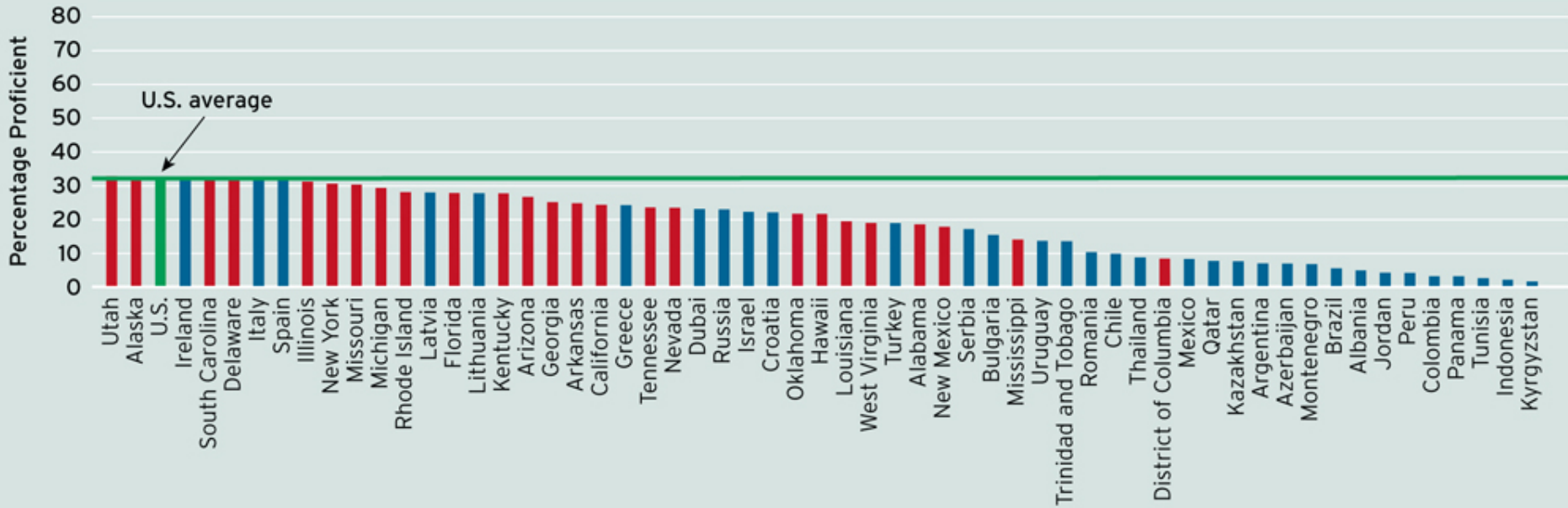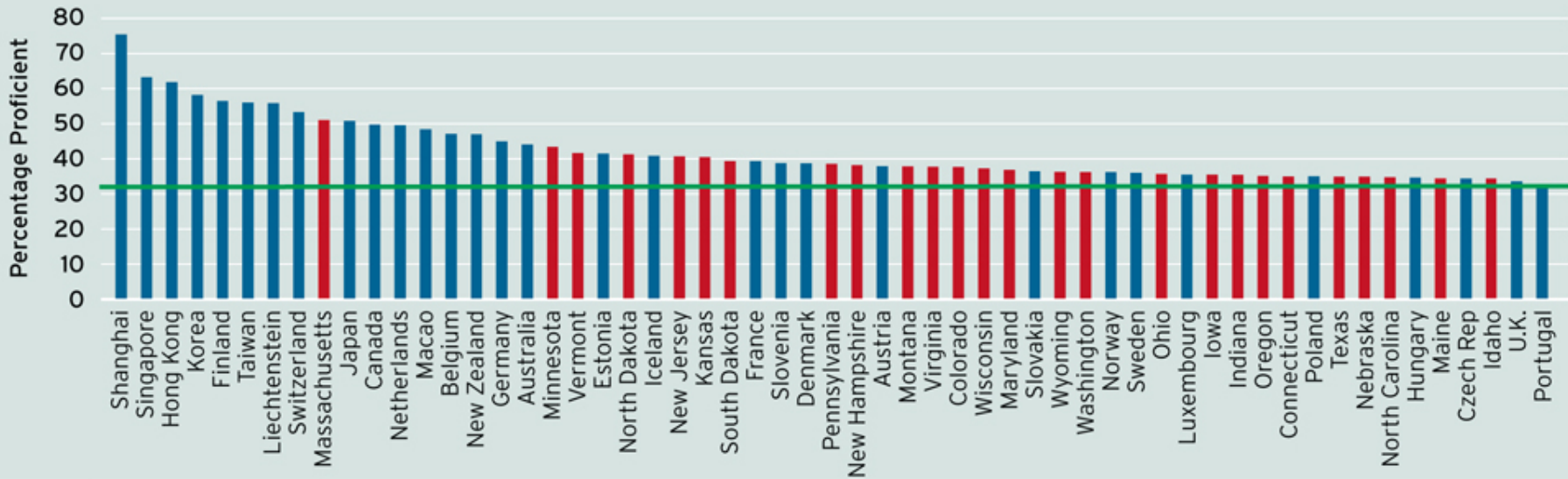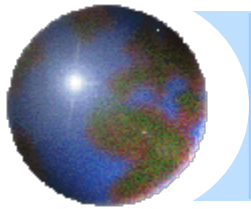   - **$86 trillion for United States**
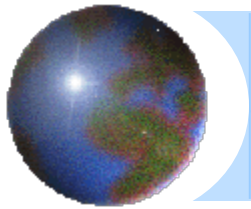
Math League Tables -- 2009

