The Returns to Education

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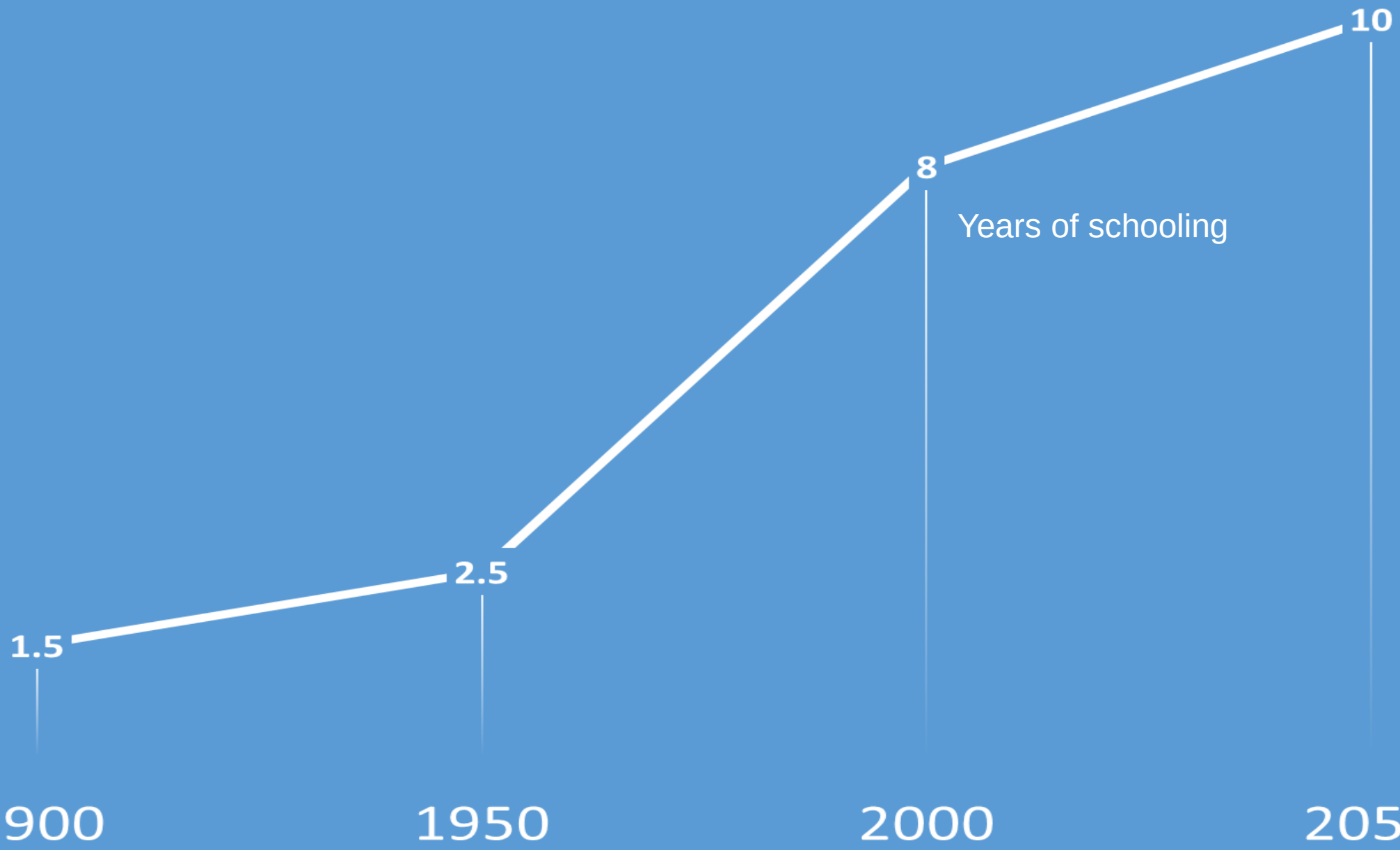
Education

The Education Revolution

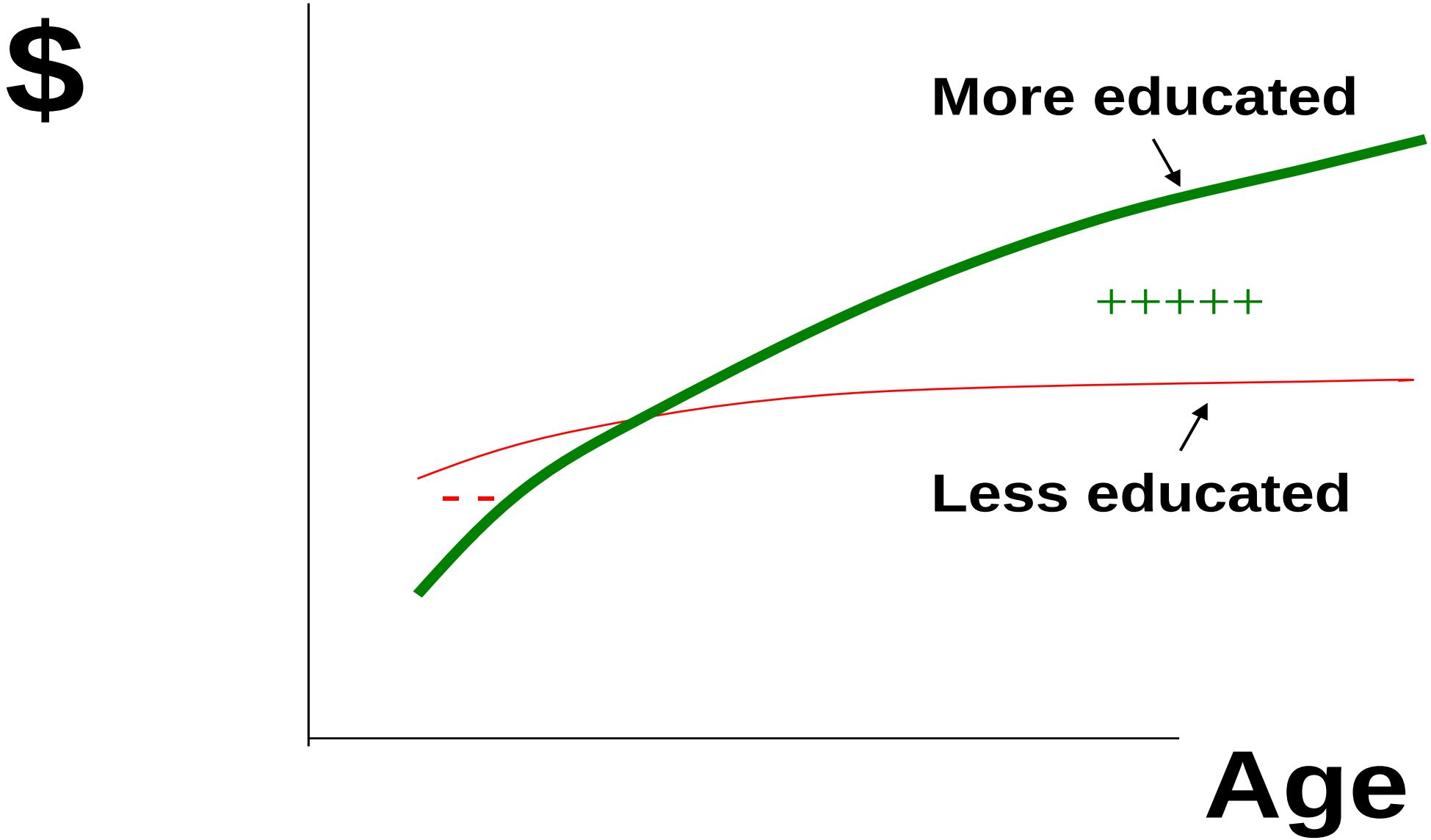


Barro and Lee

But…

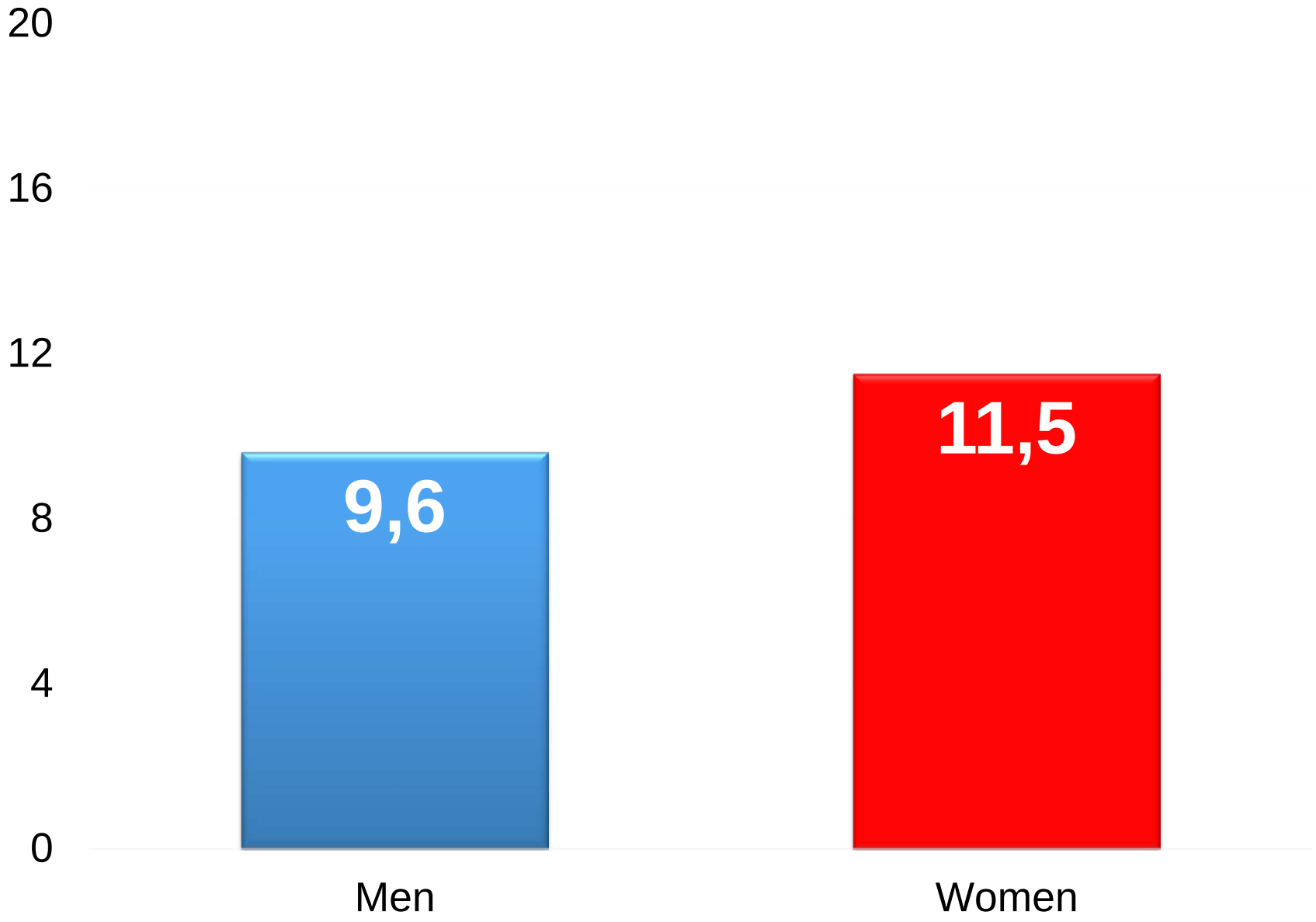
- 264 million out of school
- 262 million in school but can’t read
- 1 in 4 Young People can’t Read

