What evidence in needed for framing policy at the system level

Barry McGaw
Professorial Fellow, University of Melbourne
Former Director for Education, OECD

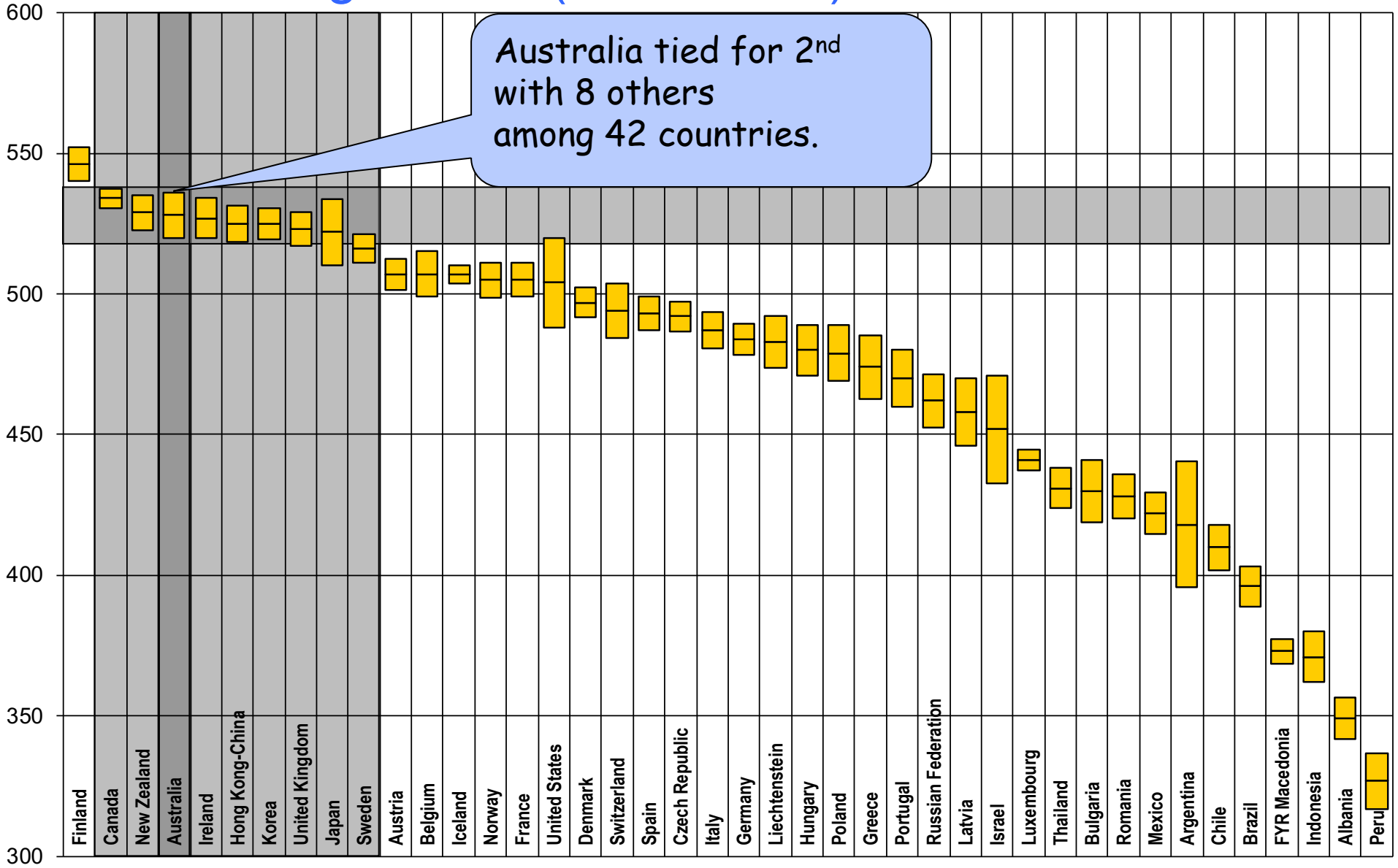
What works: Developing a Scientific Agenda to Inform Teaching and Learning Policy and Practice

