

# Webinar

## Basic skills, lessons learned from PISA

10 April | 16:00 CEST



Webinar offered by:  
European School  
Education Platform

<https://school-education.ec.europa.eu/en>



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# Webinar

## Basic skills, lessons learned from PISA

10 April | 16:00 CEST



**Miyako Ikeda**  
senior analyst at the  
OECD in Paris



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Enriching lives, opening minds.

# Lessons learned from PISA

## European Commission's Webinar on Basic skills

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**Miyako Ikeda**  
Senior analyst, OECD

10 April 2024



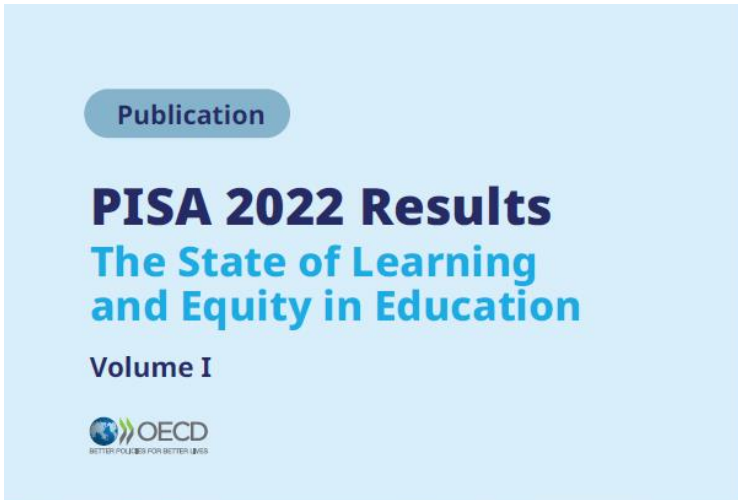
# PISA 2022

## An introduction

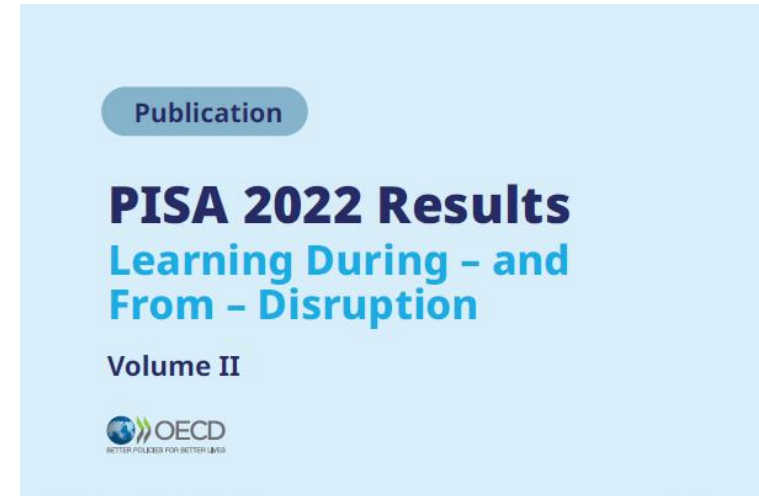


# Two volumes were released on 5 December 2023

## *The first results of OECD's PISA 2022*



[link](#)



[link](#)



# What is PISA?

## Programme for International Student Assessment

assesses 15-year-old students' abilities and knowledge in mathematics, reading and science





# What is PISA?

## Programme for International Student Assessment

assesses **15-year-old students'**  
abilities and knowledge in  
**mathematics, reading and science**







## 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



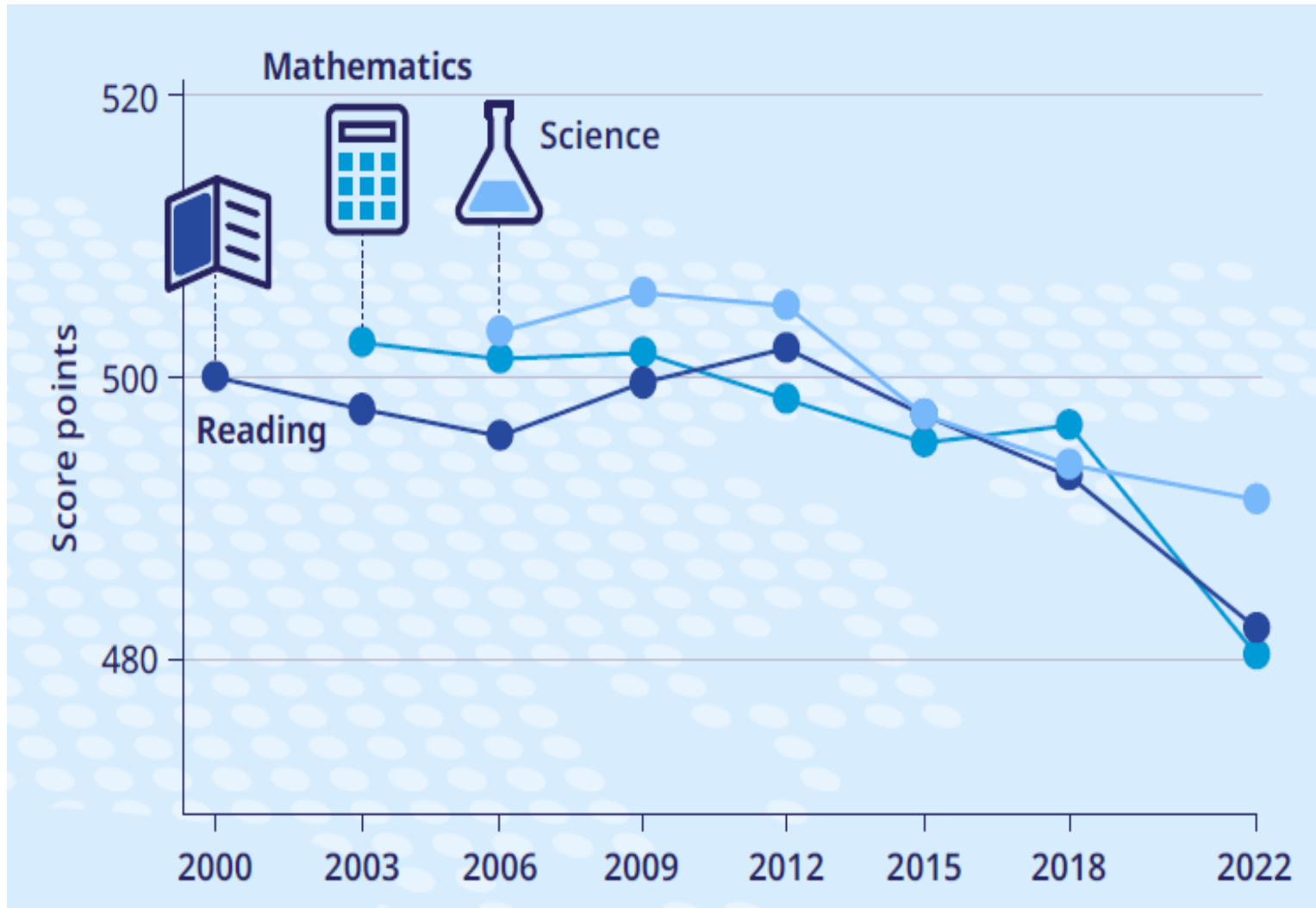


# PISA 2022 international results

The state of global education



# Trends across OECD countries



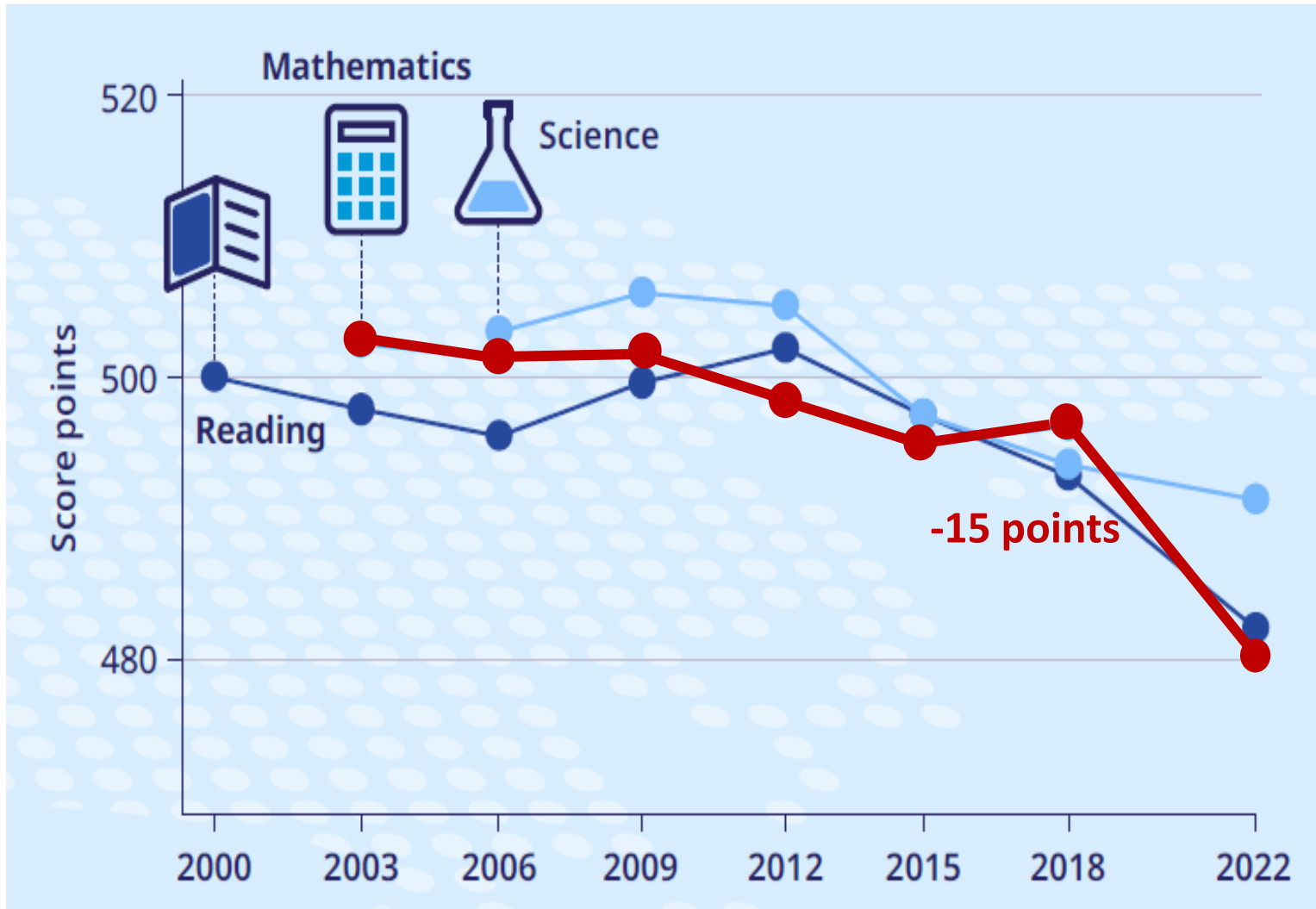
Performance in all three subjects **declined** since PISA began

Between 2018 and 2022

- 15 points decline in mathematics
- 10 points decline in reading
- No significant decline in science

# Trends across OECD countries

Click on the following link or scan the QR code to answer the question! <https://www.menti.com/al1twh117zwv>



Performance in all three subjects **declined** since PISA began

Between 2018 and 2022

- 15 points decline in mathematics (EU: -17 points)
- 10 points decline in reading (EU: -13 points)
- No significant decline in science (EU: No sig. change)

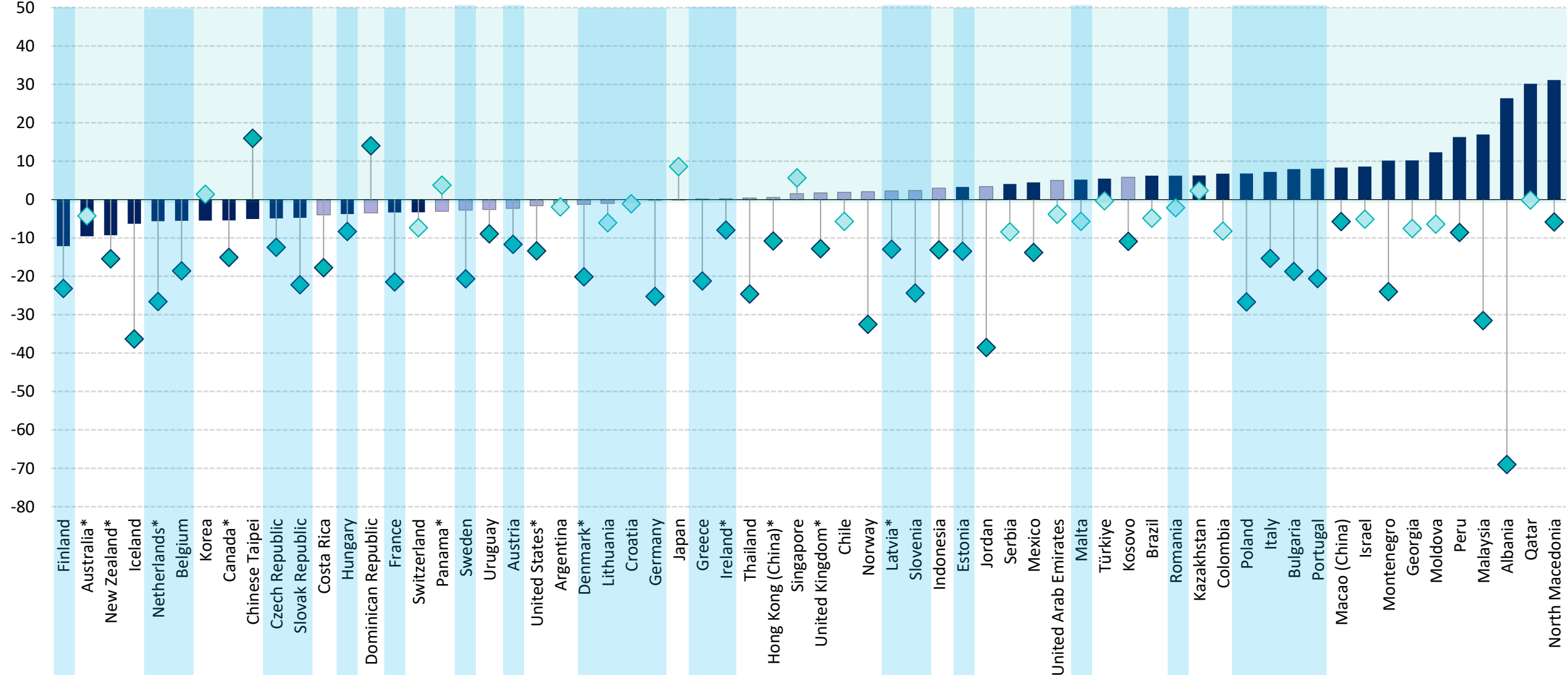
# 2018-2022 mathematics performance trends in the context of pre-2018 trends

