

10 things policymakers should know about learning goals and assessment



PISA



Andreas Schleicher
St. Petersburg, May 2014

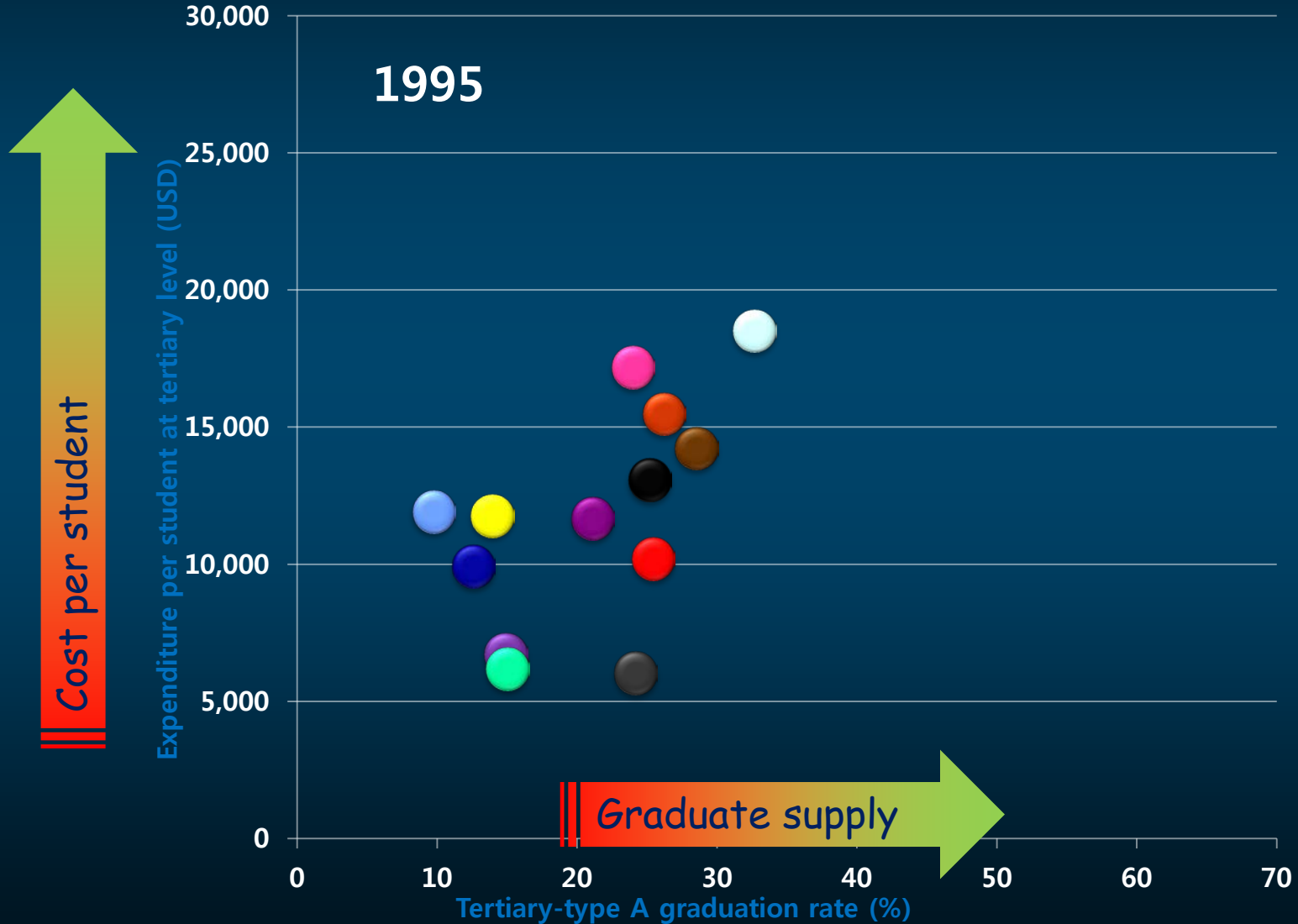


Lesson 1

In a global economy, the benchmark for educational success is no longer solely improvement by national standards, but the best performing education systems internationally

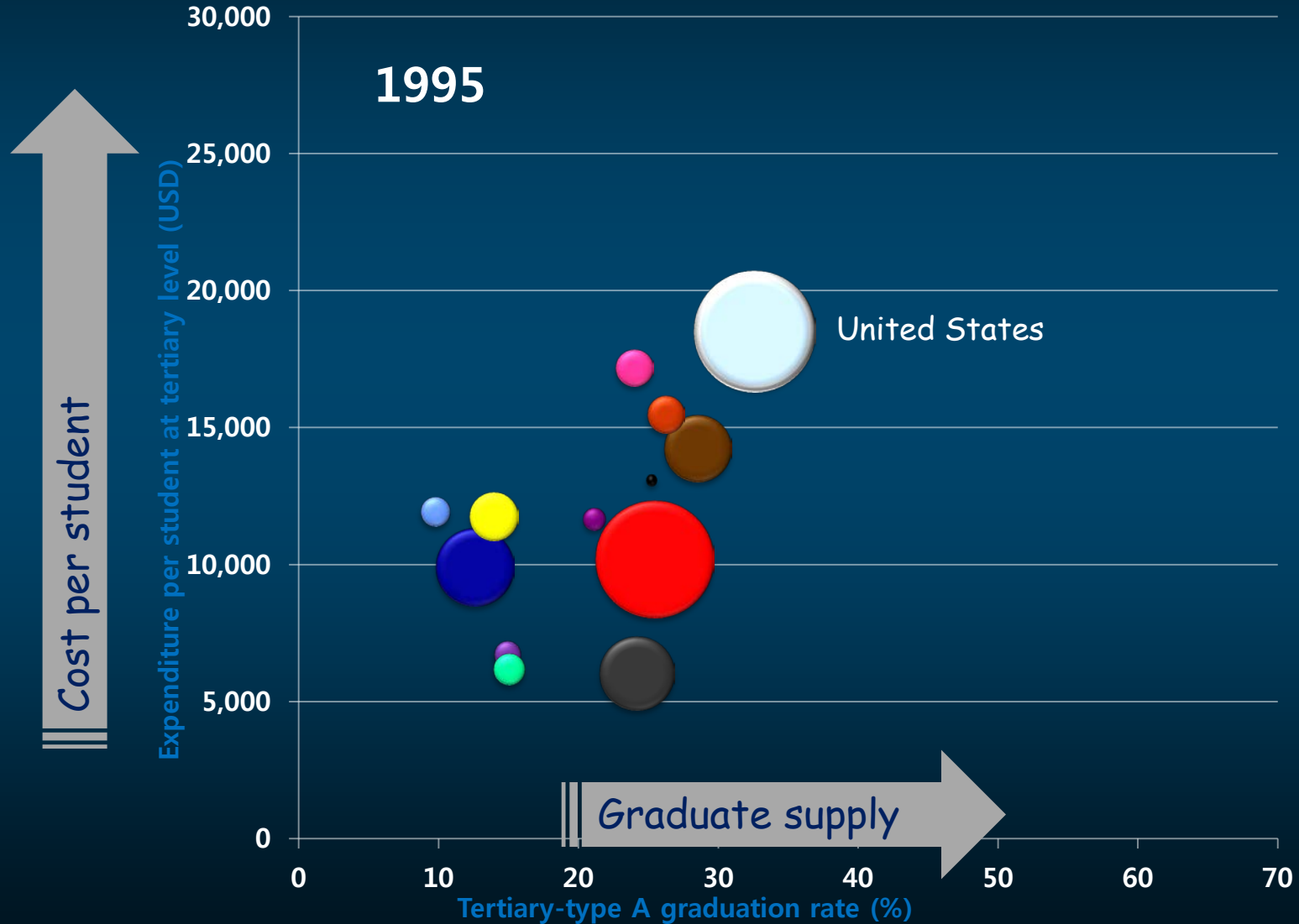
A world of change – higher education

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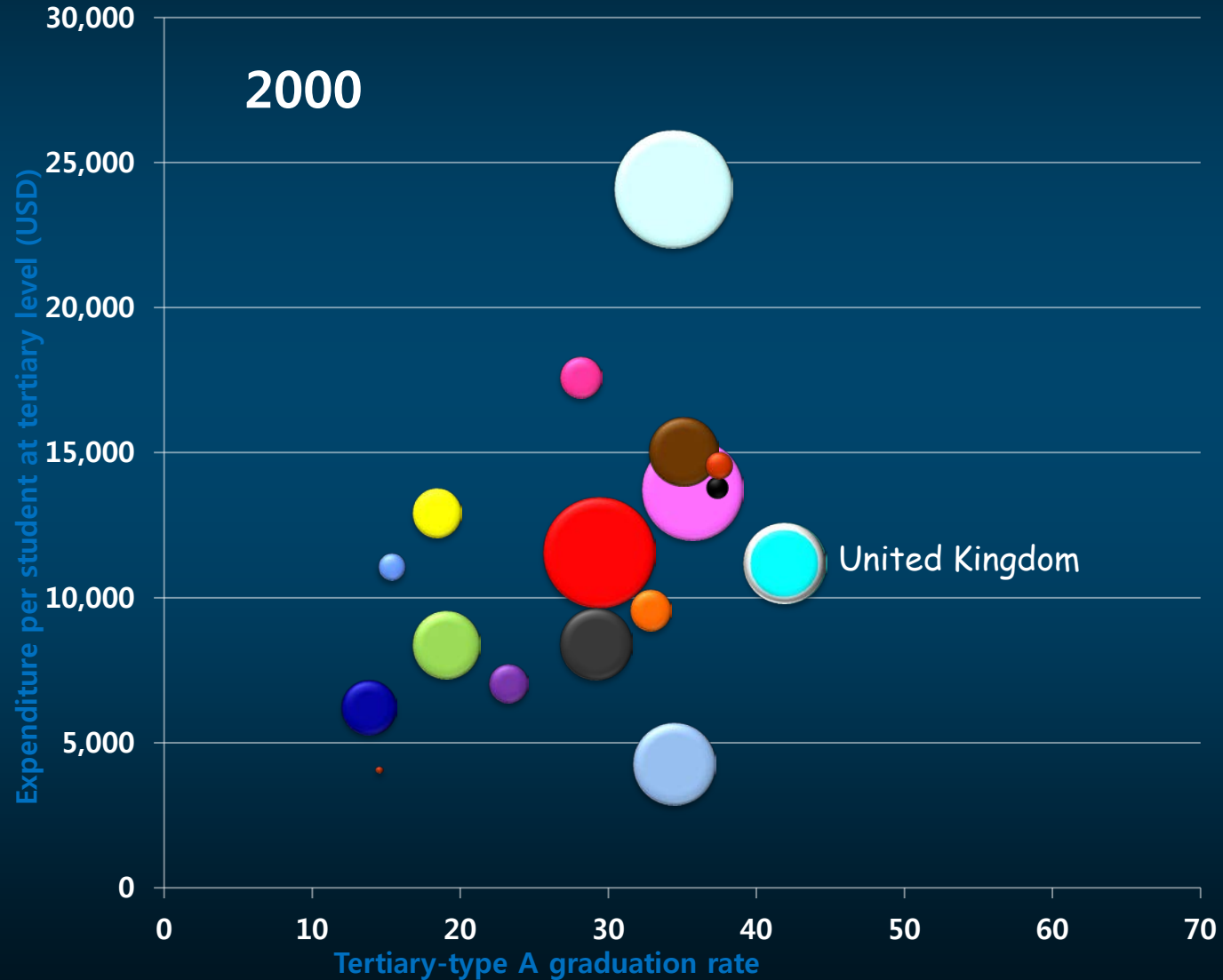


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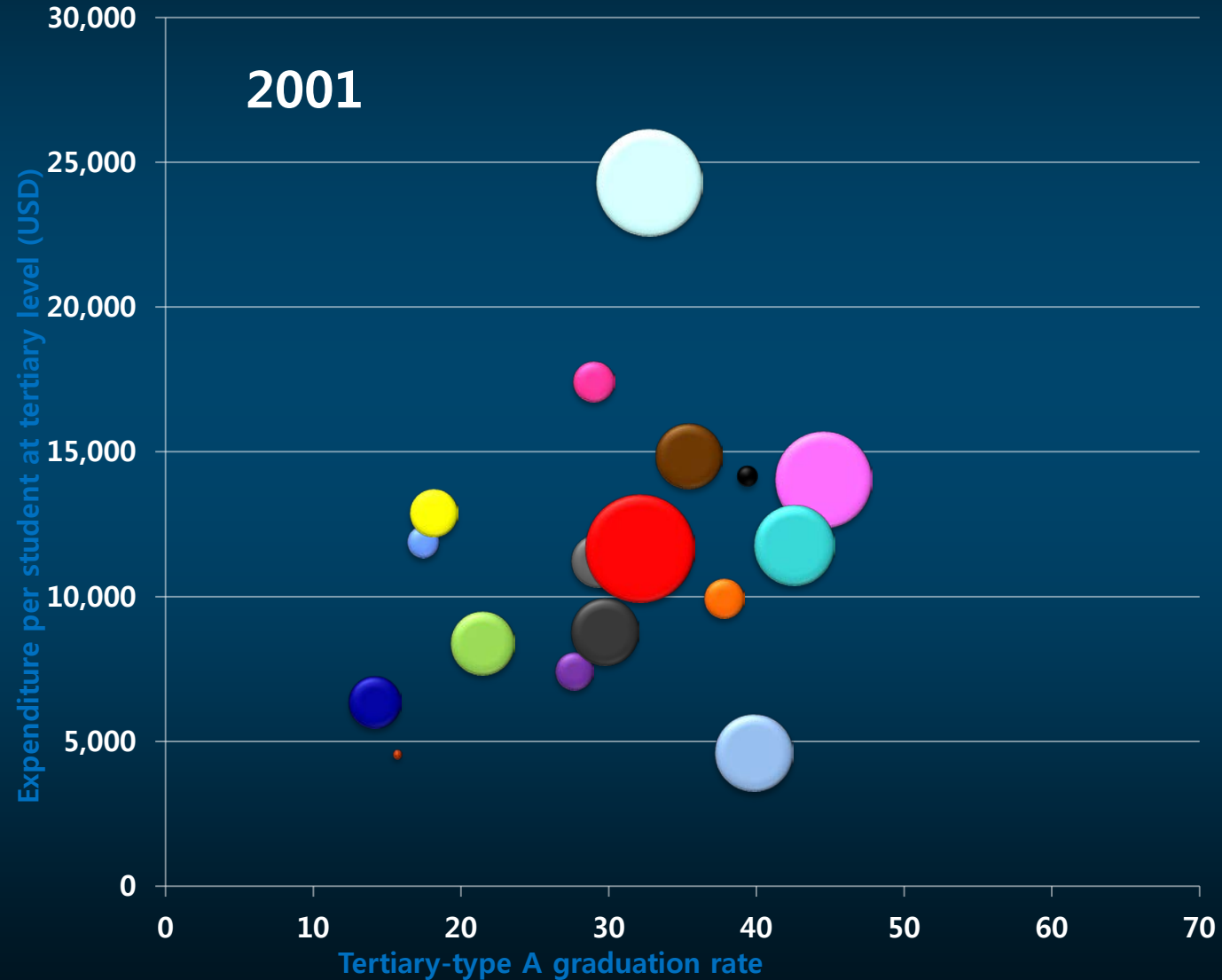
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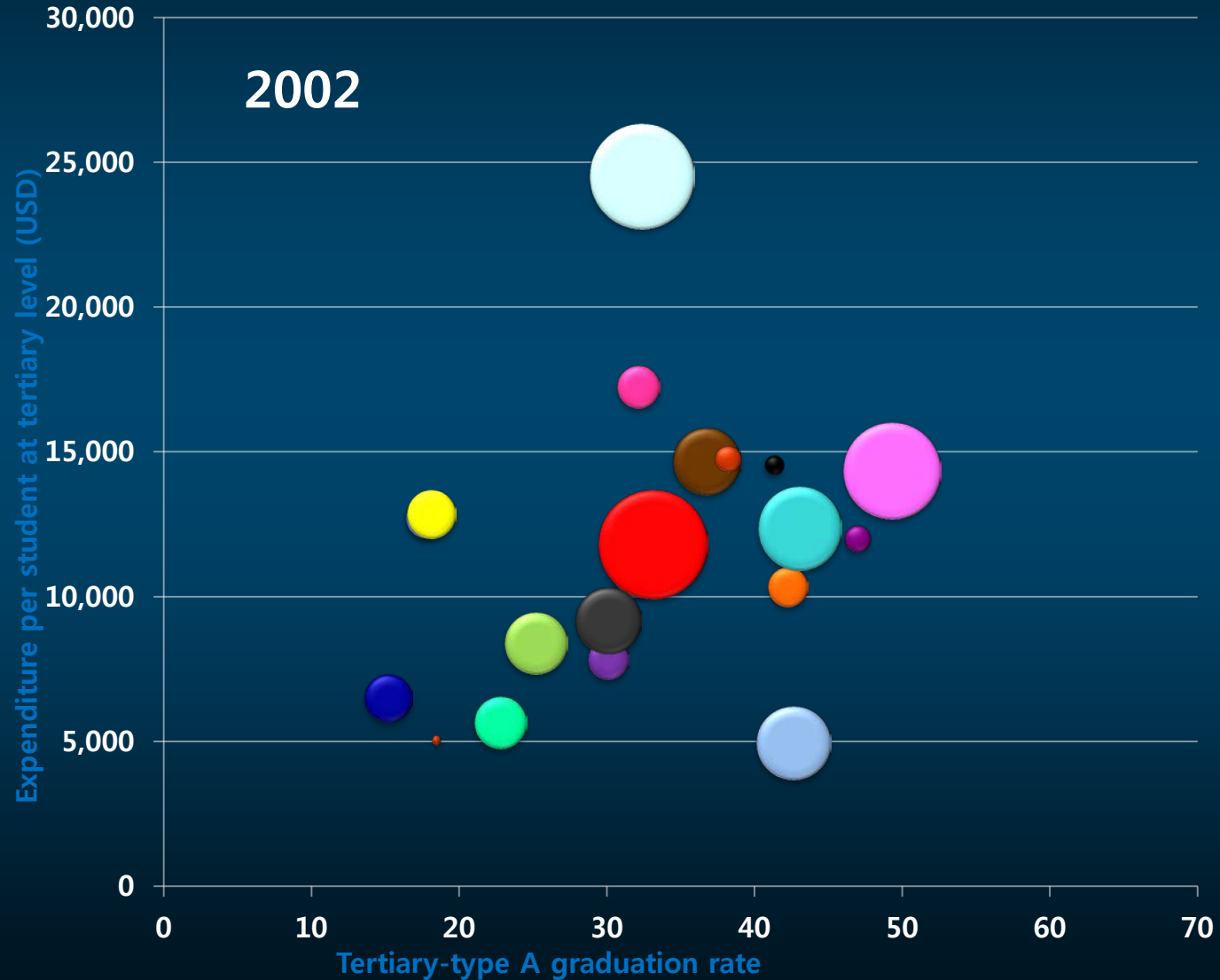
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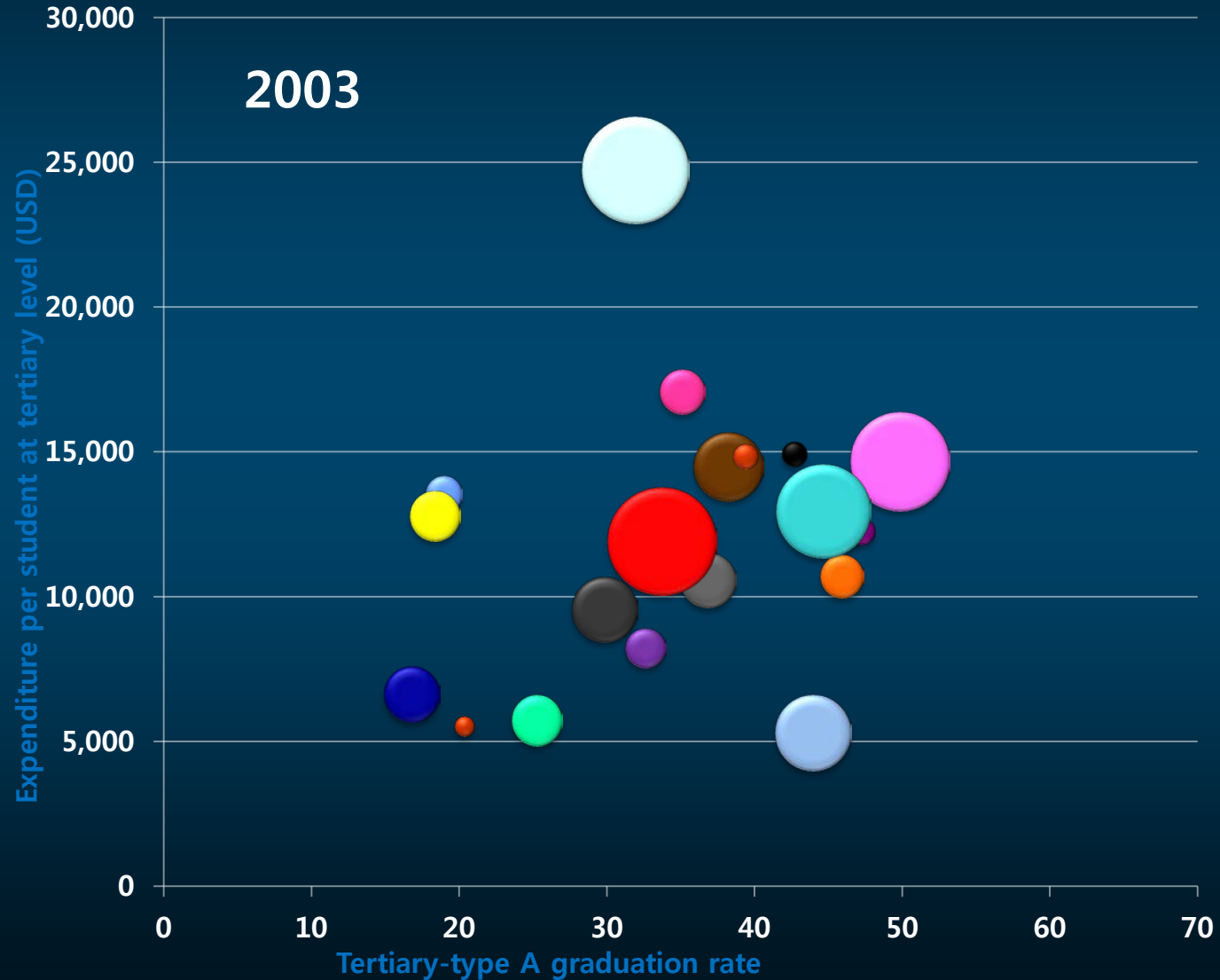


