

**EDUCATION
& SKILLS**



PISA 2022

The global yardstick for educational success





PISA participants

Around **690,000** 15-year-old students in **81 countries and economies** took PISA 2022

PISA Newcomers: El Salvador, Jamaica, Mongolia, the Palestinian Authority and Uzbekistan



Contexts

- Personal
- Occupational
- Societal
- Scientific

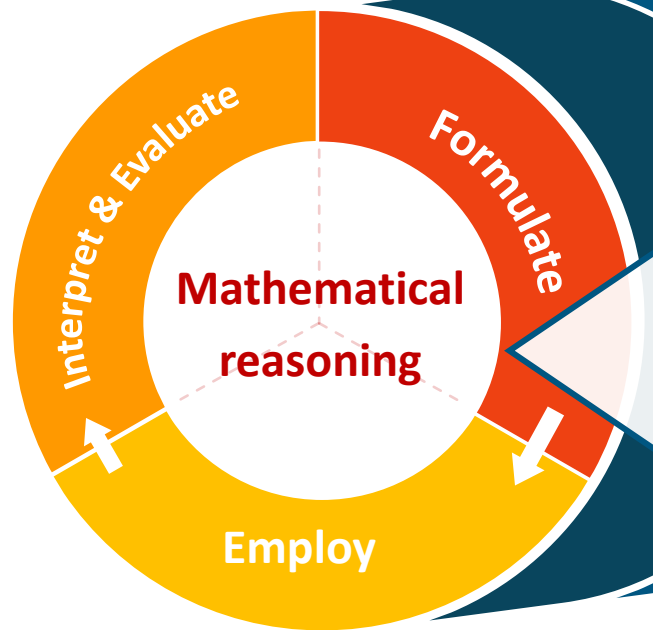
Mathematical
inductive

quantitative

Uncertainty
variability
sensitivity
acknowledgement

Change and
fundamental
types of
mathematical

Space and shape: patterns; properties of objects; spatial visualisations; positions and orientations; representations of objects; decoding and encoding of visual information;



	Target percentage	Trend items (n=74)	New items (n=160)	Total (n=234)
Reasoning	25%	39%	16%	23%
Formulate	25%	15%	23%	21%
Employ	25%	32%	32%	32%
Interpret	25%	14%	29%	24%
Total	100%	100%	100%	100%

21st Century Skills

- critical thinking;
- creativity;
- research and inquiry;
- self-direction, initiative and persistence;
- information use;
- systems thinking;
- communication; and
- reflection

PISA
Sample test
questions

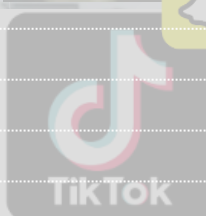
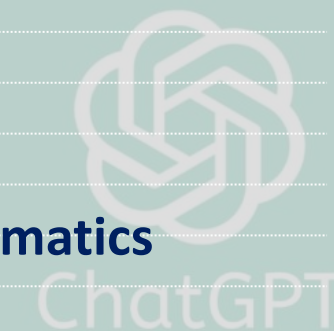
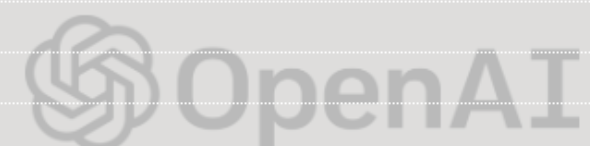


PISA 2022

The state of global education



Mathematics (PISA)



Student performance

OECD average

Average math performance dropped by almost **15 score points** since 2018 across the OECD

Previous changes in OECD average never exceeded four score points in mathematics

2003

2006

2009

2012

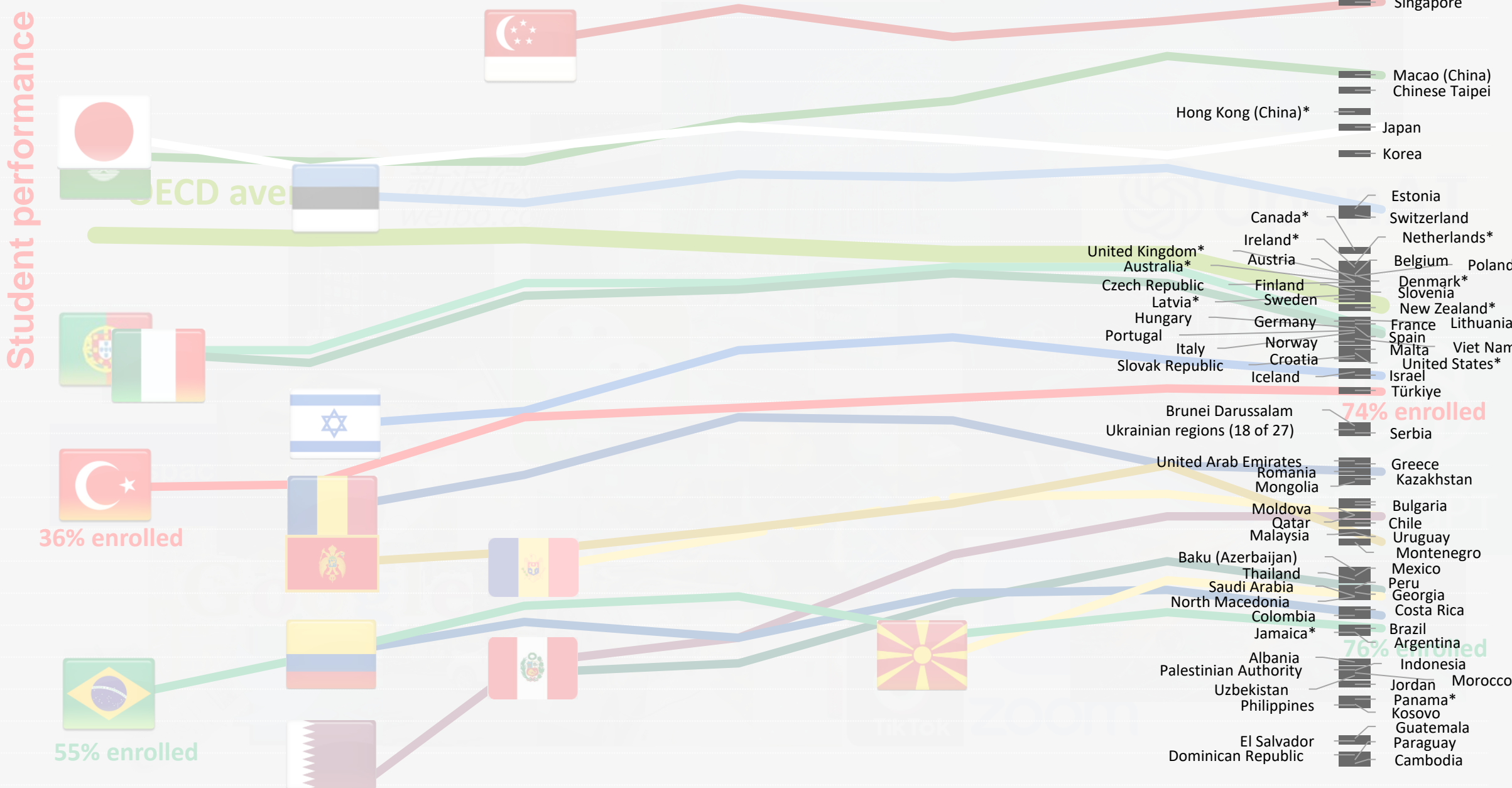
2015

2018

2022

580
570
560
550
540
530
520
510
500
490
480
470
460
450
440
430
420
410
400
390
380
370
360
350
340
330

Mathematics (PISA)



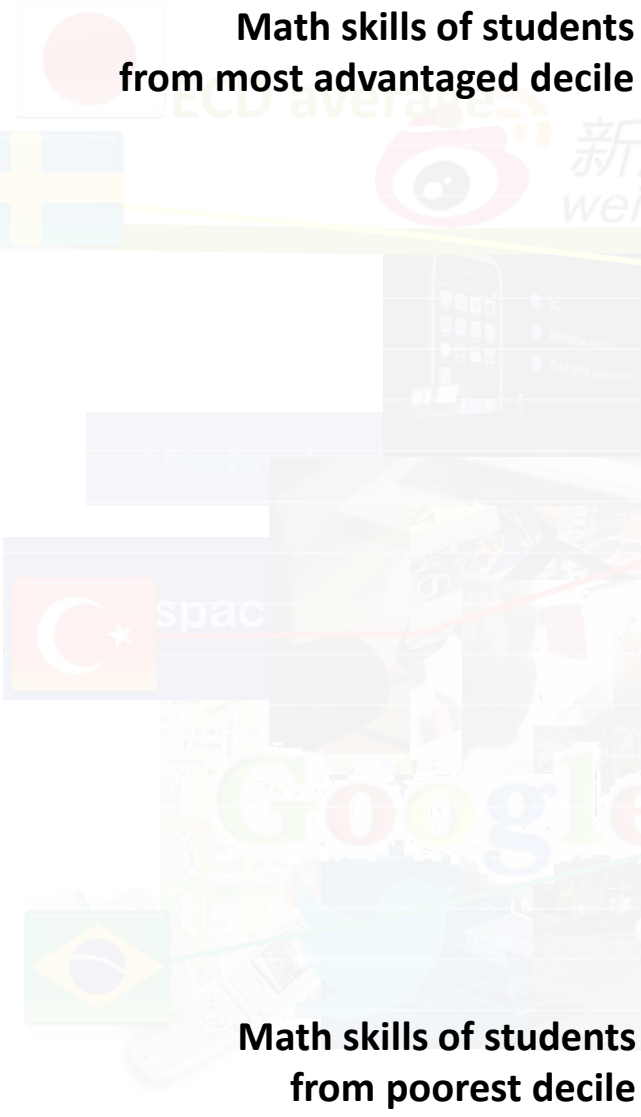
Poverty need not be destiny

Student performance

Math skills of students from most advantaged decile

Math skills of students from poorest decile

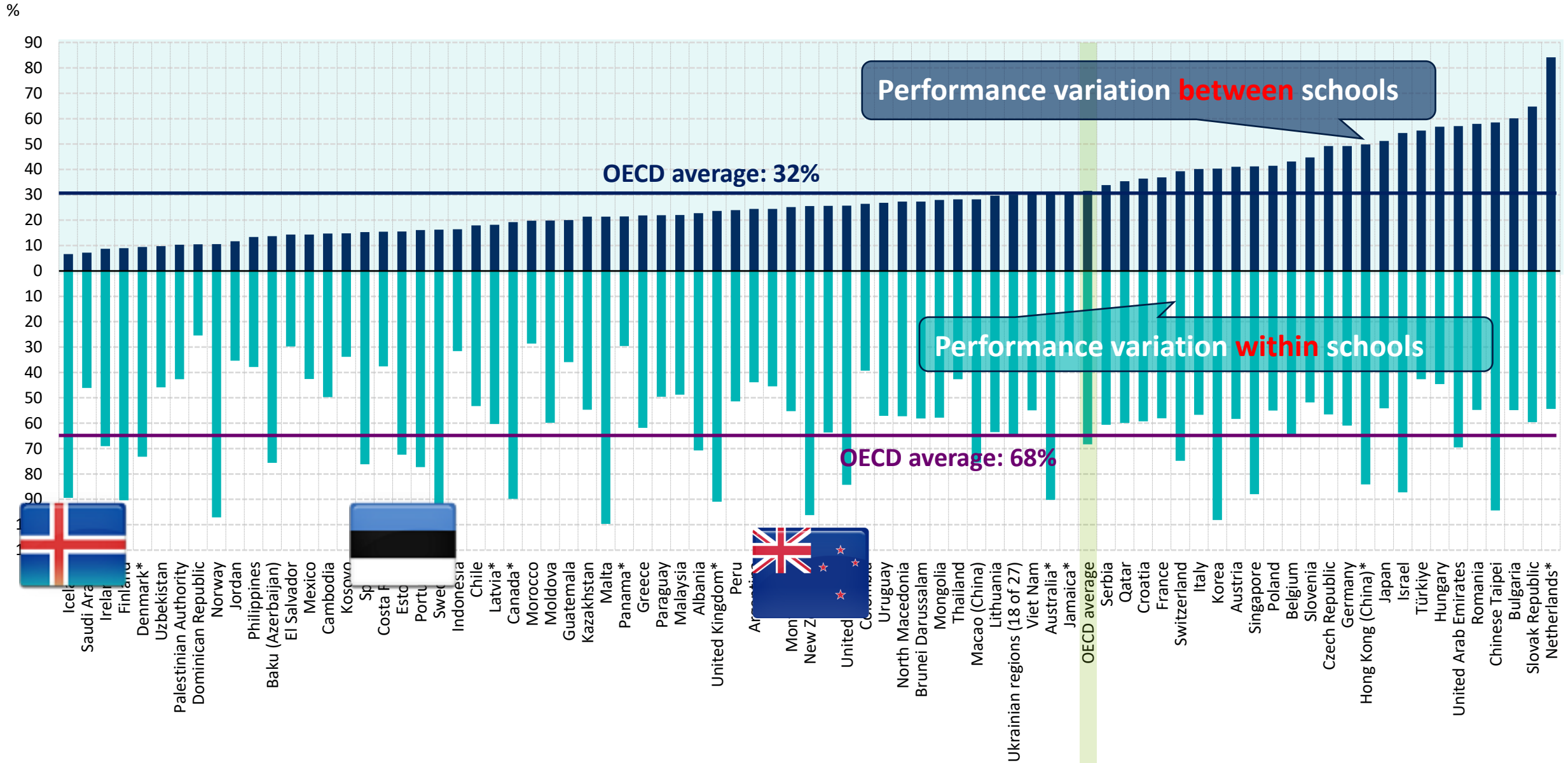
2003 2006 2009 2012 2015 2018 2022



Can the closest school be the best school?

