

Strong performers and successful reformers in education Lessons from Finland and other countries

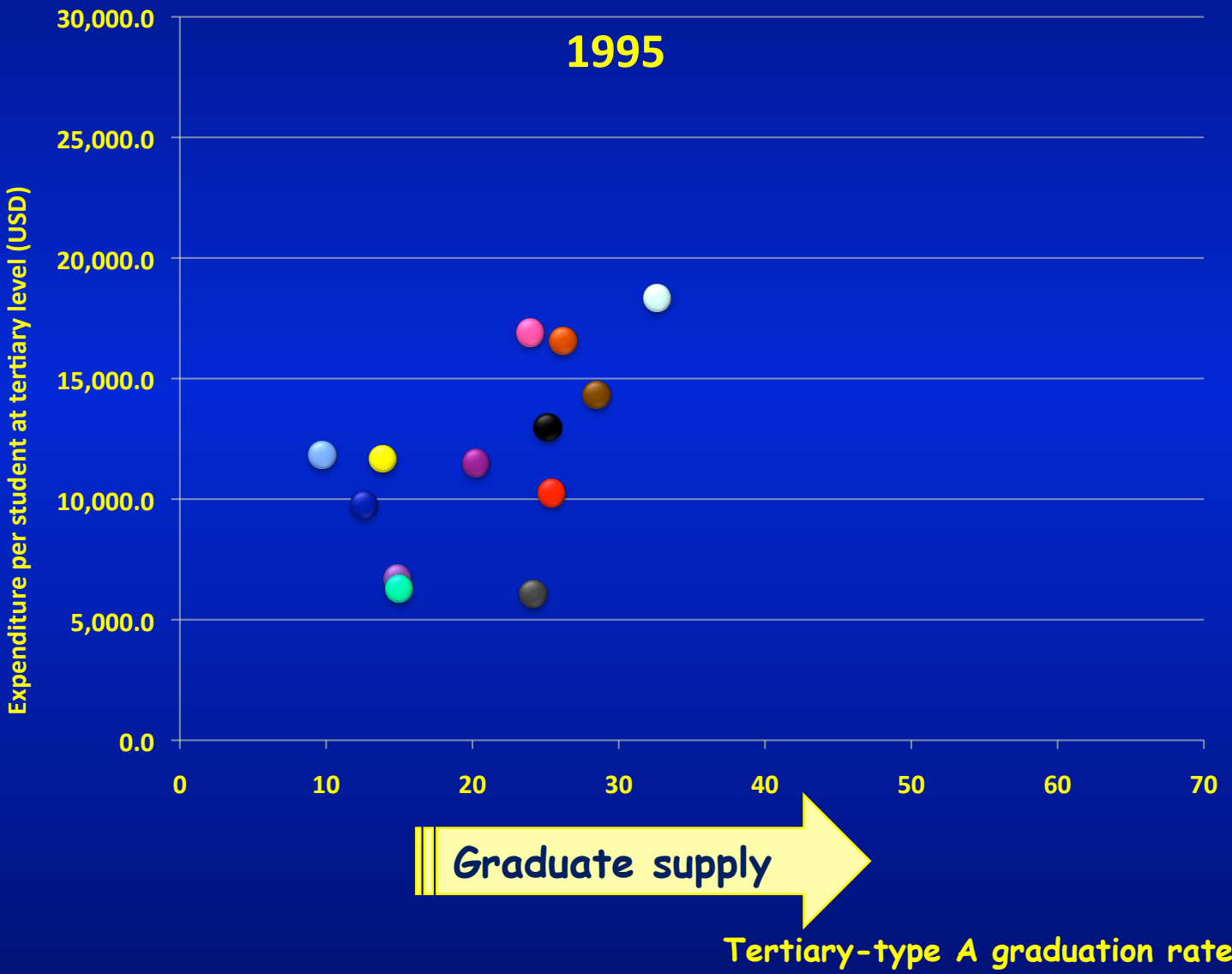
Stanford
17 January 2012

Andreas Schleicher

Special advisor to the Secretary-General on Education Policy
Head of the Indicators and Analysis Division, EDU

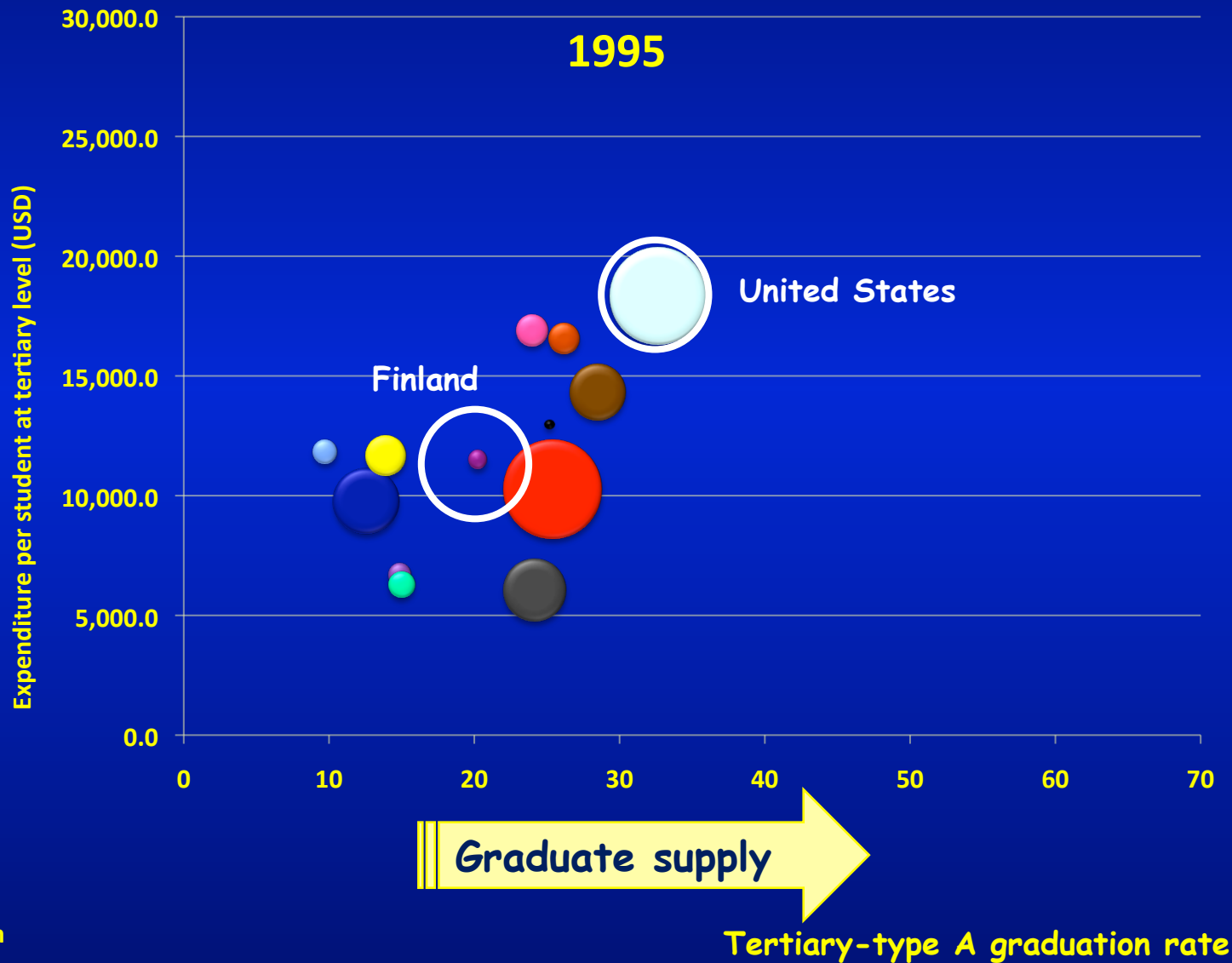
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A world of change - higher education



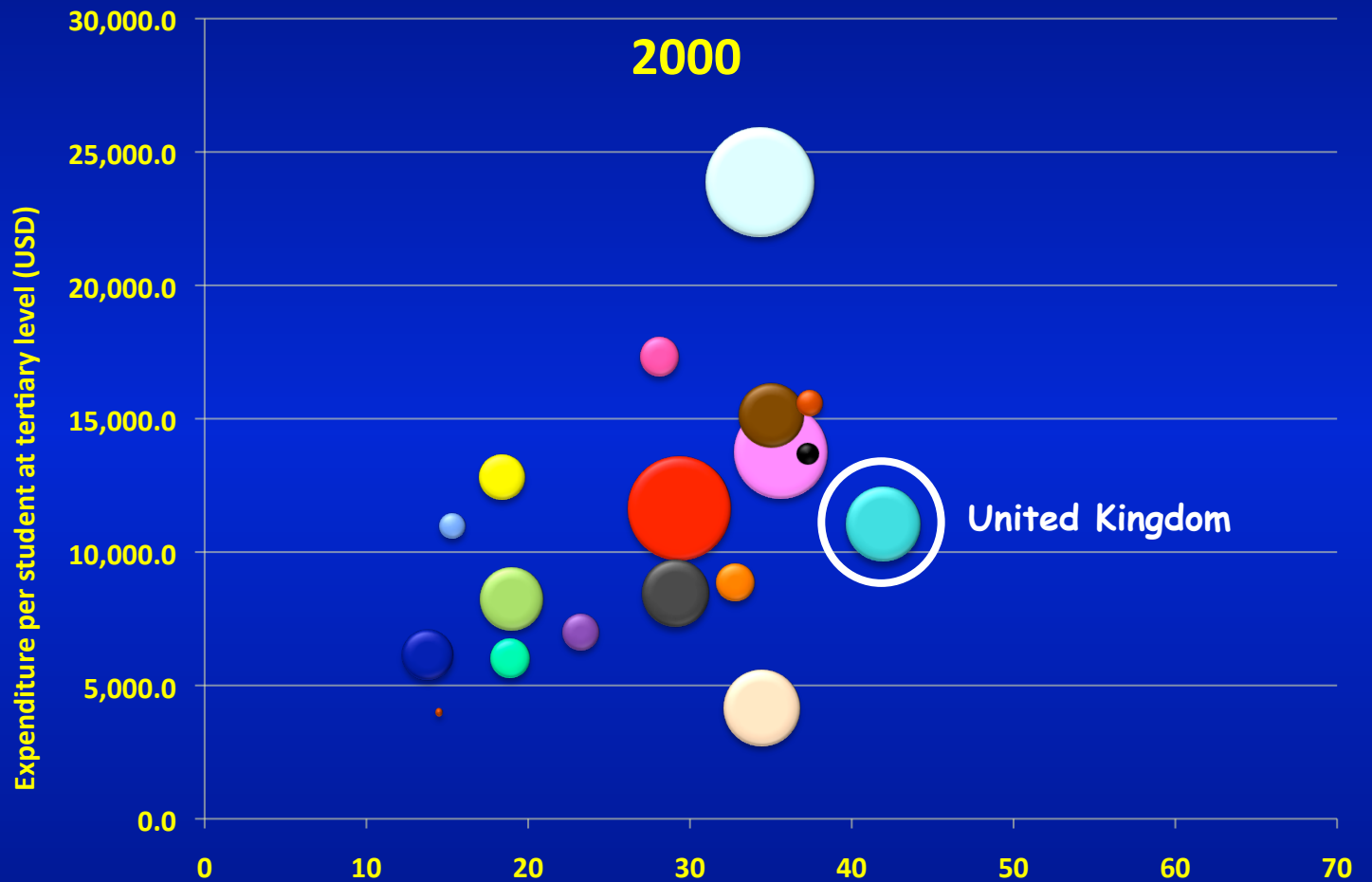
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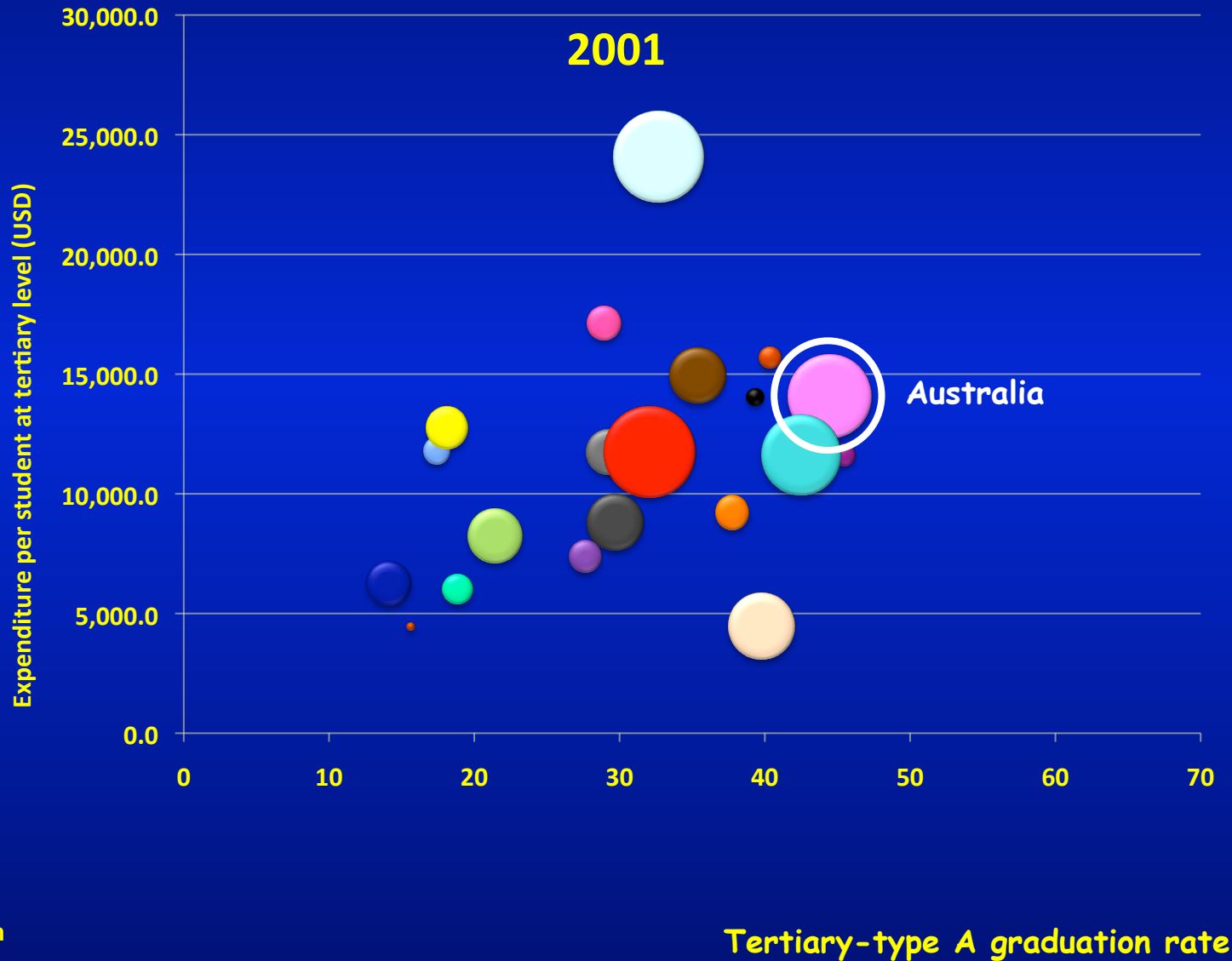
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Tertiary-type A graduation rate