Deakin University
12 February 2018

Comparisons to challenge expectations

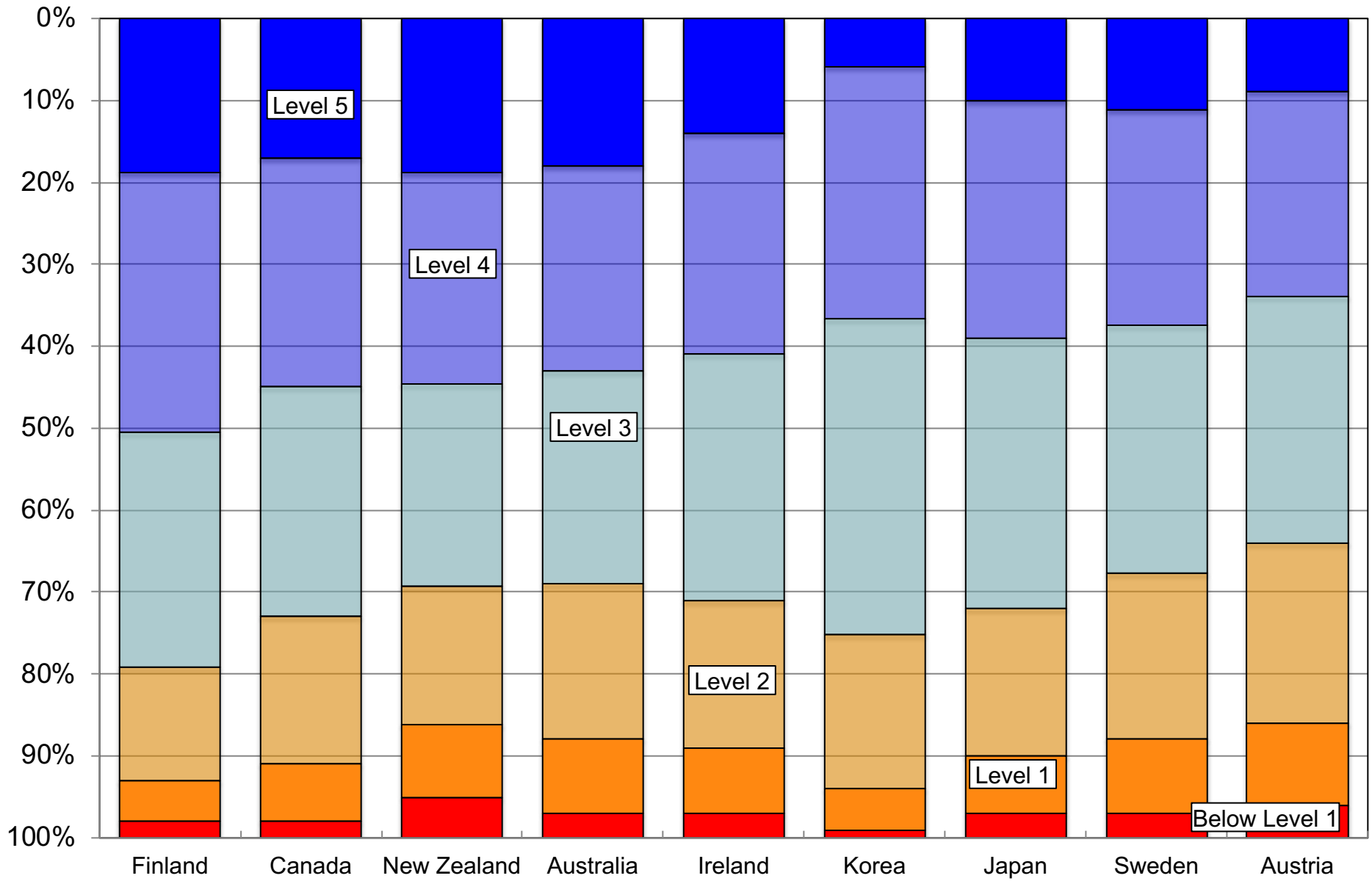
Comparisons of quality

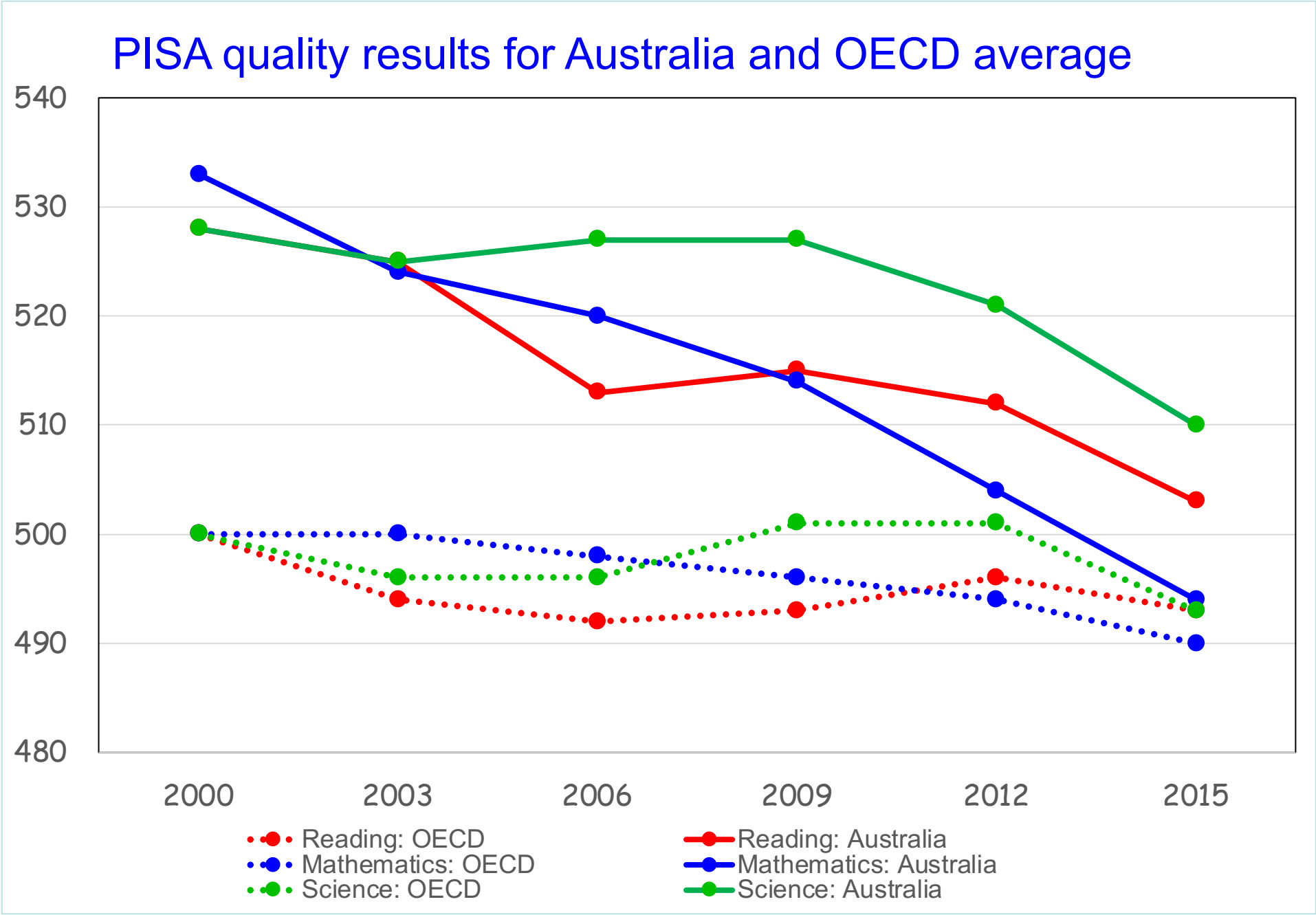
Mean reading results (PISA 2000)