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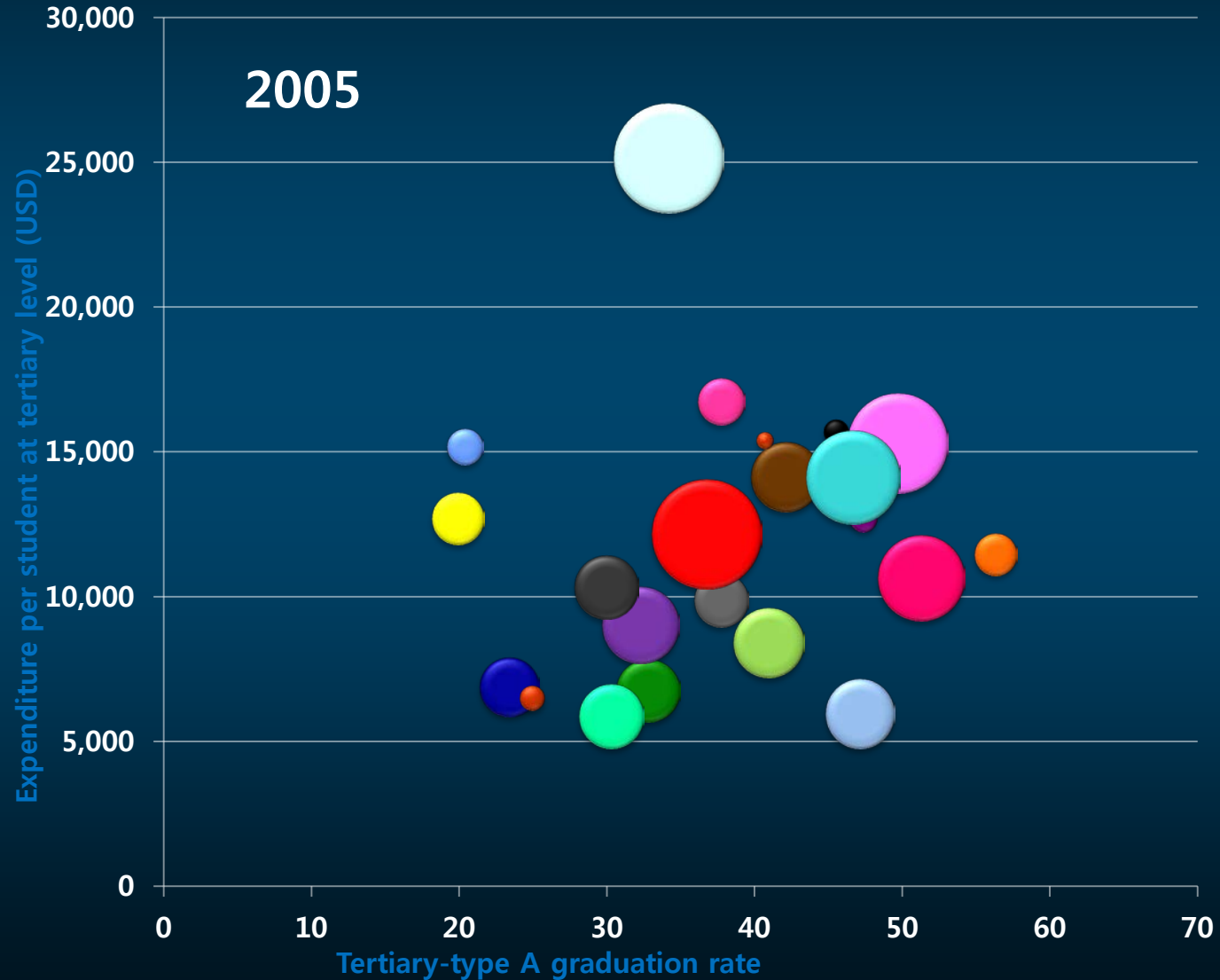
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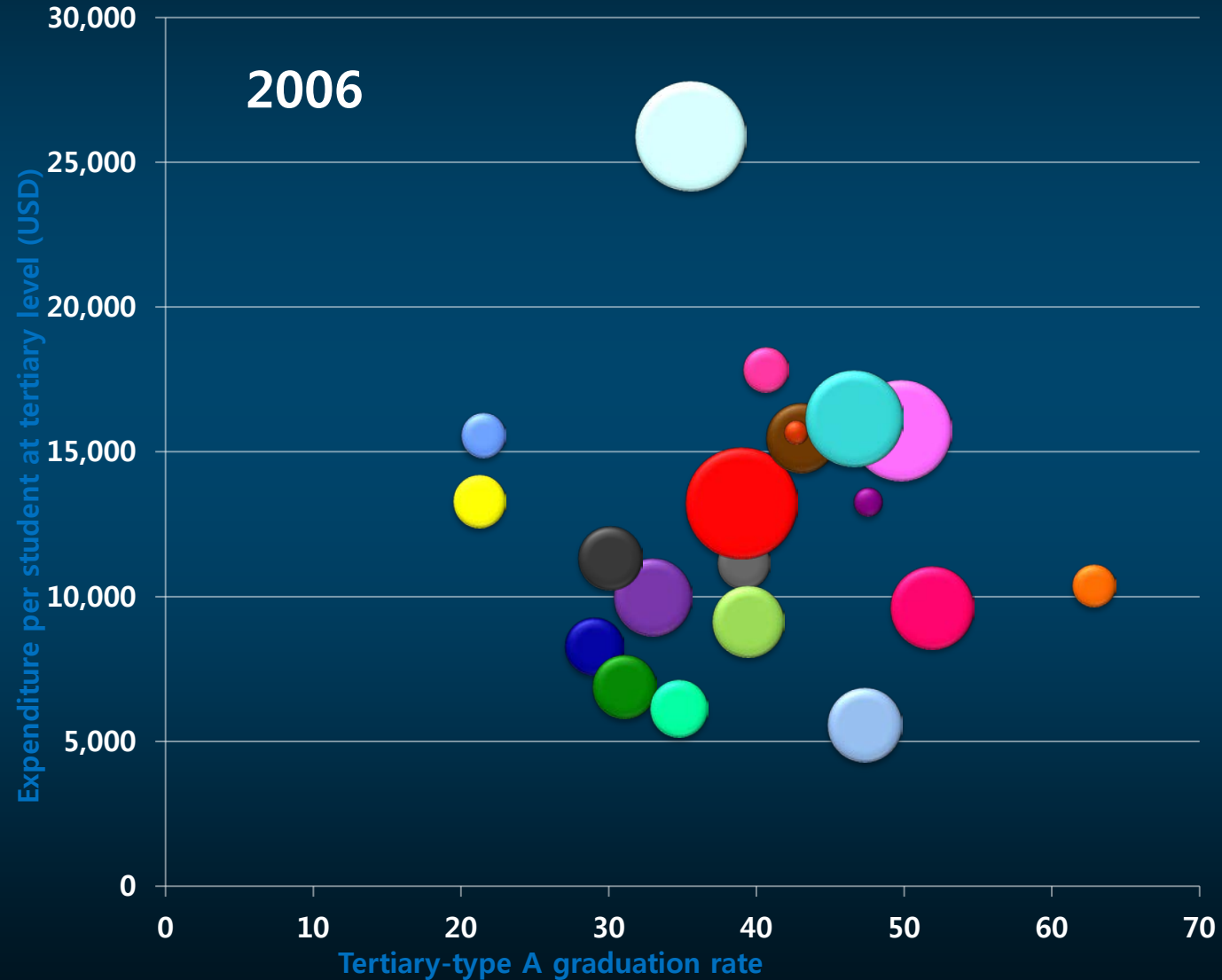
2003

