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Latin America and the Caribbean

GENDER AND LEARNING: UNDERSTANDING SKILL GAPS IN PRIMARY EDUCATION

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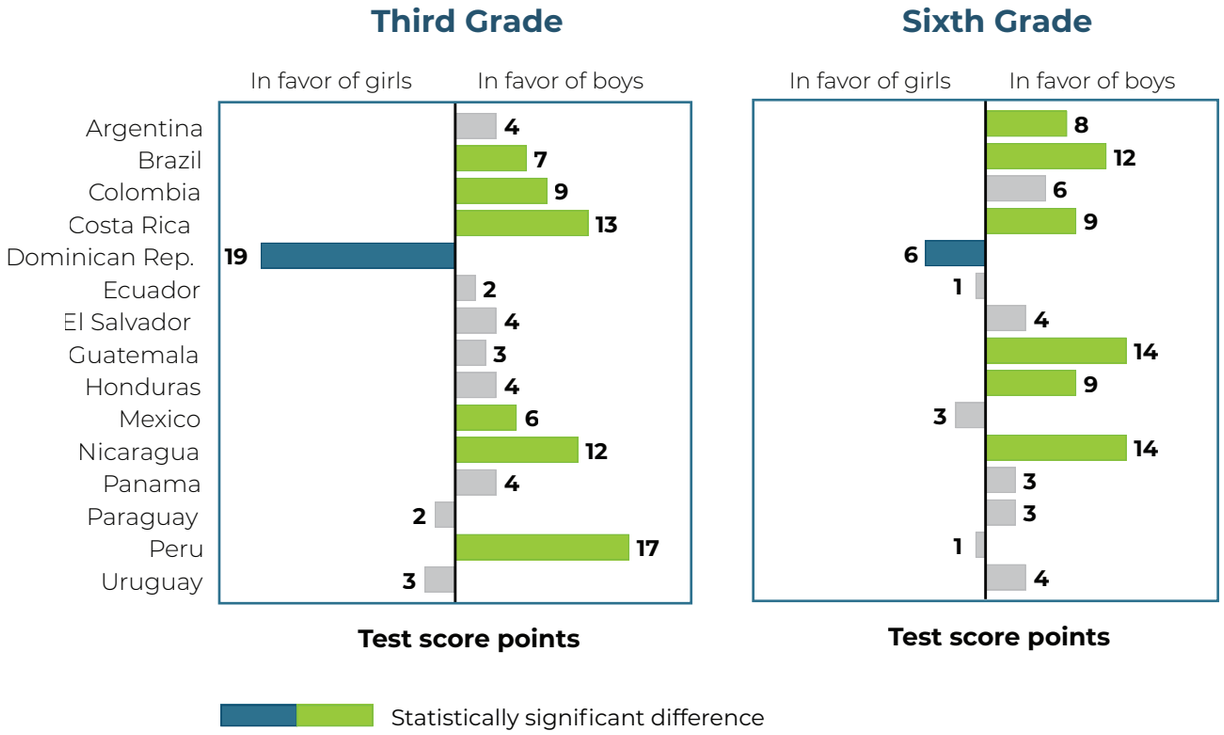
The gender-based achievement gap in mathematics tends to widen in favor of boys as students advance through their educational journey, evidenced by comparing data from 3rd and 6th grade in primary education. Conversely, the gender achievement gap favoring girls in language typically decreases between 3rd and 6th grade in most countries. While gender significantly explains the achievement gaps in mathematics, it does not consistently account for gaps in language and science.

In mathematics, a handful of countries have achievement gaps between boys and girls.

- In third-grade mathematics, boys outperform girls in Brazil, Colombia, Costa Rica, Mexico, Nicaragua, and Peru.
- In sixth grade mathematics, boys perform better than girls in a third of countries: Argentina, Brazil, Costa Rica, Guatemala, Honduras, and Nicaragua.
- At both grade levels, the Dominican Republic stands out as an exception with gender achievement gaps in favor of girls.