Variation in mathematics performance between and within schools

Figure I.2.6



Using resources effectively

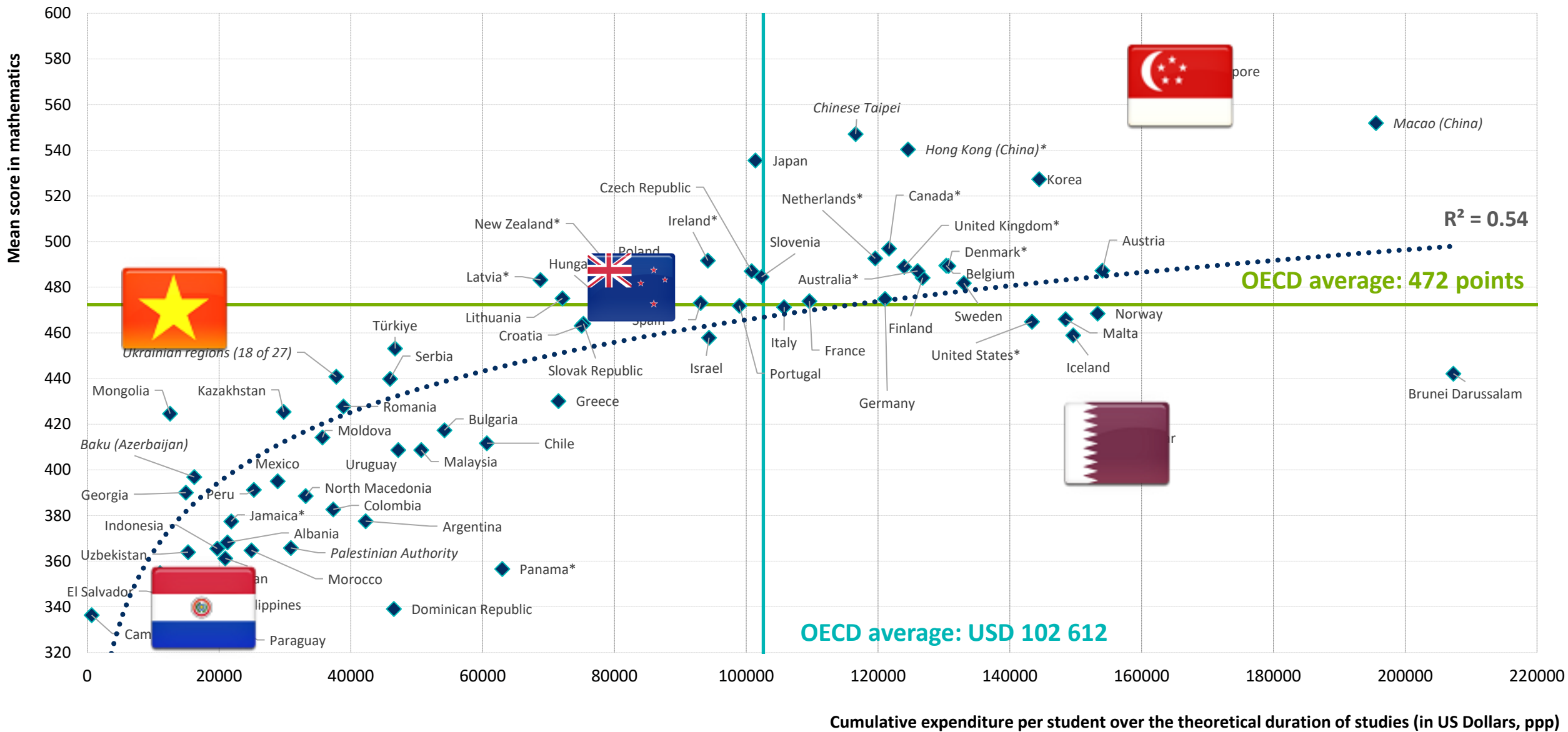
Money matters up to a point





Money is necessary but not sufficient

Figure I.4.15





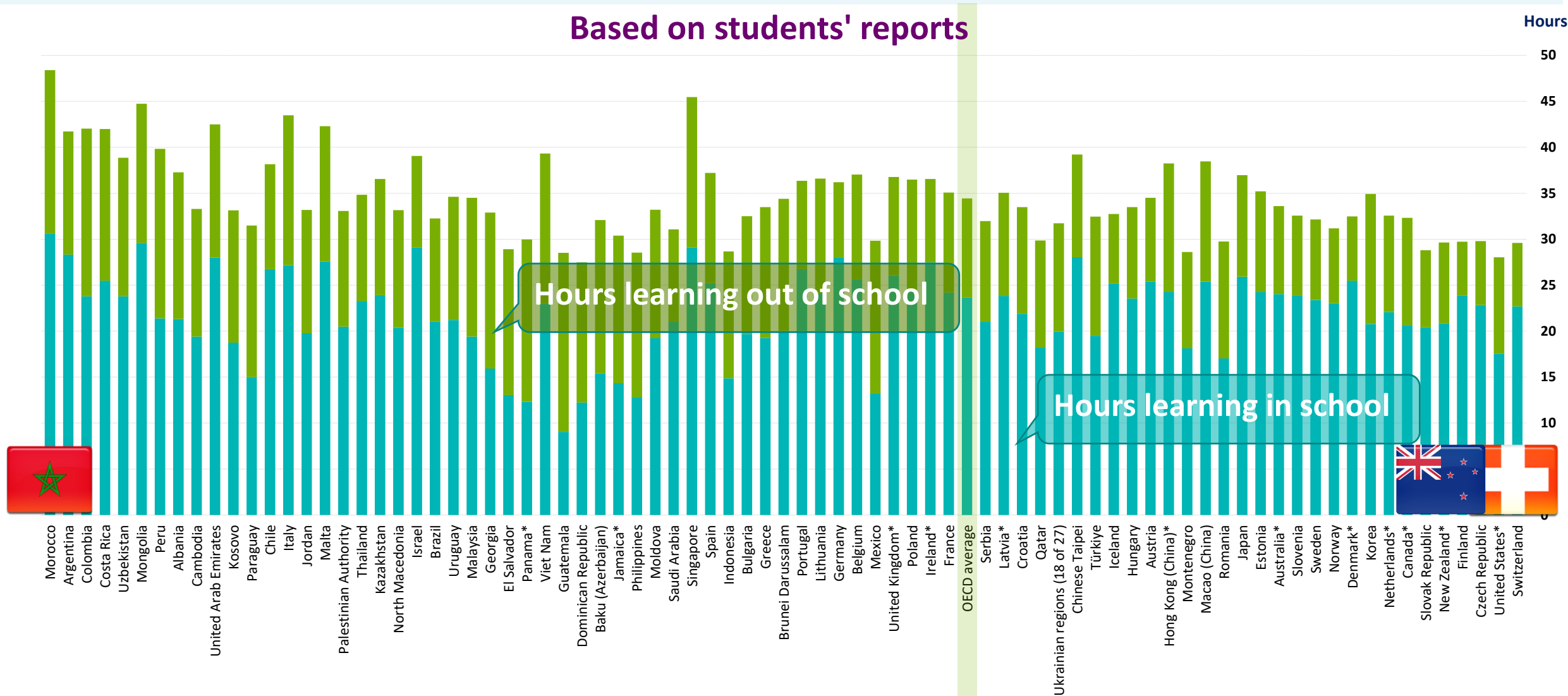
Learning time ≠ learning outcomes

Figure II.5.11

Based on students' reports

Hours

Score points in mathematics per hour of total learning time



Hours learning out of school

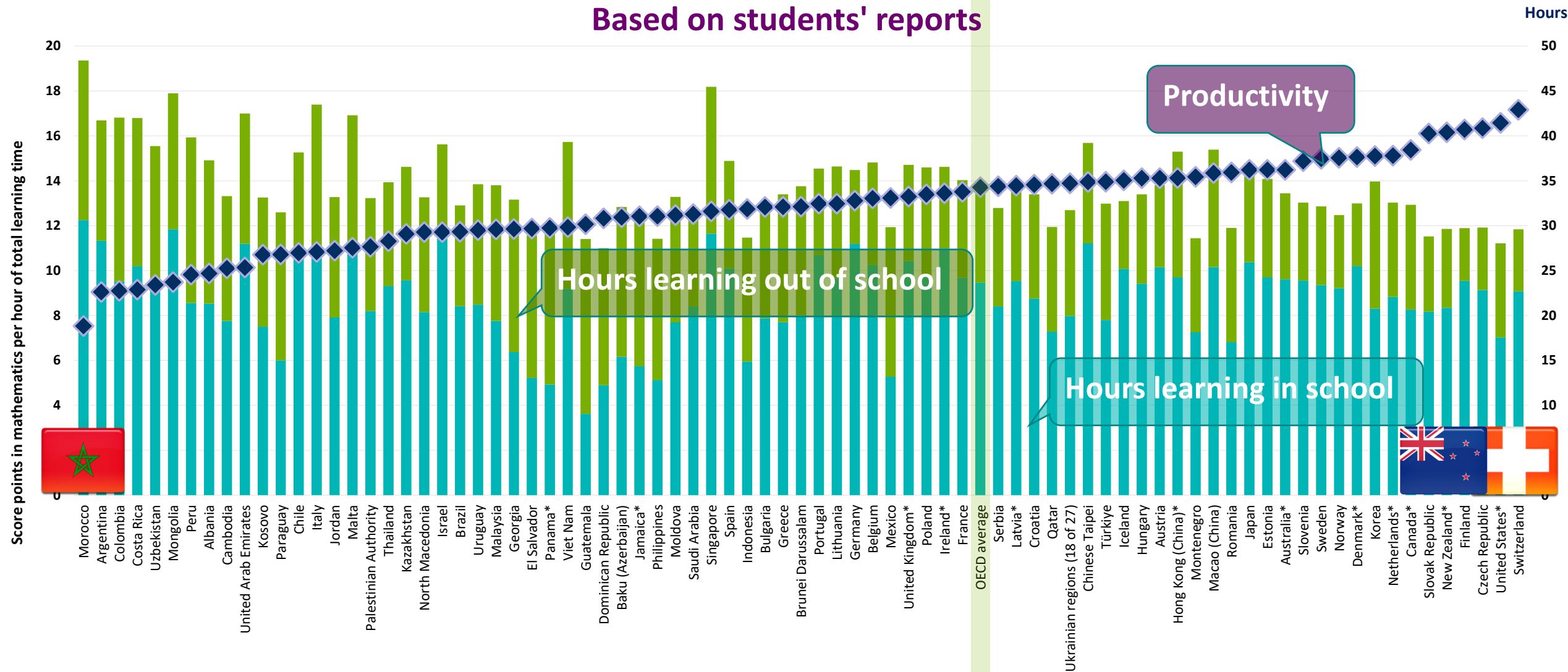
Hours learning in school



Learning time ≠ learning outcomes

Figure II.5.11

Based on students' reports

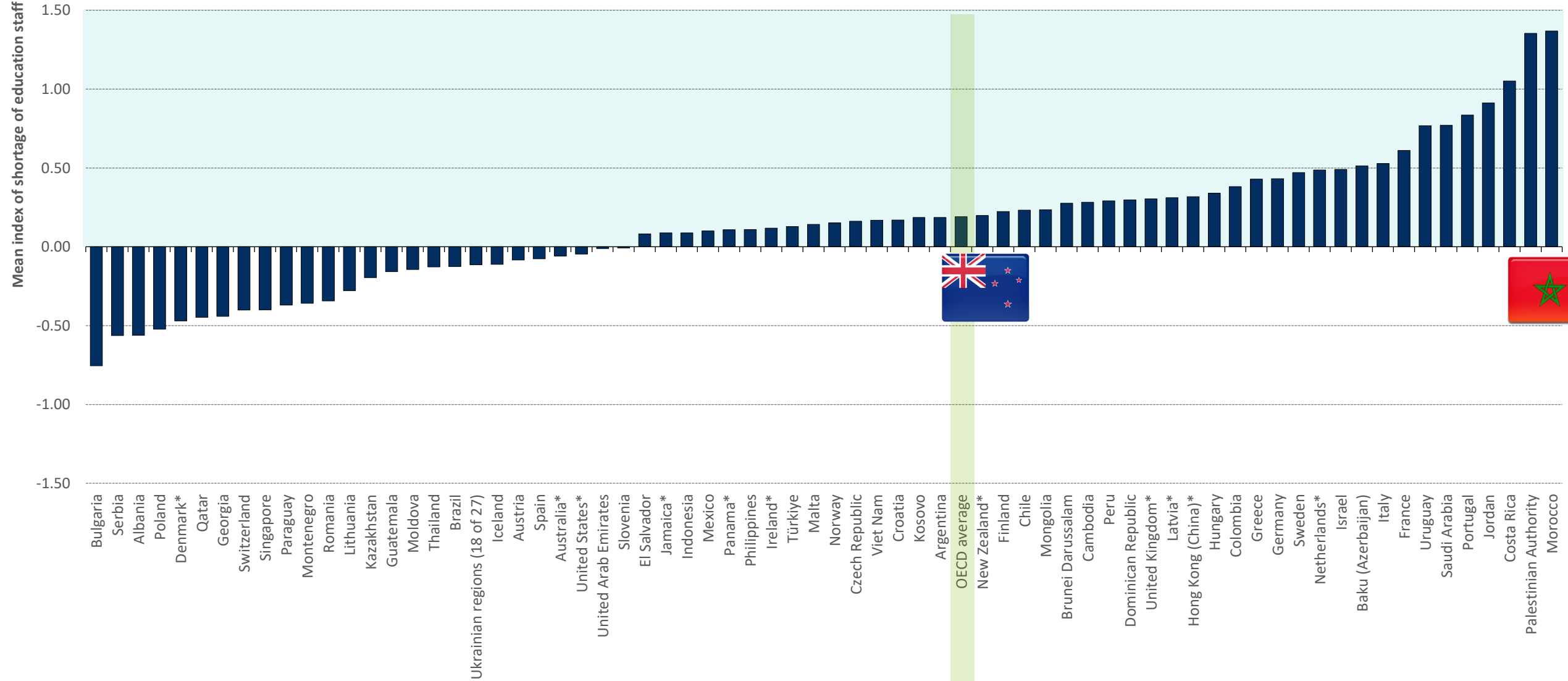




Shortage of education staff

Figure II.5.4

Based on principals' reports

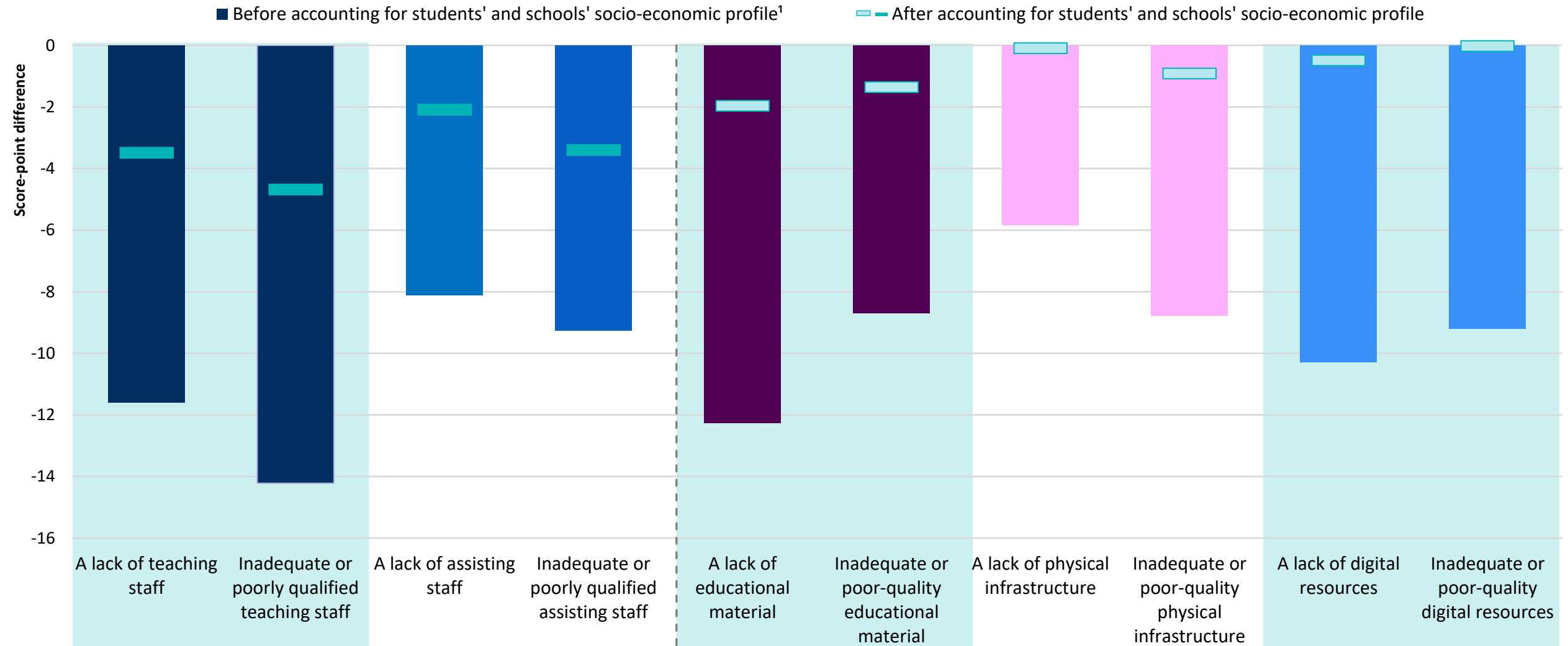




Shortage of education staff and material resources, and mathematics performance

Figure II.5.6

Change in mathematics performance associated with principals reporting that the school's capacity to provide instruction is hindered to some extent or a lot by the following; OECD average



Revolutionising learning?