- 32% proficient in U.S. (NAEP standard)
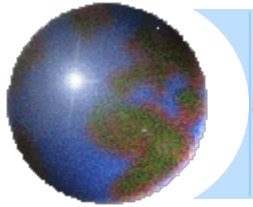 - 32nd out of 65 countries

Proficient in Math – PISA 2009

Math League Tables -- 2009

- 32% proficient in U.S. (NAEP standard)
    - 32nd out of 65 countries

- Massachusetts significantly outperformed by 6

- Minnesota significantly outperformed by 11

California competes with . . .

California competes with . . .
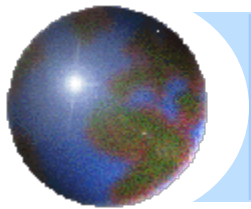
California competes with . . .

Math League Tables -- 2009

- 32% proficient in U.S. (NAEP standard)
  - 32nd out of 65 countries

- Massachusetts significantly outperformed by 6

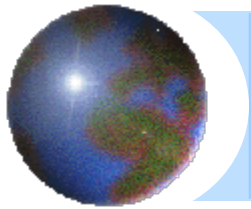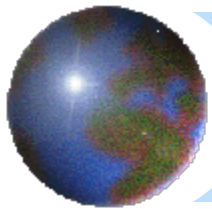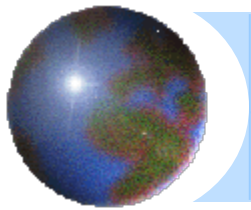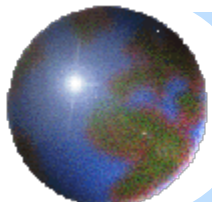- Minnesota significantly outperformed by 11