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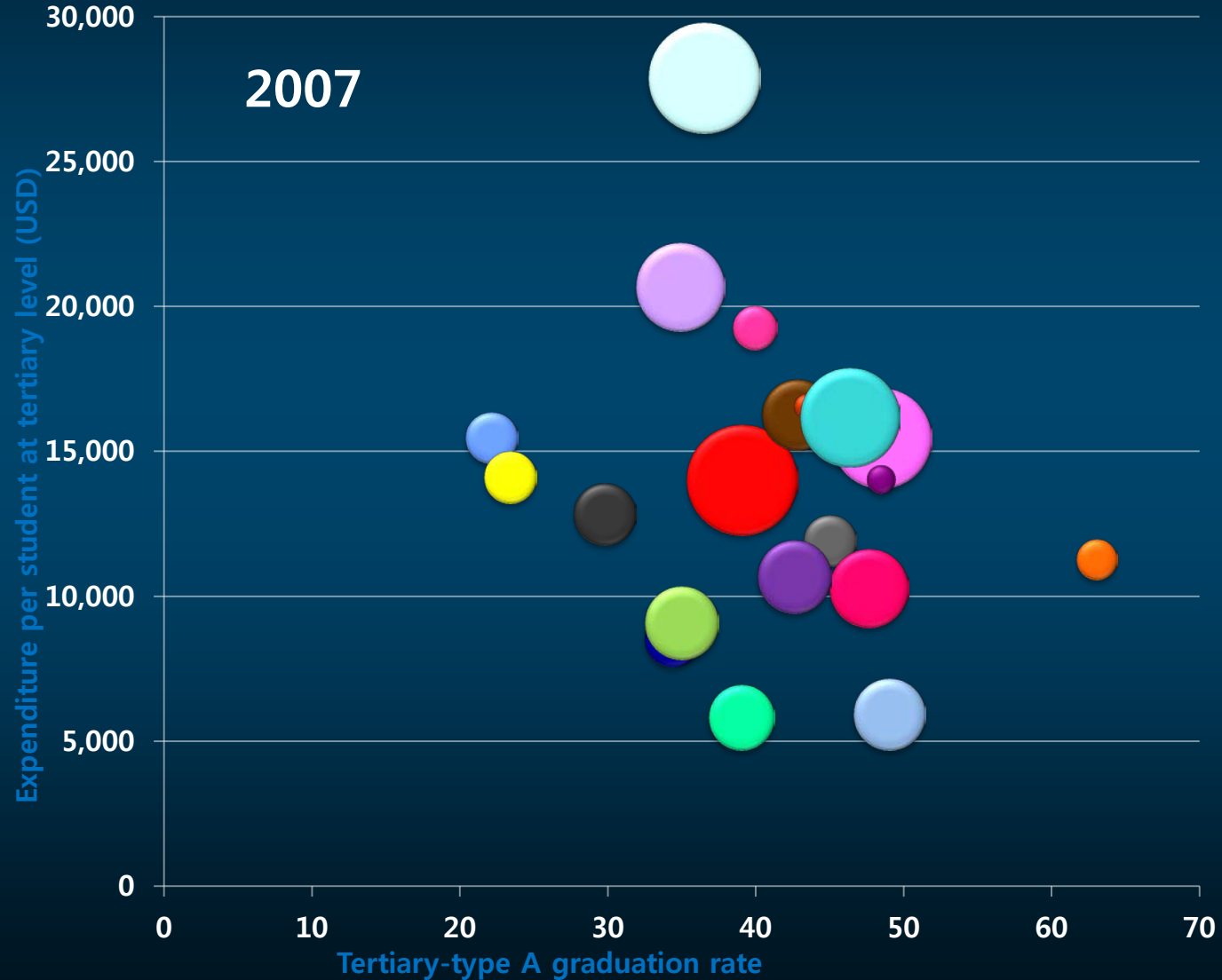
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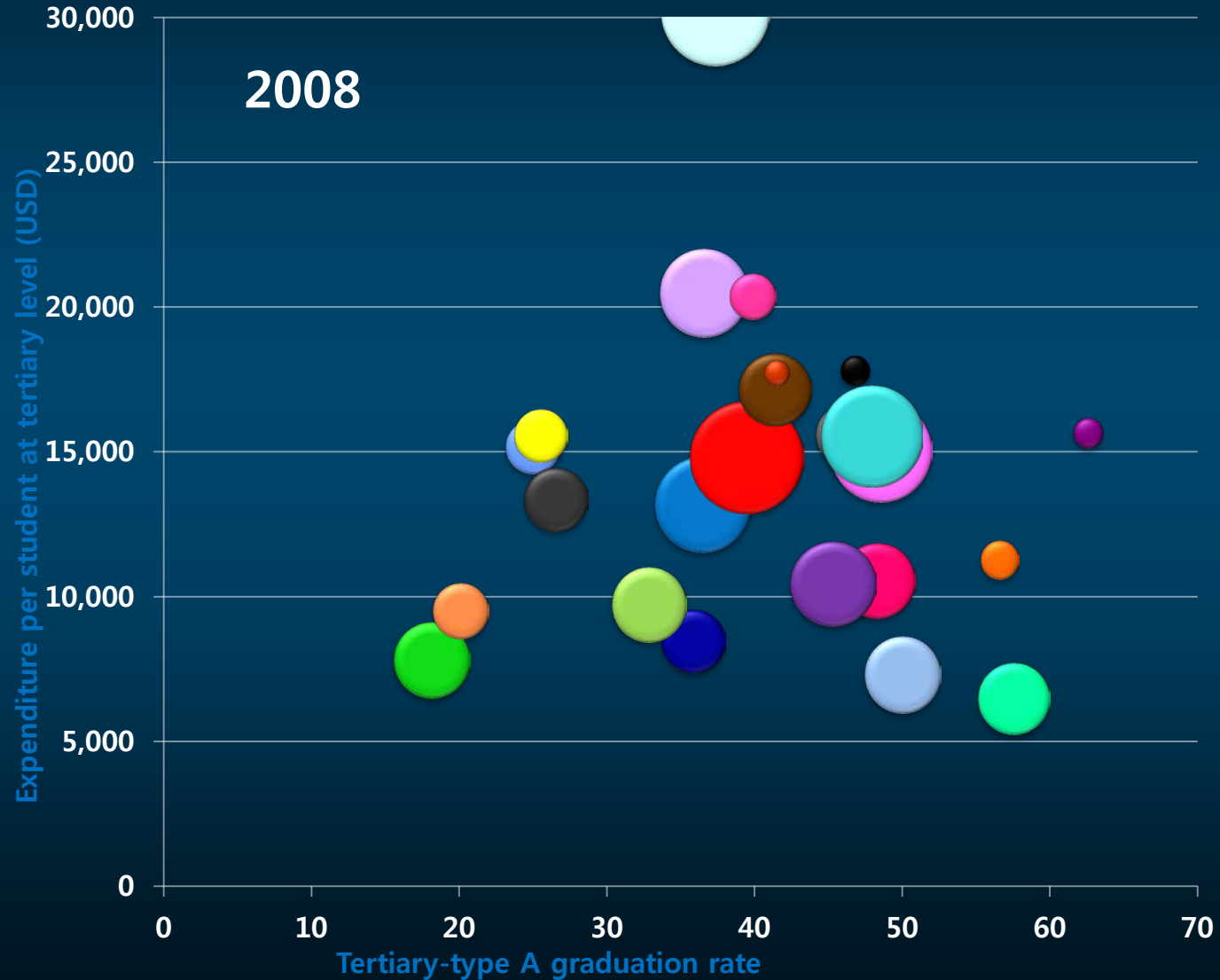
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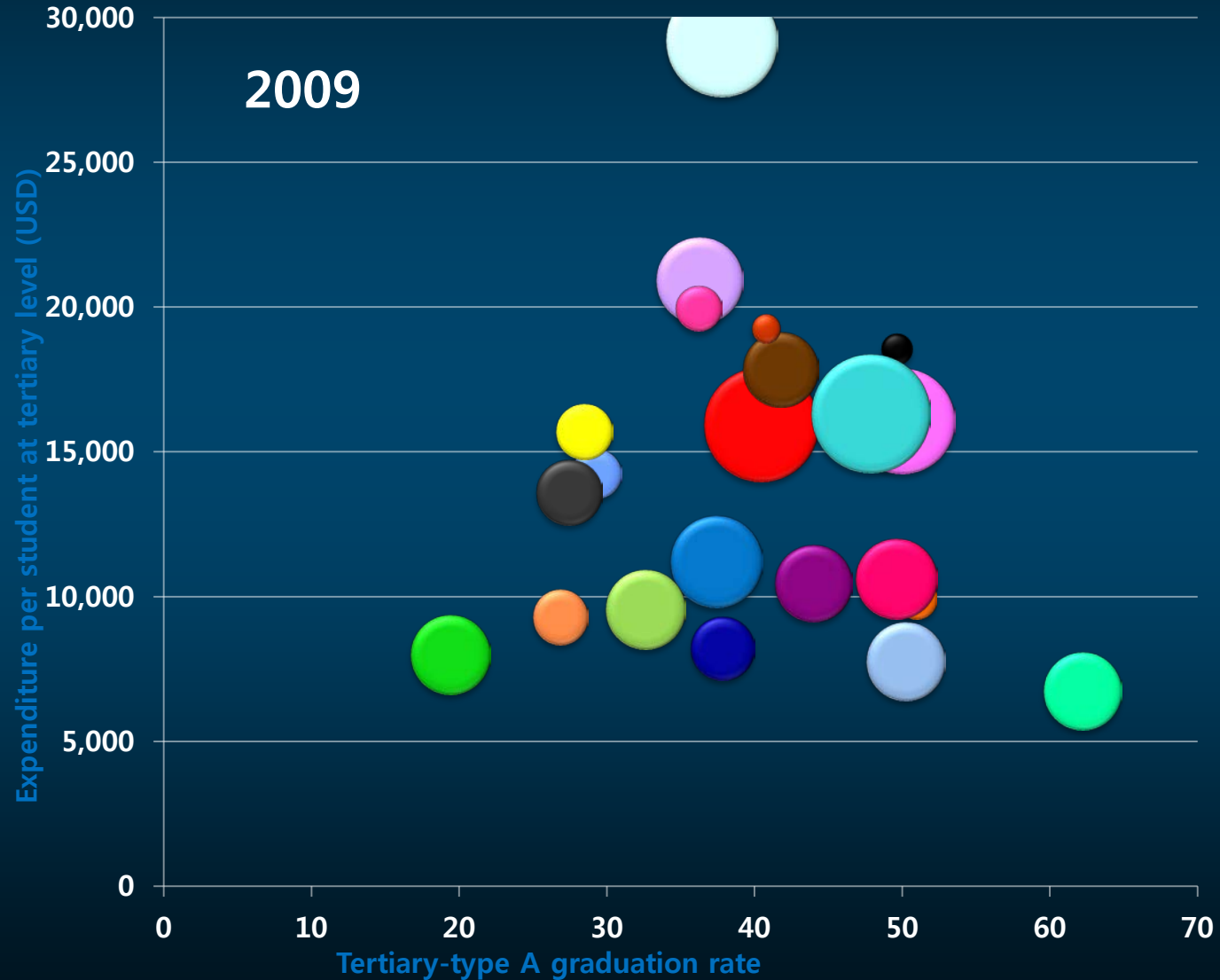
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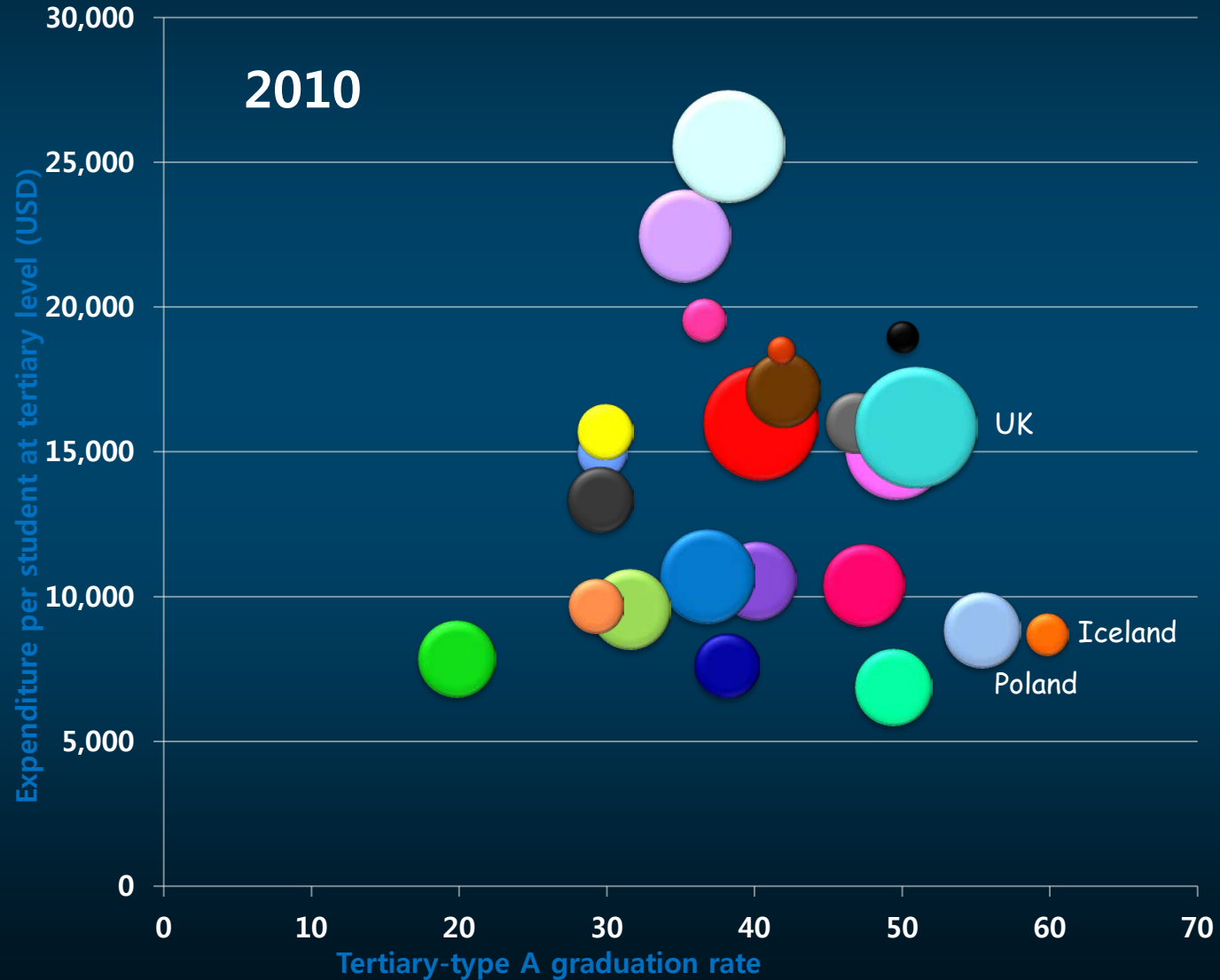
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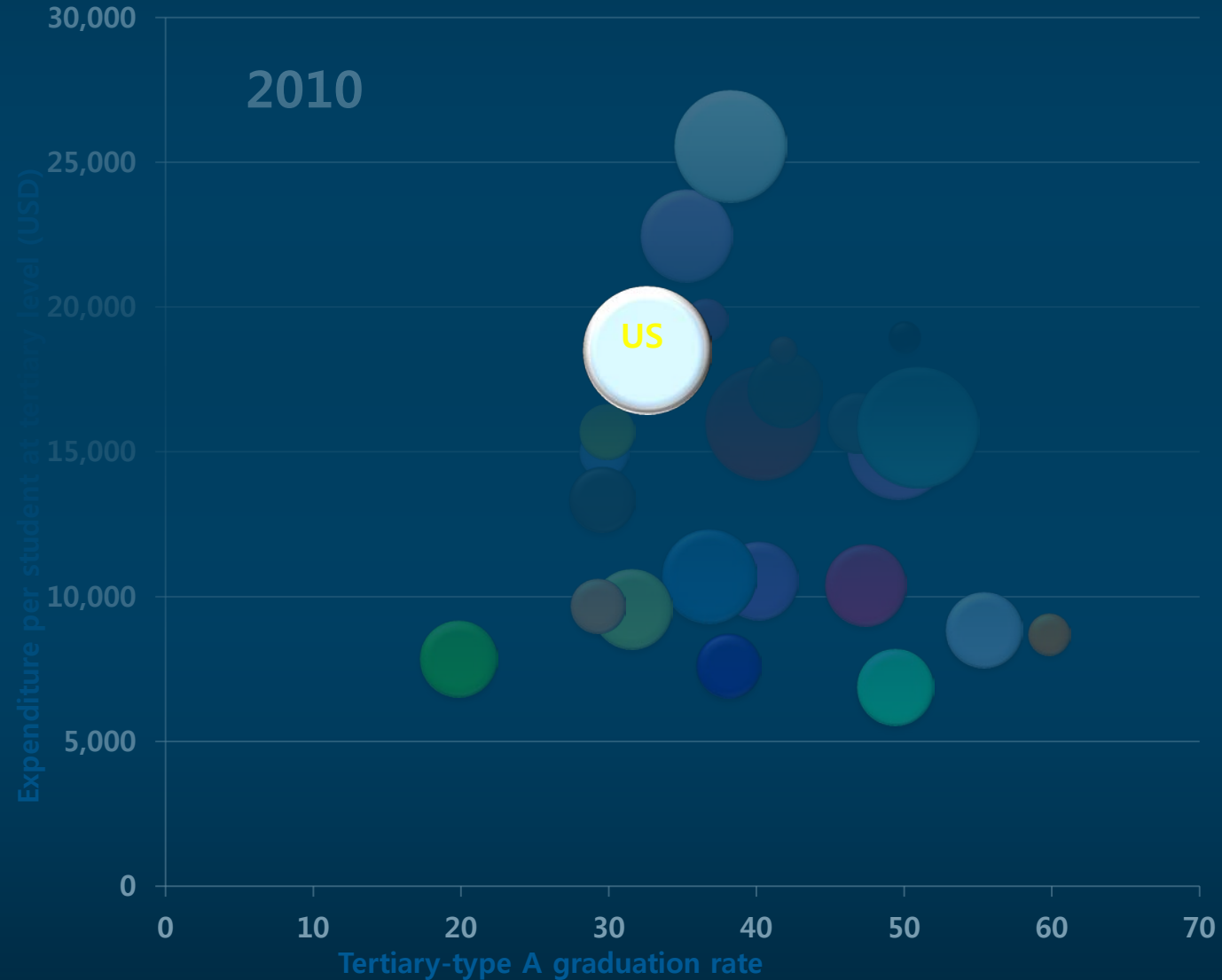
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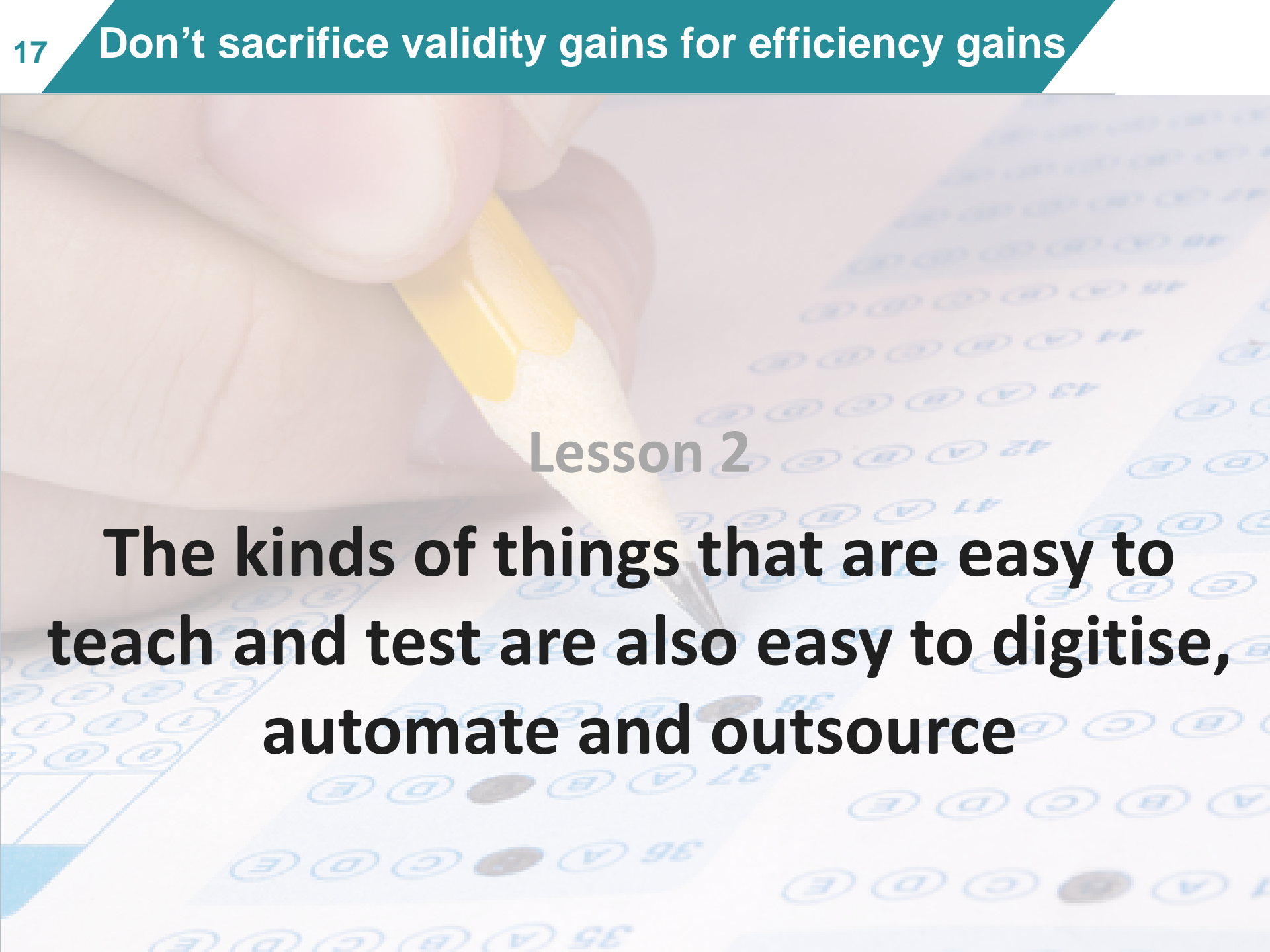


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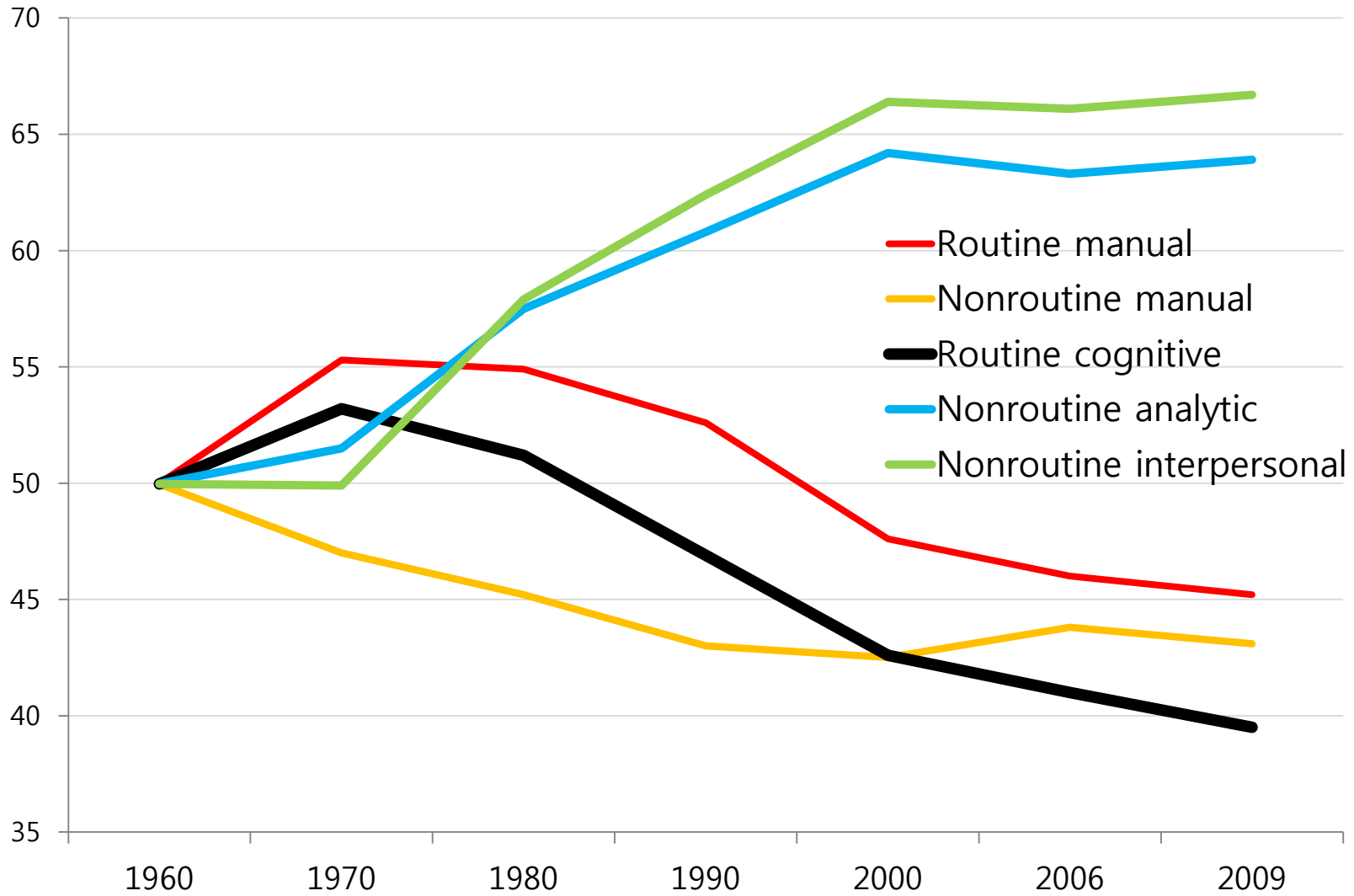
Lesson 2

The kinds of things that are easy to teach and test are also easy to digitise, automate and outsource

Changes in the demand for skills

Trends in different tasks in occupations (United States)

Mean task input in percentiles of 1960 task distribution



Source: Autor, David H. and Brendan M. Price. 2013. "The Changing Task Composition of the US Labor Market: An Update of Autor, Levy, and Murnane (2003)." MIT Mimeograph, June.