Figure I.5.3

## Mathematics

Score-point difference

■ Pre 2018 4-year trend    ◆ Change between 2018 and 2022

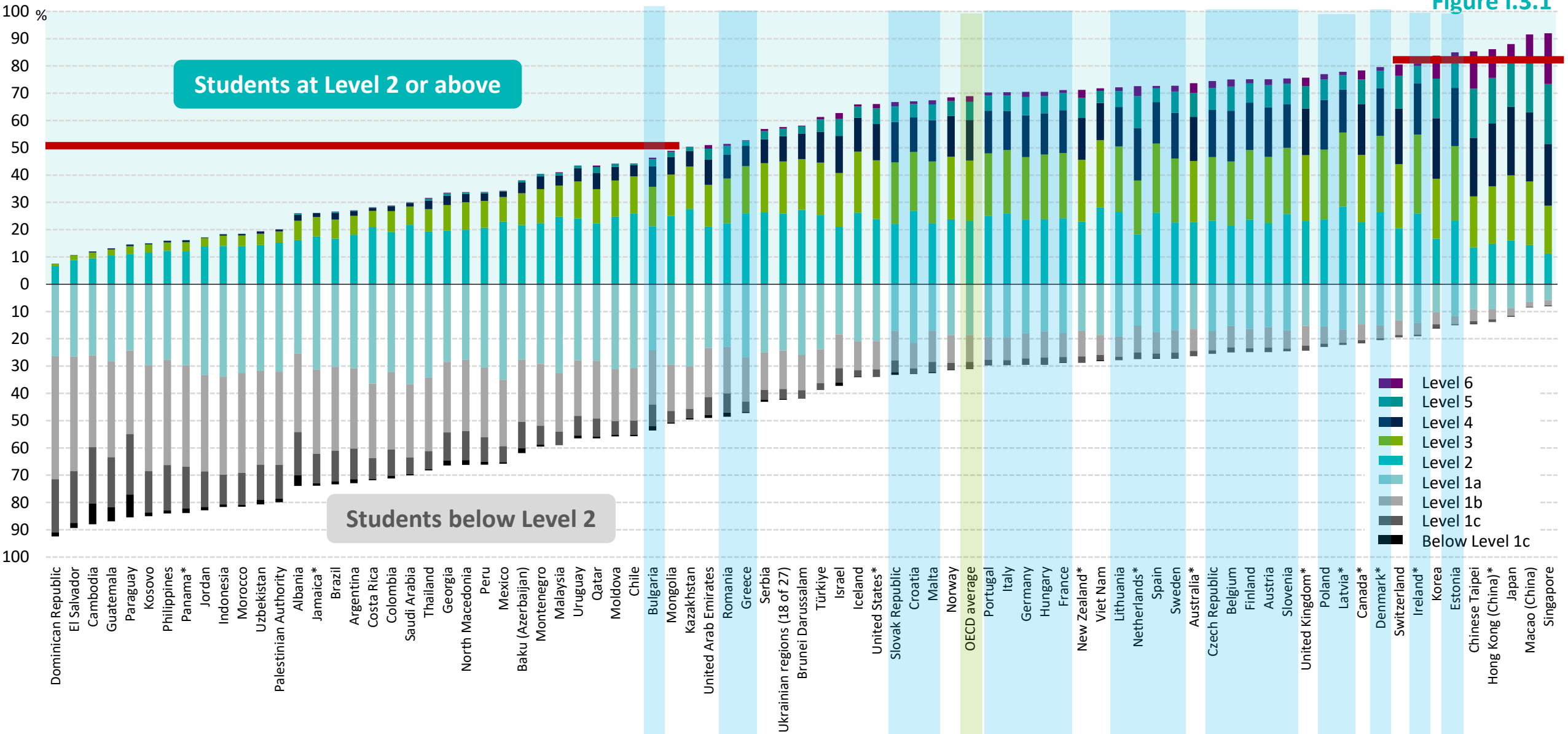






# SDG Target 4.1: Students' proficiency in mathematics

Figure I.3.1





# PISA 2022 mathematics item: Level 2

PISA 2022



## Triangular Pattern

Question 2 / 3

Refer to "Triangular Pattern" on the right. Click on a choice to answer the question.

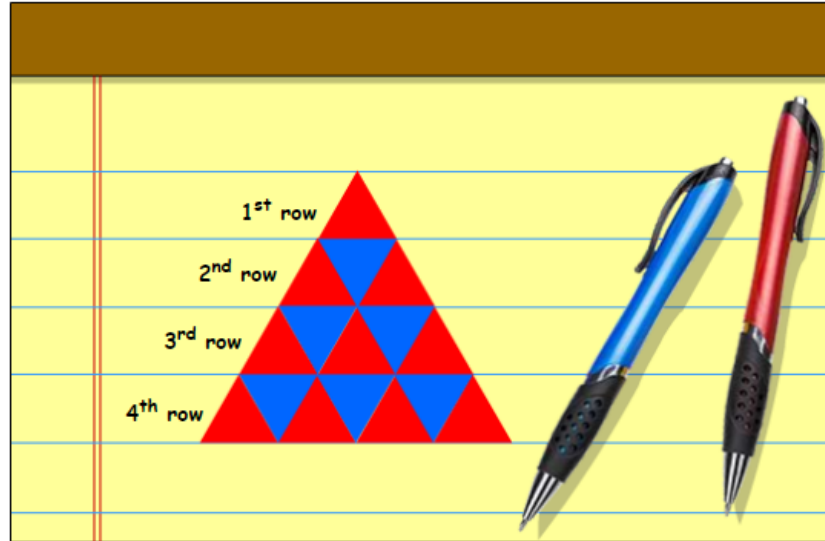
If Alex were to extend the pattern to a fifth row, what would be the percentage of blue triangles in all five rows of the pattern?

- 40.0%
- 50.0%
- 60.0%
- 66.7%

## TRIANGULAR PATTERN

Alex drew the following pattern of red and blue triangles.

The first four rows of the pattern are shown below.



Click on the following link or scan the QR code to answer the question!

<https://www.menti.com/al81w4si8g6o>



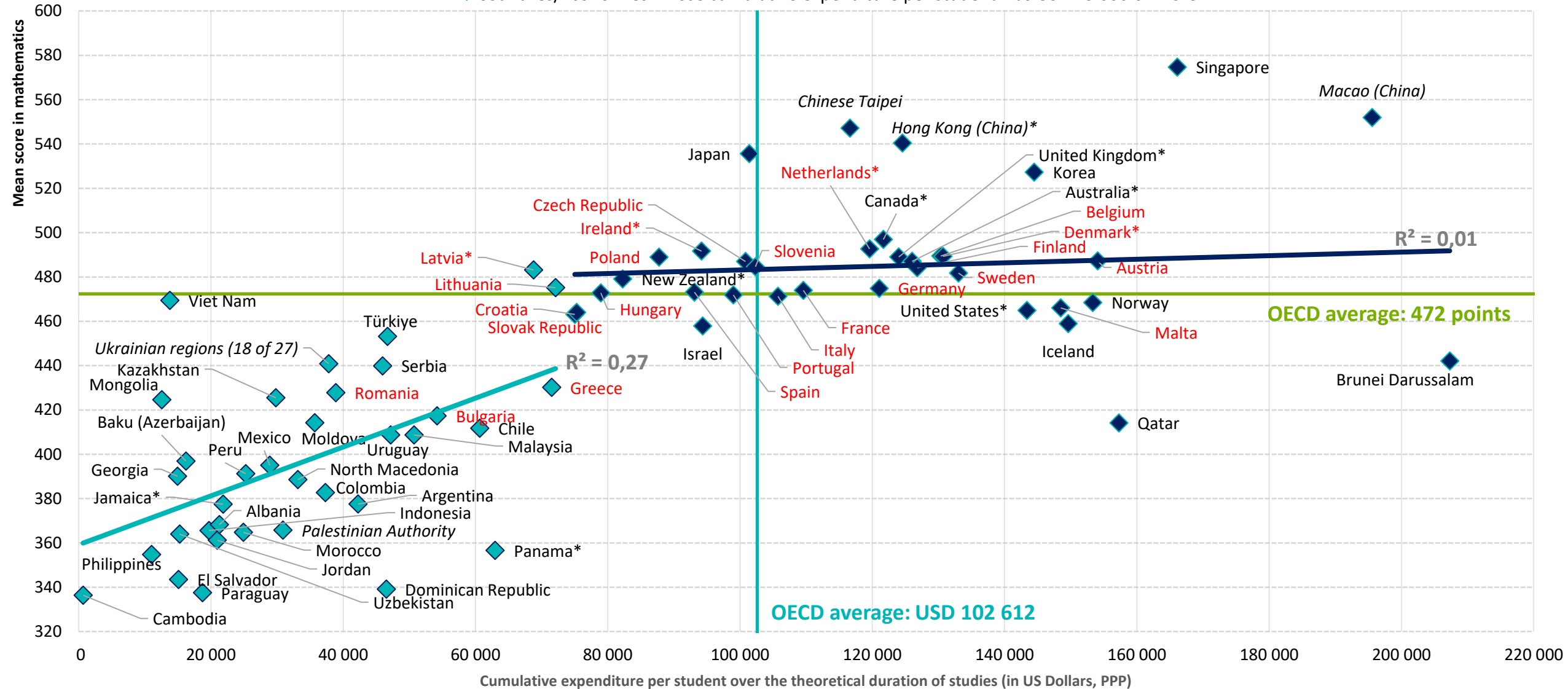




# Money matters, up to a point

Figure II.5.2

- ◆ Countries/Economies whose cumulative expenditure per student was less than USD 75 000
- ◆ Countries/Economies whose cumulative expenditure per student was USD 75 000 or more