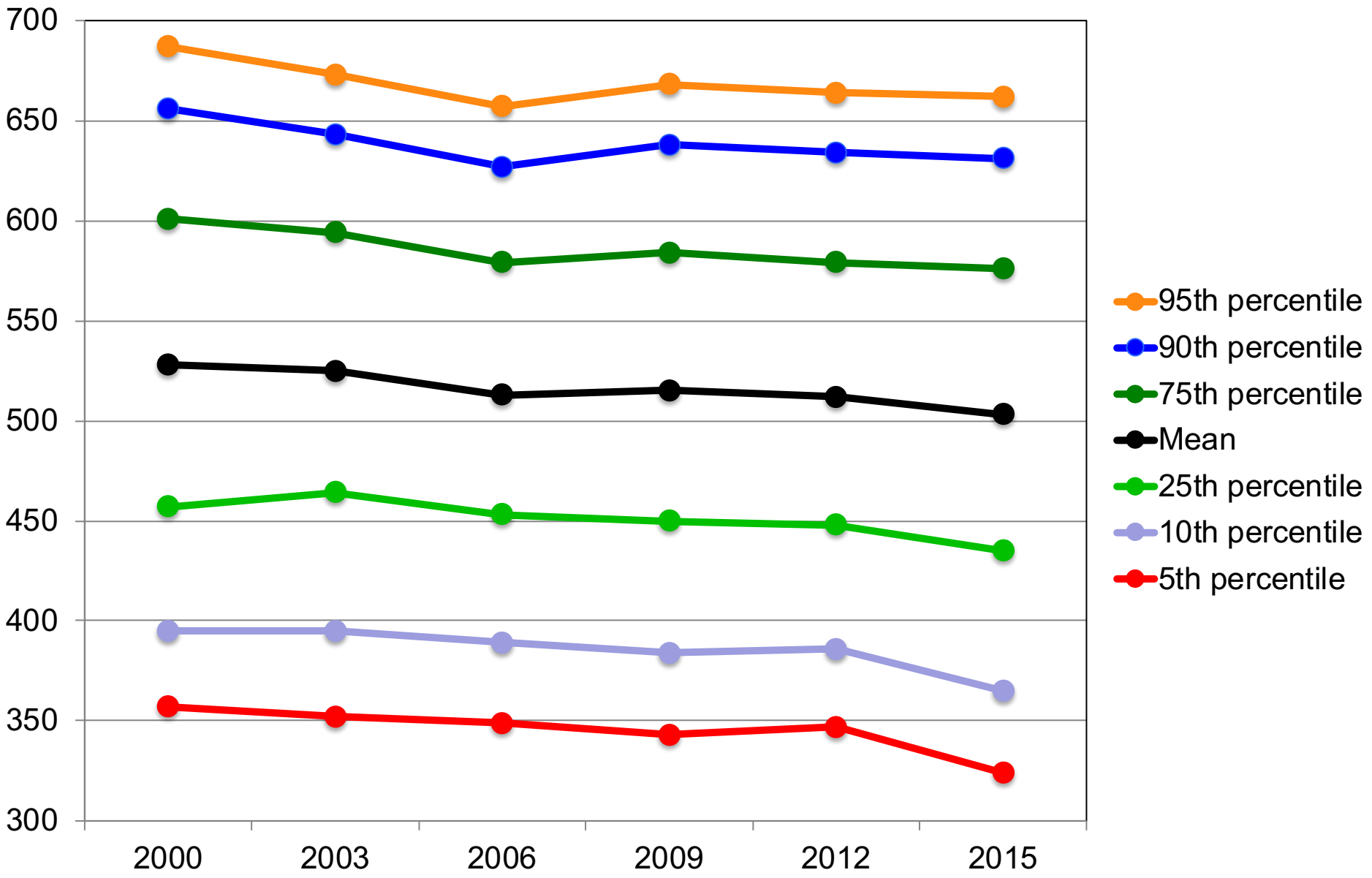
OECD (2003), *Literacy skills for the world of tomorrow: Further results from PISA 2000*, Fig. 2.5, p.76.