ACHIEVEMENT GAPS BETWEEN BOYS AND GIRLS IN MATHEMATICS

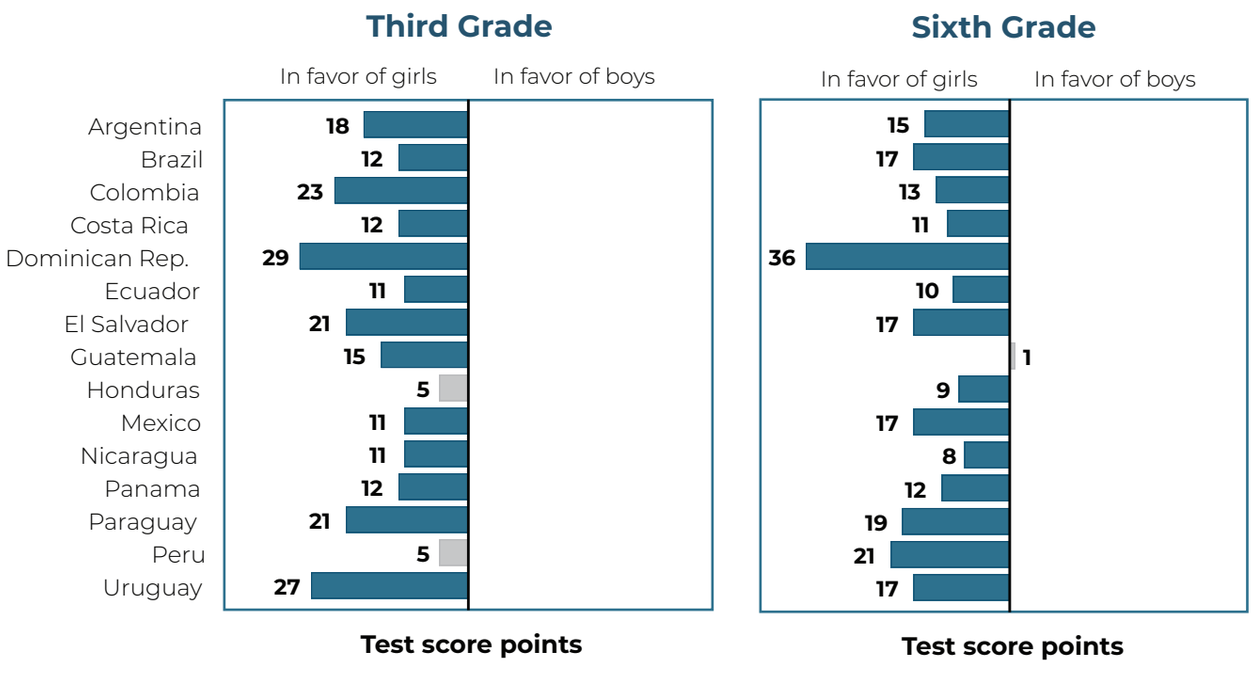


Source: Authors' calculations based on ERCE 2019 databases.

Girls consistently outperform boys in language

- Third-grade girls outperform boys in language in almost all countries.
- The largest achievement gaps between boys and girls are observed in the Dominican Republic.
- There is no significant difference in third grade test scores in Honduras and Peru, nor in sixth grade test scores in Guatemala.
- In Argentina, Dominican Republic, Mexico, Panama, Paraguay, Peru, and Uruguay girls outperform boys in sixth grade science. Guatemala is the only exception where boys outperform girls.