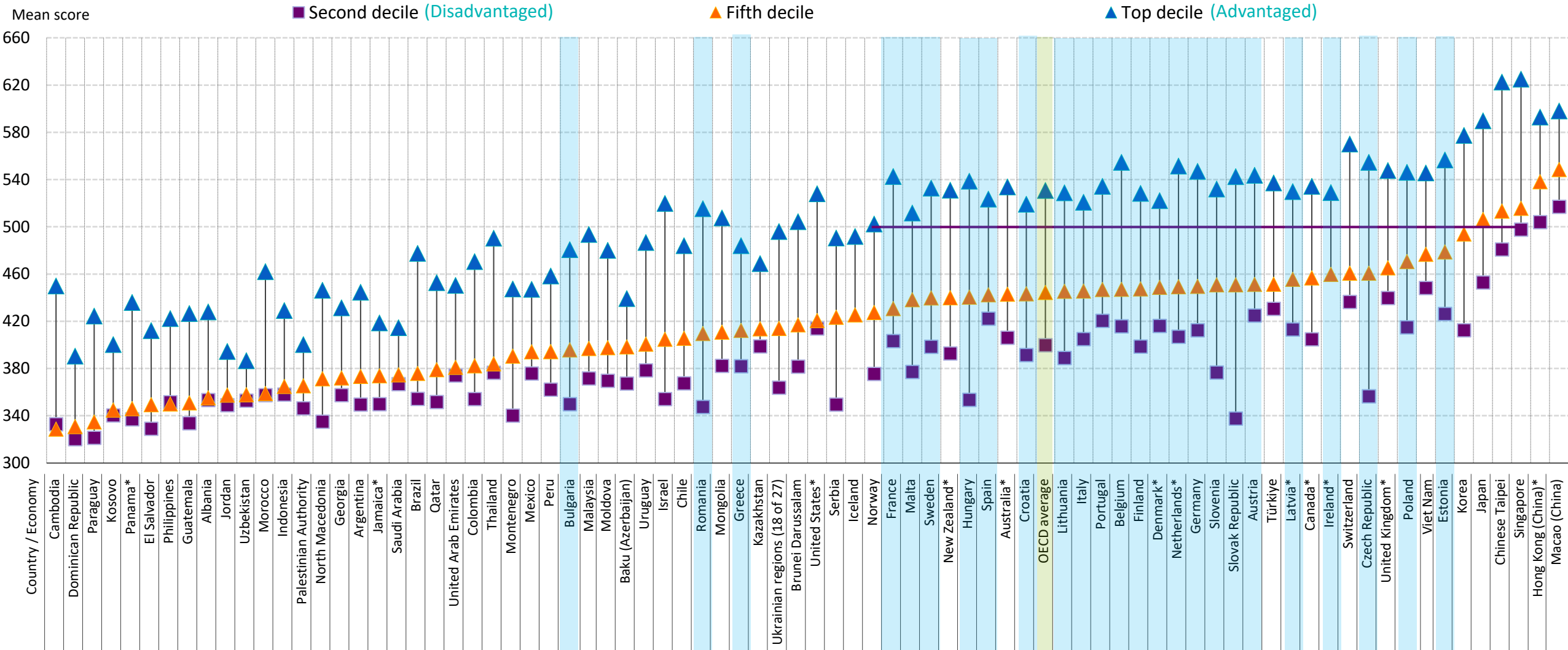




# Poverty is not destiny

Figure I.4.18

## International deciles of PISA index of economic, social and cultural status (ESCS)



# PISA 2022 international results

Beyond mathematics, reading and science





# Criteria used to identify resilient education systems

## Performance

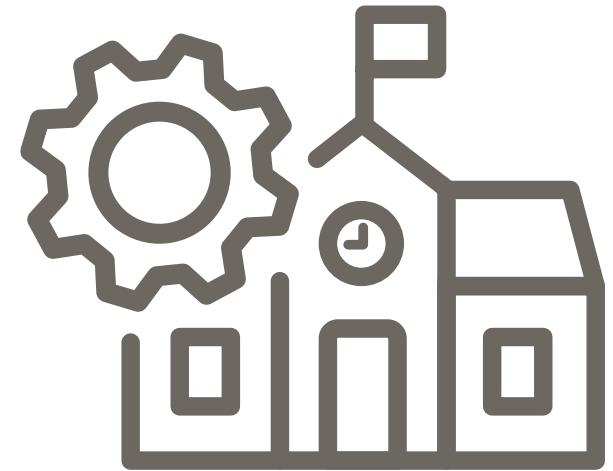
Mathematics scores

## Equity

Link between students' performance and socio-economic status

## Well-being

Students' sense of belonging at school

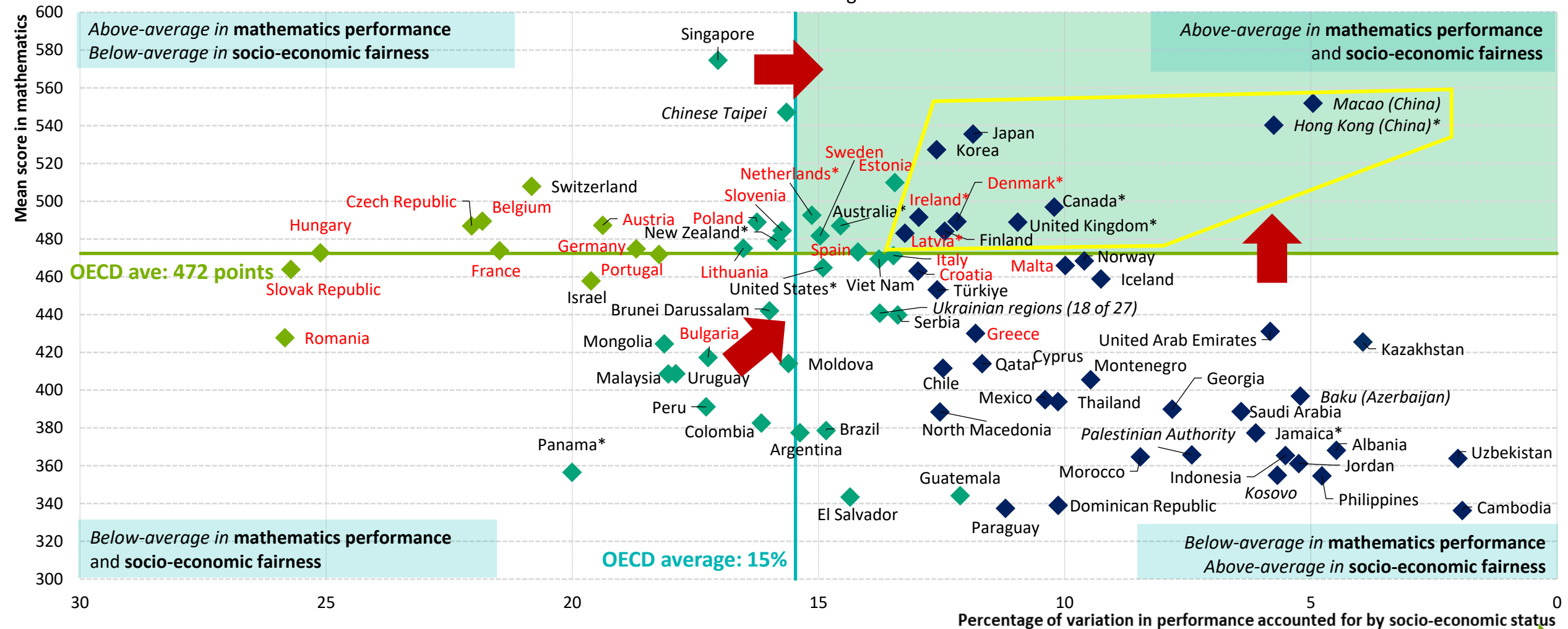




# 10 systems achieving greater equity

Figure I.4.2

- ◆ Socio-economic fairness is below the OECD average
- ◆ Socio-economic fairness is not statistically significantly different from the OECD average
- ◆ Socio-economic fairness is above the OECD average



Greater socio-economic fairness



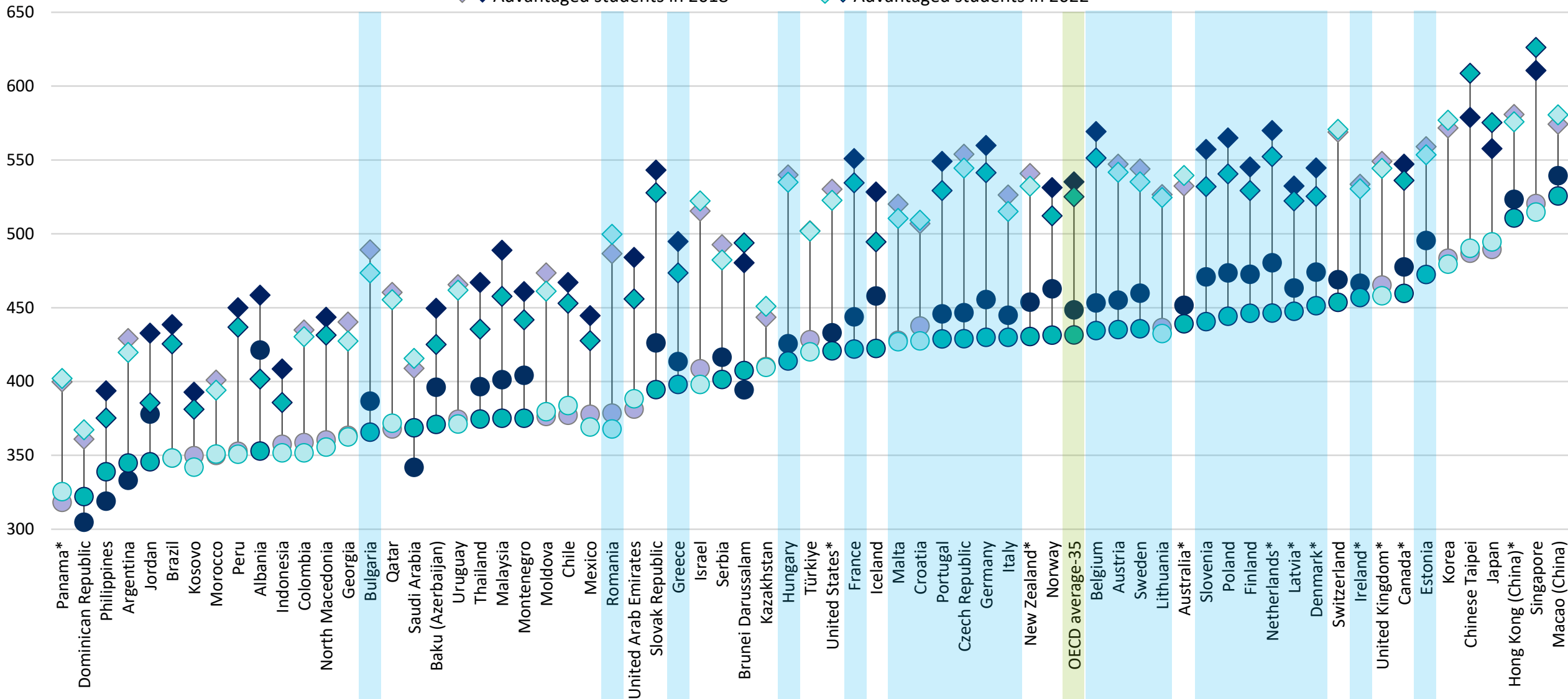


# Advantaged and disadvantaged students' performance equally went down

Figure I.5.5

- Disadvantaged students in 2018
- Disadvantaged students in 2022
- ◆ Advantaged students in 2018
- ◆ Advantaged students in 2022