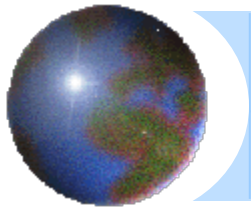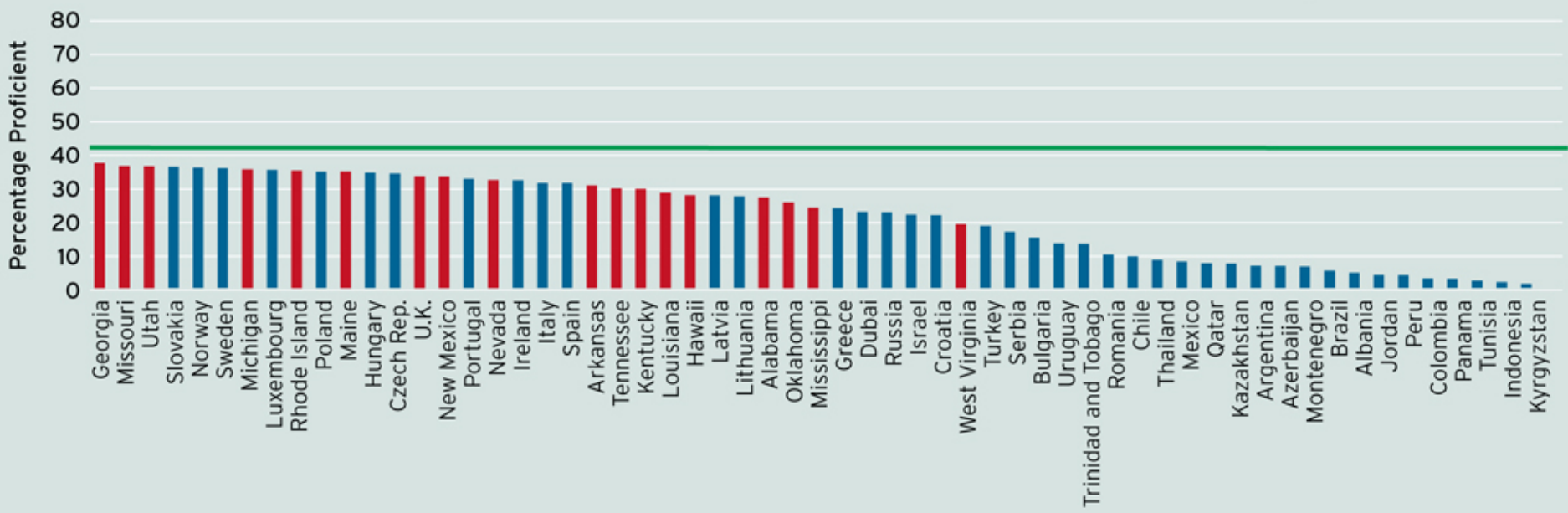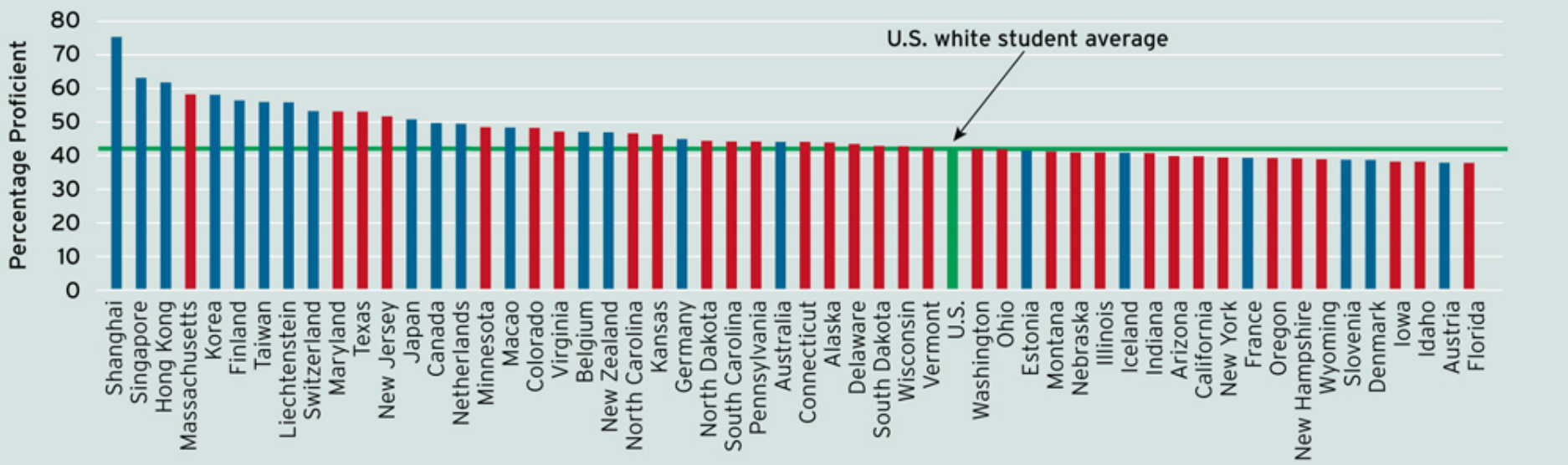- California significantly outperformed by 36

- Not U.S. having especially difficult to educate

- White students

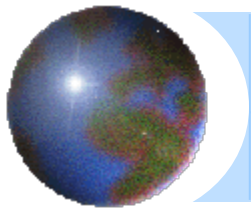# White Students in US vs *All* Internationally

- Not U.S. having especially difficult to educate

- White students
  - 42% proficient; 17th in comparison to *all* in other countries

