Programme for International Student Assessment (PISA) Conference : Using PISA evidence to inform education policies and practices.

Leveraging PISA for School Improvement :
How the Equitable Education Fund Utilises PISA Insight to Foster Student Resilience and Enhance Educational Outcomes in Thailand
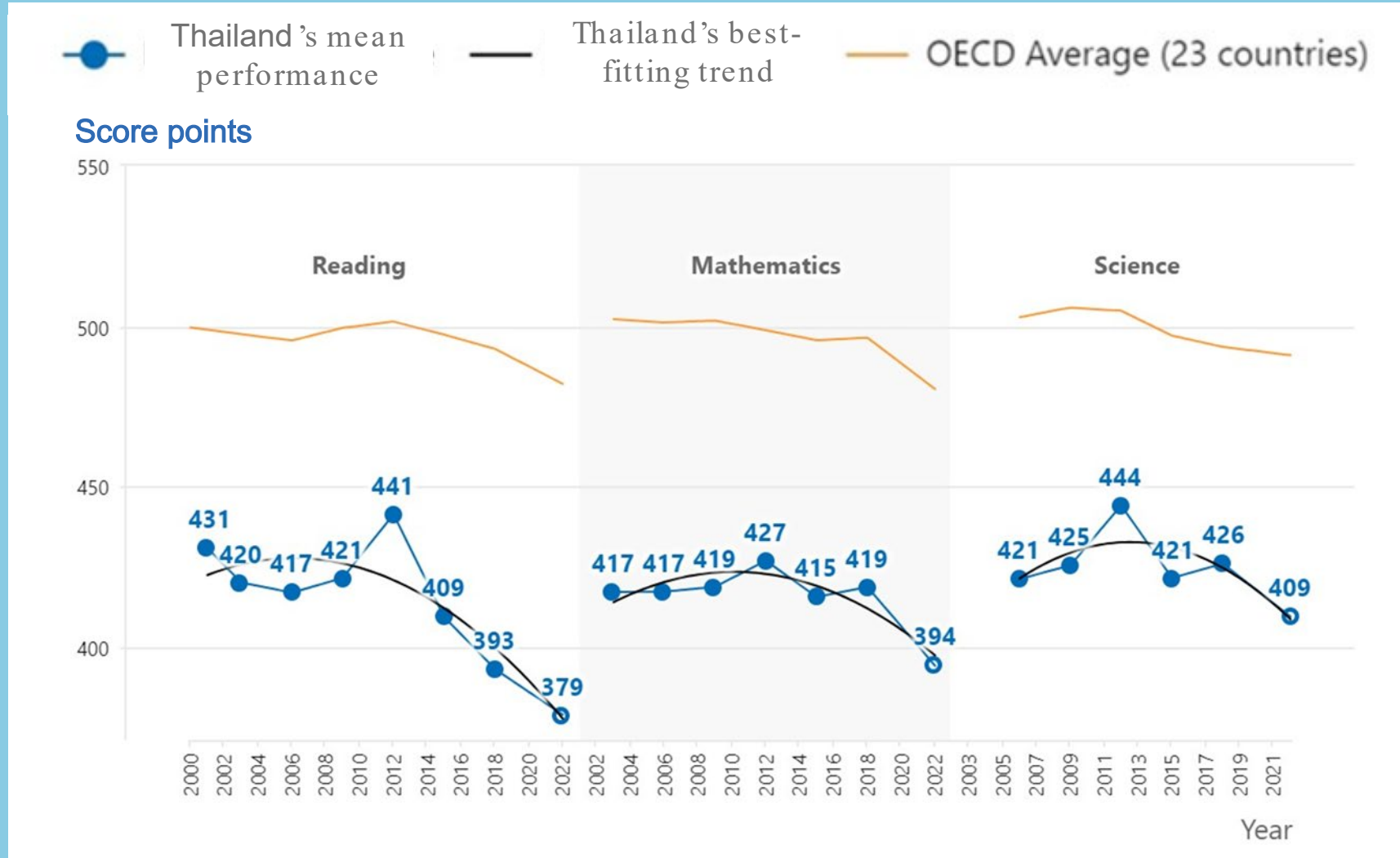
30 November 2024

Dr.Kraiyos Patrawart
Managing Director, Equitable Education Fund (EEF)

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Director of Research Institute for Policy Evaluation and Design (RIPED)