Mathematics score



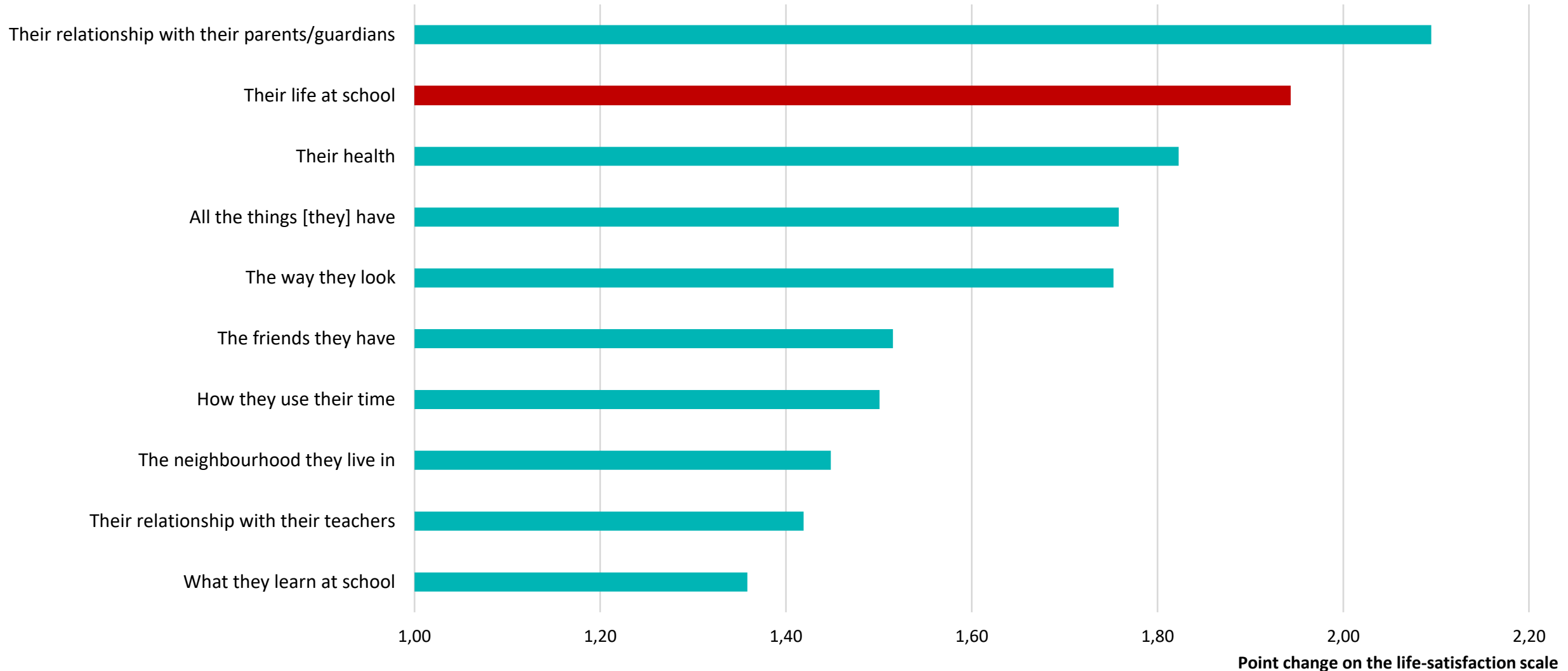


# Life satisfaction is closely linked to satisfaction with school life

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:*

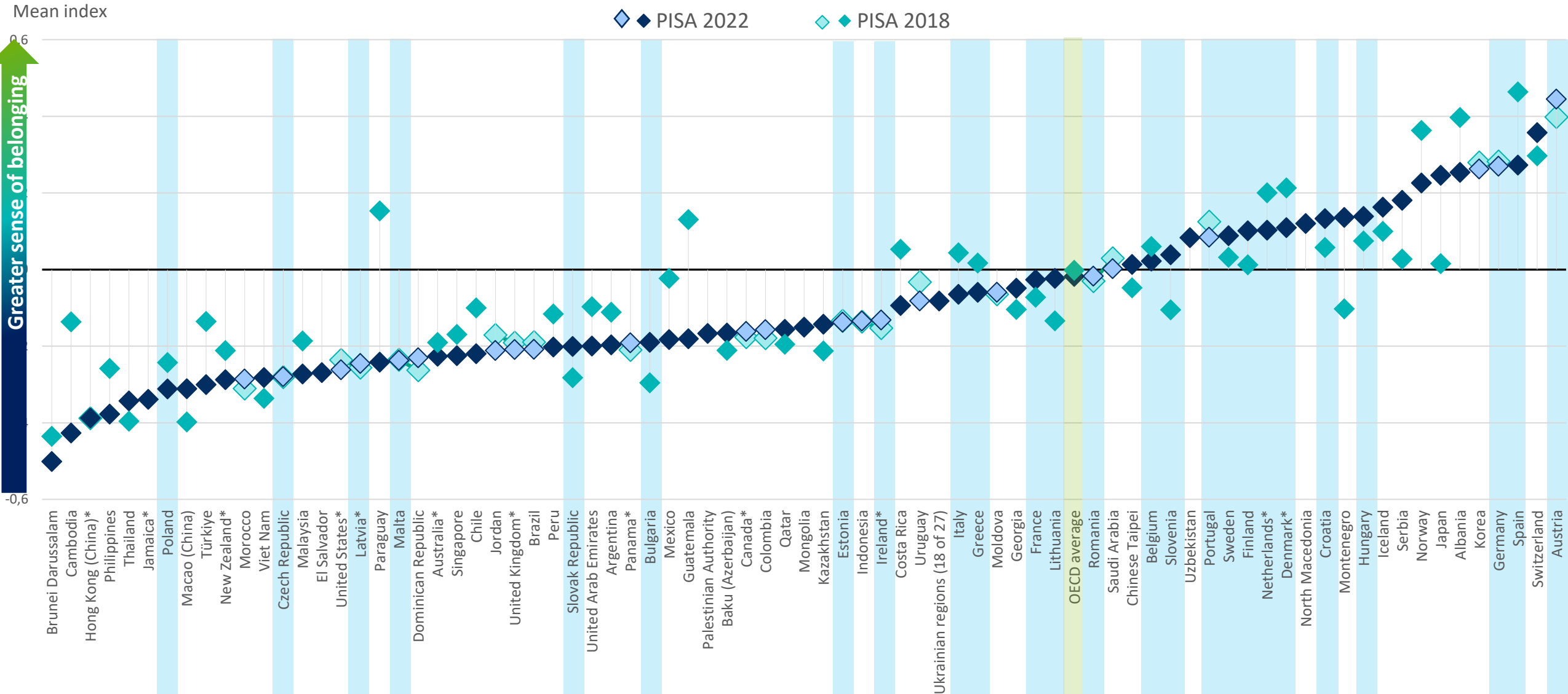




# Sense of belonging at school between 2018 and 2022

Table II.B1.1.5

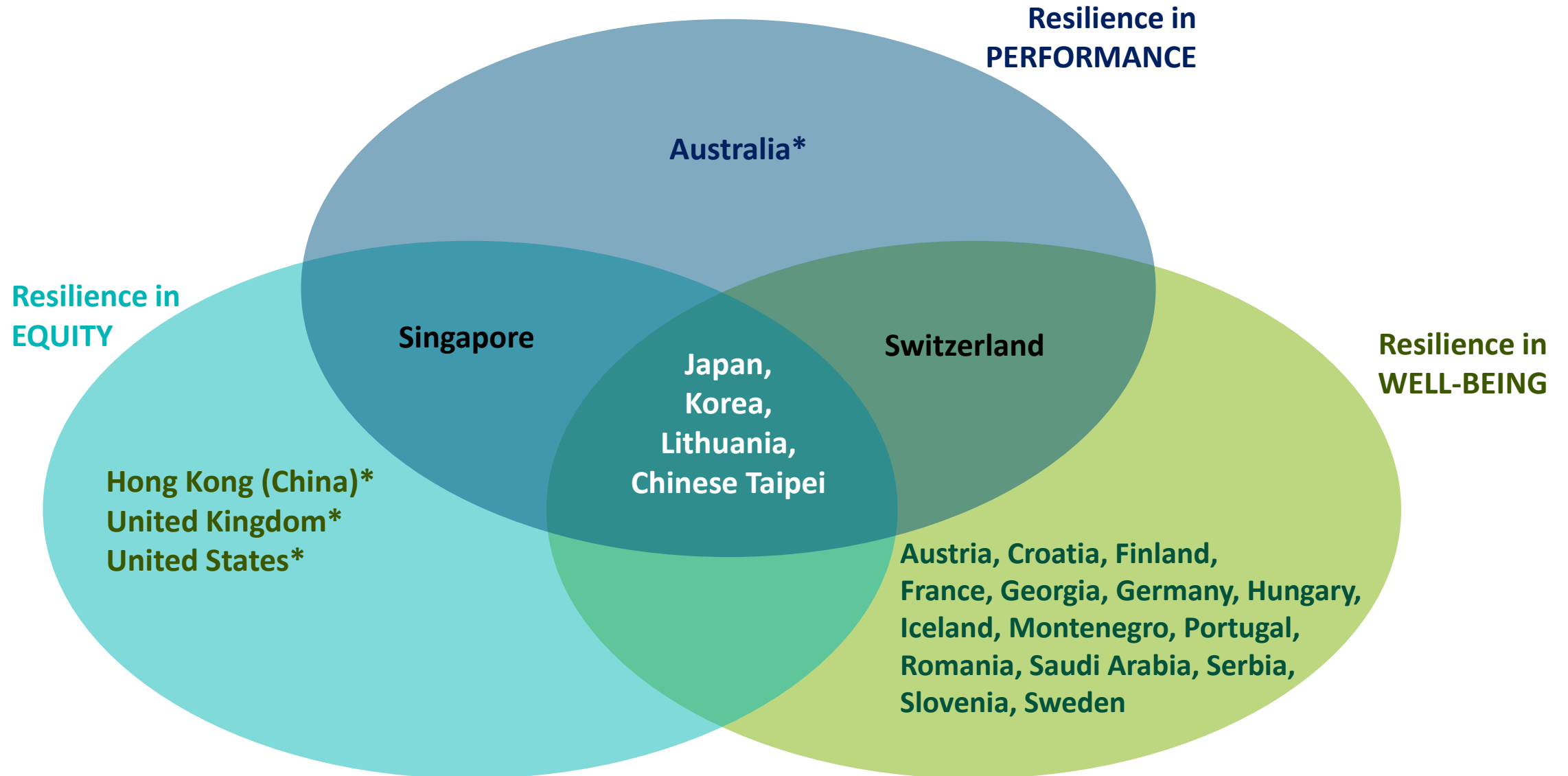
## Index of sense of belonging at school





# Resilient education systems

Figure II.1.1





# Characteristics of resilient education systems

Performance

Equity

Well-being



Learning during school closures

School life and home support

Students' pathways through school

Material and educational resources

School governance



# Ten actions related to resilience

## Learning during school closures

- ✓ Keep schools open longer for more students
- ✓ Prepare students for self-directed learning

## School life and home support

- ✓ Build strong foundations for learning and well-being
- ✓ Strengthen school-family partnerships

## Students' pathways through school

- ✓ Delay institutional stratification
- ✓ Provide additional support to struggling students

## Material and educational resources

- ✓ Limit digital distractions
- ✓ Align staff and materials with needs

## School governance

- ✓ Make schools hubs for social interaction
- ✓ Combine school autonomy with quality assurance





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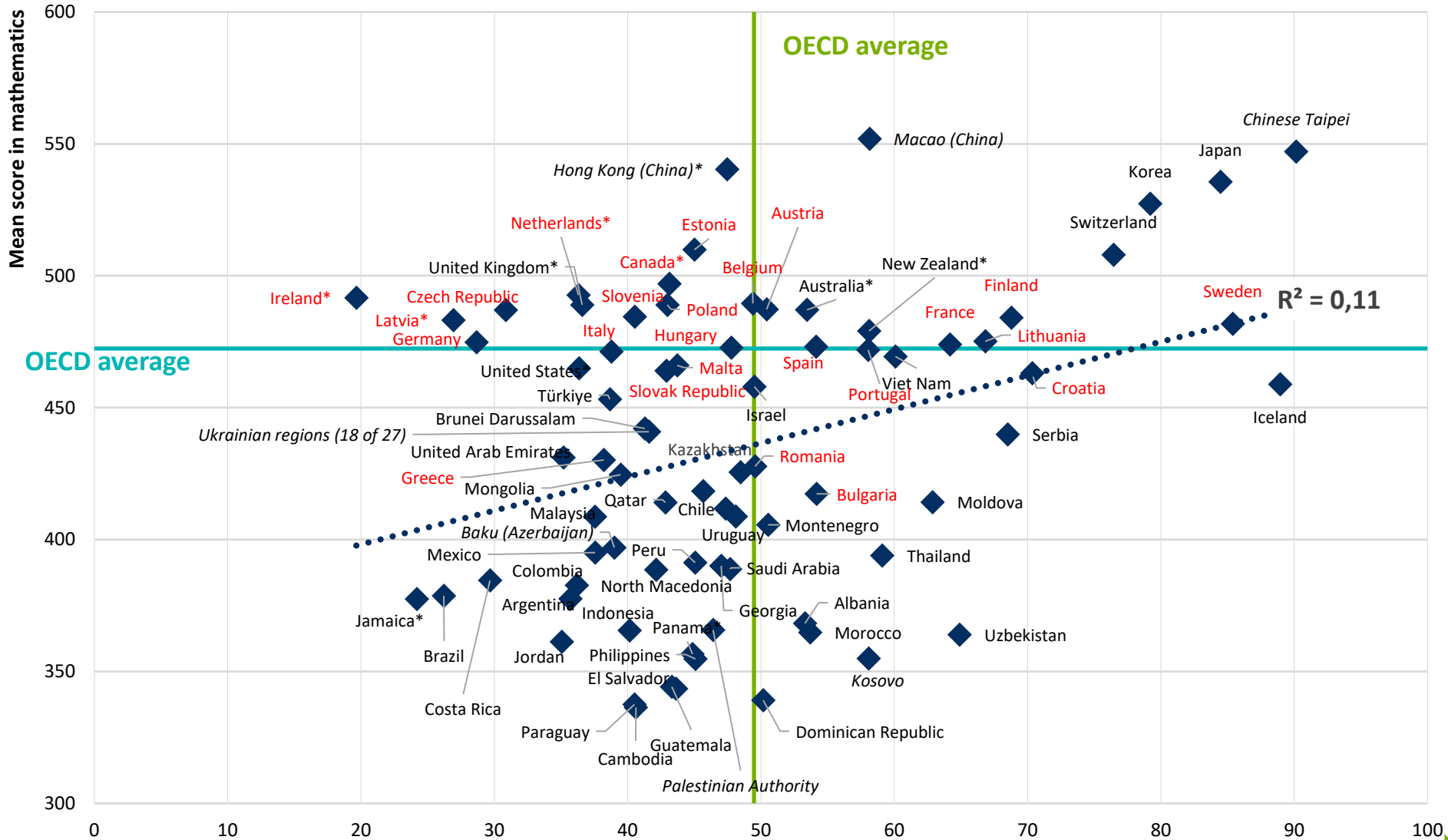
# PISA 2022 international results

## Learning during school closures



# High performers kept schools open longer for more students

Figure II.2.2



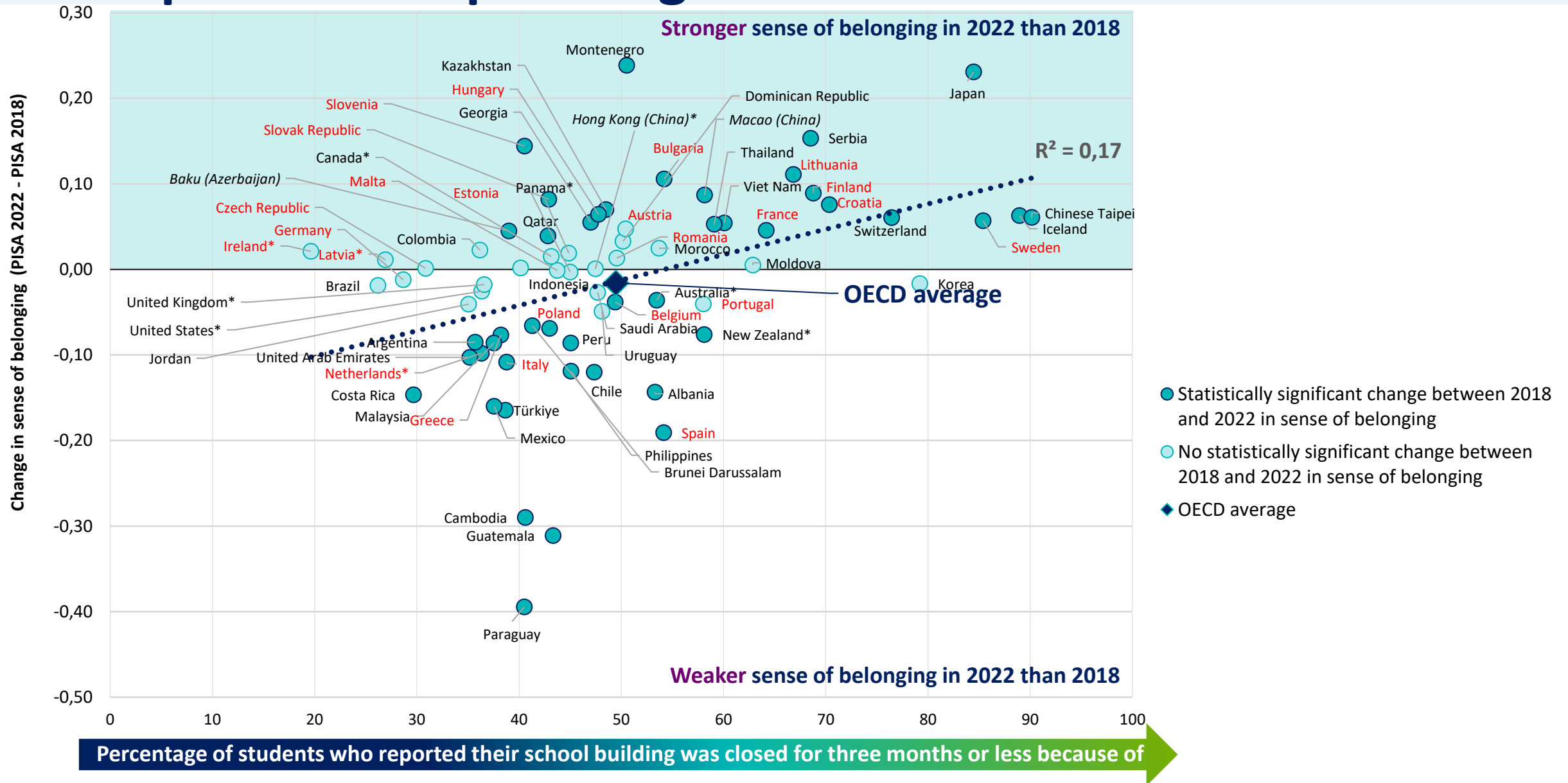
Percentage of students who reported their school building was closed for three months or less because of COVID-19