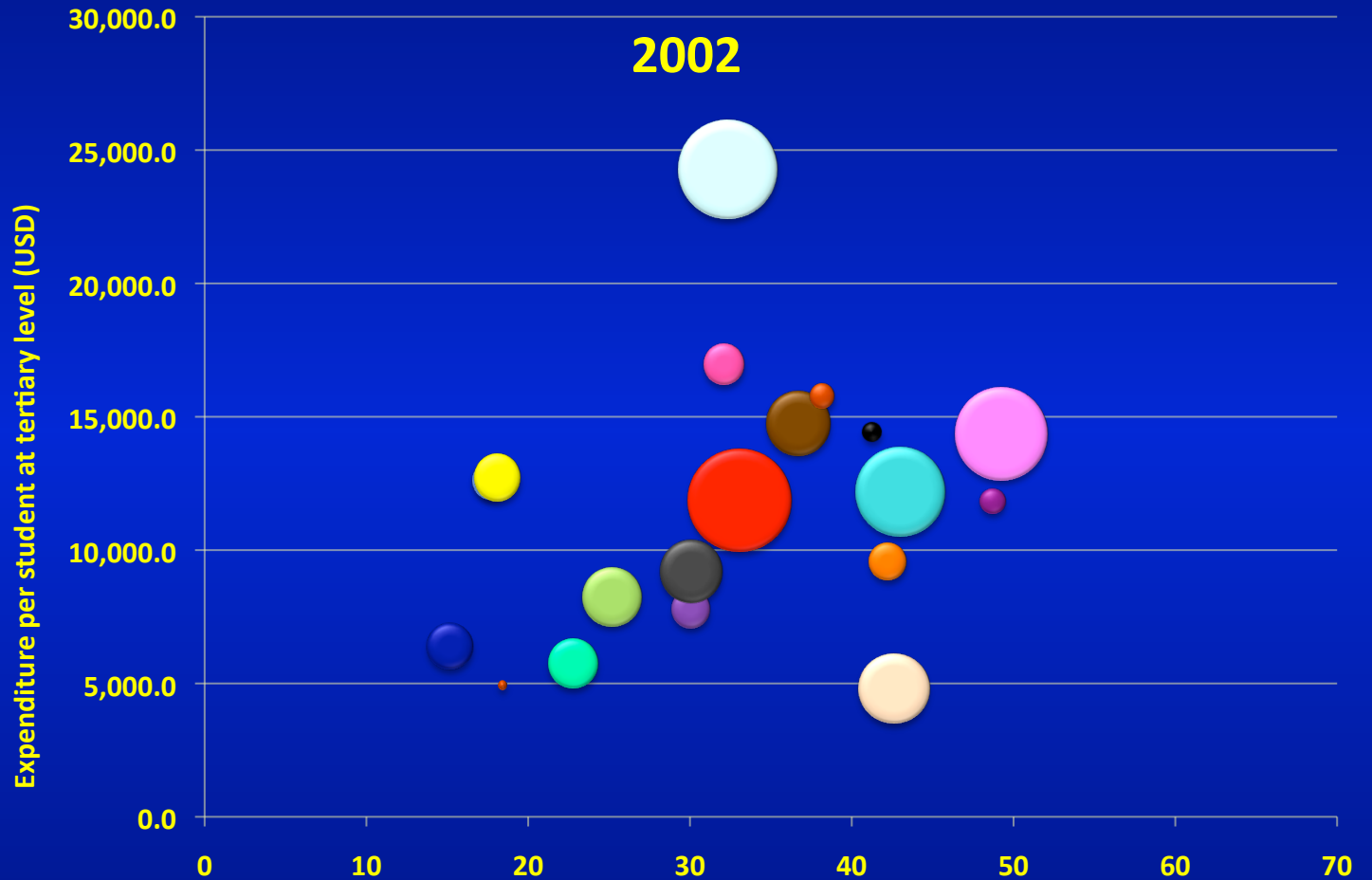
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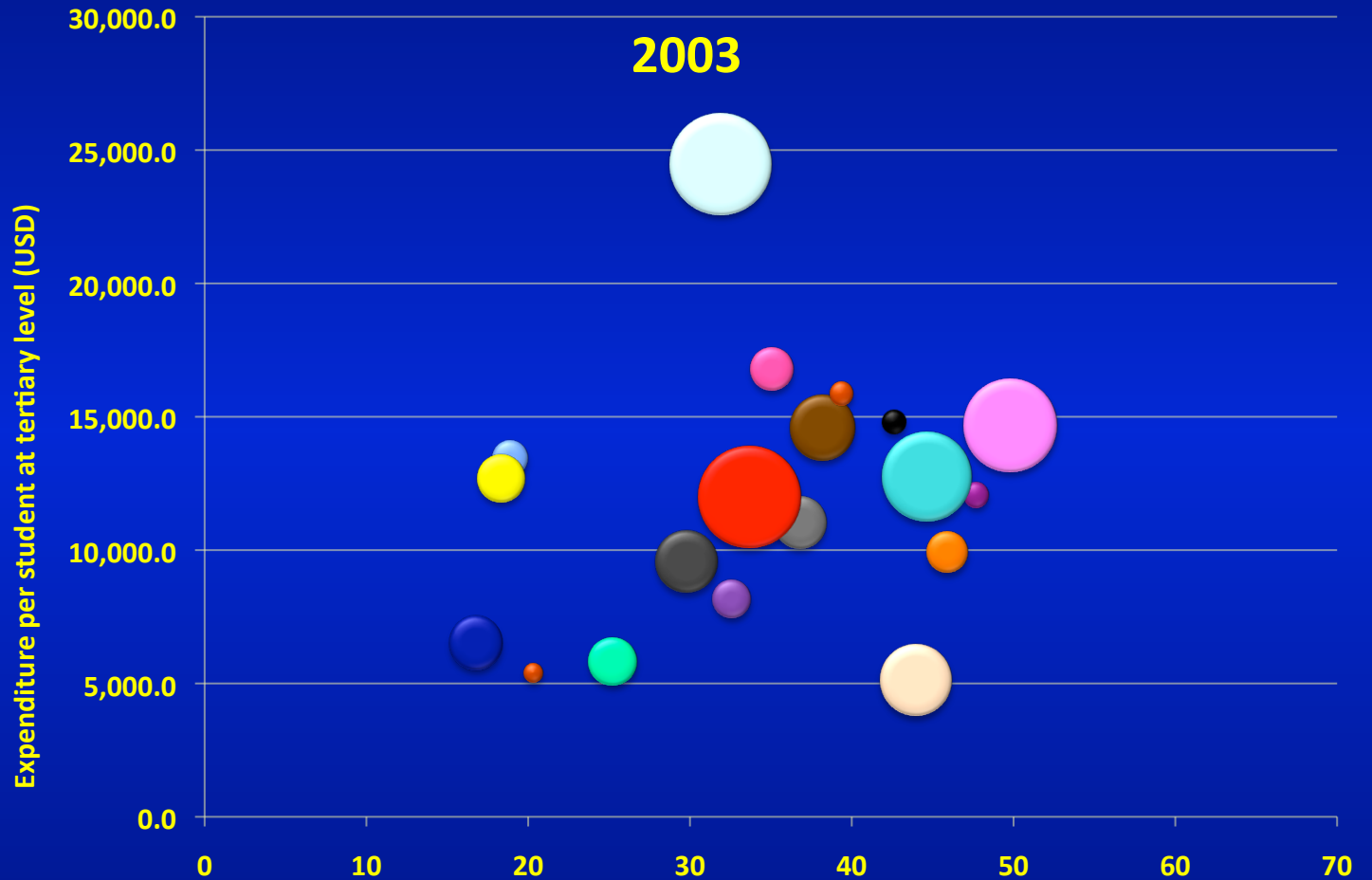
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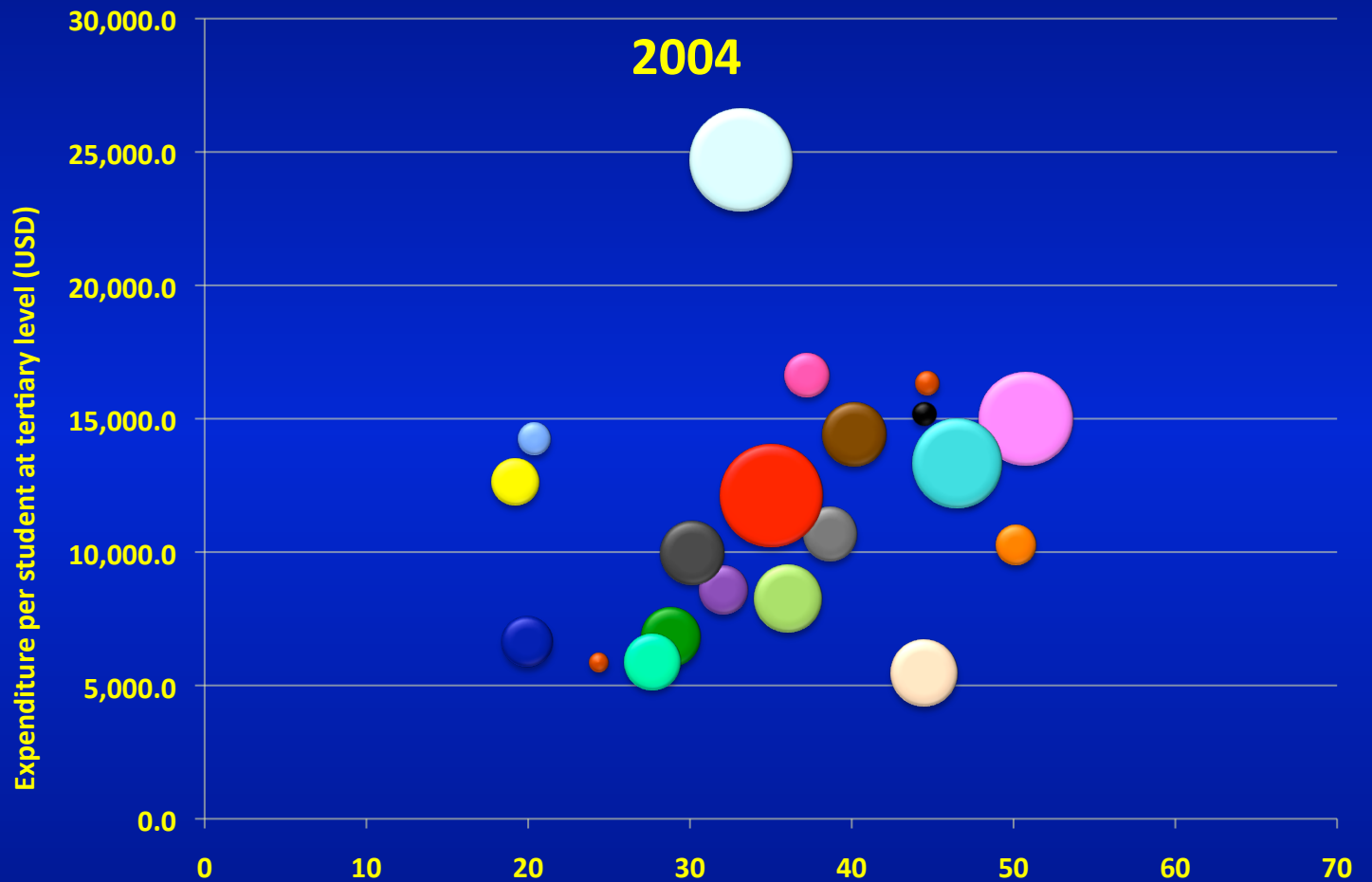


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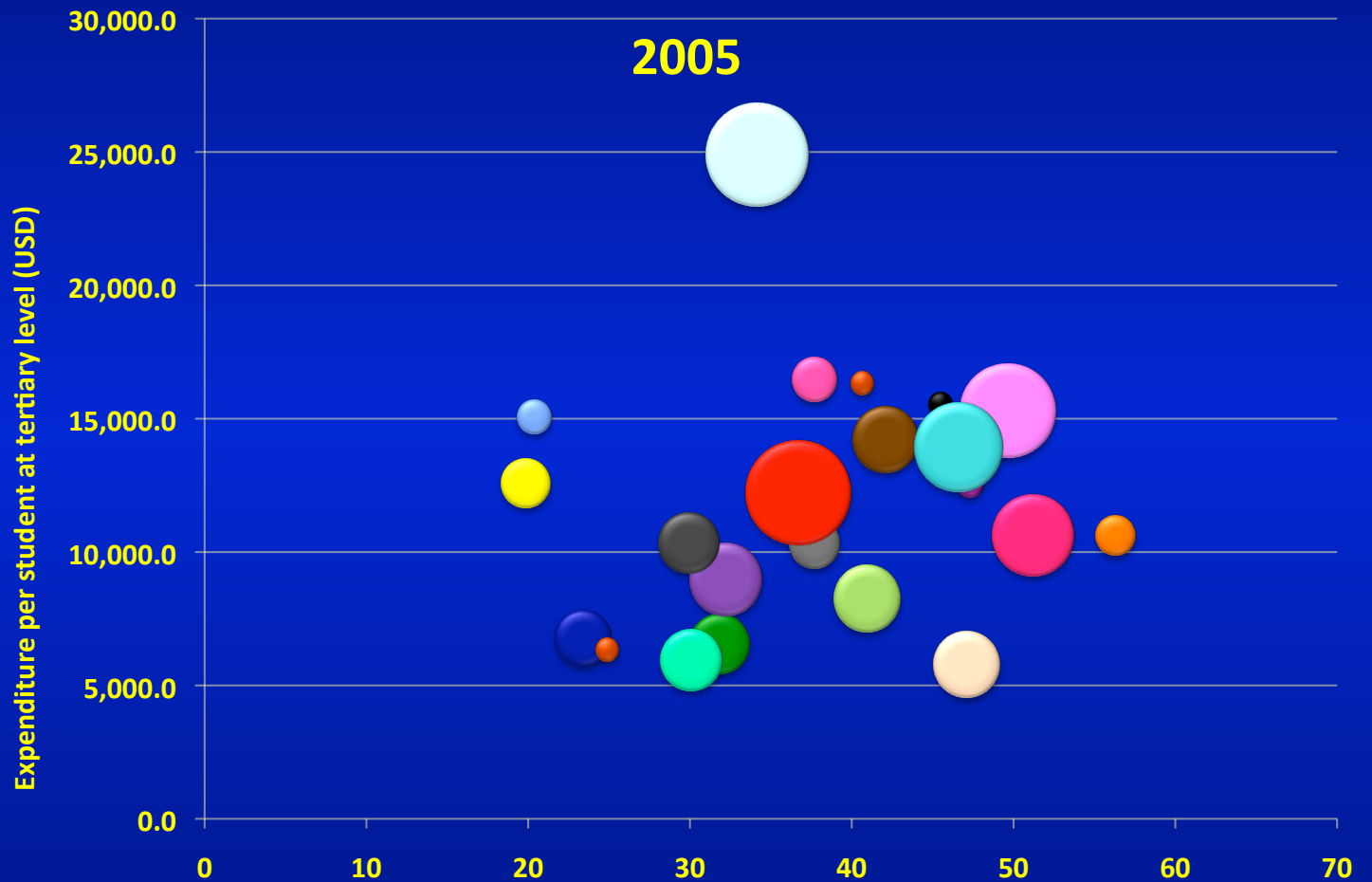
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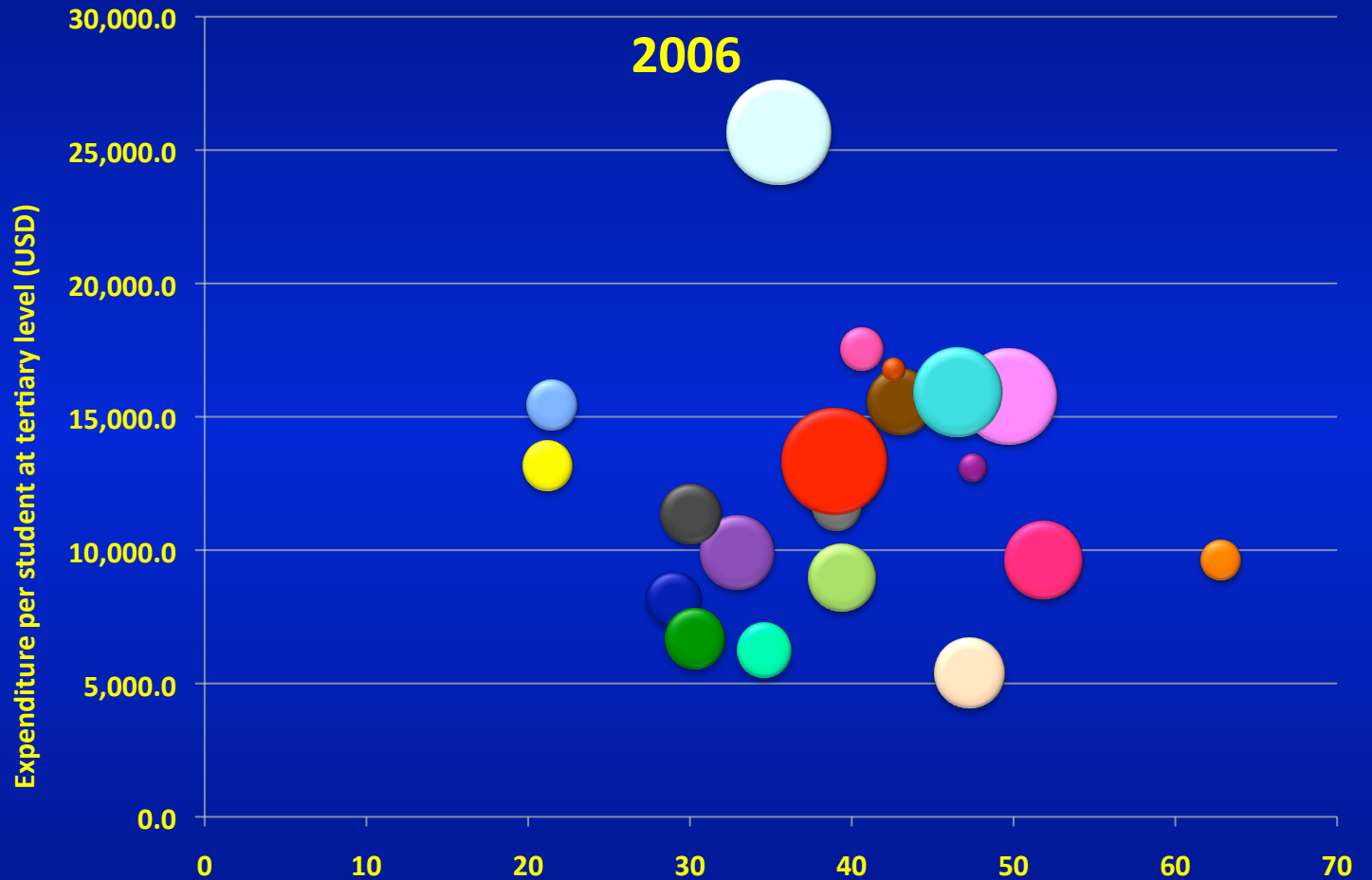
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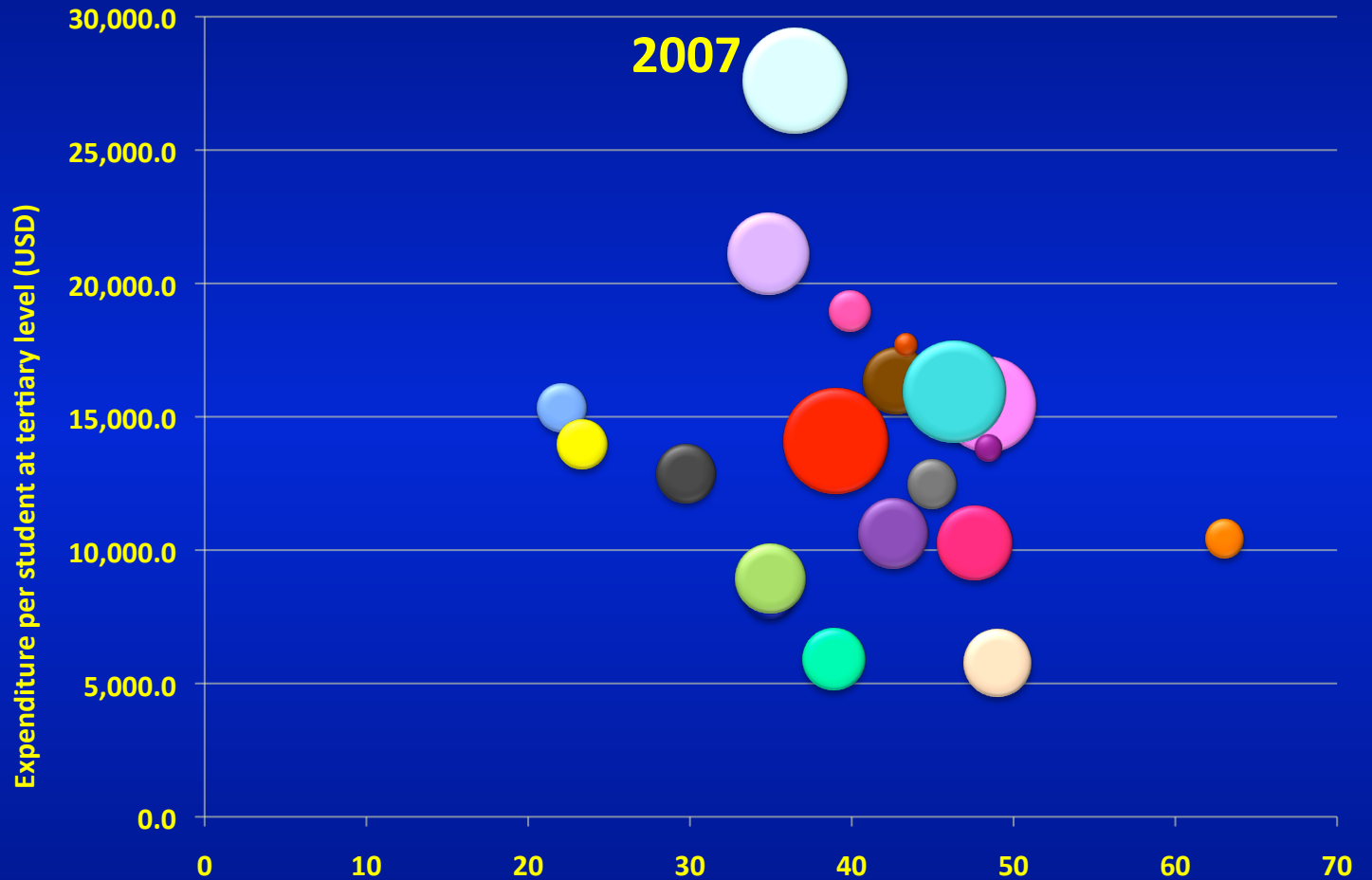
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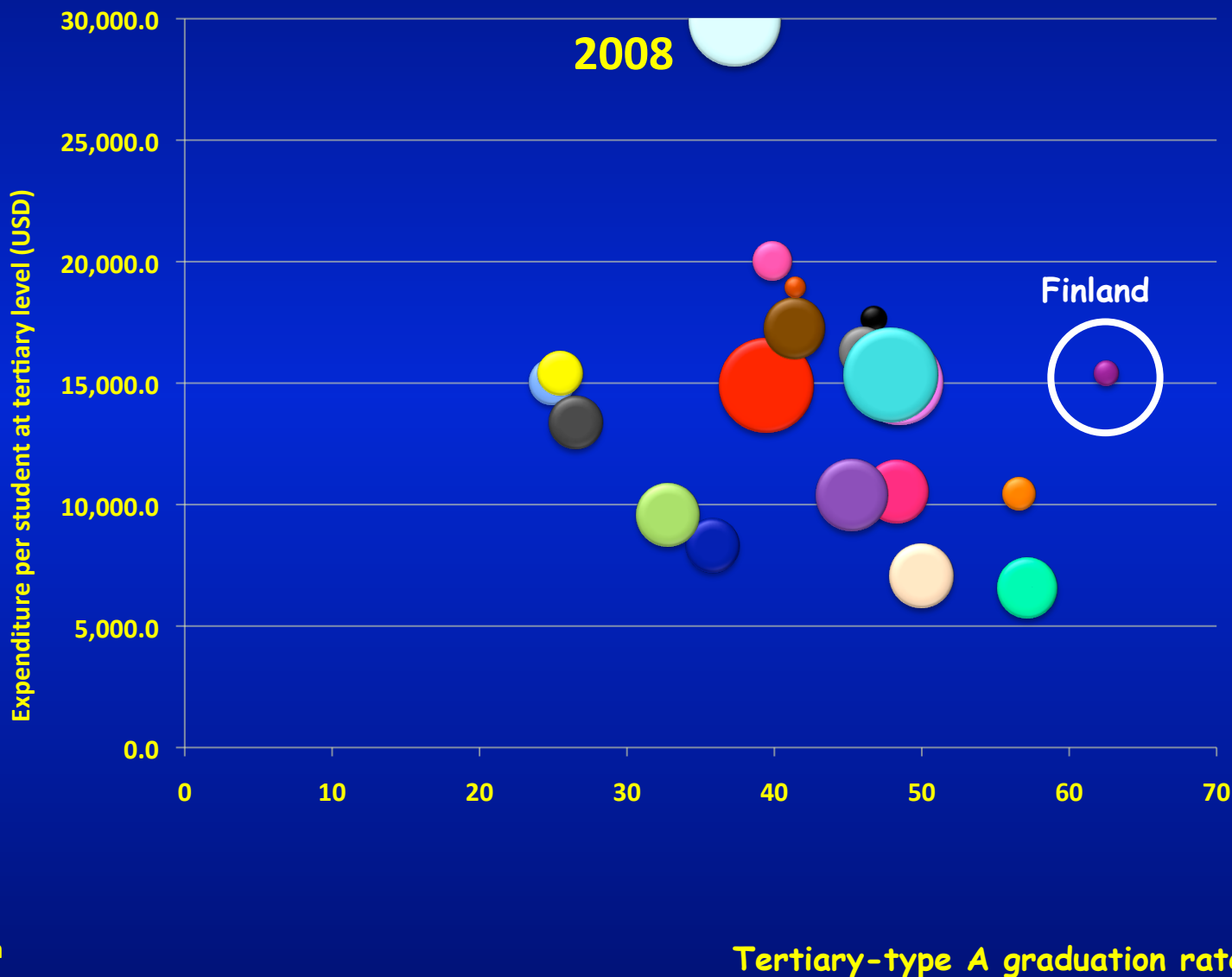
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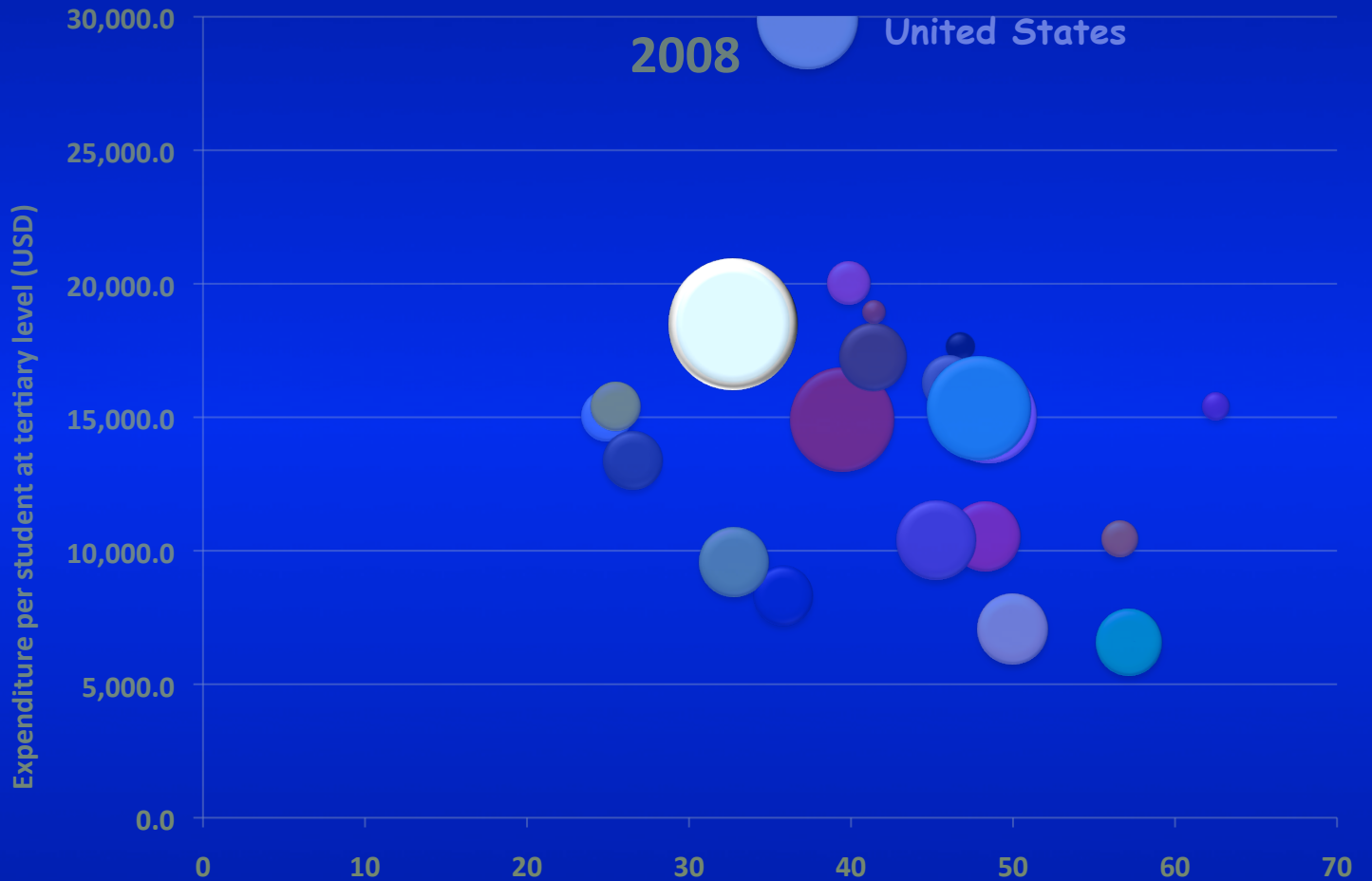
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A world of change - higher education