Percent of students at each PISA 2000 reading level



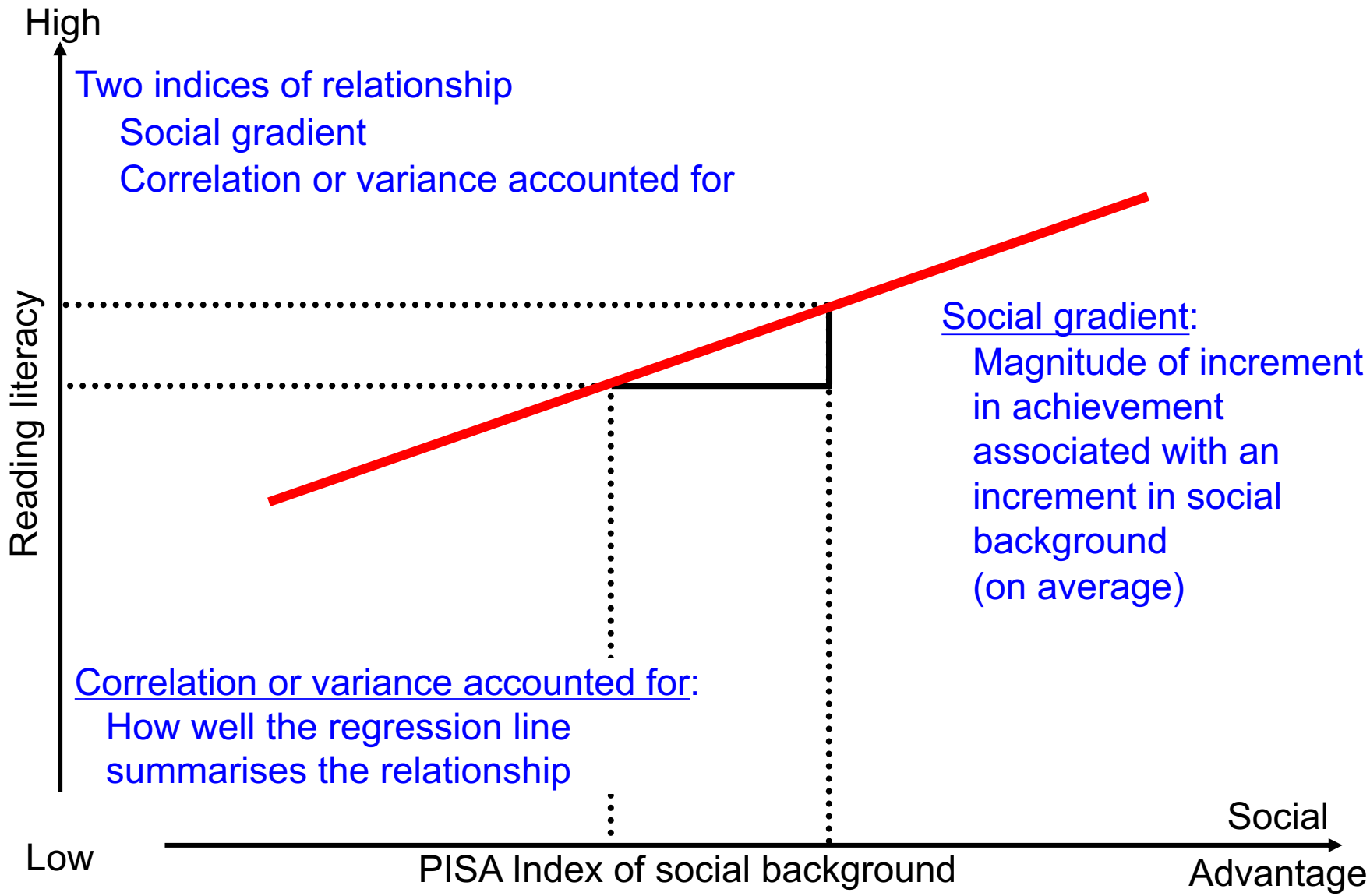


Trends in distribution of Australian PISA reading performances



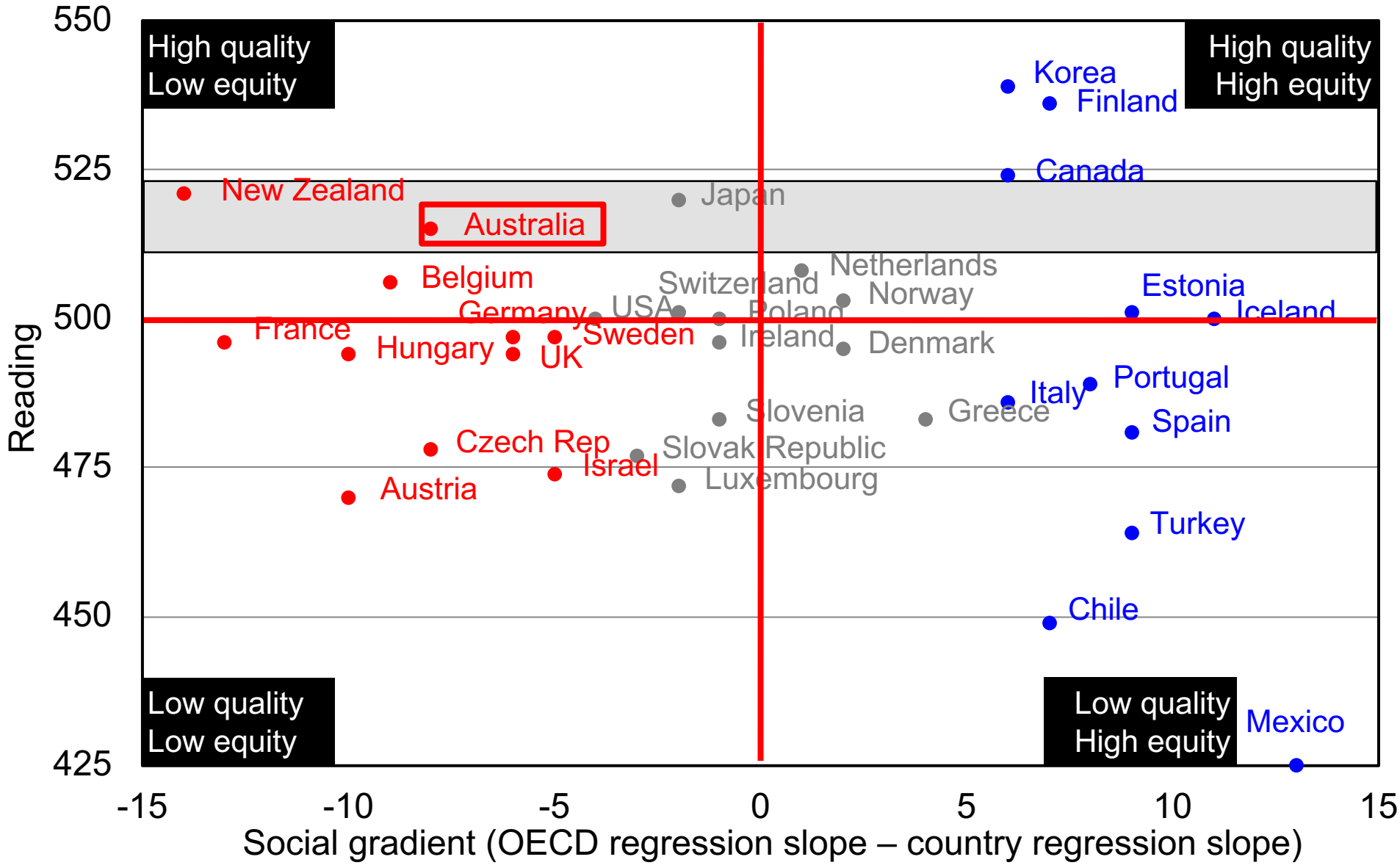
Comparisons of equity

Social background & reading literacy



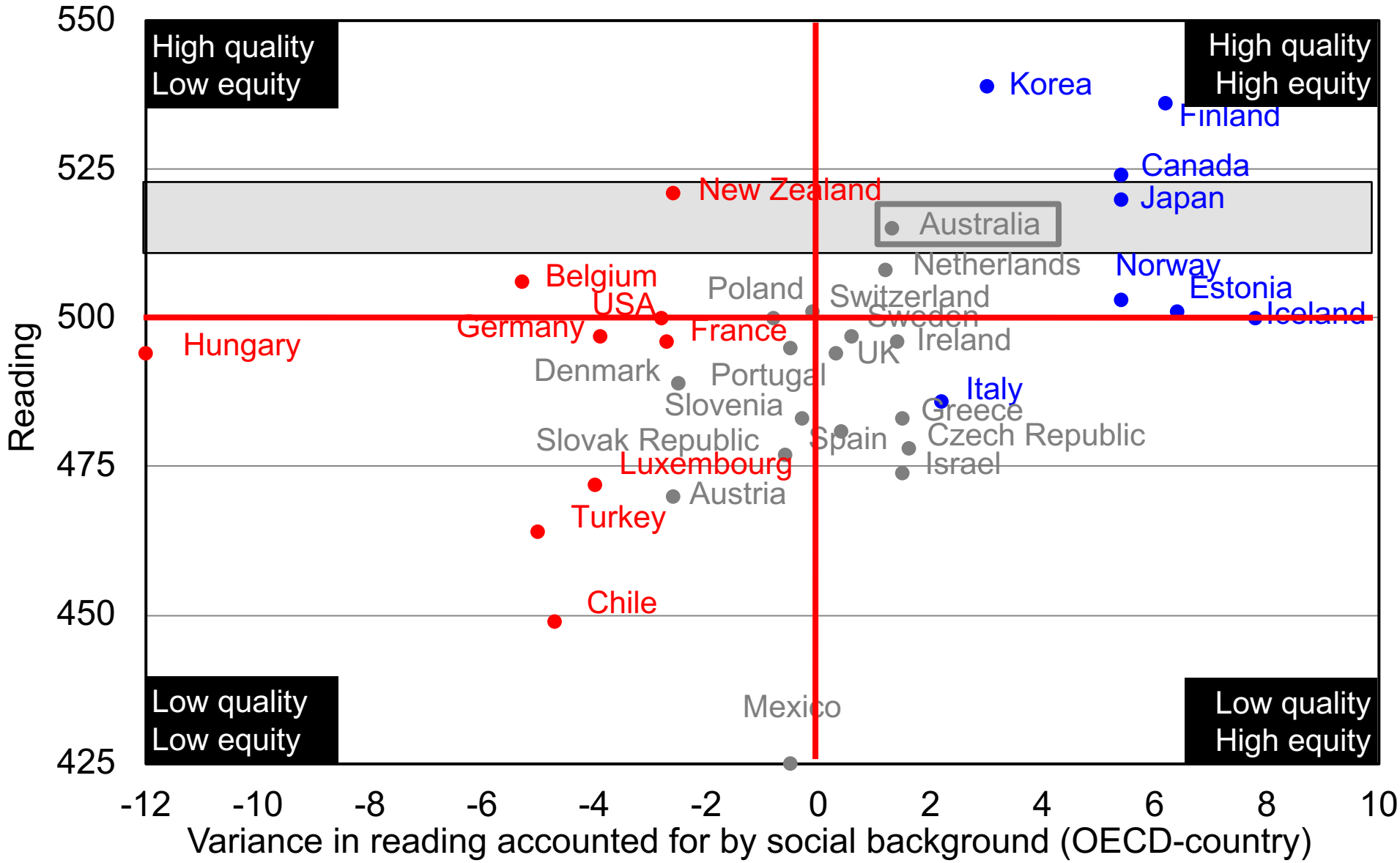
Source: OECD (2001) *Knowledge and skills for life*, Appendix B1, Table 8.1, p.308

Social gradients for reading (PISA 2009)



OECD (2010) *PISA 2009 Results: overcoming social background*, Fig. II.3.2, p.55.

Correlations for reading (PISA 2009)



OECD (2010) *PISA 2009 Results: overcoming social background,* Fig. II.3.2, p.55.

Evidence from comparisons on what might work to improve performance

Australia was high quality and relatively low equity.

Now Australia has declined in quality and remains relatively low equity.

What lessons might Australia learn from others?

