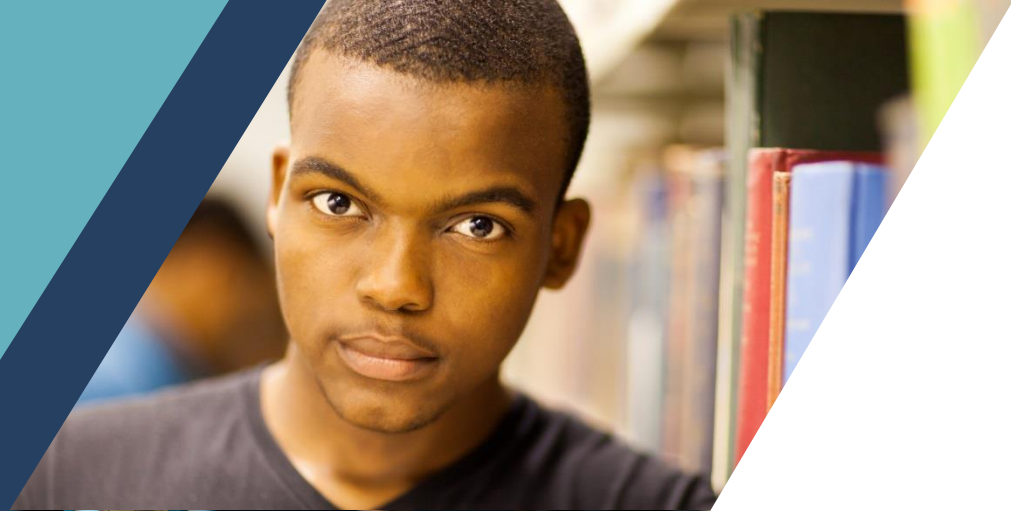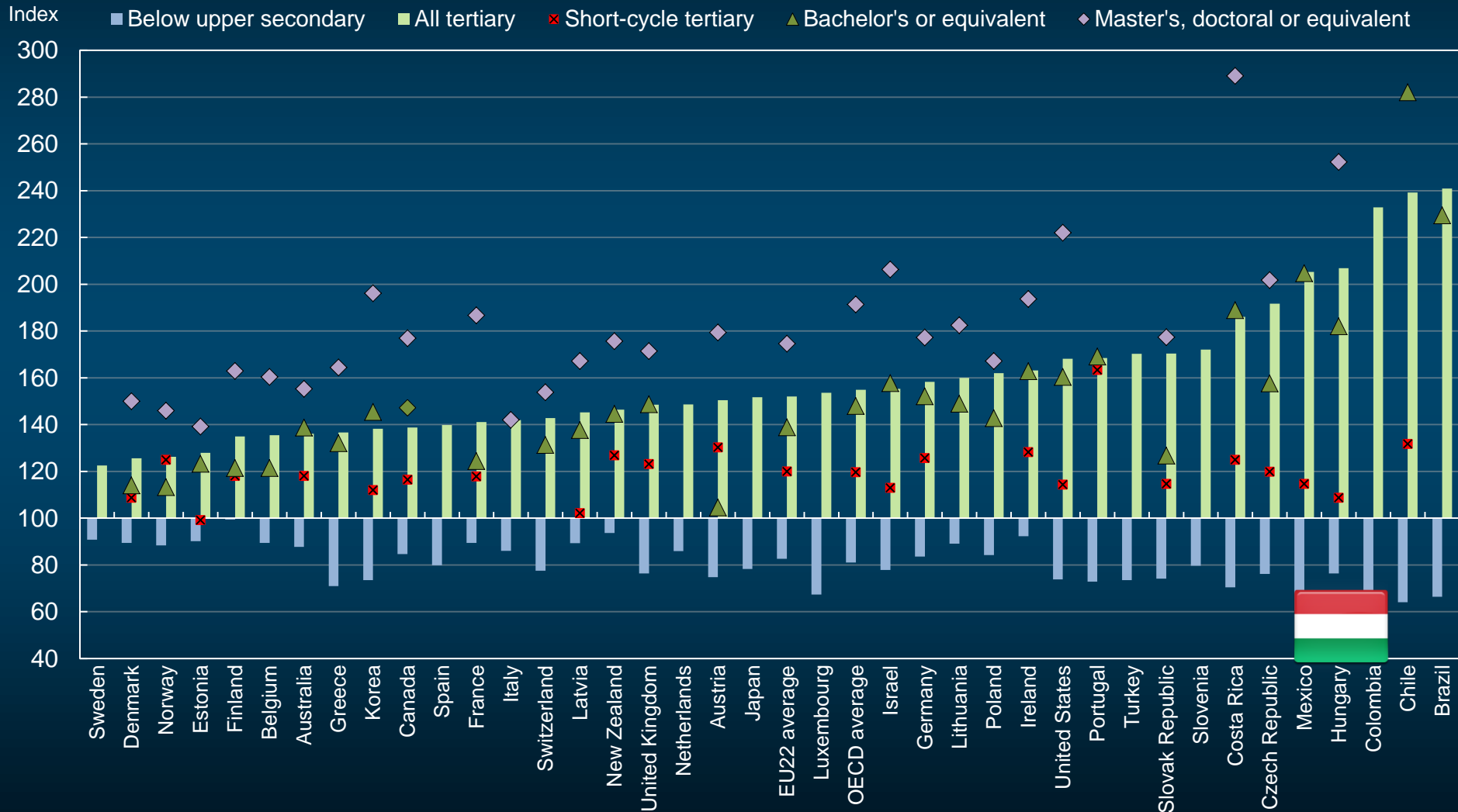# Education in Hungary

Individuals reap high rewards for investing in better skills…

Those with tertiary qualifications earn on average 55% more than those with upper secondary level attainment

Figure A6.1

Relative earnings of adults working full-time, by educational attainment (2014). Upper secondary education = 100
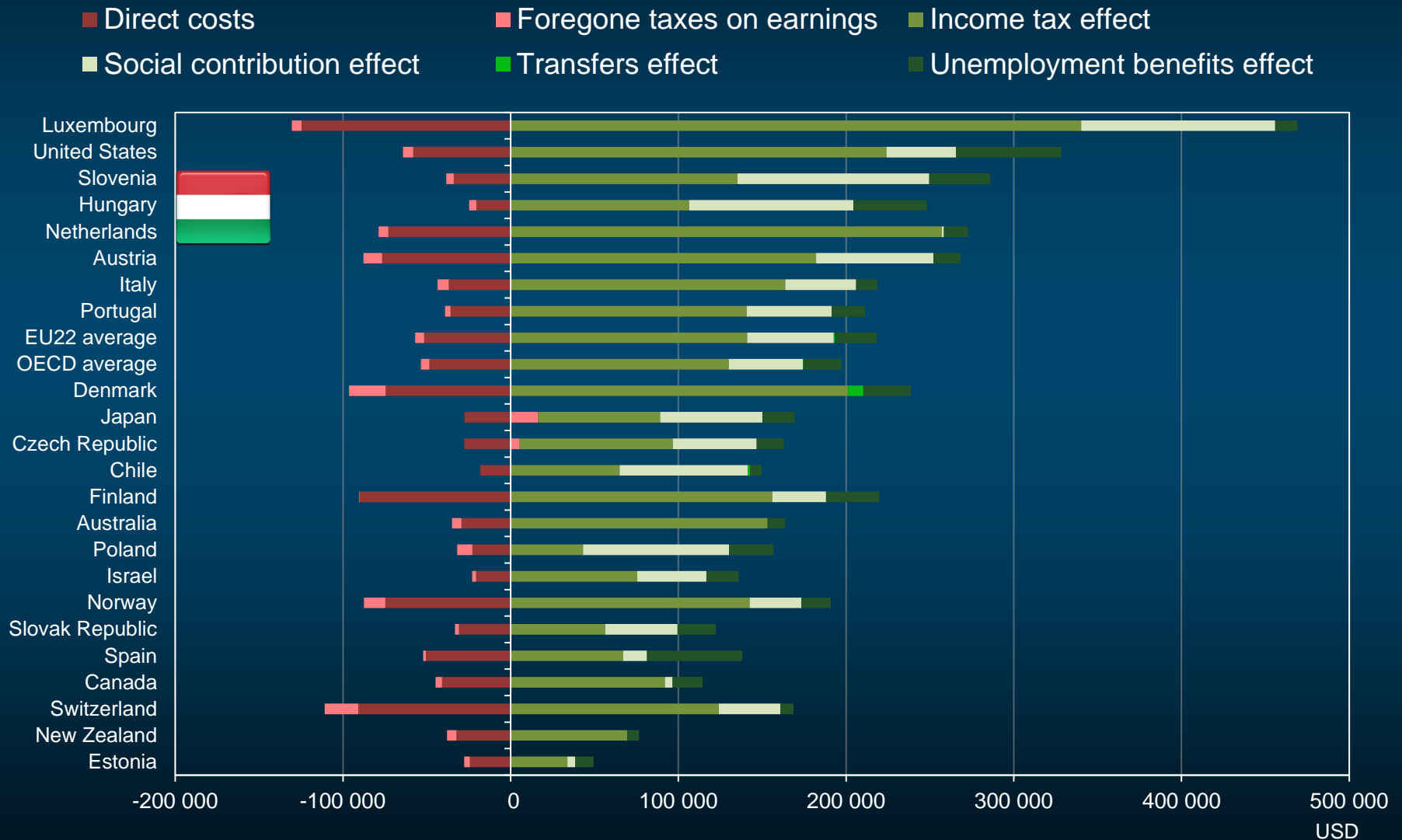
Also for taxpayers the benefits of better education far outweigh the costs

The public benefits for a man attaining a tertiary education are on average nearly 4 times greater than the public costs

Public costs and benefits for a man attaining tertiary education (2012)

- Direct costs
- Foregone taxes on earnings
- Income tax effect
- Social contribution effect
- Transfers effect
- Unemployment benefits effect

Luxembourg
United States
Slovenia
Hungary
Netherlands
Austria
Italy
Portugal
EU22 average
OECD average
Denmark
Japan
Czech Republic
Chile
Finland
Australia
Poland
Israel
Norway
Slovak Republic
Spain
Canada
Switzerland
New Zealand
Estonia

-200 000   -100 000   0   100 000   200 000   300 000   400 000   500 000

USD

While those with advanced skills reap large rewards,
people failing to obtain baseline qualifications pay a rising price

High unemployment among adults with low levels of educational attainment

Figure A5.1a

Unemployment rates of 25-64 year-olds, by educational attainment (2015)

▲ Below upper secondary ● Upper secondary or post-secondary non-tertiary — Tertiary
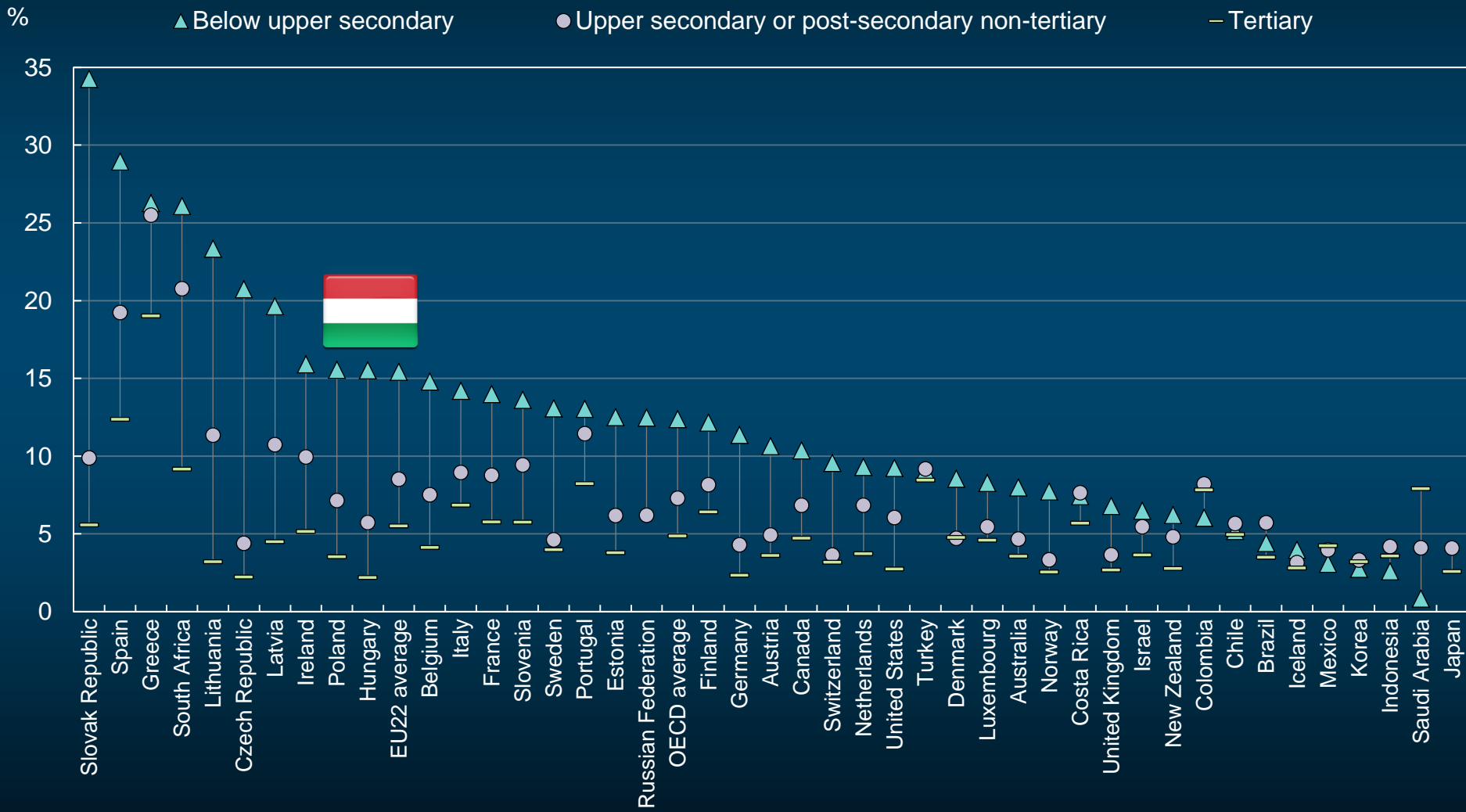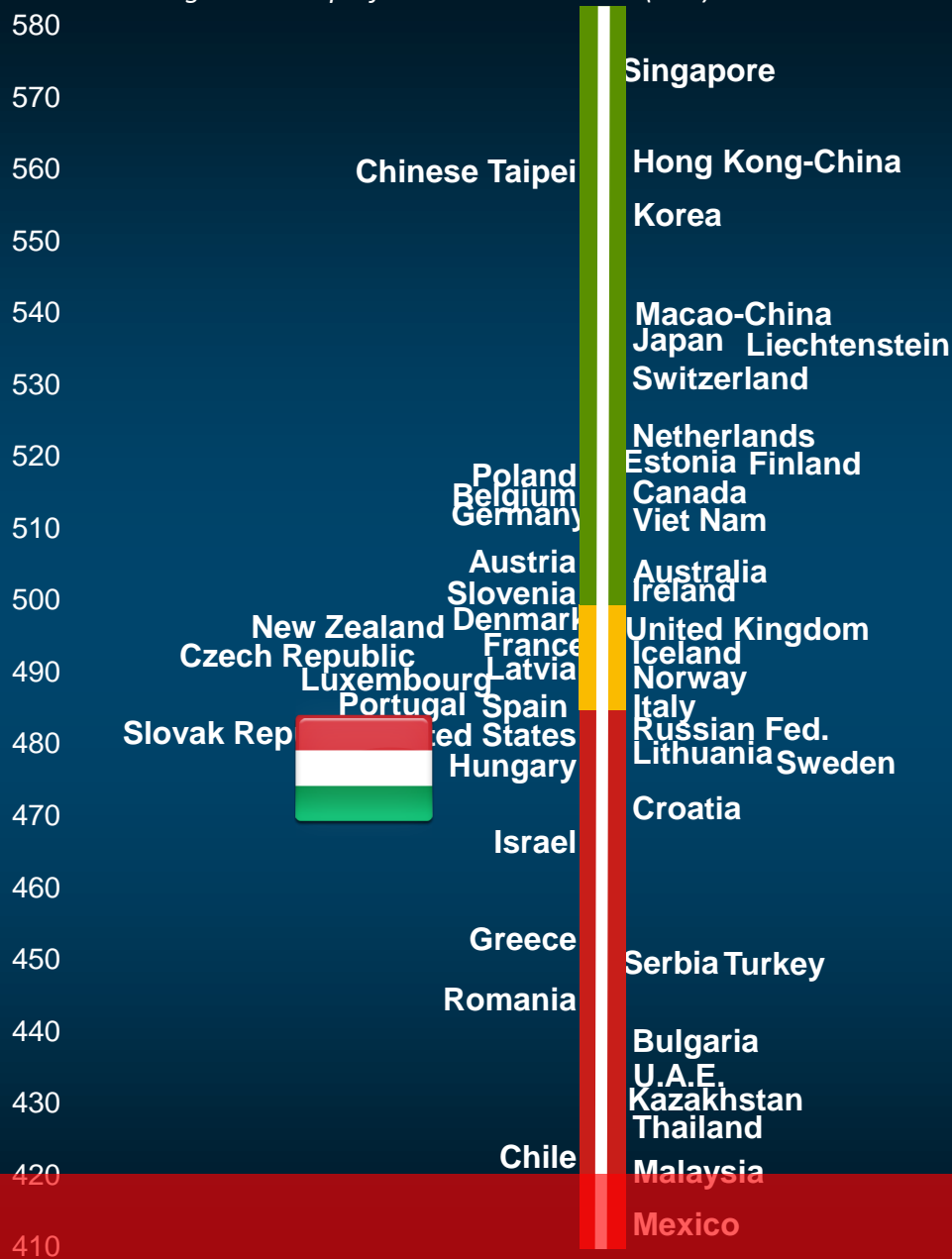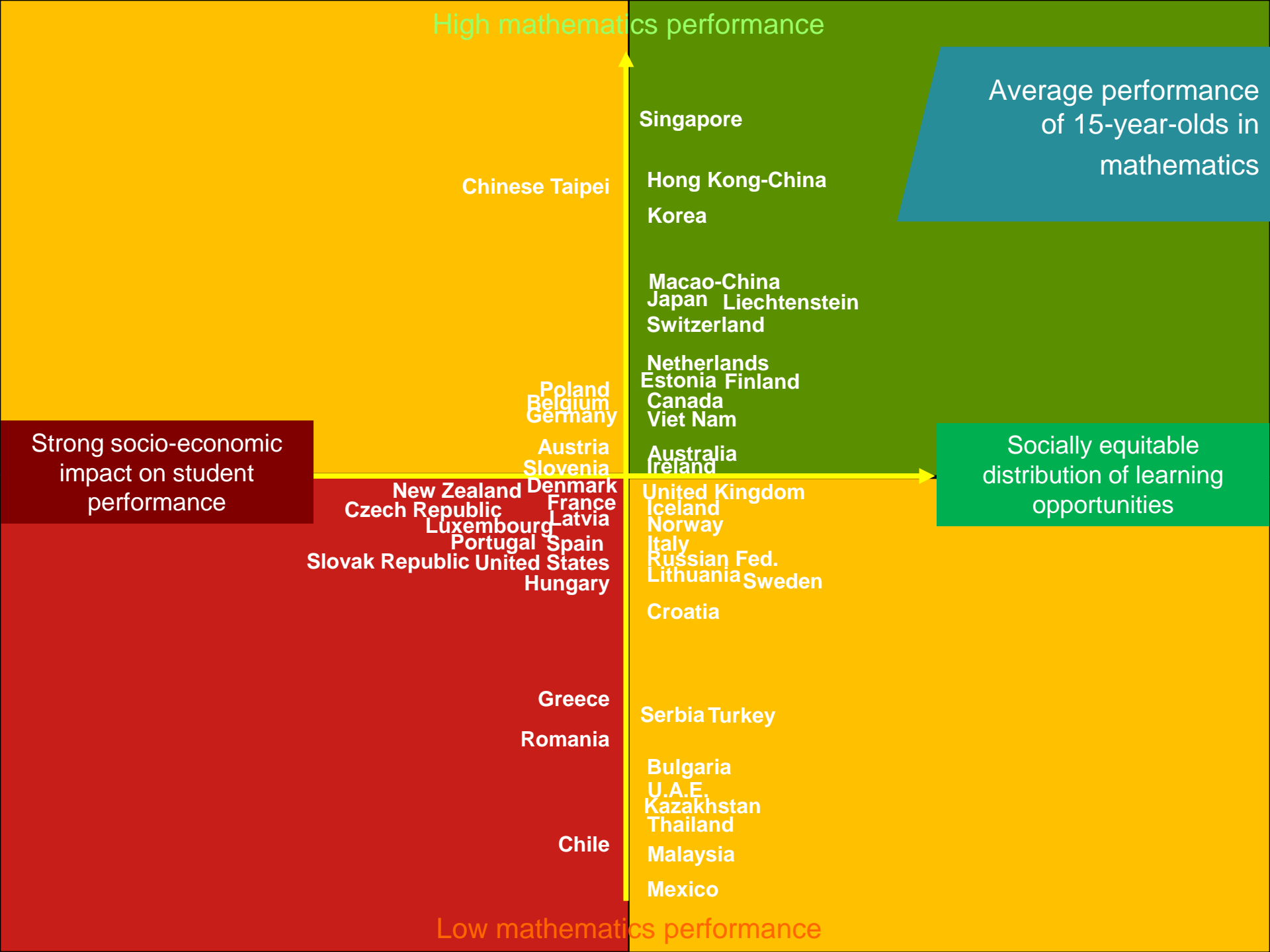
Developing strong foundations