Tertiary-type A graduation rate

The composition of the global talent pool has changed...

Countries' share in the population with tertiary education, for 25-34 and 55-64 year-old age groups, percentage (2009)

55-64-year-old population



25-34-year-old population

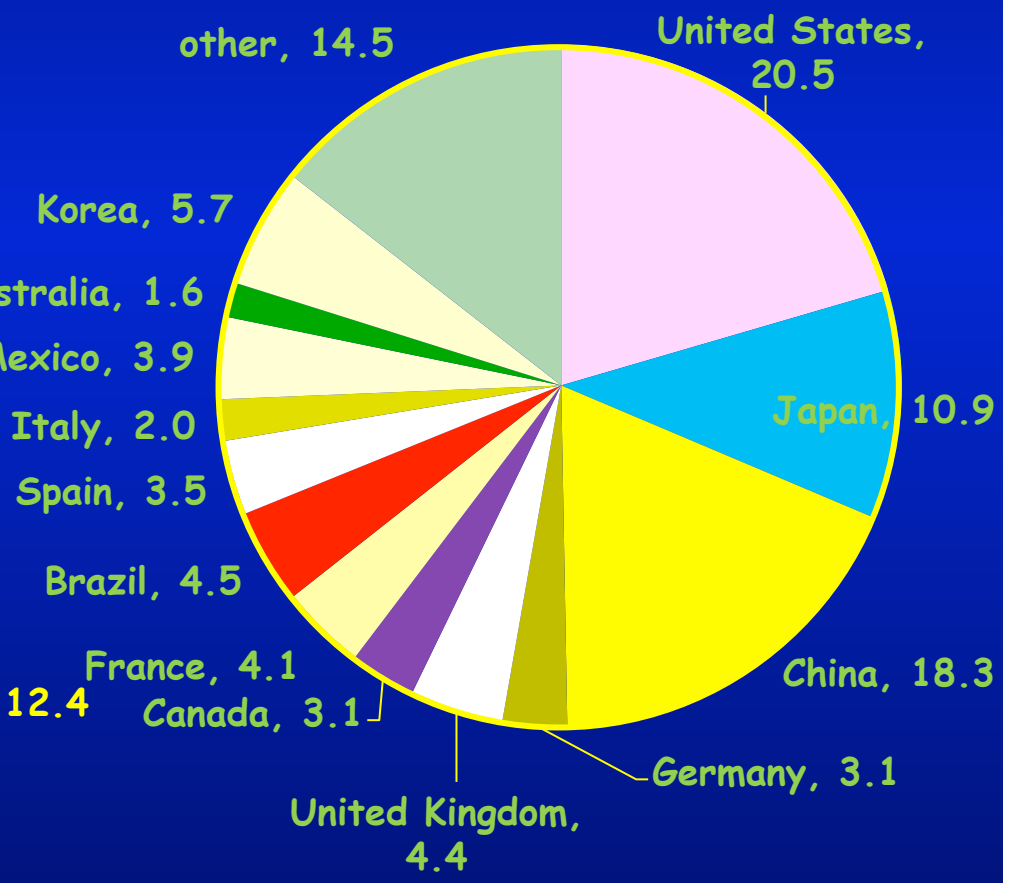
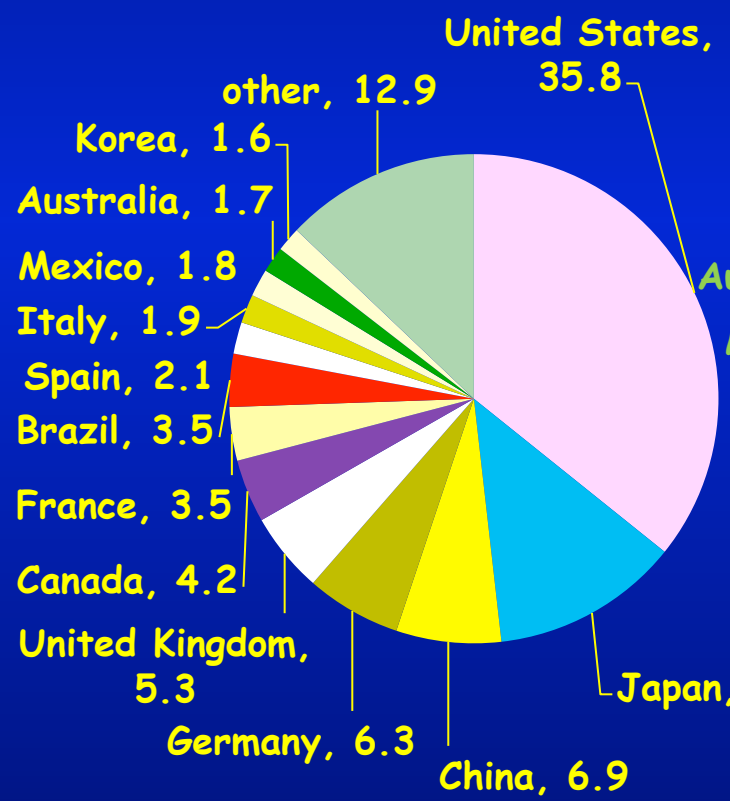


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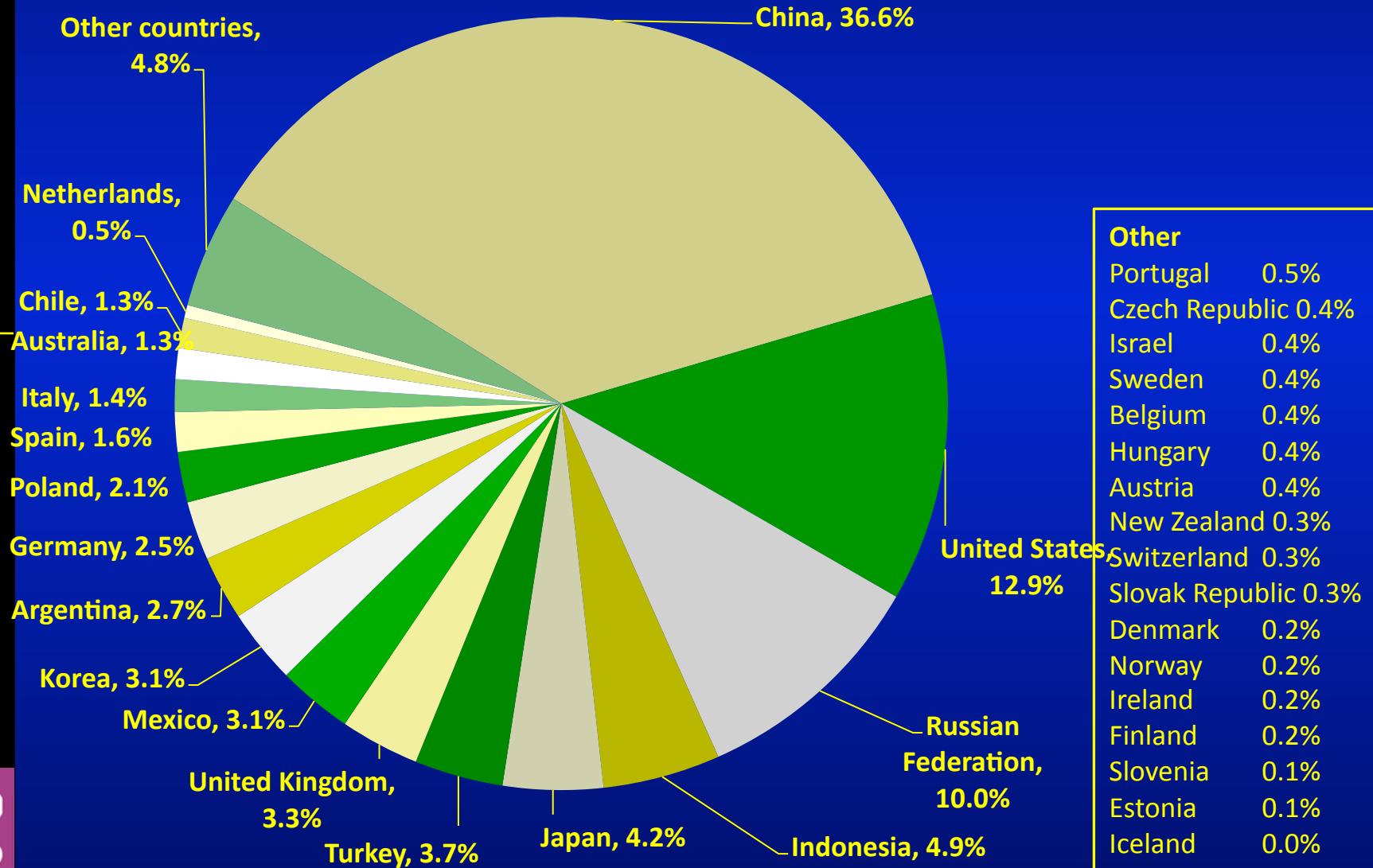
55-64-year-old population

25-34-year-old population

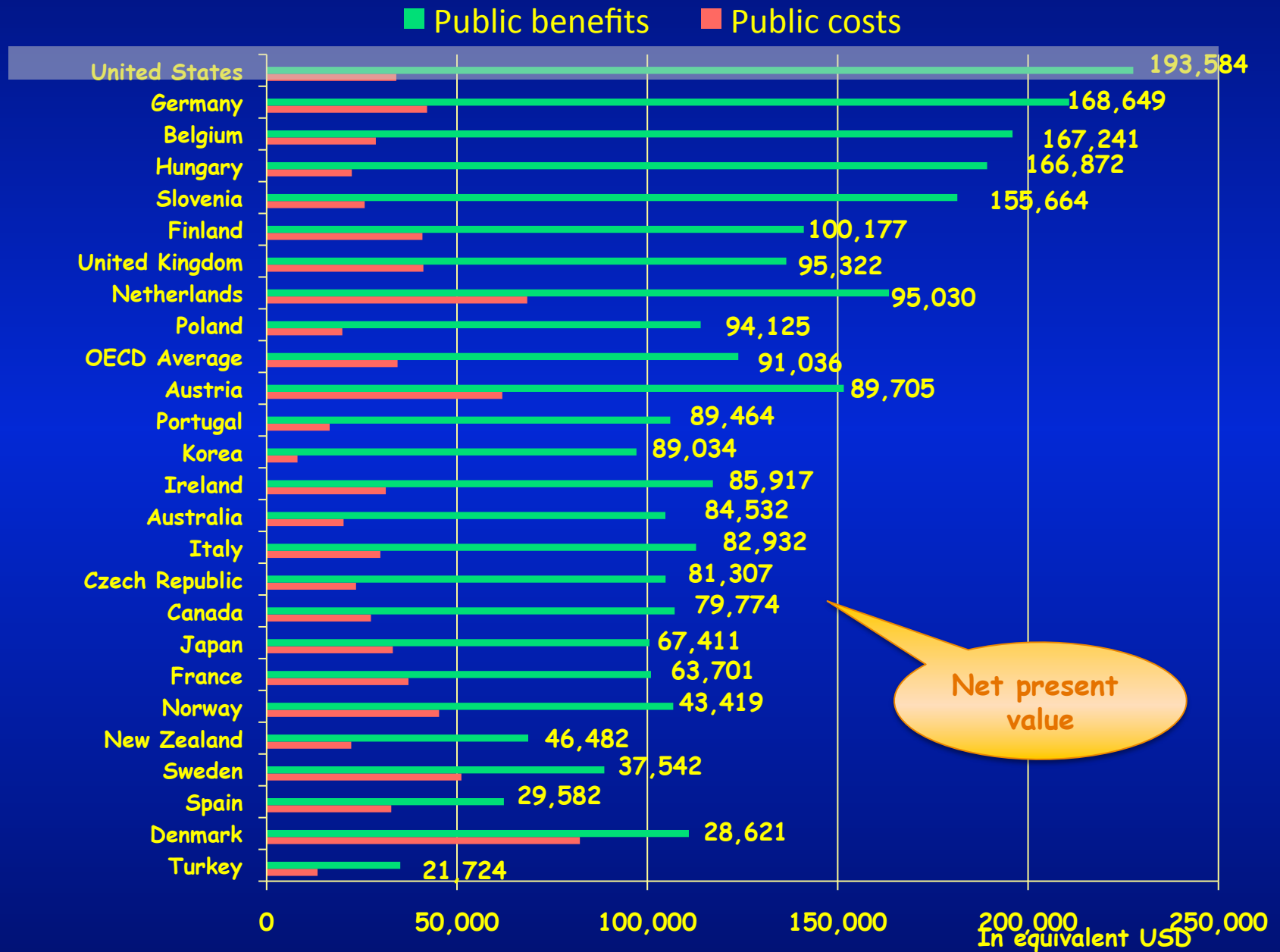


...and will continue to change

Share of new entrants into tertiary education in 2009 (all OECD and G20 countries)



Public cost and benefits for a man obtaining tertiary education (2007 or latest available year)