Education Pays

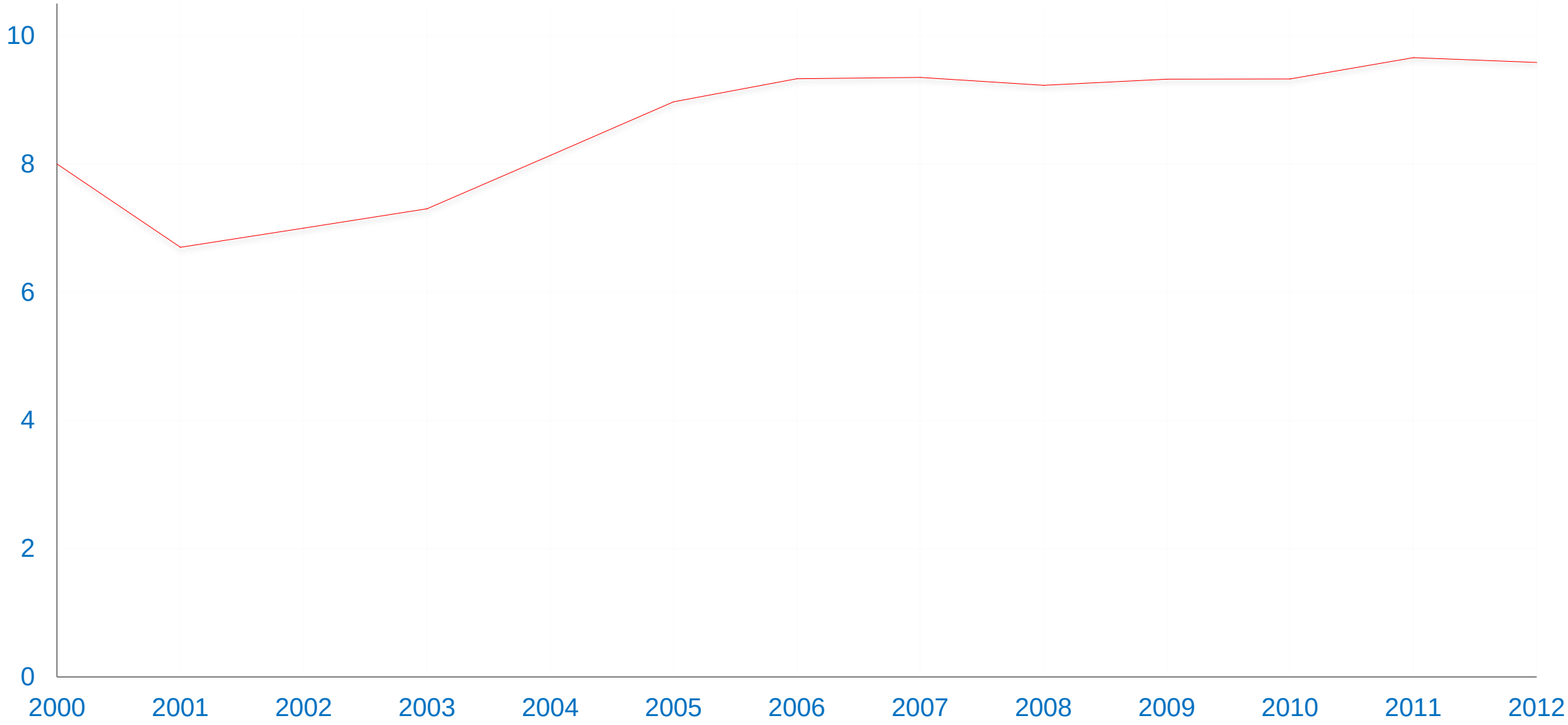


Every Year of Schooling Raises Earnings 9%

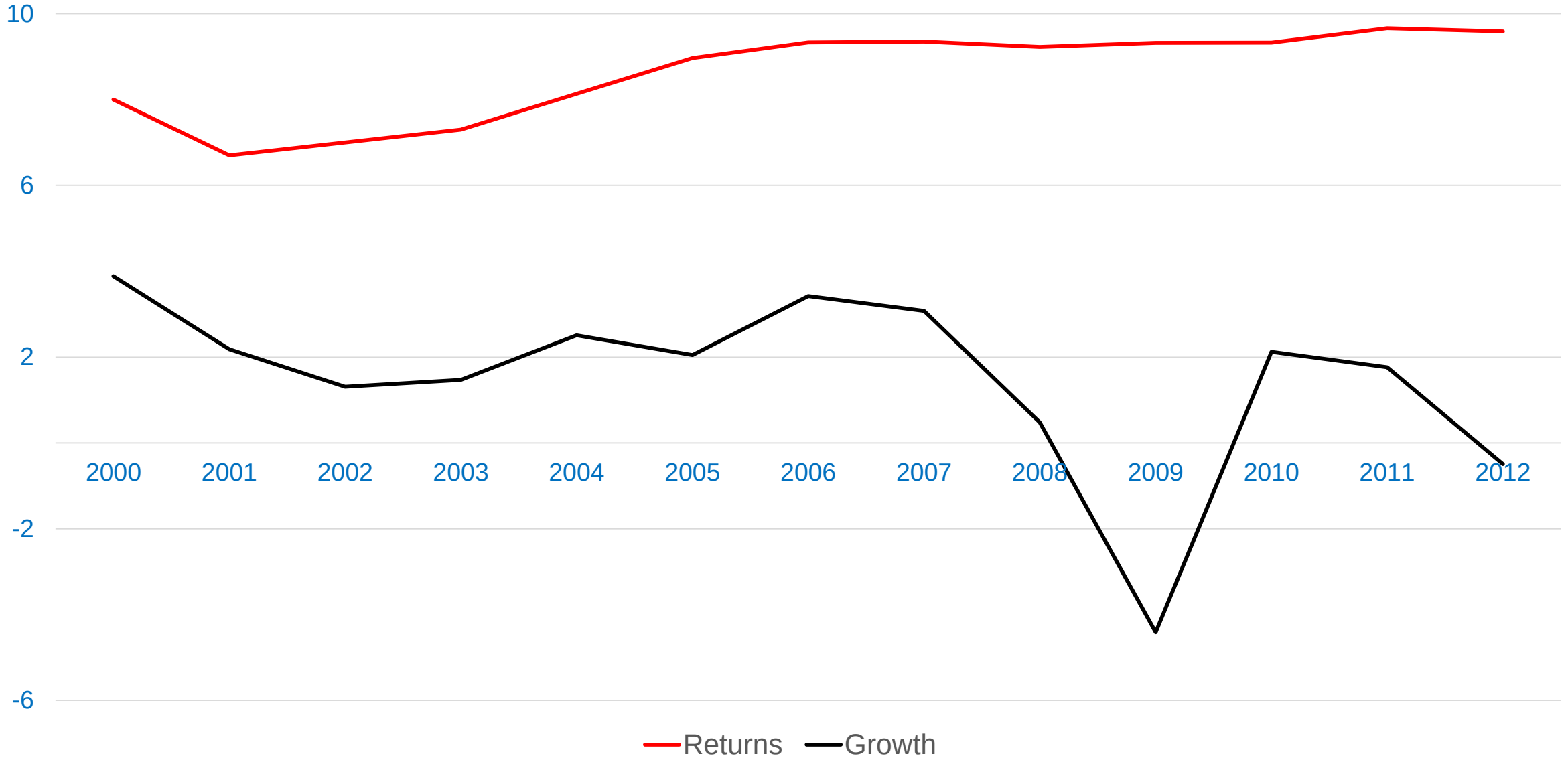
Returns Higher for Women



Returns to Schooling in Europe



Returns to Schooling & Growth in Europe



Russia

U N E S C O
INTERNATIONAL SOCIAL SCIENCE JOURNAL

PUBLISHED QUARTERLY
VOL. XIV, NO. 4, 1962

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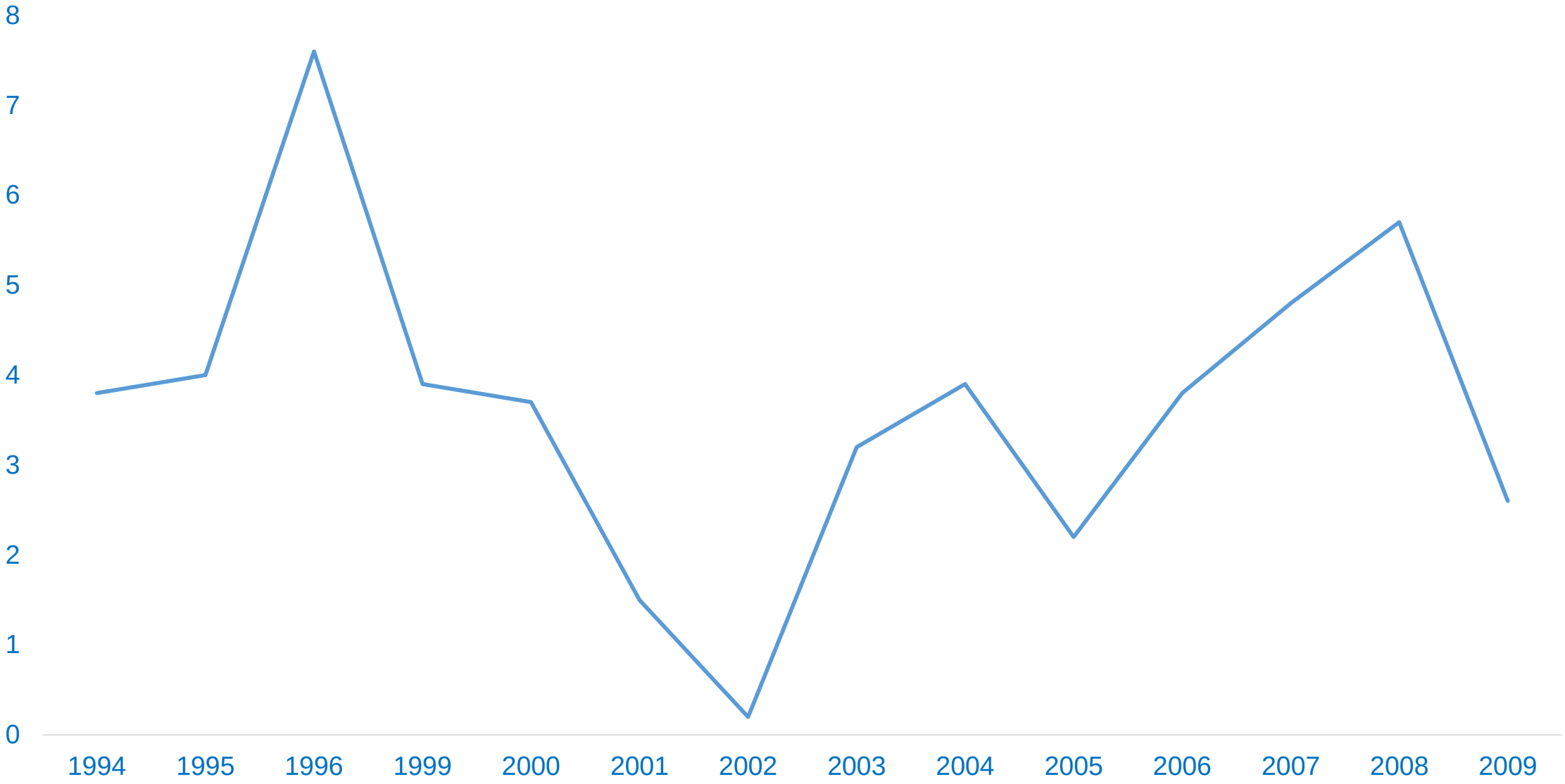
Russia

1919: Returns to schooling: 17.6%

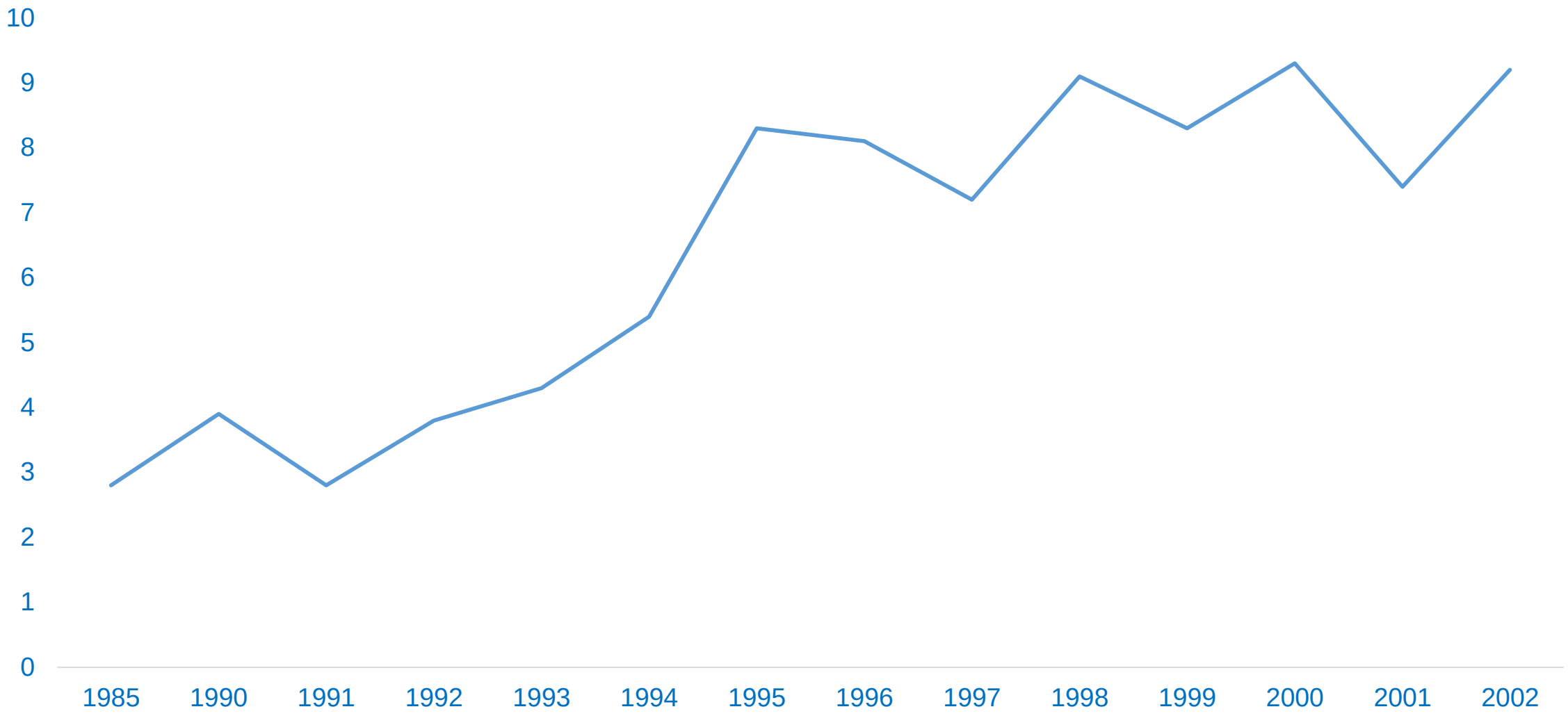
(Strumilin 1924)

*Regression of compressed non-discounted earnings groups from factory in then Leningrad