High mathematics performance

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

Average performance of 15-year-olds in Mathematics (PISA)

Fig I.2.13

Mean score	
580	
570	Singapore
560	Chinese Taipei — Hong Kong-China
550	Korea
540	Macao-China / Japan — Liechtenstein
530	Switzerland
520	Netherlands / Estonia — Finland / Canada
510	Poland / Belgium / Germany — Viet Nam
500	Austria / Slovenia — Australia / Ireland
490	New Zealand / Denmark / France / Czech Republic / Latvia / Luxembourg — United Kingdom / Iceland / Norway
480	Portugal / Spain / Slovak Rep / United States / Hungary — Italy / Russian Fed. / Lithuania / Sweden
470	Croatia / Israel
460	
450	Greece — Serbia / Turkey
440	Romania — Bulgaria
430	U.A.E. / Kazakhstan / Thailand
420	Chile — Malaysia
410	Mexico

Below PISA Level 2

Low mathematics performance

High mathematics performance

Average performance of 15-year-olds in mathematics

Singapore

Chinese Taipei

Hong Kong-China

Korea

Macao-China
Japan   Liechtenstein
Switzerland

Netherlands
Estonia Finland
Canada
Viet Nam

Strong socio-economic impact on student performance

Poland
Belgium
Germany

Austria
Slovenia

New Zealand   Denmark
Czech Republic   France
Luxembourg Latvia
Portugal Spain
Slovak Republic United States
Hungary

Australia
Ireland

United Kingdom
Iceland
Norway
Italy
Russian Fed.
Lithuania Sweden

Croatia

Socially equitable distribution of learning opportunities

Greece

Romania

Serbia Turkey

Bulgaria
U.A.E.
Kazakhstan
Thailand

Chile

Malaysia

Mexico

Low mathematics performance

High mathematics performance

2012

Strong socio-economic impact on student performance
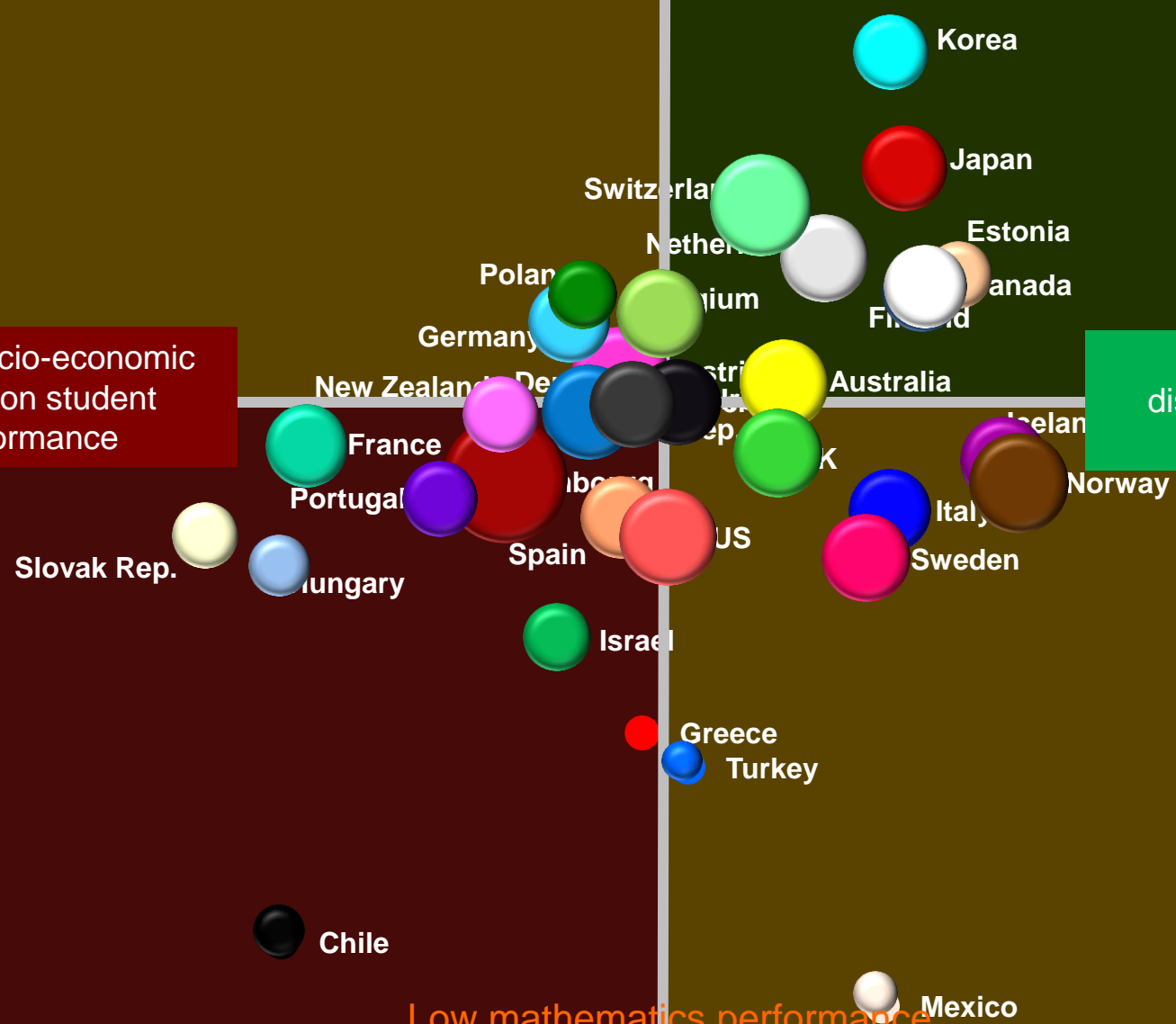
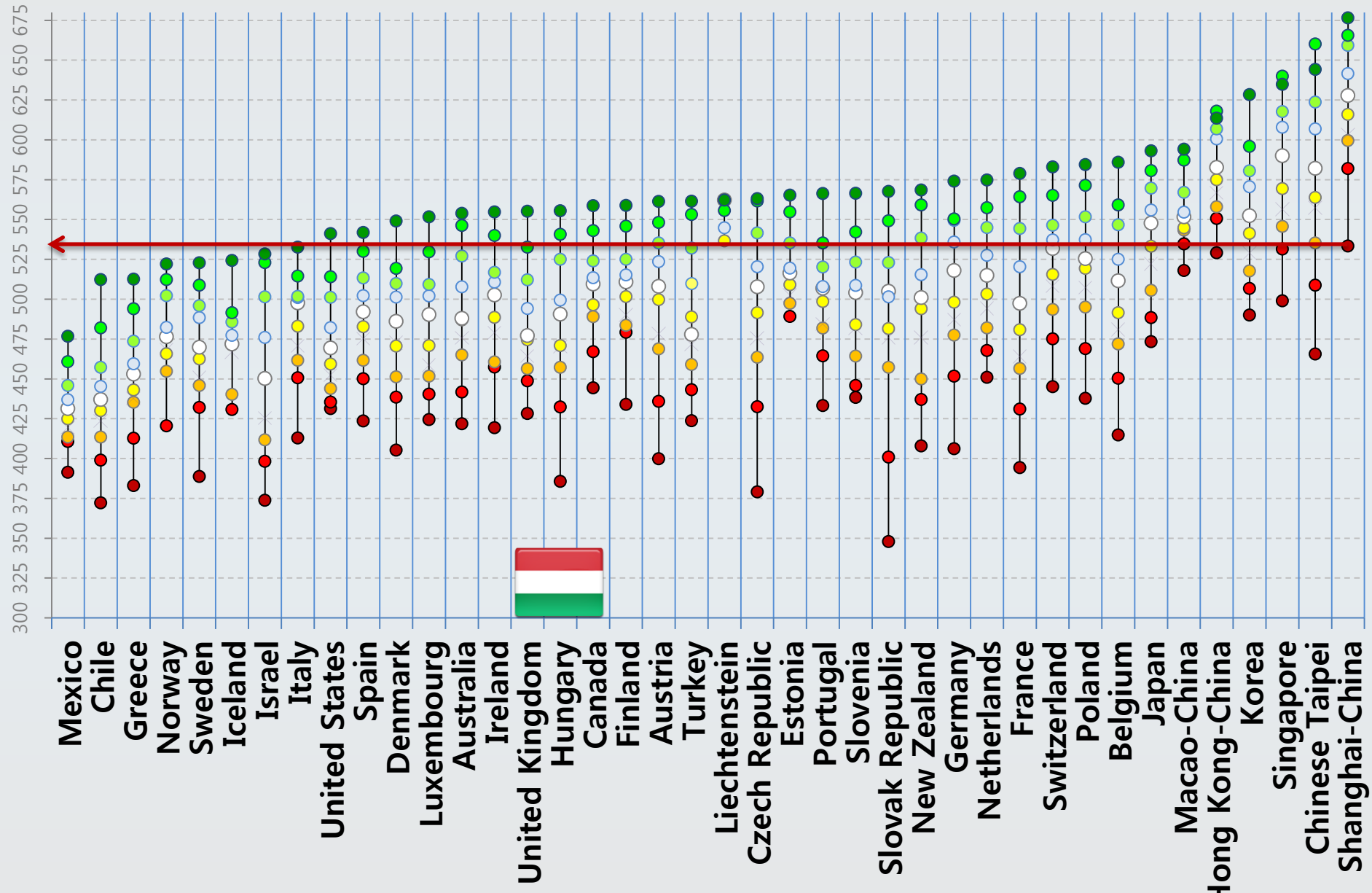Socially equitable distribution of learning opportunities

Low mathematics performance

Korea
Japan
Switzerland
Netherlands
Estonia
Poland
Belgium
Canada
Germany
Finland
New Zealand
Denmark
Austria
Australia
Slovenia
Czech Rep.
Iceland
France
UK
Norway
Luxembourg
Italy
Portugal
US
Sweden
Spain
Slovak Rep.
Hungary
Israel
Greece
Turkey
Chile
Mexico
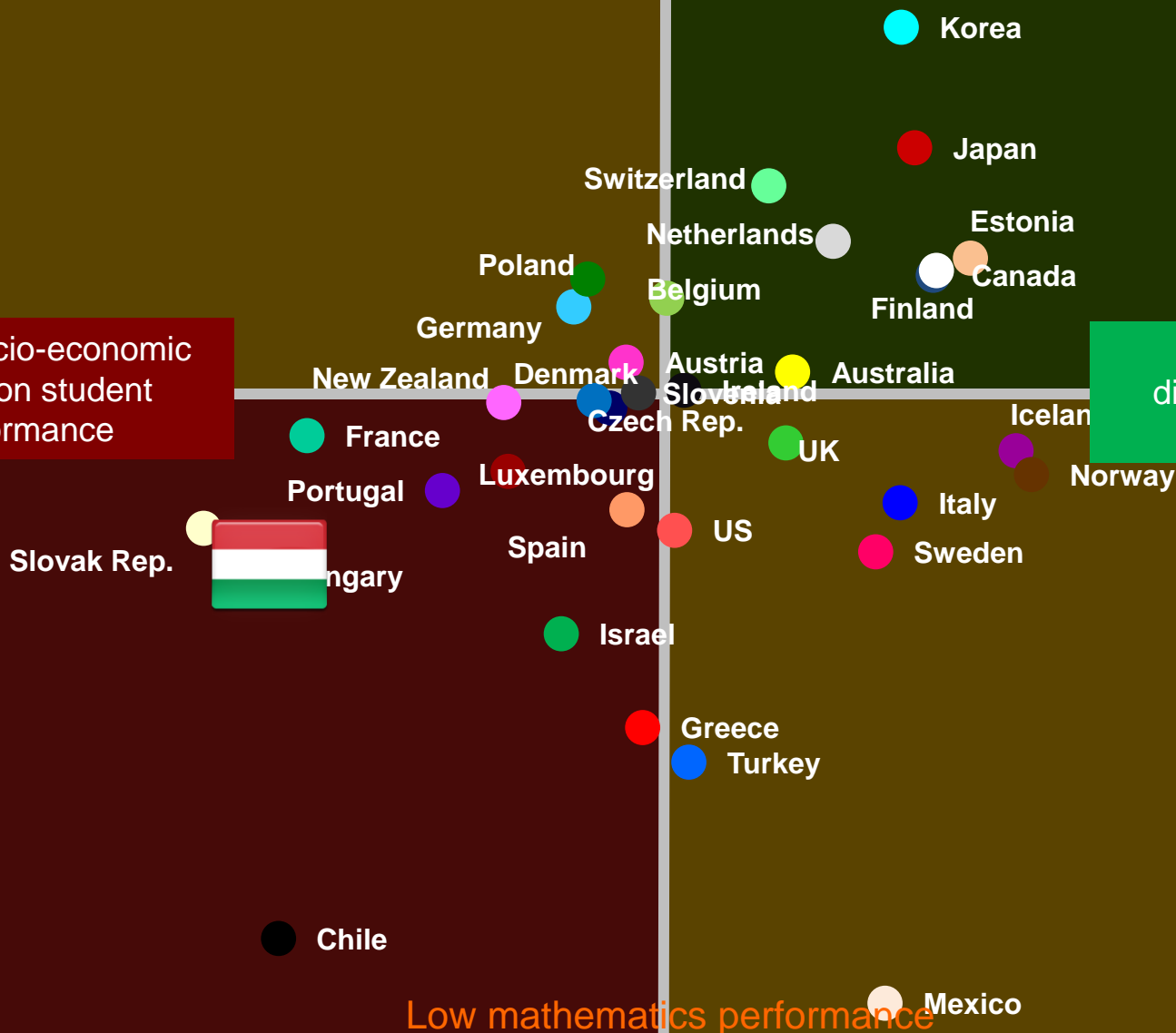
High mathematics performance

Strong socio-economic impact on student performance

Socially equitable distribution of learning opportunities

Korea

Japan

Switzerland

Estonia

Netherlands

Poland

Belgium

Canada

Germany

Finland

New Zealand

Denmark

Austria

Australia

France

Iceland

Portugal

Luxembourg

Norway

Spain

US

Slovak Rep.