ACHIEVEMENT GAPS BETWEEN BOYS AND GIRLS IN LANGUAGE

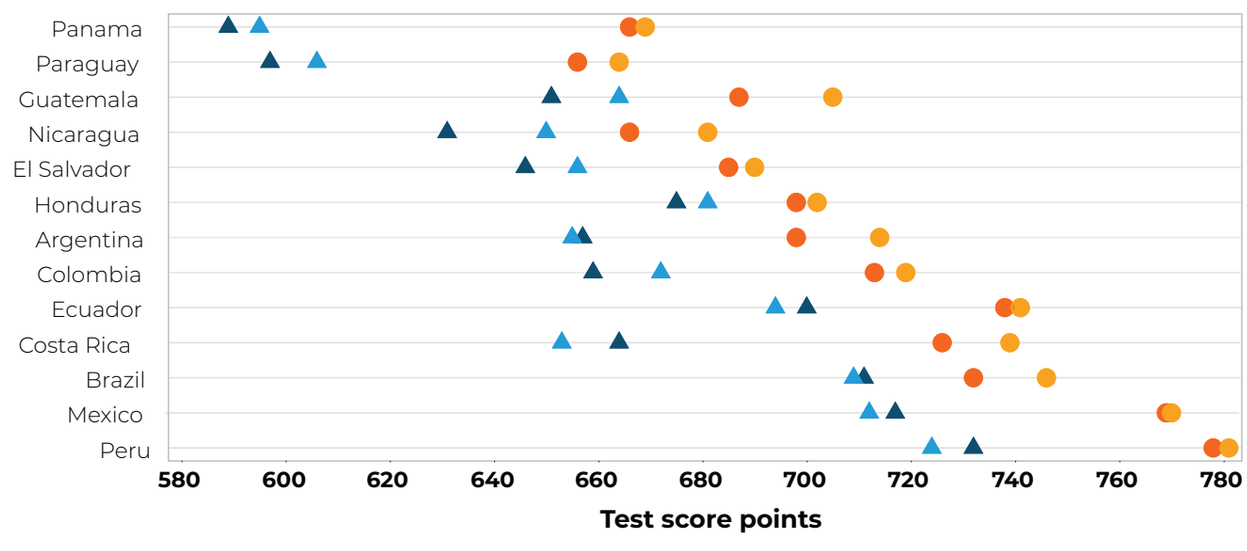


Source: Authors' calculations based on ERCE 2019 databases.

Indigenous girls achieve lower scores in mathematics than peers.

- Indigenous girls score lower in mathematics than all other groups of students.
- The greatest achievement gaps between Indigenous boys and girls and their peers who are not indigenous are observed in Argentina, Colombia, Costa Rica, Mexico, Panama, Paraguay, and Peru.

AVERAGE TEST SCORES OF INDIGENOUS BOYS AND GIRLS AND THEIR PEERS, SIXTH GRADE MATHEMATICS[1]



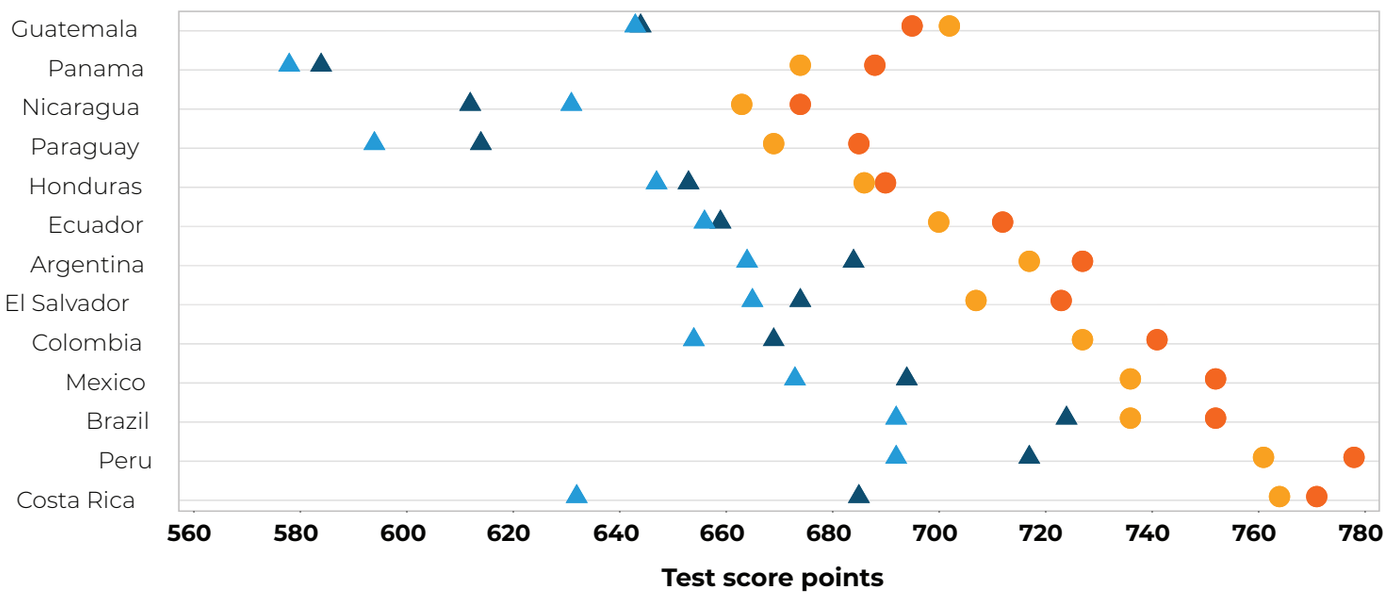
Source: Authors' calculations based on ERCE 2019 databases.