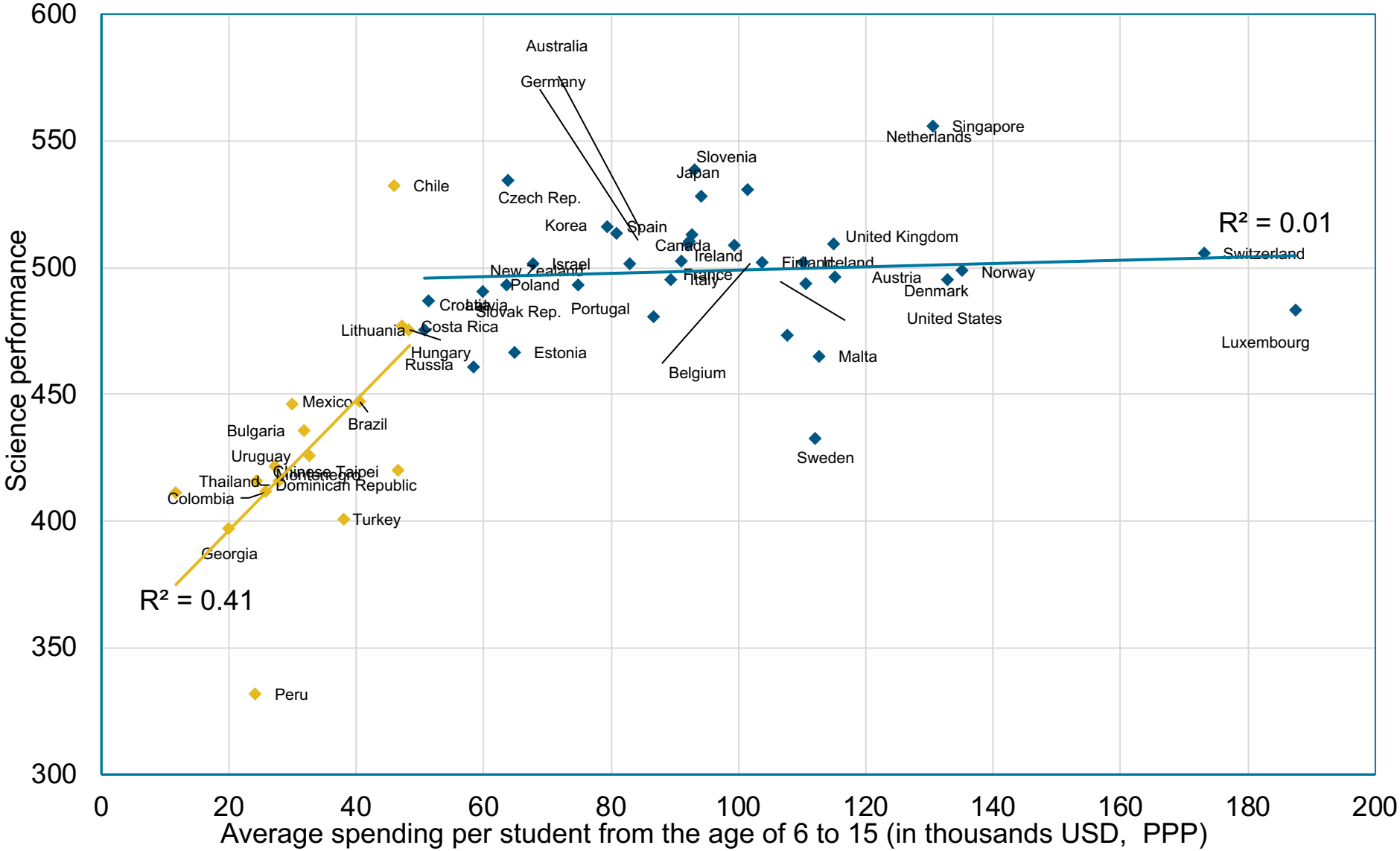
Cherry picking Finland

Understanding Finland

- Finland's high performance in 2000
  - 1st in reading
  - 2nd in mathematics behind Japan with six others including Australia
  - 2nd in science behind South Korea with five others including Australia
- Features visitors like about Finland
  - Light curriculum
  - Autonomous schools
  - No external assessments
  - Very selective entry into initial teacher education
- Actions that drove reform in period before first PISA tests
  - Inspectors in classrooms
  - National text books
  - Annual testing of students