Unlocking the potential of the digital world

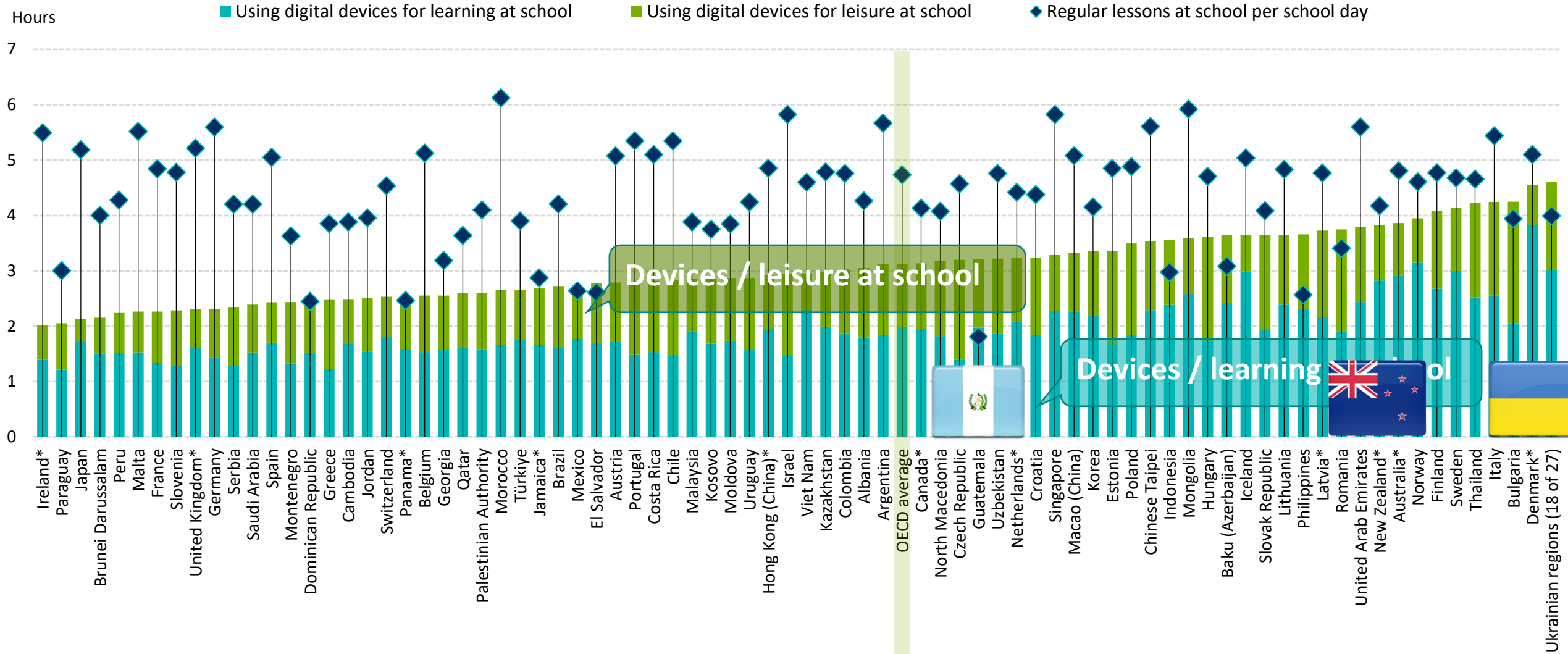




Time spent at school in regular lessons and on digital devices

Figure II.5.15

Time spent per day by students (in hours)

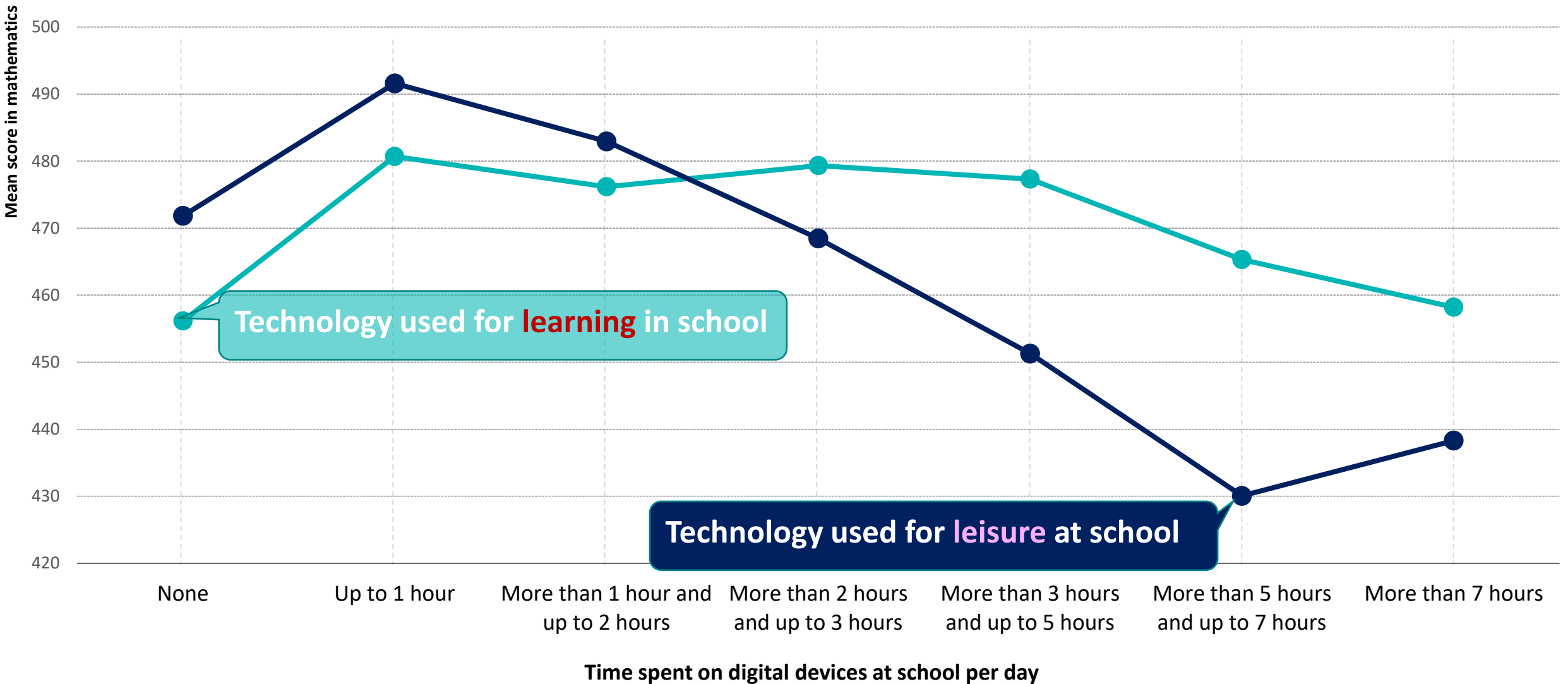




Time spent on digital devices at school and mathematics performance

Figure II.5.14

Based on students' reports; OECD average

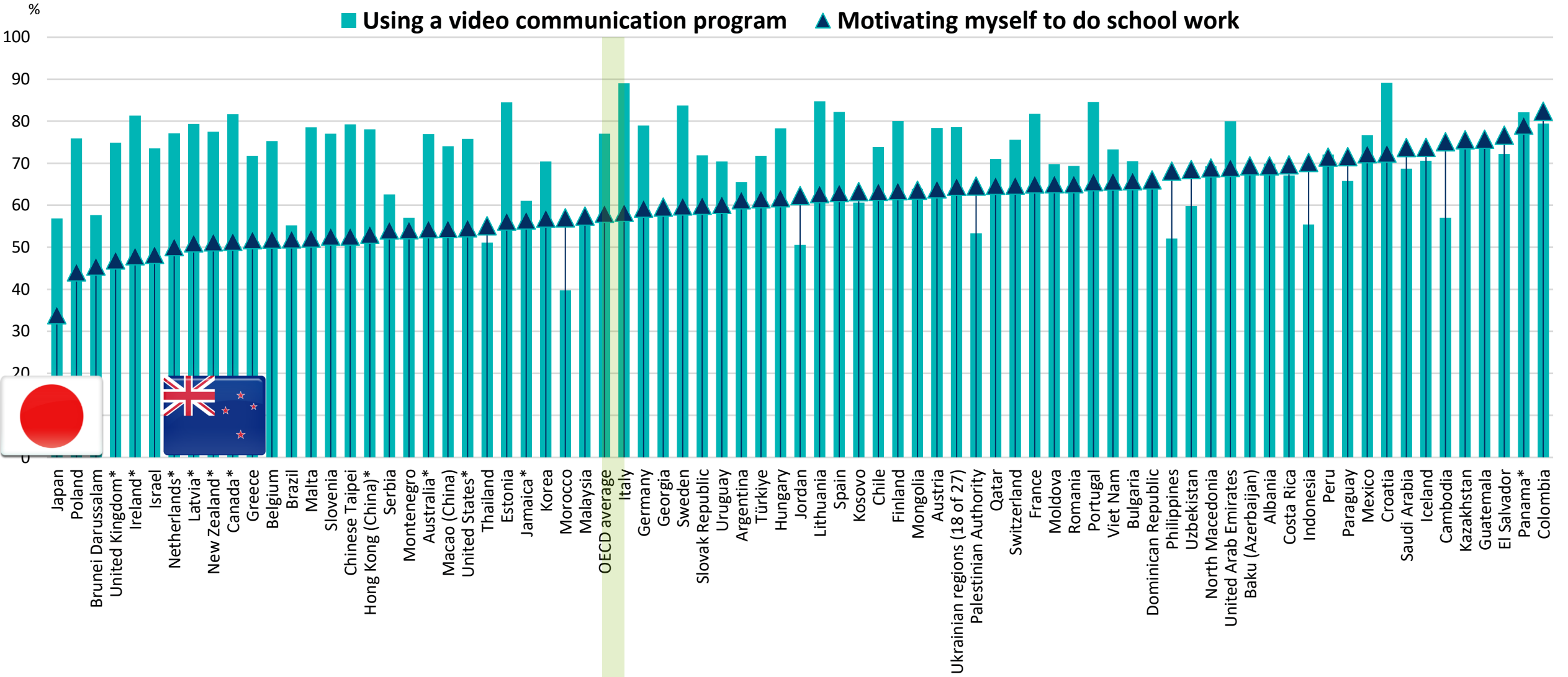




Students' confidence in self-directed learning

Figure II.2.5

Percentage of students who reported feeling confident/very confident in taking the following actions if their school building closes again in the future



Digital distractions

How smart phones and tablets can impair learning



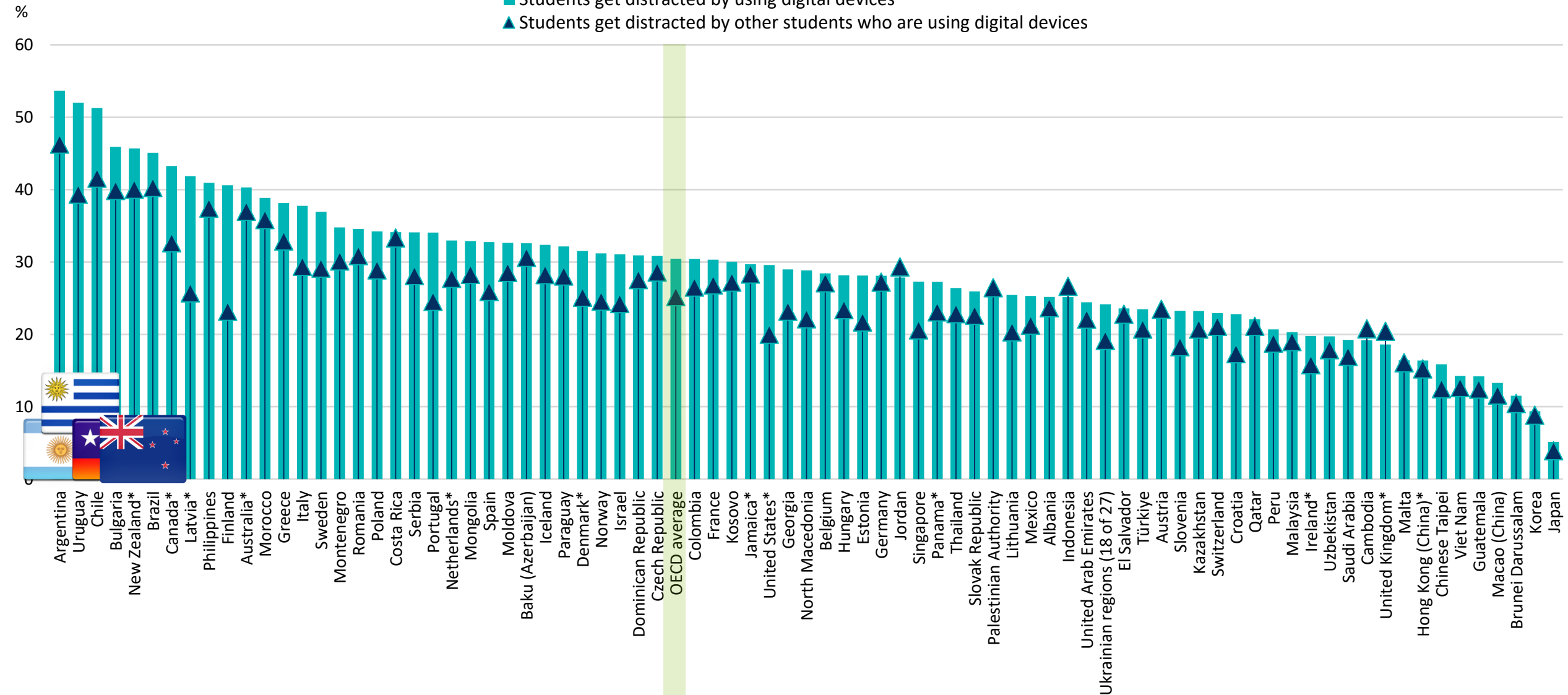


Distraction from digital devices in mathematics lessons

Figure II.3.4

Percentage of students who reported that the following happens in every or in most of their mathematics lessons