[1]The Dominican Republic and Uruguay do not have indigenous populations among their students and were therefore excluded from this part of the analysis.

Indigenous boys achieve lower scores in language and science when compared to their peers.

- In sixth grade language and science, indigenous boys generally obtain lower scores than other groups of students.
- The greatest achievement gaps between Indigenous boys and girls and their peers who are not indigenous in language and science are observed in Costa Rica and Panama.

AVERAGE TEST SCORES OF INDIGENOUS BOYS AND GIRLS AND THEIR PEERS, SIXTH GRADE LANGUAGE

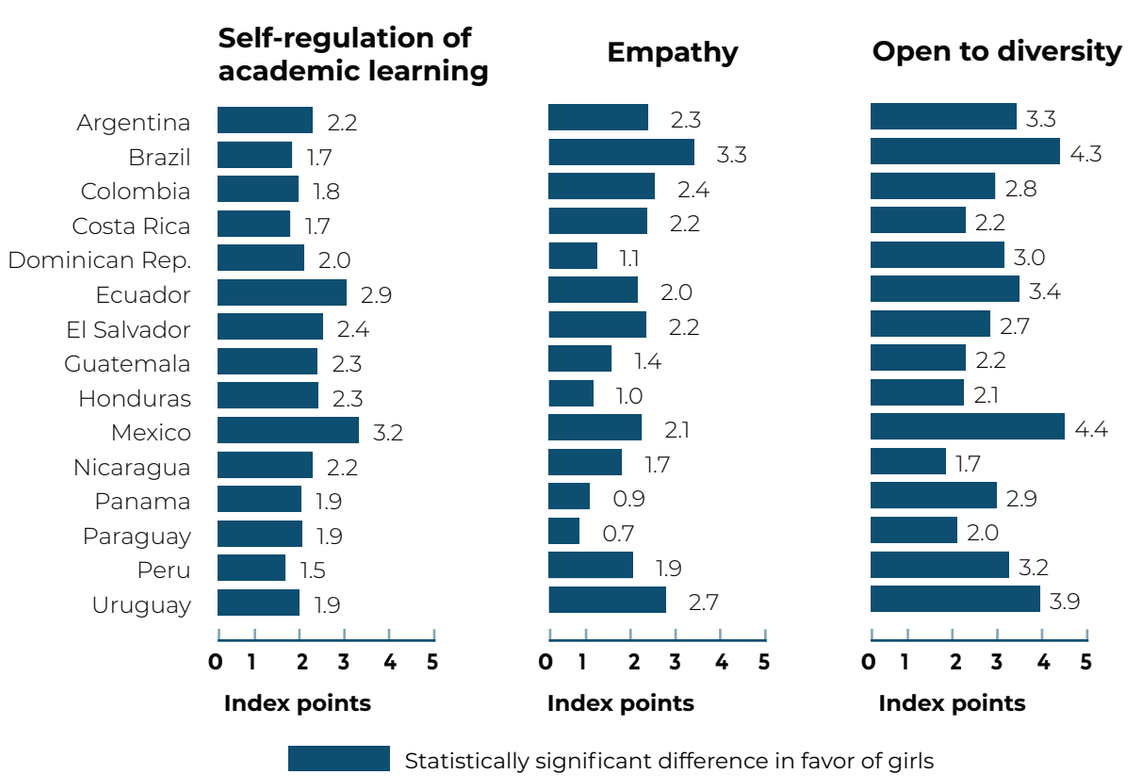