Then

Now

Learning a place



Learning an activity

Prescription



Informed profession

Delivered wisdom



User-generated wisdom

Uniformity



Embracing diversity

Conformity



Ingenious

Curriculum-centred



Learner-centred

Provision



Outcomes

Bureaucratic look-up

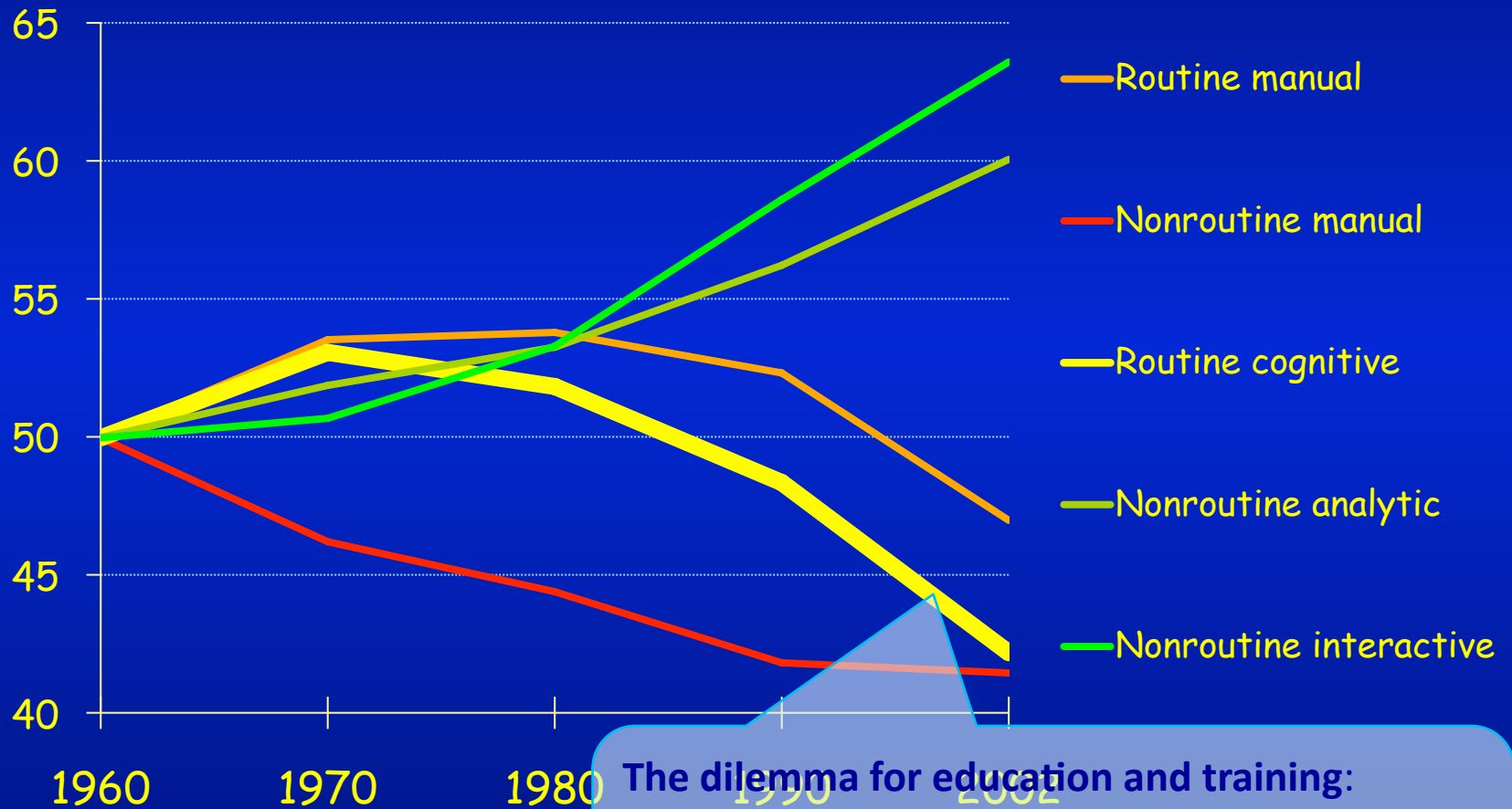


Devolved - look outwards

How the demand for skills has changed

Economy-wide measures of routine and non-routine task input (US)

Mean task input as percentiles of the 1960 task distribution



(Levy and Murnane)

The dilemma for education and training:
The skills that are easiest to teach and test are also the ones that are easiest to digitise, automate and outsource

PISA 2009 in brief

PISA countries in 2009

□ Over half a million students...

- representing 28 million 15-year-olds in 74* countries/economies

... took an internationally agreed 2-hour test...

- Goes beyond testing whether students can reproduce what they were taught...
- ... to assess students' capacity to extrapolate from what they know and creatively apply their knowledge in novel situations

... and responded to questions on...

- their personal background, their schools and their engagement with learning and school

□ Parents, principals and system leaders provided data on...

- school policies, practices, resources and institutional factors that help explain performance differences .

* Data for Costa Rica, Georgia, India, Malaysia, Malta, Mauritius, Venezuela and Vietnam will be published in December 2011

PISA 2009 in brief

PISA countries in 2009

□ PISA seeks to... of world economy 87%

... Support governments to prepare students...

... to deal with more rapid change than ever before...

... for jobs that have not yet been created...

... using technologies that have not yet been invented...

... to solve problems that we don't yet know will arise

... Provide a basis for policy dialogue and global collaboration in defining and implementing educational goals, policies and practices

- Show countries what achievements are possible

- Help governments set policy targets in terms of measurable goals achieved elsewhere

- Gauge the pace of educational progress

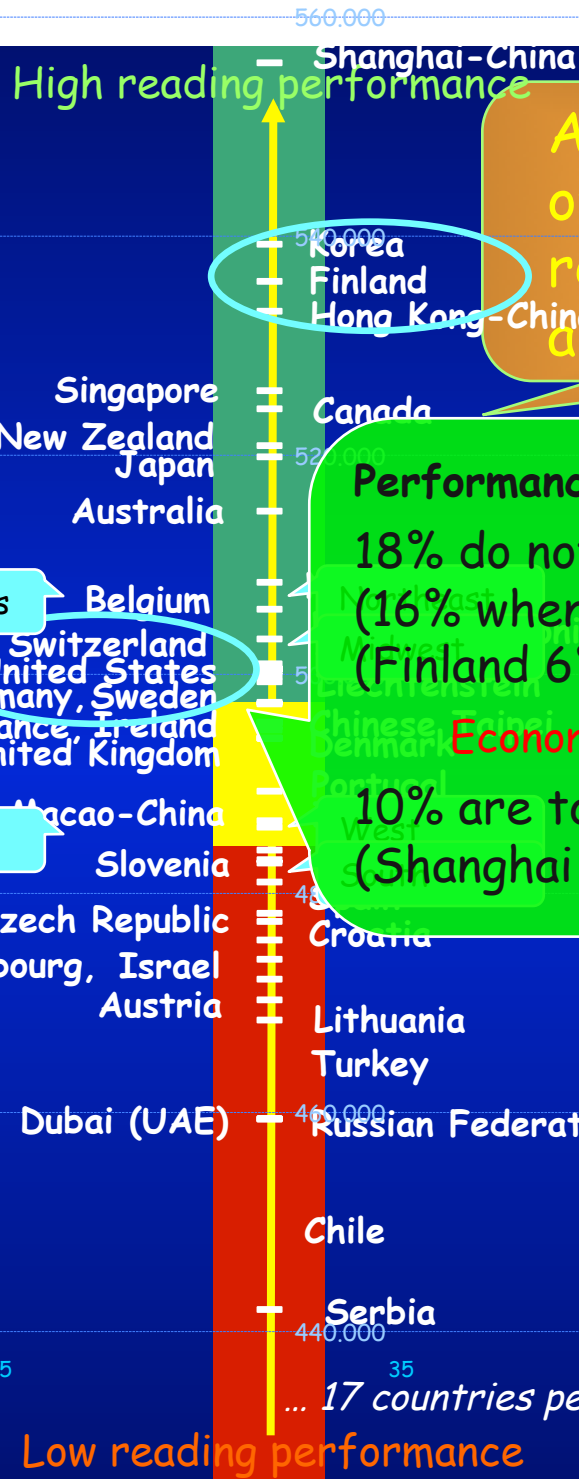
- Facilitate peer-learning on policy and practice .

PISA 2009 in brief

□ Key principles

- 'Crowd sourcing' and collaboration
 - PISA draws together leading expertise and institutions from participating countries to develop instruments and methodologies...
... guided by governments on the basis of shared policy interests
- Cross-national relevance and transferability of policy experiences
 - Emphasis on validity across cultures, languages and systems
 - Frameworks built on well-structured conceptual understanding of assessment areas and contextual factors
- Triangulation across different stakeholder perspectives
 - Systematic integration of insights from students, parents, school principals and system-leaders
- Advanced methods with different grain sizes
 - A range of methods to adequately measure intended constructs with different grain sizes to serve different decision-making needs
 - Productive feedback, at appropriate levels of detail, to fuel improvement at multiple levels .

What 15-year-olds can do



Average performance of 15-year-olds in reading - extrapolate and apply

Performance distribution in US
 18% do not reach baseline Level 2 (16% when excluding immigrants) (Finland 6%, Canada 9%)
 Economic cost: 72 trillion \$
 10% are top performers (Shanghai 20%)

Suburban schools

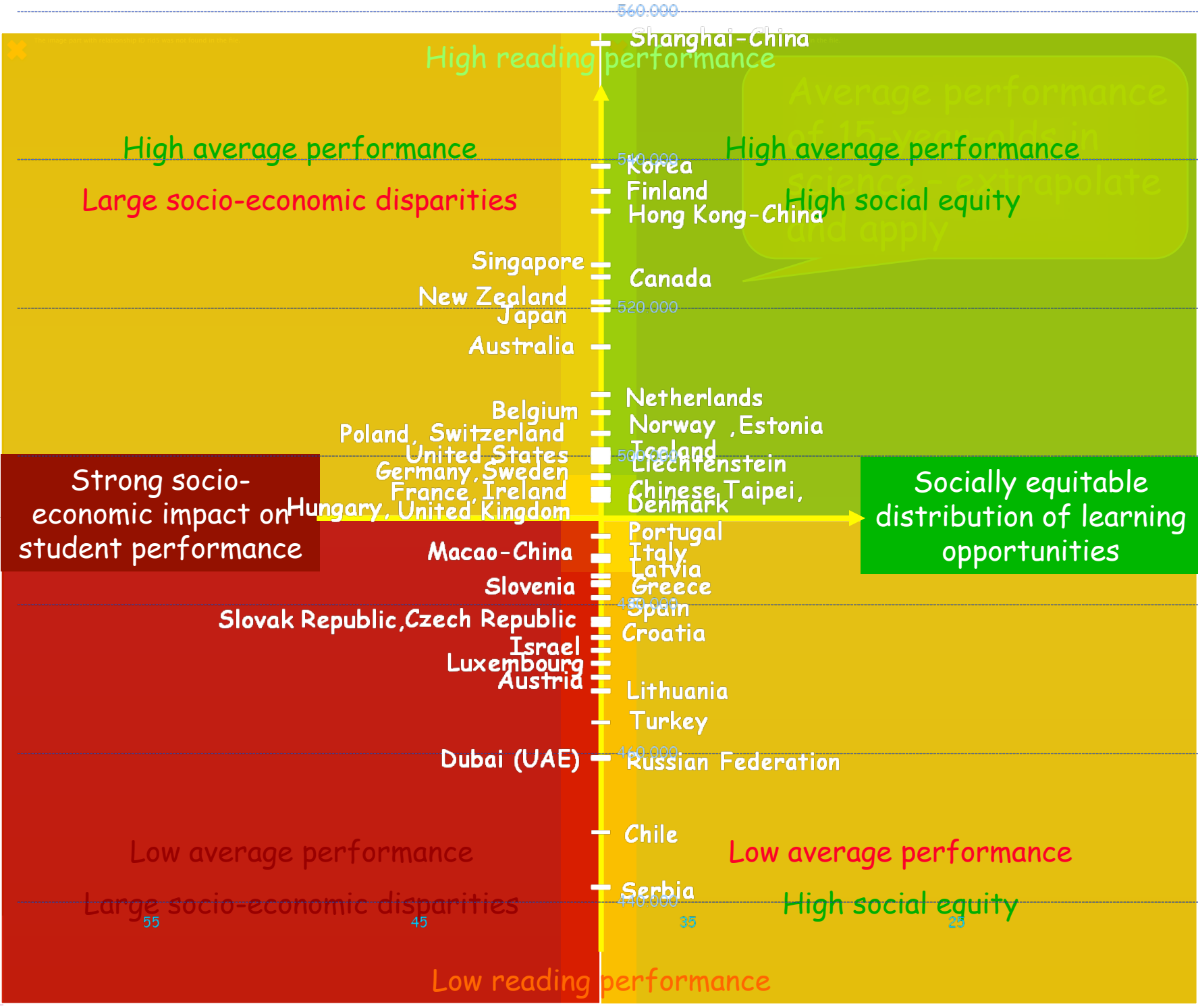
Urban schools

... 17 countries perform below this line

Low reading performance

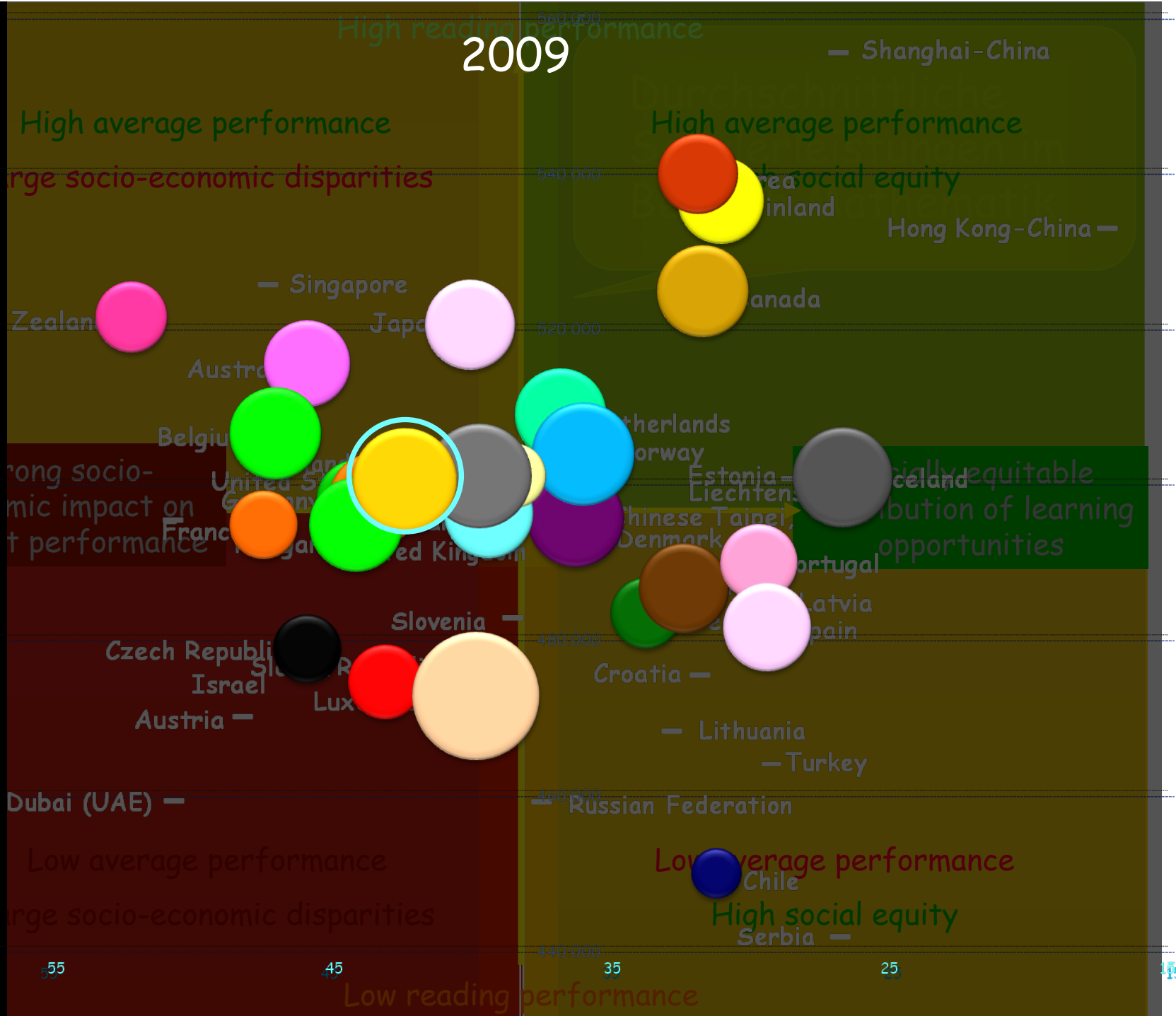
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PISA
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2009



High performing systems often prioritize the quality of teachers over the size of classes

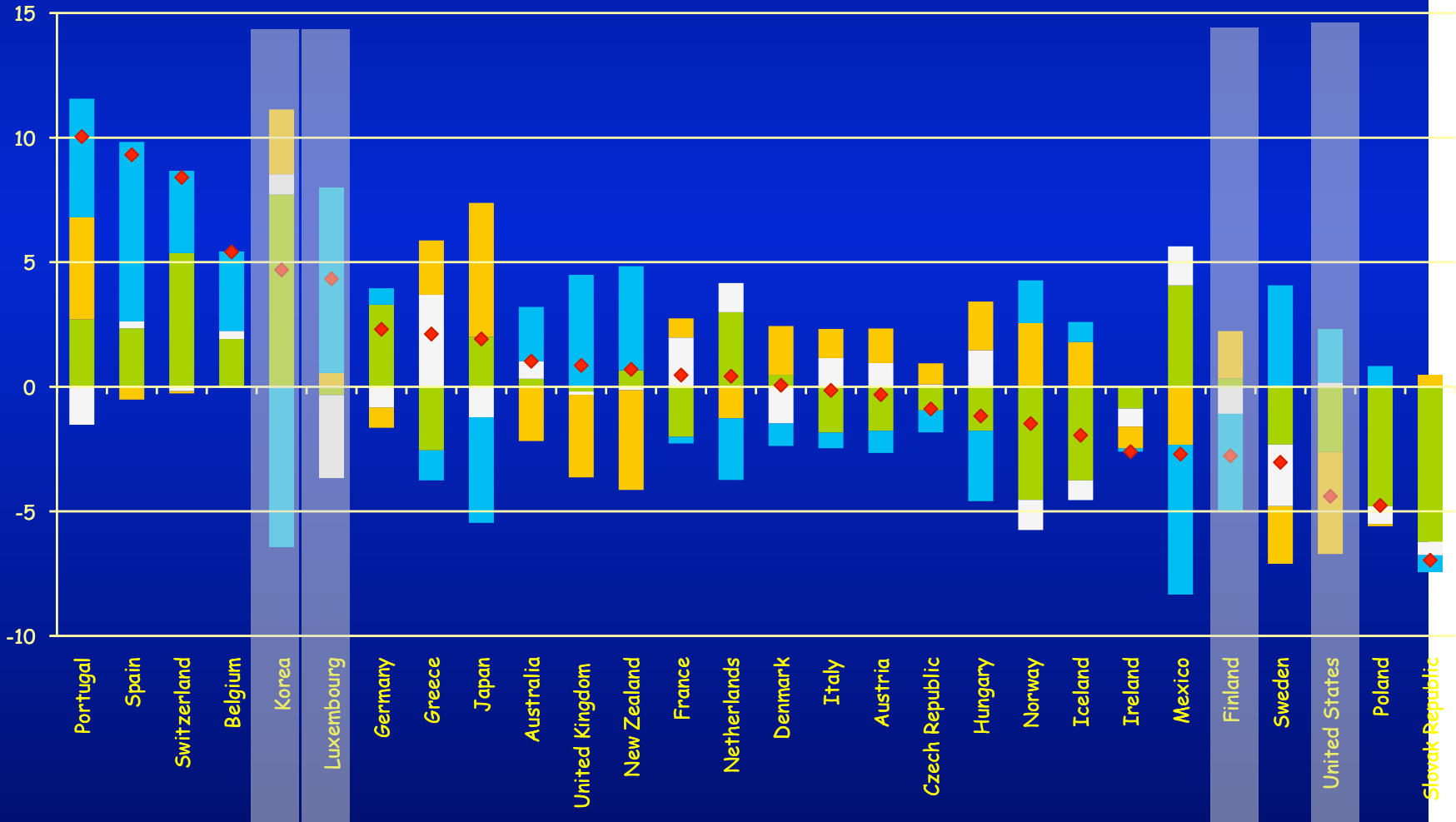
Contribution of various factors to upper secondary teacher compensation costs

per student as a percentage of GDP per capita (2004)