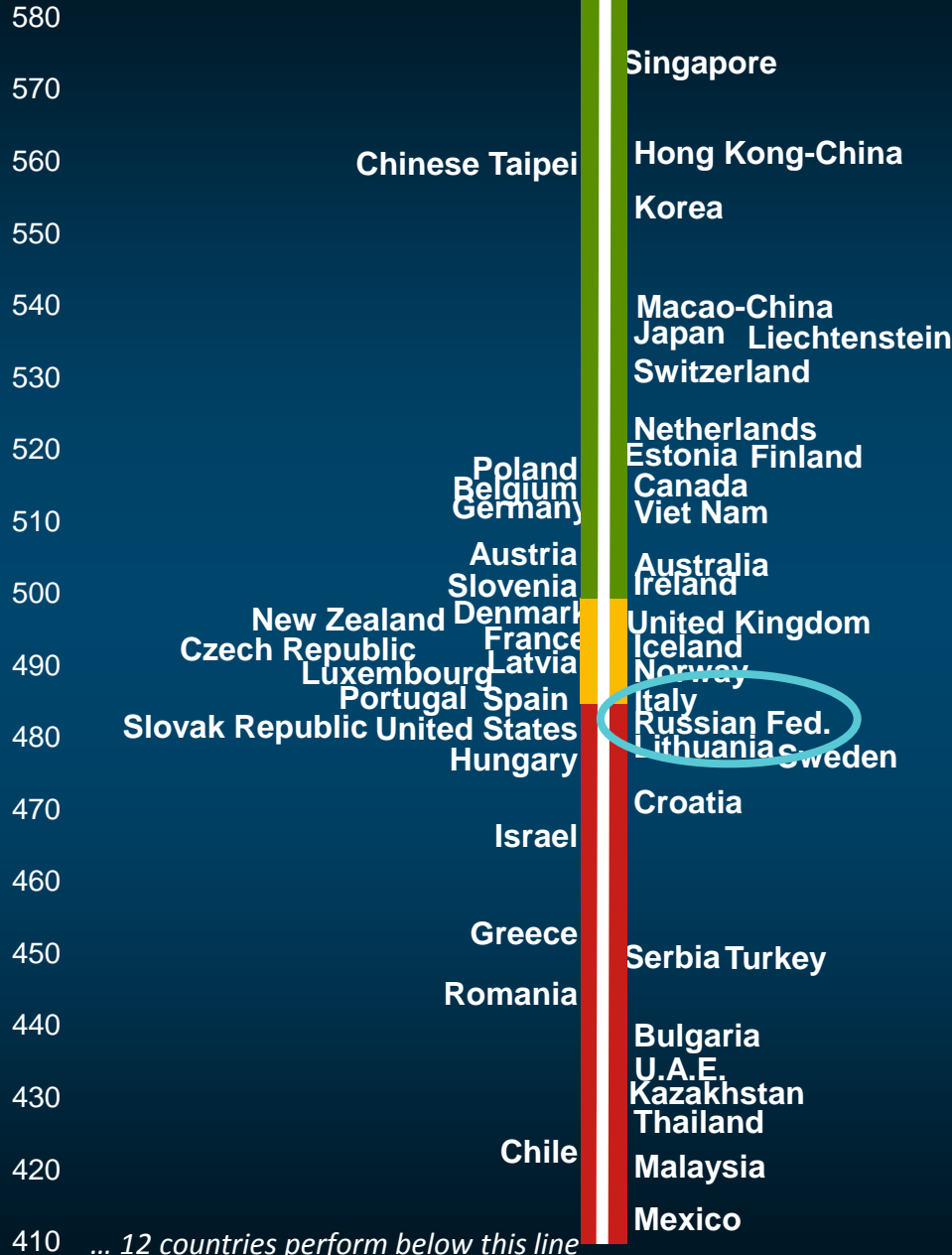


Lesson 3

**The false choice between
equity and excellence**

High mathematics performance

Mean score ... Shanghai-China performs above this line (613)



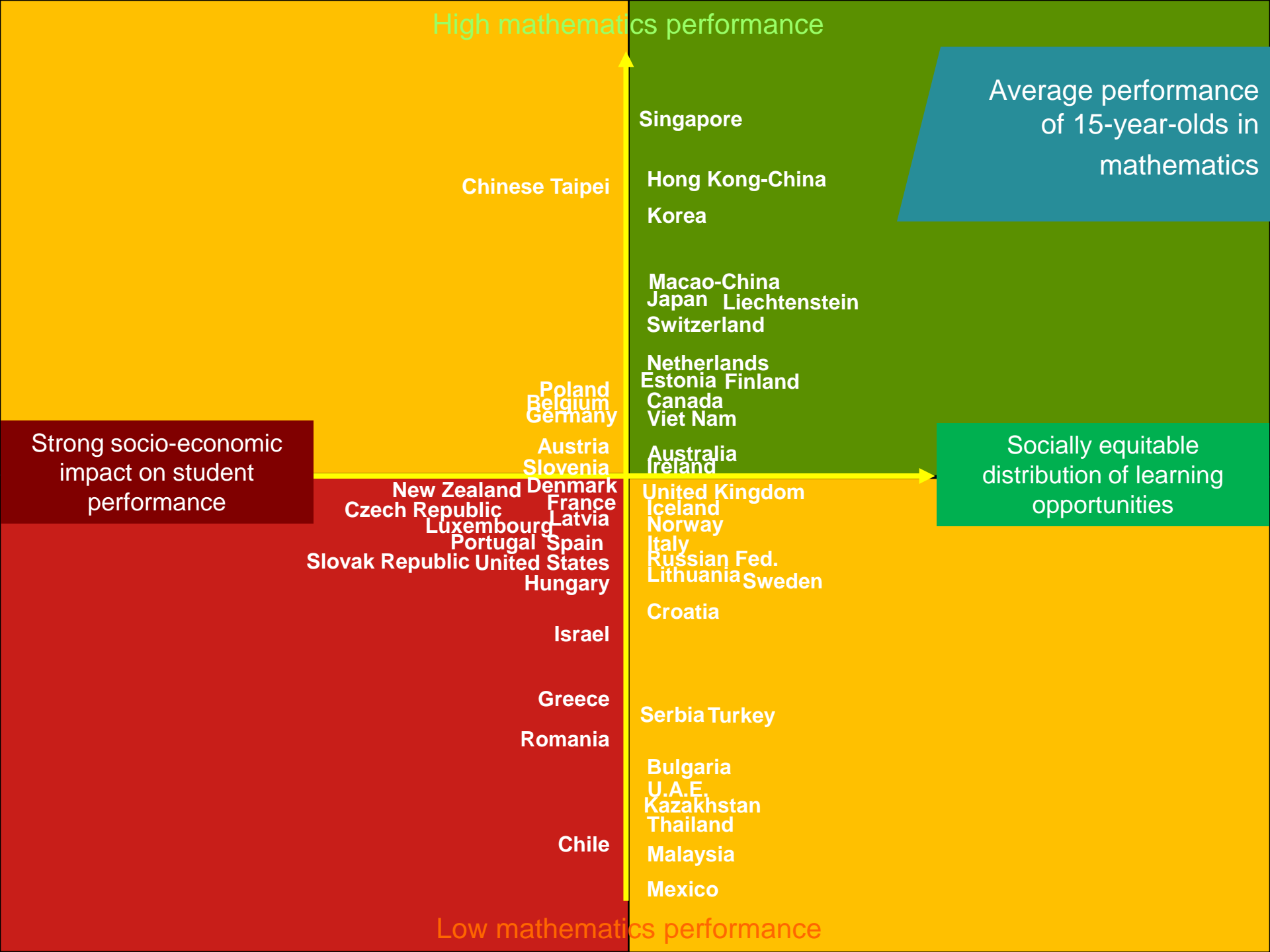
Average performance of 15-year-olds in Mathematics



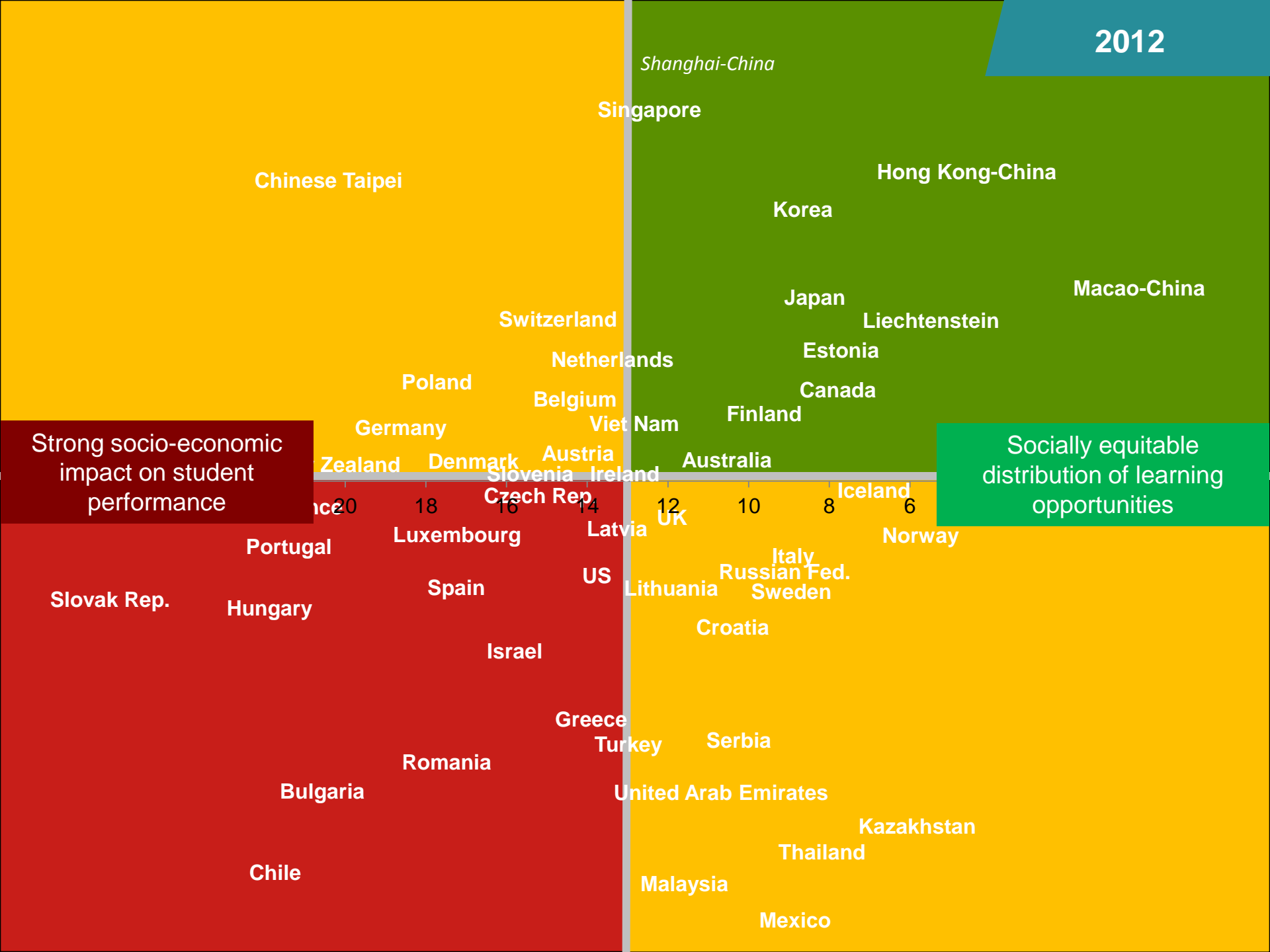
Fig I.2.13

... 12 countries perform below this line

Low mathematics performance



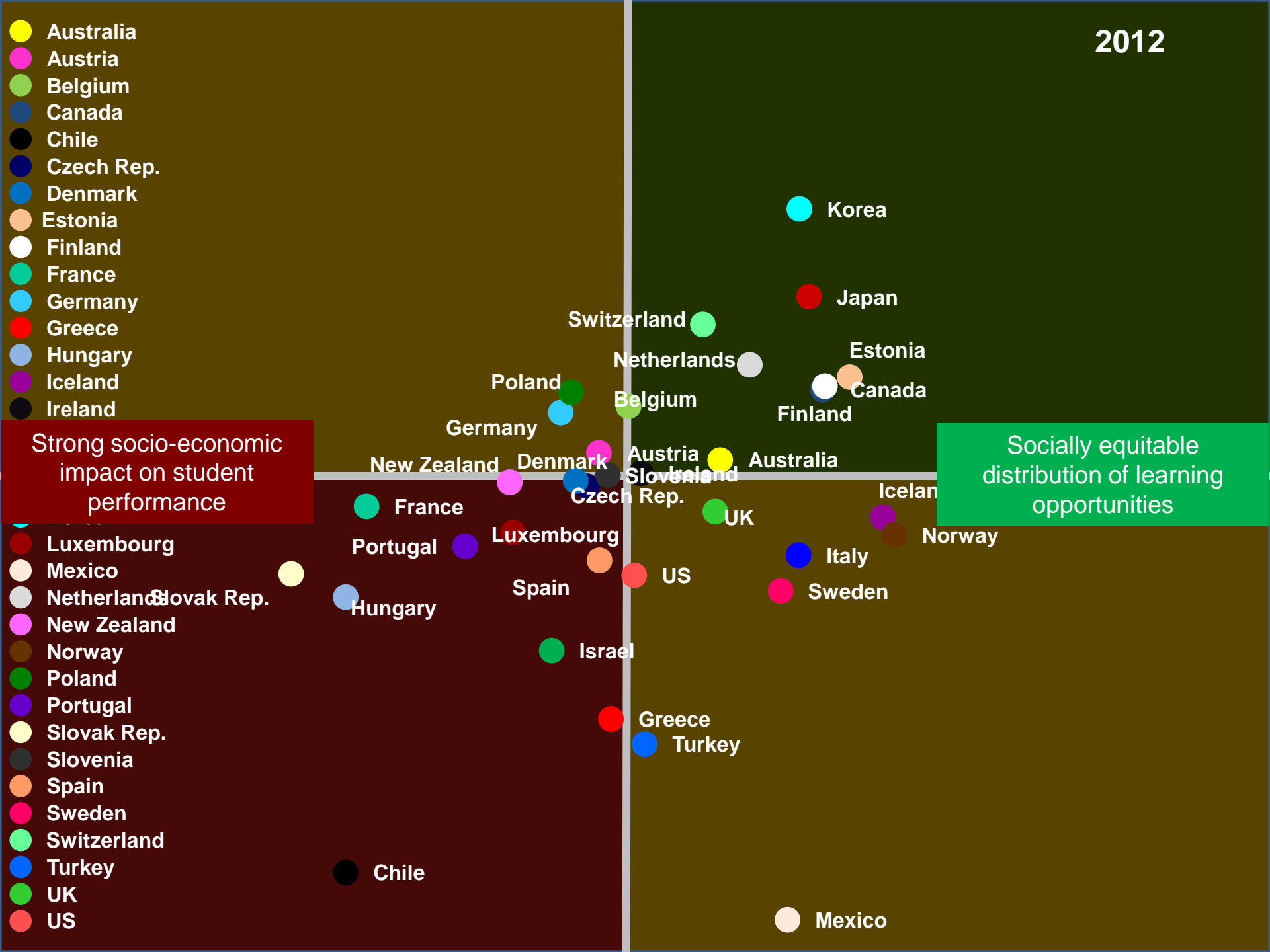
2012



Strong socio-economic impact on student performance

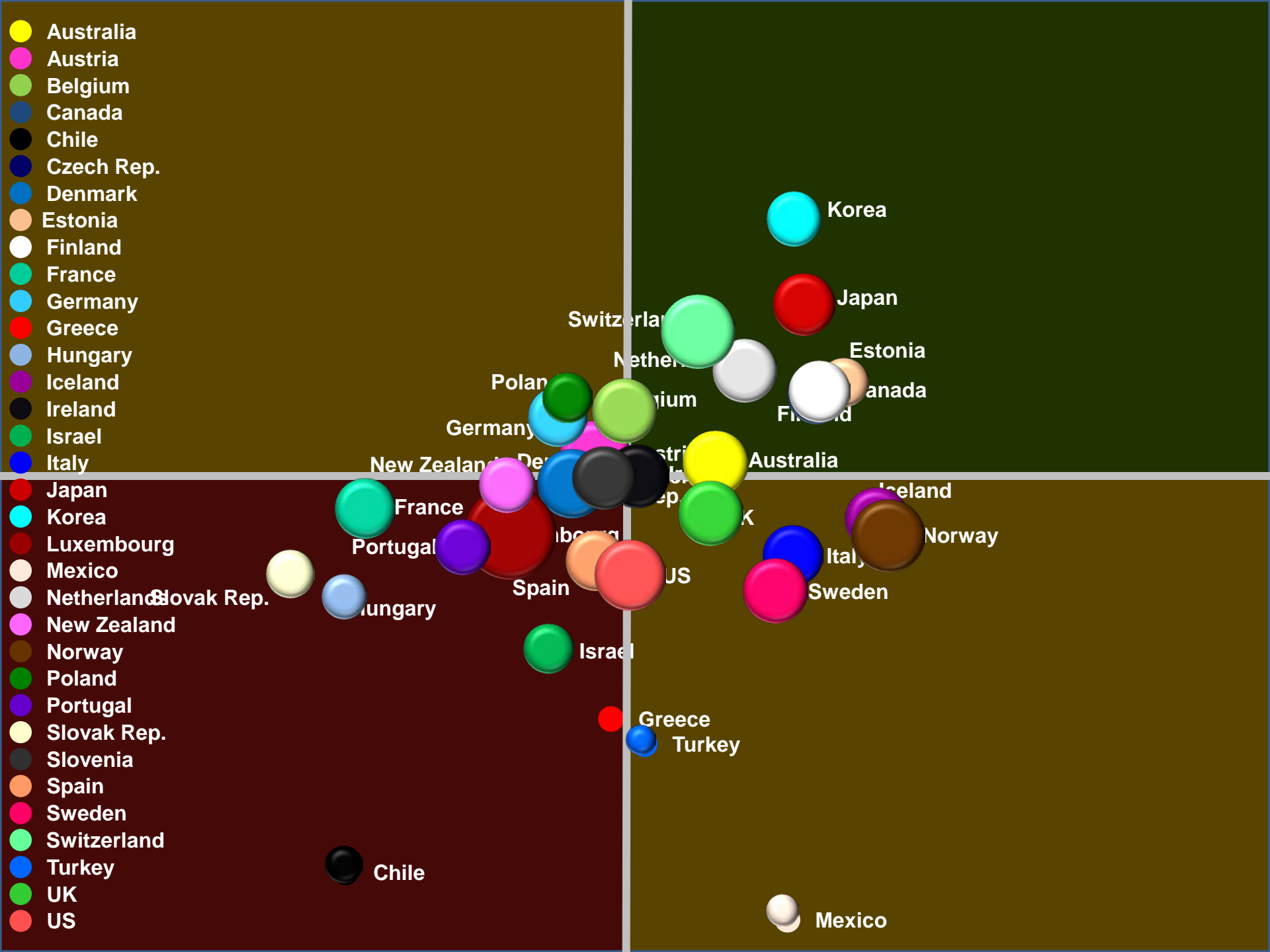
Socially equitable distribution of learning opportunities

2012



Strong socio-economic impact on student performance

Socially equitable distribution of learning opportunities



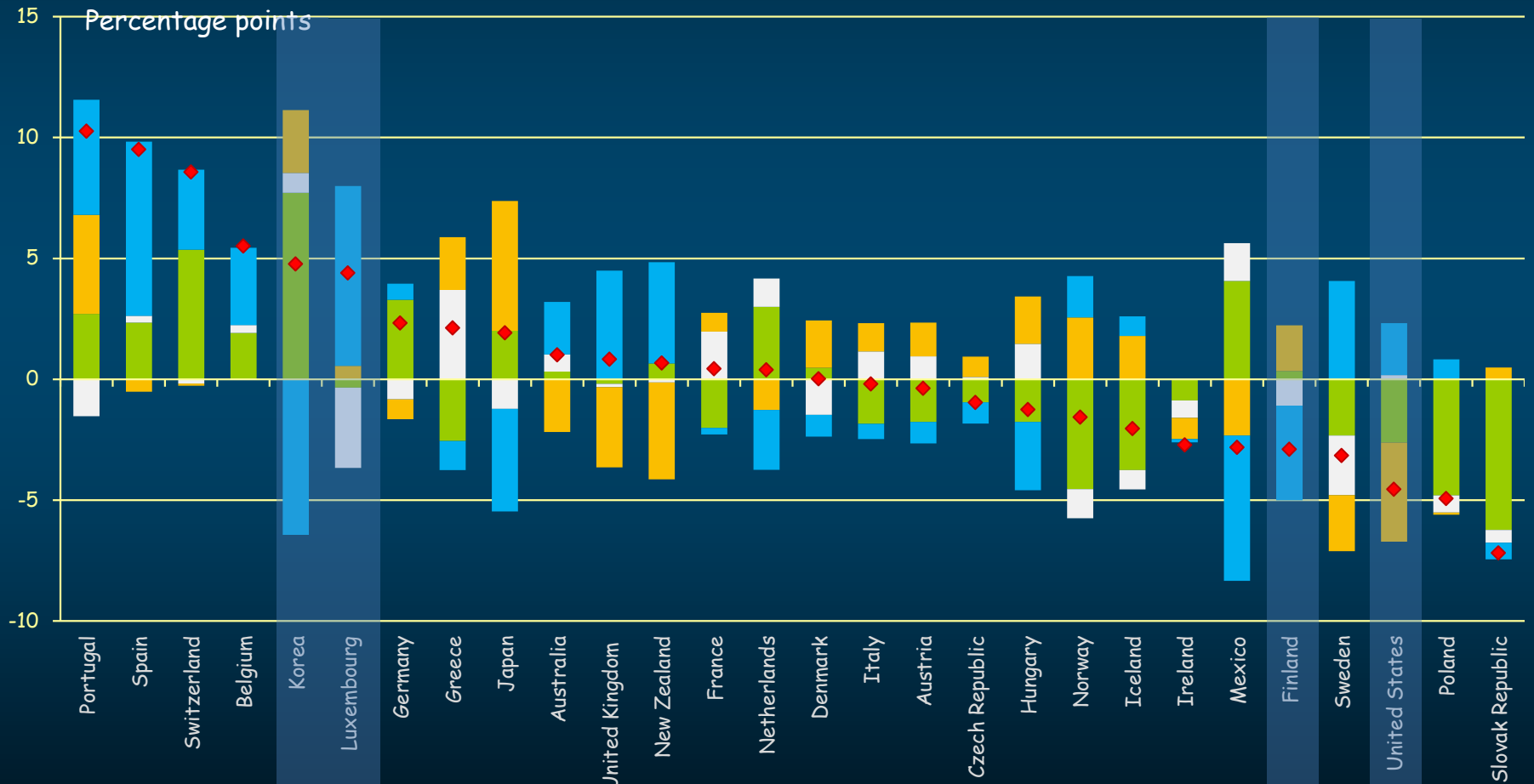
A 3D illustration of a green, stylized human figure standing on a white step ladder. The figure is holding a large, glowing gold coin above the top of a large, pink piggy bank. The piggy bank is pig-shaped with a snout and two small eyes. The scene is set against a plain white background.