Hungary

Italy

Sweden

Israel

Greece

Turkey

Chile

Mexico

Low mathematics performance

PISA mathematics performance by decile of social background

The early years

High enrolment but moderate investment

Over 70% of 3 year-olds and 86% of 4 year-olds are enrolled in early years

Enrolment rates at age 3 and 4 in early childhood and primary education (2014)

- ■ Enrolment rates at age 3 in early childhood educational programmes
- ■ Enrolment rates at age 3 in pre-primary education
- ◆ Enrolment rates at age 4
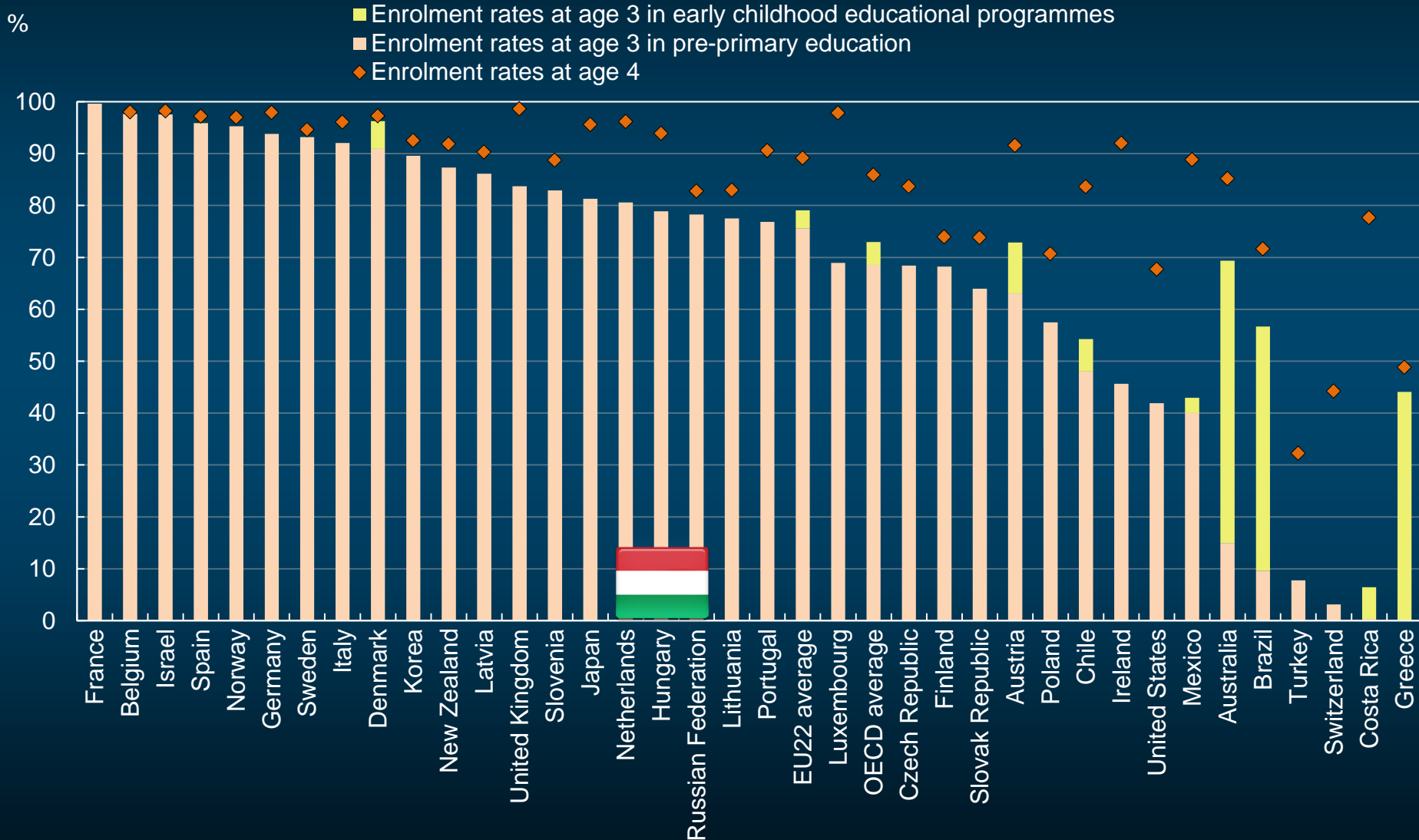
On average, there are 14 pupils per teacher in pre-primary education

Ratio of pupils to teaching staff in early childhood education (2014)

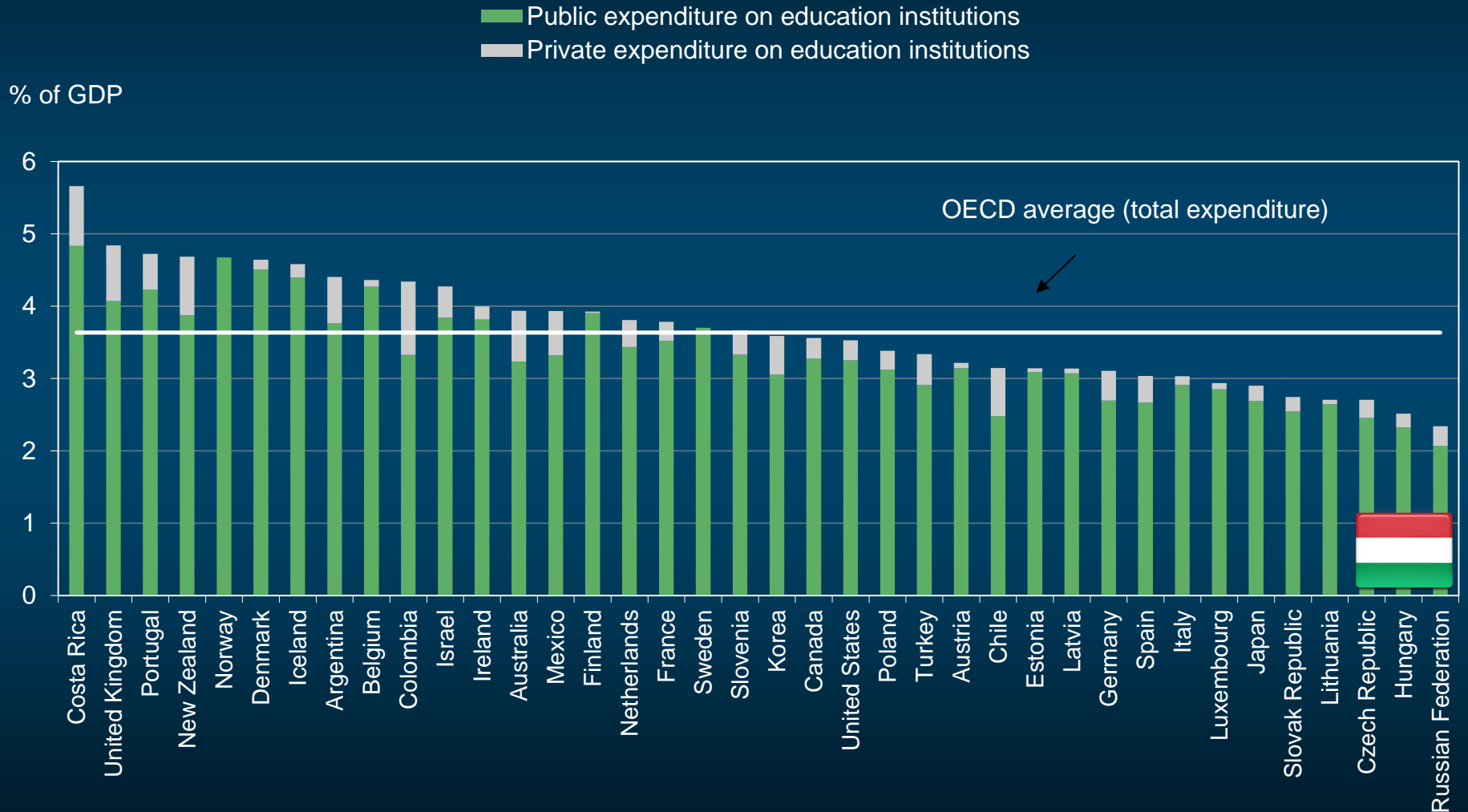■ Pre-primary education   ◆ Early childhood educational development
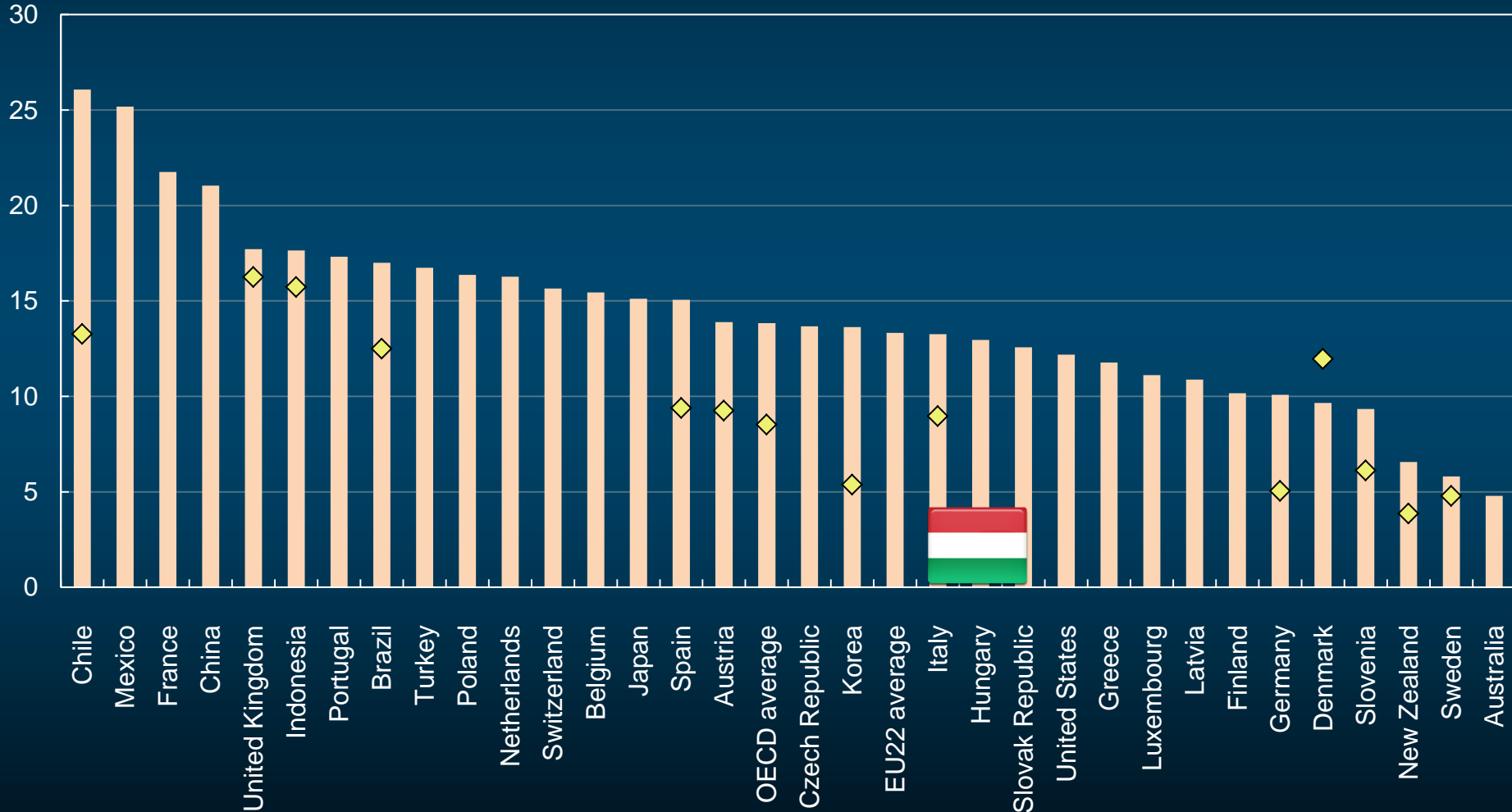
Strong and rising investment in basic skills

Except for vocational education

Countries spend 3.7% of their GDP on primary, secondary and post-secondary non-tertiary education, on average

Figure B2.2a

Public and private expenditure on primary, secondary and post-secondary non-tertiary education institutions as a percentage of GDP by level of education (2013)
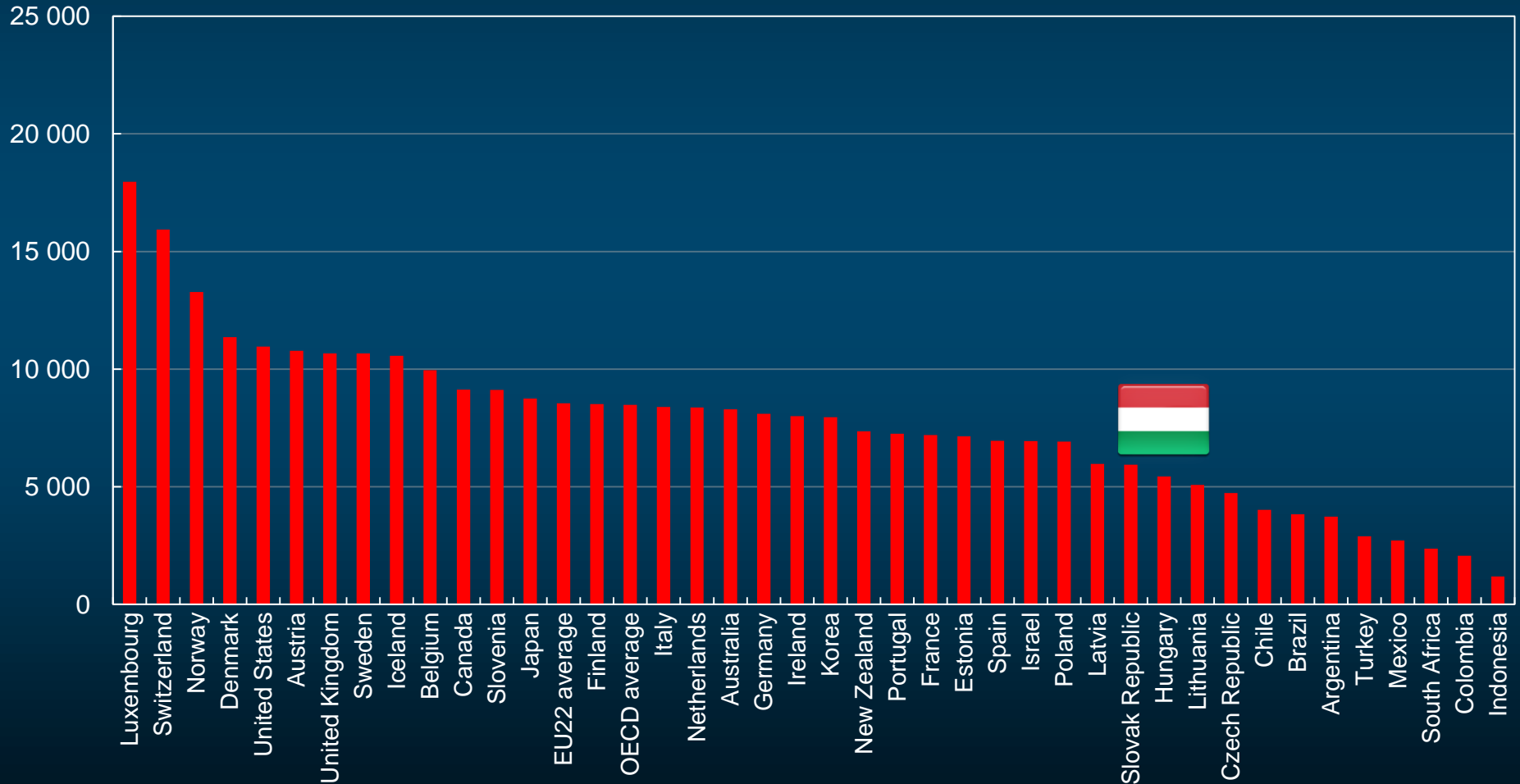
- Public expenditure on education institutions
- Private expenditure on education institutions

% of GDP

OECD average (total expenditure)

Countries (left to right): Costa Rica, United Kingdom, Portugal, New Zealand, Norway, Denmark, Iceland, Argentina, Belgium, Colombia, Israel, Ireland, Australia, Mexico, Finland, Netherlands, France, Sweden, Slovenia, Korea, Canada, United States, Poland, Turkey, Austria, Chile, Estonia, Latvia, Germany, Spain, Italy, Luxembourg, Japan, Slovak Republic, Lithuania, Czech Republic, Hungary, Russian Federation

On average, over USD 8 400 is spent per student in primary education per year

Annual expenditure per student by educational institutions for all services in primary education (2013)

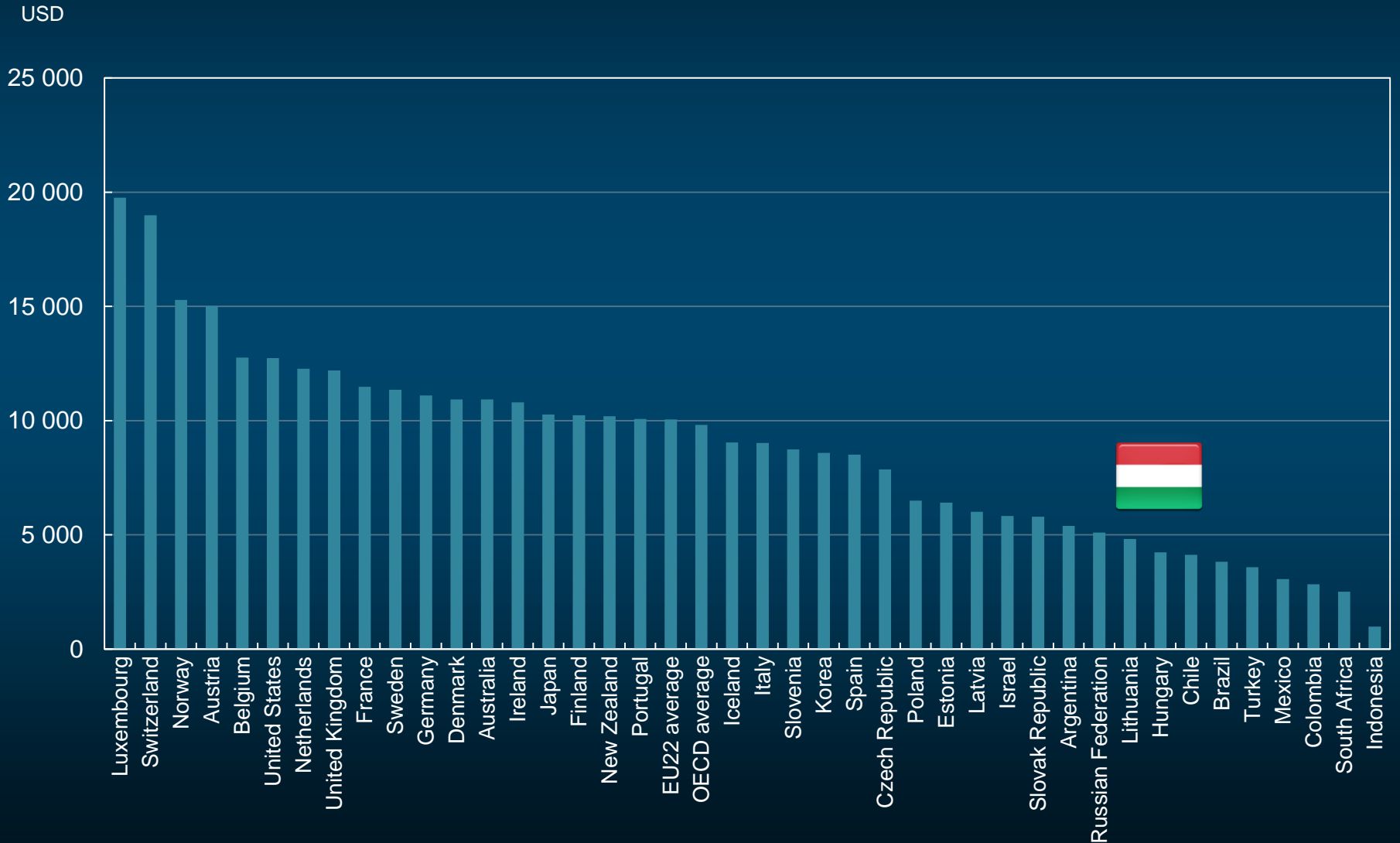# On average, over USD 9 800 is spent per student in secondary education per year
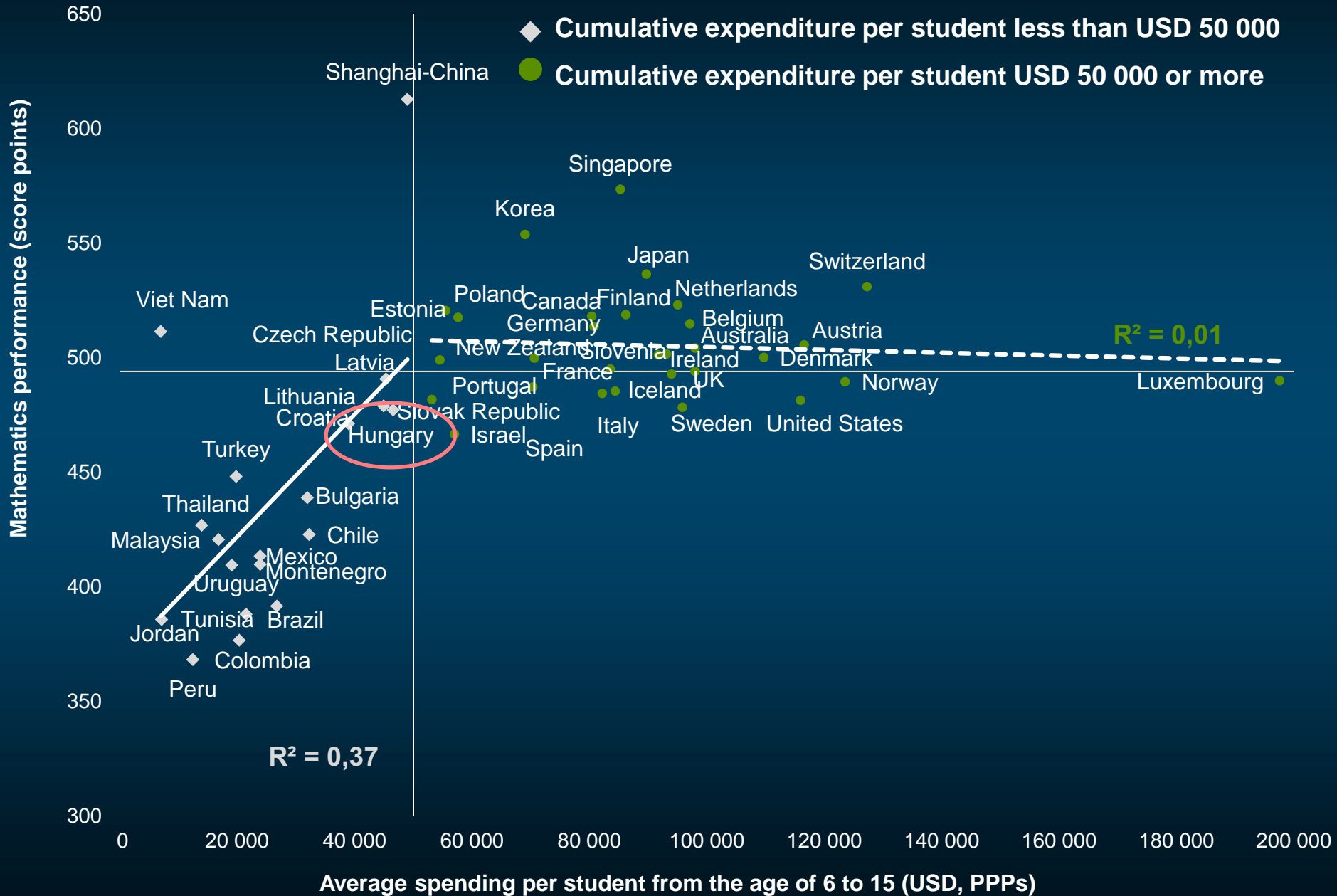
Annual expenditure per student by educational institutions for all services in secondary education (2013)