1

Trends across Thailand and OECD countries since PISA began

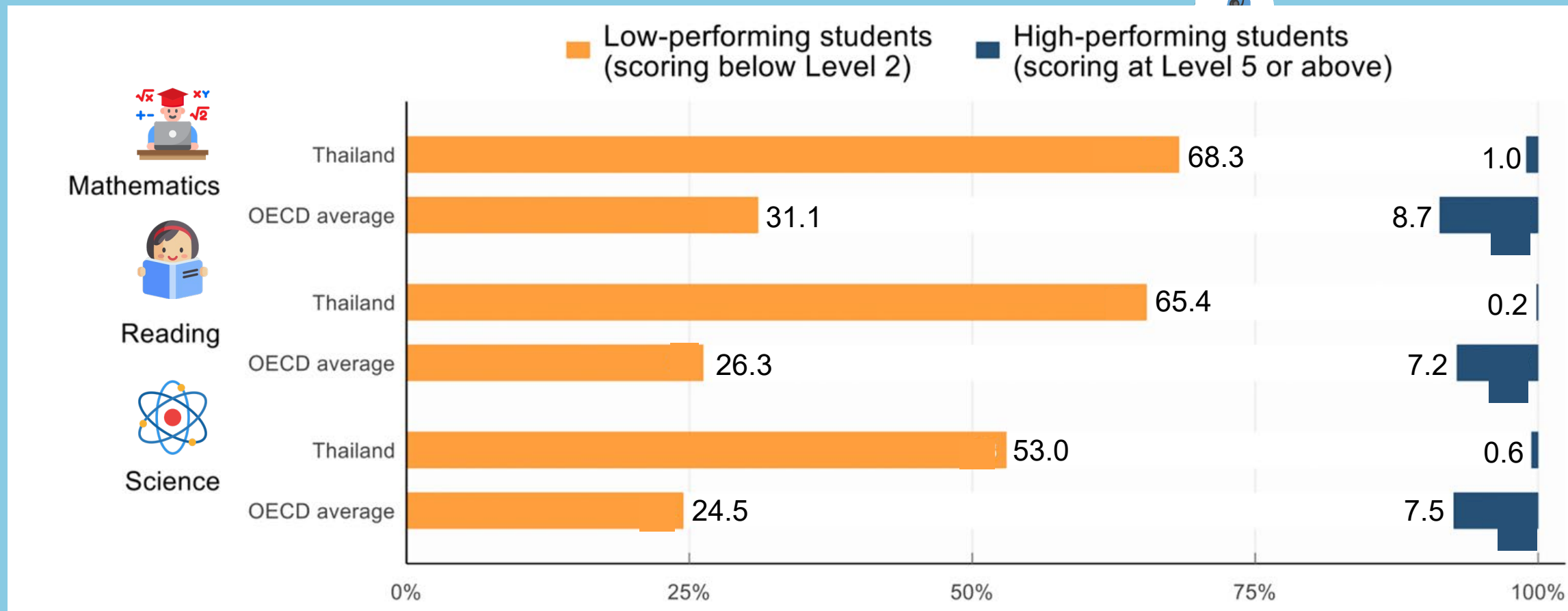Thailand's mean performance

Thailand's best-fitting trend

OECD Average (23 countries)
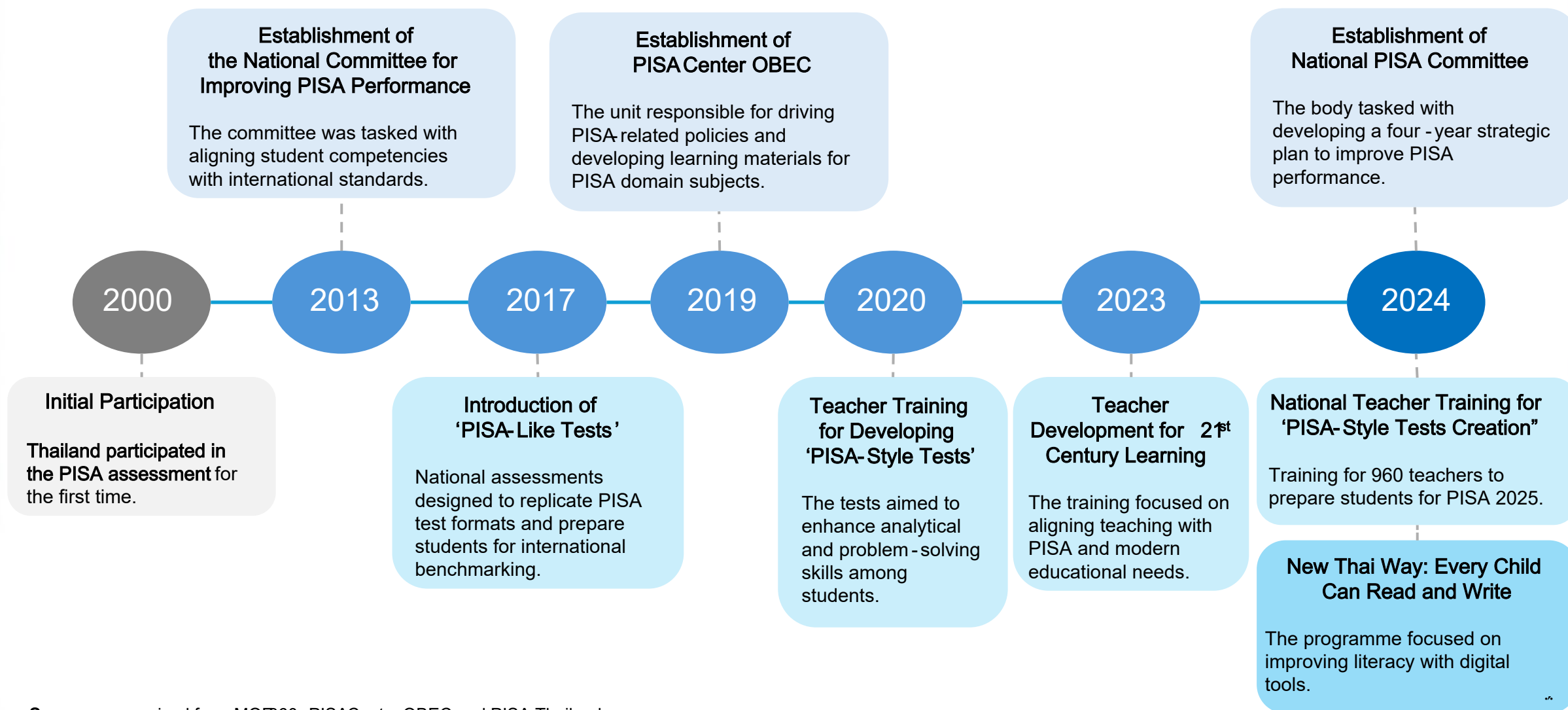
Score points

For OECD countries between ⅞ and 2022

✓ An points decline in mathematics

✓ ⅞ points decline in reading

✓ **No significant** decline in science

Top performers and low -performing students
in mathematics, reading and science

Low-performing students (scoring below Level 2) — Thailand Mathematics: 68.3, High-performing students (scoring at Level 5 or above): 1.0
OECD average Mathematics: 31.1, High-performing: 8.7
Thailand Reading: 65.4, High-performing: 0.2
OECD average Reading: 26.3, High-performing: 7.2
Thailand Science: 53.0, High-performing: 0.6
OECD average Science: 24.5, High-performing: 7.5

Development of Policies to Improve PISA Performance in Thailand

EEF RIPED
Research Institute for Policy Evaluation and Design

Establishment of the National Committee for Improving PISA Performance

The committee was tasked with aligning student competencies with international standards.

Establishment of PISA Center OBEC

The unit responsible for driving PISA-related policies and developing learning materials for PISA domain subjects.

Establishment of National PISA Committee

The body tasked with developing a four-year strategic plan to improve PISA performance.

| 2000 | 2013 | 2017 | 2019 | 2020 | 2023 | 2024 |

Initial Participation

Thailand participated in the PISA assessment for the first time.