■ Salary as % of GDP/capita ■ Instruction time ■ 1/teaching time ■ 1/class size

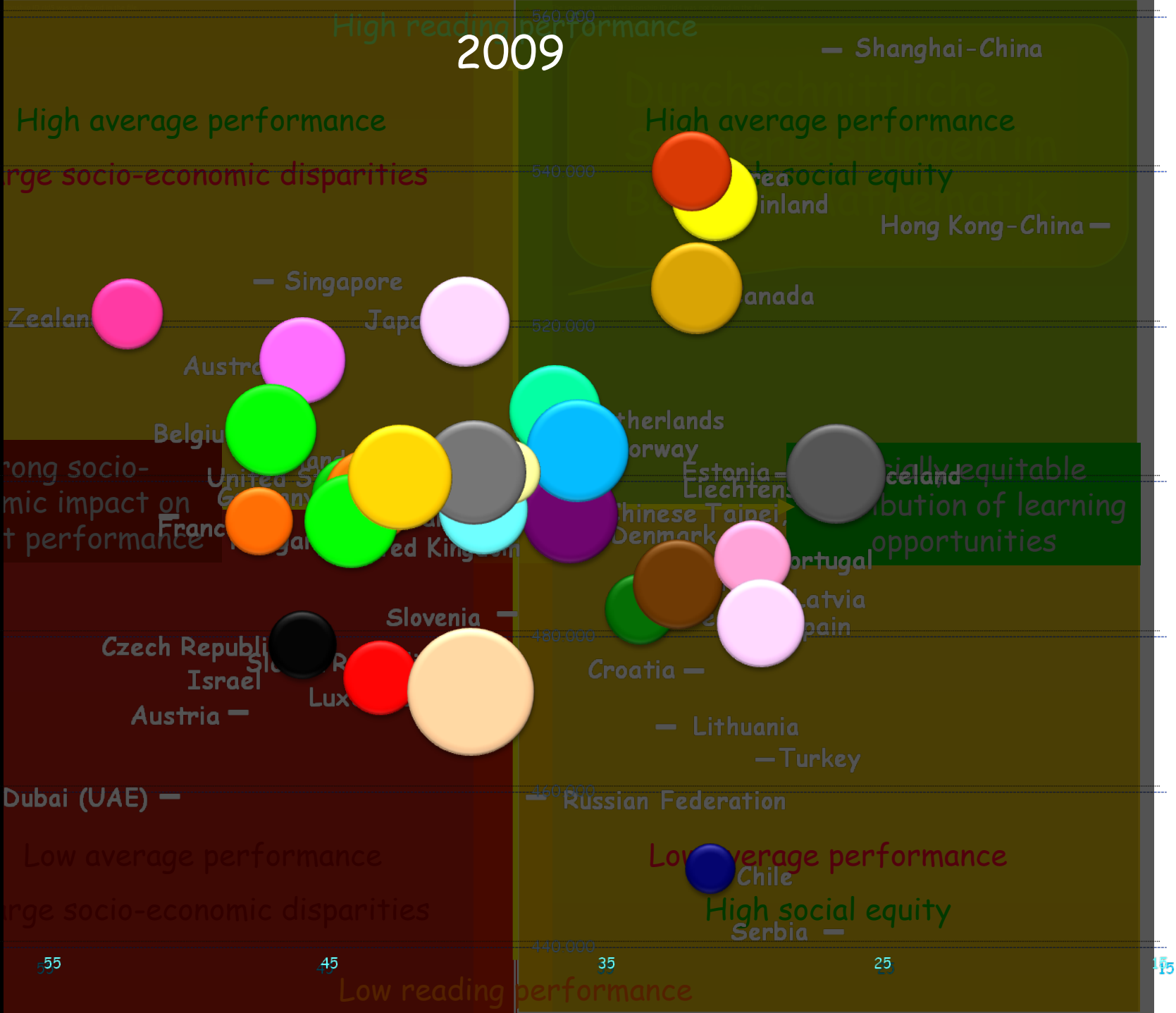
◆ Difference with OECD average

Percentage points



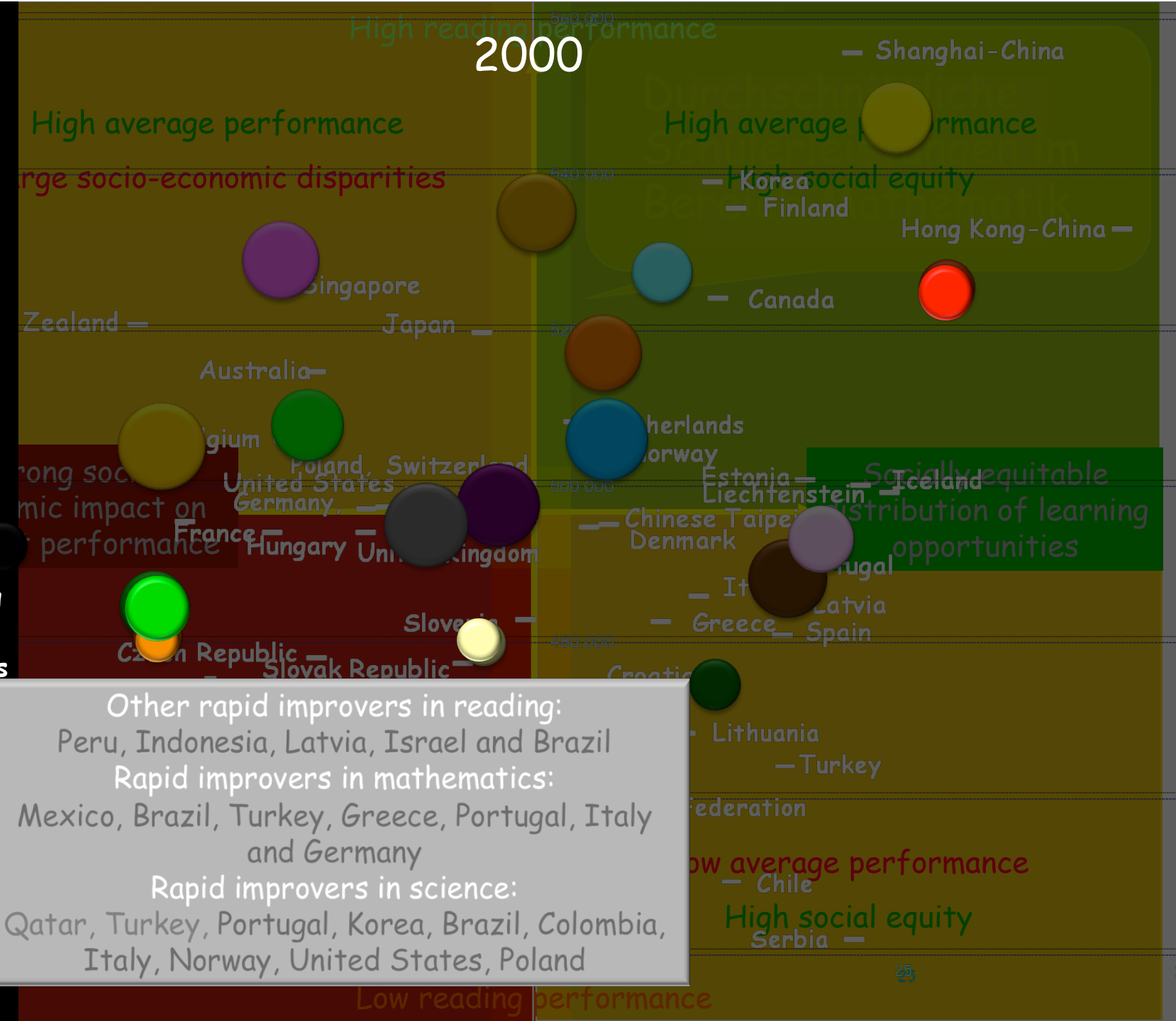
2009

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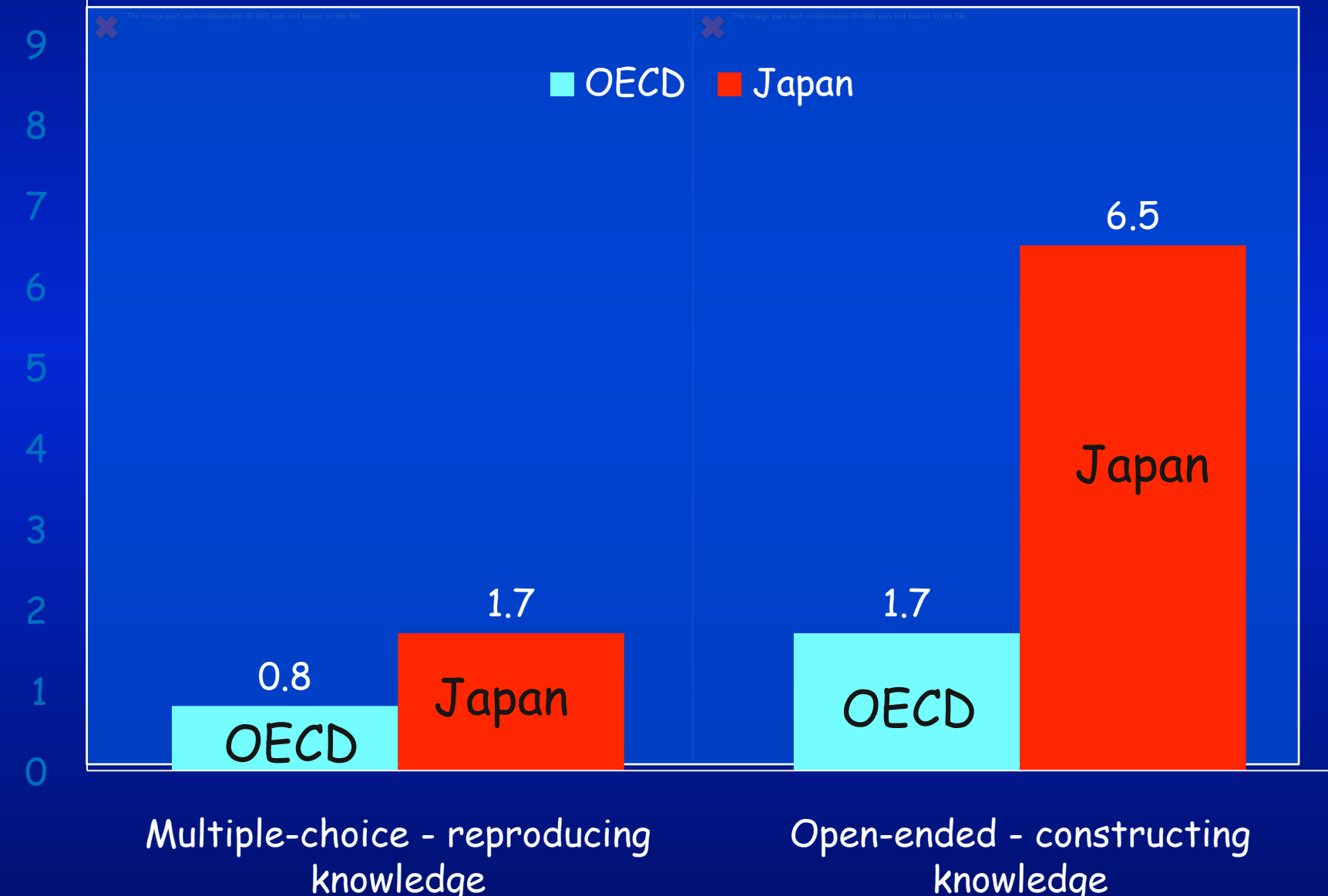


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Changes in performance by type of task

Increase
percentage correct



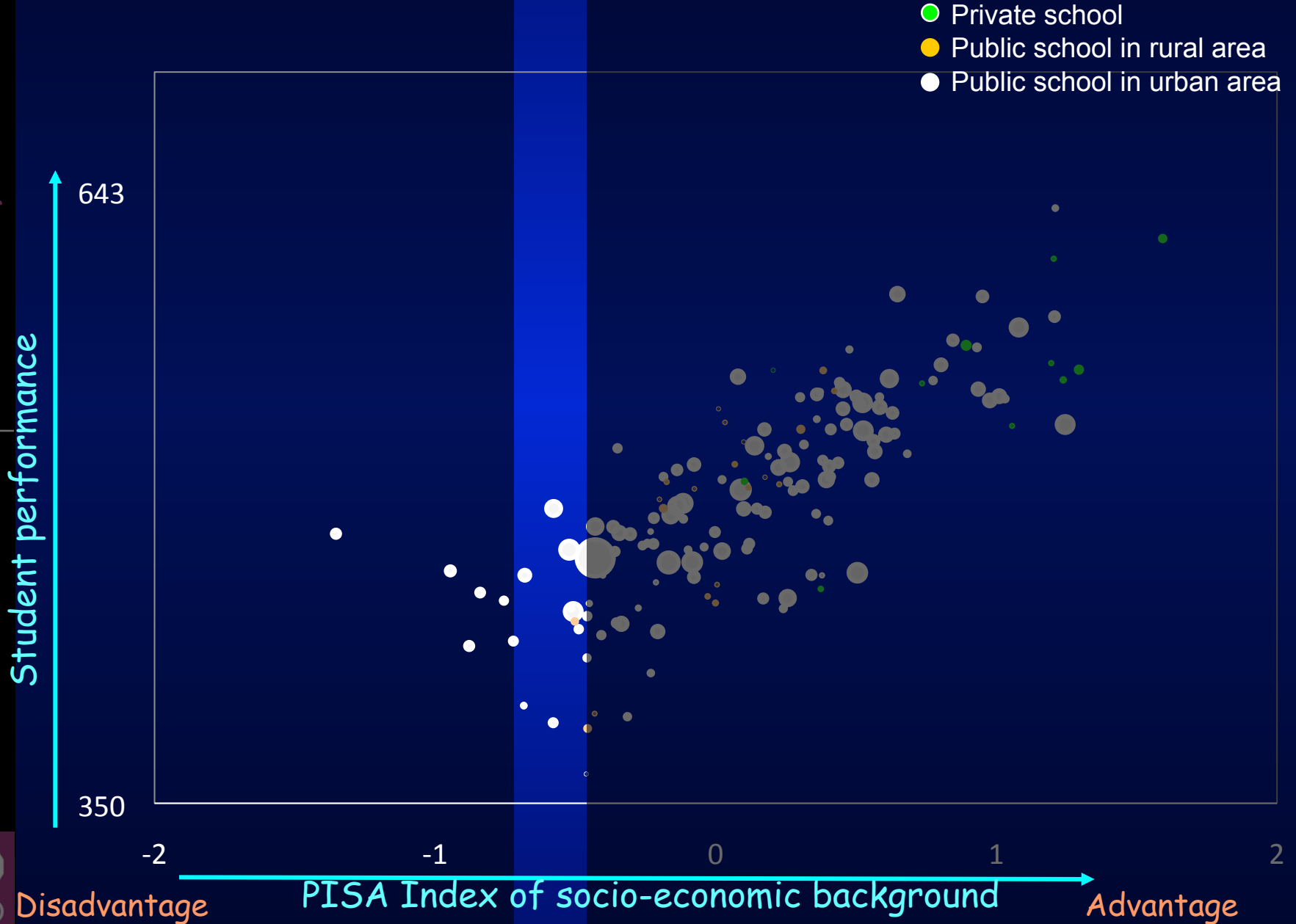
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School performance and socio-economic background United States



School performance and socio-economic background Finland

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Student performance

Score
Thousands

-2

-1

0

1

2

- Private school
- Public school in rural area
- Public school in urban area

Disadvantage

PISA Index of socio-economic background

Advantage



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Percentage of resilient students among disadvantaged students

35
%
80
70
60
50
40
30
20
10
0

Resilient student: Comes from the bottom quarter of the socially most disadvantaged students but performs among the top quarter of students internationally (after accounting for social background)

More than 30% resilient students among disadvantaged students

Between 15%-30% of resilient students among disadvantaged students

Less than 15% resilient students among disadvantaged students

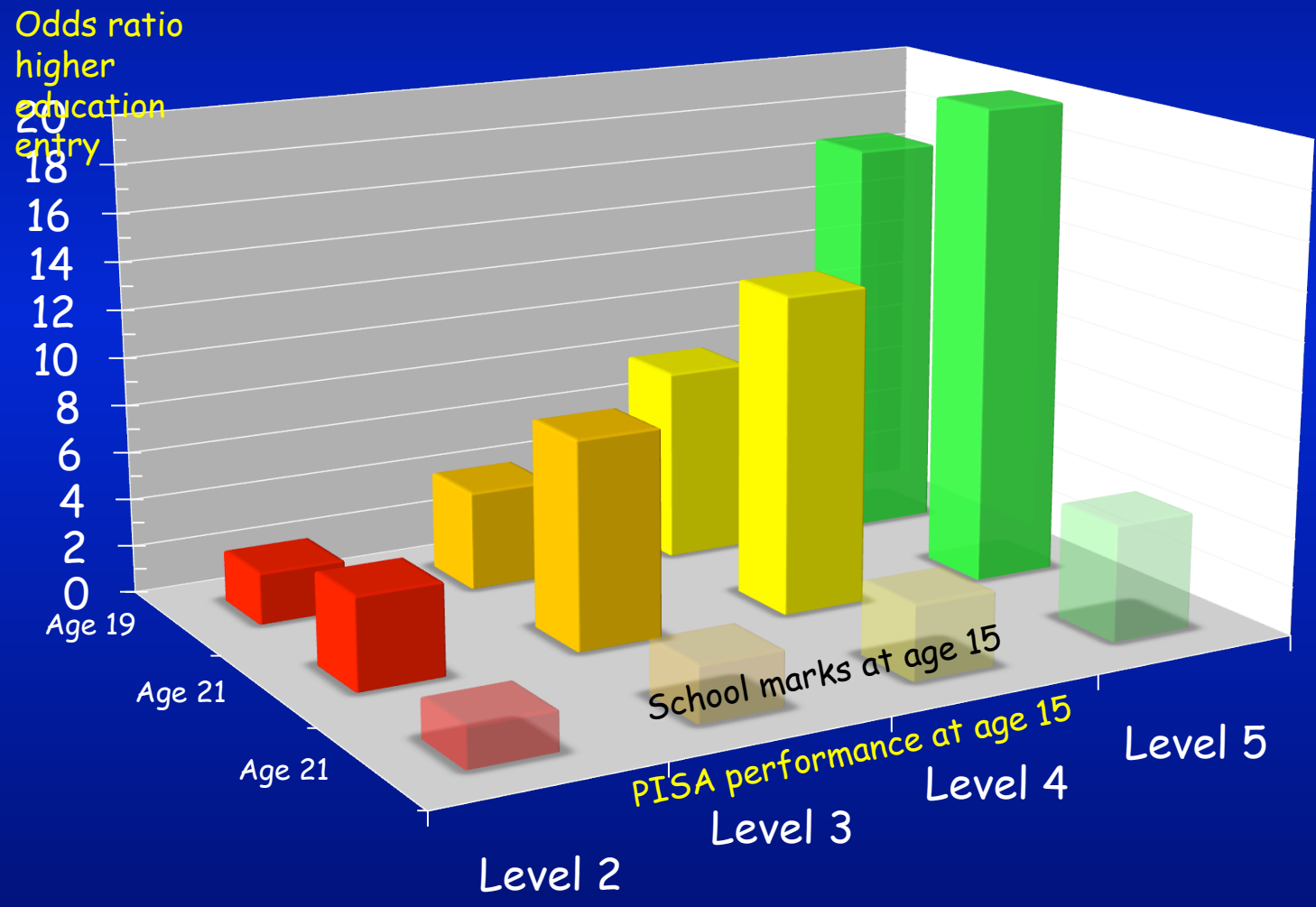


Does it all matter?