- Students get distracted by using digital devices
- ▲ Students get distracted by other students who are using digital devices

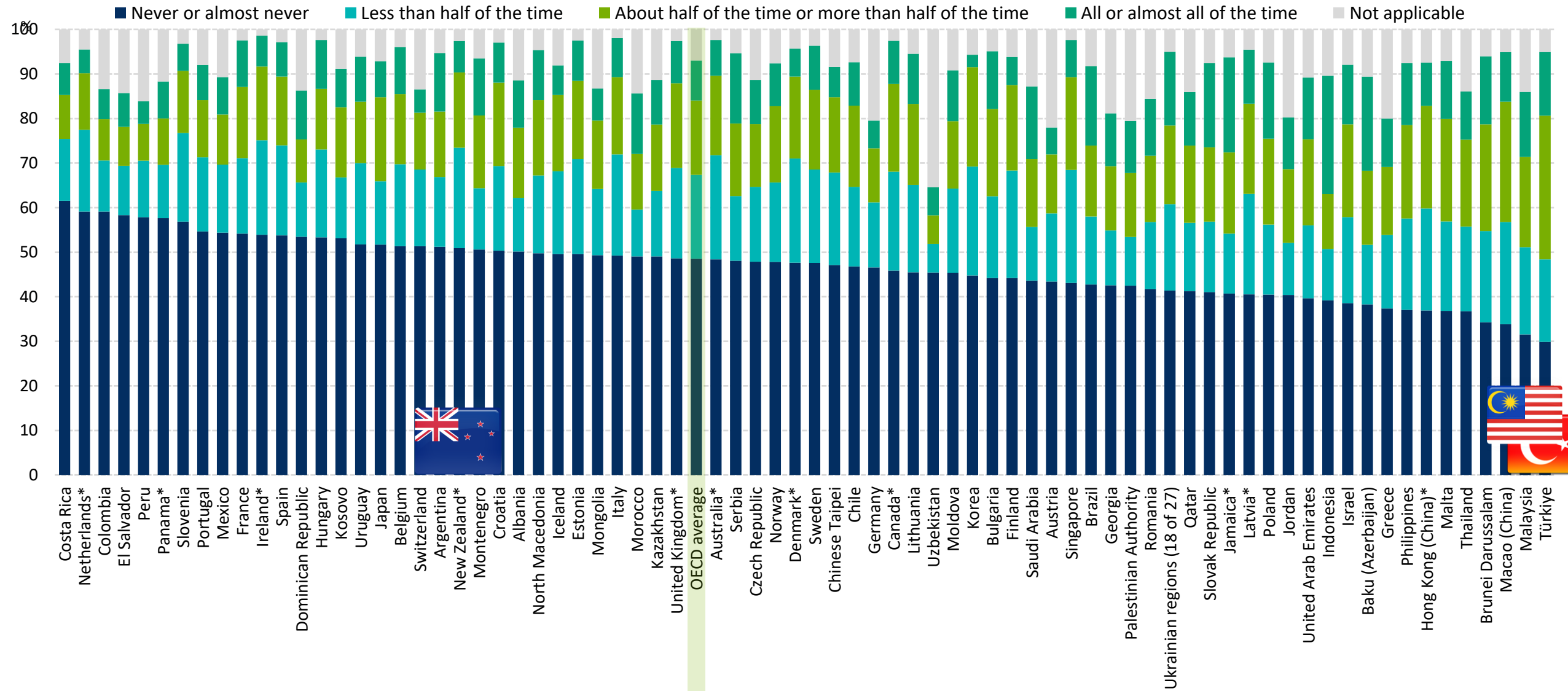




Feeling nervous/anxious when digital devices are not near

Figure II.5.16

Based on students' reports



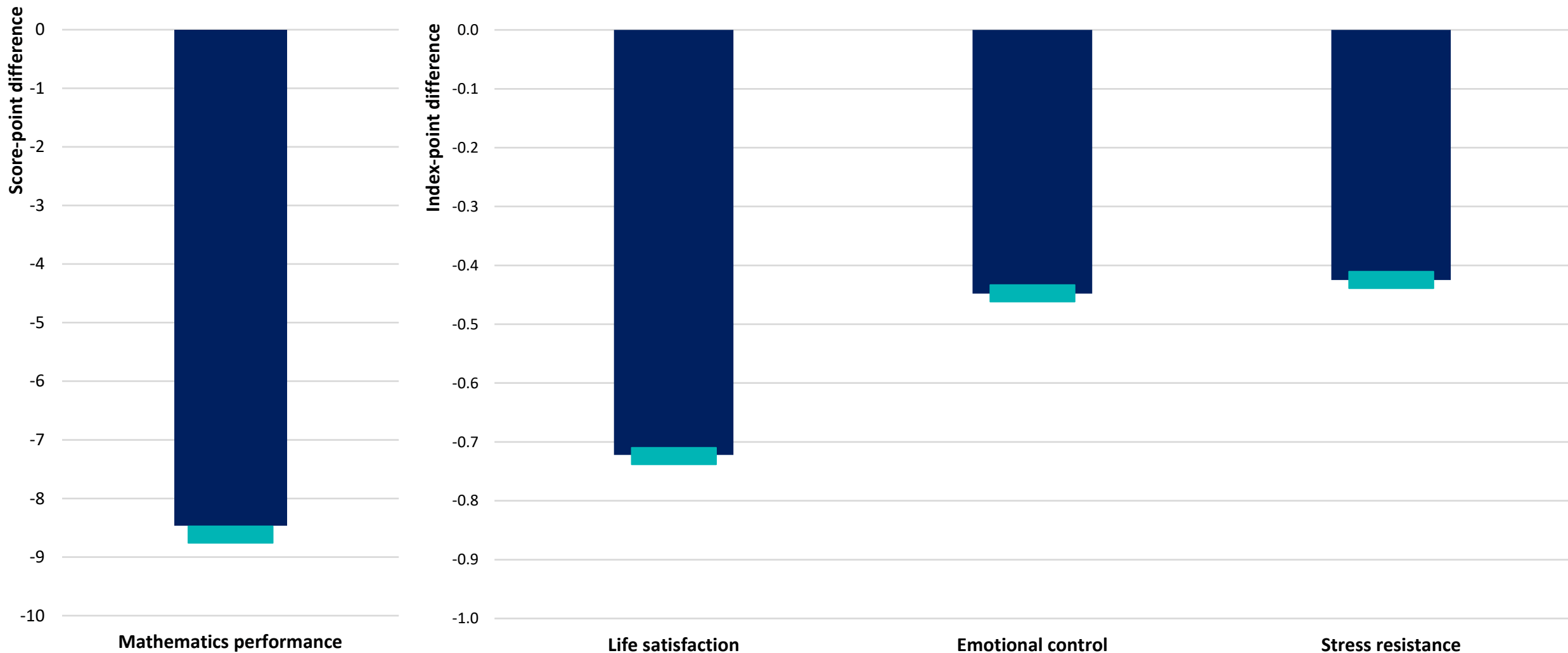


Outcomes of feeling nervous/anxious when digital devices are not near

Figure II.5.17

Based on students' reports; OECD average

■ Before accounting for students' and schools' socio-economic profile¹ — After accounting for students' and schools' socio-economic profile

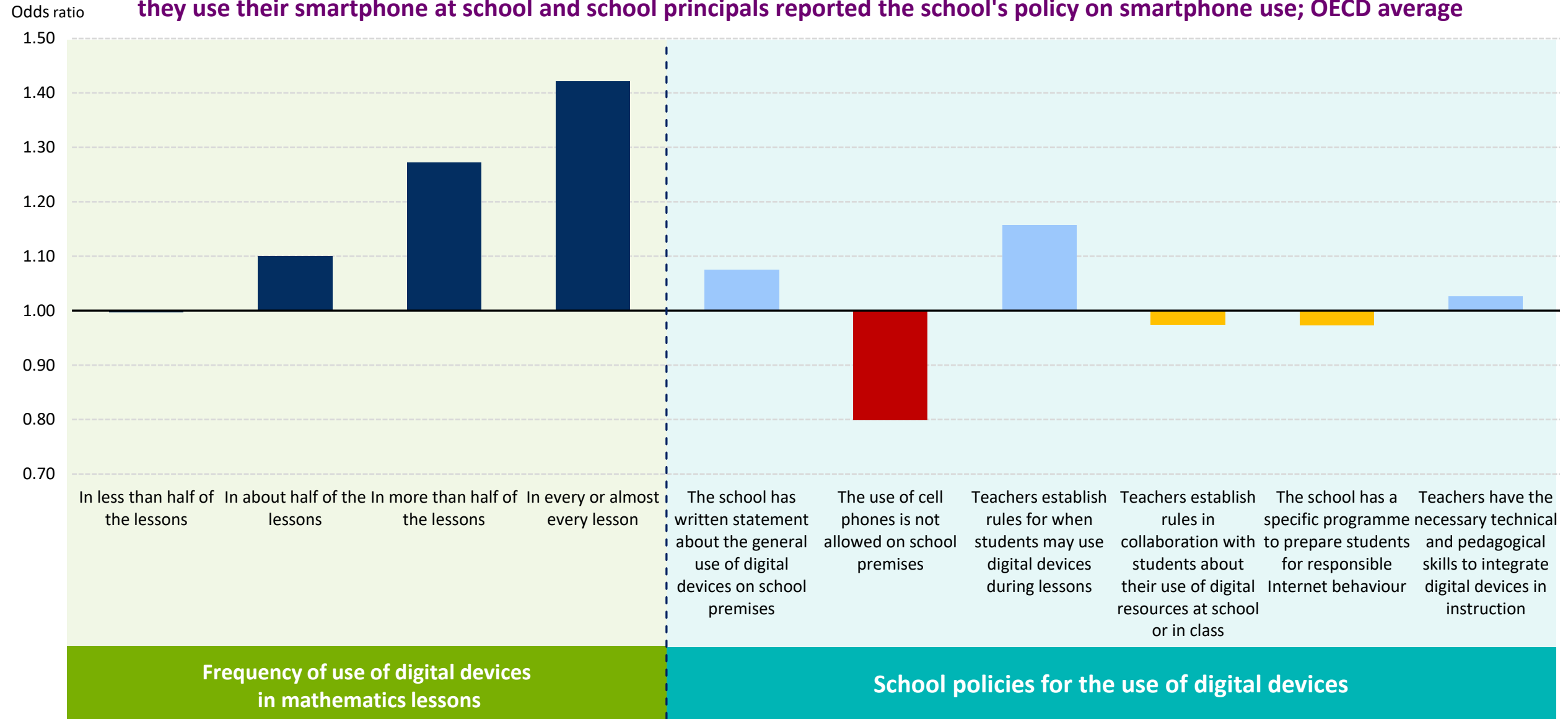




Digital devices, distraction and school policies

Figure II.5.9

Change in the likelihood of students becoming distracted by using digital devices in mathematics lessons when students reported that they use their smartphone at school and school principals reported the school's policy on smartphone use; OECD average



Teachers and teaching

Are some students being let down?

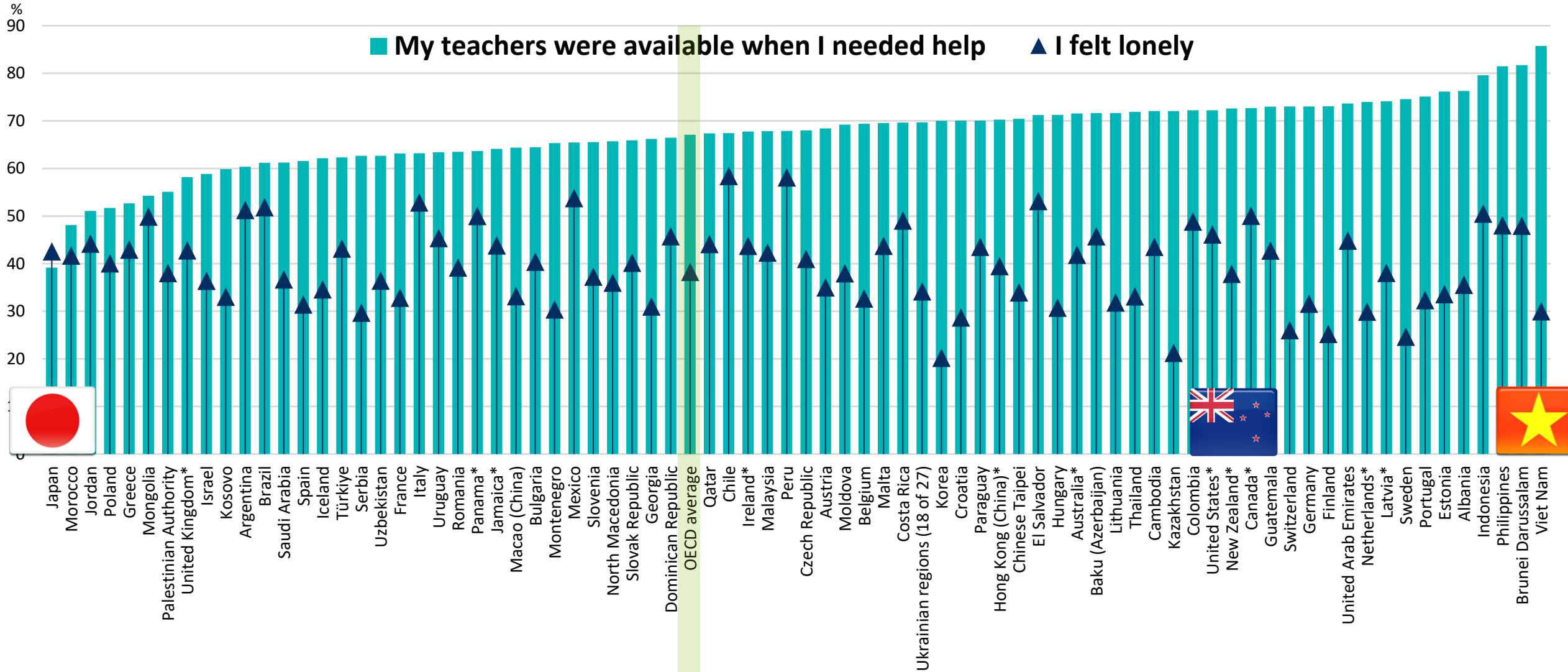




Teacher support

Figure II.2.10

Percentage of students who agreed or strongly agreed with the following statements about the time when their school building was closed because of COVID-19; based on students' reports