Introduction of 'PISA-Like Tests'

National assessments designed to replicate PISA test formats and prepare students for international benchmarking.

Teacher Training for Developing 'PISA-Style Tests'

The tests aimed to enhance analytical and problem-solving skills among students.

Teacher Development for 21st Century Learning

The training focused on aligning teaching with PISA and modern educational needs.

National Teacher Training for 'PISA-Style Tests Creation"

Training for 960 teachers to prepare students for PISA 2025.

New Thai Way: Every Child Can Read and Write

The programme focused on improving literacy with digital tools.

Source: summarised from MOE360, PISACenter OBEC and PISA Thailand.

Focus on Children and Youths in the Bottom 15% of Households
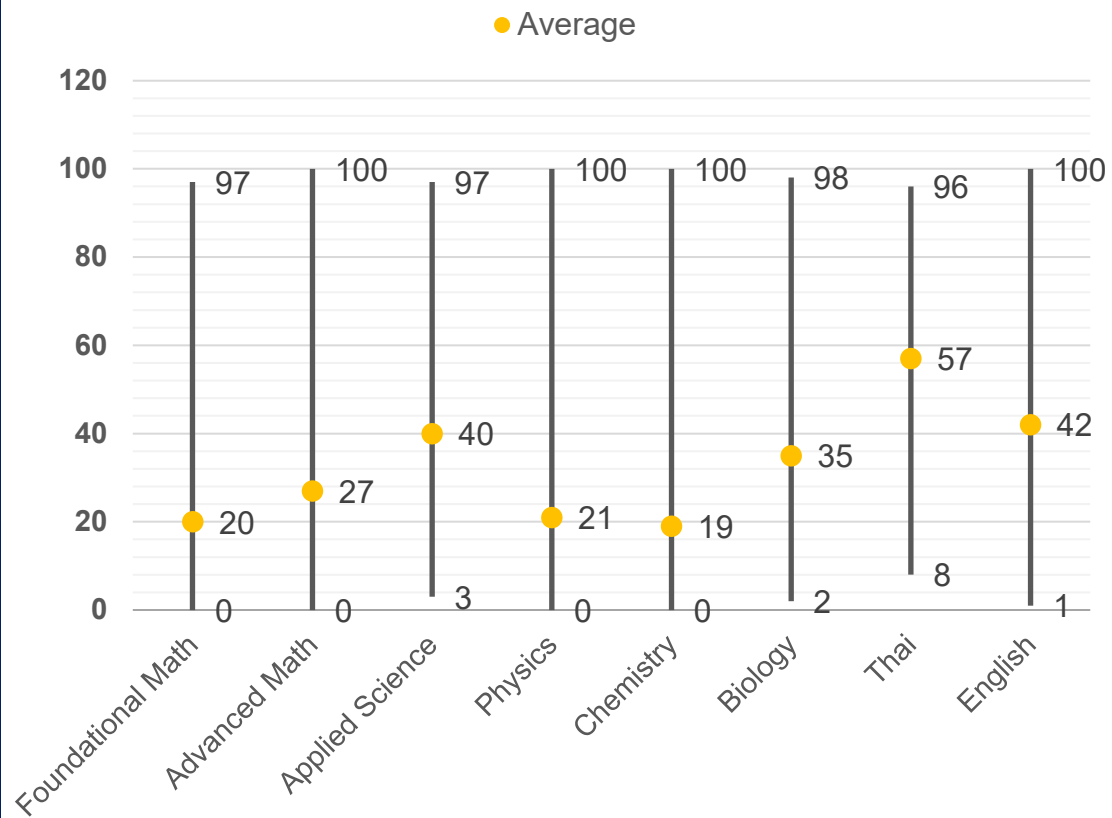
The Academic Year 2023

8.9 Million People (3–14 Years)

2.8 Million People

1.8 Million People

No. of school-aged children

EEF screen and directly provides CCT in addition to government's subsidy for poor students

EEF screen and forward results MOE–MOI to provide CCT

EEF screens and forward results to the government to request for additional budget (not allocated yet)

1.2 Million People

0.6 Million People

1 Million People

6.1 Million People

1,039 Baht   1,444 Baht   1,782 Baht

2,803 Baht (Poverty line)

Income

STATION 1

Educational Pathway of Underprivileged: Impoverished Students in 2023 Academic Year

EEF RIPED — Research Institute for Policy Evaluation and Design

80% Pursue Further Education

20% Drop-out

33,547 persons Dropout from System

2023 Academic year
Continue to G. 10 / Voc. level
134,760 persons

STATION 3

2022 Academic year
Underprivileged - Impoverished Students, G.9
168,307 persons

STATION 2

STATION 1

No information/Enter workforce:
112,839 persons
(Pursue further education without TCAS exam)

67.54%

2023 Academic year
Continue to tertiary education
(passed TCAS exam)
21,921 persons

STATION 4

12.46% passed TCAS exam

6

Performance Gaps Persist to Higher Education

University Admission Exam Scores (All Students) — Average values: Foundational Math 97/20/0, Advanced Math 100/27/0, Applied Science 97/40/3, Physics 100/21/0, Chemistry 100/19/0, Biology 98/35/2, Thai 96/57/8, English 100/42/1

University Admission Exam Scores (Disadvantaged Students) — Average values: Foundational Math 73/17/0, Advanced Math 91/20/0, Applied Science 84/37/10, Physics 88/16/0, Chemistry 50/17/0, Biology 85/29/2, Thai 86/53/10, English 94/31/8