Money makes a difference – but only up to a point

Back

Mathematics performance (score points)

◆ Cumulative expenditure per student less than USD 50 000

● Cumulative expenditure per student USD 50 000 or more

Shanghai-China

Singapore

Korea

Japan

Switzerland

Viet Nam

Poland   Canada   Finland   Netherlands

Estonia   Germany   Belgium   Austria

Czech Republic   Australia

New Zealand   Slovenia   Ireland   Denmark   R² = 0,01

Latvia   France   UK   Norway   Luxembourg

Lithuania   Portugal   Iceland

Croatia   Slovak Republic   Italy   Sweden   United States

Turkey   Hungary   Israel   Spain

Thailand   Bulgaria

Malaysia   Chile

Mexico

Uruguay   Montenegro

Tunisia   Brazil

Jordan   Colombia

Peru

R² = 0,37

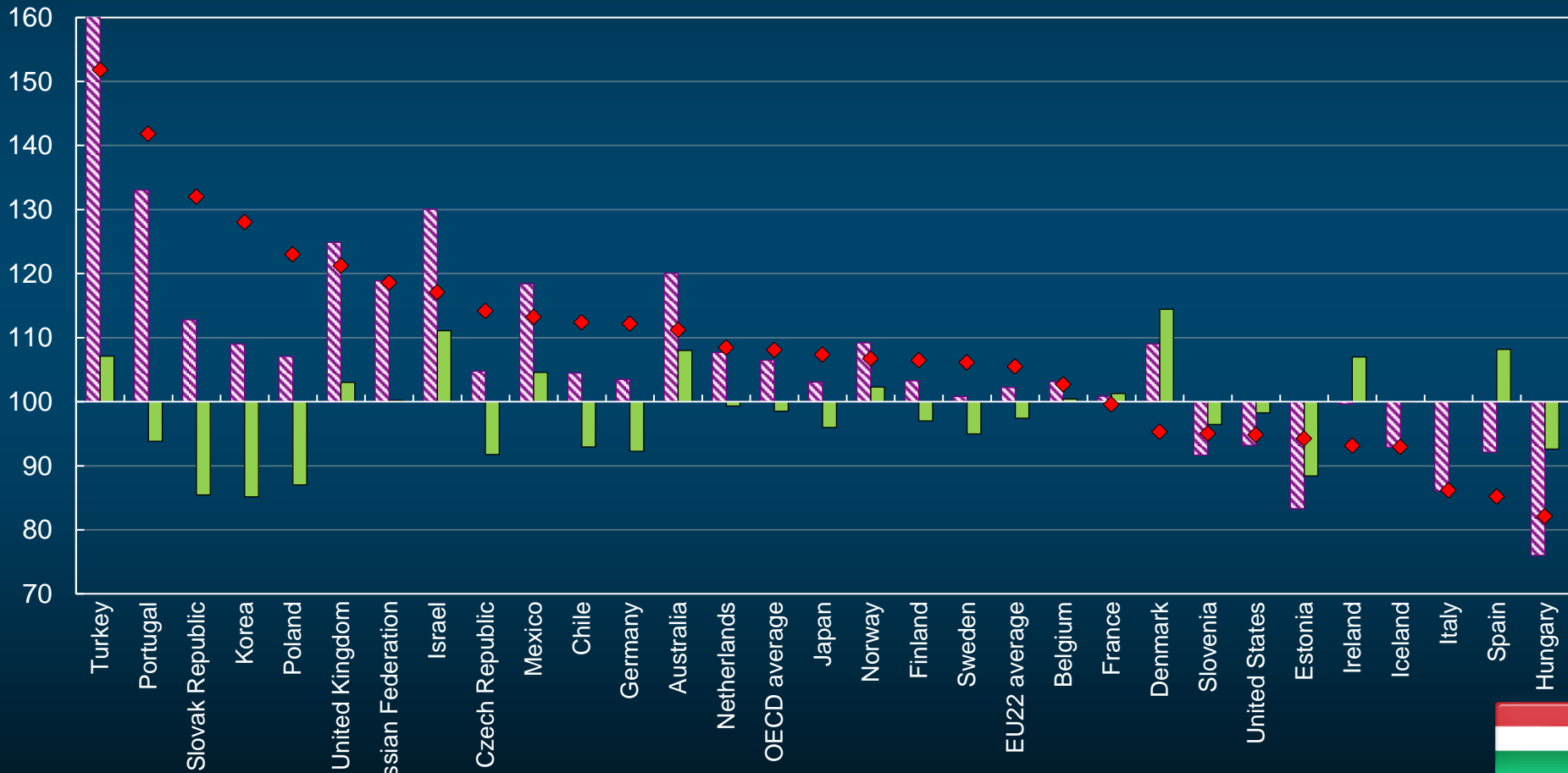**Average spending per student from the age of 6 to 15 (USD, PPPs)**

In two thirds of the countries, expenditure per student in primary to post-secondary non-tertiary education increased, with an average increase of 8% between 2008 and 2013

Figure B1.5a

Changes in the number of students, expenditure on educational institutions and expenditure per student in primary, secondary and post-tertiary non-tertiary education (2008, 2013)

Index of change (2008=100)

- Change in expenditure
- Change in the number of students (in full-time equivalents)
- Change in expenditure per student

Countries (left to right): Turkey, Portugal, Slovak Republic, Korea, Poland, United Kingdom, Russian Federation, Israel, Czech Republic, Mexico, Chile, Germany, Australia, Netherlands, OECD average, Japan, Norway, Finland, Sweden, EU22 average, Belgium, France, Denmark, Slovenia, United States, Estonia, Ireland, Iceland, Italy, Spain, Hungary
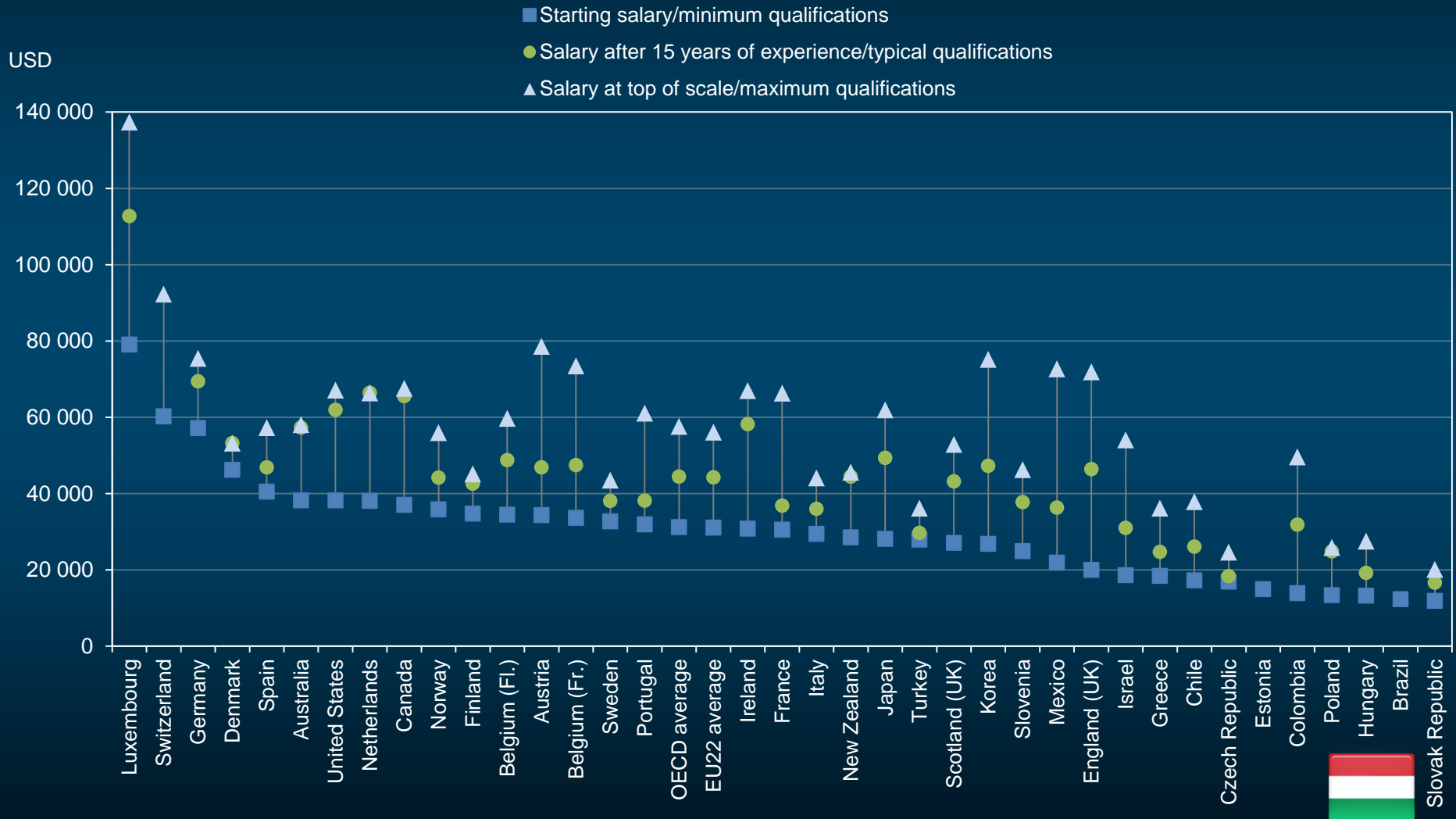
Countries spend their money differently

Teacher pay offers little of a career progression…

In some countries there is very little salary progression, while in others the salaries of teachers increase significantly over their careers

Figure D3.2

Lower secondary teachers' salaries at different points in teachers' careers (2014)
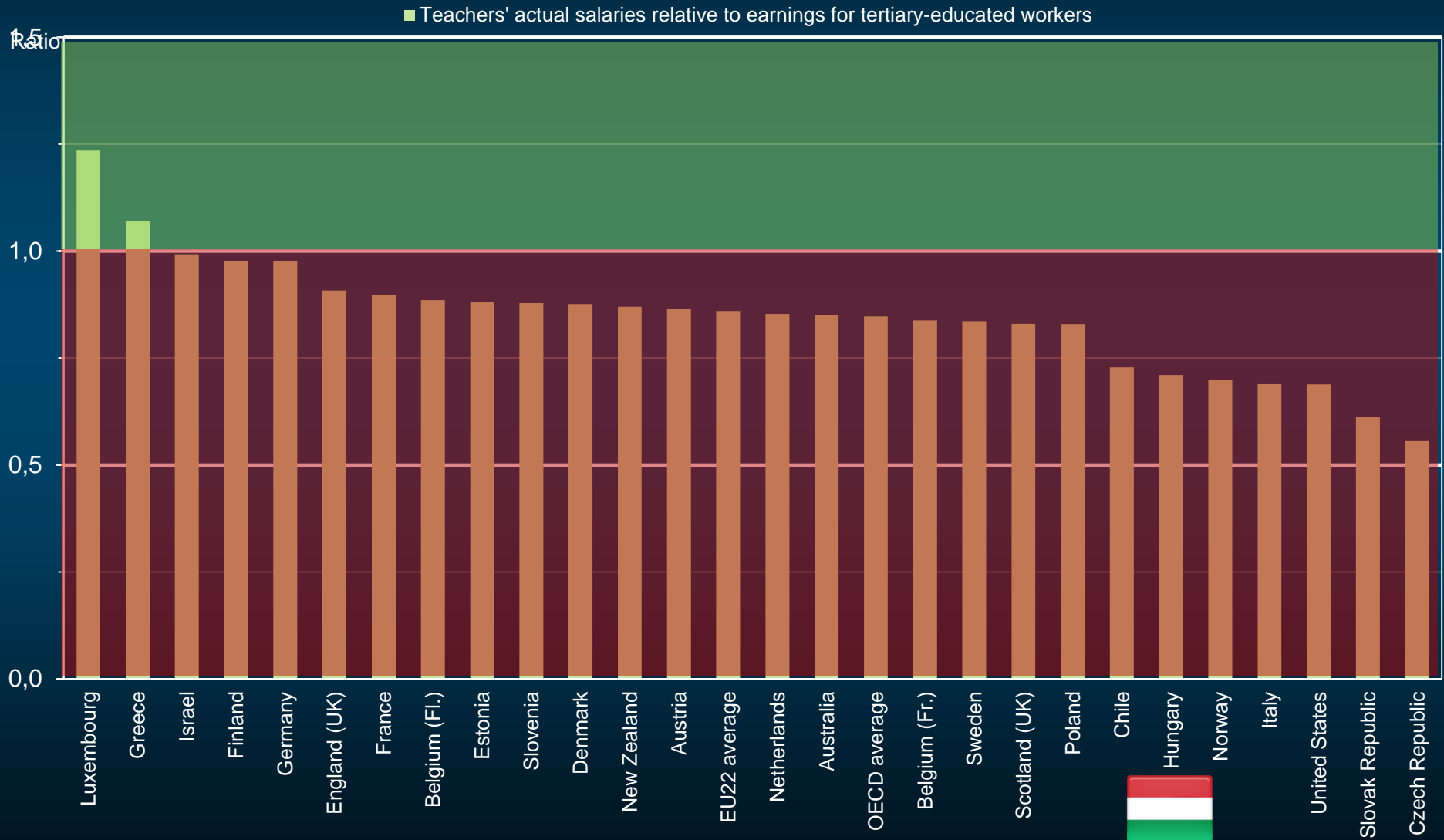
■ Starting salary/minimum qualifications
● Salary after 15 years of experience/typical qualifications
▲ Salary at top of scale/maximum qualifications

...and is not quite competitive

Teachers at the lower secondary level earn about 85% of the average tertiary-educated worker's salary

Figure D3.1

Lower secondary teachers' salaries relative to earnings for tertiary-educated workers (2014)
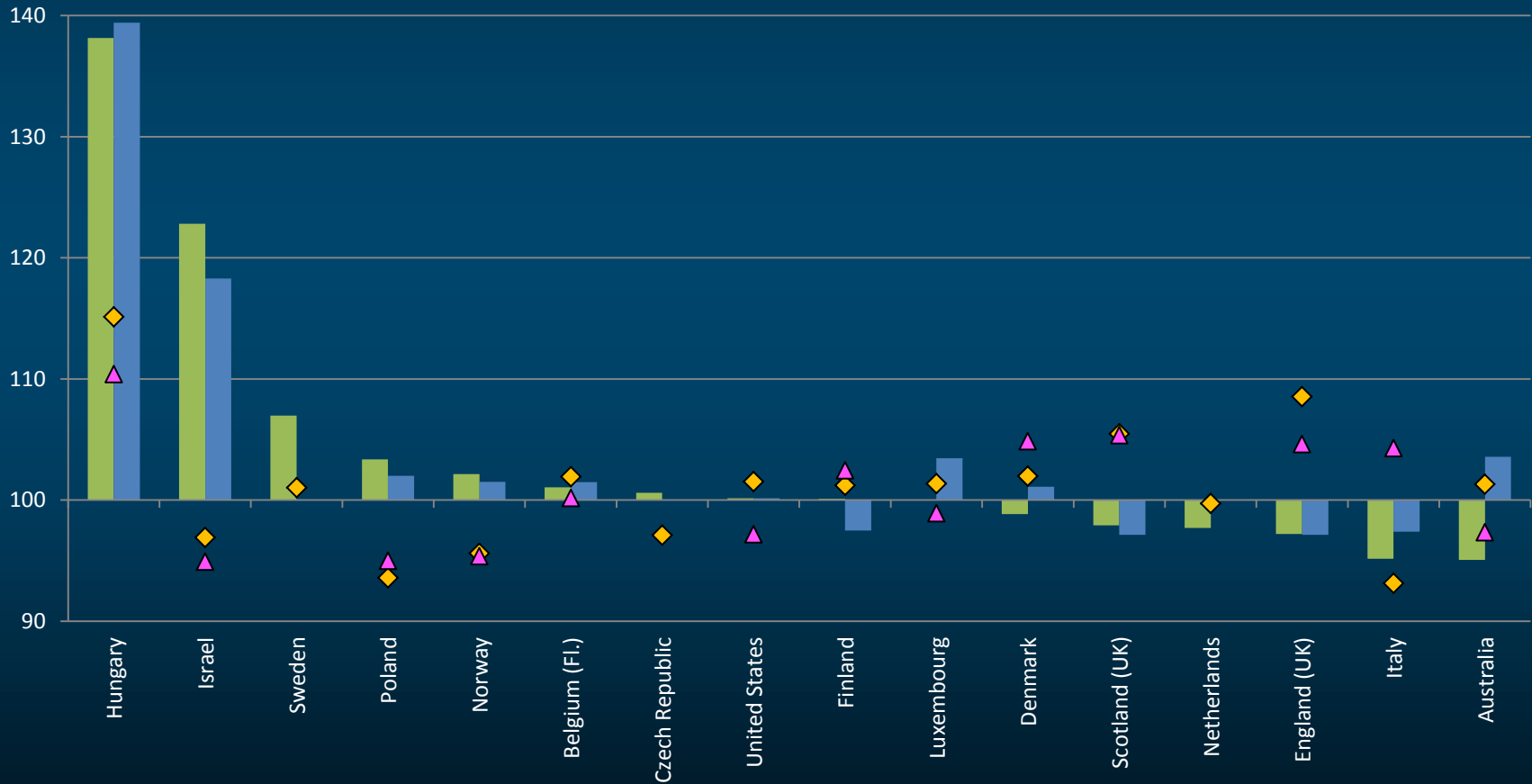
■ Teachers' actual salaries relative to earnings for tertiary-educated workers