Source: Authors' calculations based on ERCE 2019 databases.

Girls consistently exhibit higher levels of socio-emotional skills than boys.

- The gap between boys and girls in socio-emotional skills is consistent across all countries.
- Sixth grade girls have higher levels of self-regulation of academic learning, empathy, and openness to diversity compared to boys.

SOCIOEMOTIONAL SKILLS INDEX GAPS BETWEEN BOYS AND GIRLS, SIXTH GRADE

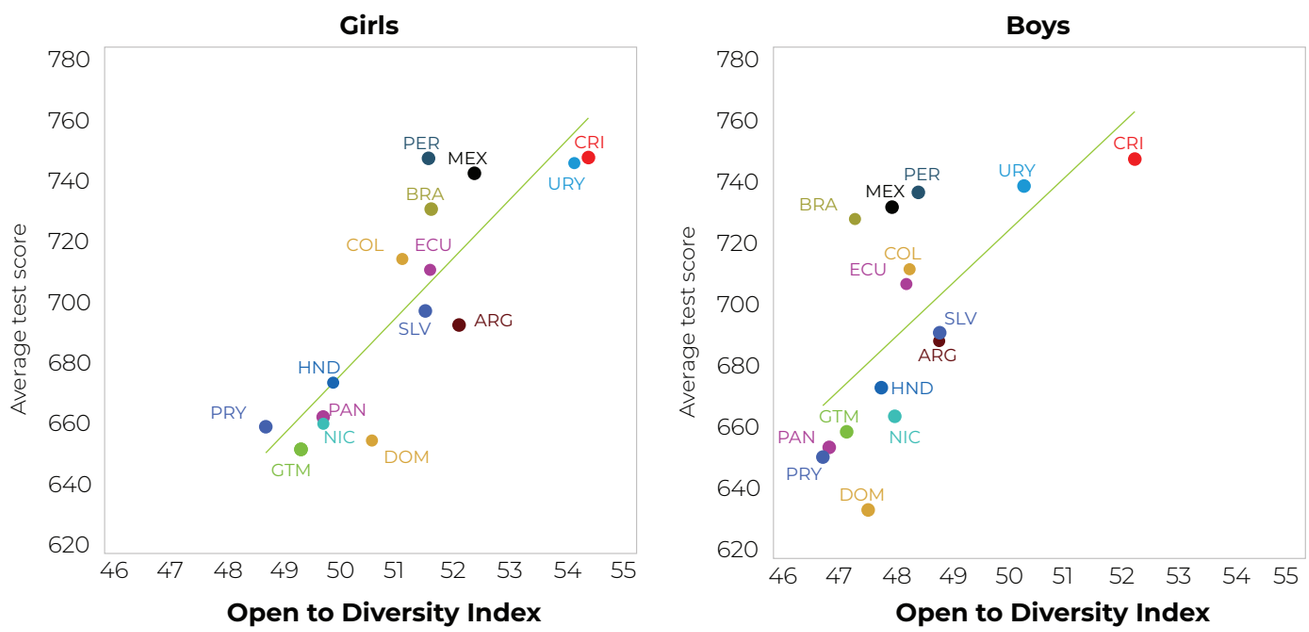


Source: Authors' calculations based on ERCE 2019 databases.

Openness to diversity is positively associated with cognitive skills in all subject areas.