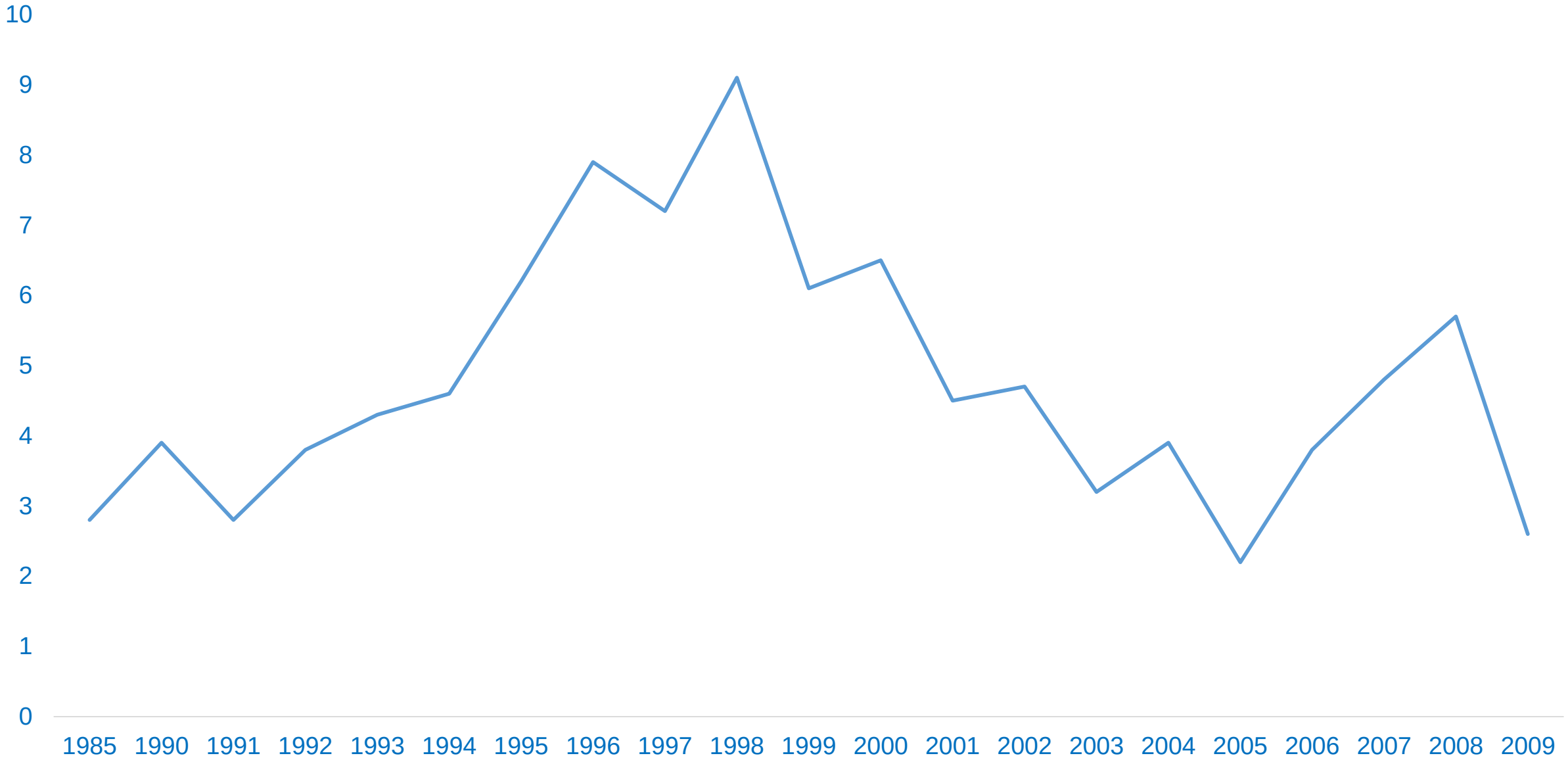
Returns to Schooling in Russia



Returns to Schooling in Russia



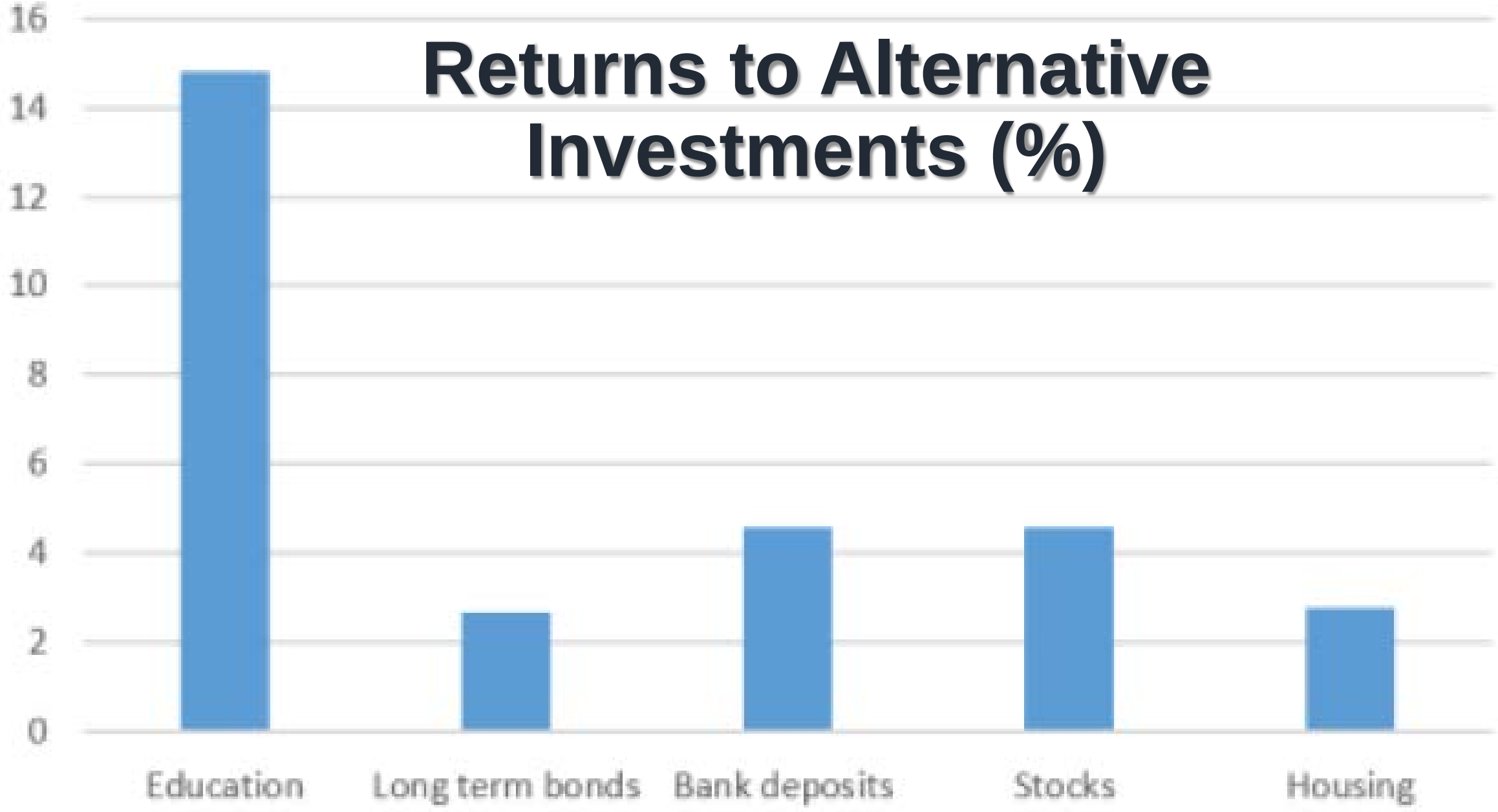
Returns to Schooling in Russia



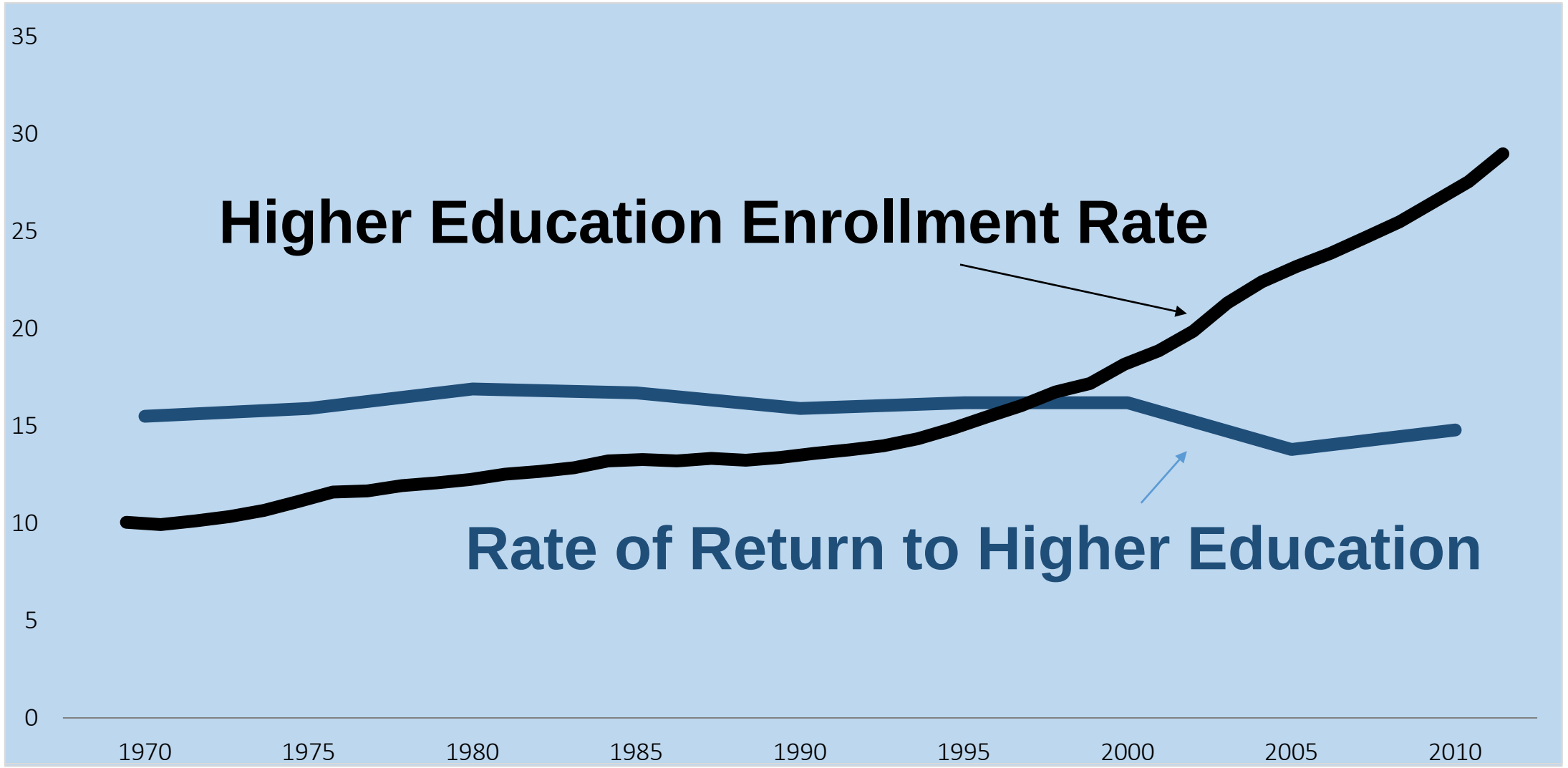
Returns to Schooling in Russia

- But…regional variation. For example:
- Oshchepkov: What Drives Return to Education: Evidence from Russian Regions
- Klyachko, Semionova: Contribution of Education to the Socio-Economic Development of the Subjects of the Russian Federation
- Aletdinova, Koritskiy: Human Capital of Siberia in The Epoch of the Digital Economy Development
- Also:
- Arkhipova, Egorov, Sirotin: Returns to schooling in Russia and Ukraine: Comparative analysis (Applied Econometrics)

Returns to Alternative Investments (%)



Race Between Education & Technology



Invest in Relevant Skills

Problem-solving

Learning

Communication

Personal

Social

Policy

- Returns to schooling are high
  - But quality of schooling in many countries is Low
- Ability of workers to compete depends on quality of education system
- Financing skills investments is an issue
  - As is equity
- Automation/technology implies deskilling in many aspects
  - And a need for new skills for many

THE HUMAN CAPITAL PROJECT

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HUMAN CAPITAL INDEX: THE STORY

"How much human capital will a child born today acquire by the end of secondary school, given the risks to poor health and poor education that prevail in the country where she was born?"

Three ingredients reflect building blocks of the *next generation's* human capital:

SURVIVAL: Will children born today survive to school age?

SCHOOL – How much school will they complete and how much will they learn?

HEALTH – Will they leave school in good health, ready for further learning and/or work?

HUMAN CAPITAL INDEX: CALCULATION

SURVIVAL

Children who don't survive don't grow up to become future workers

x

SCHOOL

Contribution of quality-adjusted years of school to productivity of future workers