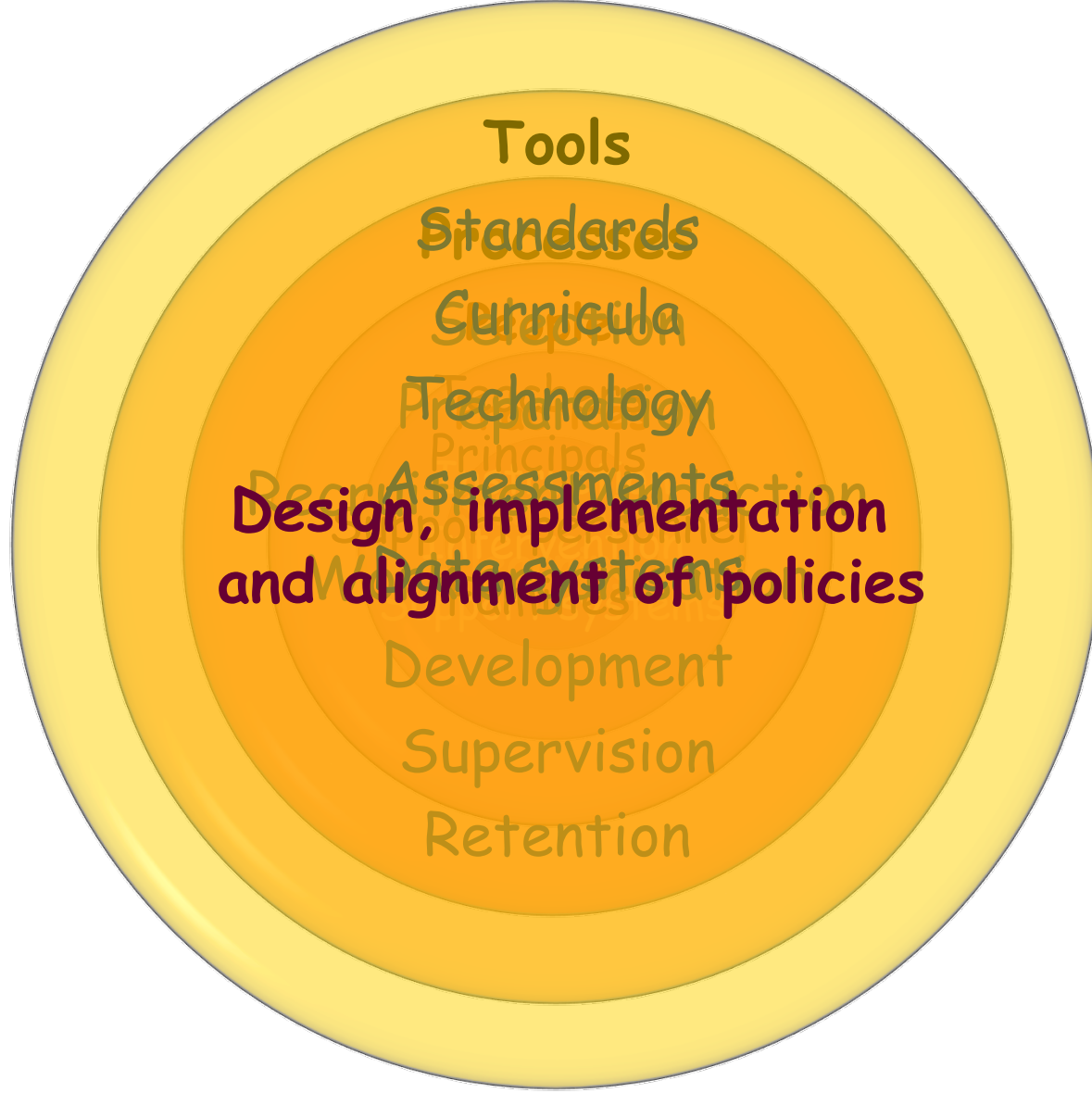
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Increased likelihood of postsec. particip. at age 19/21 associated with PISA reading proficiency at age 15 (Canada) after accounting for school engagement, gender, mother tongue, place of residence, parental, education and family income (reference group PISA Level 1)



What does it all mean?



	Policy	R System	R School	E Equity
Policies and practices				
Learning climate				
Discipline			😊	
Teacher behaviour			😊	
Parental pressure			😊	
Teacher-student relationships			😊	
Dealing with heterogeneity				
Grade repetition		😞	😞	😞
Prevalence of tracking				😞
Expulsions		😞	😞	😞
Ability grouping (all subjects)		😞	😞	😞
Standards /accountability				
Nat. examination		😊		
Standardised tests				😊

- A commitment to education and the belief that competencies can be learned and therefore all children can achieve
 - Universal educational standards and personalisation as the approach to heterogeneity in the student body...
 - ... as opposed to a belief that students have different destinations to be met with different expectations, and selection/stratification as the approach to heterogeneity
 - Clear articulation who is responsible for ensuring student success and to whom

Resources
where they
yield most

Incentives
and
accountability

at
f
ry

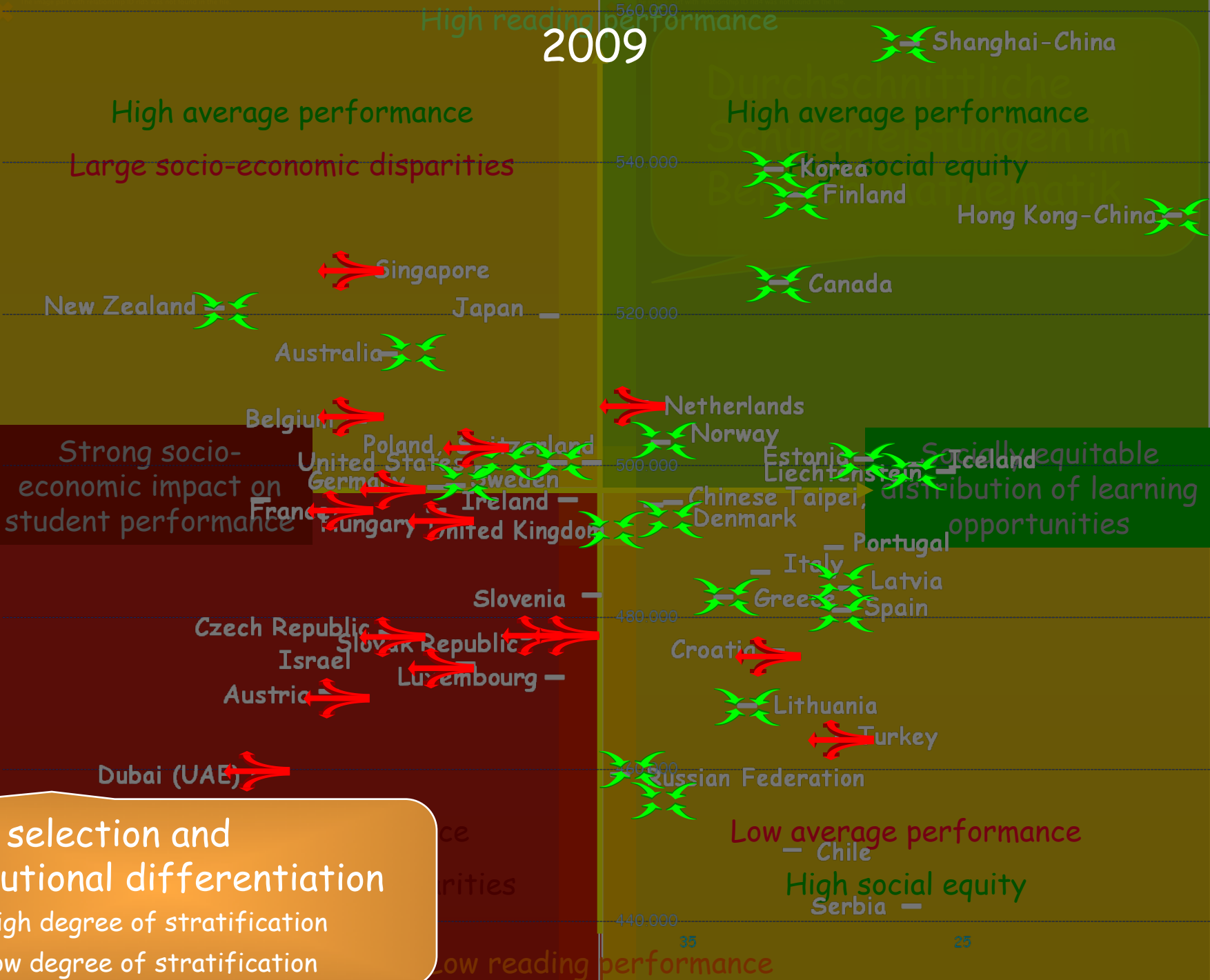
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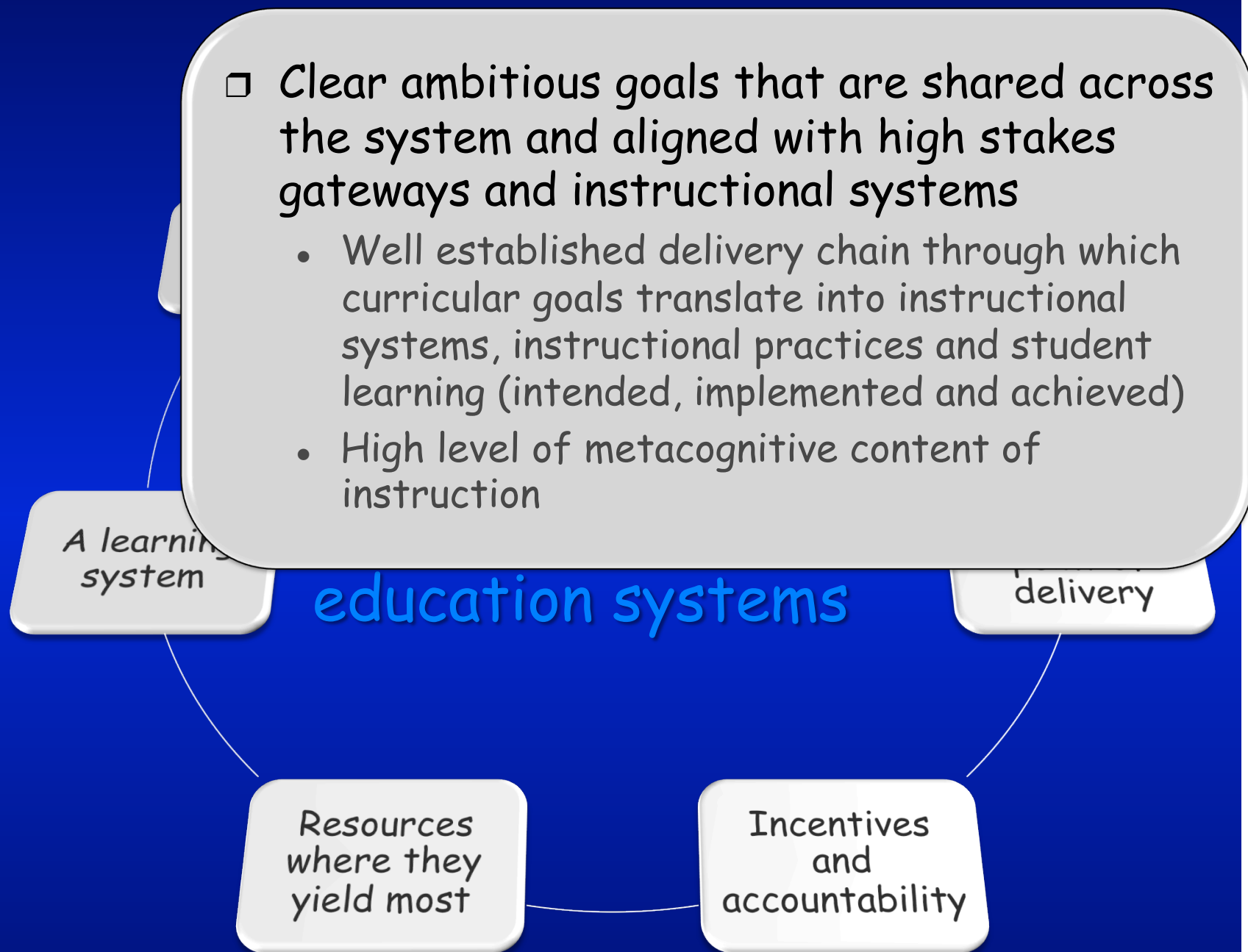
2009

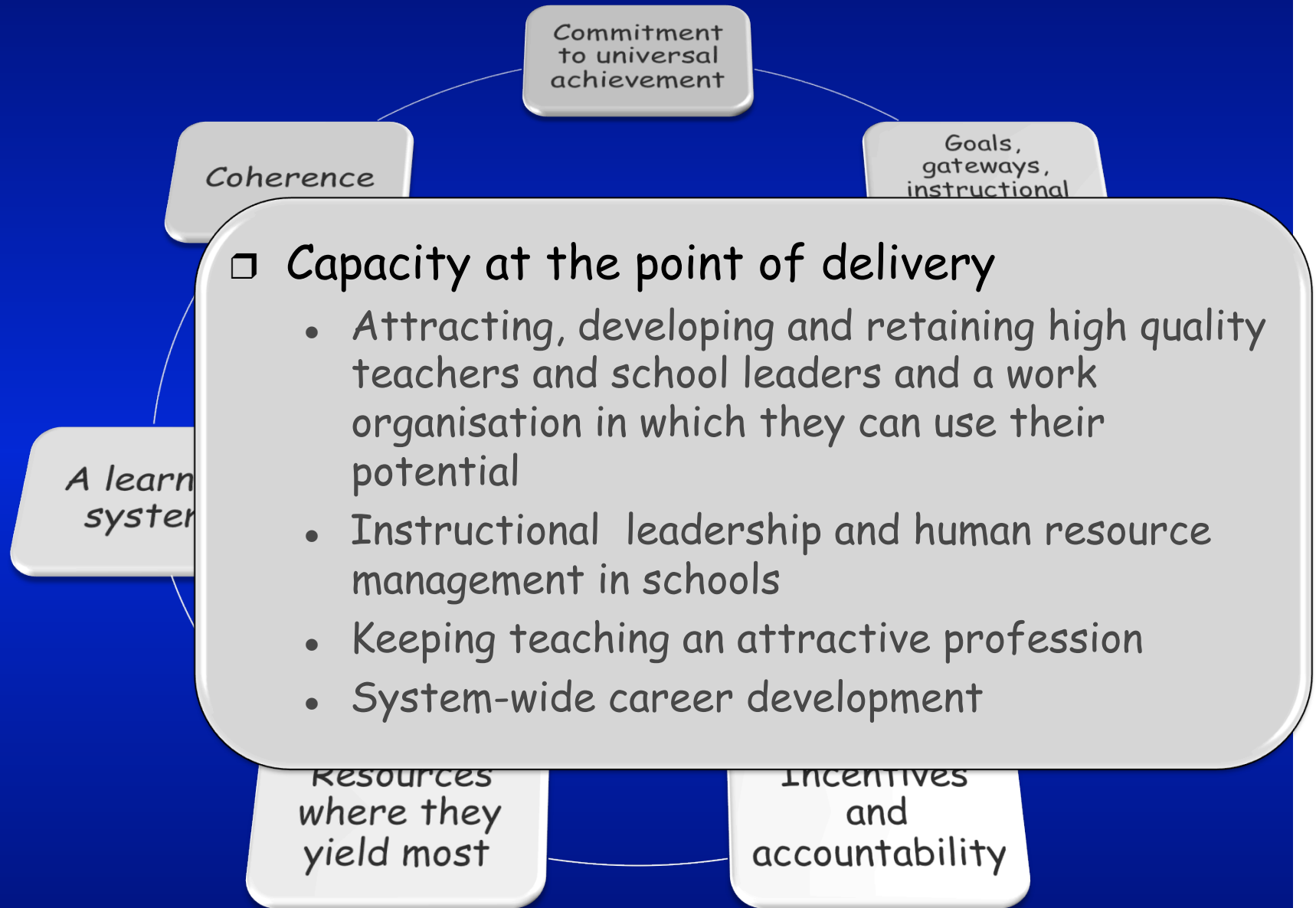
High reading performance



Early selection and institutional differentiation

- High degree of stratification
- Low degree of stratification



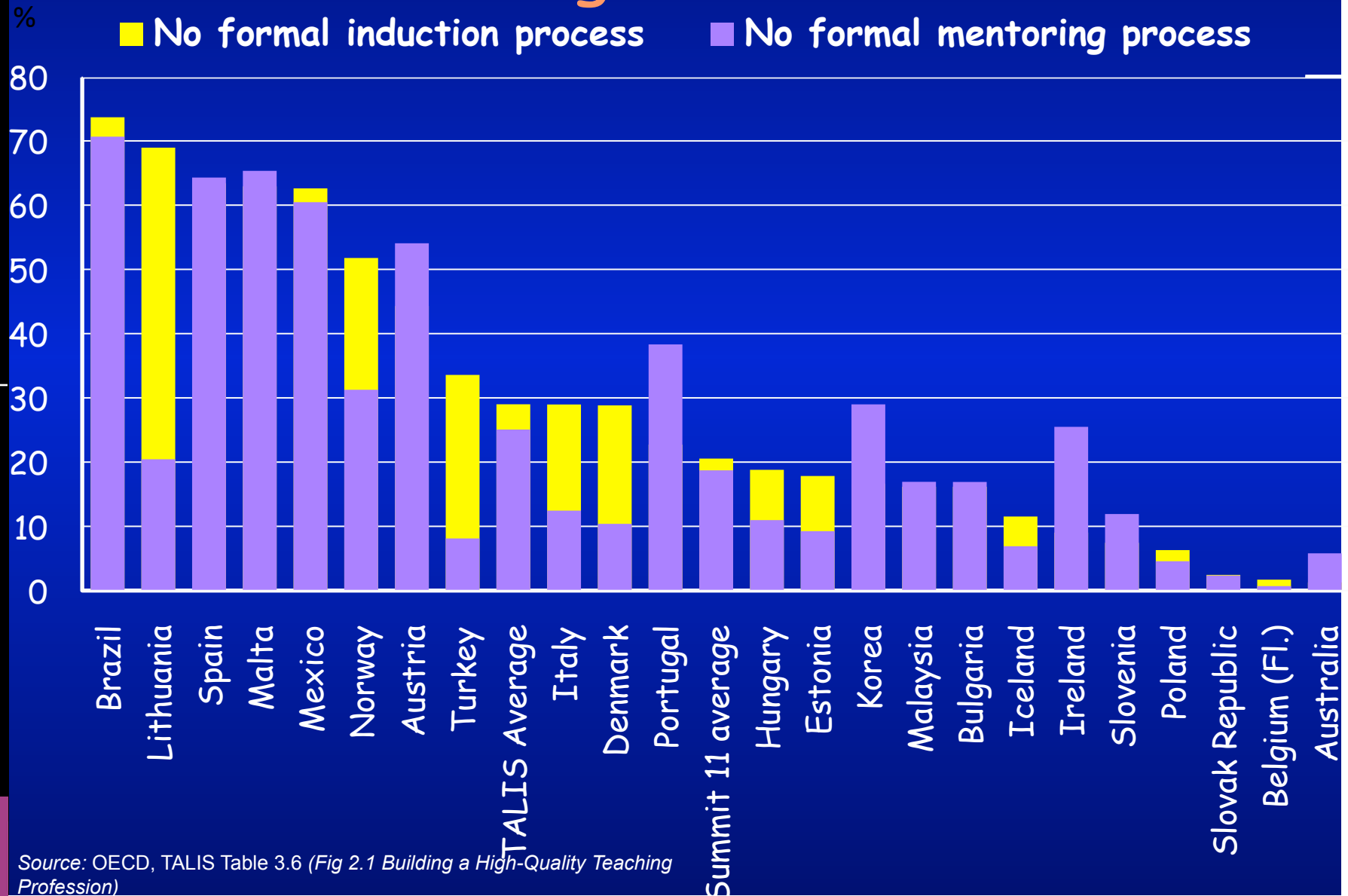




Teacher in-service development

- **No matter how good the pre-service education for teachers is**
 - ... it cannot prepare teachers for rapidly changing challenges throughout their careers
- **High-performing systems rely on ongoing professional to...**
 - ... update individuals' knowledge of a subject in light of recent advances
 - ... update skills and approaches in light of new teaching techniques, new circumstances, and new research
 - ... enable teachers to apply changes made to curricula or teaching practice
 - ... enable schools to develop and apply new strategies concerning the curriculum and teaching practice
 - ... exchange information and expertise among teachers and others
 - ... help weaker teachers become more effective .
- **Effective professional development is on-going...**
 - ... includes training, practice and feedback, and adequate time and follow-up support