Ratio

1,5

1,0

0,5

0,0

Luxembourg, Greece, Israel, Finland, Germany, England (UK), France, Belgium (Fl.), Estonia, Slovenia, Denmark, New Zealand, Austria, EU22 average, Netherlands, Australia, OECD average, Belgium (Fr.), Sweden, Scotland (UK), Poland, Chile, Hungary, Norway, Italy, United States, Slovak Republic, Czech Republic

Teachers' salaries increased radically between 2013 and 2014

Change in lower secondary teachers' actual and statutory salaries (2010, 2012 and 2014)

Index of change
2012 = 100

- 2014 actual salary
- 2014 statutory salary
- 2010 actual salary
- 2010 statutory salary

Countries: Hungary, Israel, Sweden, Poland, Norway, Belgium (Fl.), Czech Republic, United States, Finland, Luxembourg, Denmark, Scotland (UK), Netherlands, England (UK), Italy, Australia

The time students spend in class varies hugely…

On average, compulsory instruction time exceeds 7 500 hours for combined primary and lower secondary education

Figure D1.1

Compulsory instruction time in general education (2016)

Duration of primary and lower secondary education, in years
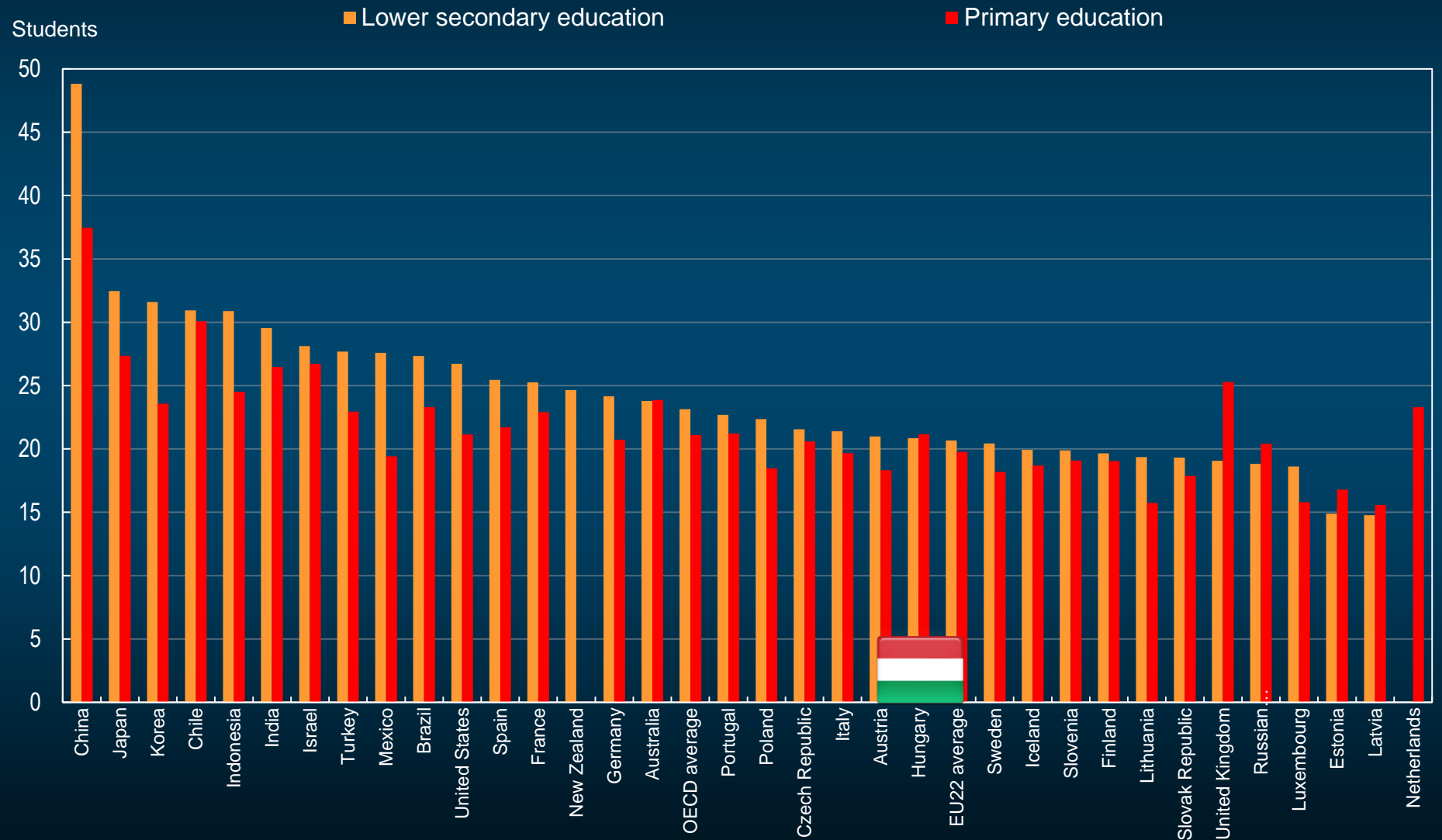
■ Primary   ■ Lower secondary

Hungary 8
Latvia 9
Russian Federation 9
Poland 9
Turkey 8
Slovenia 9
Finland 9
Korea 9
Austria 8
Estonia 9
Lithuania 10
Sweden 9
Belgium (Fl.) 8
Slovak Republic 9
Belgium (Fr.) 8
Czech Republic 9
Greece 9
EU22 average 9
Japan 9
Germany 9
Italy 8
OECD average 9
Portugal 9
Iceland 10
Switzerland 9
Norway 10
Spain 9
Luxembourg 9
France 9
Canada 9
Ireland 9
Mexico 9
Chile 8
Netherlands 9
Israel 9
United States 9
Colombia 9
Denmark 10
Australia 11

0   2 000   4 000   6 000   8 000   10 000   12 000

Total number of compulsory instruction hours

…but classes are comparably small

Primary classes tend to be smaller than lower secondary classes

Average class size, by level of education (2014)

Legend: Lower secondary education (orange), Primary education (red)

Y-axis: Students (0 to 50)

Countries (left to right): China, Japan, Korea, Chile, Indonesia, India, Israel, Turkey, Mexico, Brazil, United States, Spain, France, New Zealand, Germany, Australia, OECD average, Portugal, Poland, Czech Republic, Italy, Austria, Hungary, EU22 average, Sweden, Iceland, Slovenia, Finland, Lithuania, Slovak Republic, United Kingdom, Russian…, Luxembourg, Estonia, Latvia, Netherlands

Time for other things than teaching

The higher the level of education, the fewer the teaching hours per year

Figure D4.2

Number of teaching hours per year, by level of education (2014)

- ■ Upper secondary, general programmes
- ● Primary
- ◆ Lower secondary, general programmes

Hours per year
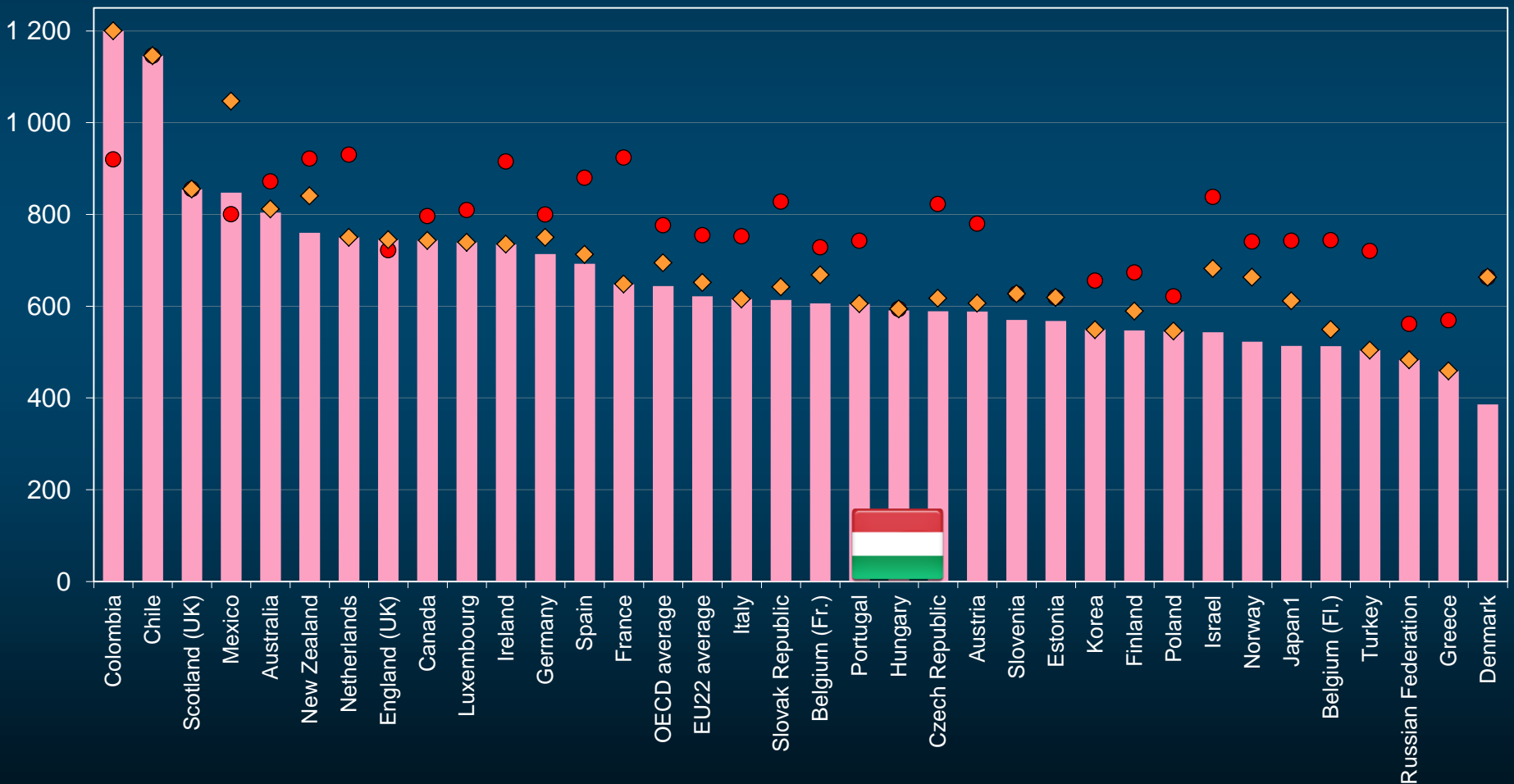
Scope for developing vocational education

On average, more young adults are enrolled in general rather than vocational programmes at the upper secondary level

Figure C1.1

Upper secondary enrolment rates of 15-19 year-olds, by programme orientation (2014)

■ General programmes ■ Other vocational programmes ■ Combined school- and work-based programmes
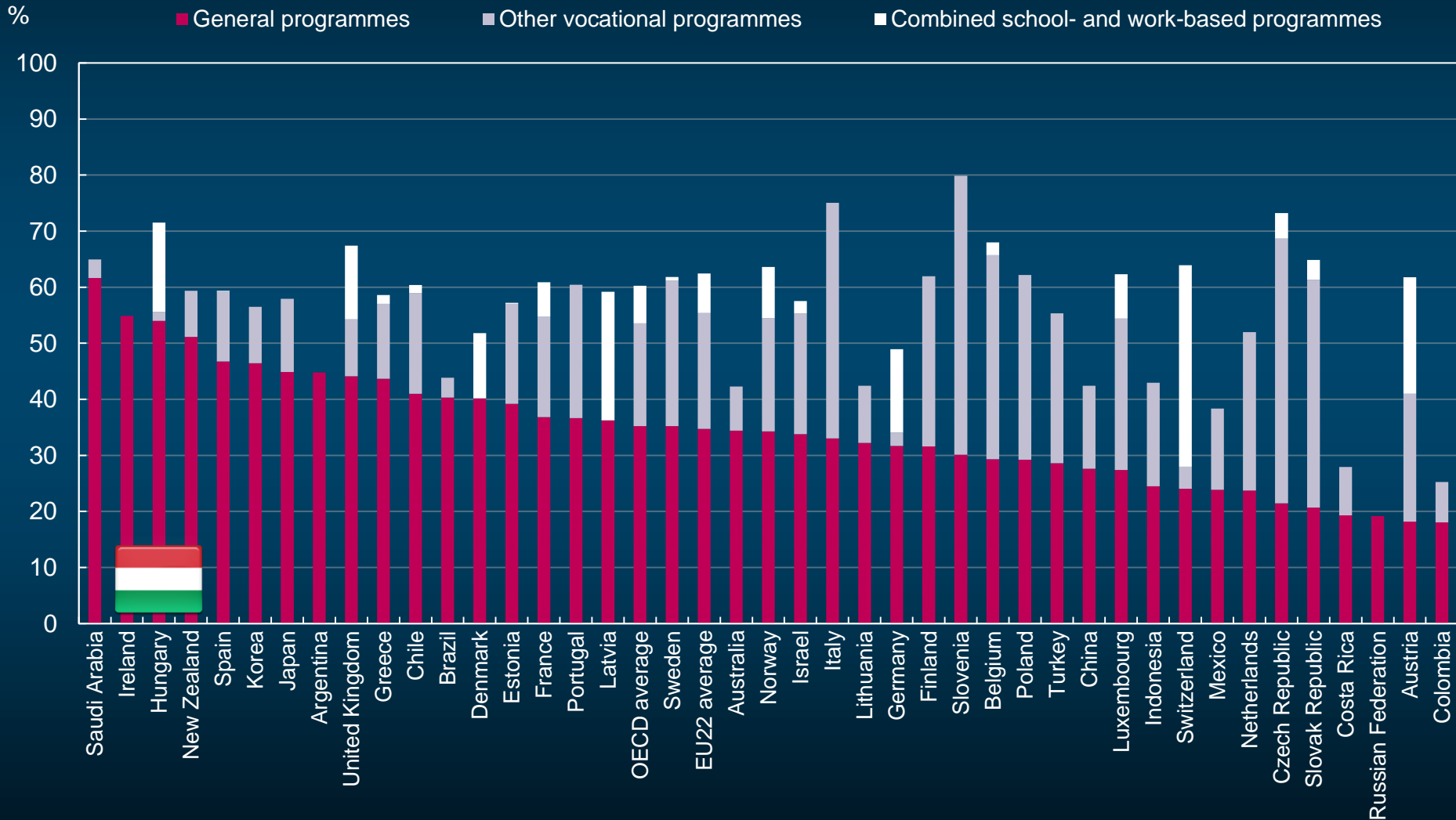
For those who studied only through the upper secondary level, vocational programmes tend to lead to greater employment prospects

Employment rates of 25-34 year-olds whose highest level of educational attainment is upper secondary, by type of programme (2015)

■ Vocational programmes   ■ General programmes
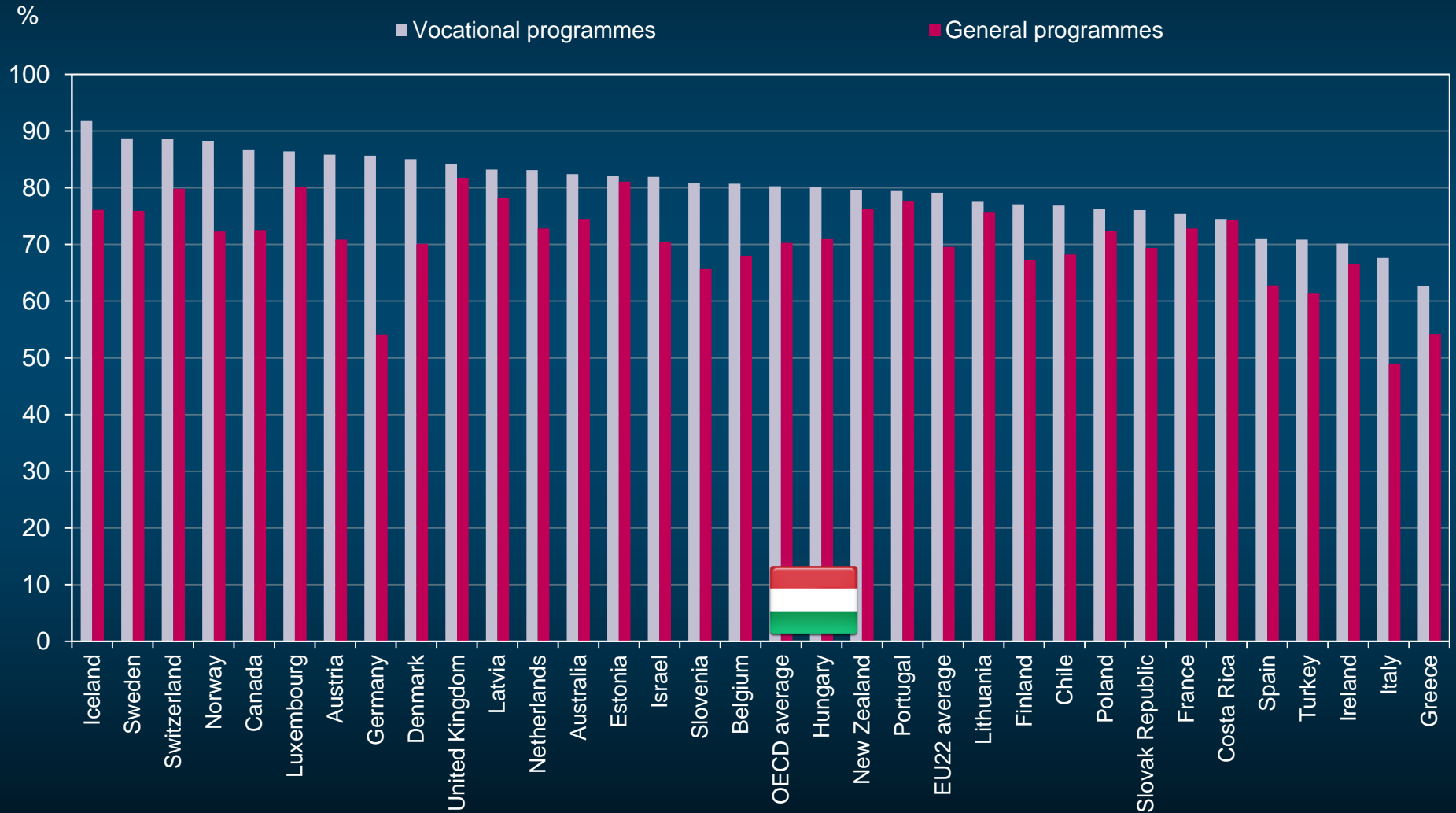
Figure D2.3