PBTS 2023 in Thailand

- From December 2023 and January 2024

- Targeted relatively disadvantaged students

- 5,683 students from 16 provinces

(0,1)
[0,0]
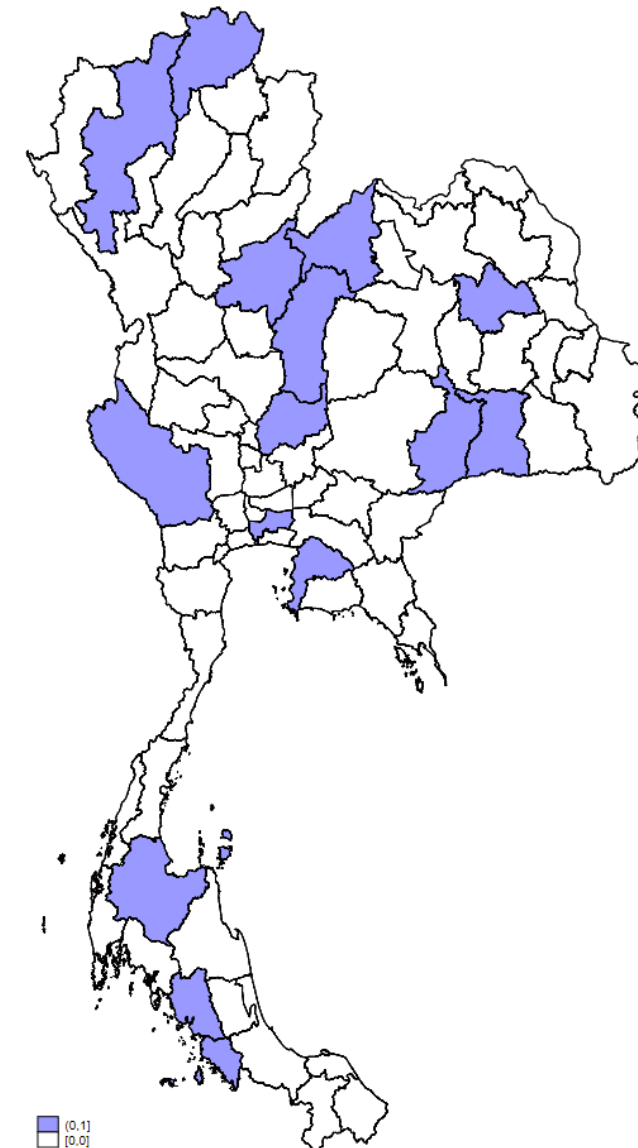
PBTS is Slightly Lower than Thailand PISA
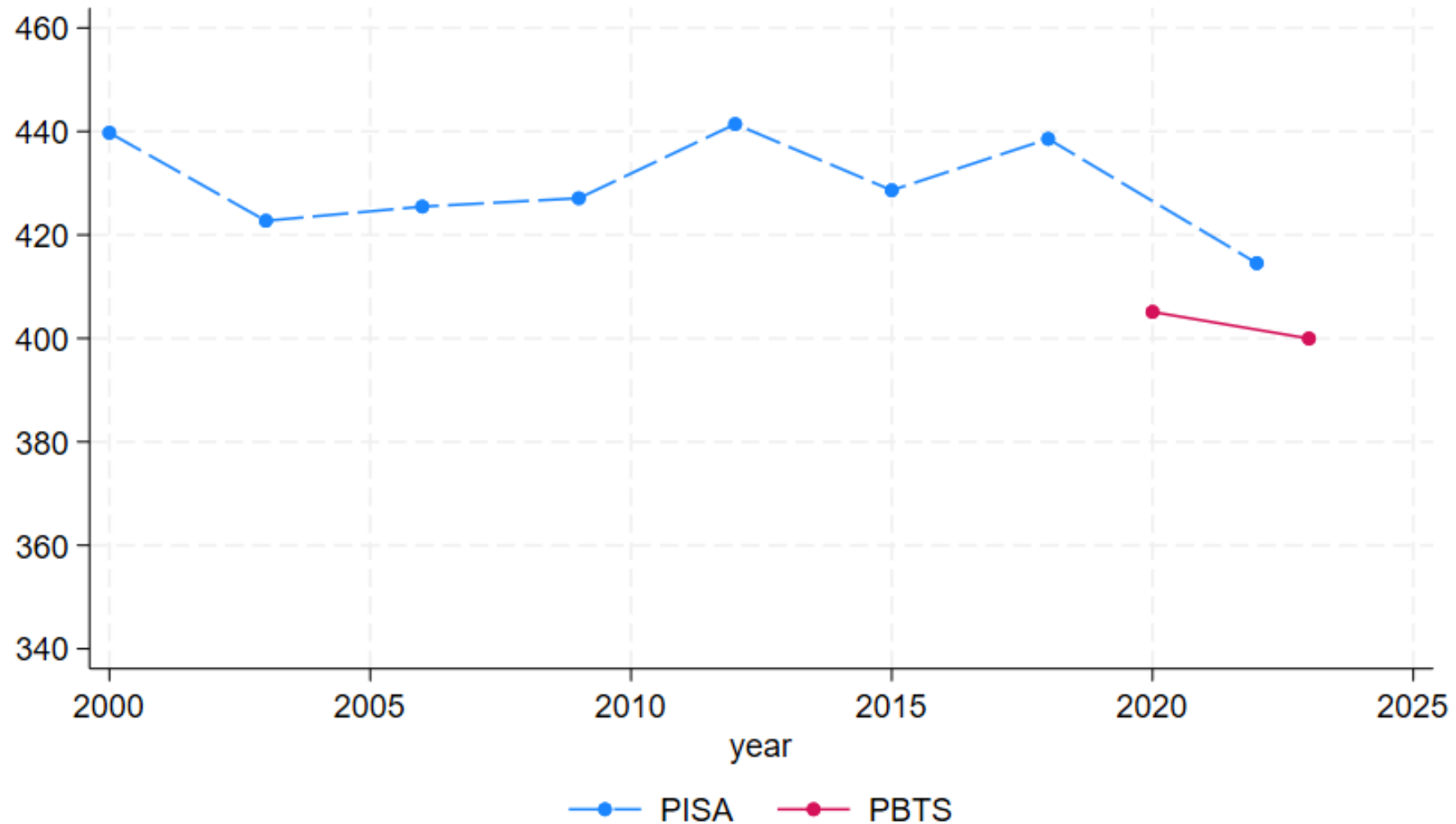
PBTS targeted Relatively Disadvantaged Students
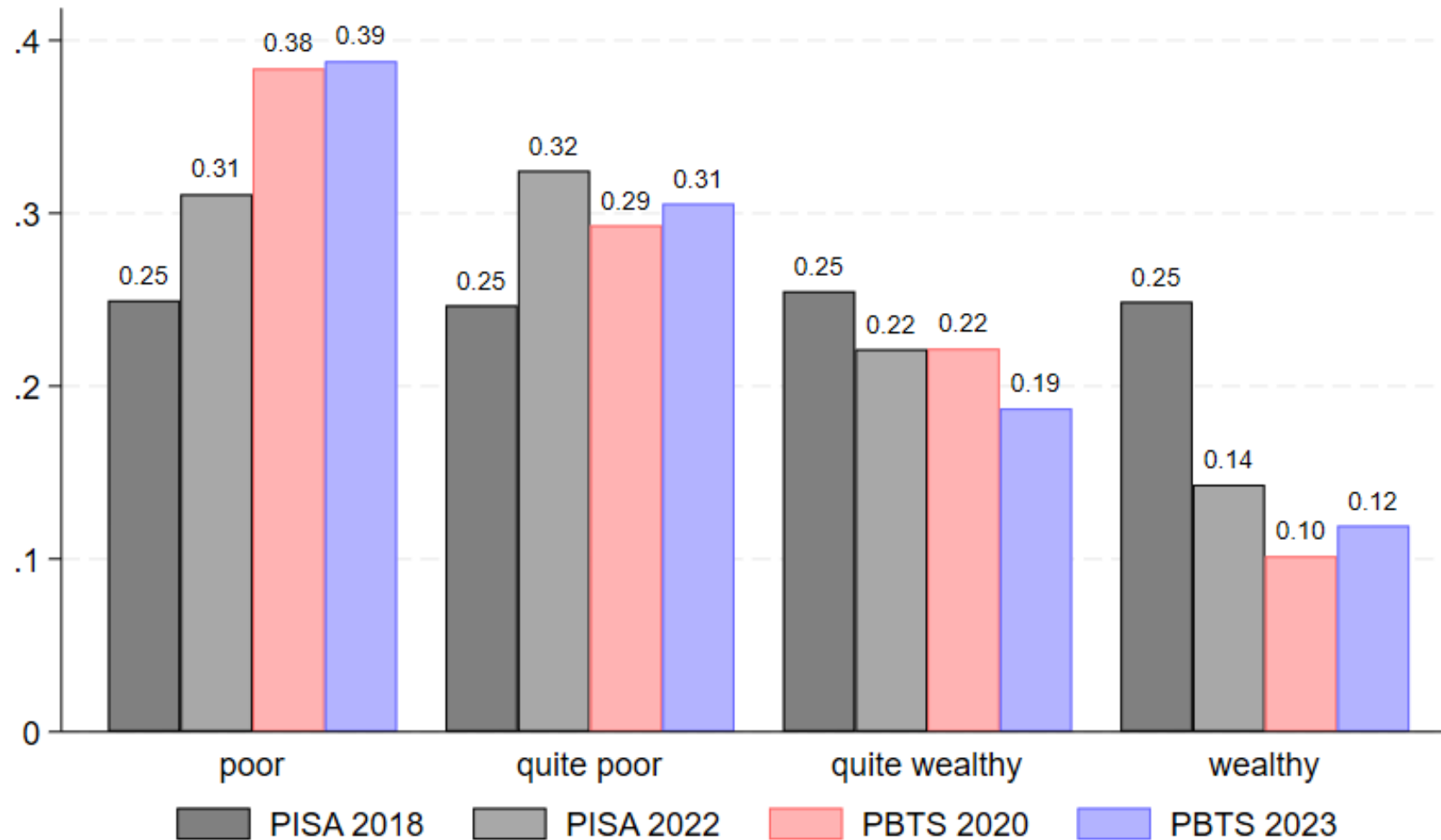
PBTS and PISA of the bottom-25 wealth group are comparable
Wealth plays an important role in determining PISA scores