# Systems with improved sense of belonging kept schools open longer for more students

Figure II.2.3



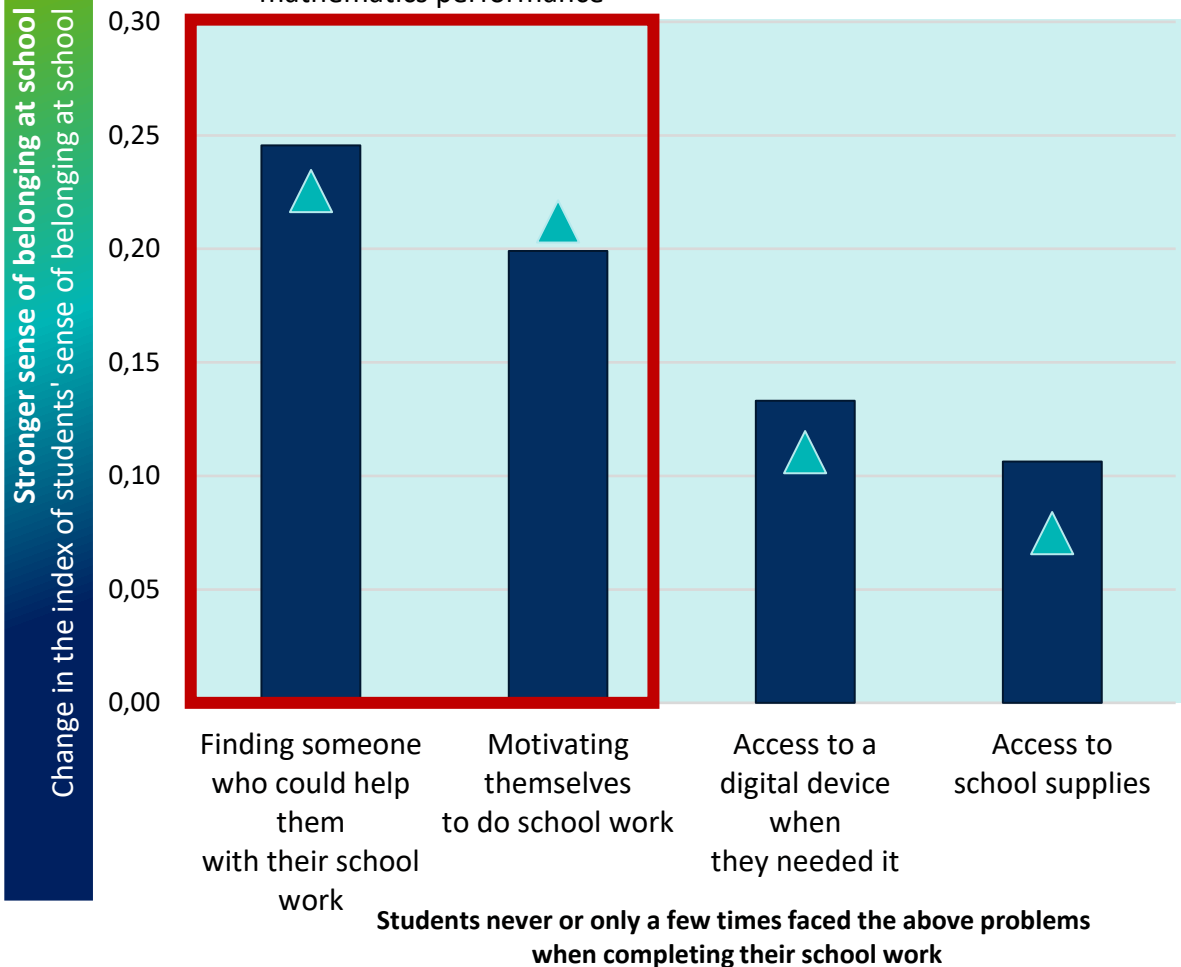


# Less problems with remote learning, better sense of belonging and higher performance

Figure II.2.15

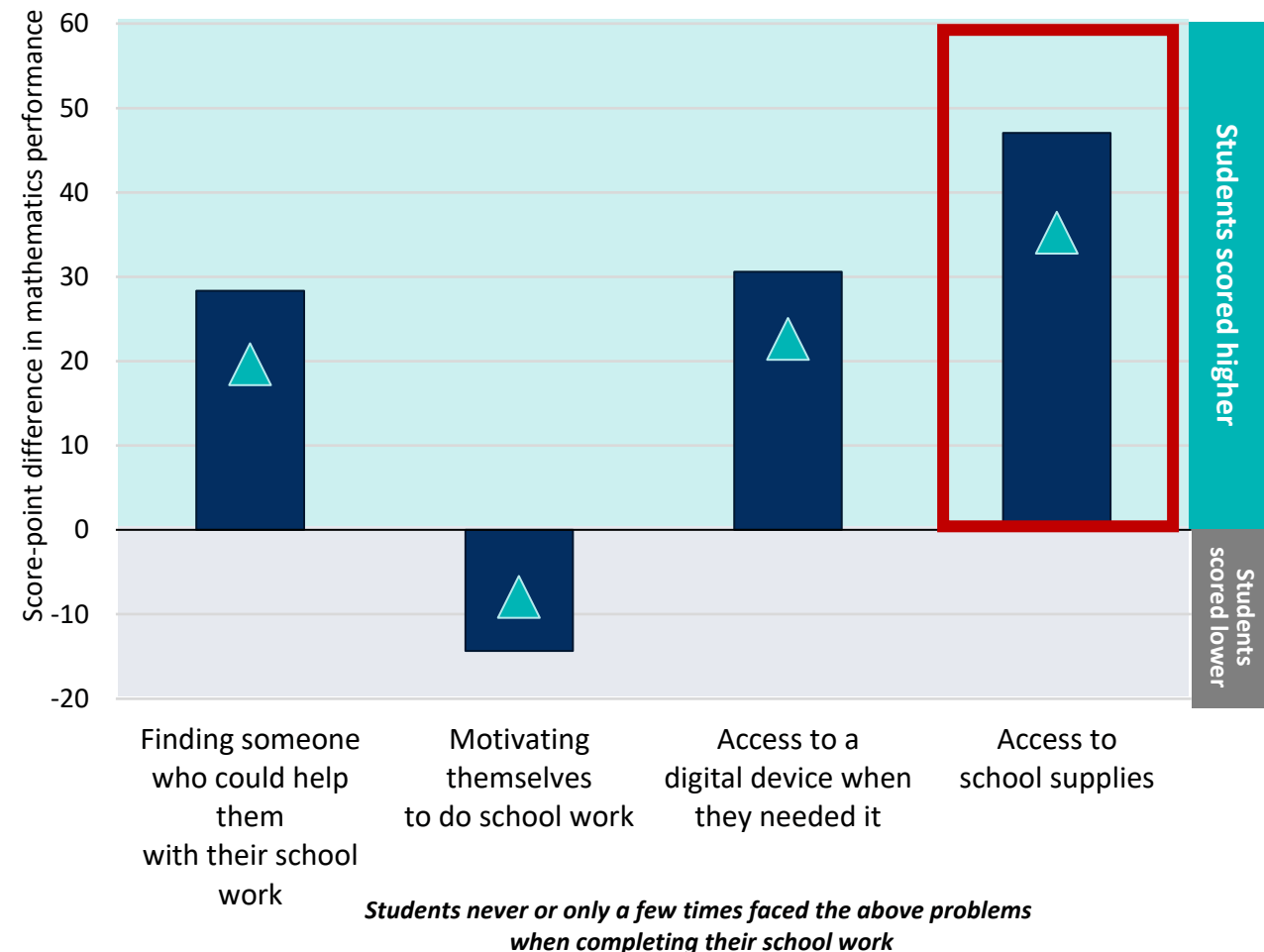
## Sense of belonging

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



## Mathematics performance

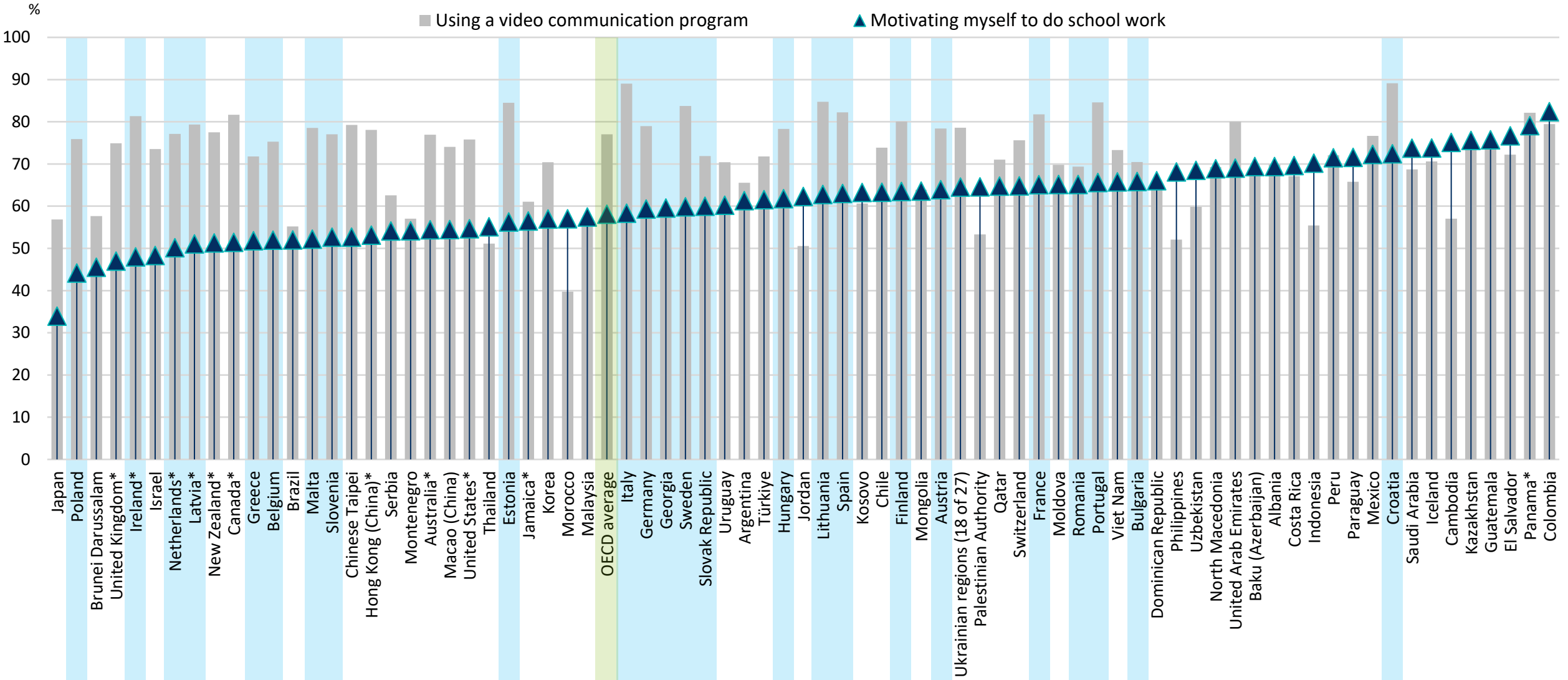
- Before accounting
- ▲ After accounting for students' and schools' socio-economic profile