x

HEALTH

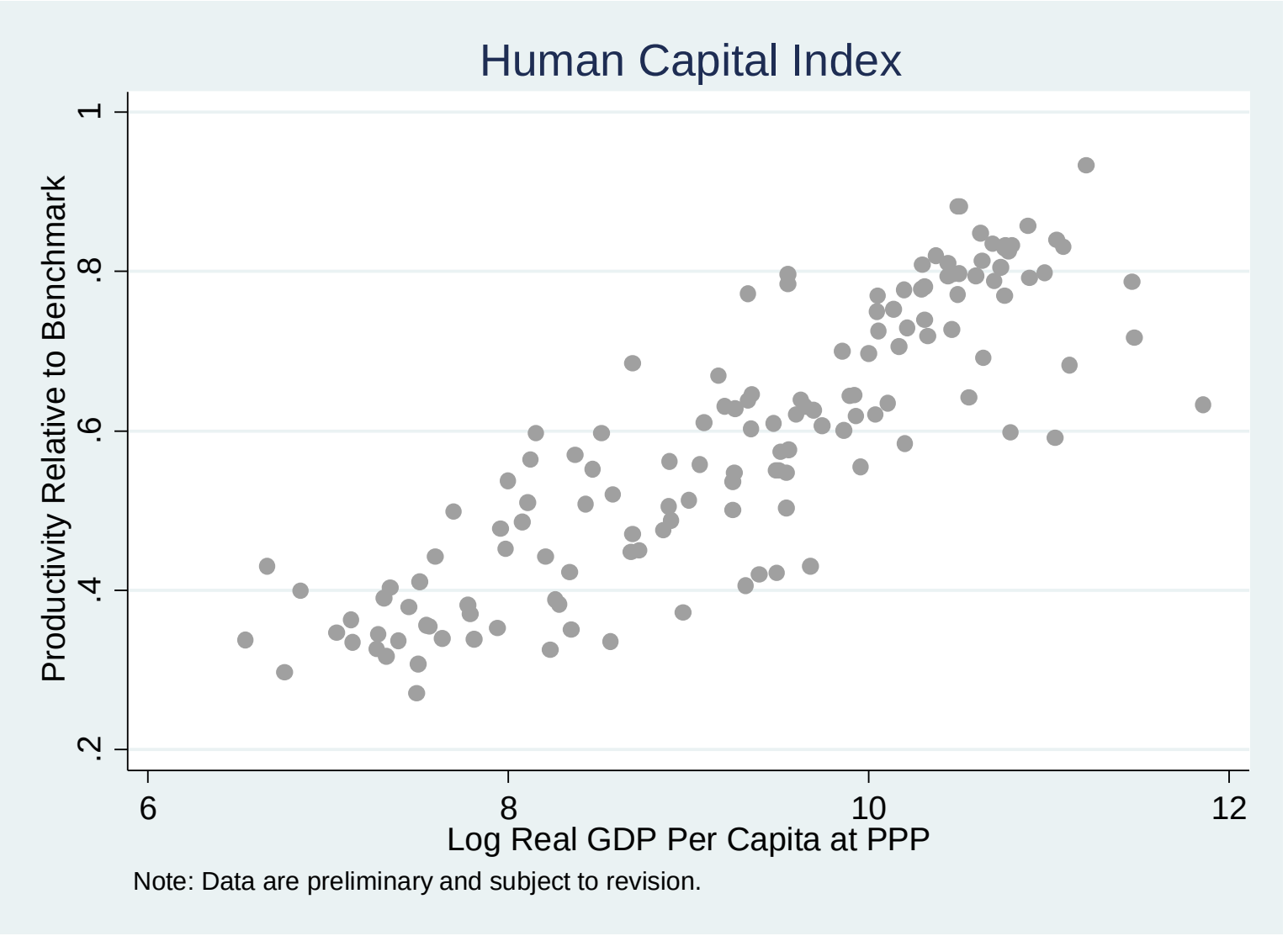
Contribution of health (average of adult survival rate and stunting) to productivity of future workers

=

HCI

Productivity of a future worker (relative to benchmark of complete education and full health)

HUMAN CAPITAL INDEX: COVERAGE: 162 COUNTRIES



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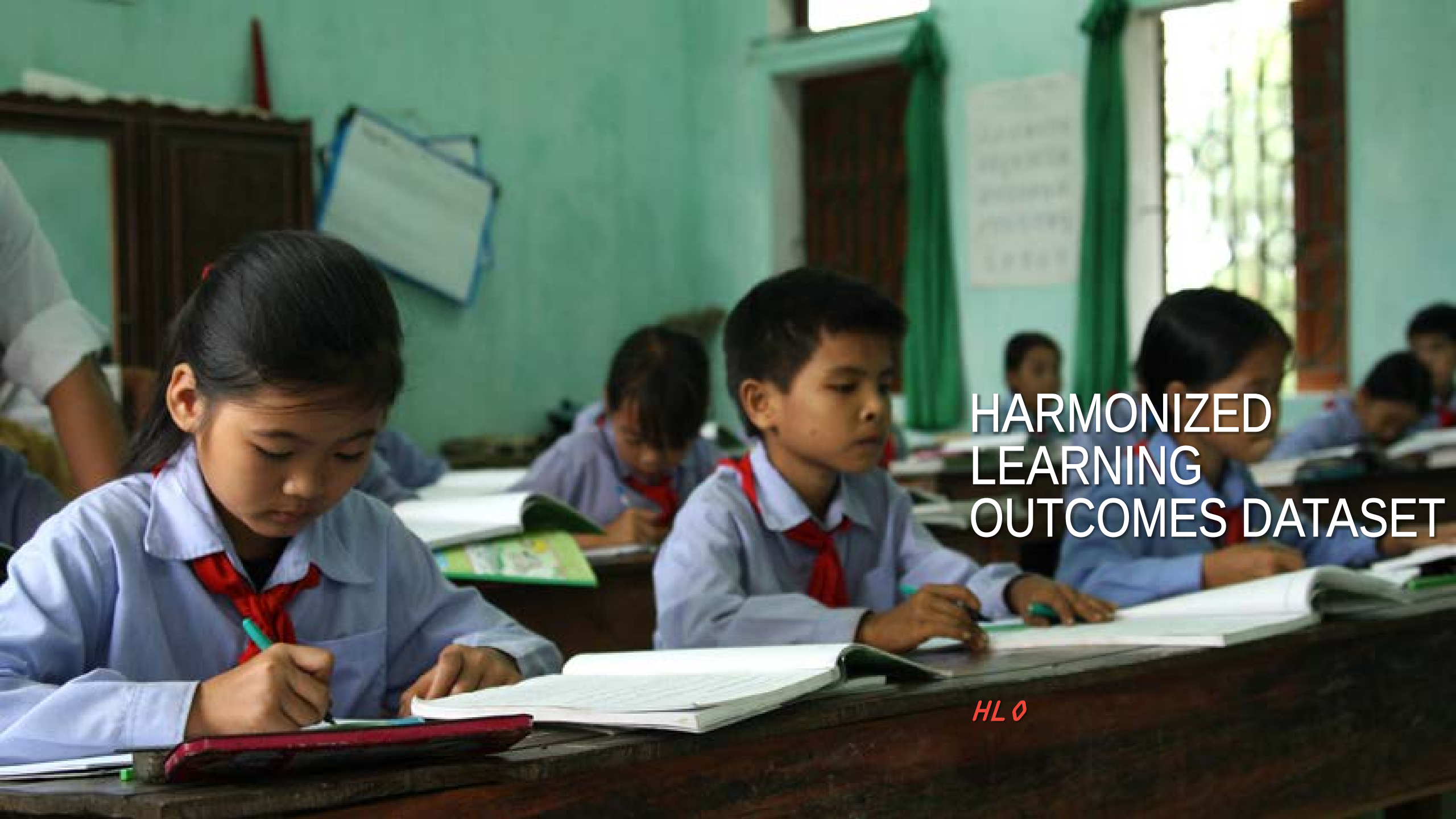
HUMAN CAPITAL INDEX: INDICATOR 2: SCHOOLING

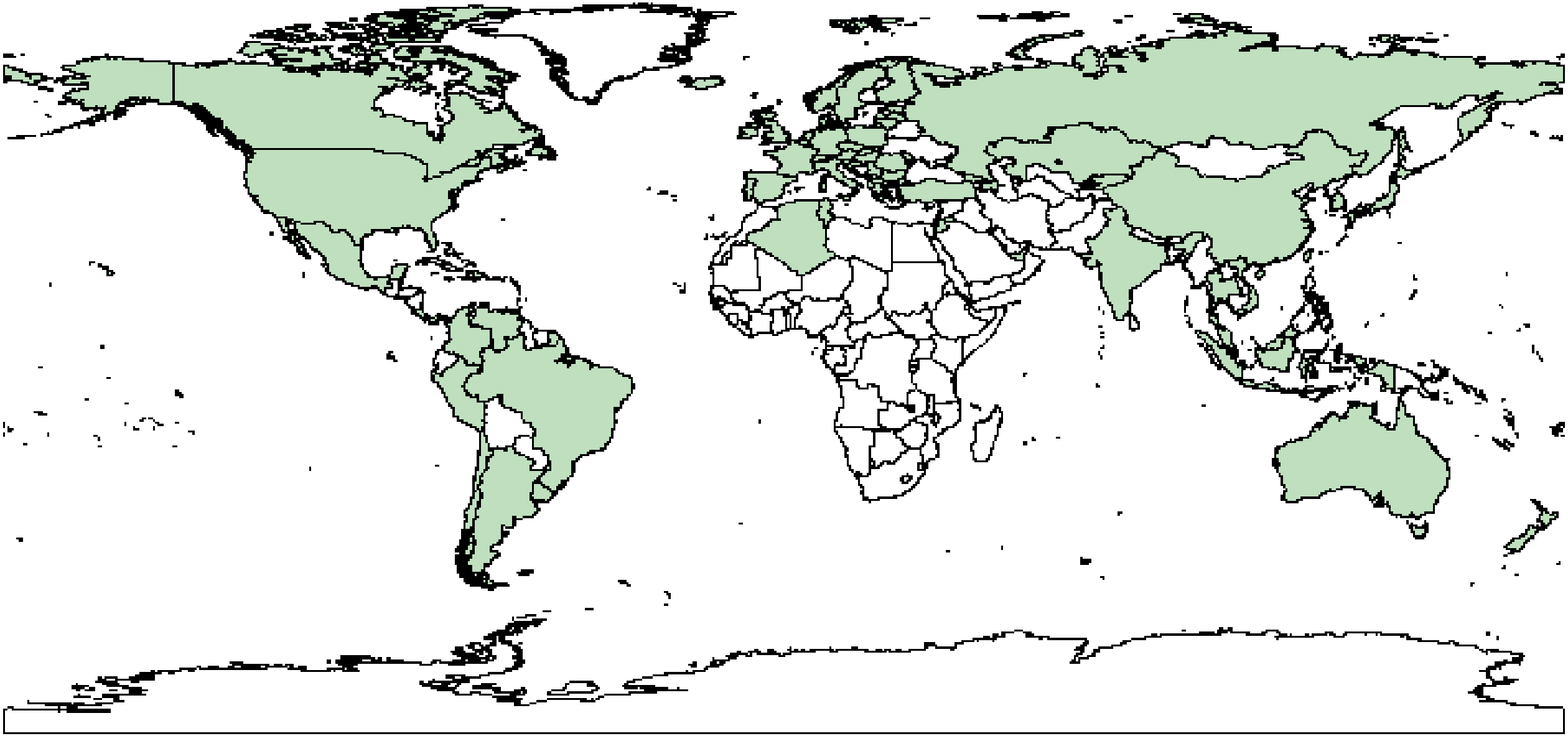
- Expected years of schooling, based on current enrollment and completion rates, available from UNESCO
  - Primary and Secondary
  - Adjustments for repetition

- Learning, based on new WB dataset of harmonized international test scores covering more than 160 countries
  - Test scores measured in “PISA or TIMSS equivalent” units
  - Convert gaps in test scores into equivalent years of schooling