Vocational programmes in upper secondary education tend to have higher student-teacher ratios than general programmes

Ratio of students to teaching staff in upper secondary education, by type of programme (2014)

Students

■ Vocational programmes   ■ General programmes

Indonesia, Chile, United Kingdom, Netherlands, China, New Zealand, Latvia, Estonia, Finland, Denmark, Hungary, Slovenia, OECD average, Germany, Turkey, EU22 average, Slovak Republic, France, Italy, Korea, Czech Republic, Spain, Austria, Belgium, Poland, Luxembourg, Lithuania, Brazil, Greece, Ireland, Australia, Switzerland

High impact on outcomes
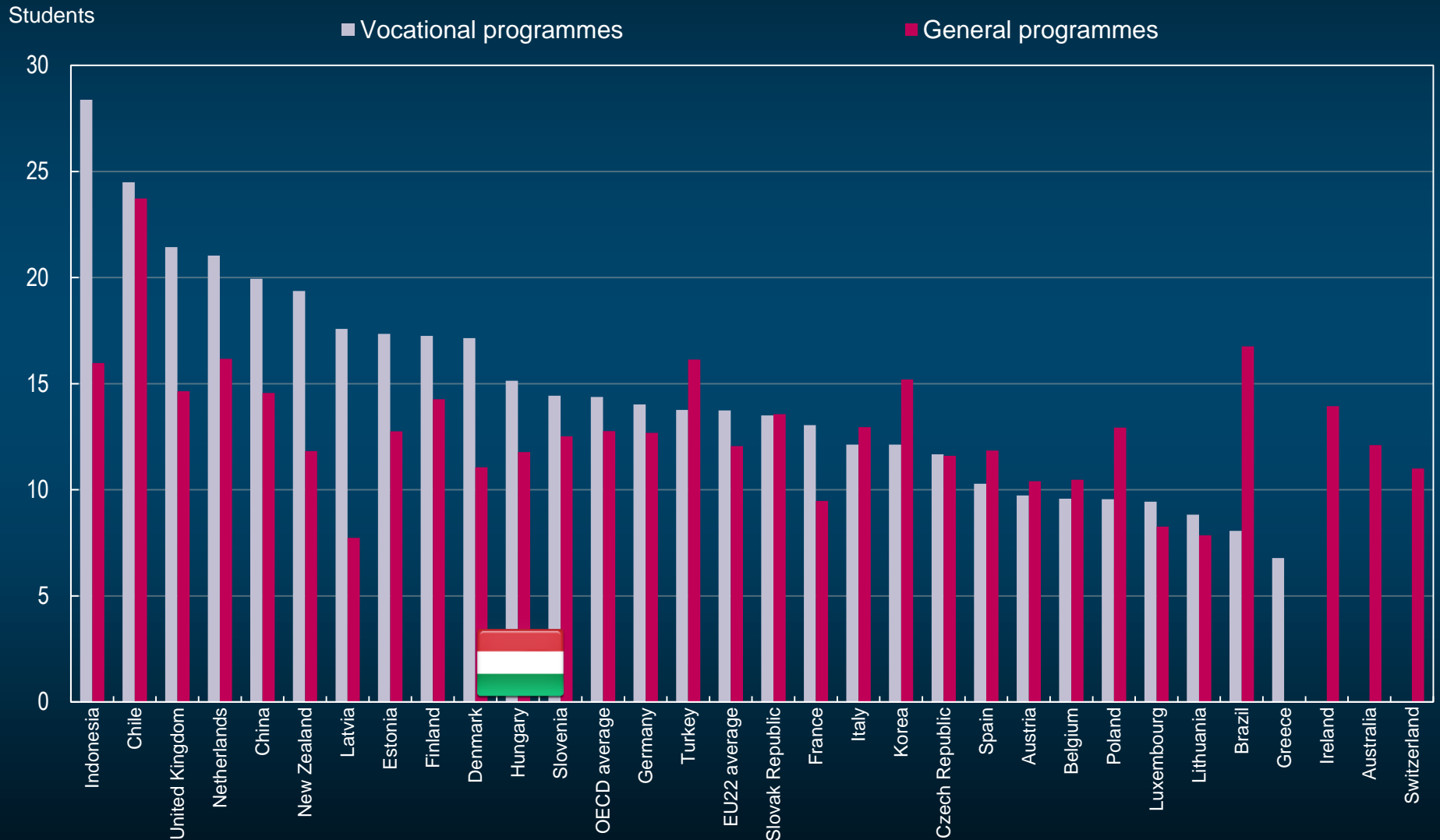
Must haves

Quick wins

Lessons from high performers

Catching up with the top-performers

Low feasibility

High feasibility

Money pits

Low hanging fruits

Low impact on outcomes
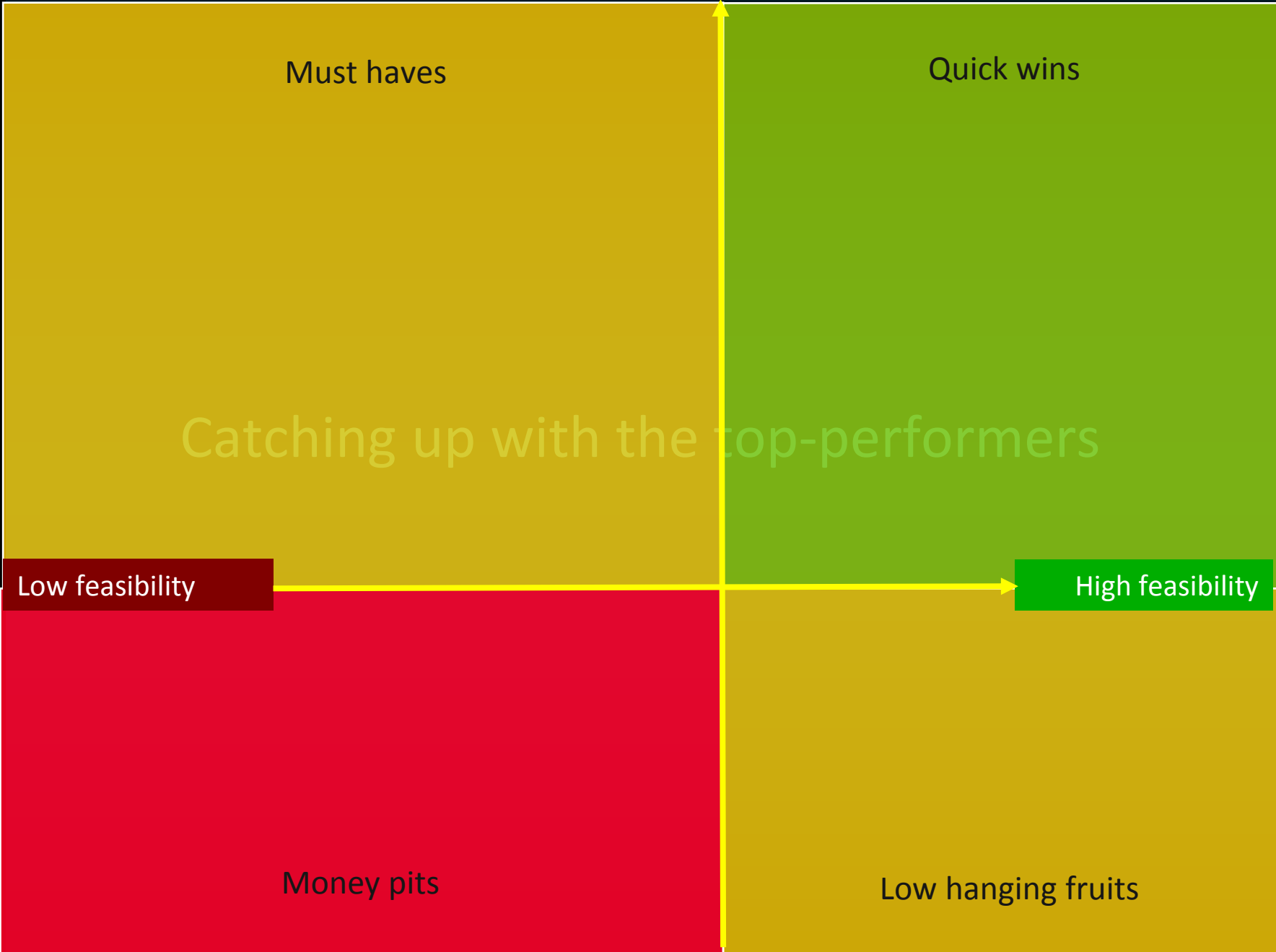
Lessons from high performers

High impact on outcomes

Low impact on outcomes

Low feasibility

High feasibility

Must haves

Quick wins

Money pits

Low hanging fruits

Commitment to universal achievement

Capacity
at point of delivery

Resources
where they yield most

Gateways, instructional
systems

Coherence

A learning system

Incentive structures and
accountability

Lessons from high performers

k wins

☐ A commitment to education and the belief 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

structional
ems

High feasibility

Incentive structures and accountability

Money pits

Low hanging fruits

High impact on outcomes

Lessons from high performers

Must haves

Quick wins

Capa... at point o...

Coher...

Low feasibility

High feasibility

Incentive structures and accountability

Money pits

Low hanging fruits

Low impact on outcomes

☐ Clear ambitious goals that are shared across the system and aligned with the instructional system

- 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

Lessons from...

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 effective human resource management in schools

- Teacher leadership, keeping teaching intellectually attractive

- System-wide career development

...ck wins

...s, instructional ...ystems

A learning system

Low feasibility

High feasibility

Incentive structures and accountability

Money pits

Low hanging fruits

Autonomy: Teachers' decision-making power over their work (teaching content, course offerings, discipline practices)

Professionalism is the level of autonomy and internal regulation exercised by members of an occupation in providing services to society

Teacher professionalism

Peer networks: Opportunities for exchange and support needed to maintain high standards of teaching (participation in induction, mentoring, networks, feedback from direct observations)
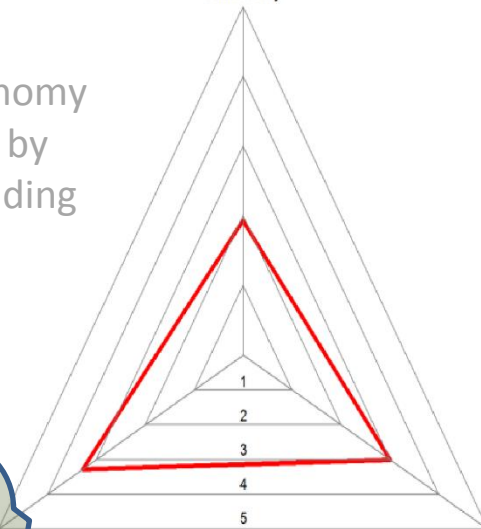
Knowledge base for teaching (initial education and incentives for professional development)

Autonomy: Teachers' decision-making power over their work (teaching content, course offerings, discipline practices)

Professionalism is the level of autonomy and internal regulation exercised by members of an occupation in providing services to society

Autonomy

1
2
3
4
5

Networks

Knowledge

Peer networks: Opportunities for exchange and support needed to maintain high standards of teaching (participation in induction, mentoring, networks, feedback from direct observations)
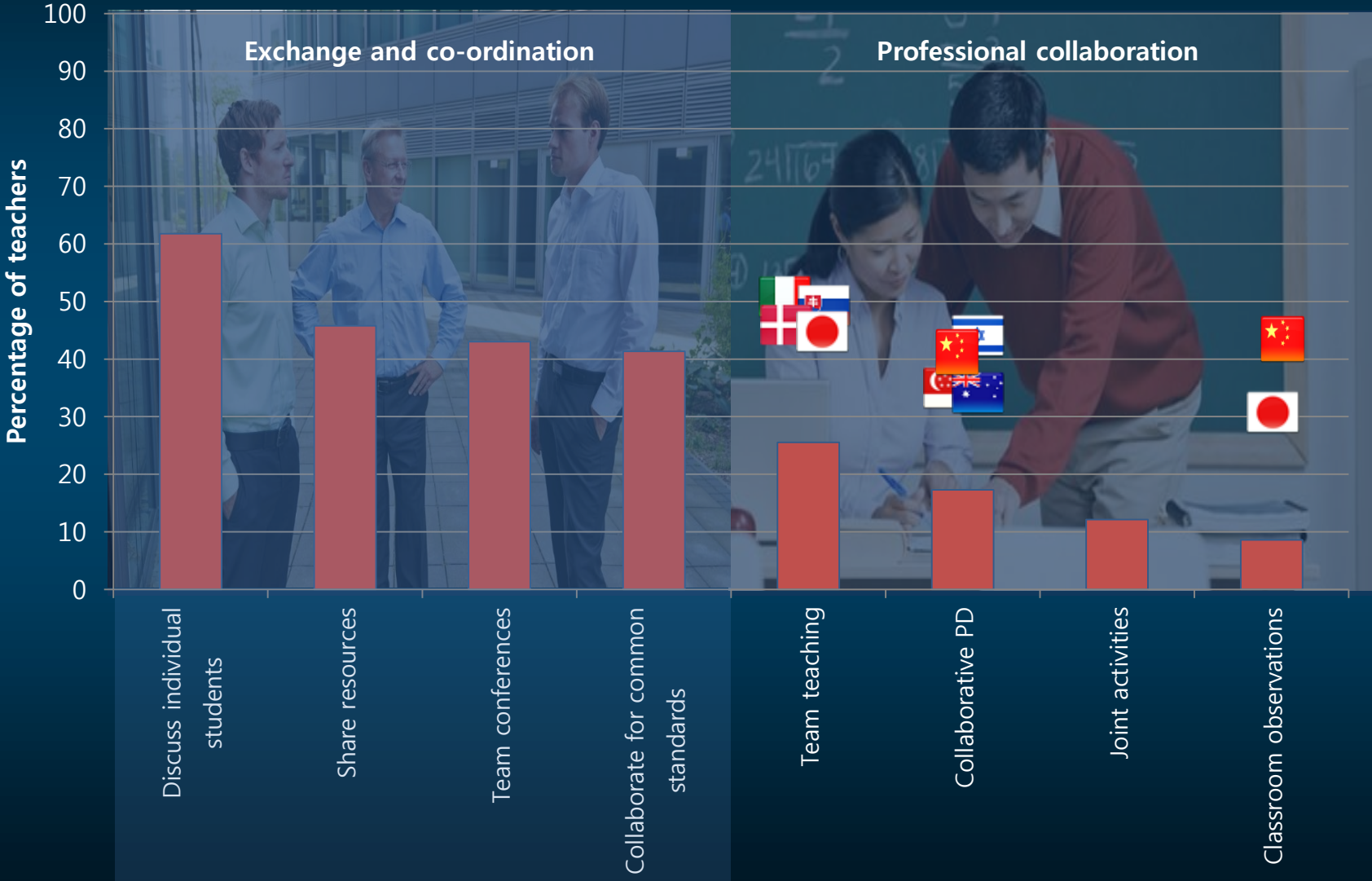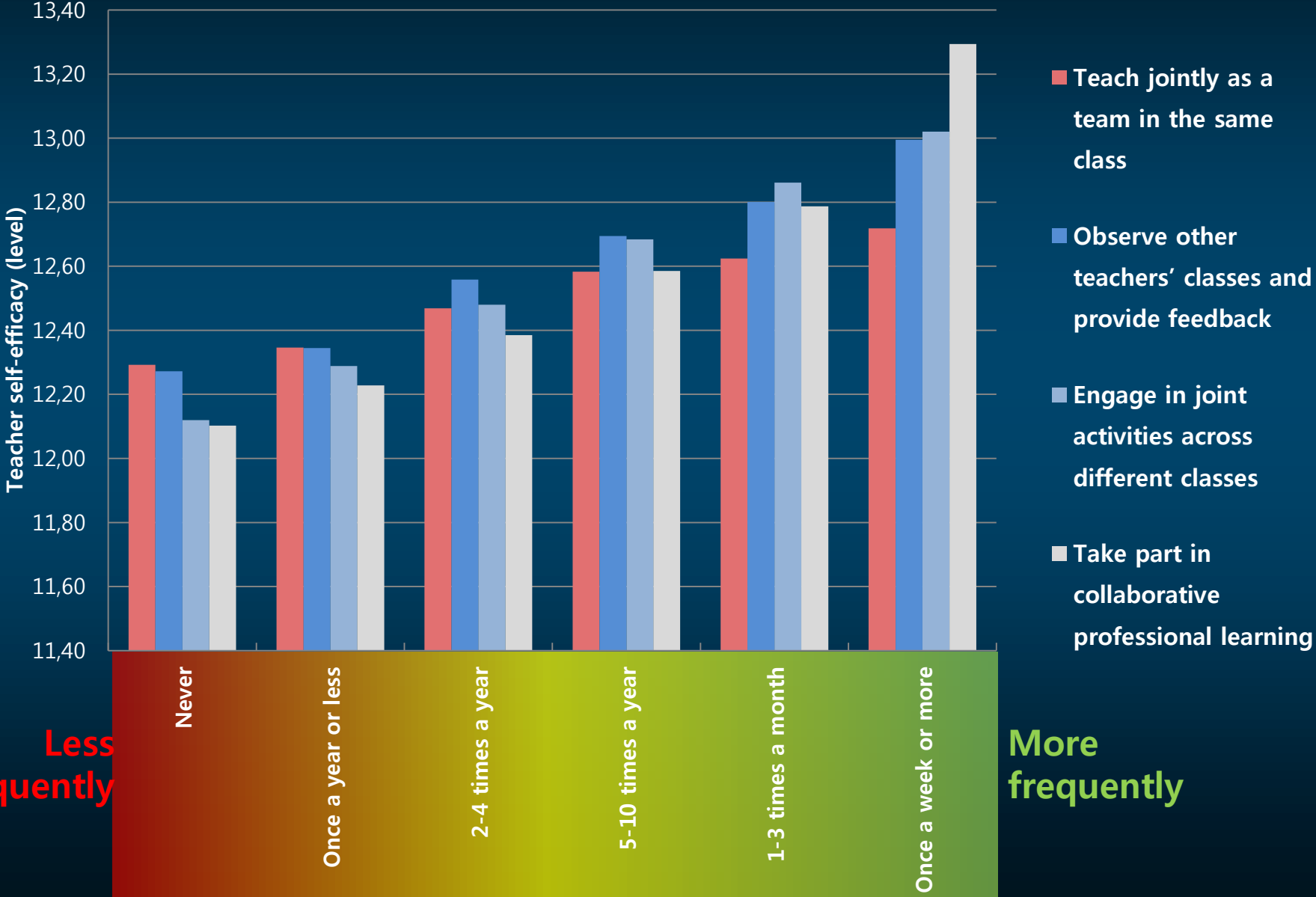
Knowledge base for teaching (initial education and incentives for professional development)