# Prepare students for autonomous 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



# PISA 2022 international results

## Digital distractions



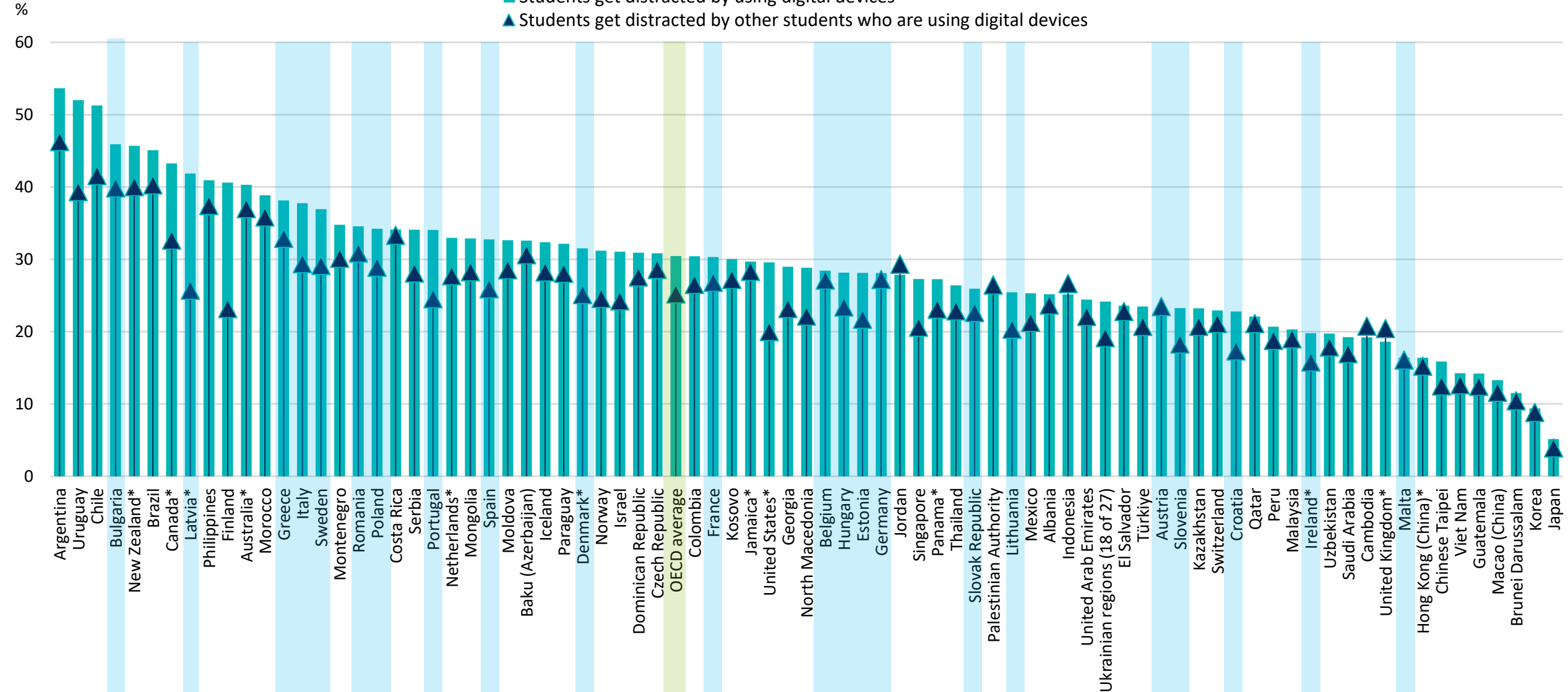


# Distraction from digital devices in mathematics lessons

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

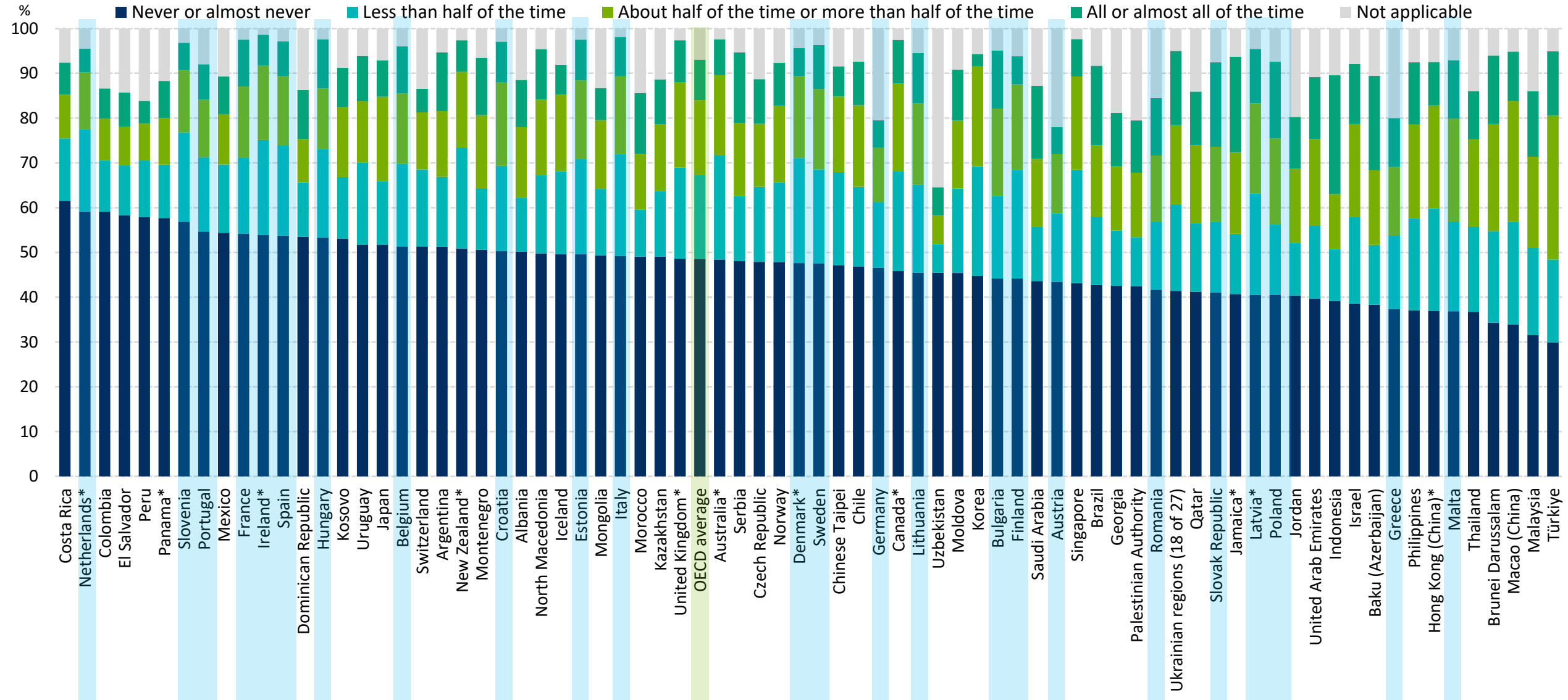




# Over a half of students feeling nervous/anxious when digital devices are not near

Figure II.5.16

Based on students' reports





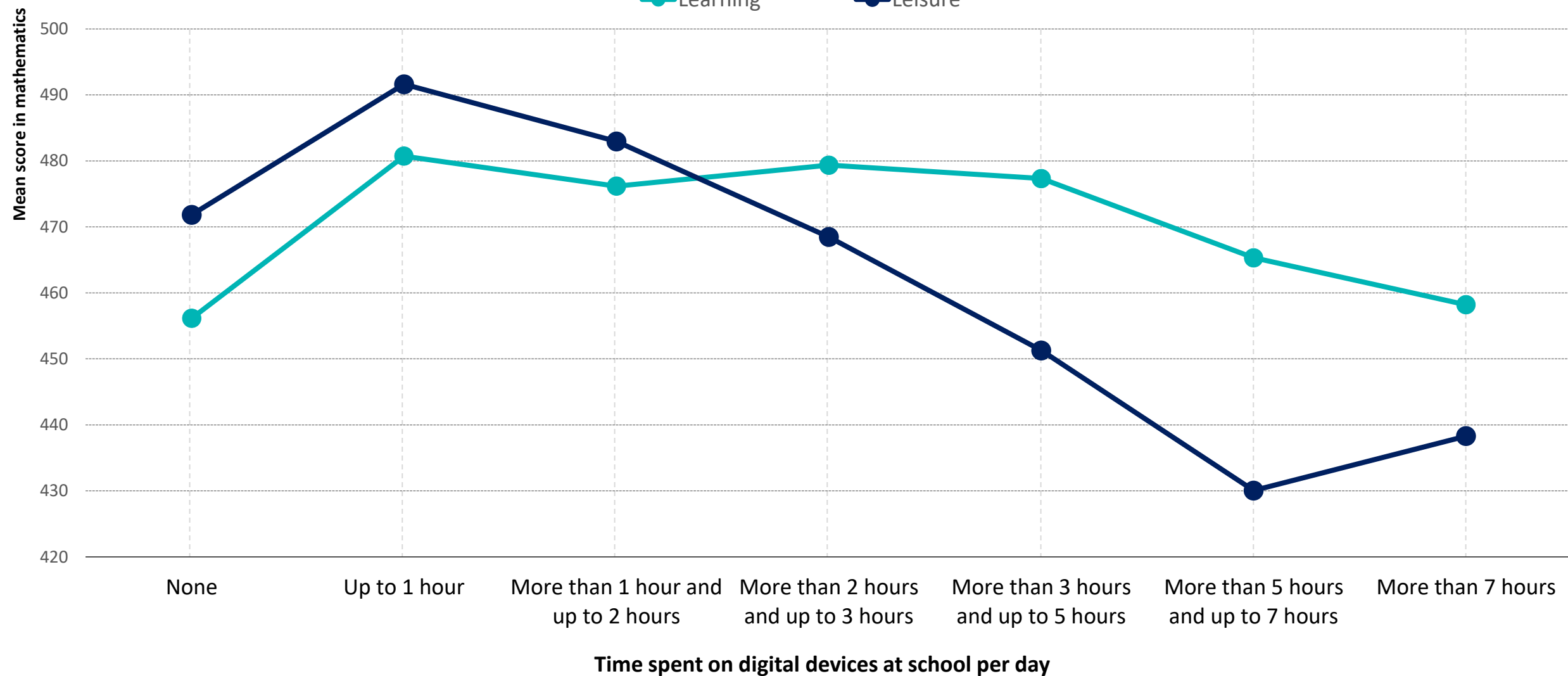


# Time spent on digital devices at school and mathematics performance

Figure II.5.14

Based on students' reports; OECD average

Learning Leisure

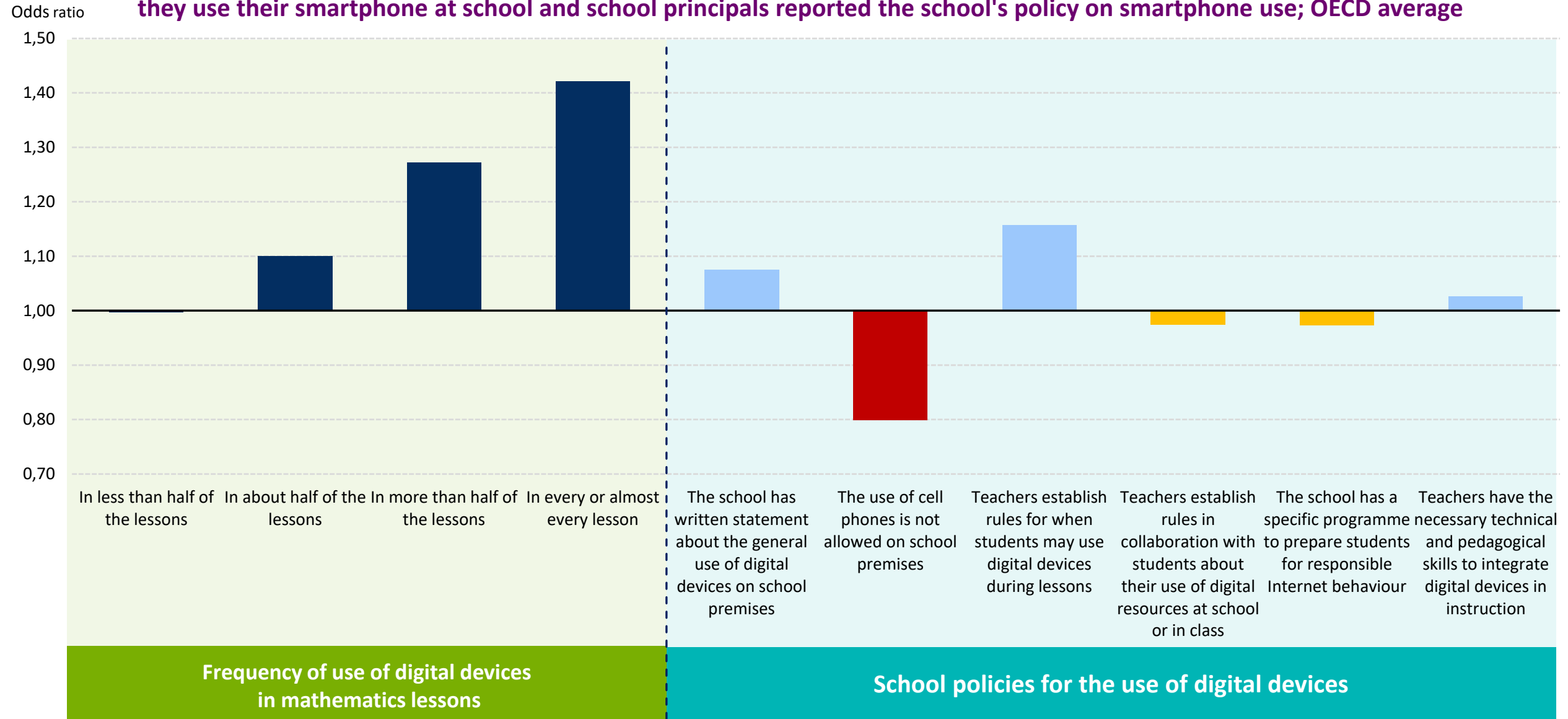




# School policies to limit digital distraction

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



# PISA 2022 international results

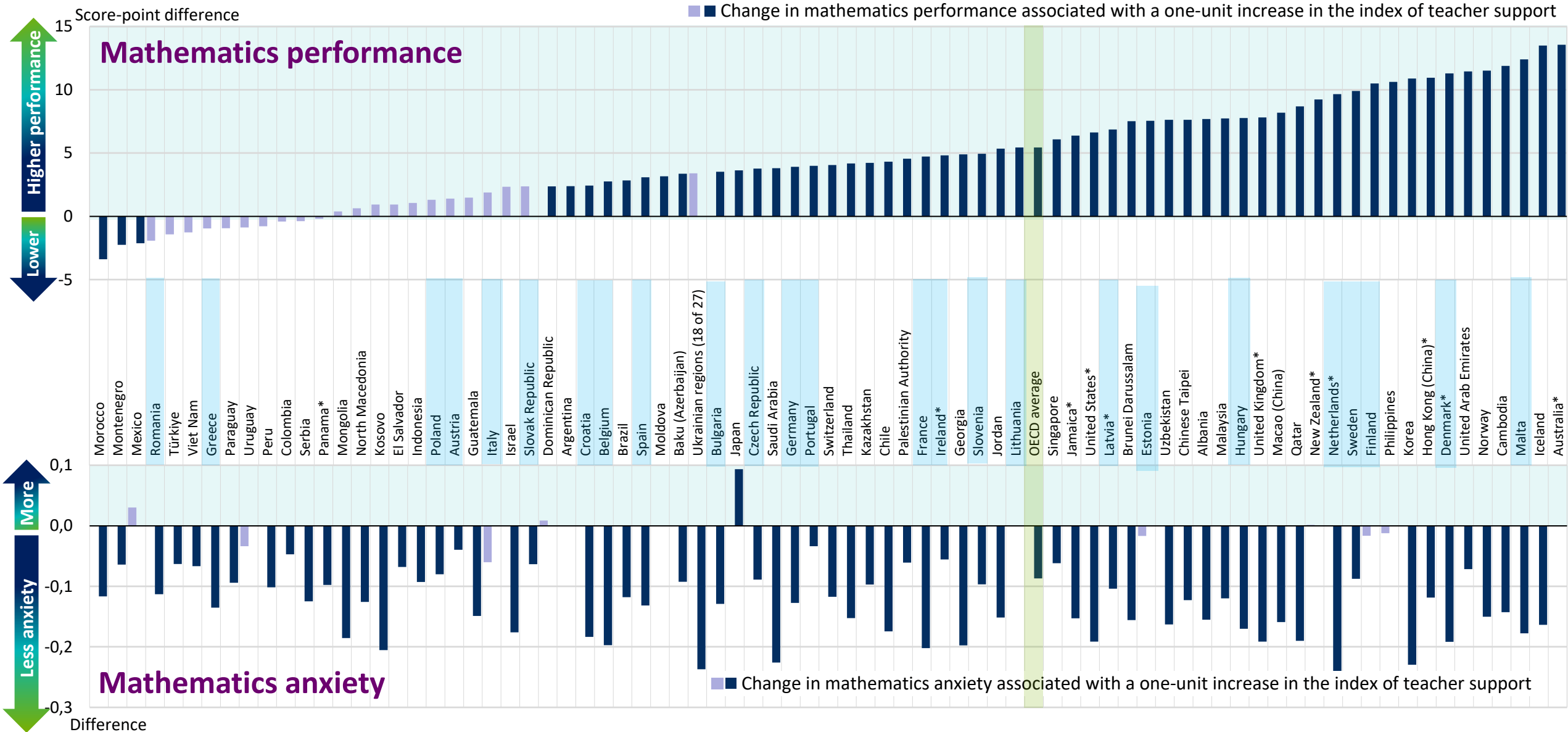