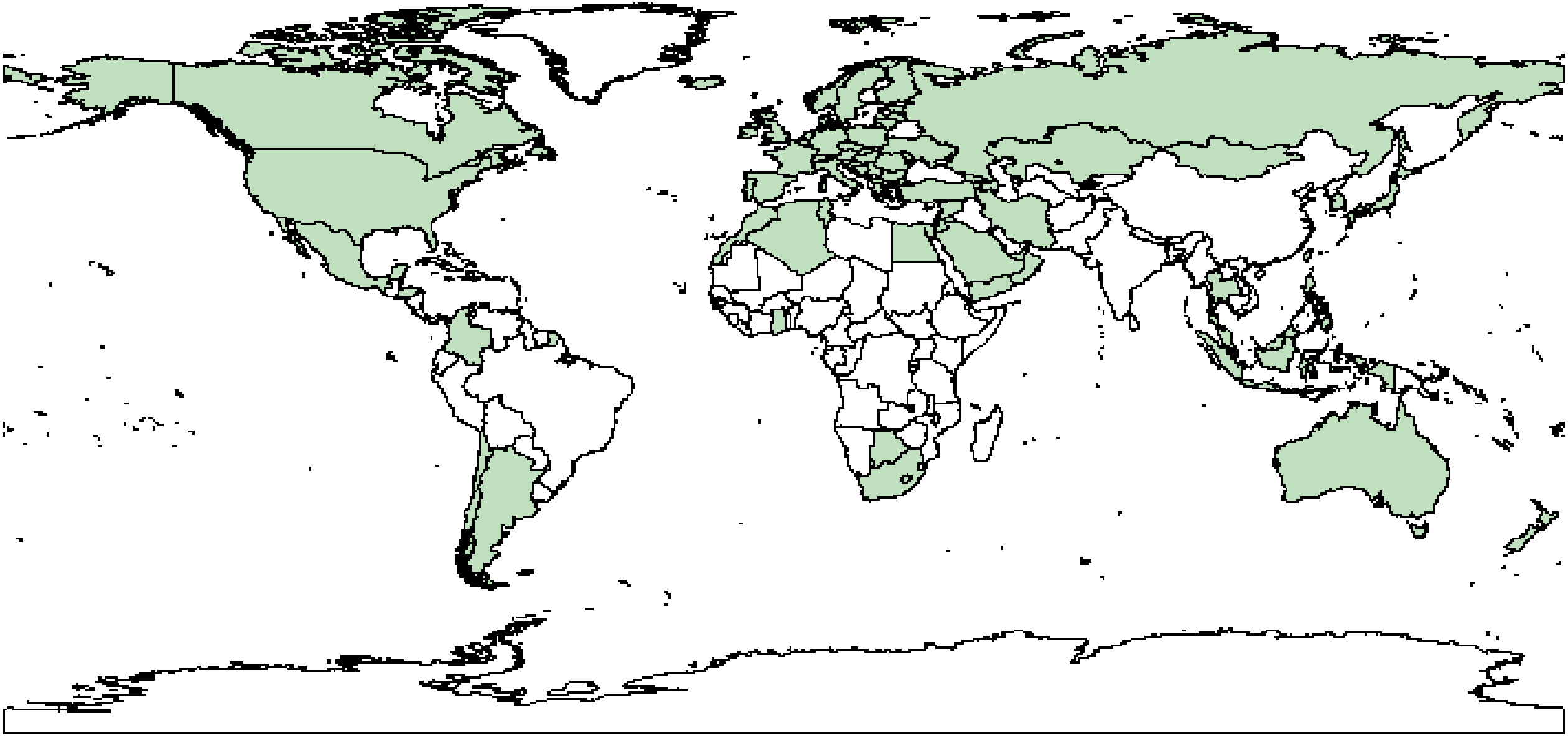
Results in a measure of expected quality-adjusted years of schooling