Teacher co-operation

Percentage of lower secondary teachers who report doing the following activities at least once per month

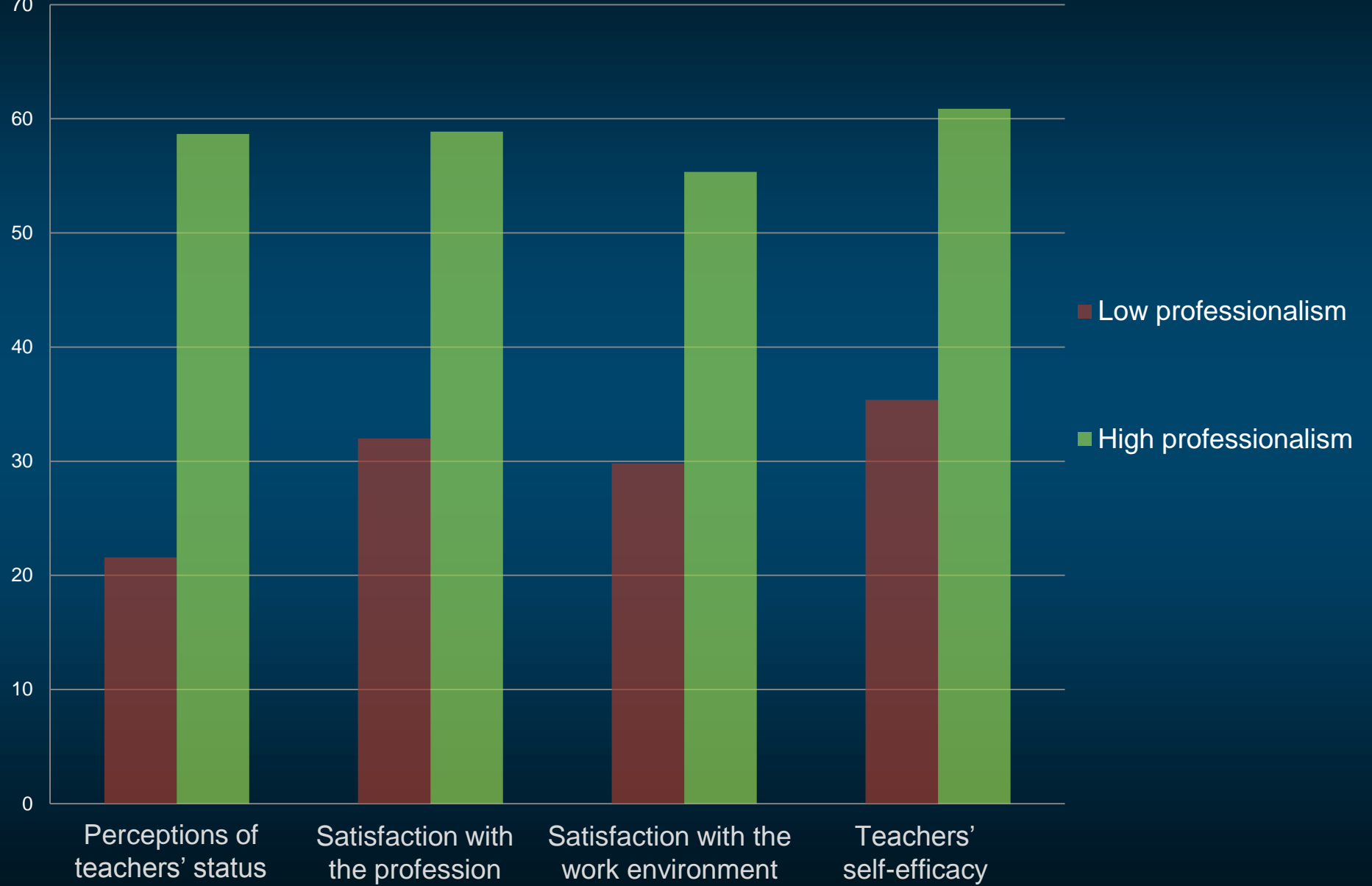# Teachers Self-Efficacy and Professional Collaboration

Teacher professionalism index and teacher outcomes
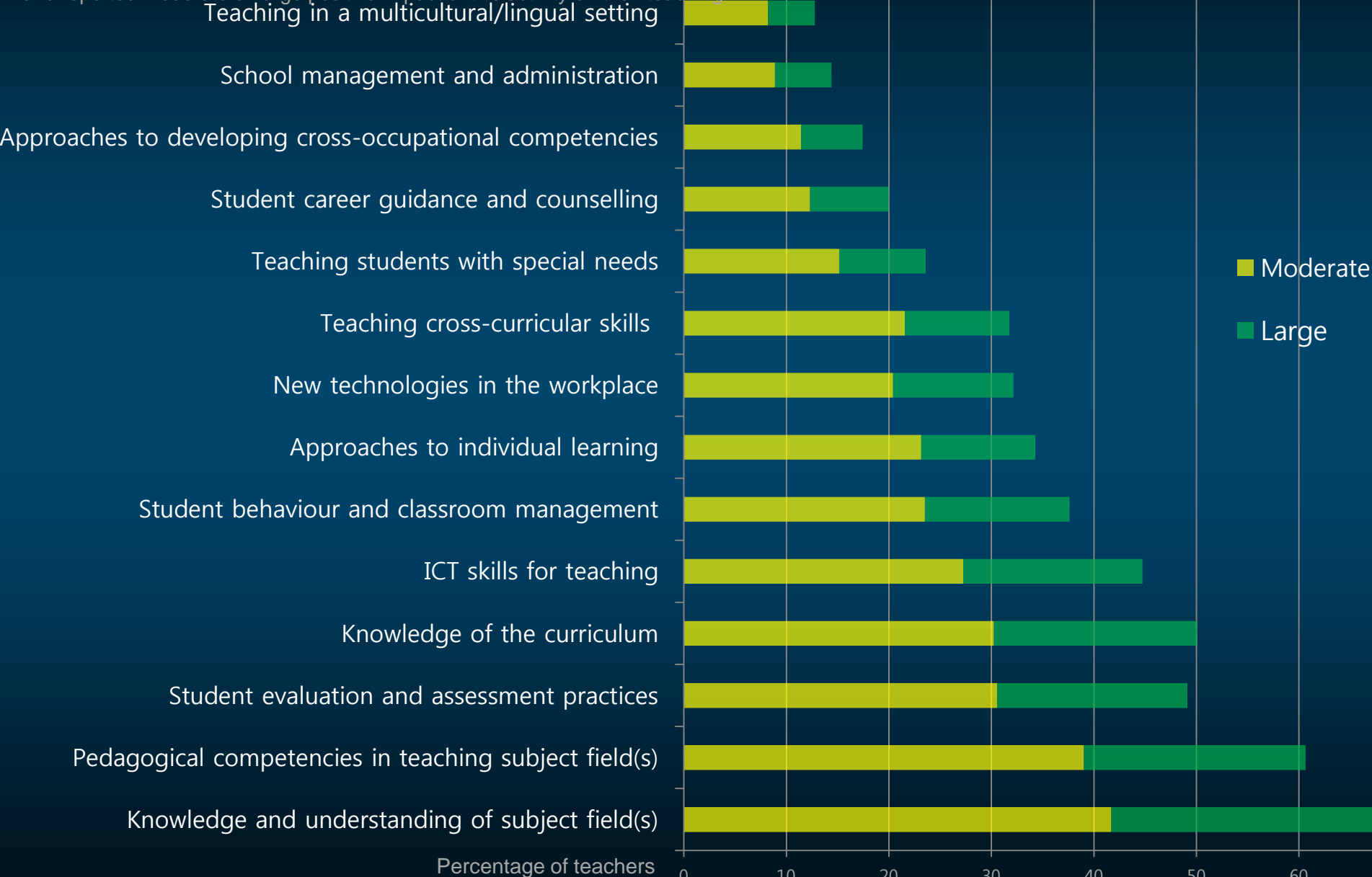

Predicted percentile

Legend: Low professionalism, High professionalism

Categories: Perceptions of teachers' status, Satisfaction with the profession, Satisfaction with the work environment, Teachers' self-efficacy

Impact of professional development on teaching

Percentage of teachers who participated in professional development activities with the following content in the 12 months prior to the survey, and reported moderate or large positive impact of this activity on their teaching

Legend:
- Moderate
- Large

Categories (top to bottom):
- Teaching in a multicultural/lingual setting
- School management and administration
- Approaches to developing cross-occupational competencies
- Student career guidance and counselling
- Teaching students with special needs
- Teaching cross-curricular skills
- New technologies in the workplace
- Approaches to individual learning
- Student behaviour and classroom management
- ICT skills for teaching
- Knowledge of the curriculum
- Student evaluation and assessment practices
- Pedagogical competencies in teaching subject field(s)
- Knowledge and understanding of subject field(s)

Percentage of teachers

x-axis: 0, 10, 20, 30, 40, 50, 60

◻ Incentives, accountability, knowledge management
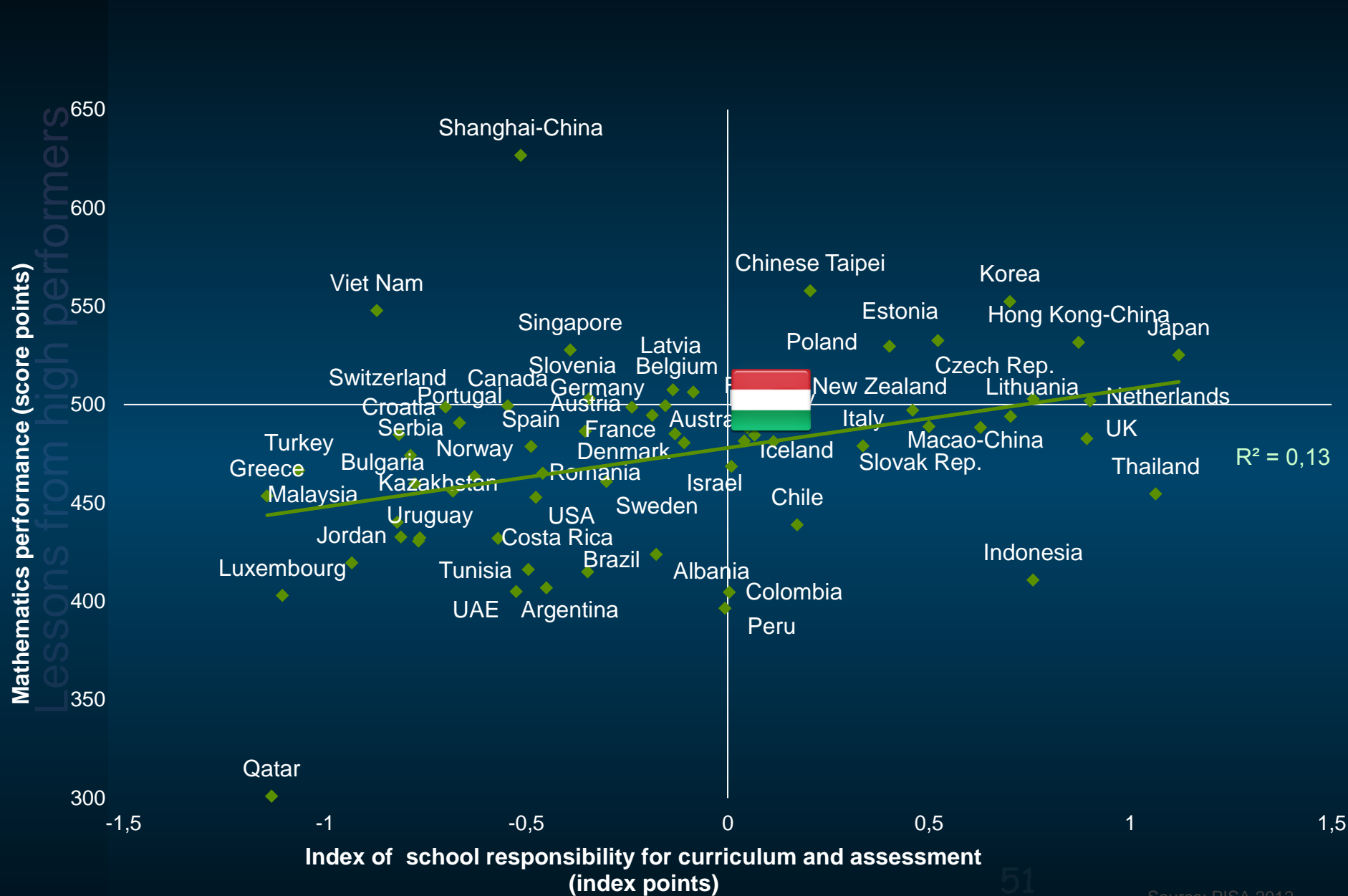
- Aligned incentive structures

  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
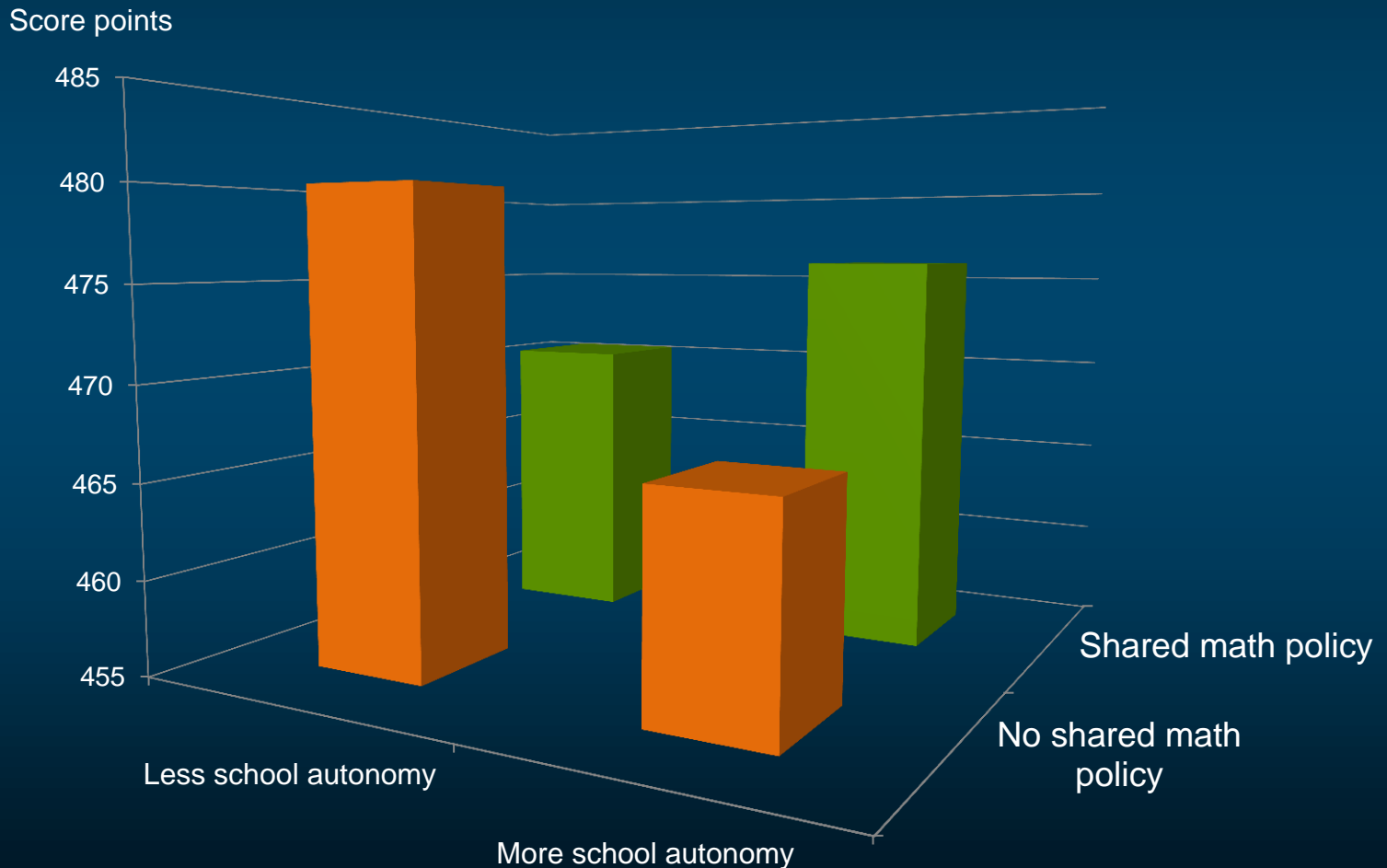 - Opportunity costs for staying in school and performing well

  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

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

Mathematics performance (score points)

Lessons from high performers

Index of school responsibility for curriculum and assessment (index points)

Shanghai-China

Viet Nam

Chinese Taipei

Korea

Estonia

Hong Kong-China

Singapore

Japan

Latvia

Poland

Belgium

Slovenia

Czech Rep.