## Teacher support





# More teacher support, higher mathematics performance and less anxiety towards mathematics

Figure II.3.3

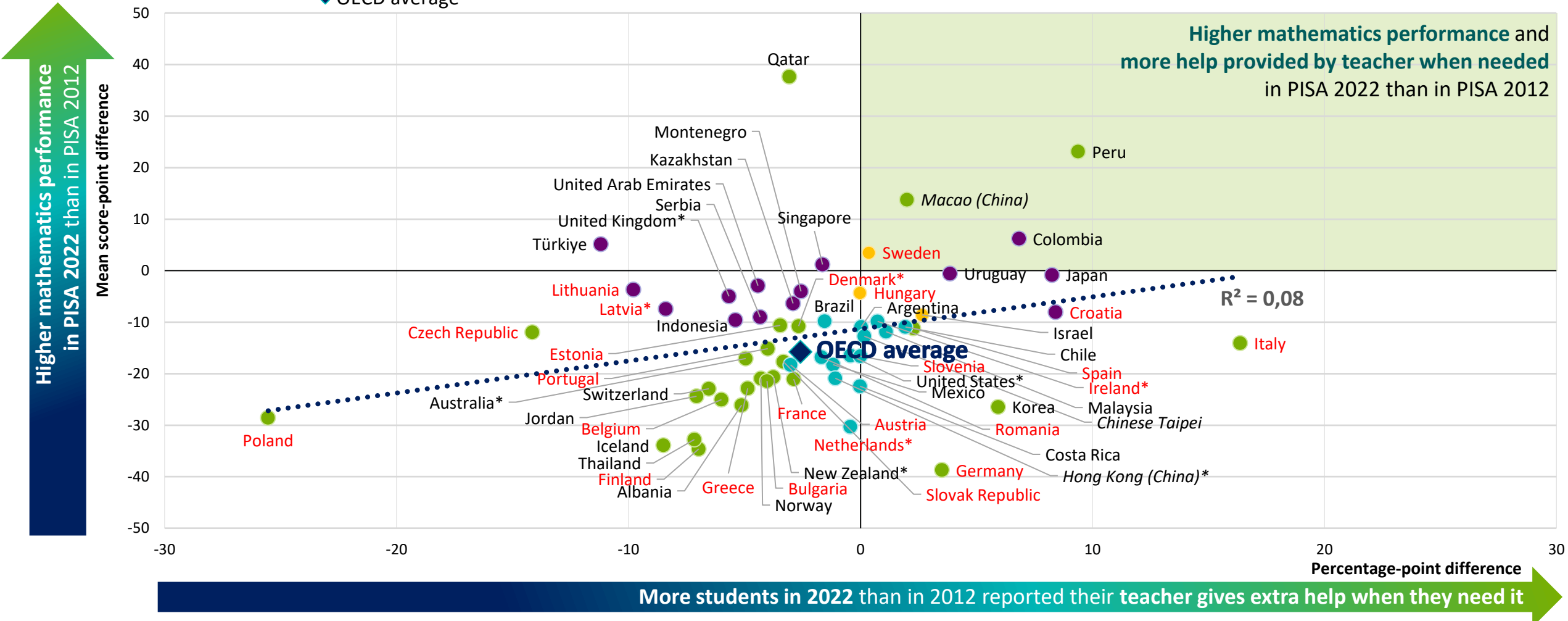




# Increase in teacher help, increase in mathematics performance

Figure II.3.2

- Change between 2012 and 2022 is statistically significant for mathematics performance and the percentage of students
- Change between 2012 and 2022 is only statistically significant for mathematics performance
- Change between 2012 and 2022 is only statistically significant for the percentage of students
- Change between 2012 and 2022 is not statistically significant
- ◆ OECD average

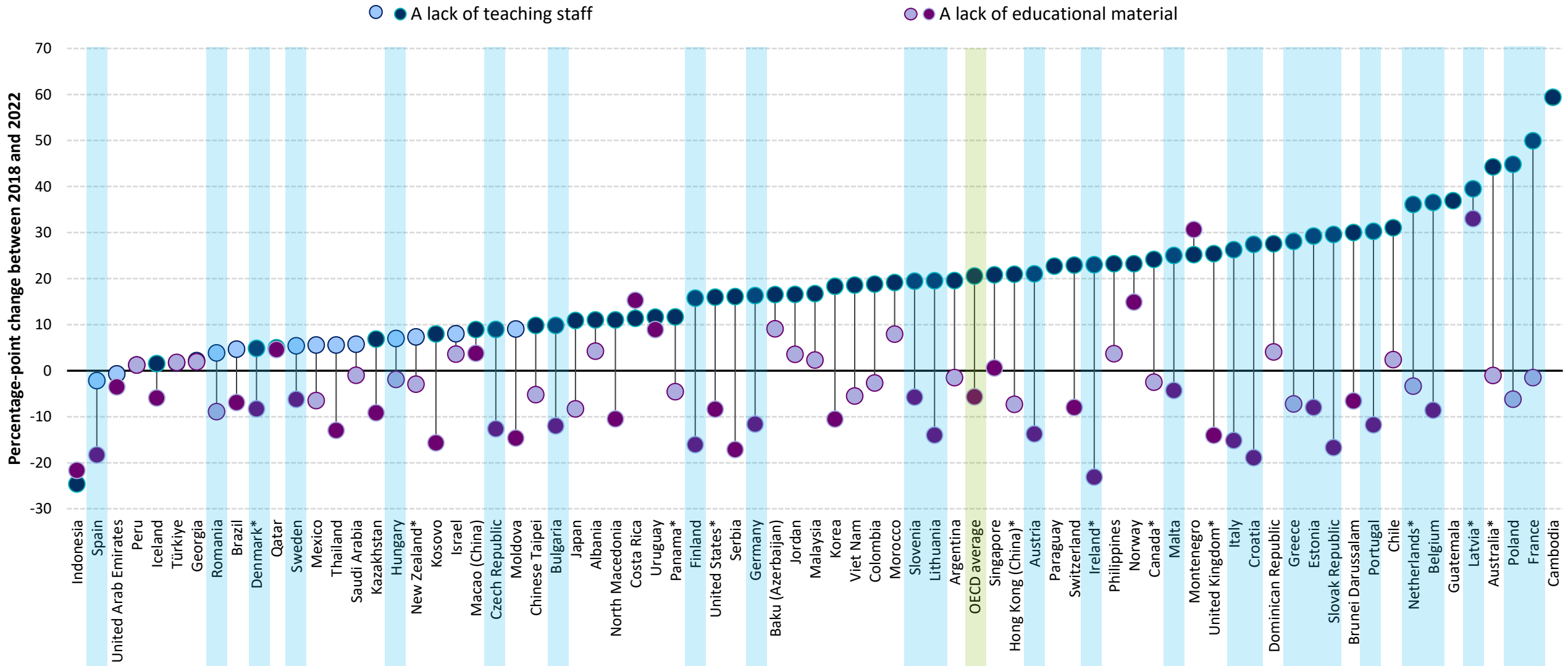




# Principals were more concerned about the shortage of teaching staff in 2022 than in 2018

Figure II.5.3

Percentage-point change of students whose principals reported that the school's capacity to provide instruction is hindered to some extent or a lot by the following