Lesson 4

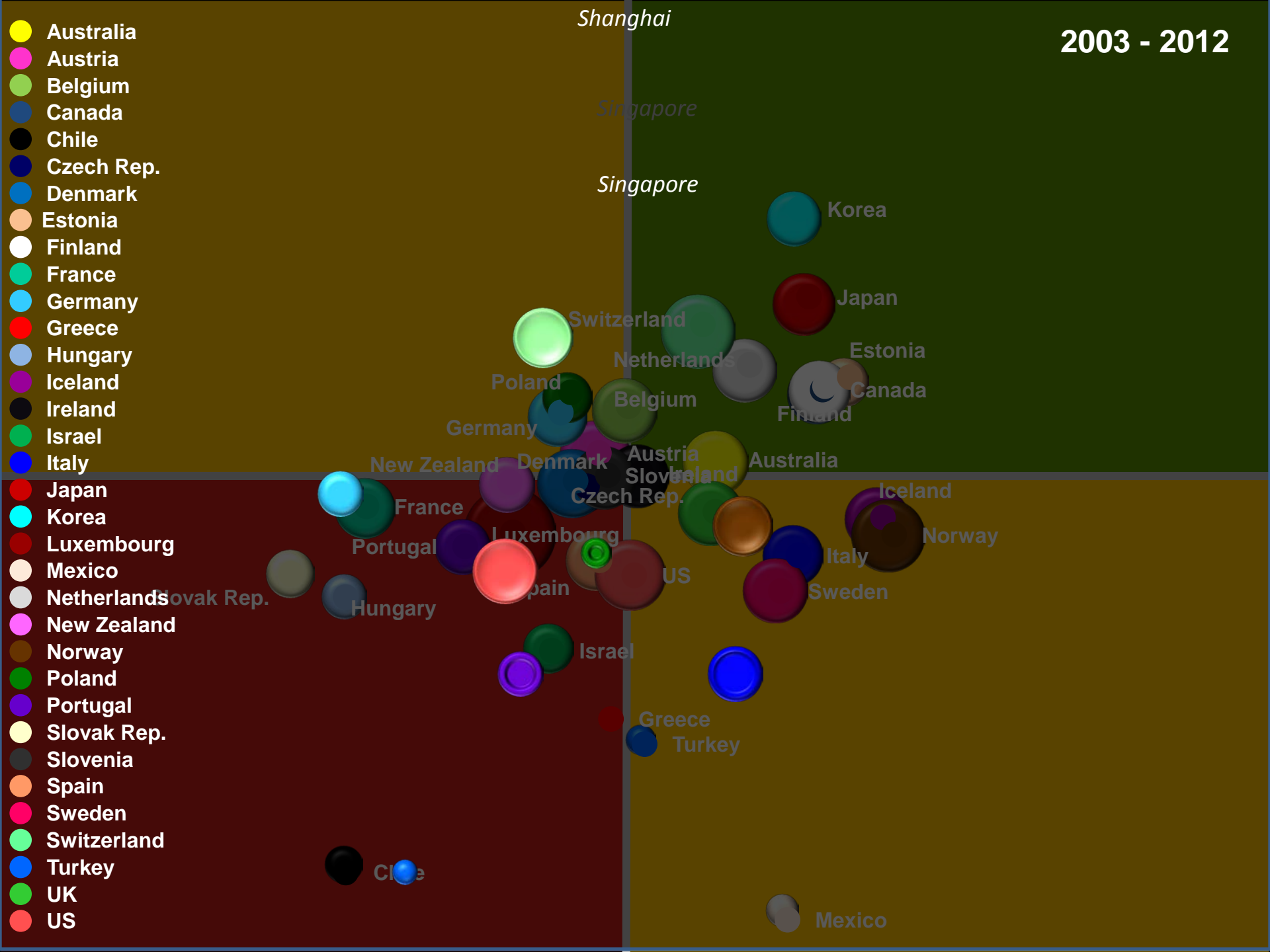
**Not more money but better
spending choices make a difference**

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



2003 - 2012

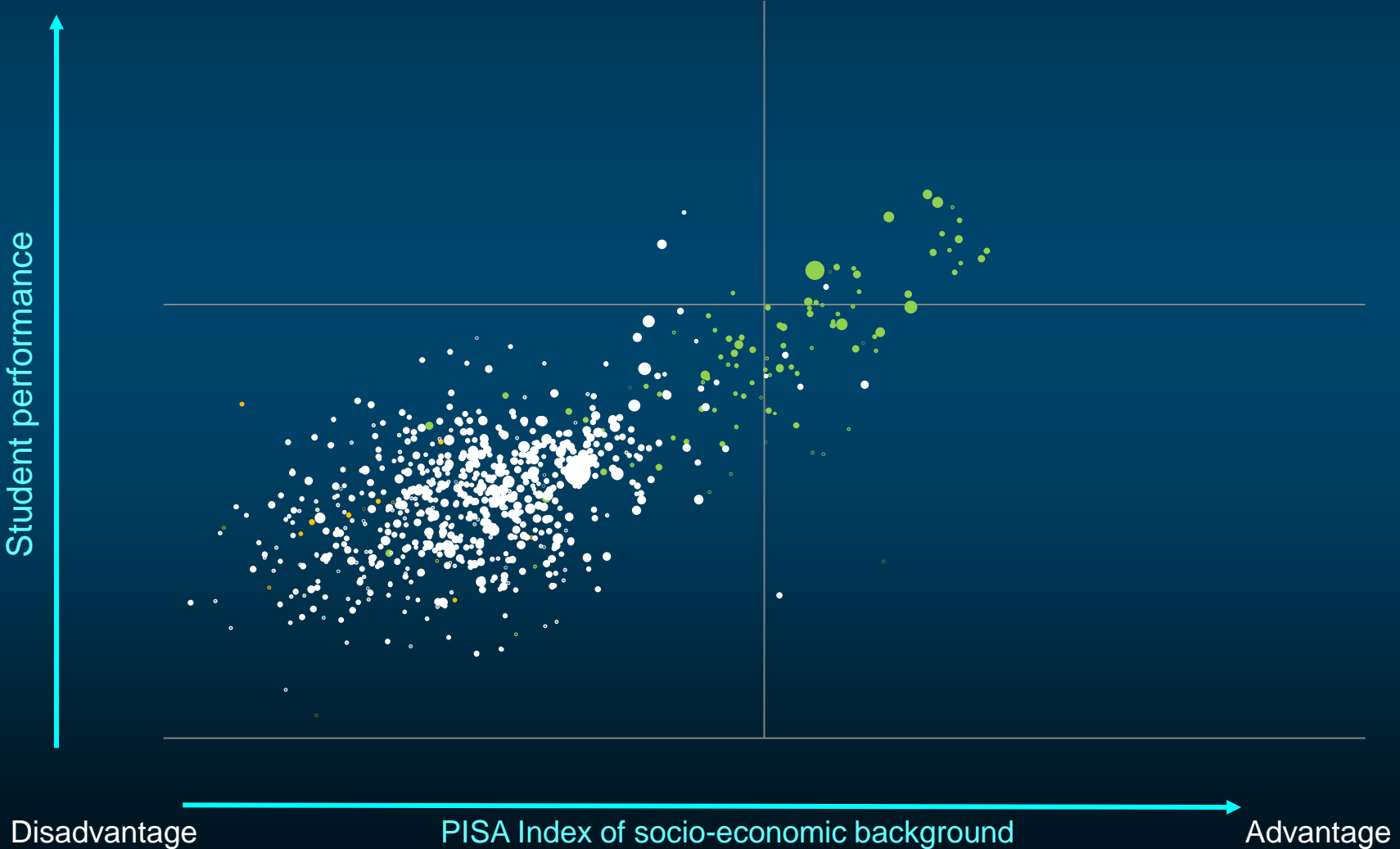


Lesson 5

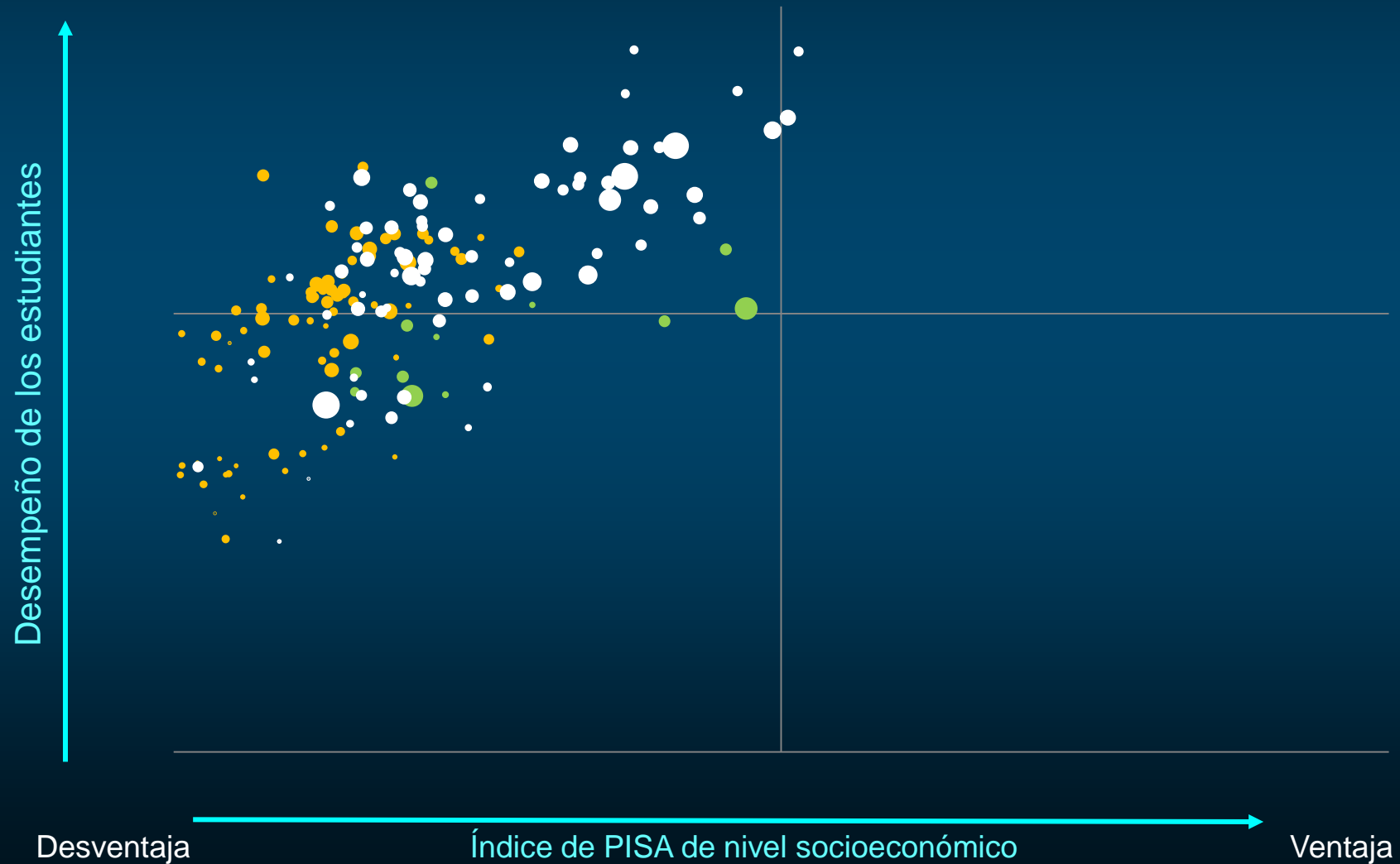
The country where students go to class matters more than what social class students come from

A photograph of a rocky hillside with a single tree and a clear blue sky. The tree is positioned on the left side of the frame, with its branches extending towards the center. The rocks are light-colored and layered, creating a textured background. The sky is a solid, clear blue.