Switzerland   Canada   Germany   New Zealand   Lithuania

Portugal   Austria   Netherlands

Croatia   Spain   Italy

Serbia   France   Australia

Turkey   Norway   Denmark   Macao-China   UK

Bulgaria   Iceland   Slovak Rep.   Thailand

Greece   Kazakhstan   Romania   Israel

Malaysia   Sweden   Chile

Uruguay   USA

Jordan   Costa Rica   Indonesia

Luxembourg   Brazil   Albania

Tunisia   Colombia

UAE   Argentina   Peru

Qatar

R² = 0,13

Schools with more autonomy perform better than schools with less autonomy in systems with standardised math policies

Fig IV.1.16

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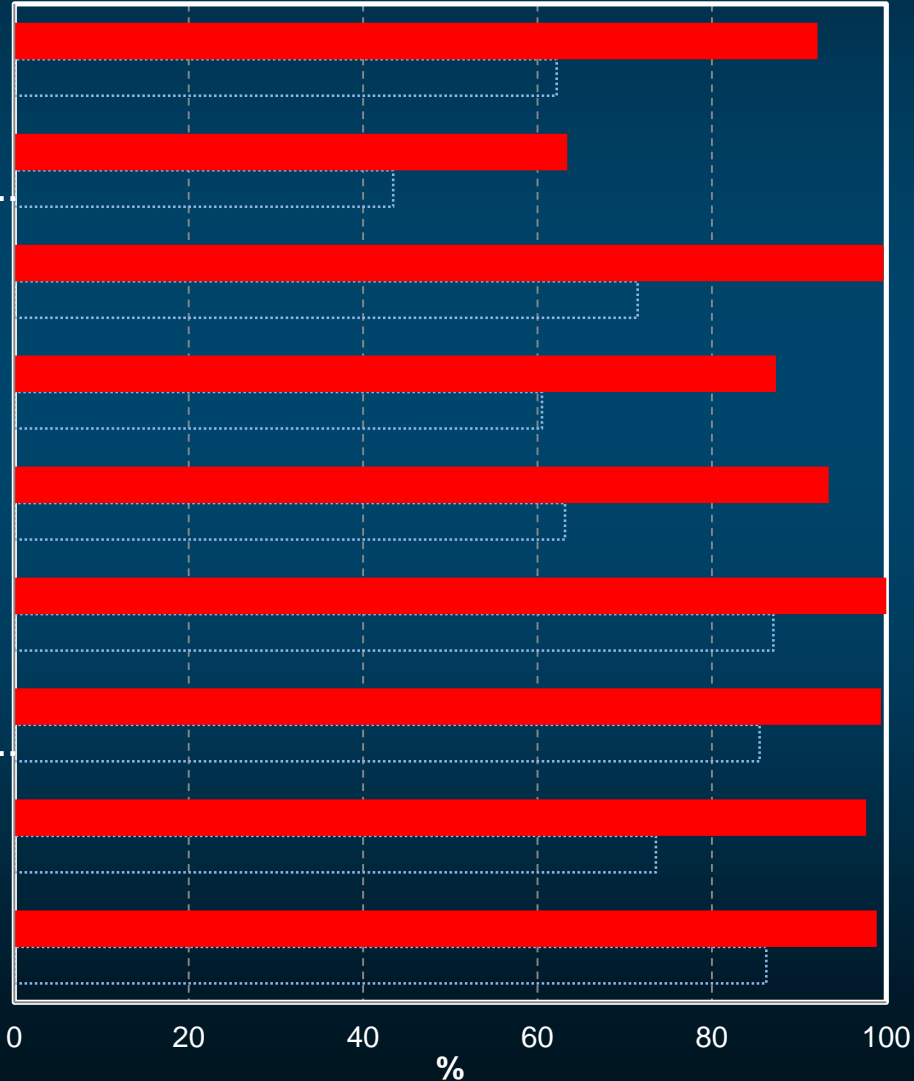
Score points

Shared math policy

No shared math policy

Less school autonomy

More school autonomy

Fig IV.1.17

Schools with more autonomy perform better than schools with less autonomy in systems with more collaboration

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

Score points

Quality assurance and school improvement

Fig IV.4.14
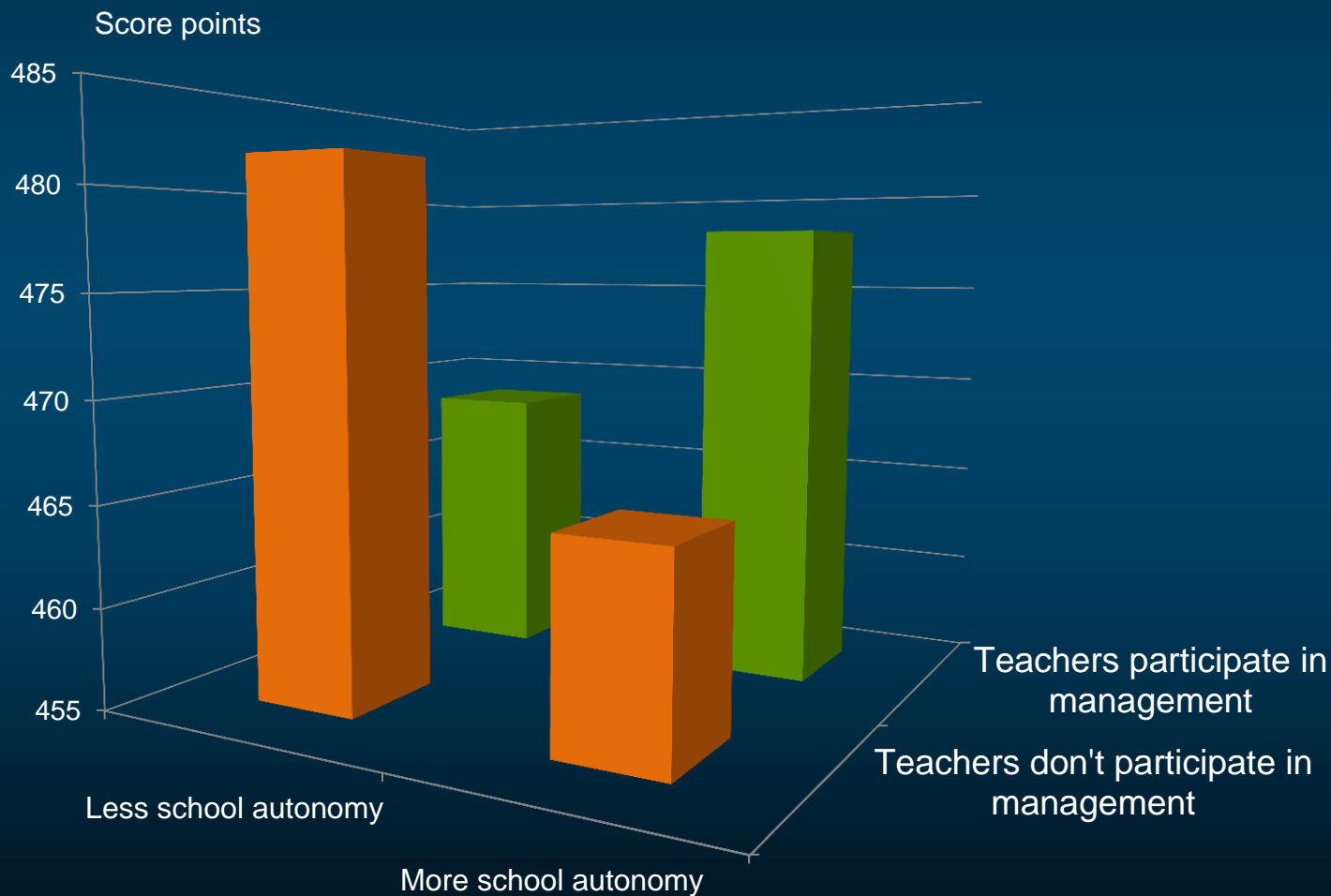
Percentage of students in schools whose principal reported that their schools have the following for quality assurance and improvement:

Legend: ■ Singapore   ▢ OECD average

Categories (top to bottom):
- Implementation of a standardised policy for mathematics
- Regular consultation with one or more experts over a period of at least six months with the aim of improving…
- Teacher mentoring
- Written feedback from students (e.g. regarding lessons, teachers or resources)
- External evaluation
- Internal evaluation/self-evaluation
- Systematic recording of data, including teacher and student attendance and graduation rates, test results…
- Written specification of student-performance standards
- Written specification of the school's curriculum and educational goals

X-axis: 0, 20, 40, 60, 80, 100 **%**

Lessons from high performers

High impact on outcomes

Must haves

Quick wins

Ca___
at point___

Cohe___

A learning system

Low feasibility

High feasibility

Incentive structures and accountability

Money pits

Low hanging fruits

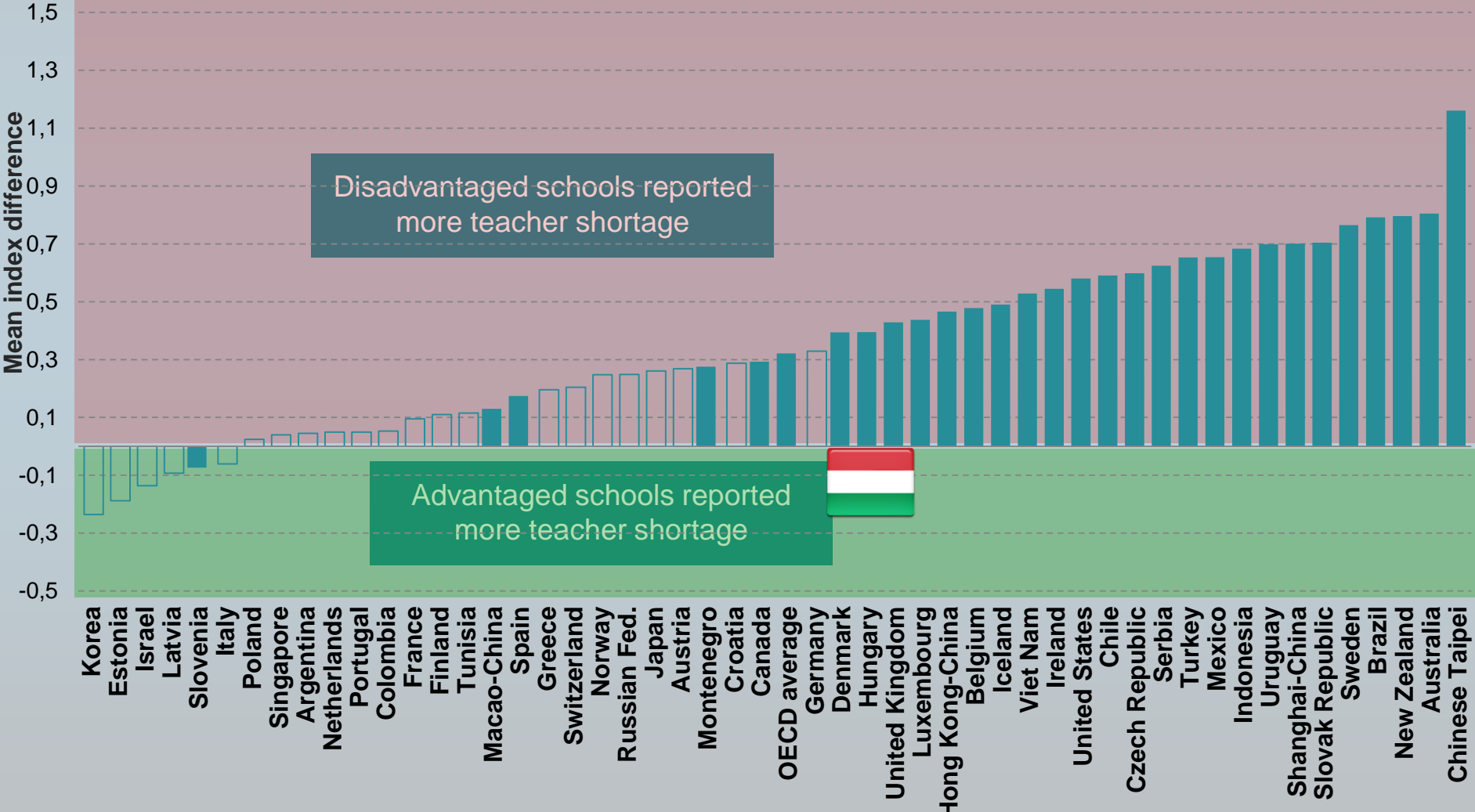Low impact on outcomes

- ❏ 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

Align the resources with the challenges

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

Mathematics performance (score points)

Less equity

Greater equity

Equity in resource allocation (index points)

$R^2 = 0,19$

Source: PISA 2012

Adequate resources to address disadvantage
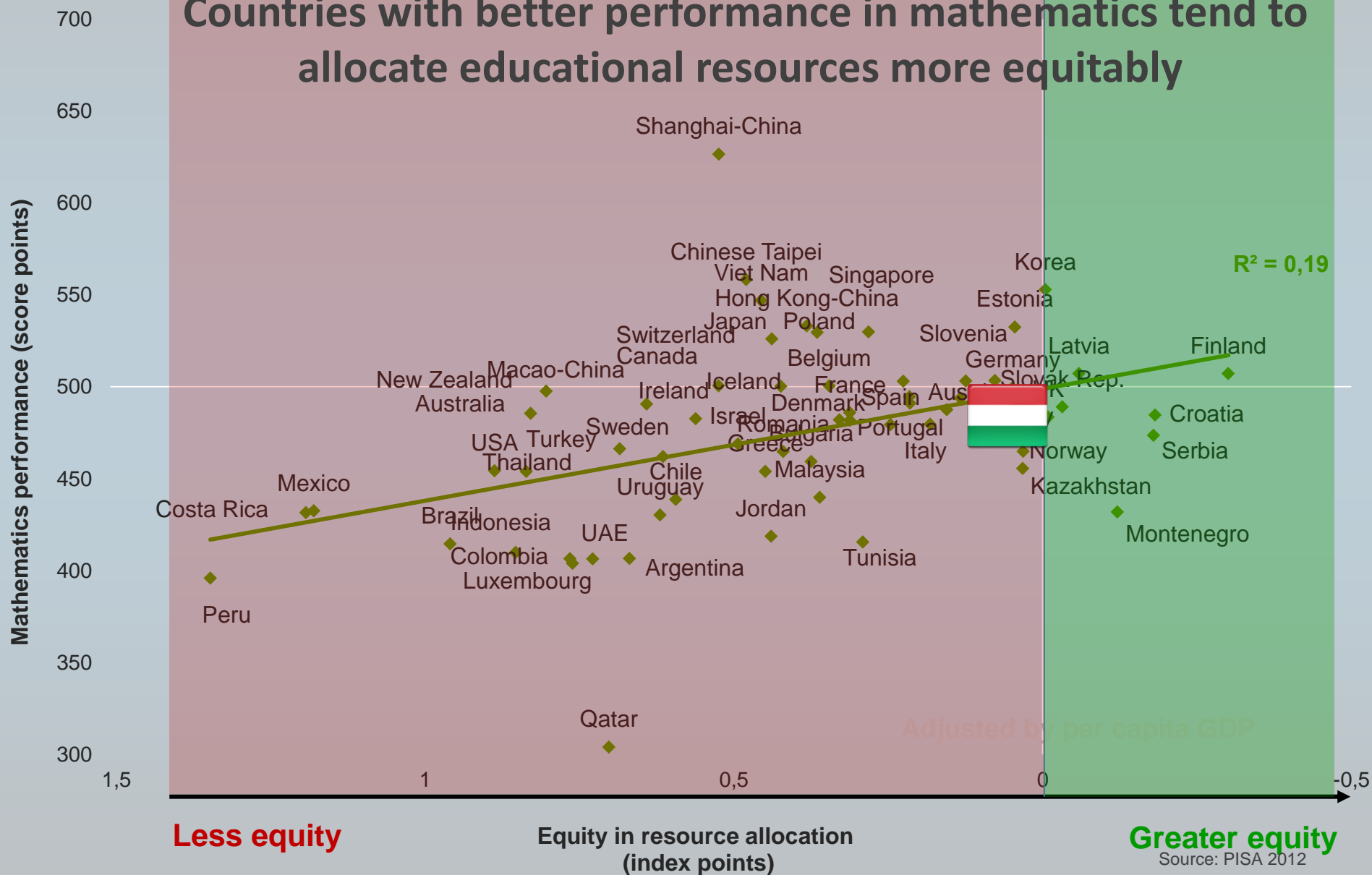
A shortage of qualified teachers is more of concern in disadvantaged schools

■ Difference between socio-economically disadvantaged and socio-economically advantaged schools

Disadvantaged schools reported more teacher shortage

Advantaged schools reported more teacher shortage

High impact on outcomes

Must haves

Commitment to universal achievement

Capacity
at point of delivery

Resources

Quick wins

...eld most

...ateways, instructional
systems

...tem

High feasibility

□ 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)

...centive structures and
accountability

Money pits

Low hanging fruits

Low impact on outcomes

Lessons from high performers

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

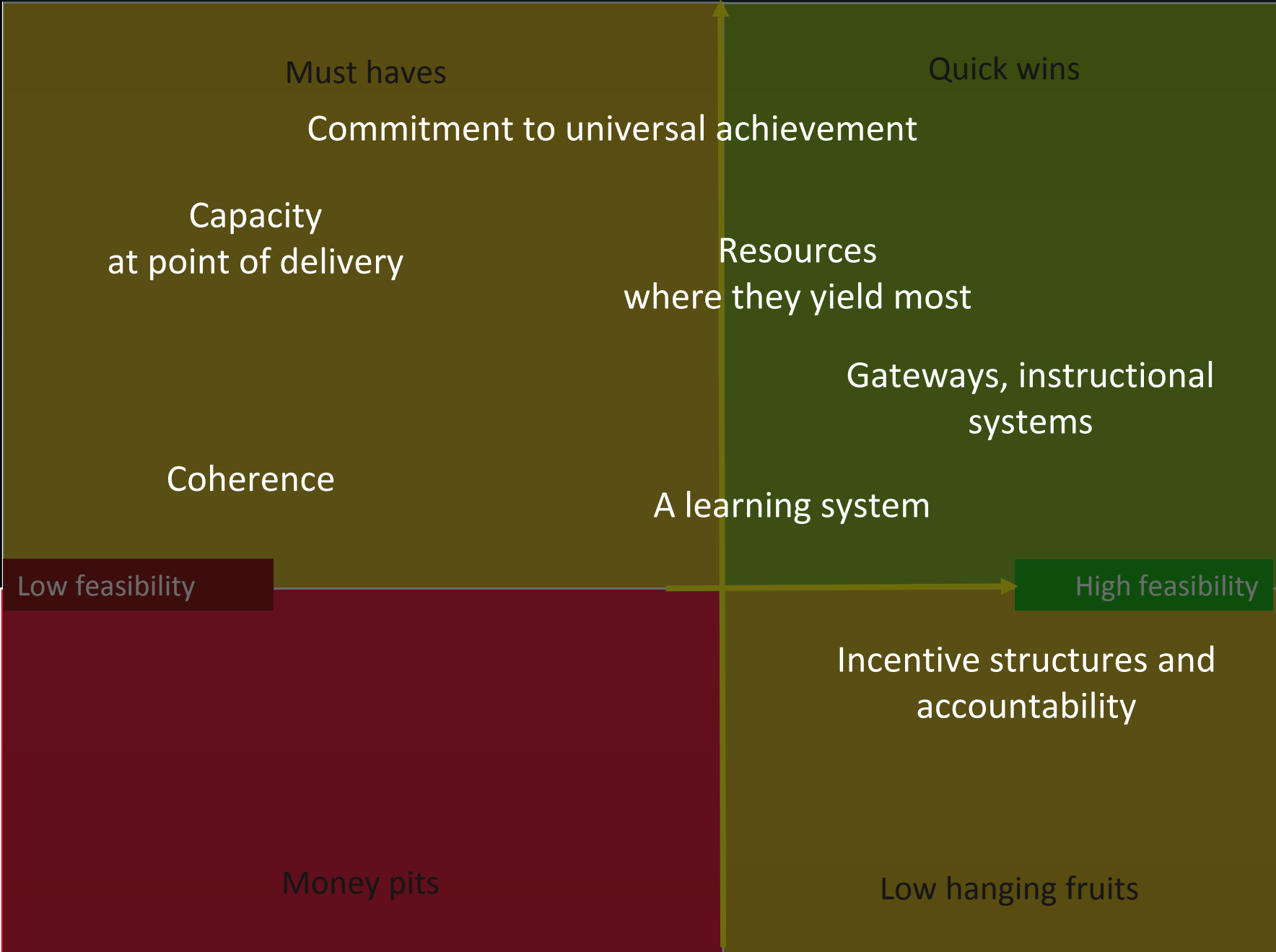A learning system

Low feasibility

High feasibility

Incentive structures and
accountability

Money pits

Low hanging fruits

Low impact on outcomes

What it all means

Lessons from high performers

The old bureaucratic system		The modern enabling system
	Student inclusion	
Some students learn at high levels		**All** students need to learn at high levels
	Curriculum, instruction and assessment	
Routine cognitive skills		Conceptual understanding, complex ways of thinking, ways of working
	Teacher quality	
Standardisation and compliance		High-level professional knowledge workers
	Work organisation	
'Tayloristic', hierarchical		Flat, collegial
	Accountability	
Primarily to authorities		Primarily to peers and stakeholders

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and remember:

Without data, you are just another person with an opinion