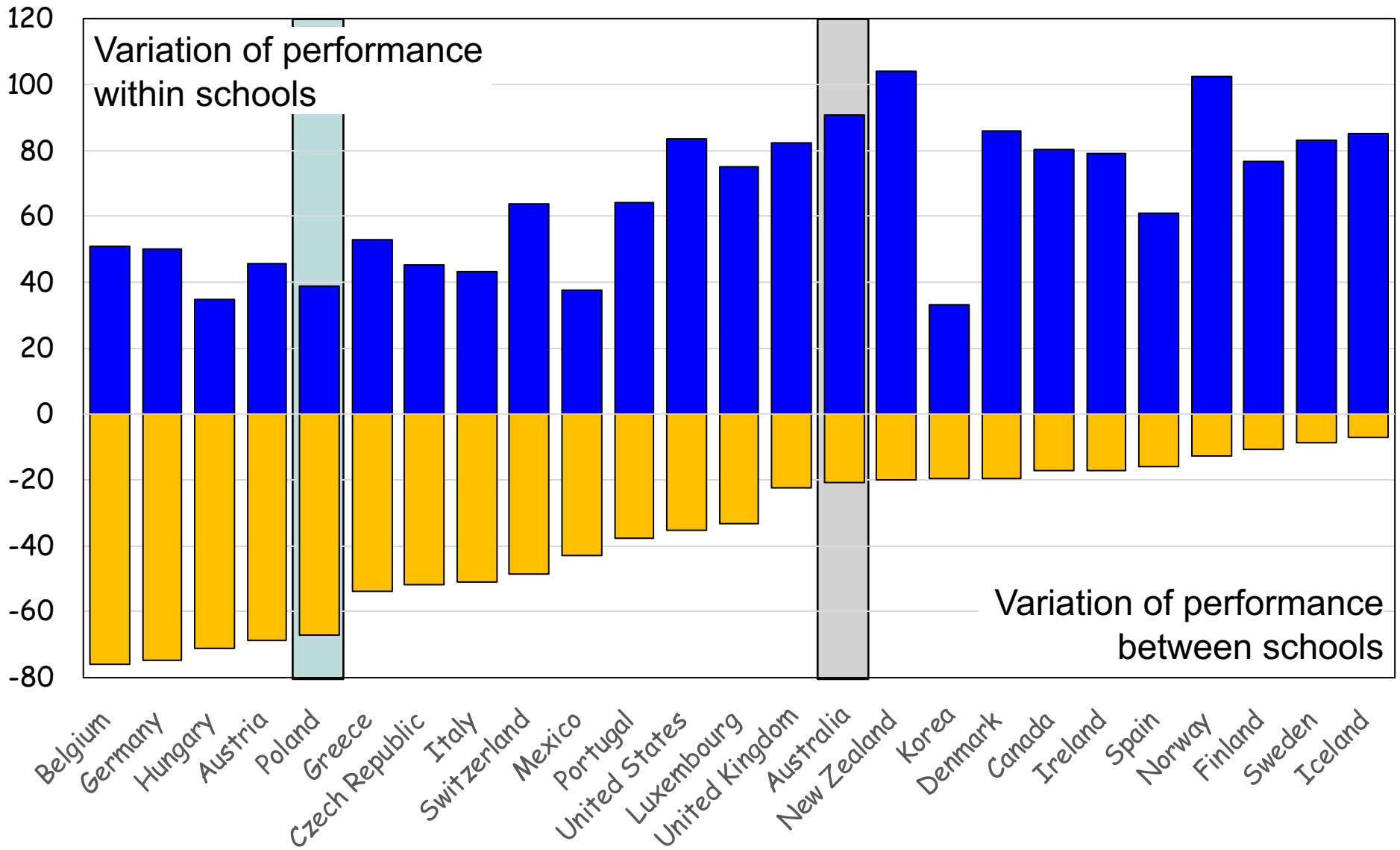
Increasing spending

Spending per student from the age of 6 to 15 and PISA science performance



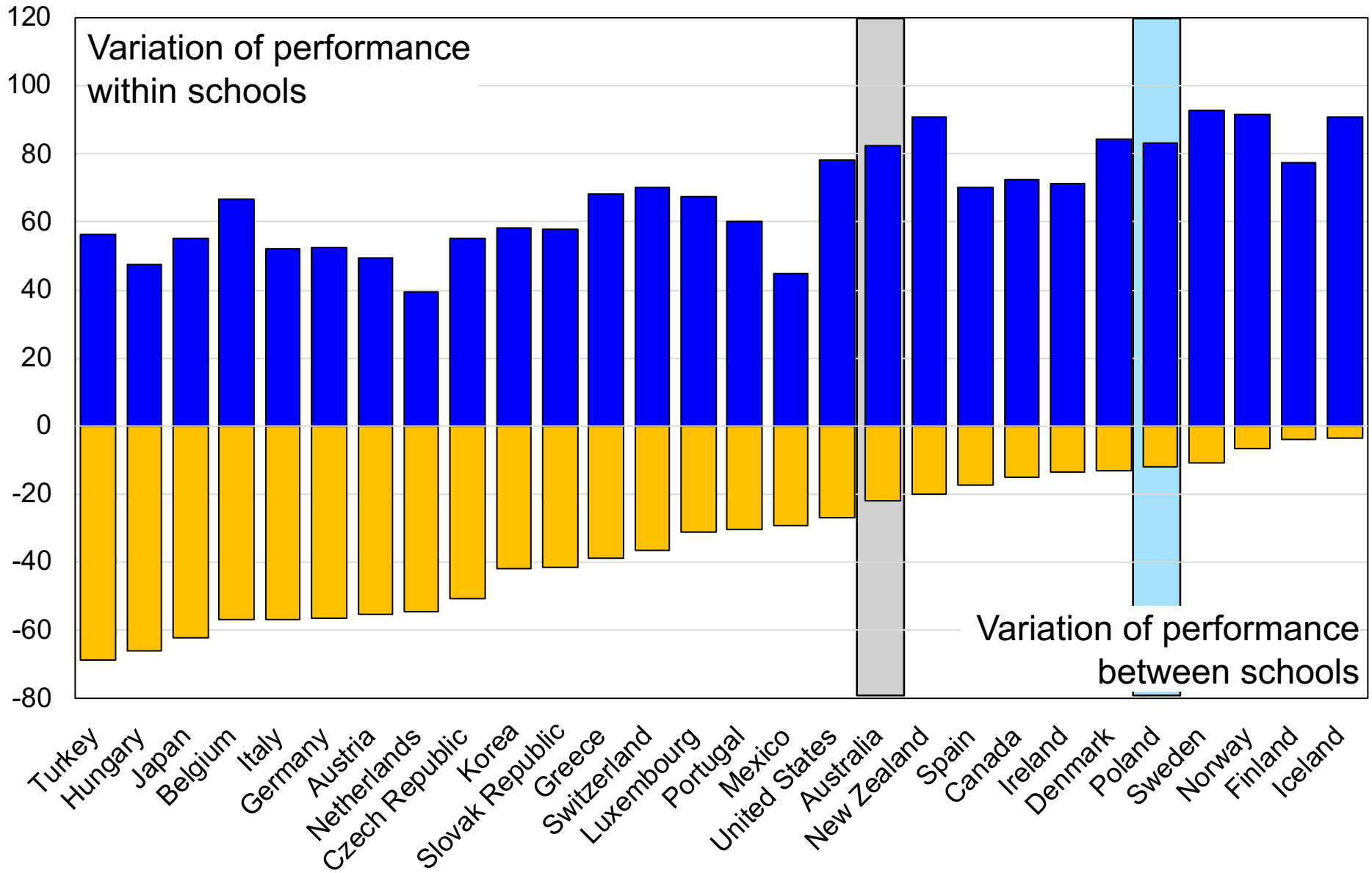
Making causal inferences from interrupted time series

Variation in reading performance (PISA 2000)



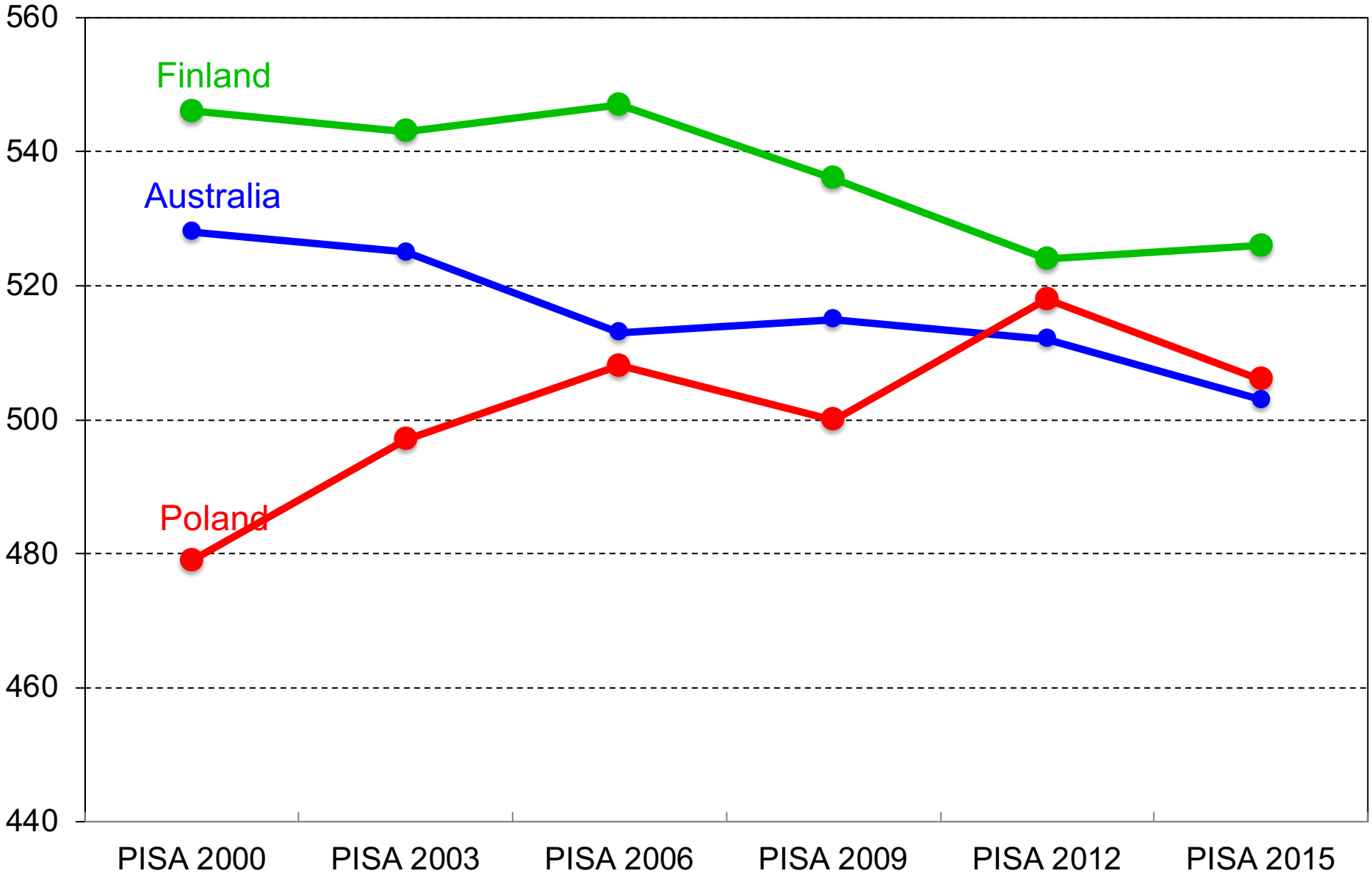
CD,UNESCO (2003), *Literacy skills for tomorrow's world: further results from PISA 2000*, Table 7.1a, p.357.