- College educated parents

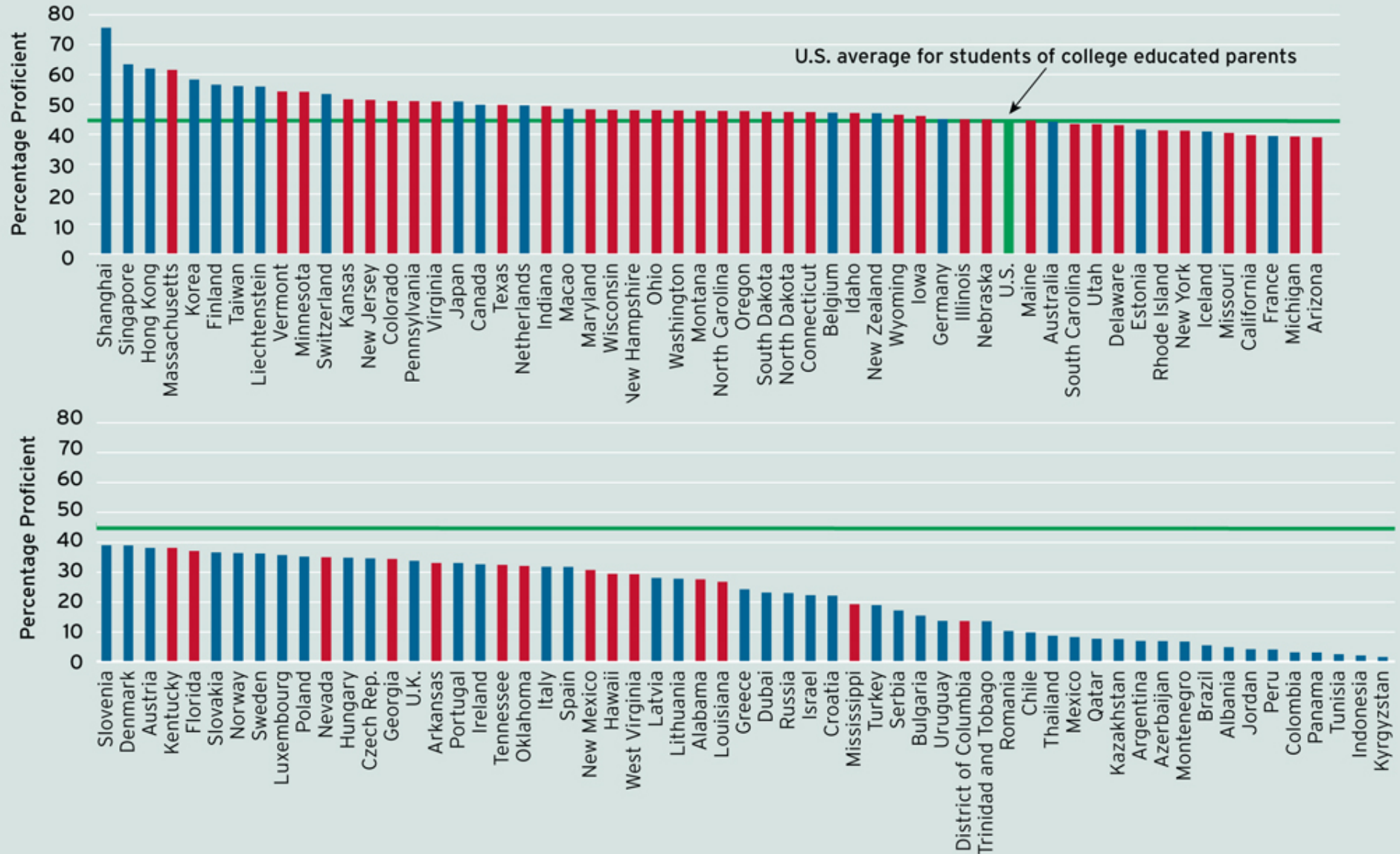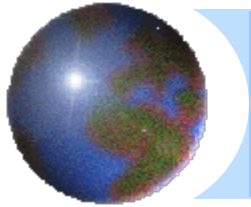Students in US with College Educated Parent vs *All* Internationally

- Not U.S. having especially difficult to educate

- White students
  - 42% proficient; 17th in comparison to *all* in other countries
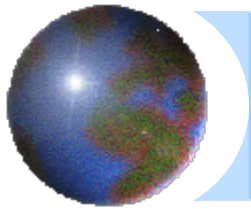
- College educated parents
  - 44% proficient; 16th in comparison to *all* in other countries

- Not a few bad states

- Not a difficult to educate population

- Very different futures for United States

- Easy to ignore, hard to recover