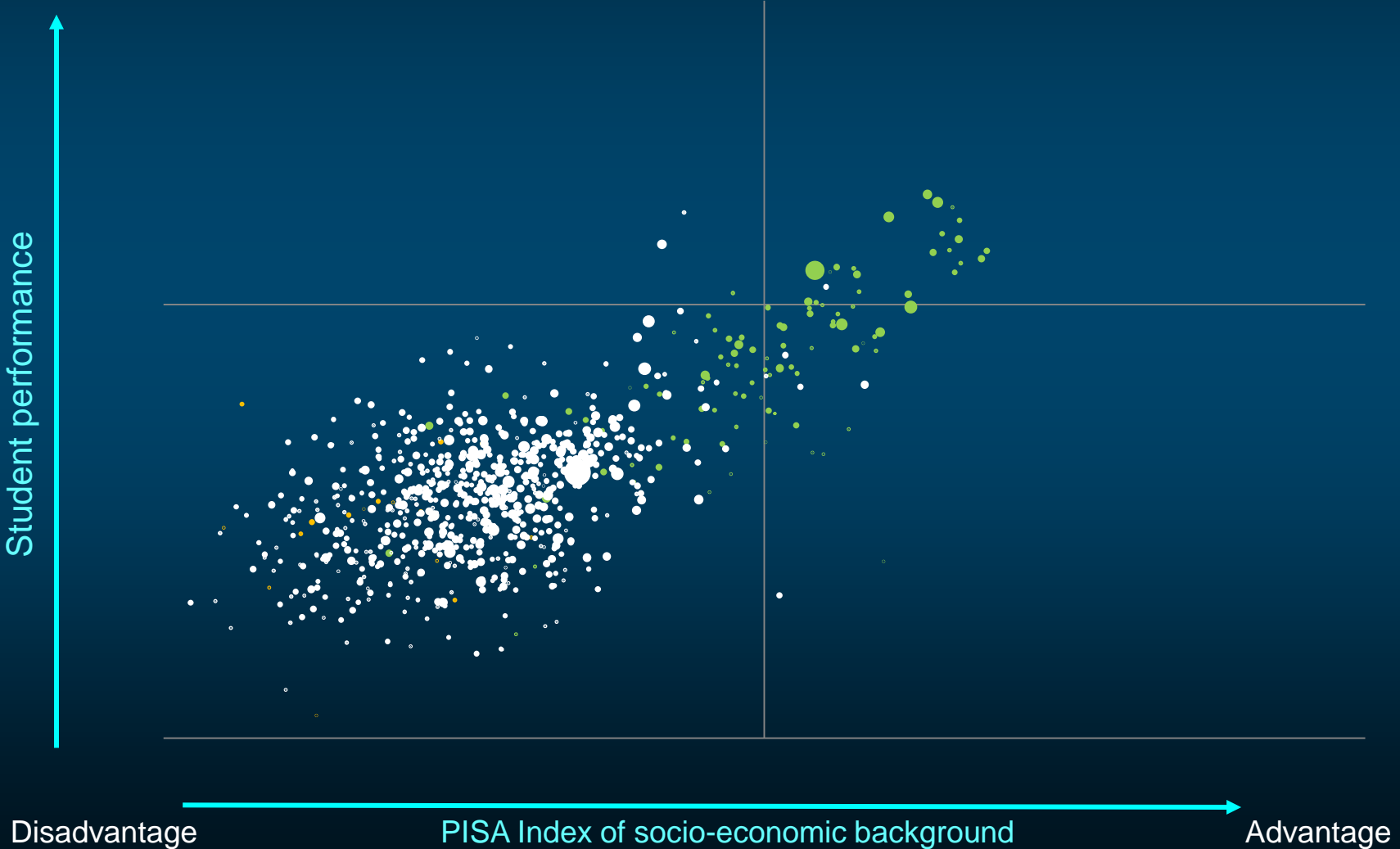
Brazil



Vietnam

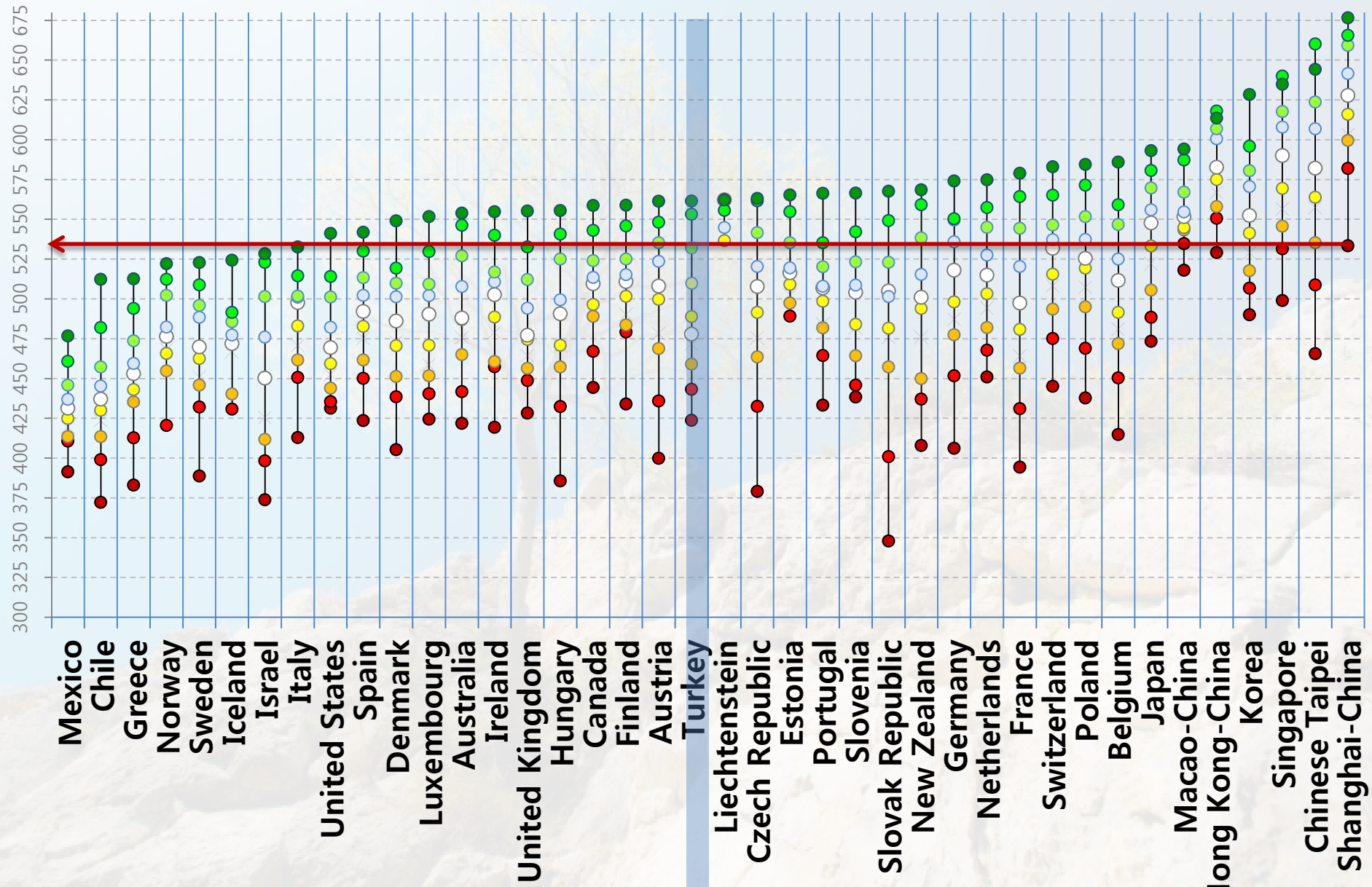


Brazil



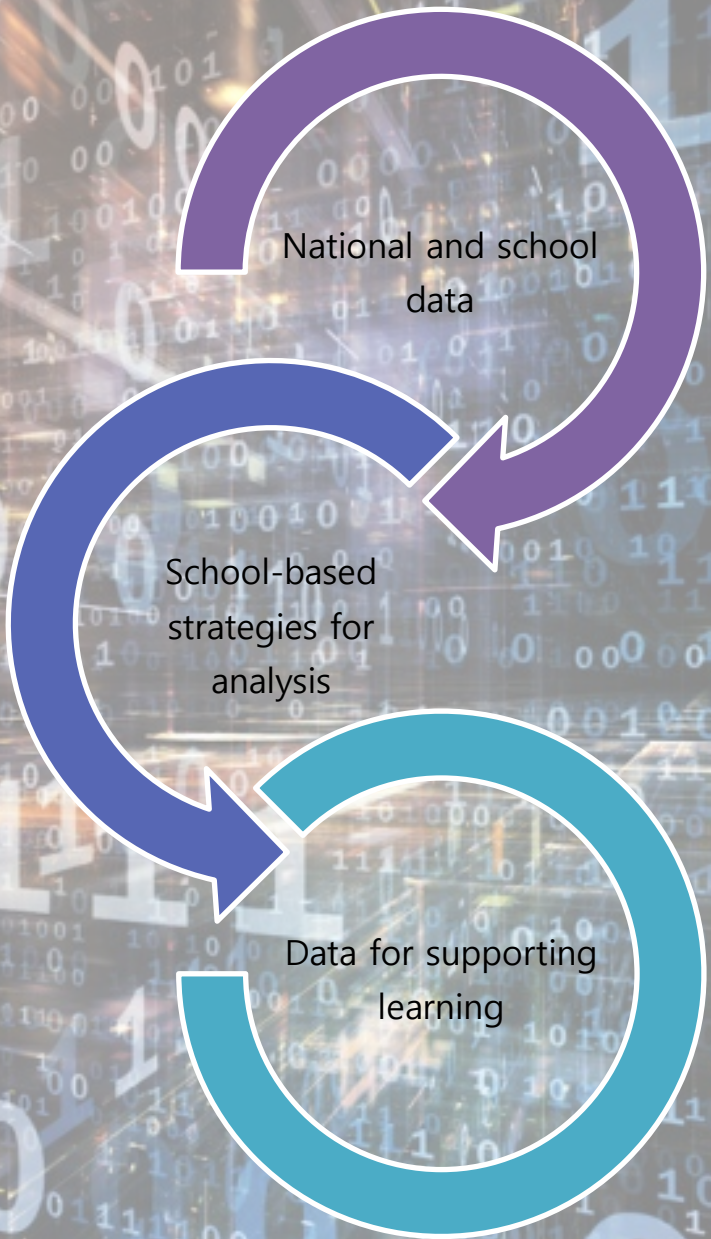
Resilience in education

PISA performance by decile of social background



Source: PISA 2012

Provide a data-rich school environment to combat inequities



High impact on outcomes

Must haves

Quick wins

Catching up with the top-performers

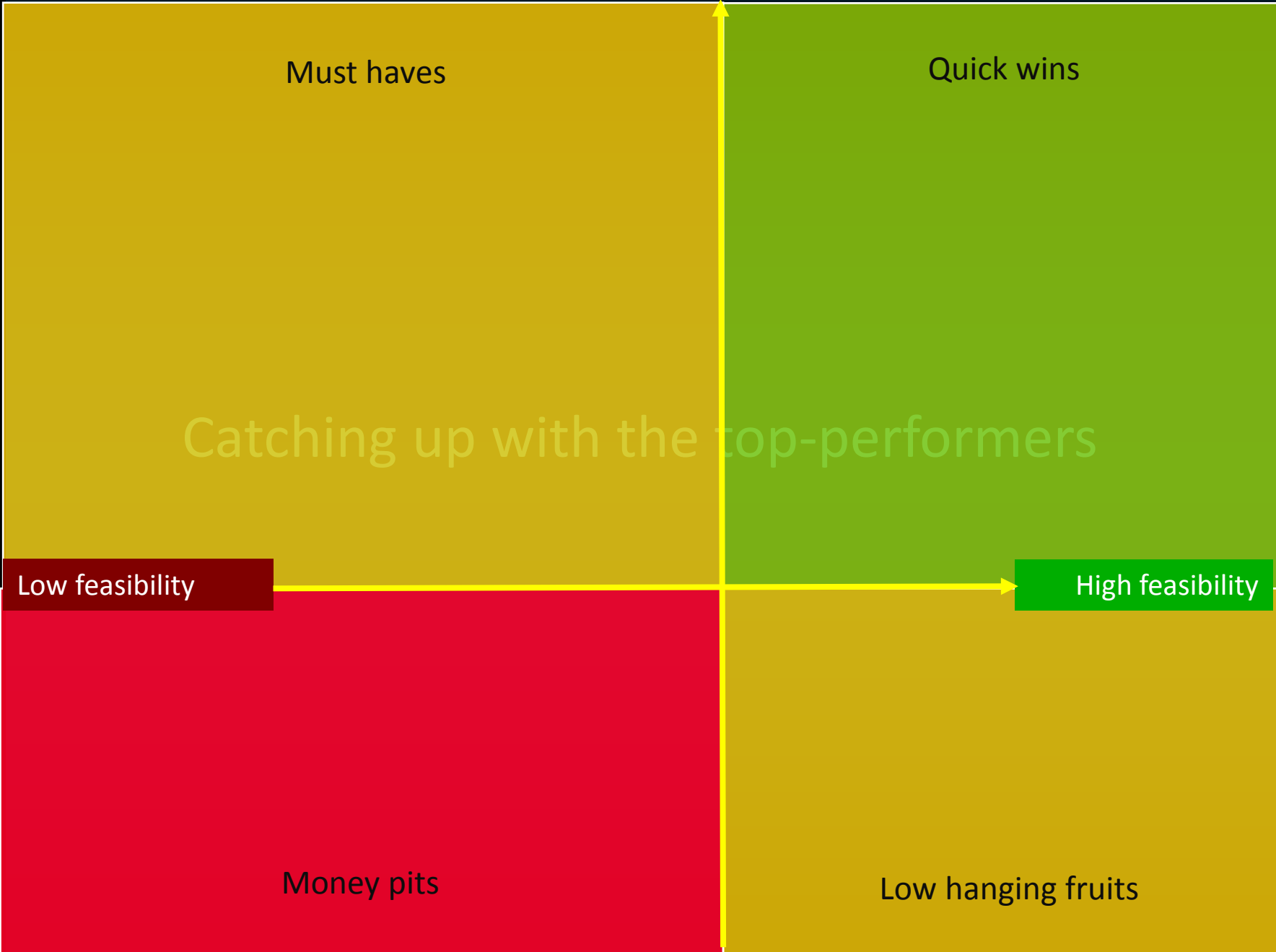
Low feasibility

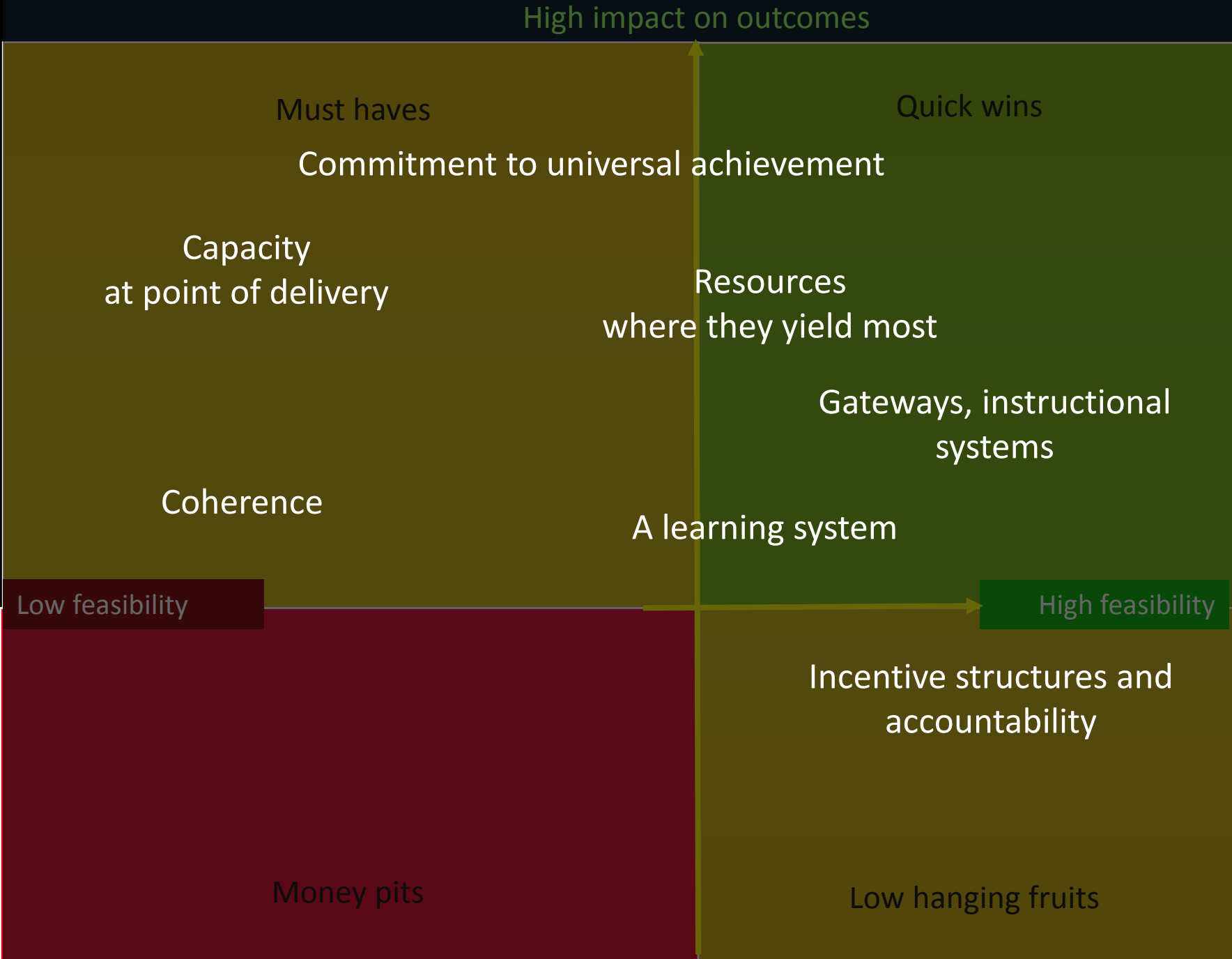
High feasibility

Money pits

Low hanging fruits

Low impact on outcomes





High impact on outcomes

Must haves

Quick wins

Commitment to universal achievement

Capacity at point of delivery

Resources where they yield most

Gateways, instructional systems

Coherence

A learning system

Low feasibility

High feasibility

Incentive structures and accountability

Money pits

Low hanging fruits

Low impact on outcomes

High impact on outcomes

❑ Lesson 6: Believe that all children can achieve

- Universal educational standards and personalization 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

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Low feasibility

High feasibility

Incentive structures and
accountability

Money pits

Low hanging fruits

Low impact on outcomes

High expectations for all students

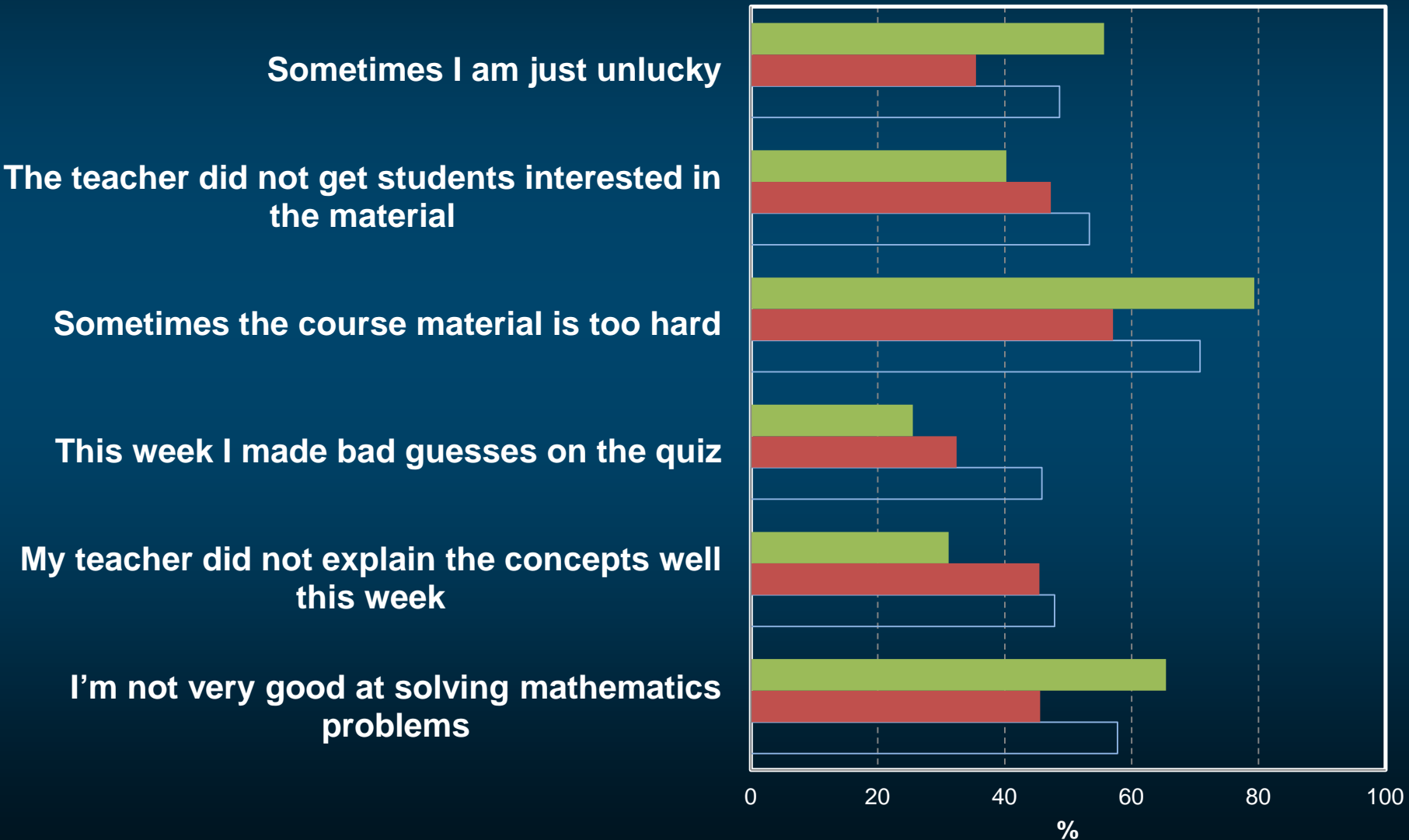


Perceived self-responsibility for failure in mathematics

Fig III.3.6

Percentage of students who reported "agree" or "strongly agree" with the following statements:

■ Russian Federation ■ United States □ OECD average



Make learning central, encourage engagement and responsibility



Be acutely sensitive to individual differences



Provide continual assessment with formative feedback



Be demanding for every student



Ensure that students feel valued and included and learning is collaborative

High impact on outcomes

Must haves

Quick wins

- **Lesson 7:** Have clear ambitious goals that are shared across the system and aligned with high stakes gateways and instructional systems
 - Well established delivery chain through which curricular goals translate into instructional systems, instructional practices and student learning (intended, implemented and achieved)
 - High level of metacognitive content of instruction ...

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Low feasibility

Incentive structures and
accountability

Money pits

Low hanging fruits

Low impact on outcomes

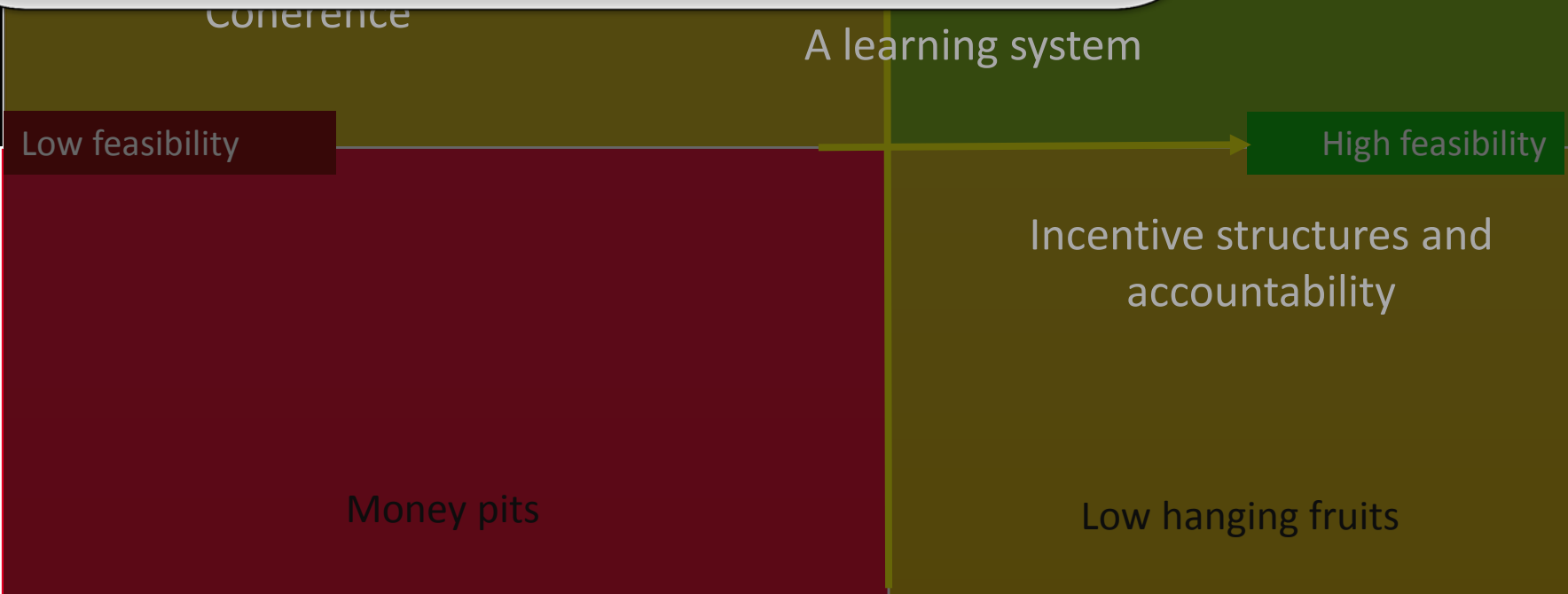
Lesson 8: Build capacity at the point of delivery

- Attracting, developing and retaining high quality teachers and school leaders and a work organisation in which they can use their potential
- Instructional leadership and human resource management in schools
- Keeping teaching an attractive profession
- System-wide career development ...