HARMONIZED
LEARNING
OUTCOMES DATASET
HLO

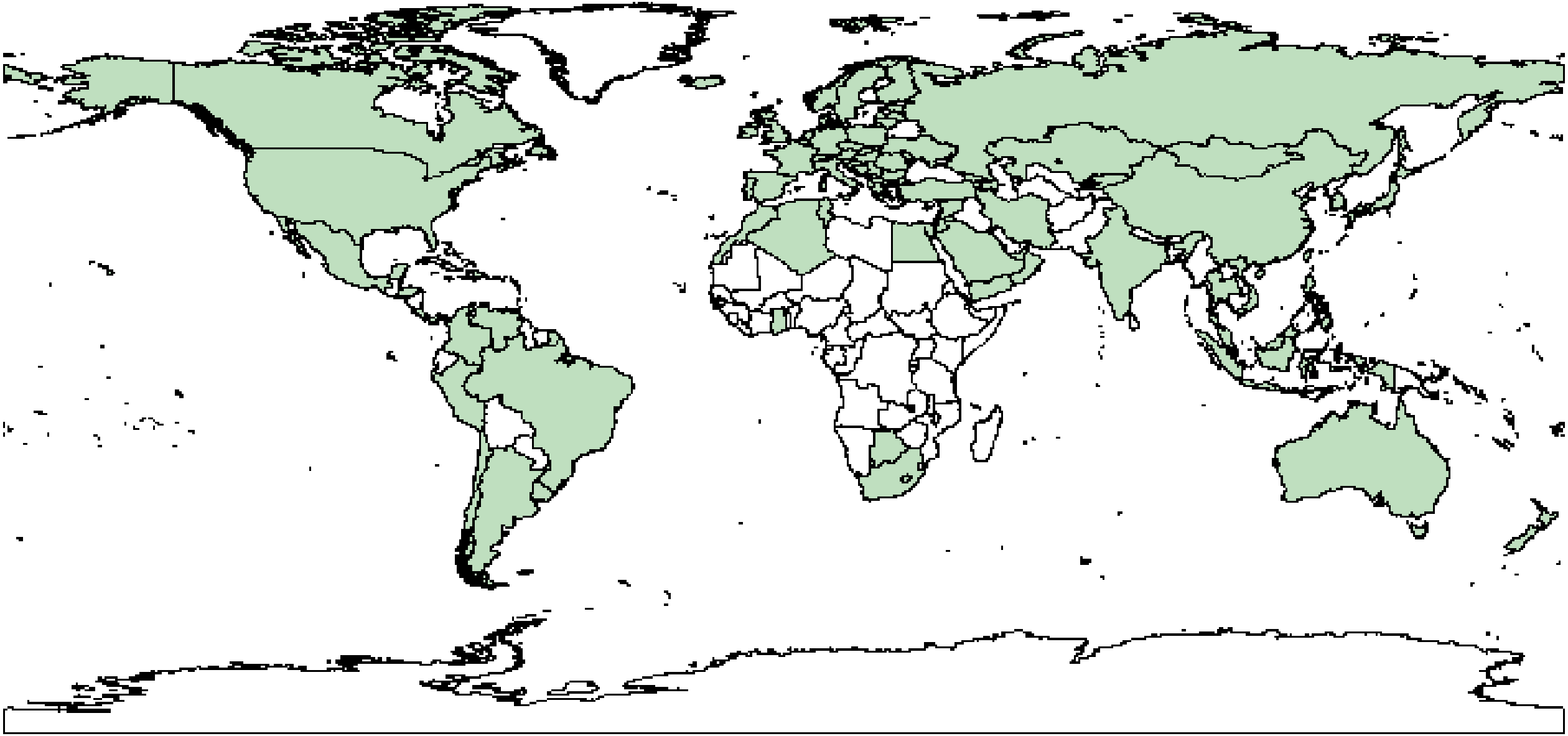
COUNTRIES COVERED BY PISA



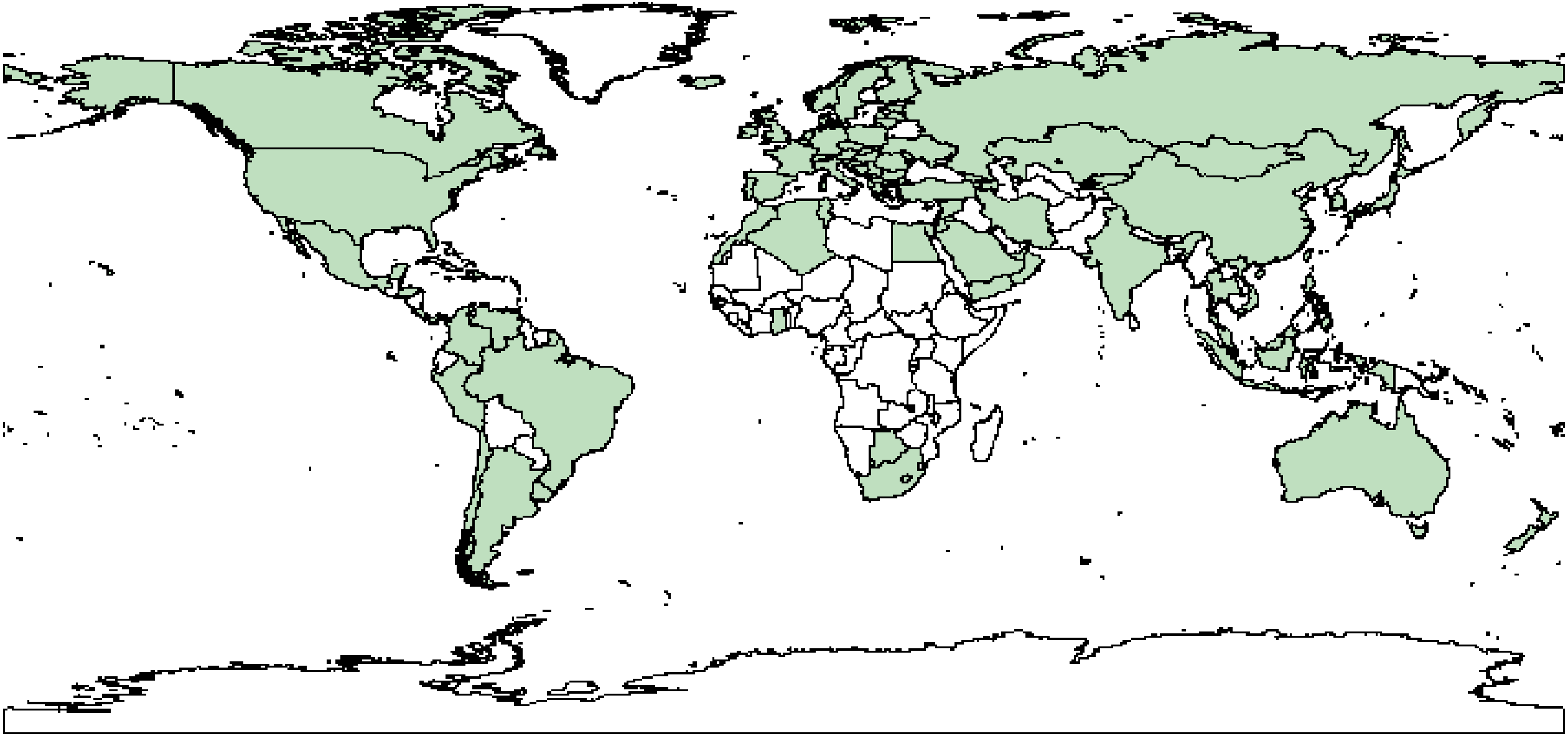
COUNTRIES COVERED BY TIMSS AND PIRLS



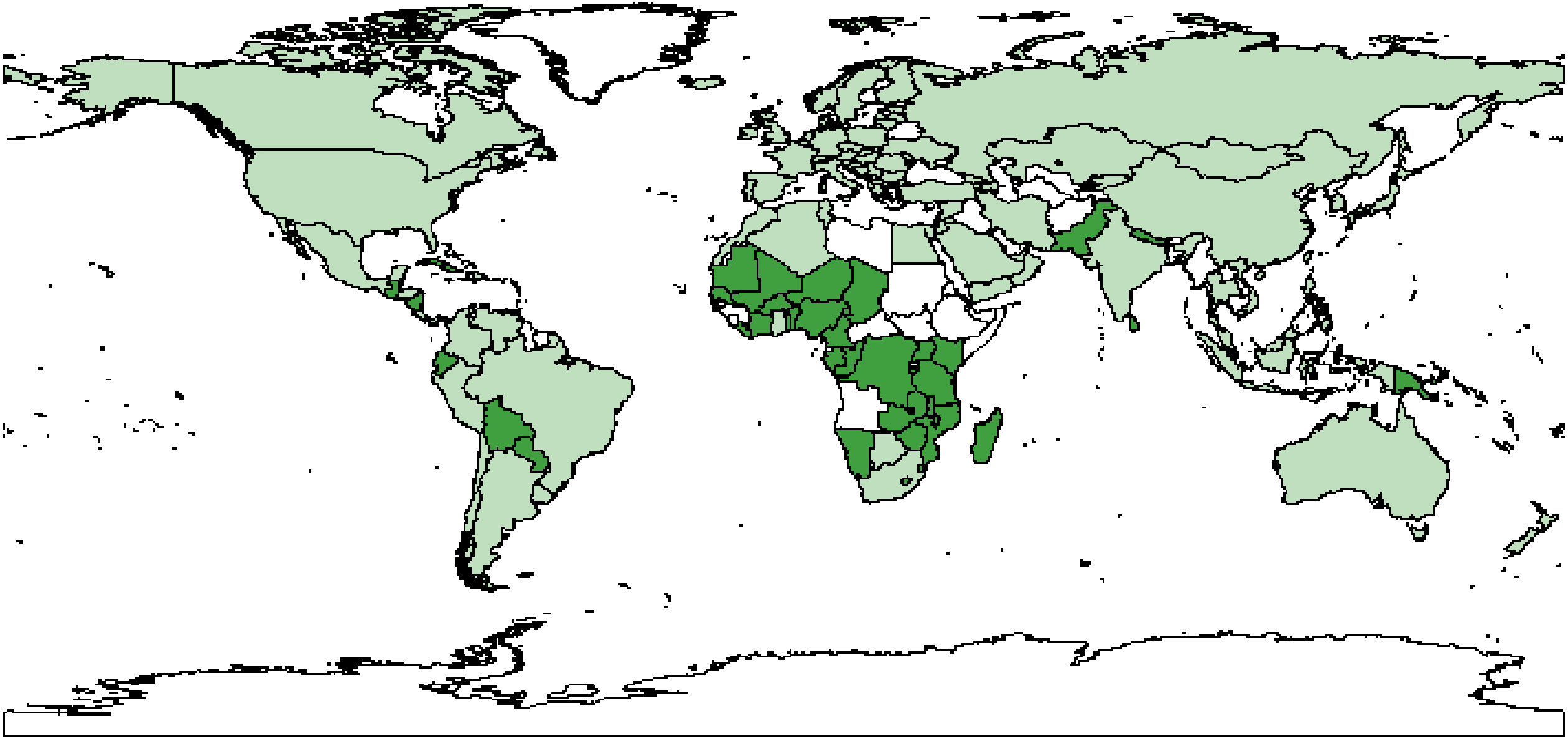
COUNTRIES COVERED BY PISA/TIMSS/PIRLS



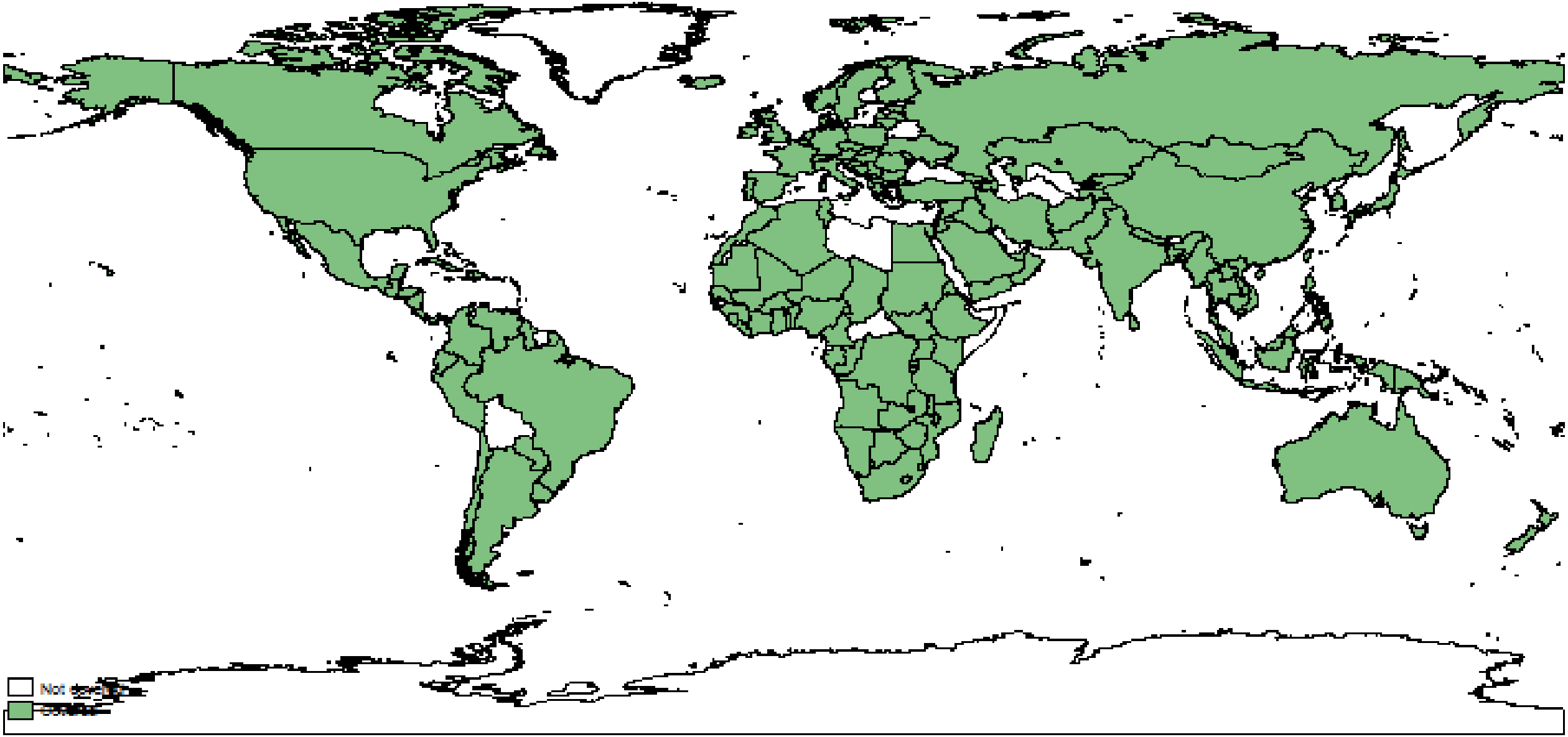
COUNTRIES COVERED BY ISATS



COUNTRIES COVERED BY ISATS & RSATS



COUNTRIES COVERED BY ISATS & RSATS & EGRA



HLO CONTRIBUTIONS

Large, inclusive, recent

Multiple linking methods

Distributional information

Disaggregation

Robustness tests

ASSESSMENTS USED

TIMSS

PIRLS

PISA

LLECE

SACMEQ

PASEC

EGRA

ASSUMPTIONS

Same underlying population