Regression Analysis
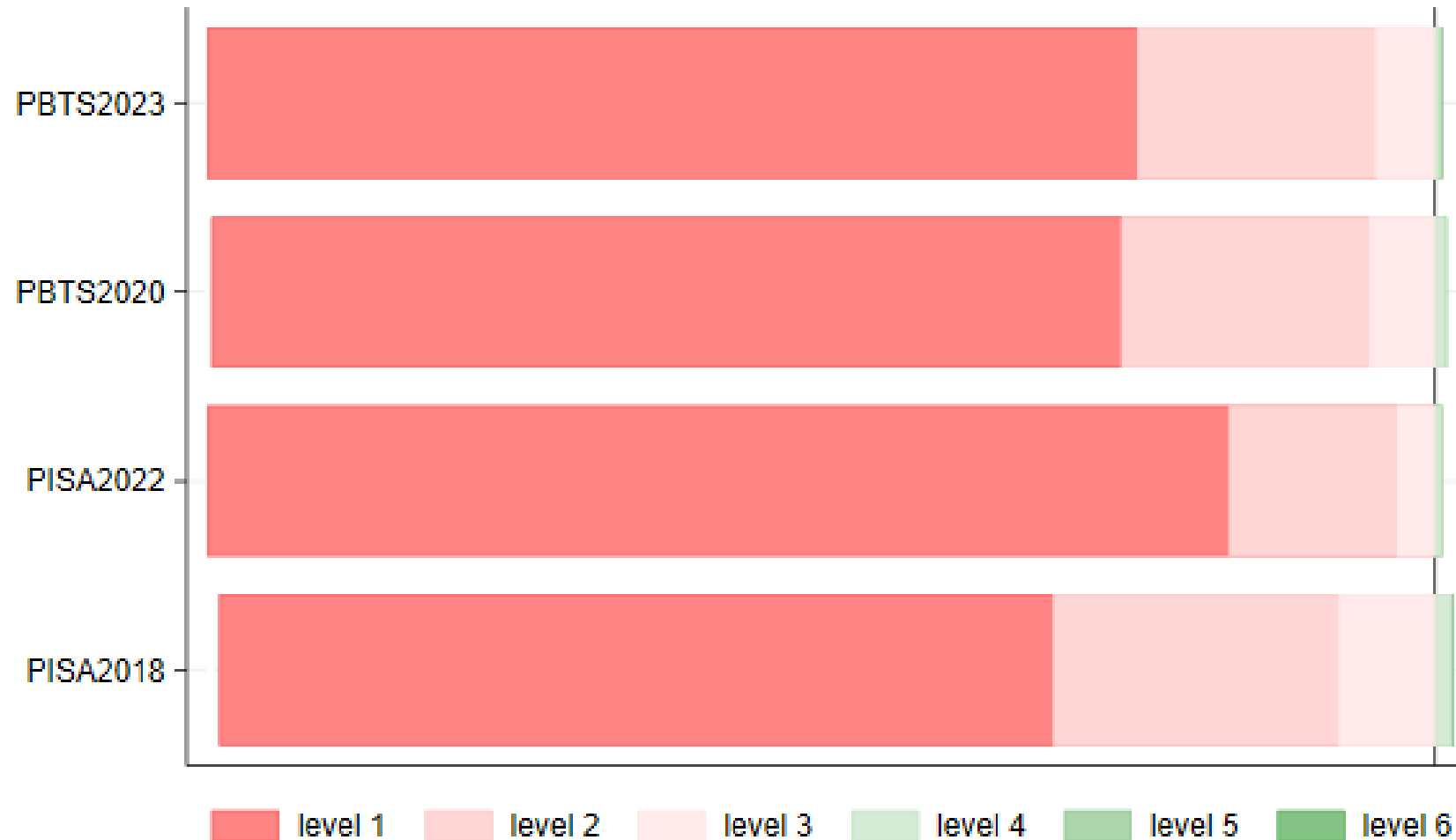
- We first estimate the impact of a variable of interest, Z_t, using the following linear regression without prior skills:

$$PBTS_t = \alpha + \beta Z_t + \boldsymbol{\gamma X_t} + \varepsilon_t$$

- We then estimate a similar model with prior skills, S_{t-1}:

$$PBTS_t = \alpha + \beta Z_t + \rho S_{t-1} + \boldsymbol{\gamma X_t} + \varepsilon_t$$

Wealth affects PISA scores exponentially
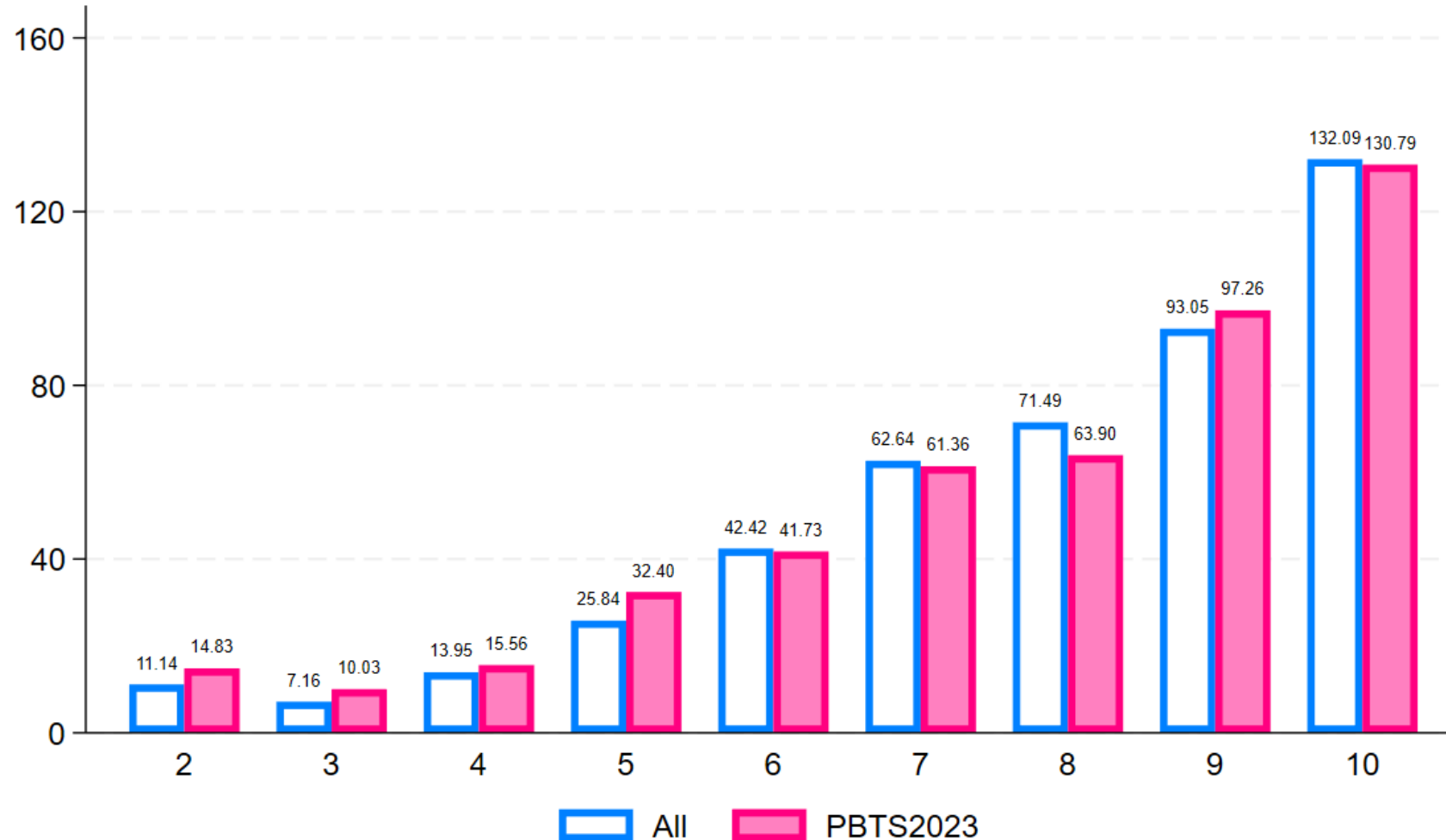
Wealth Effects Reduce Significantly once Control for Prior Skills PISA Scores were largely Determined by Prior Skills
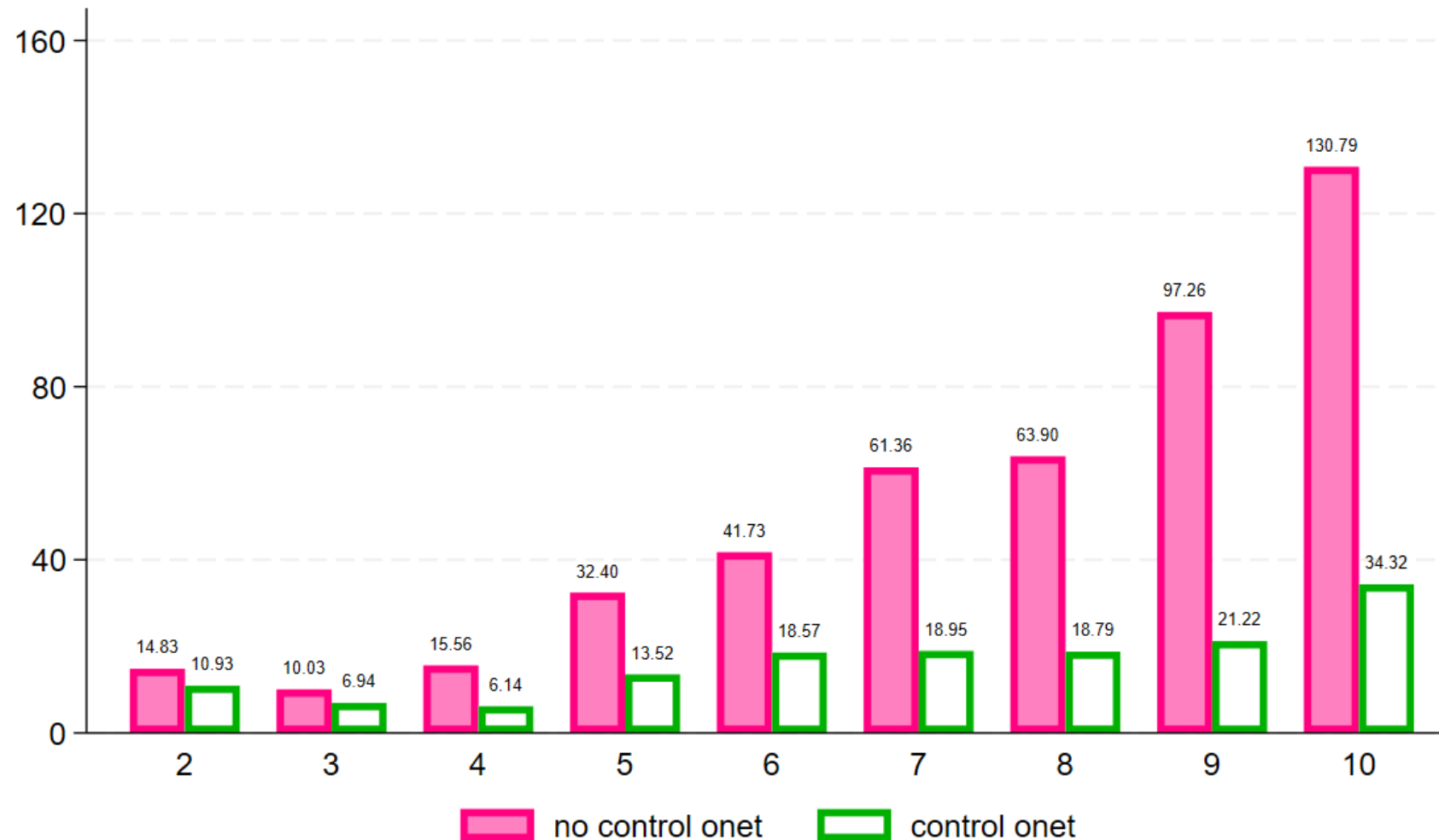