- Of the three socioemotional skills, only *openness to diversity* is associated with learning outcomes.
- Boys and girls from countries with the highest cognitive skills are more open to diversity, namely Costa Rica and Uruguay. Conversely, their peers in lower-scoring countries, like the Dominican Republic, Guatemala, Honduras, Nicaragua, Panama, and Paraguay, score lower on the Open to Diversity Index.

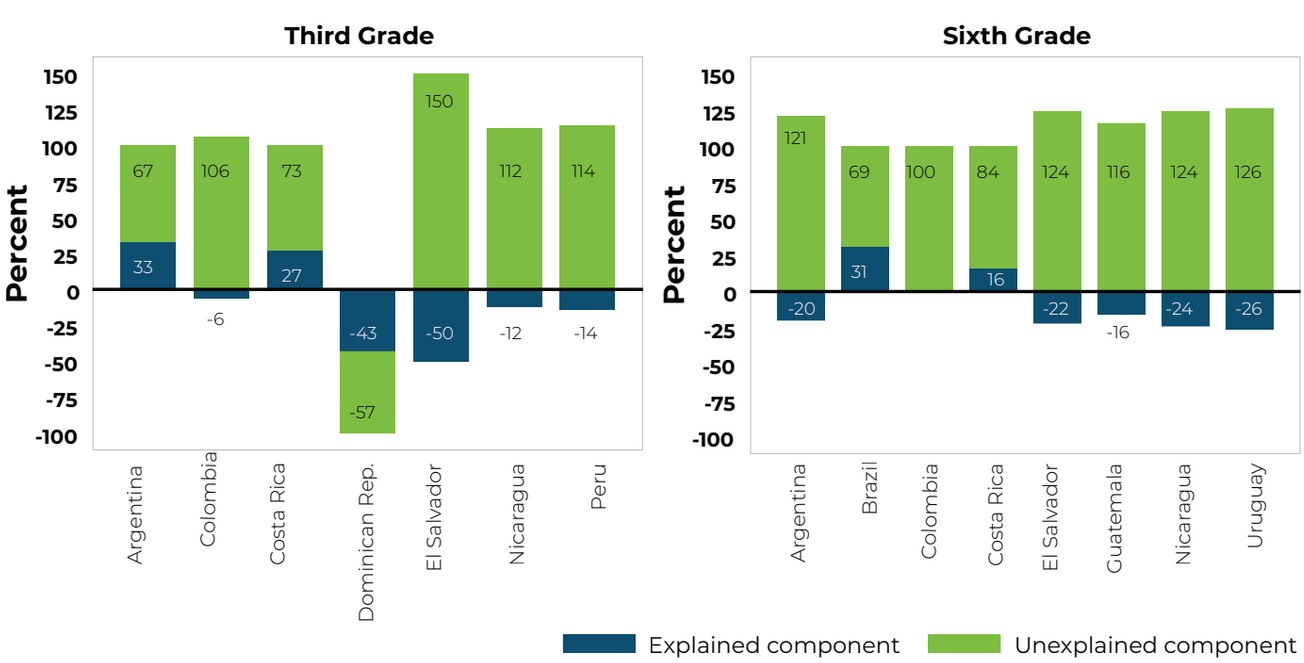
RELATION BETWEEN OPEN TO DIVERSITY INDEX AND AVERAGE TEST SCORES, SIXTH GRADE



The mathematics achievement gap between boys and girls is largely due to gender.

- In third grade, between 67 and 150 percent of the mathematics achievement gap favoring boys can be explained by gender.[2] The Dominican Republic, 57 percent of the achievement gap in favor of girls can be explained by gender.
- In sixth grade, between 69 and 126 percent of the mathematics achievement gap in favor of boys is explained by gender.