... wins

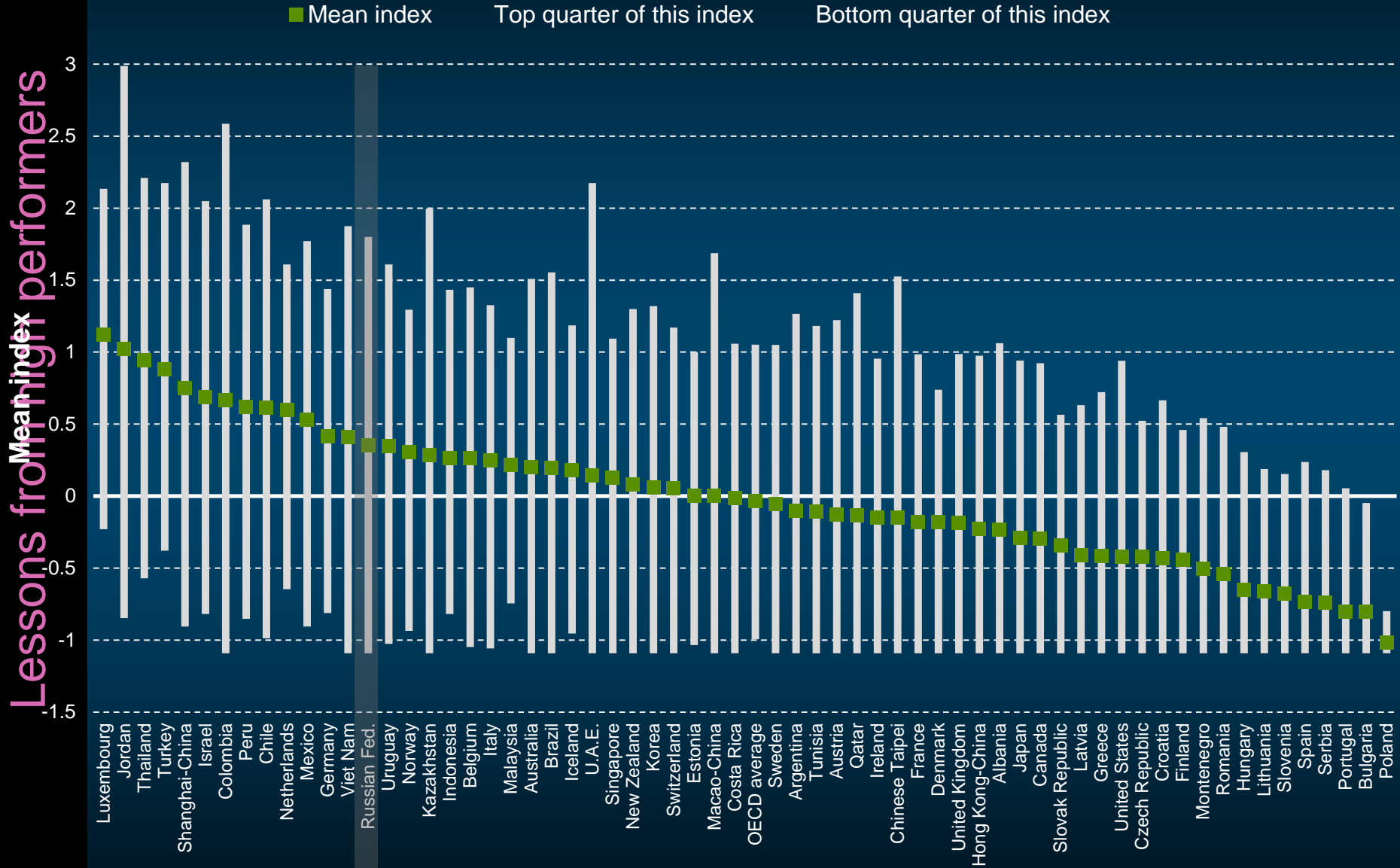
...s, instructional systems

Lessons from high



Teacher shortage

Fig IV.3.5



Prepare for work in disadvantage

- Reinforce initial teacher training including curriculum content for disadvantage
- Strengthening diagnostic capacity
- Include practical field experience

Prepare teachers for work in disadvantage

Preparation

Provide mentoring in disadvantage

- Both new and experienced teachers benefit
- Pedagogical and relational strategies

Improve working conditions

Career and financial incentives



❑ **Lesson 9: Align autonomy with accountability**

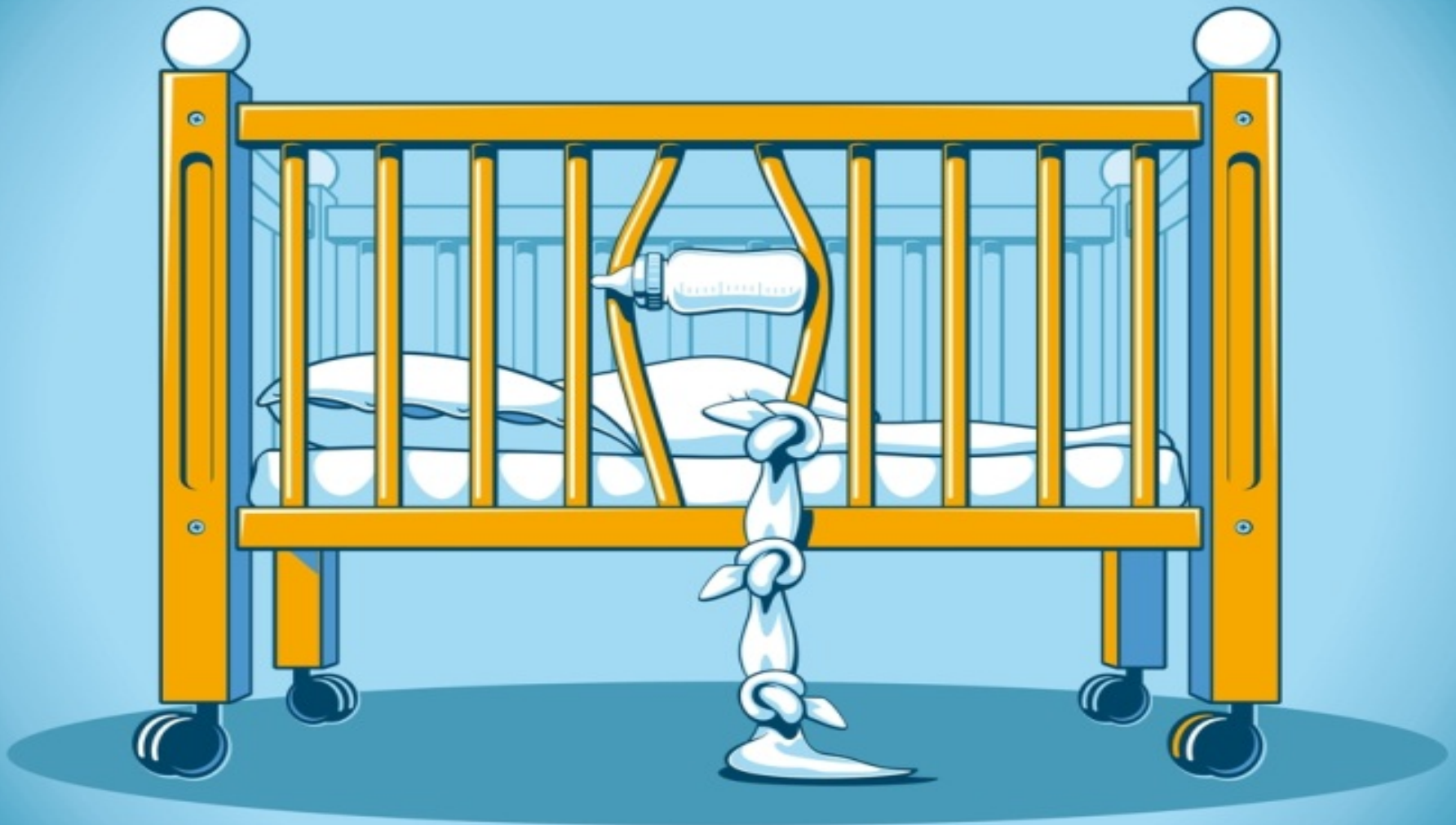
- Aligned incentive structures

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

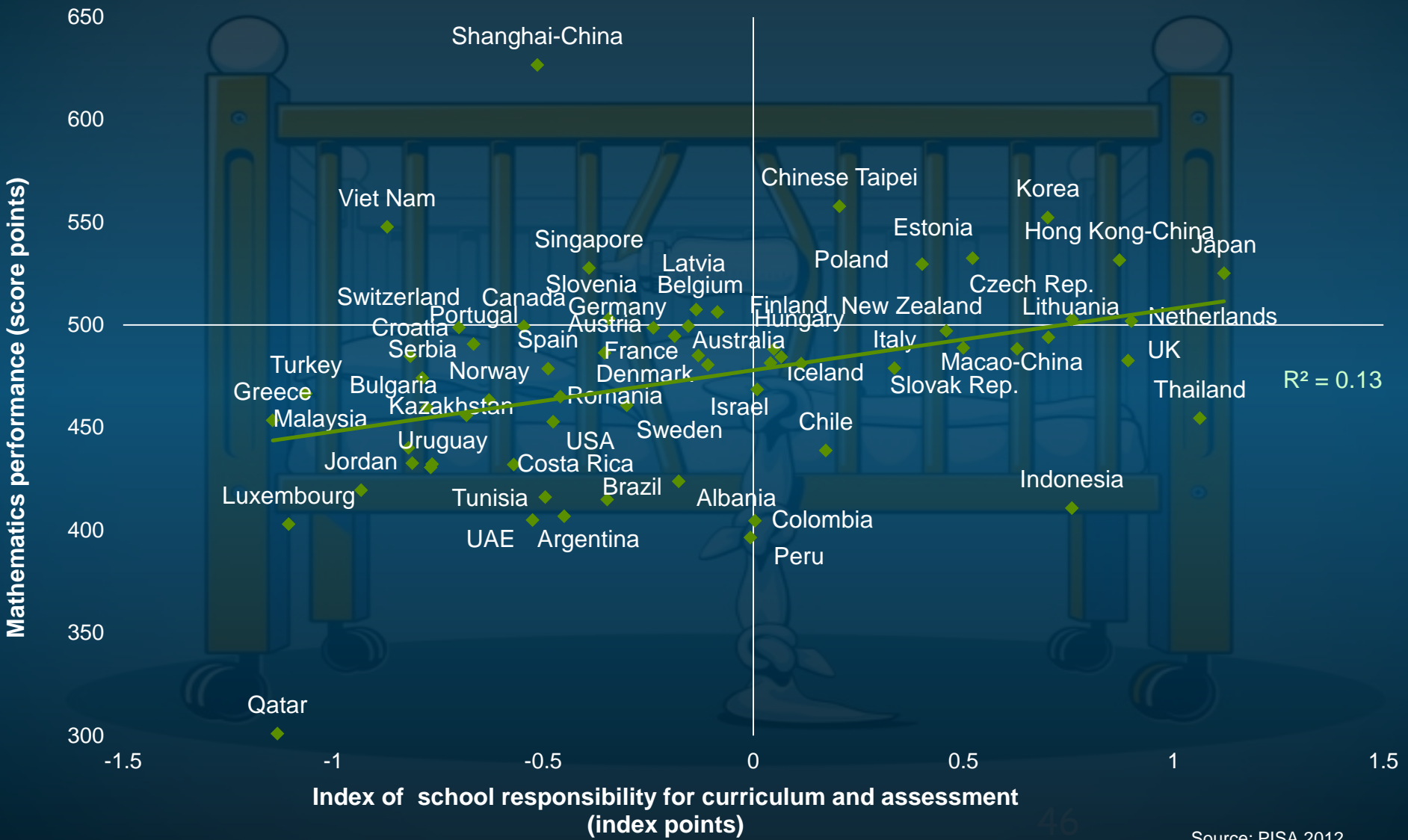
For teachers

- 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



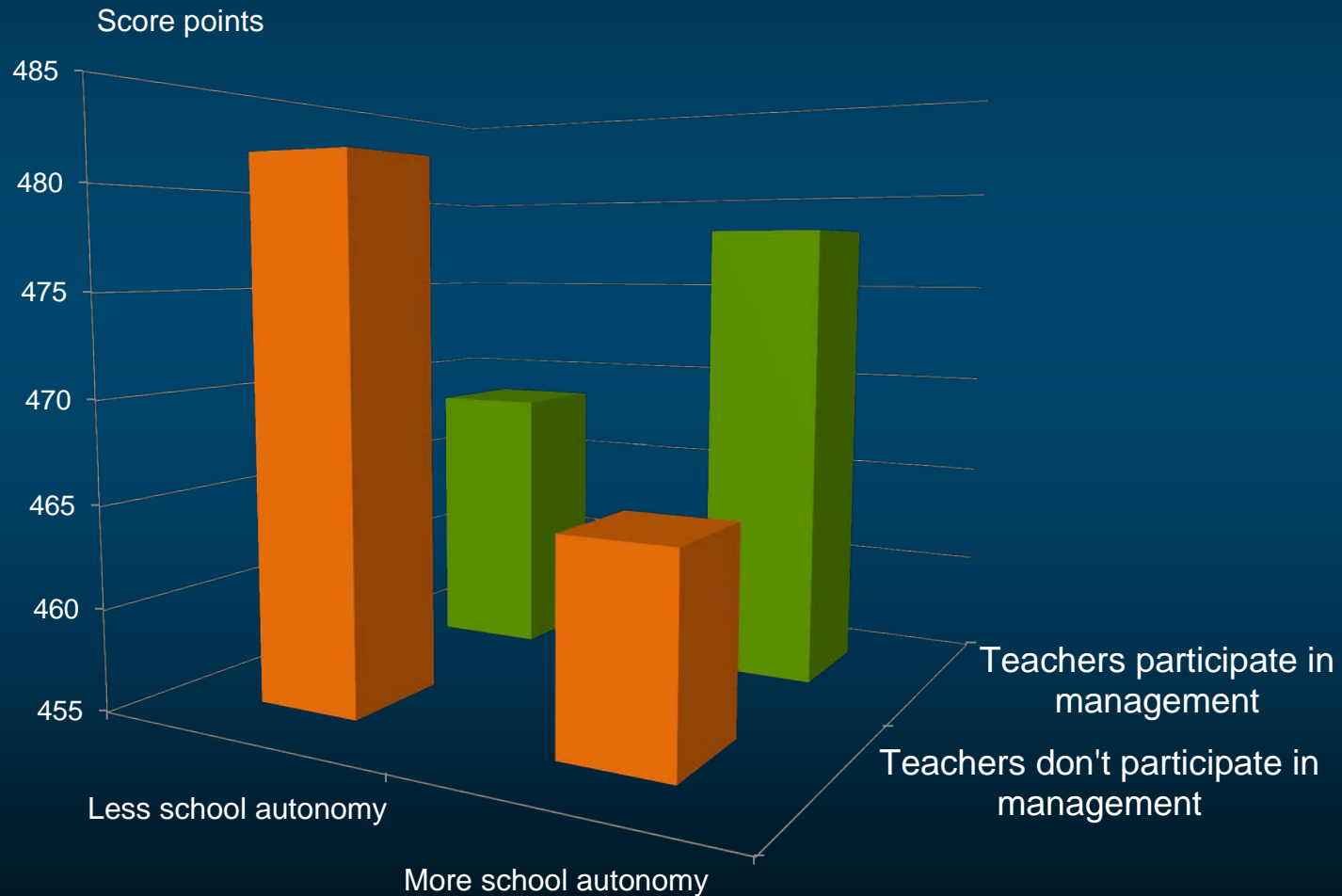
The question is not how many charter schools you have but how you enable every teacher to assume charter-like autonomy

Countries that grant schools **autonomy** over curricula and assessments tend to perform better in mathematics