Variation in mathematics performance (PISA 2003)

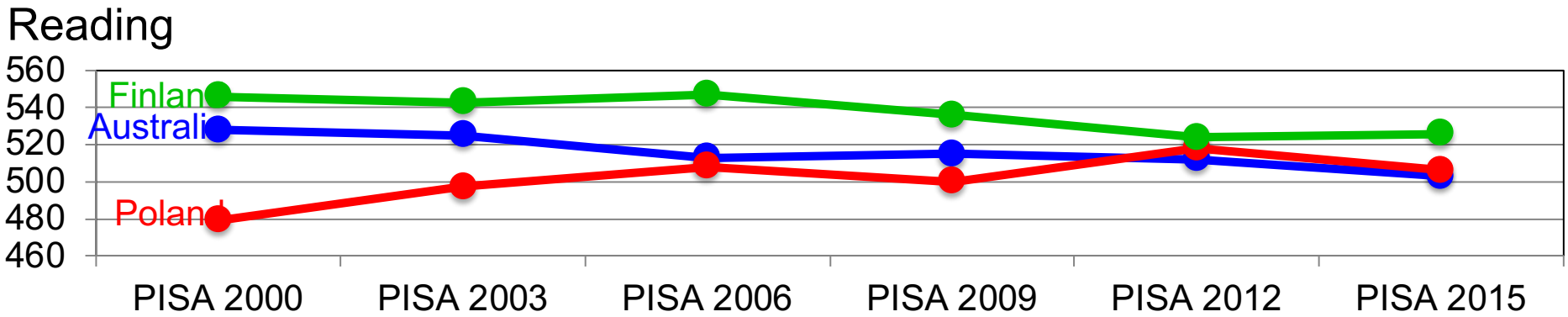


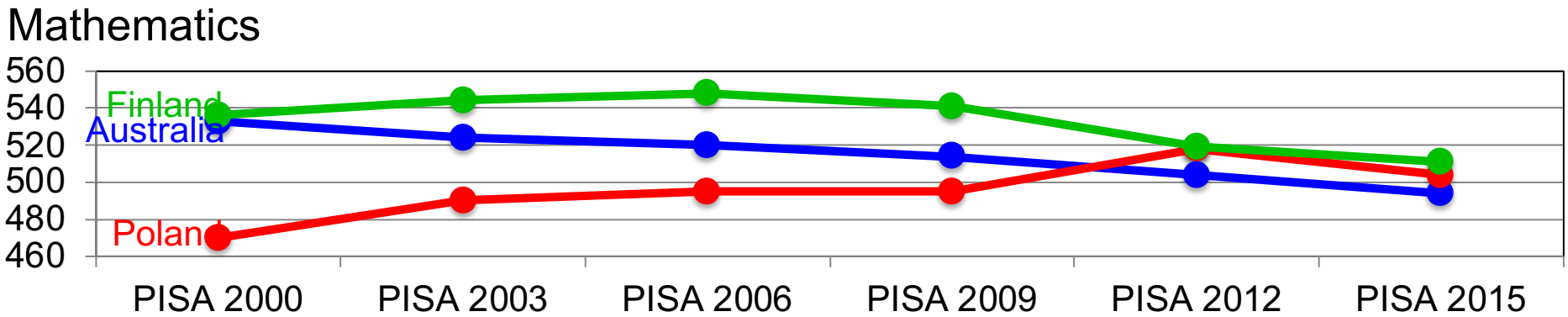
OECD (2004), *Learning for tomorrow's world: First results from PISA 2003*, Table 4.1a, p.383.

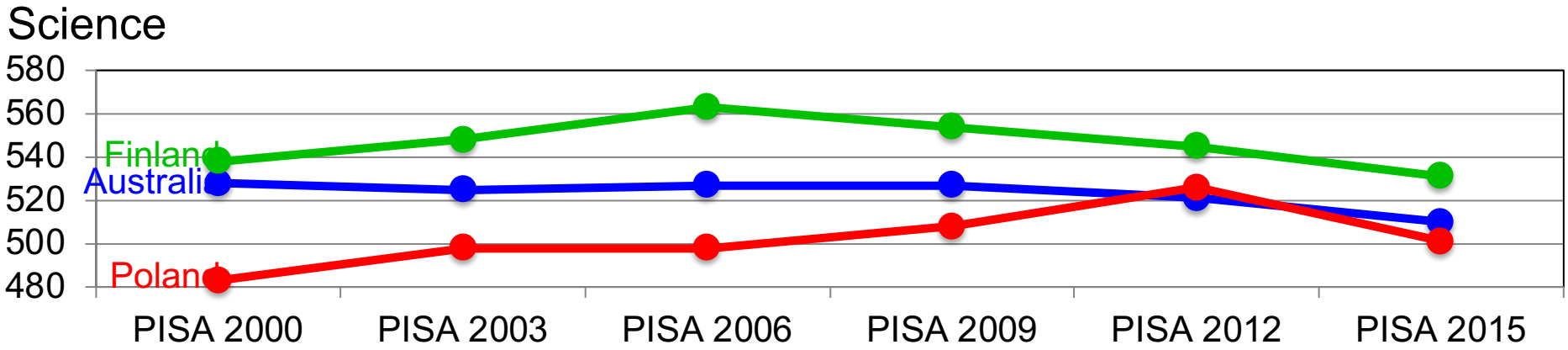
Trends in PISA reading means



PISA trends for Australia and Poland







Same spending with less teaching time but larger classes

OECD recent analyses of PISA data show that:

- For countries spending the same but achieving at different levels
- In the higher performing countries, teachers:
  - spend less time in the classroom
  - spend more time in preparation and planning with others
  - work with larger classes.

The class size conclusion is consistent with the findings of the 1979 meta-analysis by Gene Glass and Mary Lee Smith that reducing class size in the range we have in recent years has no impact on student achievement.

Thank you.