Effects of School Types Reduce Significantly with Prior Skills Again, PISA Scores were largely Determined by Prior Skills
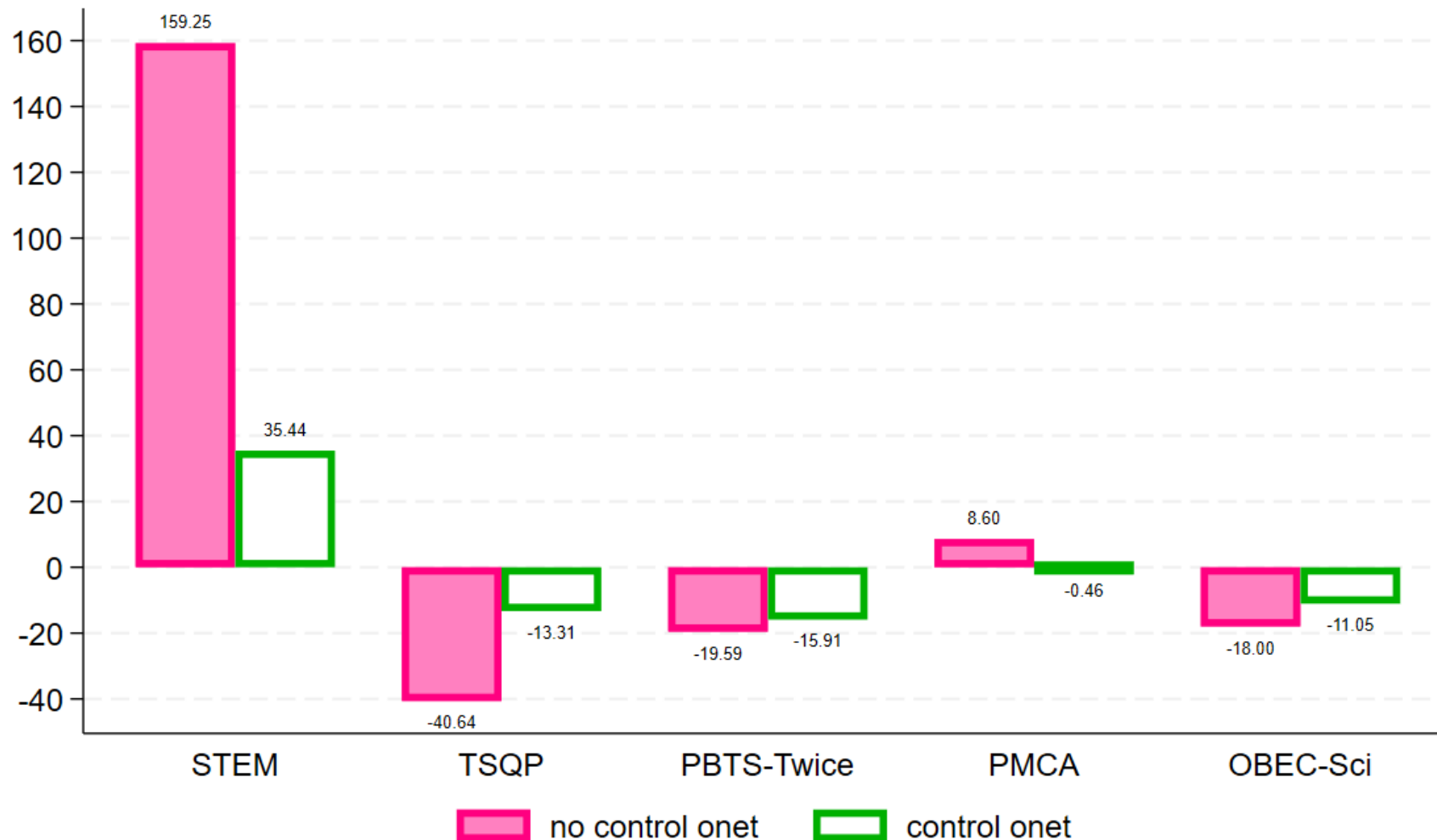
Classroom Effects Reduce Significantly with Prior Skills
Again, PISA Scores were largely Determined by Prior Skills
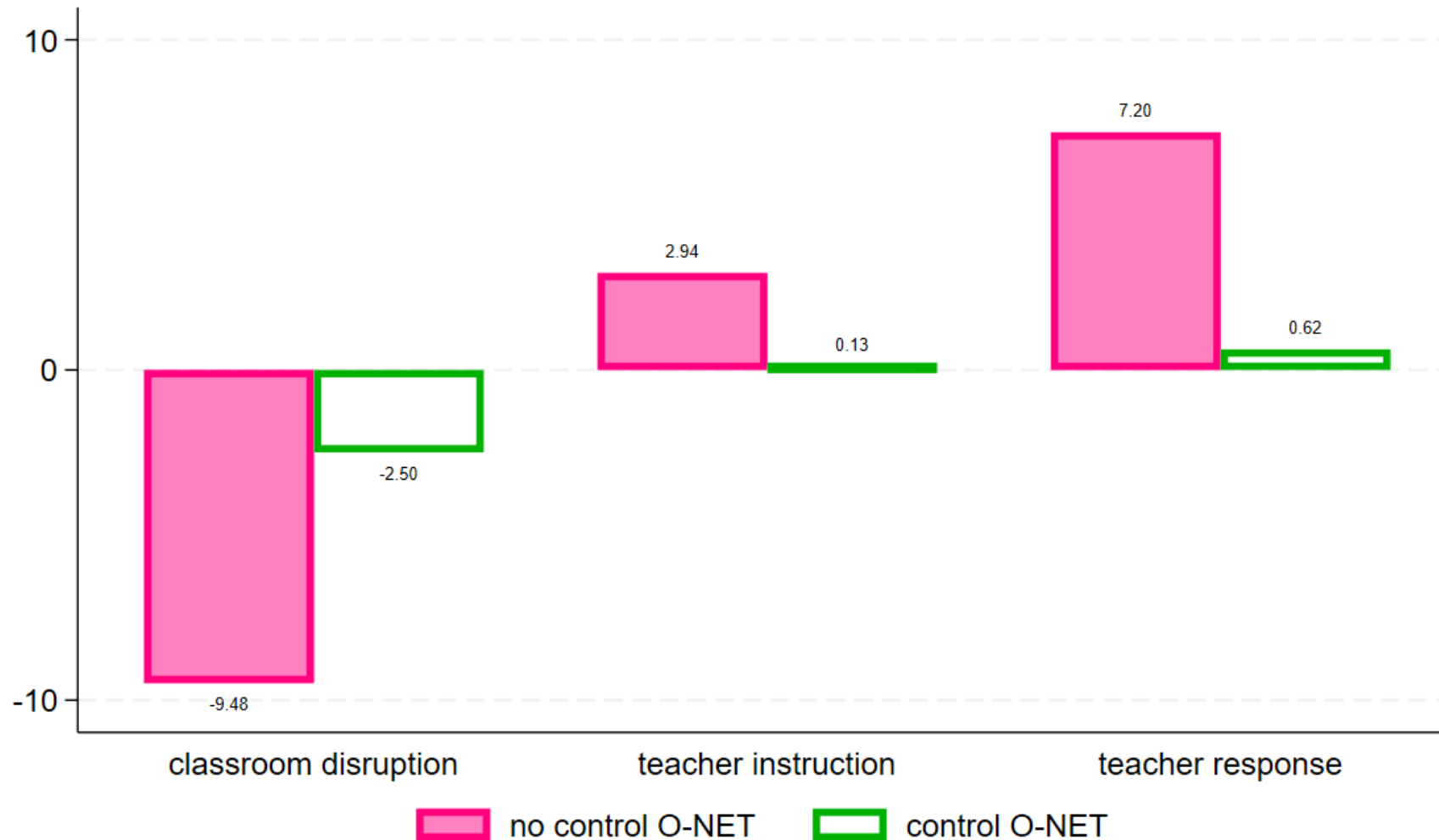
Policy Implications from the Analysis

- Instead of creating PISA-like tests for training participating students, teachers and schools in upcoming PISA, policies to improve PISA scores should focus more on the quality of Primary education since prior skills at that level are one of the most critical factors determining PISA scores.

- New assessment instruments for Primary students will inform valuable lessons for policy makers to close inequalities between primary students and schools more efficiently.

- This new focus should reduce the focus on short-term policies in response to PISA results and more on the heuristic life-cycle development of learners
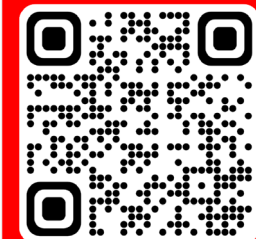
Thank You
for Your Attention

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