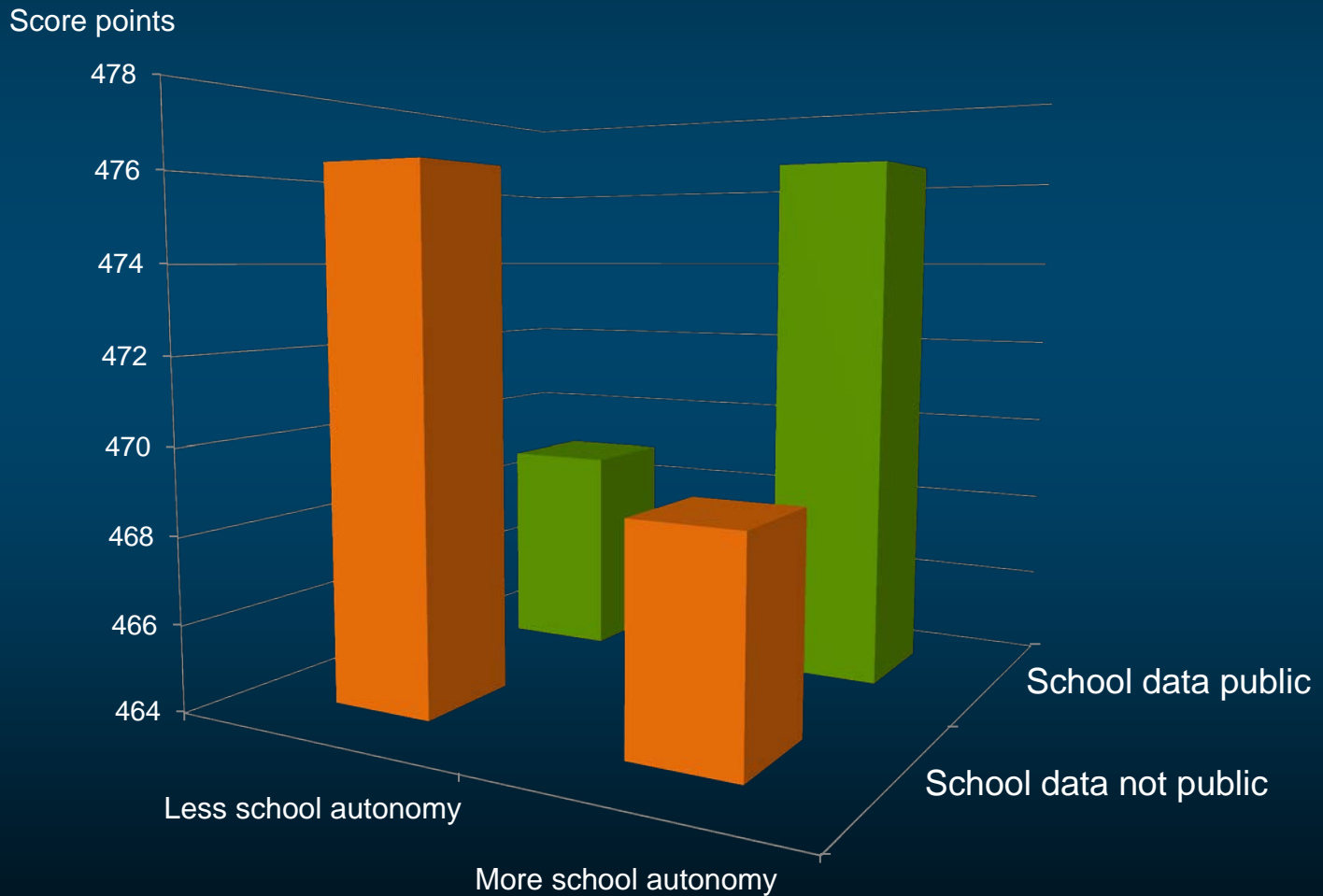


Source: PISA 2012

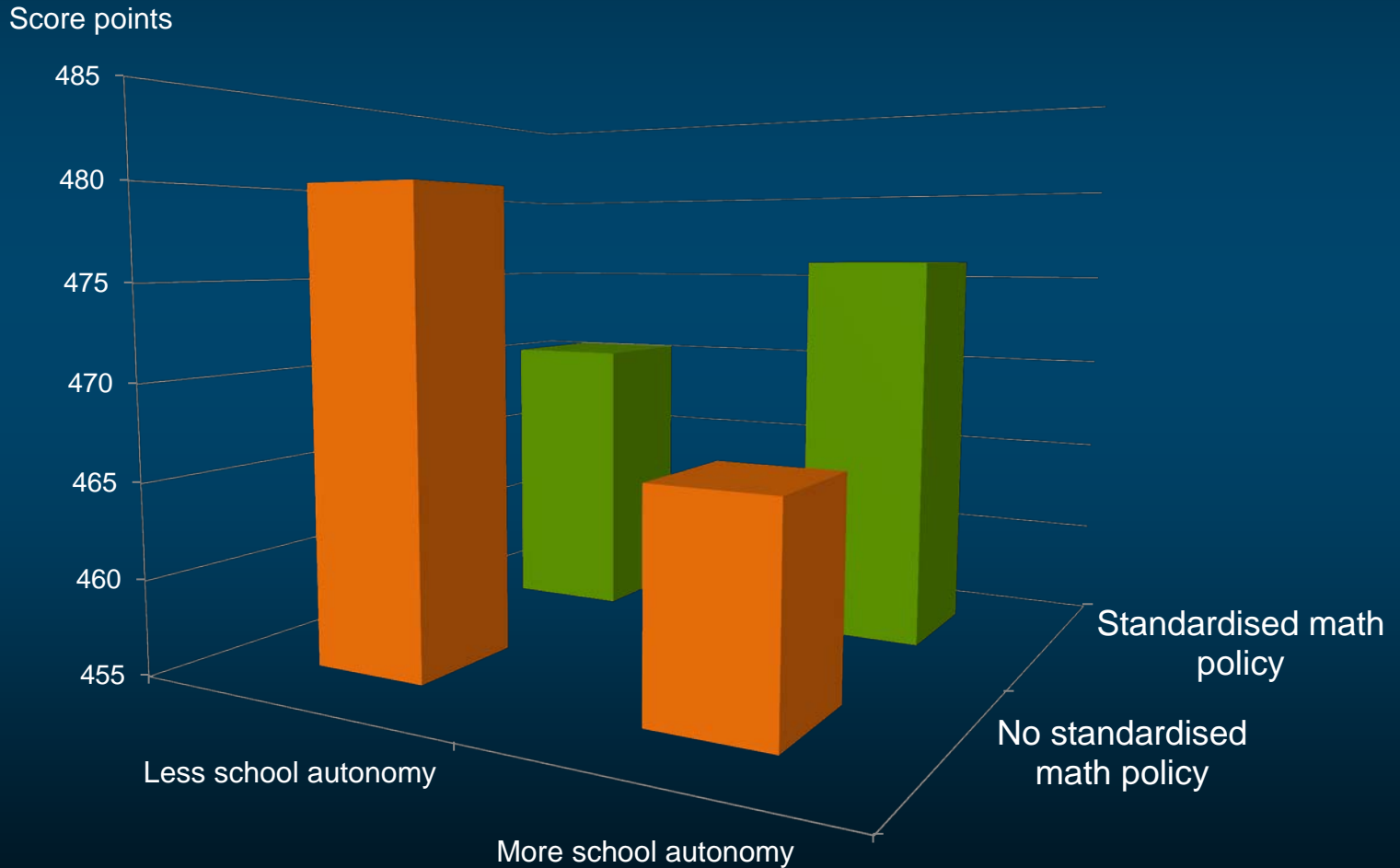
School autonomy for resource allocation x System's level of teachers participating in school management
Across all participating countries and economies



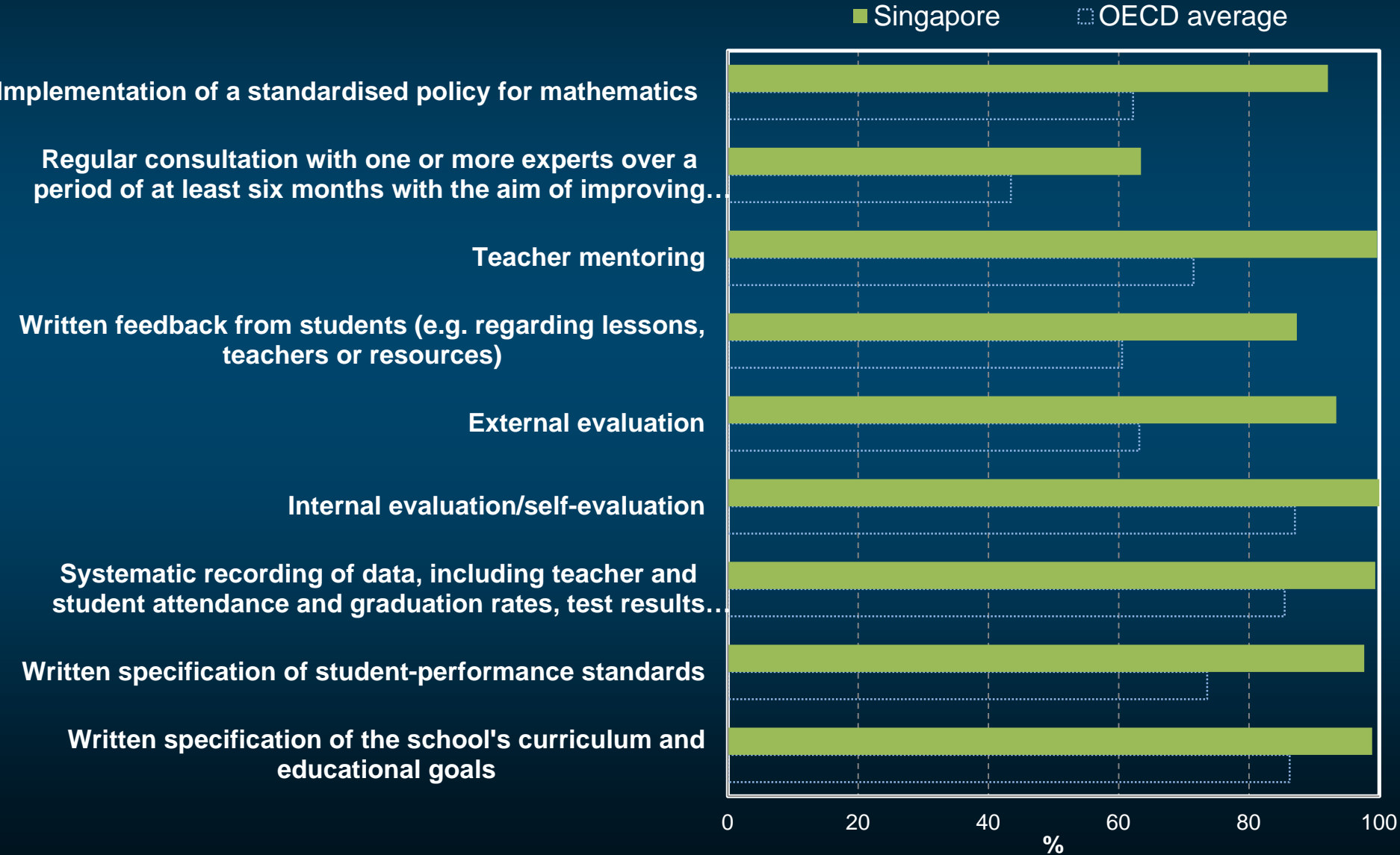
School autonomy for curriculum and assessment
x system's level of posting achievement data publicly



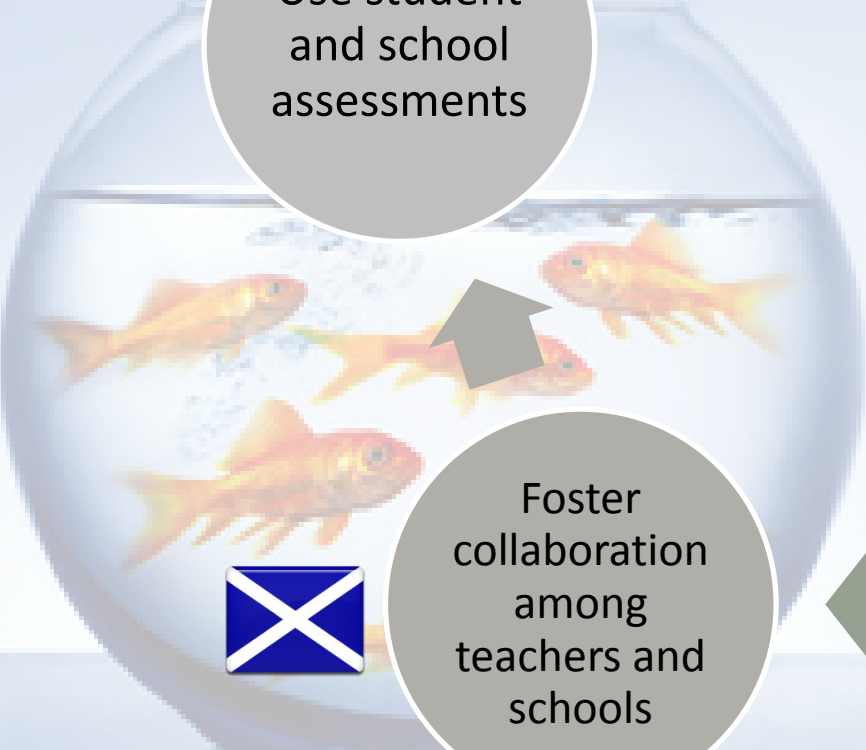
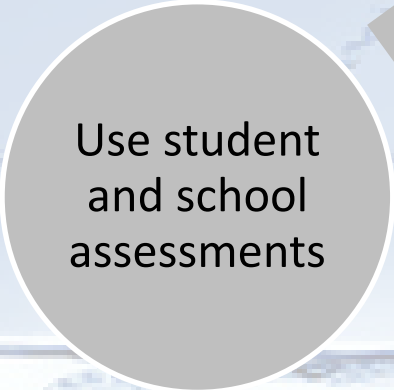
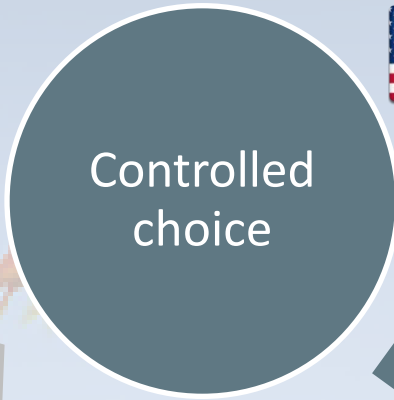
School autonomy for curriculum and assessment
x system's extent of implementing a standardised math policy (e.g. curriculum and instructional materials)



Percentage of students in schools whose principal reported that their schools have the following for quality assurance and improvement:



Square school choice with equity



High impact on outcomes

Must haves

Quick wins

❑ **Lesson 10:** Invest 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

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A learning system

Low feasibility

High feasibility

Incentive structures and
accountability

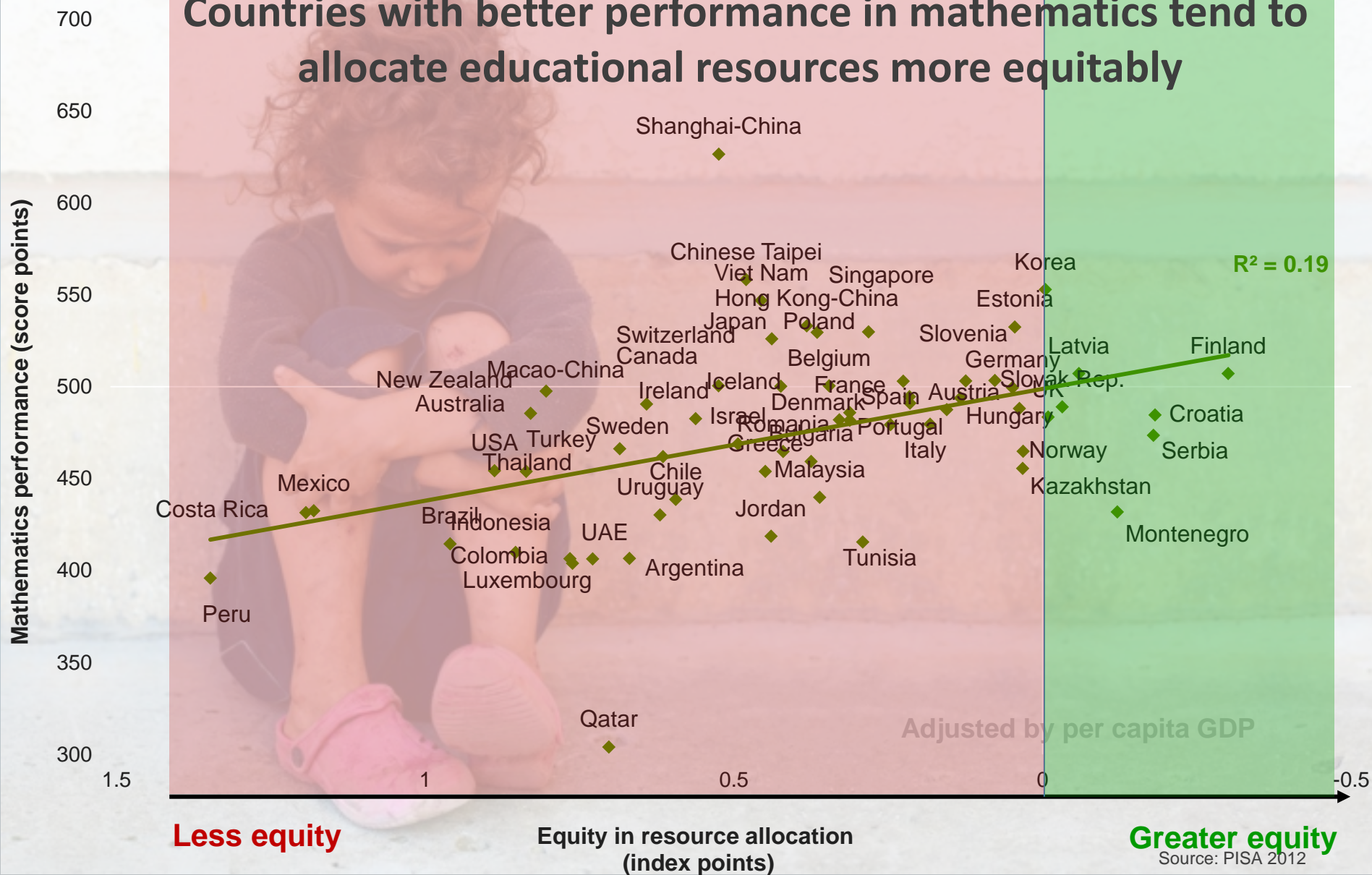
Money pits

Low hanging fruits

Low impact on outcomes

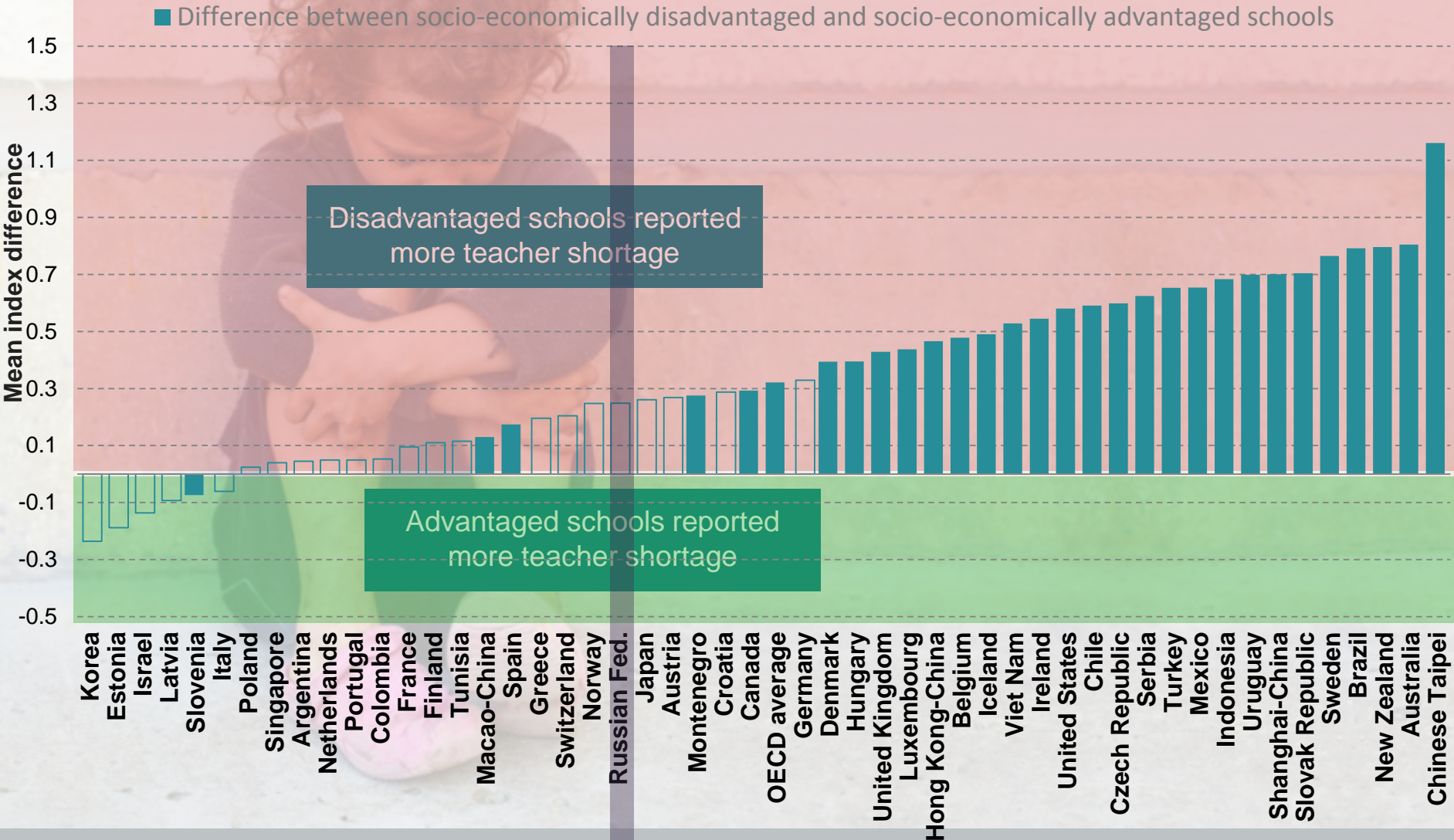
Align the resources with the challenges

Countries with better performance in mathematics tend to allocate educational resources more equitably



Source: PISA 2012

A shortage of qualified teachers is more of concern in disadvantaged schools





Both vertical and horizontal stratification hurt equity

High impact on outcomes

Must haves

Quick wins

Commitment to universal achievement

Capacity

at point of delivery

Resources

held most

□ A final thought

- 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)

gateways, instructional systems

tem

High feasibility

centive structures and accountability

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Low impact on outcomes

Find out more about our work at www.oecd.org

- All publications
- The complete micro-level database

Email: Andreas.Schleicher@OECD.org

Twitter: [SchleicherEDU](https://twitter.com/SchleicherEDU)

and remember:

Without data, you are just another person with an opinion