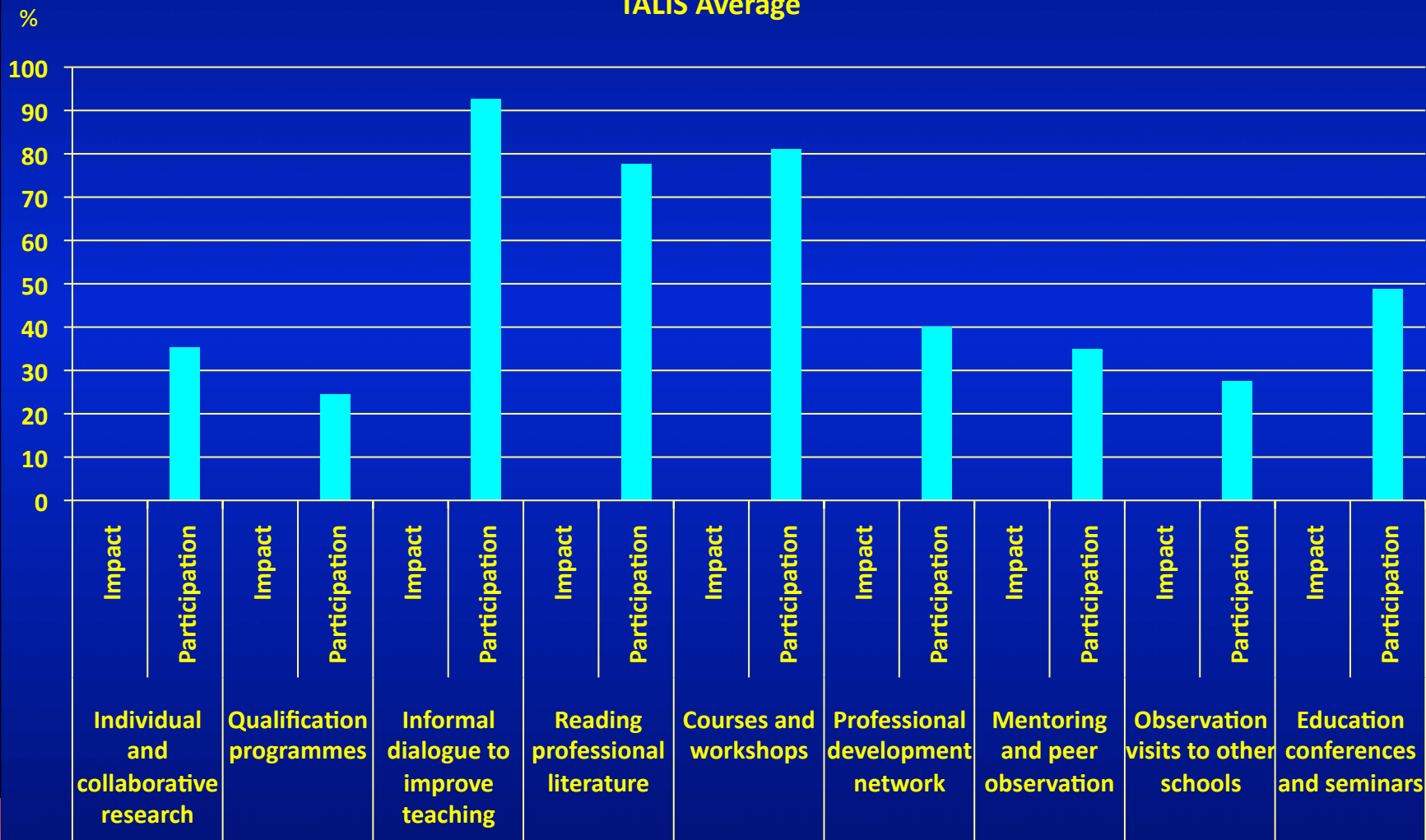
Percentage of teachers without mentoring and induction



Source: OECD, TALIS Table 3.6 (Fig 2.1 Building a High-Quality Teaching Profession)

Relatively few teachers participate in the kinds of professional development which they find has the largest impact on their work

Comparison of teachers participating in professional development activities and teachers reporting moderate or high level impact by types of activity
TALIS Average

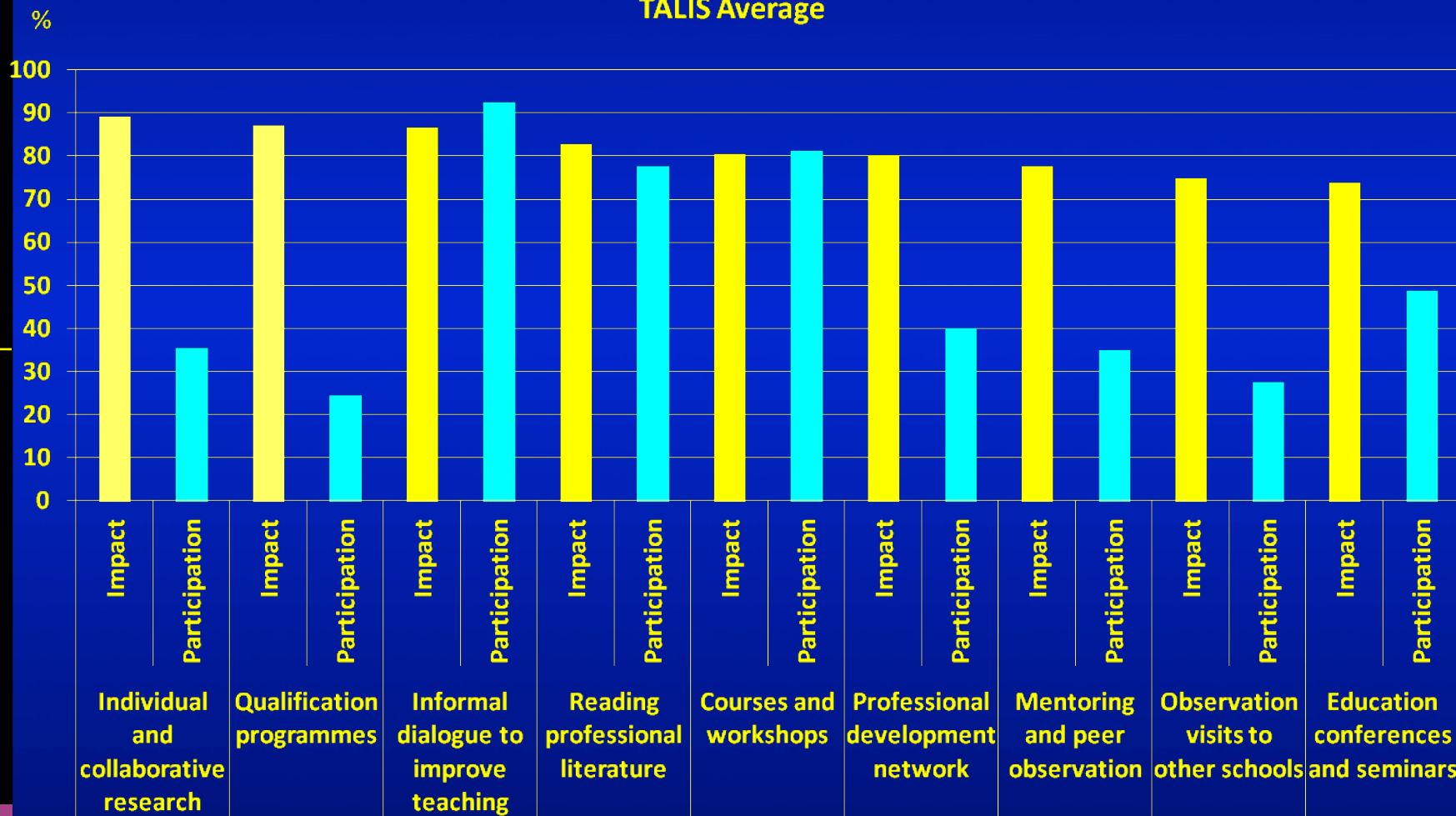




Relatively few teachers participate in the kinds of professional development which they find has the largest impact on their work

Comparison of teachers participating in professional development activities and teachers reporting moderate or high level impact by types of activity

TALIS Average



□ Incentives, accountability, knowledge management

- Aligned incentive structures

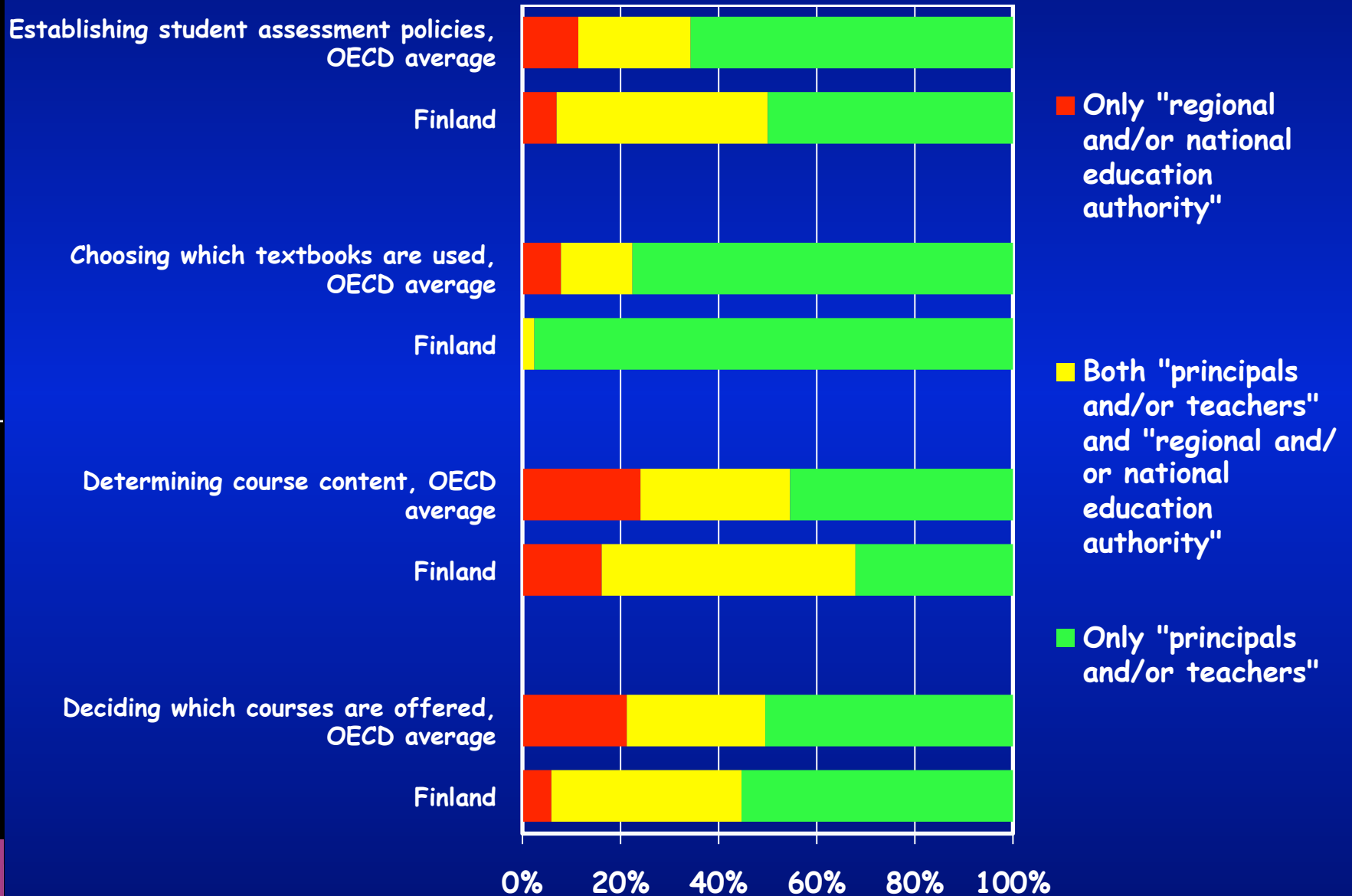
For students

- How gateways affect the strength, direction, clarity and nature of the incentives operating on students at each stage of their education
- Degree to which students have incentives to take tough courses and study hard
- Opportunity costs for staying in school and performing well

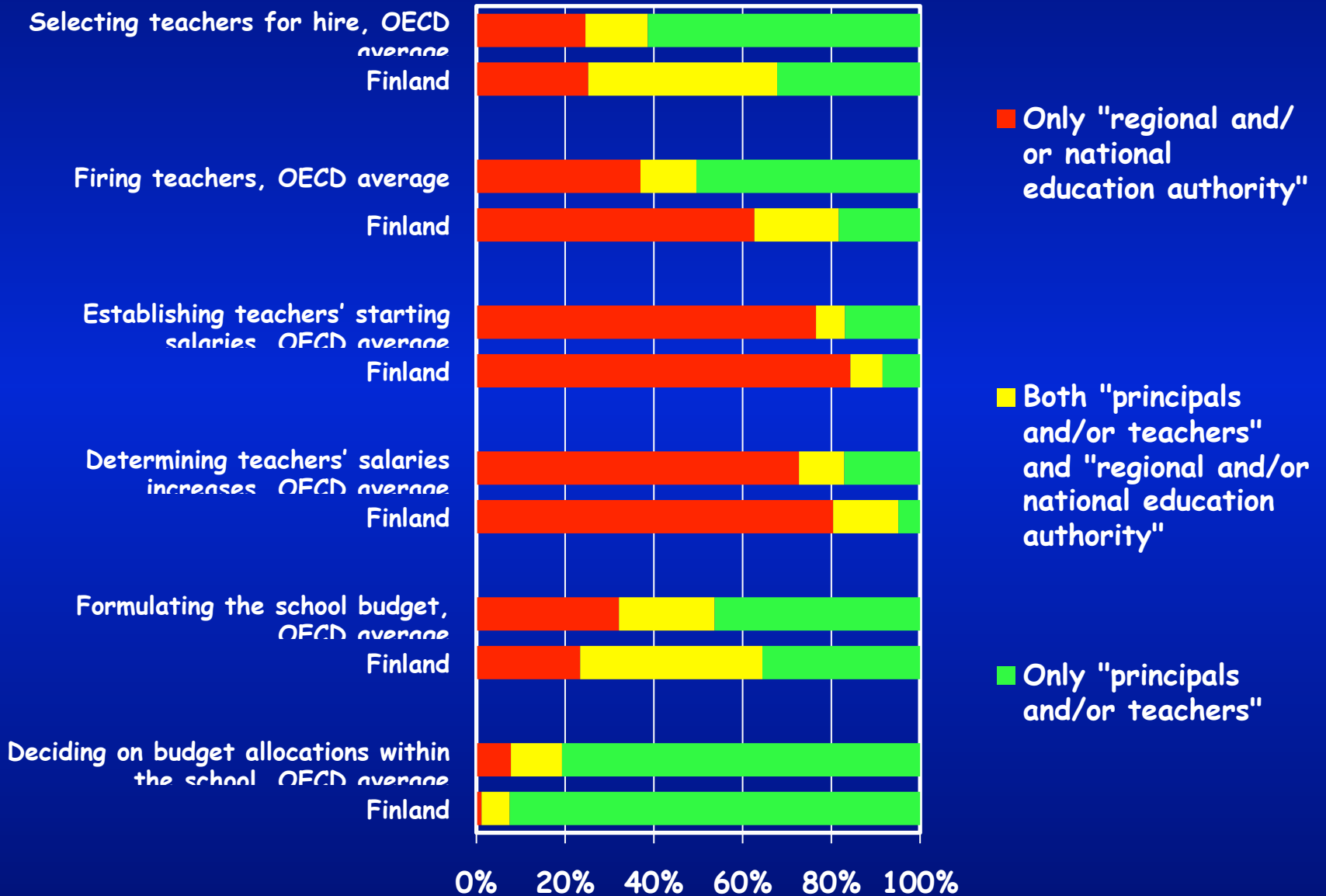
For teachers

- Make innovations in pedagogy and/or organisation
- Improve their own performance and the performance of their colleagues
- Pursue professional development opportunities that lead to stronger pedagogical practices
- A balance between vertical and lateral accountability
- Effective instruments to manage and share knowledge and spread innovation - communication within the system and with stakeholders around it
- A capable centre with authority and legitimacy to act

How much autonomy individual schools have over curricula and assessment

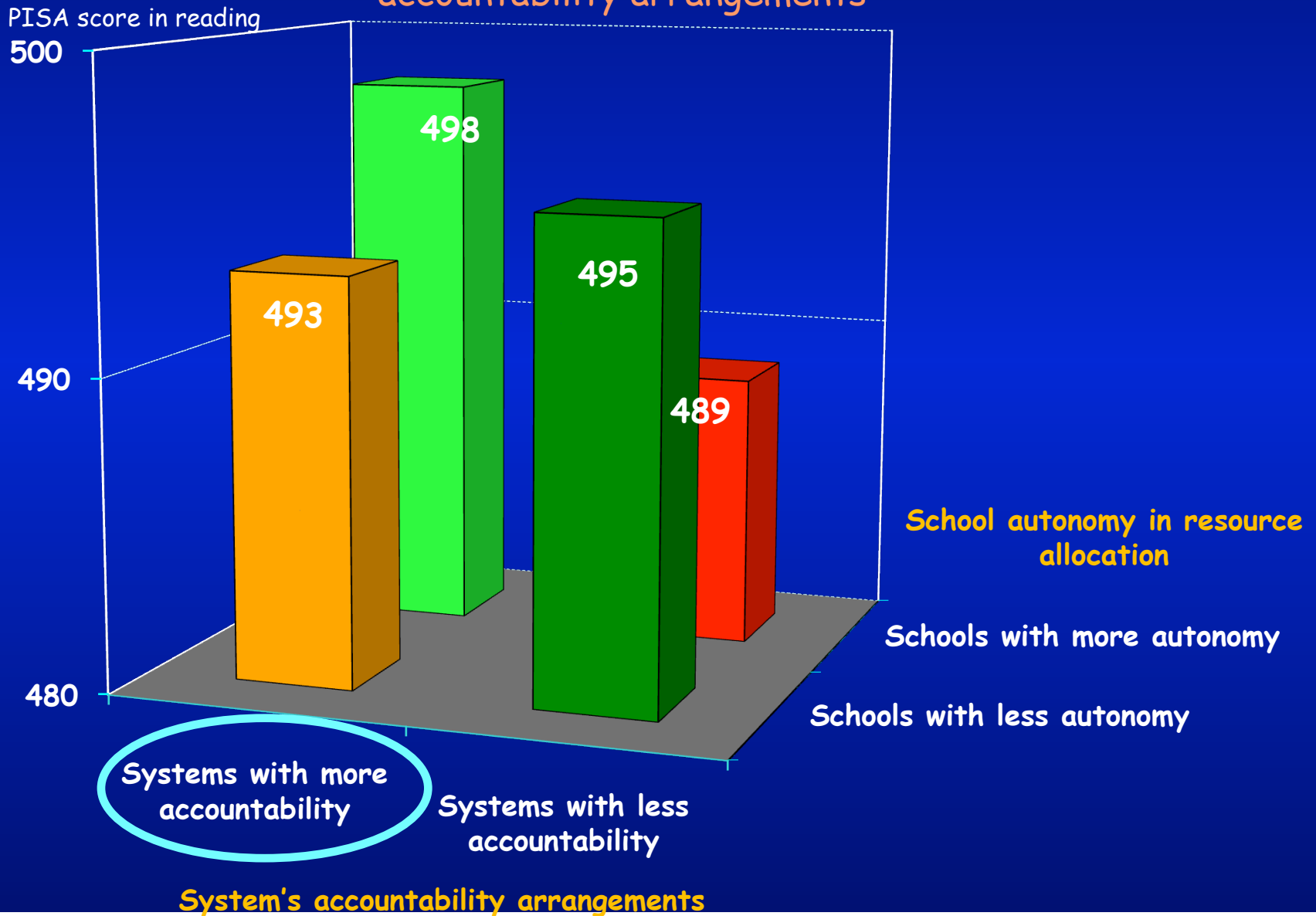


How much autonomy individual schools have over resource allocation



School autonomy, accountability and student performance

Impact of school autonomy on performance in systems with and without accountability arrangements