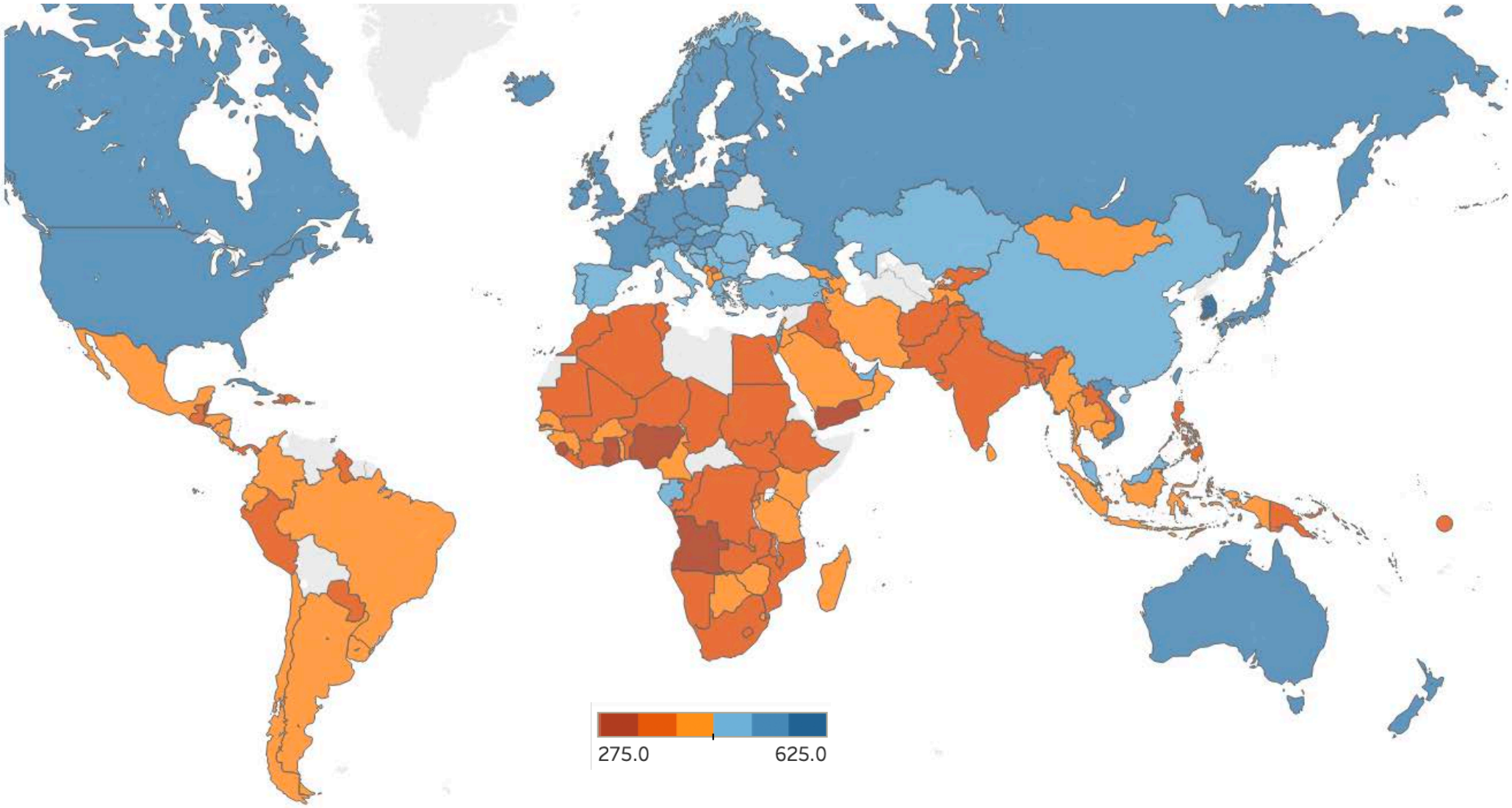
Tests measure similar proficiencies

Differences are test-fixed effects not country-fixed effects

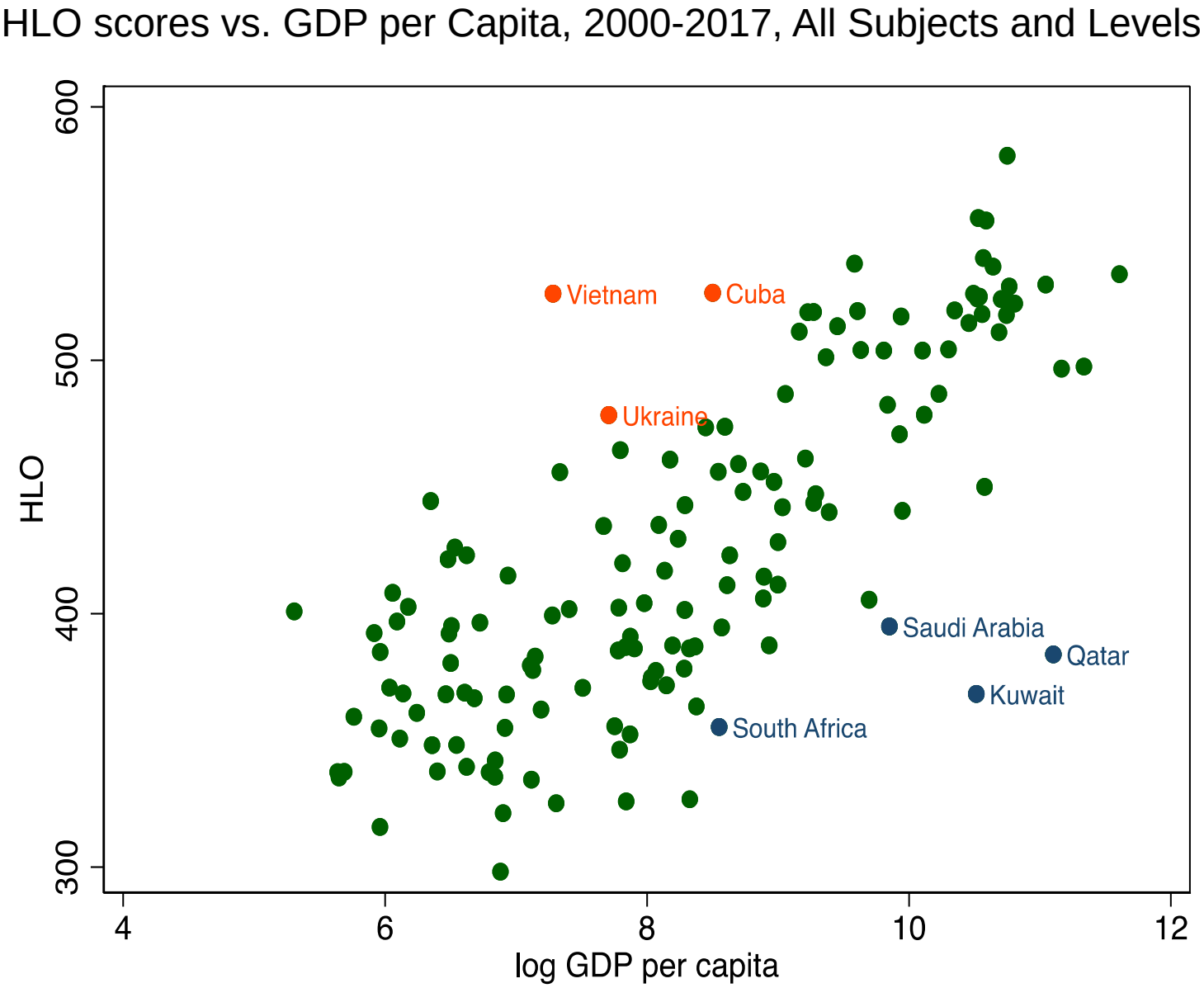
OVERARCHING LINKING INTUITION

- Index across a given pair of international & regional tests with results from countries that participate in both (“**doubloon**” countries)
- To link over time we use U.S. as **anchor** since participated since 1965 & NAEP

Average HLO score (2000-2017)

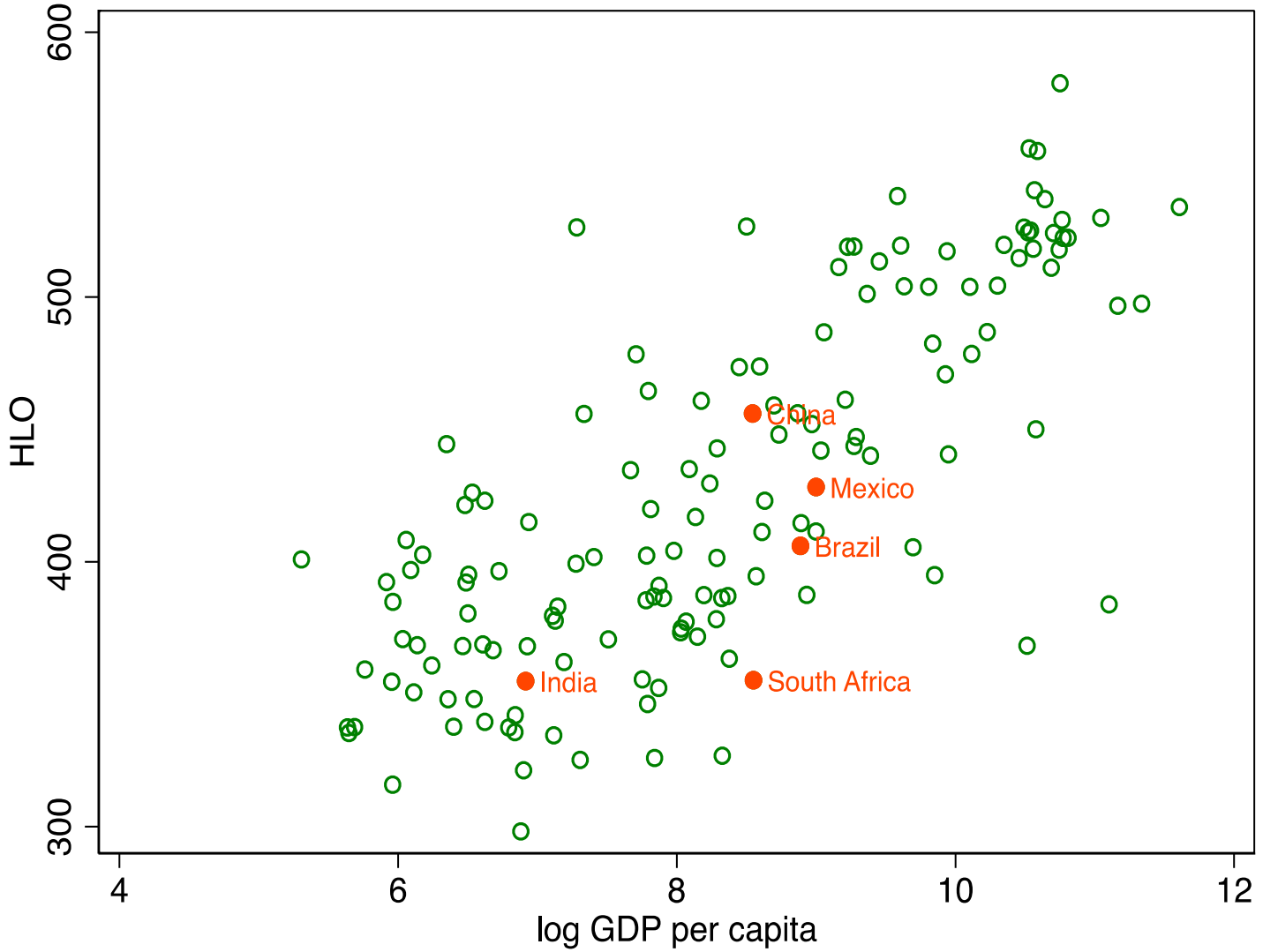


Countries Punching Above/Below Their (GDP) Weight



Distance to the Learning Frontier for Big Economies

HLO scores vs. GDP per Capita, 2000-2017, All Subjects and Levels



WHY A MEASUREMENT AGENDA

- **Improve measurement of outcomes and expand country coverage of the HCI**

  Expand the coverage of international tests and national surveys to better measure and benchmark countries on the different components of the HCI

- **Measure progress in the contributing factors**

  Allow countries to track progress towards outcomes, accounting for the lag between investments and returns in human capital

- **Identify the relevant policy levers**

  Assist countries in identifying effective policies to address critical constraints to improving human capital

REALIZING THE HUMAN CAPITAL PROJECT

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