Students learn best from teachers they love

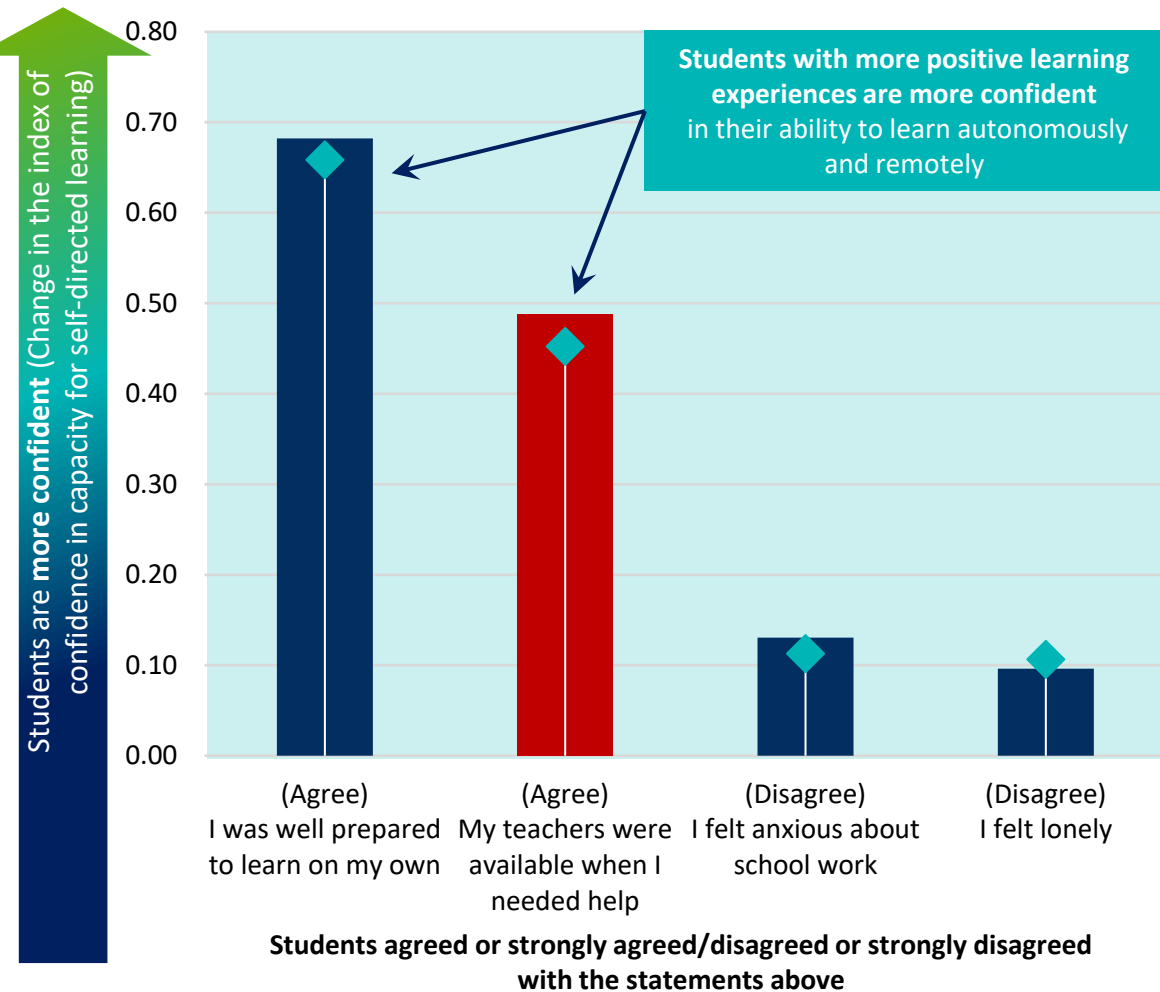
Remote learning, mathematics performance and confidence in self-directed learning

Figure II.2.12

Change in the index of confidence in students' capacity for self-directed learning/in mathematics performance, when students agreed or disagreed with the following statements about the time when their school building was closed because of COVID-19; OECD average

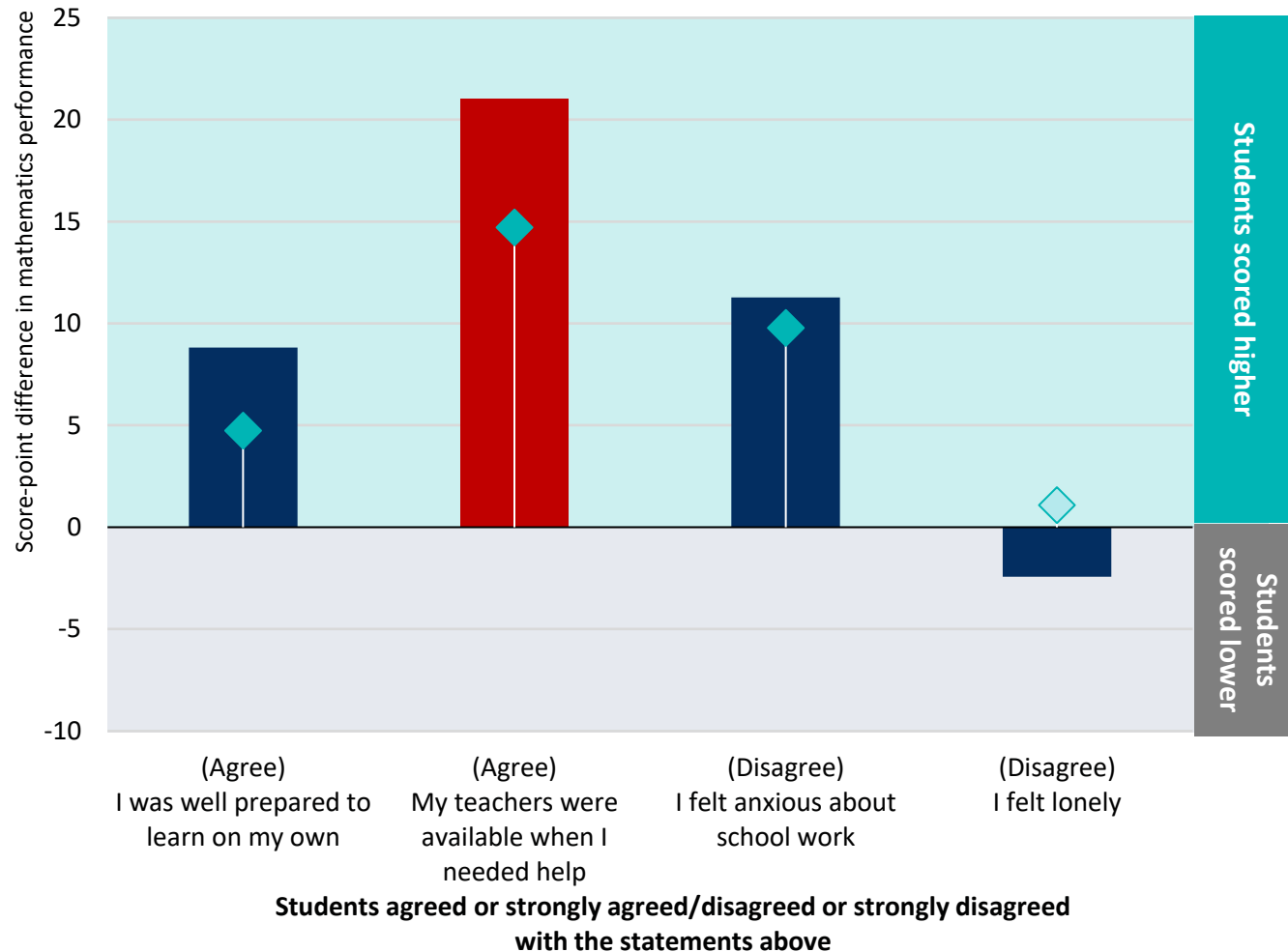
■ Before accounting

◆ After accounting for students' and schools' socio-economic profile, and mathematics performance



■ Before accounting

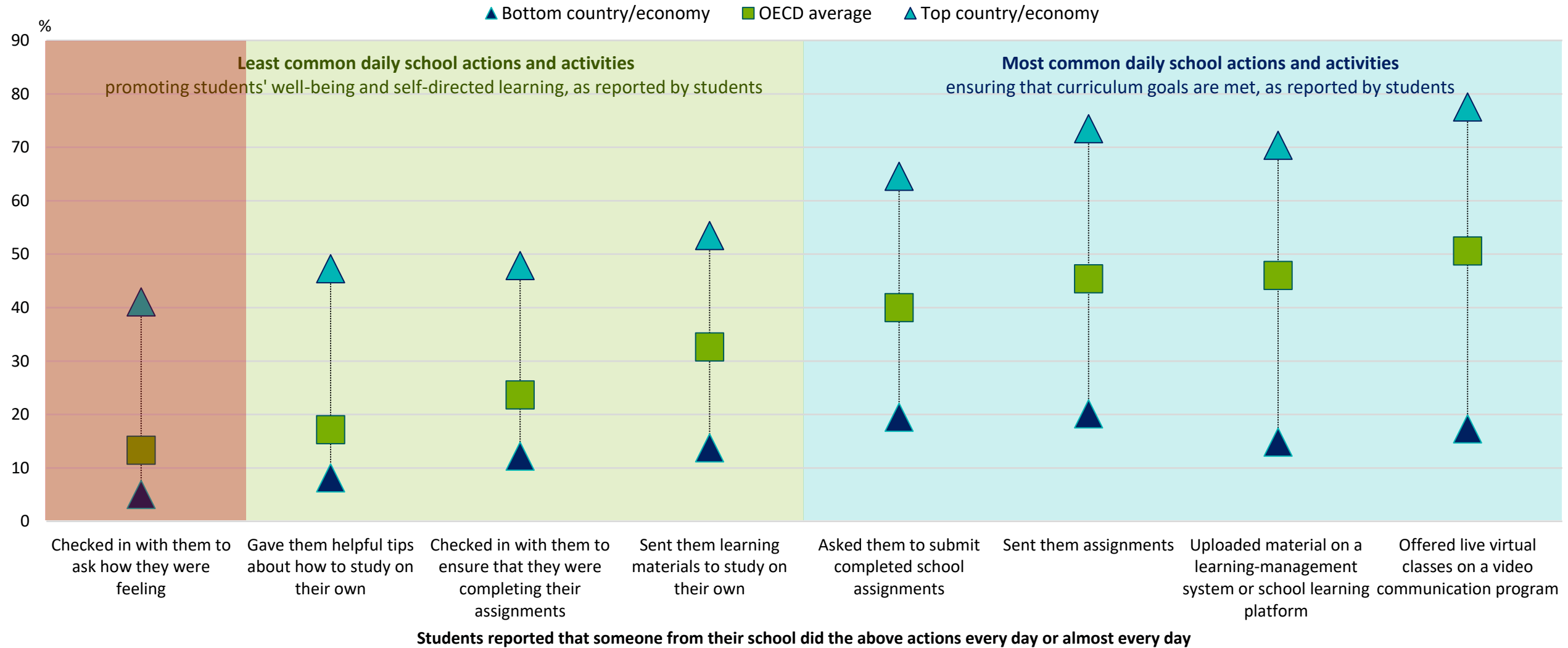
◆ After accounting for students' and schools' socio-economic profile



School actions and activities to maintain learning and well-being

Figure II.2.16

Percentage of students who reported that someone from their school did the following actions every day daily when their school building was closed because of COVID-19; OECD average