Local responsibility and system-level prescription

Trend in OECD countries



System-level prescription
'Tayloristic' work organisation
Schools today

The industrial
model, detailed
prescription of
what schools do

**Schools
tomorrow?**

Building capacity

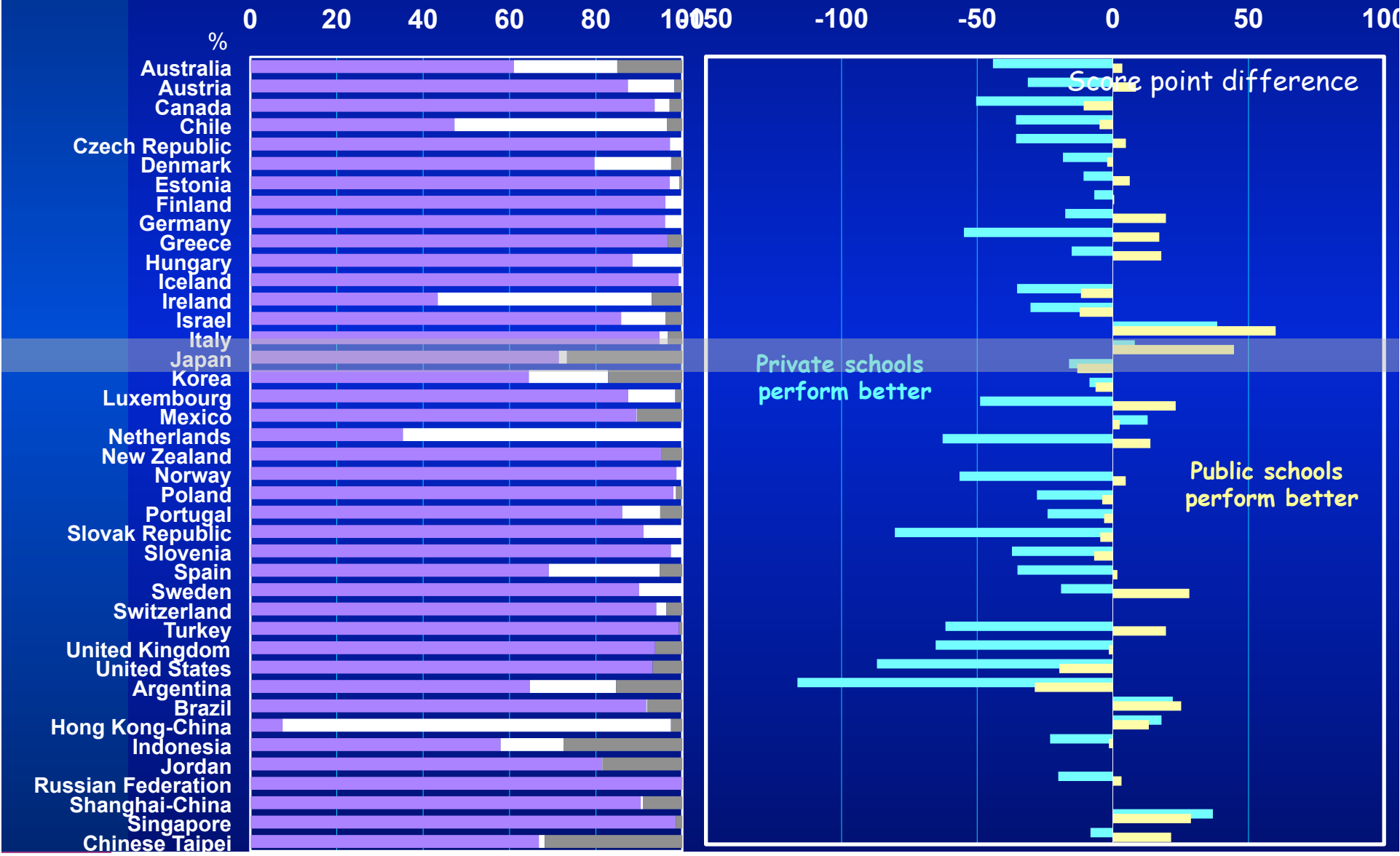
Finland today

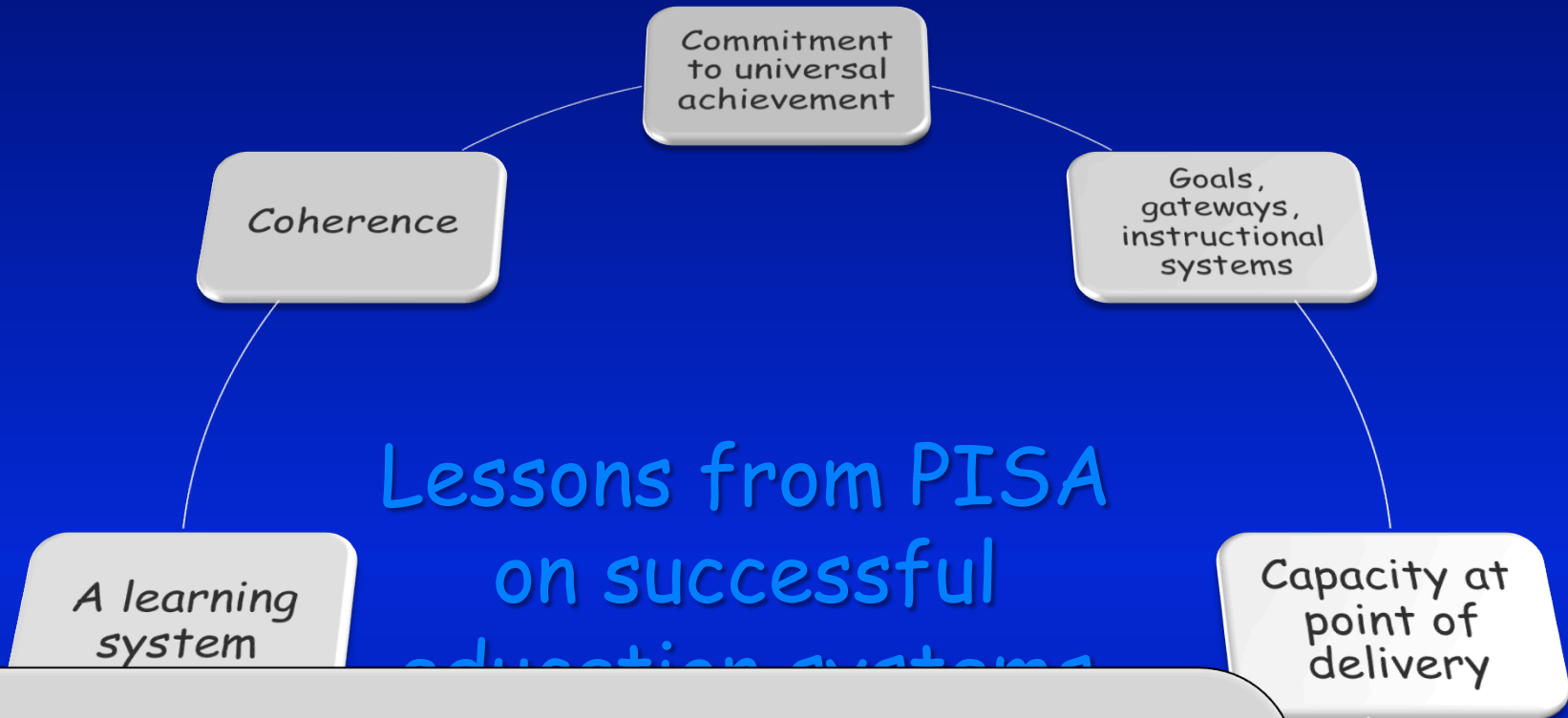
Every school an
effective school

Schools leading reform
Teachers as 'knowledge workers'

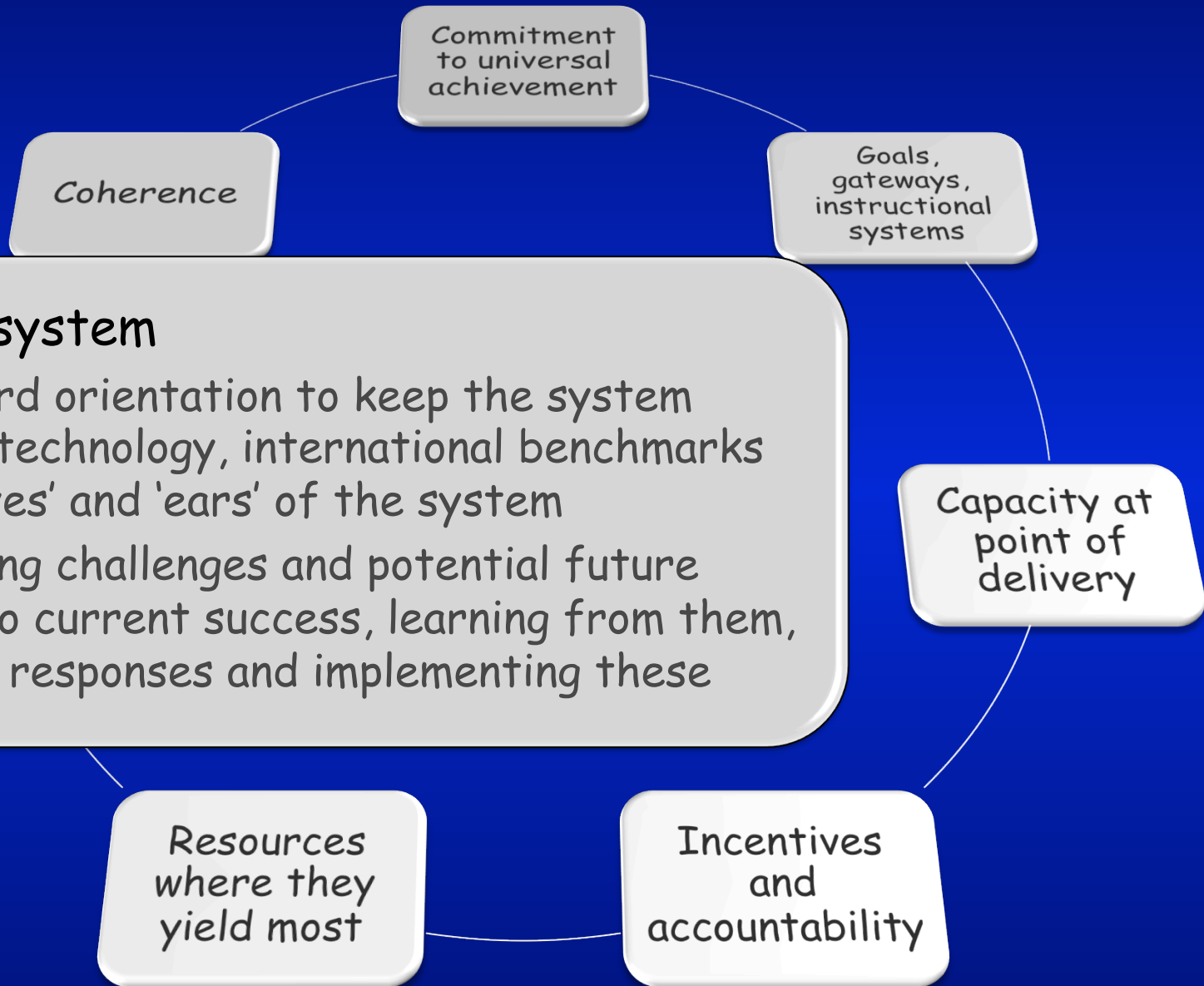
Public and private schools

- Government schools
- Government dependent private
- Government independent private
- Observed performance difference
- Difference after accounting for socio-economic background of students and schools



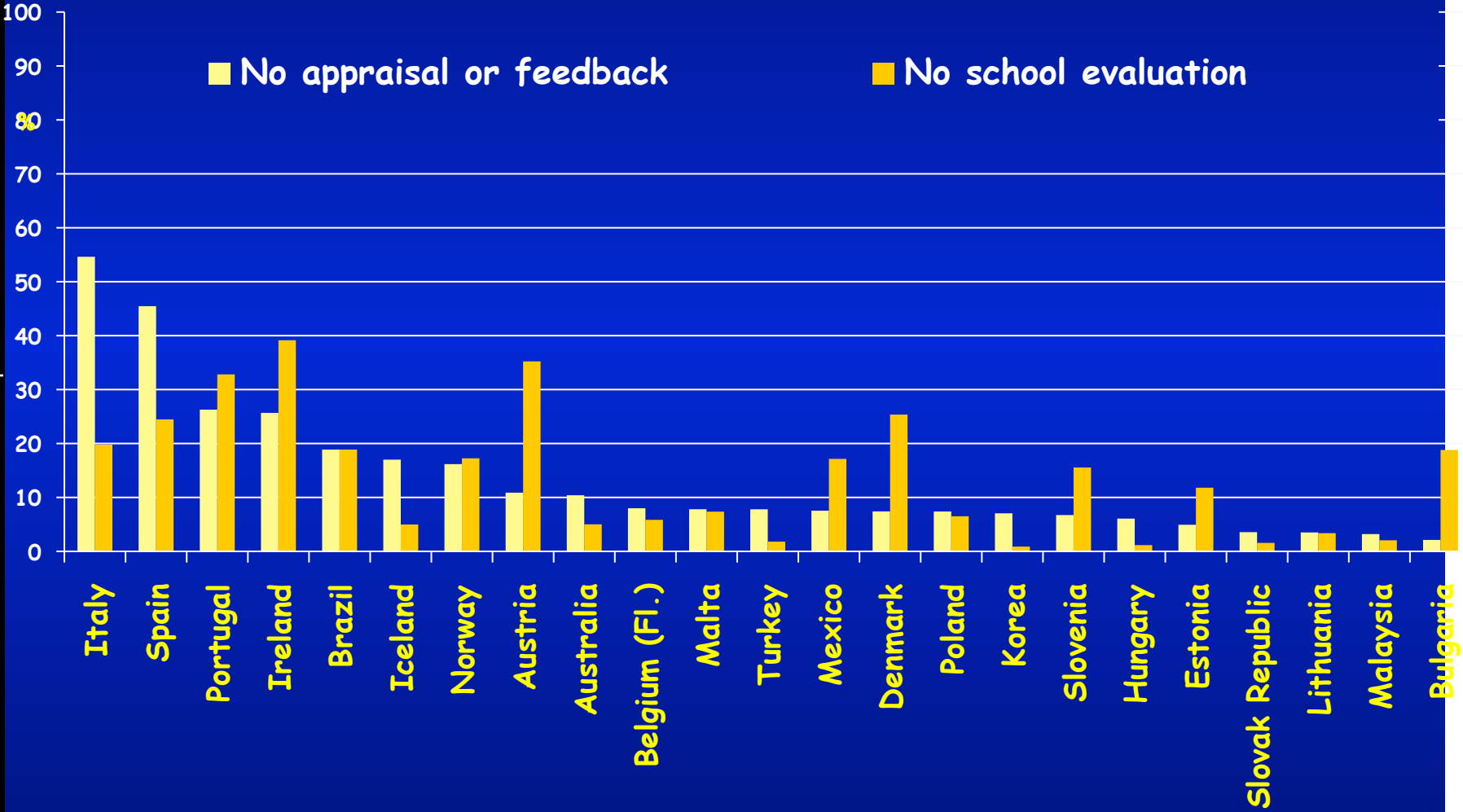


- ❑ Investing resources where they can make most of a difference
 - Alignment of resources with key challenges (e.g. attracting the most talented teachers to the most challenging classrooms)
 - Effective spending choices that prioritise high quality teachers over smaller classes



Some teachers are left alone

Teachers who received no appraisal or feedback and teachers in schools that had no school evaluation in the previous five years



Countries are ranked in descending order of the percentage of teachers who have received no appraisal or feedback.
 Source: OECD. Table 5.1 and 5.3

❑ Coherence of policies and practices

- Alignment of policies across all aspects of the system
- Coherence of policies over sustained periods of time
- Consistency of implementation
- Fidelity of implementation (without excessive control)

Goals, gateways, instructional systems

Capacity at point of delivery

A learning system

on successful education systems

Resources where they yield most

Incentives and accountability



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Strong performers and successful reformers
Andreas Schleicher
Stanford, 17 January 2012





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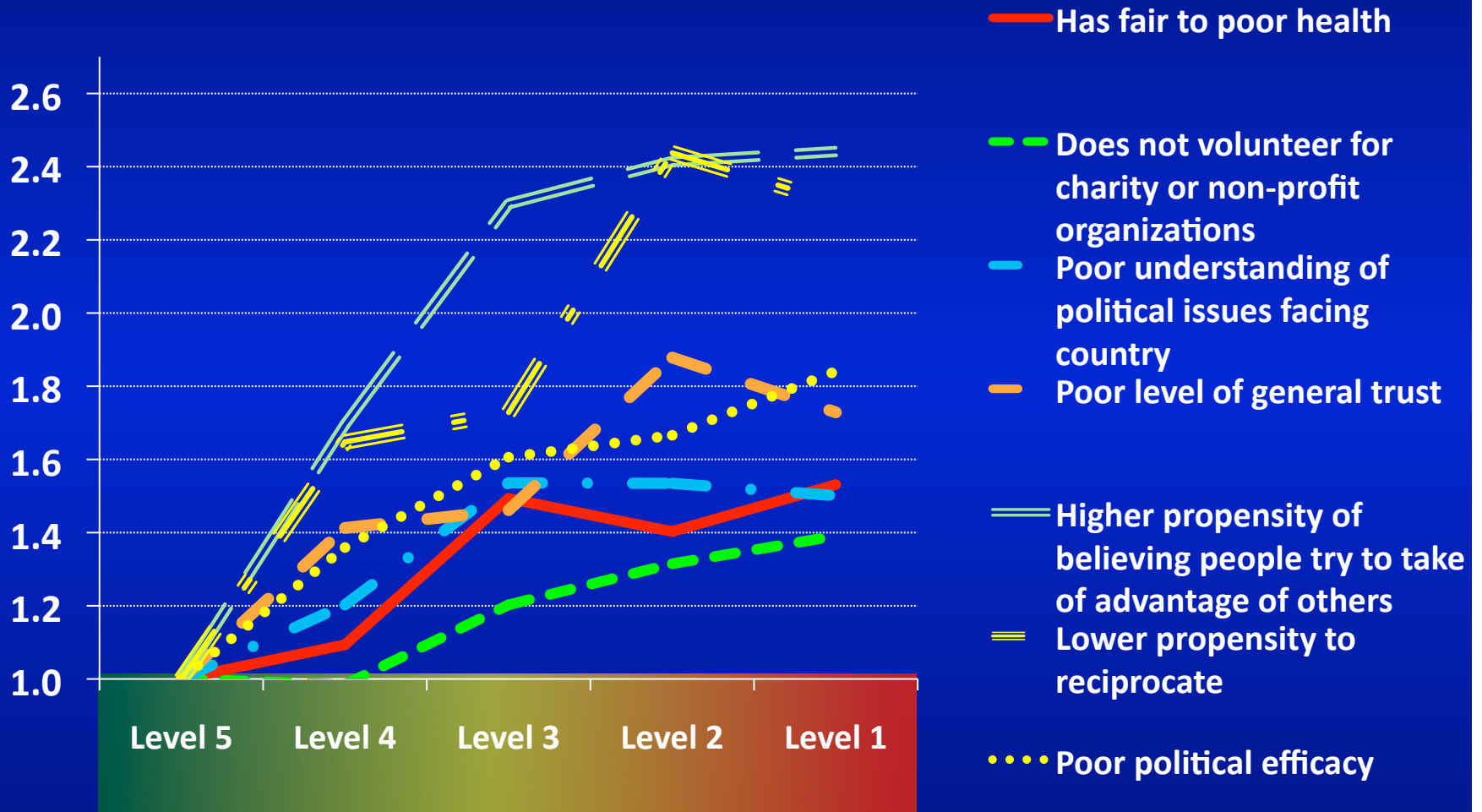
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Low skills and social outcomes

Odds ratios



Odds are adjusted for age, gender, and immigration status.