# PISA 2022 international results

## Parents and families

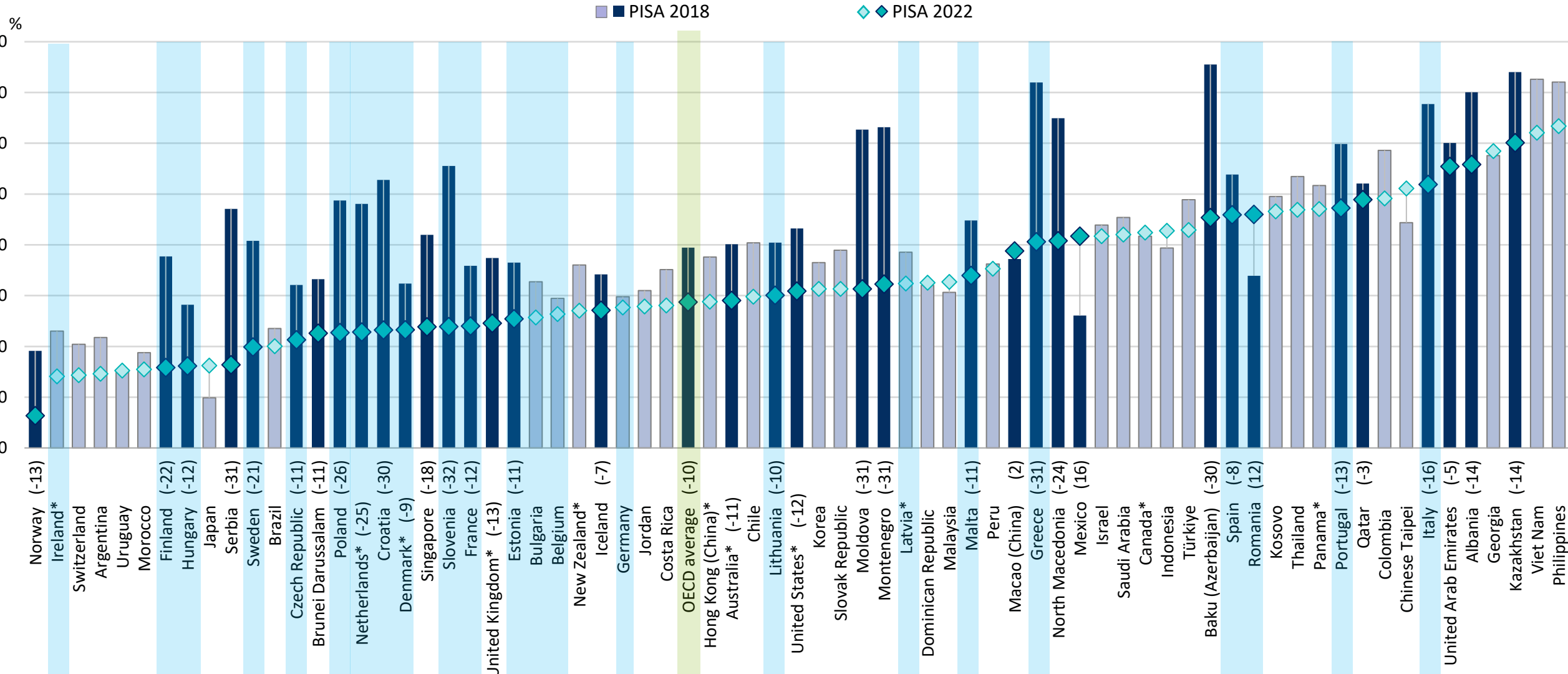




# Decline in parents-initiated talks about students' progress

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

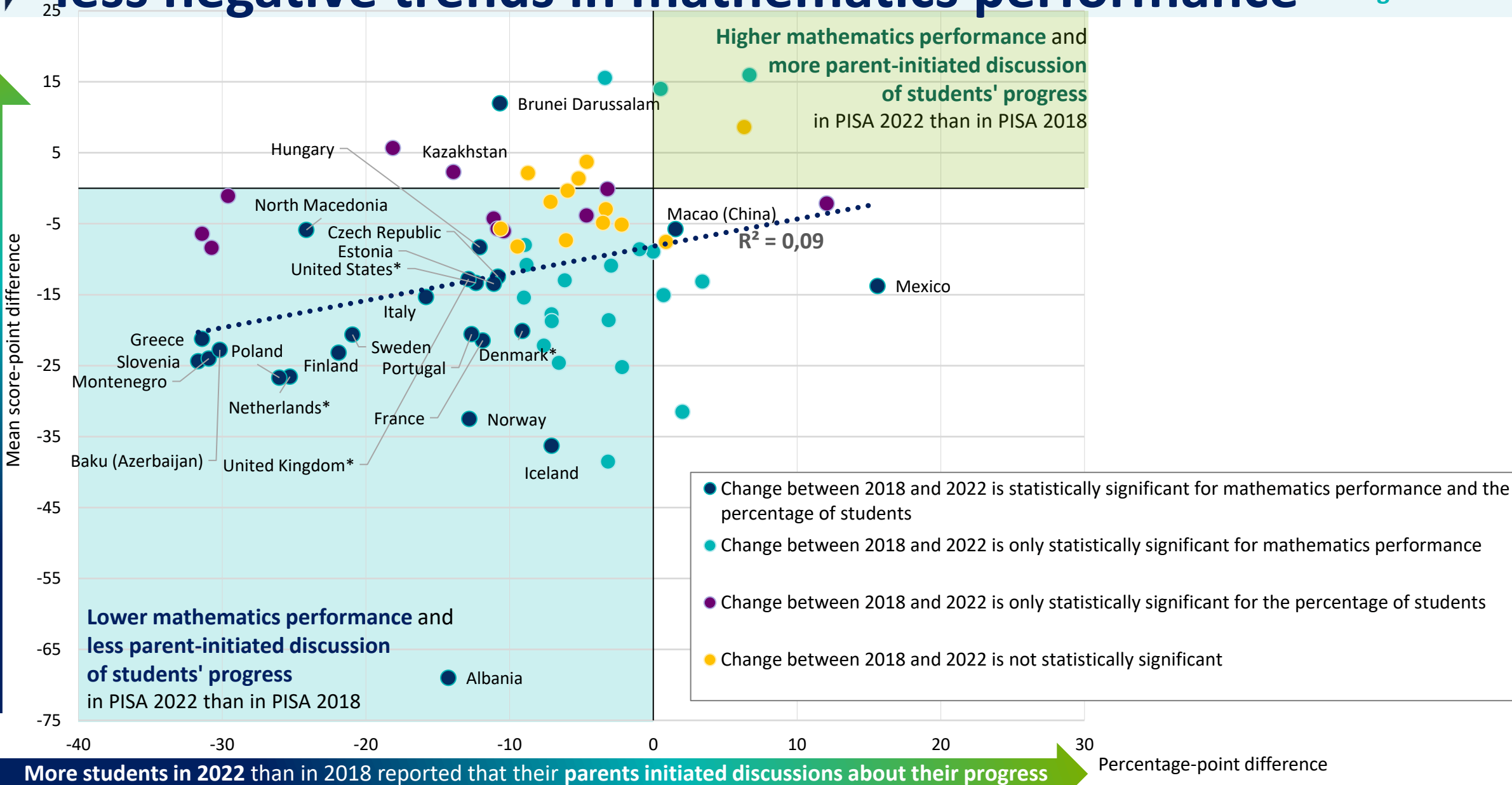




# Less decrease in parental involvement in schools, less negative trends in mathematics performance

Figure II.3.16

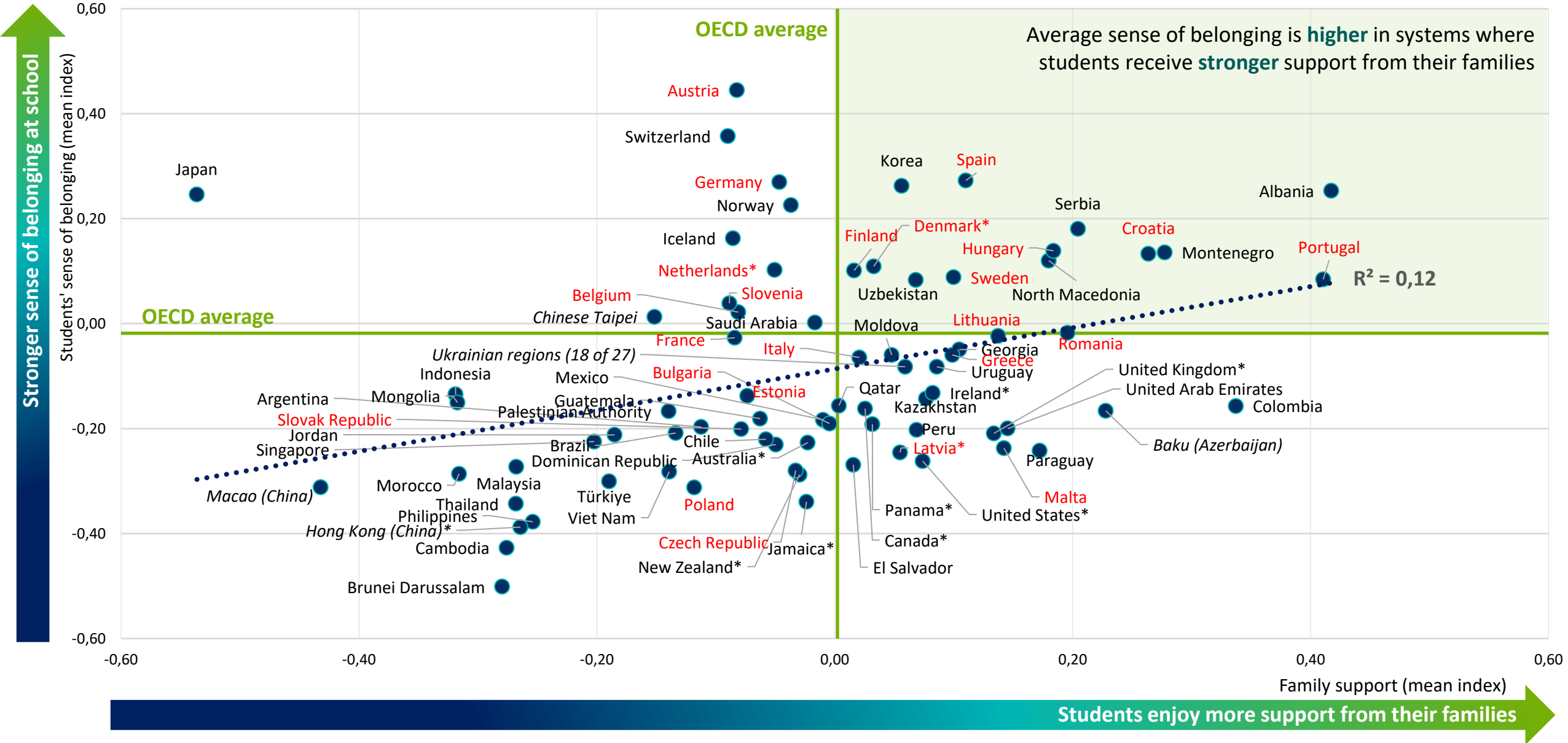
Higher mathematics performance in PISA 2022 than in PISA 2018





# More family support, stronger sense of belonging

Figure II.3.17

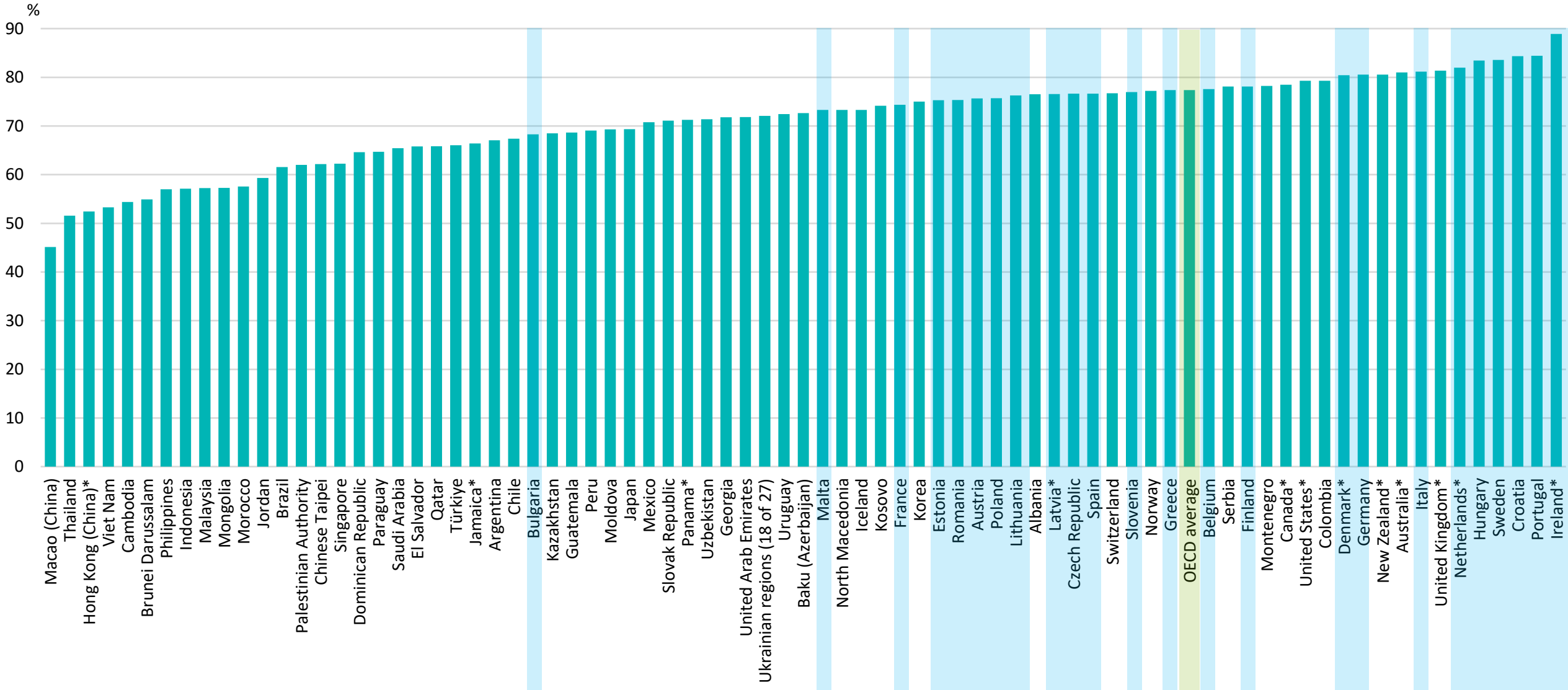




# Students whose family regularly asks about school

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

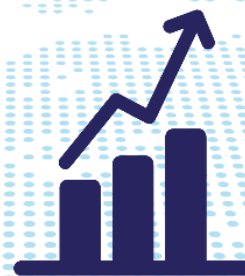
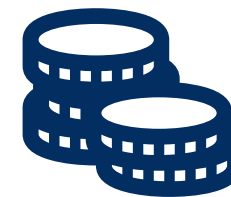


# More to come



## PISA volumes to be released **in 2024**

1. **Creative Thinking**
2. **Financial Literacy**
3. **Student readiness for life-long learning**





Find out more about our work at [www.oecd.org/pisa](http://www.oecd.org/pisa)



**PISA main reports**



**PISA Country notes**

\* Caution is required when interpreting estimates because one or more PISA sampling standards were not met (see Reader's Guide of [PISA 2022 Results Volume I](#) ).





# Upcoming Professional Development Offer

## Courses:

- ★ [Unlocking the power of teachers' digital competence: "Harnessing digital resources for effective teaching" | European School Education Platform \(europa.eu\)](#)
- ★ [AI in curriculum development: Teacher educators reshaping learning | European School Education Platform \(europa.eu\)](#)
- ★ [How to remain resilient in a demanding school environment | European School Education Platform \(europa.eu\)](#)

## Webinars:

- ★ [European Commission's Webinar on AI for student engagement and motivation | European School Education Platform \(europa.eu\)](#)
- ★ [European Commission's webinar series on Artificial intelligence for teacher professional development | European School Education Platform \(europa.eu\)](#)



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