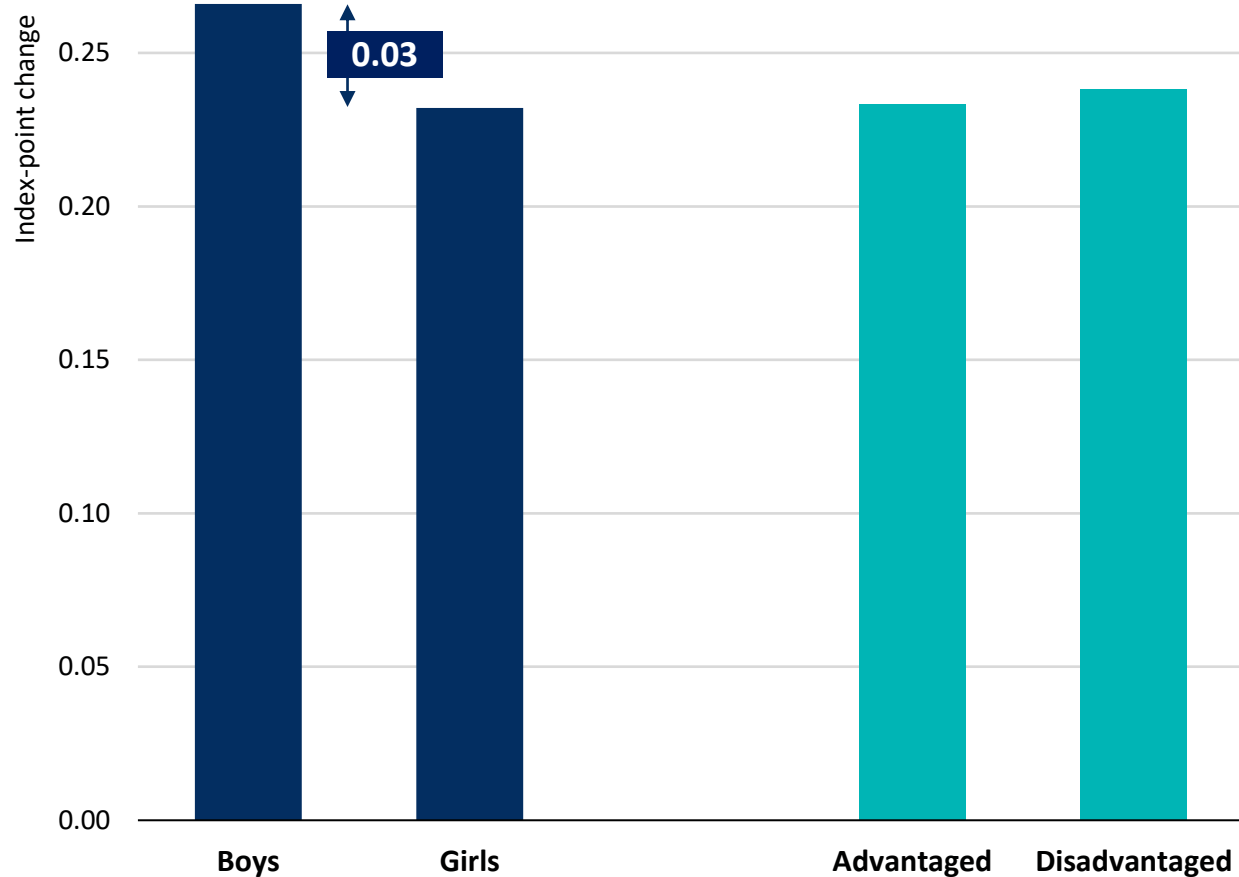


School actions to maintain learning and selected student outcomes

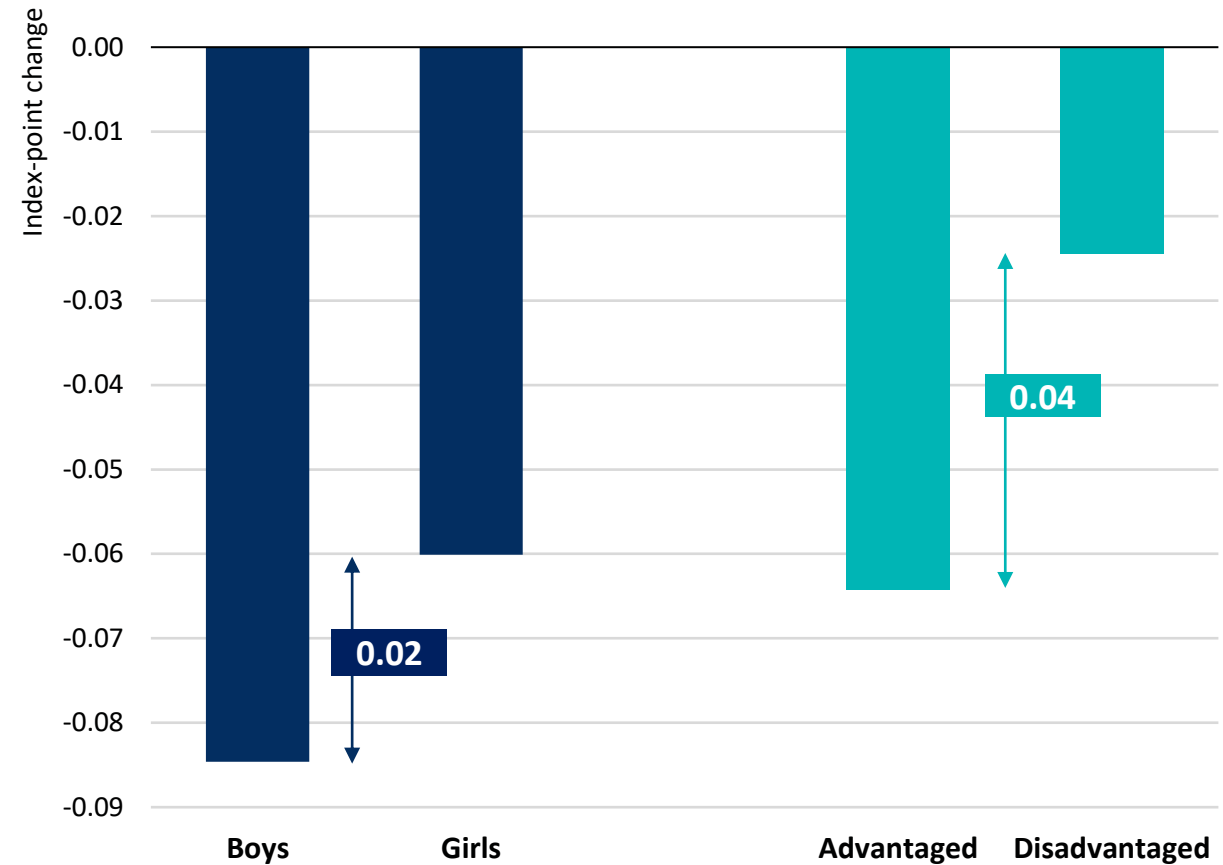
Figure II.2.18

Change associated with a one-unit increase in the index of school actions and activities to maintain learning; OECD average

Change in the index of students' confidence in their capacity for **self-directed learning**



Change in **mathematics anxiety**



Parents and families

Why they matter

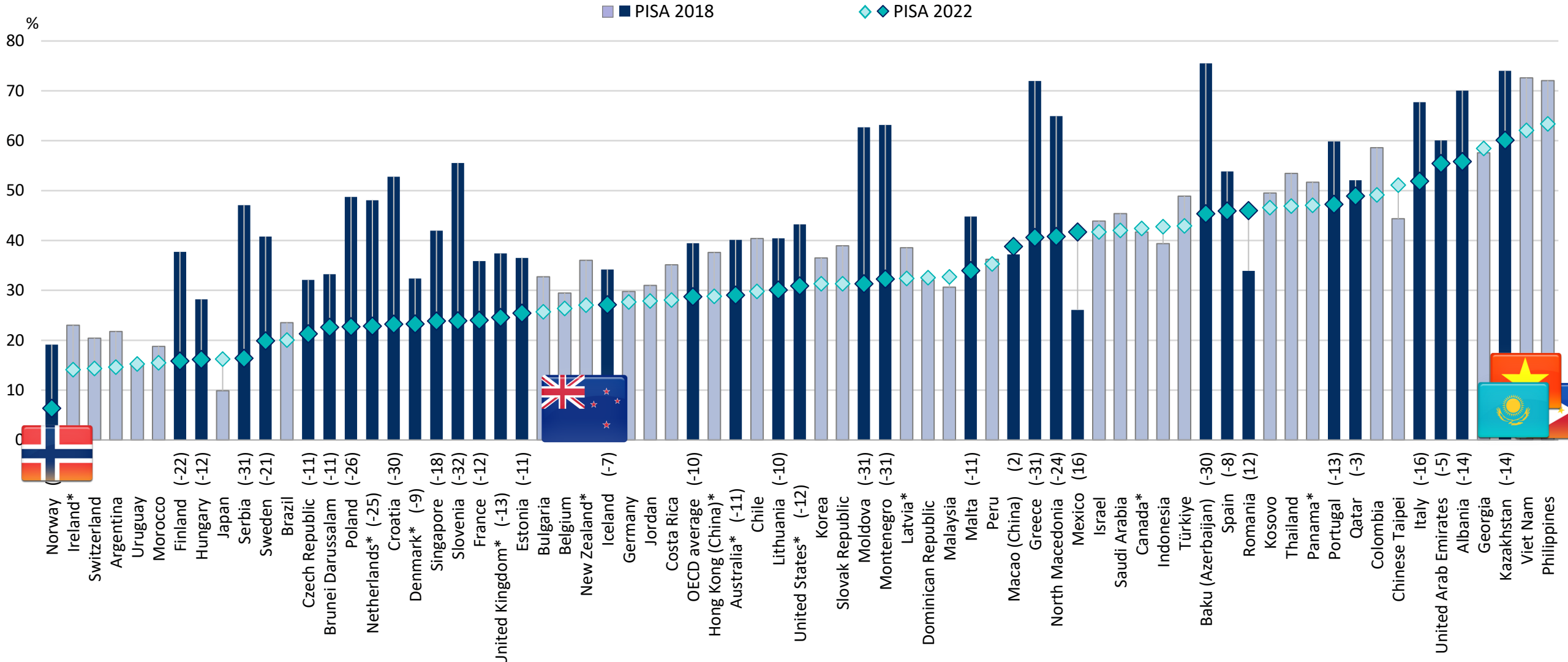




Parents-initiated talks about students' progress

Figure II.3.15

Percentage of students in schools whose principal reported that at least 50% of students' parents are involved in discussing their child's progress with a teacher on their own initiative

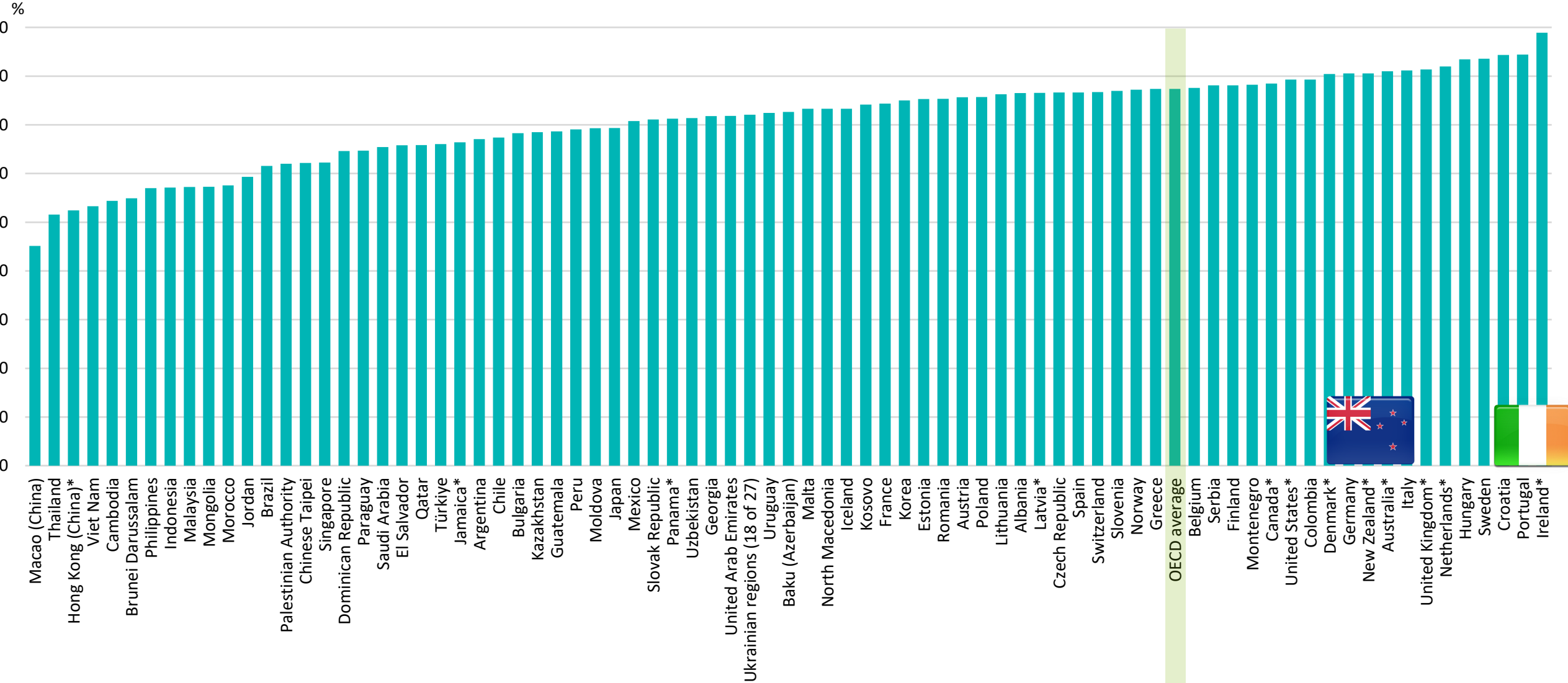




Percentage of students whose family regularly asks about school

Figure II.3.18

Percentage of students who reported that at least once a week or twice a week their parents or someone in their family asks them what they did in school that day



Beyond academic learning

Student well-being



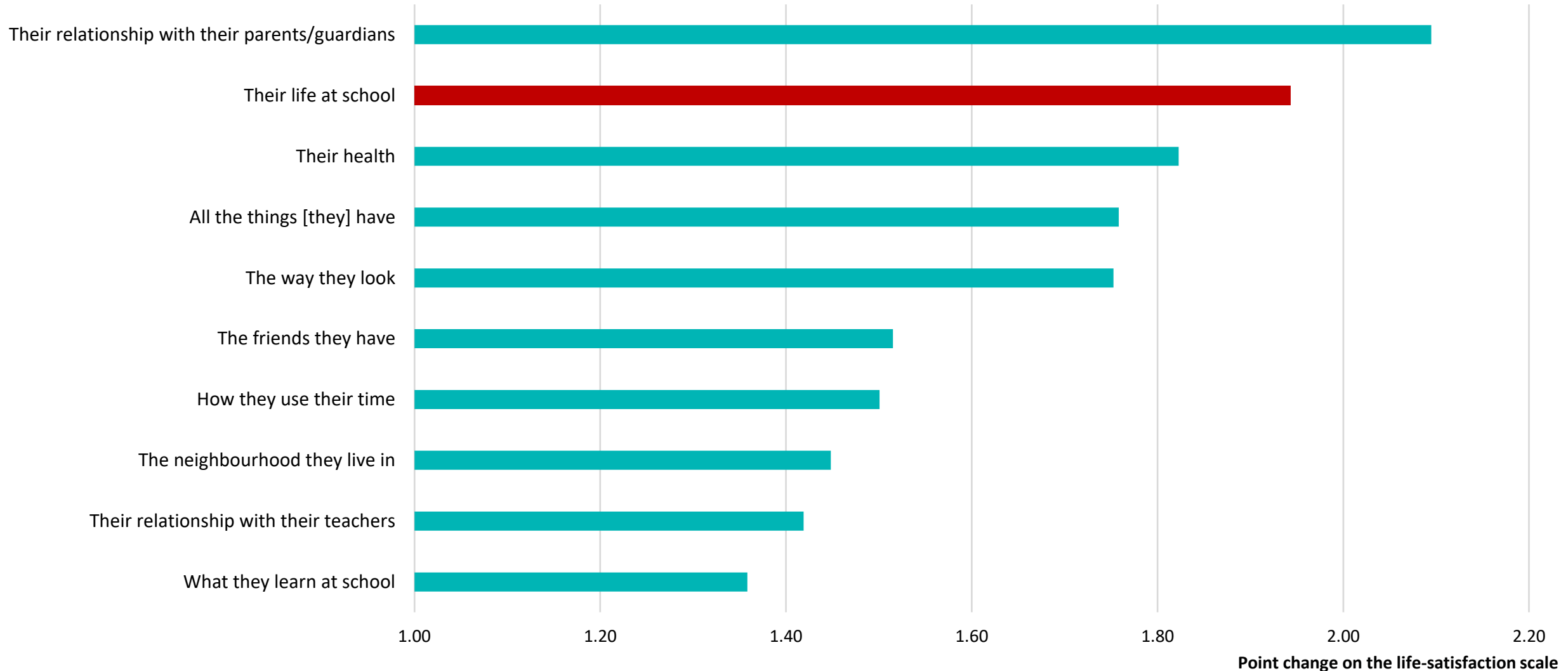


Life satisfaction and satisfaction with different aspects of life

Figure II.1.7

Average of countries/economies with available data

Change in life satisfaction when students reported that they are satisfied or totally satisfied with the following:

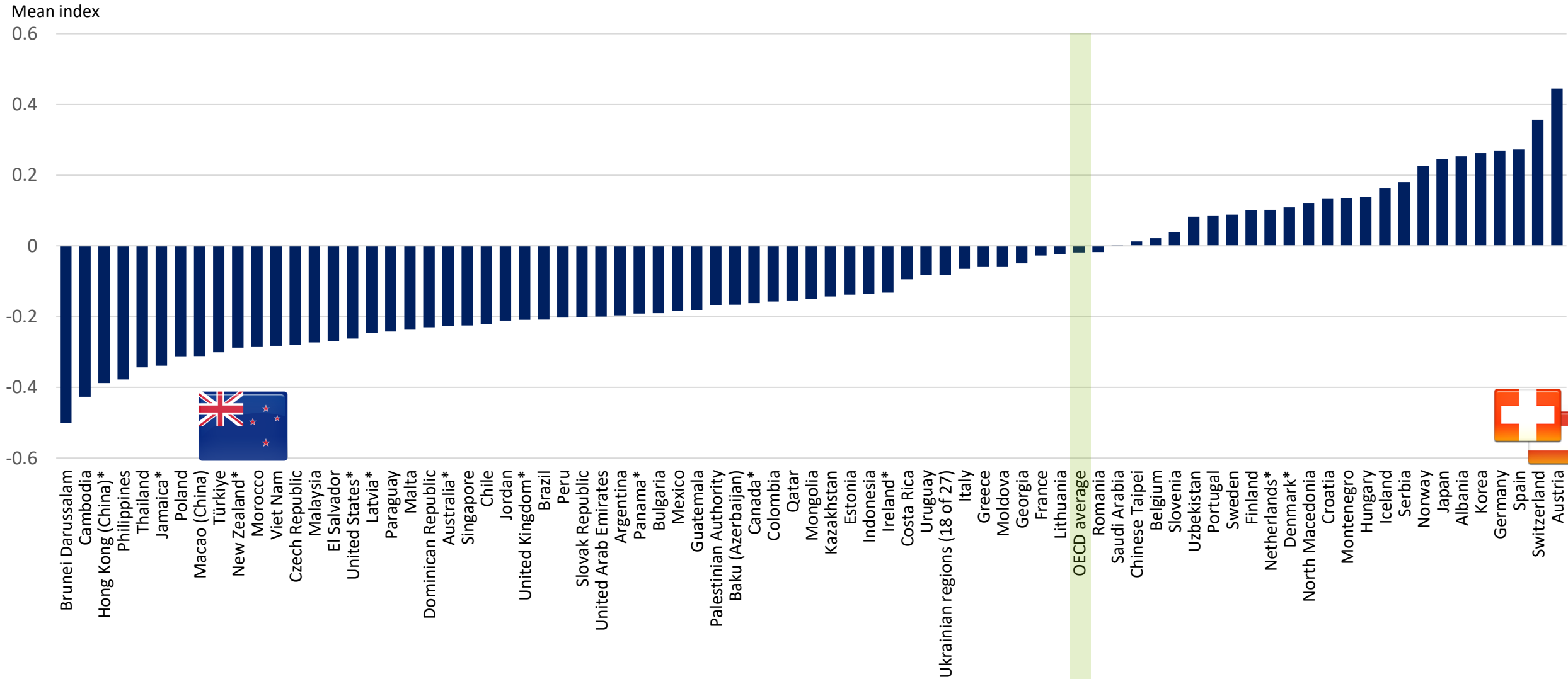




Students' sense of belonging at school, across all countries and economies

Table II.B1.1.1

Based on students' reports



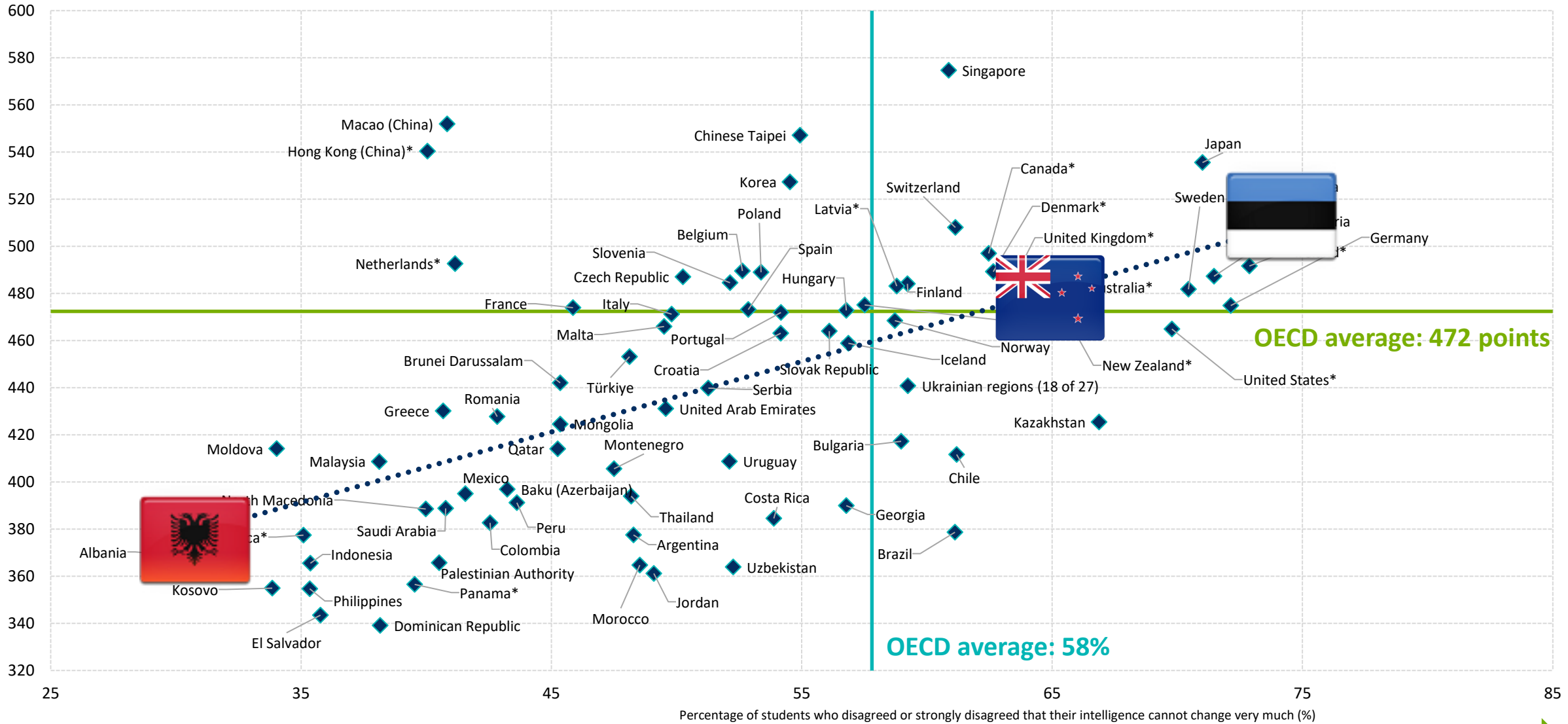


Growth mindset and mathematics performance

Table I.B1.2.1 &
Table I.B1.2.16

Higher score


Mean score in mathematics



OECD average: 472 points

OECD average: 58%

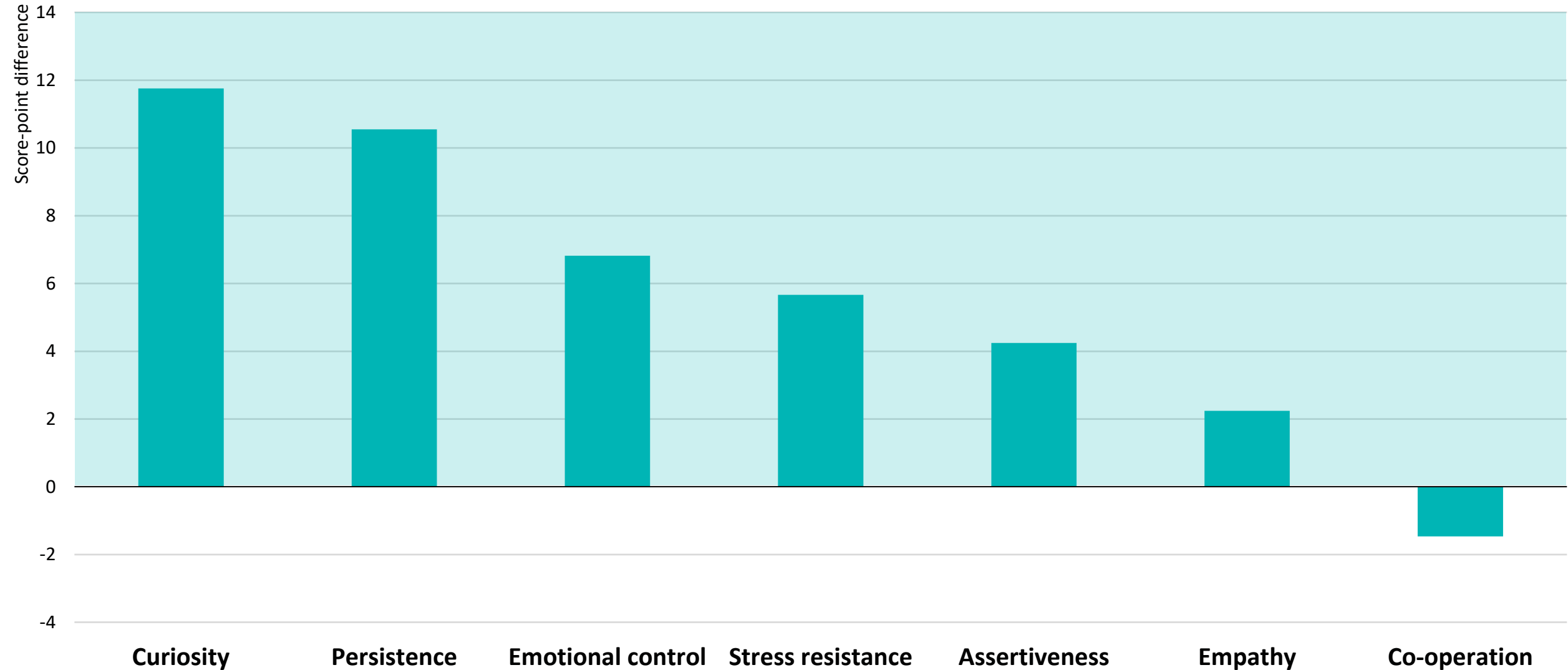
More students holding a growth mindset



Social and emotional skills, and mathematics performance

Figure II.2.6

Change in mathematics performance associated with a one-unit increase in the following indices; OECD average



Under the surface

The impact of bullying on learning

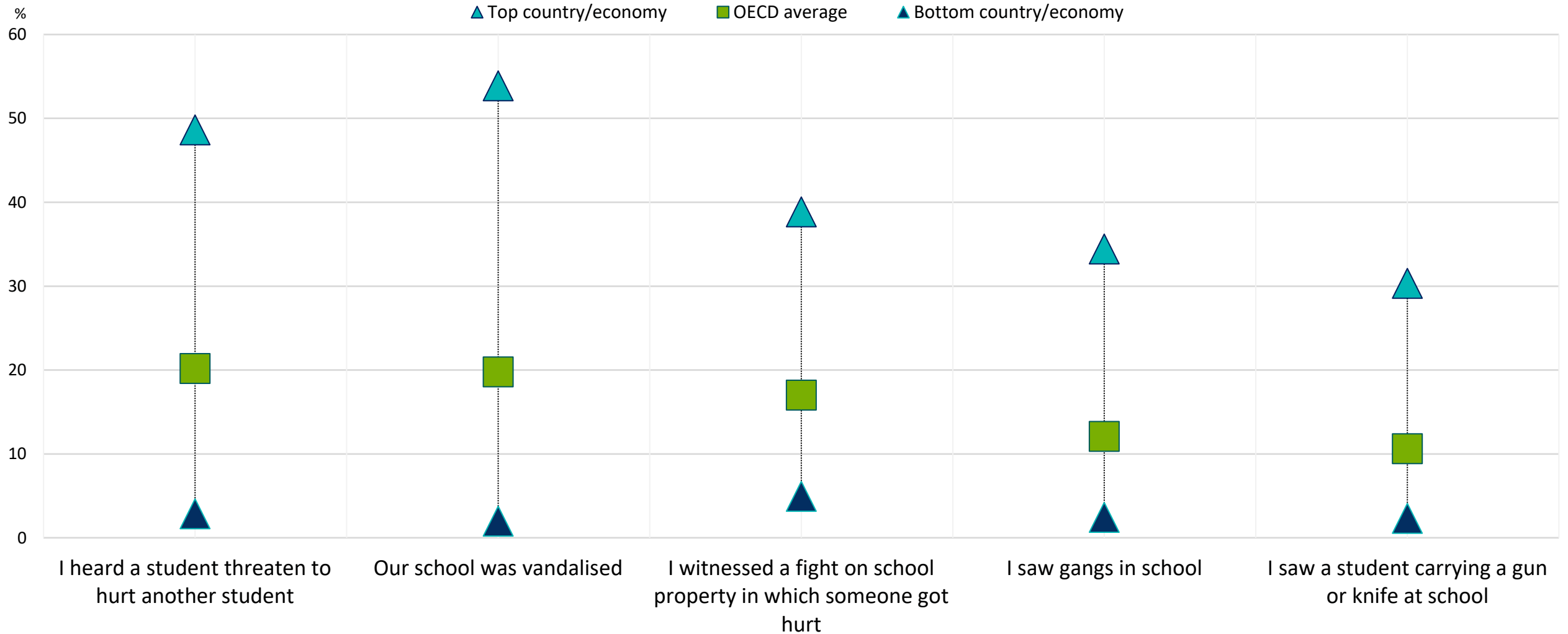




School safety risks

Figure II.3.8

Percentage of students who reported that the following happened at school during the four weeks prior to the PISA assessment; OECD average