TEST SCORE DIFFERENCES EXPLAINED BY GENDER USING THE OAXACA-BLINDER DECOMPOSITION METHOD, MATHEMATICS (%)



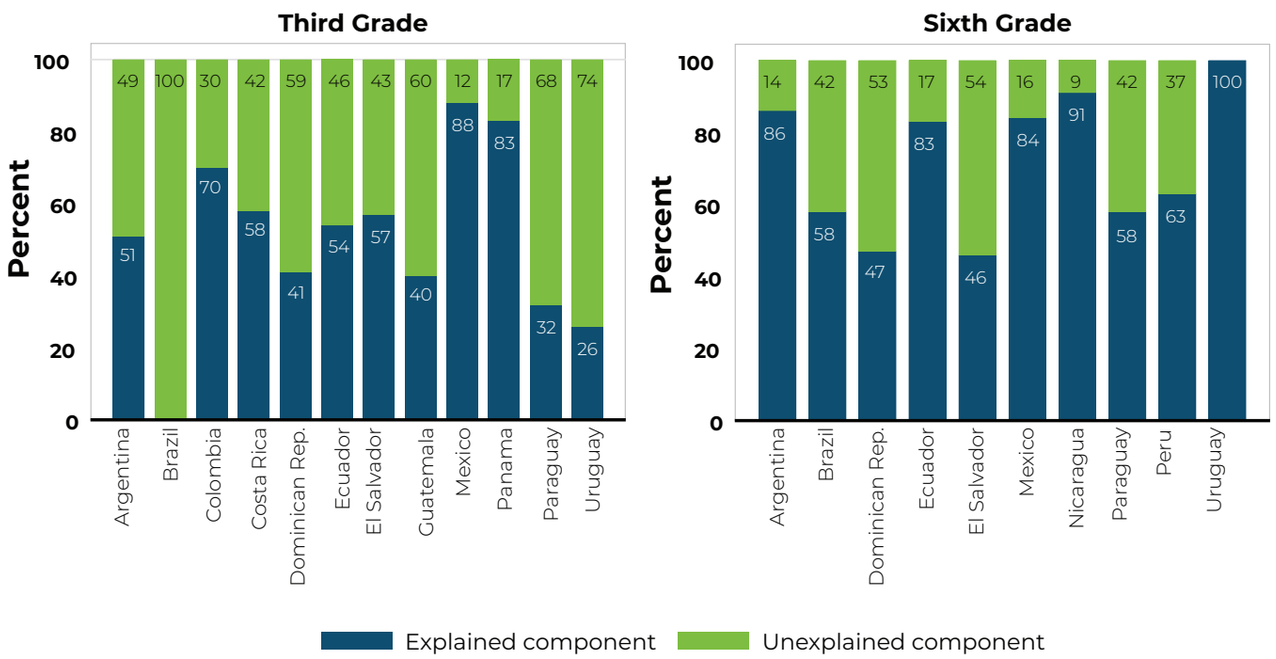
Source: Authors' calculations based on ERCE 2019 databases.

[2] The Oaxaca-Blinder Decomposition method decomposes the difference in test scores between girls and boys into two parts: (ii) the explained component (factors that can be quantified and explained as drivers of the group differences in test scores), and (ii) the unexplained component (unobservable factors related to gender). While achievement gaps are statistically significant for some countries in the first two figures, when controlling for covariates such as grade repetition, family socioeconomic status, mother's education level, parent involvement and expectations, the significance disappears at any level of confidence and therefore are not considered in this analysis.

Gender does not consistently explain the achievement gap in favor of girls in language.

- In half of the countries —Colombia, Costa Rica, Ecuador, El Salvador, Mexico, and Panama— third grade language test score gaps in favor of girls are largely due to observable factors other than gender.
- In Brazil, the Dominican Republic, Guatemala, Paraguay, and Uruguay the test score difference can in a large part be explained by gender.
- In sixth grade, half of the language achievement gap favoring girls is explained by gender in the Dominican Republic and El Salvador.
- In Argentina, Brazil, Ecuador, Mexico, Nicaragua, Paraguay, Peru, and Uruguay, the sixth-grade language achievement gap favoring girls is explained by factors other than gender.

TEST SCORE DIFFERENCES EXPLAINED BY GENDER USING THE OAXACA-BLINDER DECOMPOSITION METHOD LANGUAGE (%)



Source: Authors' calculations based on ERCE 2019 databases.

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Publication date: June 2023