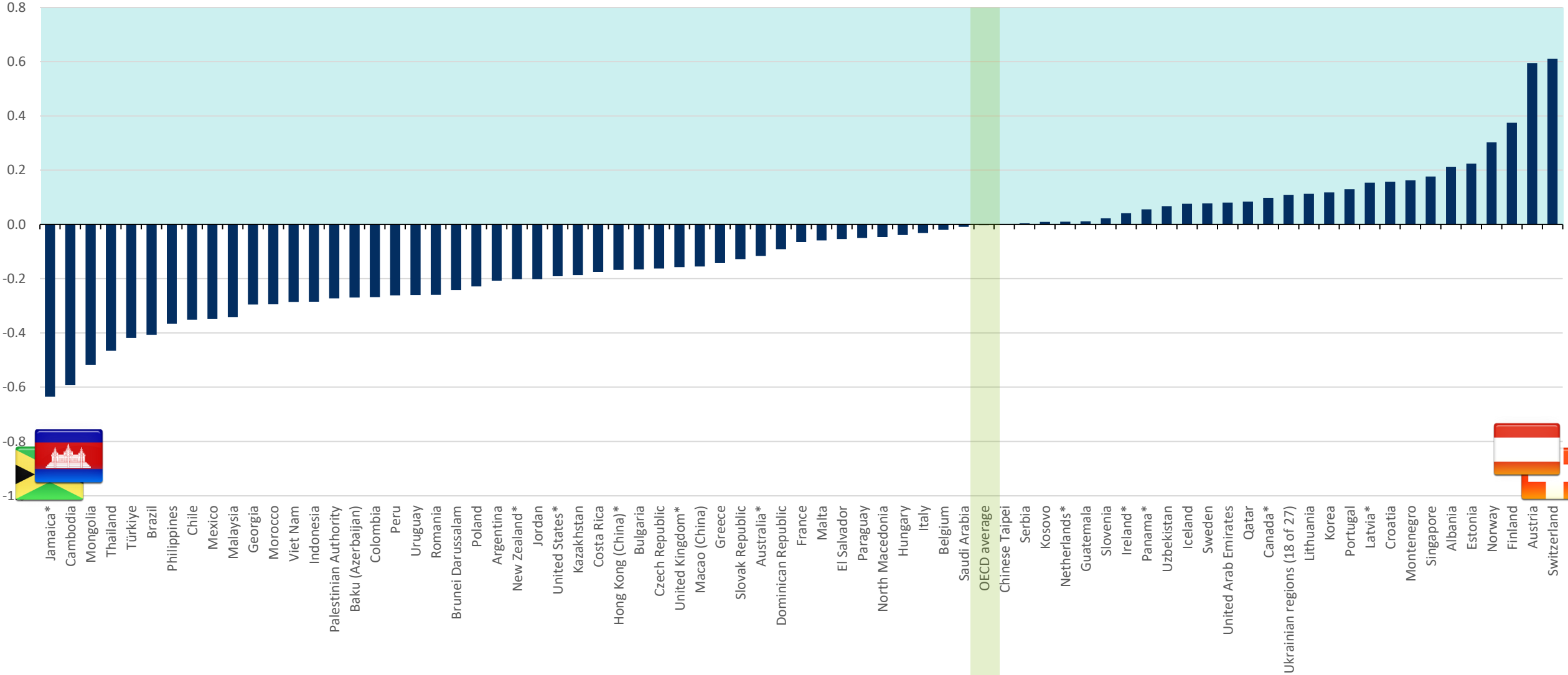


Feeling safe

Figure II.3.9

Based on students' reports

Mean index

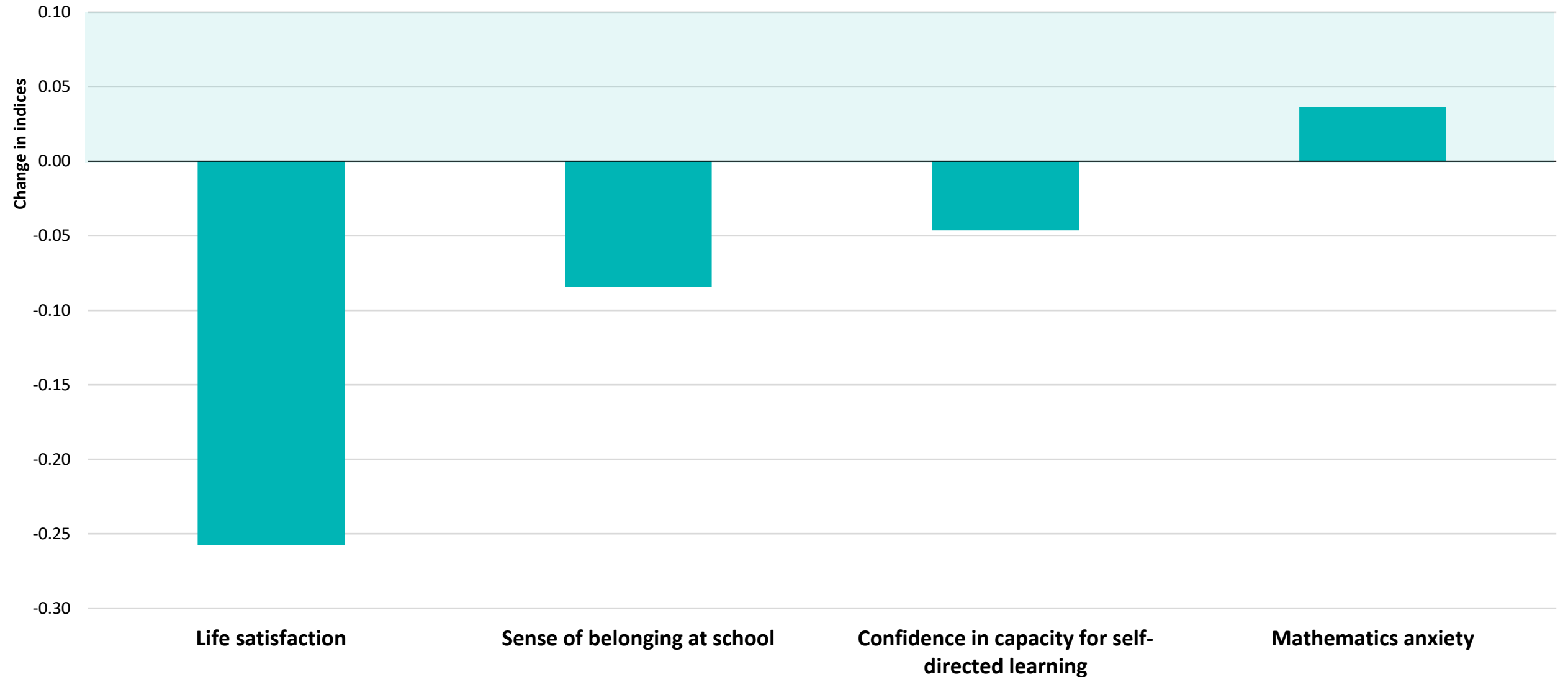




School safety risks and student well-being

Figure II.3.6

Change in the following indices per one-unit increase in the index of school safety risks; OECD average

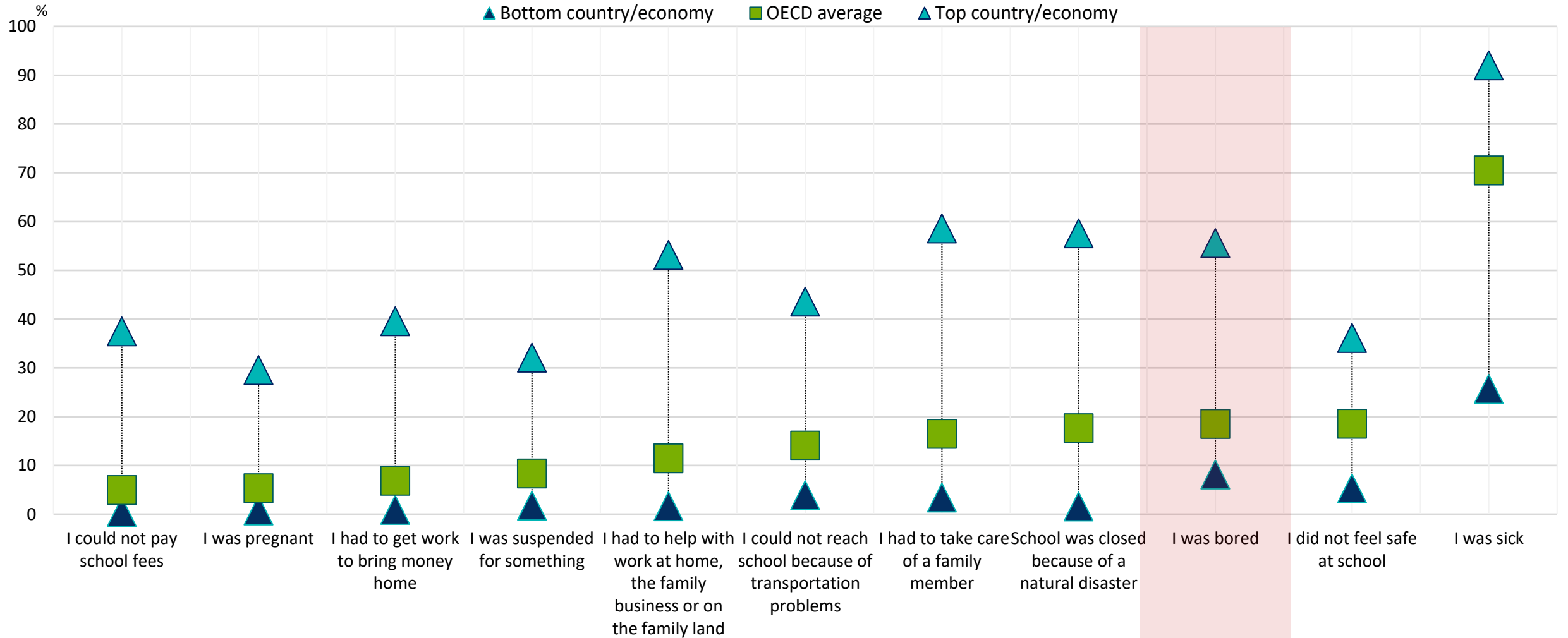




Reasons for long-term absenteeism

Figure II.3.13

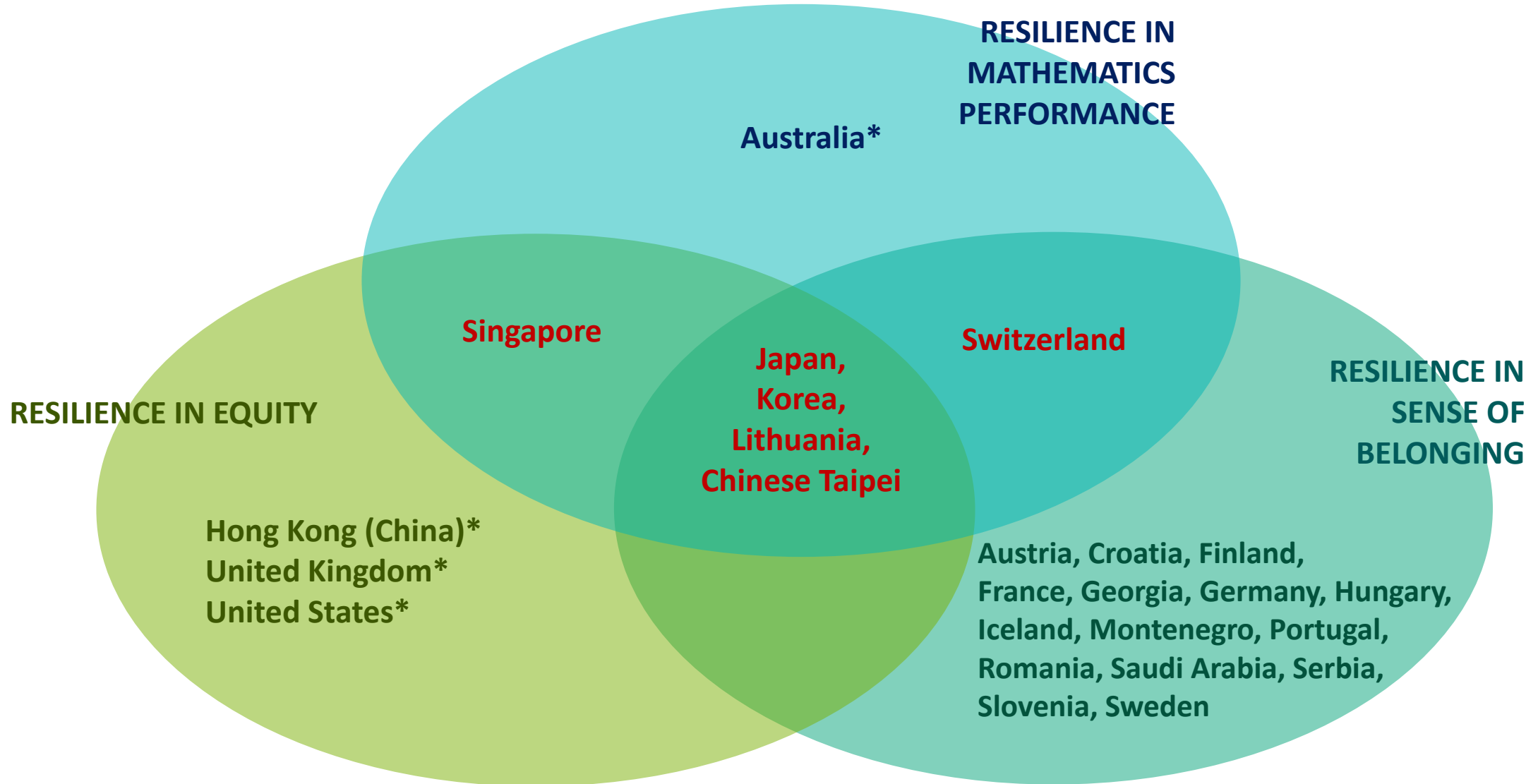
Percentage of students who reported the following reasons for having missed school for more than three consecutive months





Resilient education systems

Figure II.1.1





Some lessons from the pandemic

Keep schools open longer for more students

Prepare students for self-directed learning / teacher support

Strengthen foundations for learning and well-being / safety and sense of belonging

Limit digital distractions

Strengthen partnerships with families and parents' involvement in student learning

Delay institutional stratification

Align staff and material with needs

Make schools hubs for social interaction

Combine school autonomy with quality assurance



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



PISA main reports

Email: Andreas.Schleicher@OECD.org

X : SchleicherEDU

WeChat : AndreasSchleicher

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PISA FAQs: www.oecd.org/pisa/pisafaq

PISA Data Explorer: www.oecd.org/pisa/data



PISA Country notes

