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# The State of Education in Latin America and the Caribbean 2023

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Inter-American Development Bank  
Education Division

January 2024



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# THE STATE OF **EDUCATION** IN LATIN AMERICA AND THE CARIBBEAN

## 2023

Elena Arias  
Cecilia Giambruno  
Alejandro Morduchowicz  
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**JEL Codes:** I21; I24; I29, YI.

**Keywords:** Educational development, Learning outcomes, Coverage, Resources, Latin America and the Caribbean; Indicators.

The State of Education in Latin America and the Caribbean is a publication by the Education Division of the Social Sector at the Inter-American Development Bank (IDB). This project was conceived with the aim of generating more and better data to help countries identify issues, find solutions, and use resources intelligently. This publication would not have been possible without the work and support of numerous individuals.

First, we wish to thank the team at the Information Center for Learning Improvements (CIMA) of the IDB's Education Division, particularly Sergio Mancilla, for the technical support provided in the systematization of the databases. The team also appreciates the excellent contributions of Valentina Giménez and her support in the review, design, publication, and dissemination of this report.

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# Foreword

By **Mercedes Mateo**, Chief of the Education Division at the IDB.

The Inter-American Development Bank (IDB) has a longstanding commitment to promoting evidence-based educational policies. Now more than ever, the use of educational data and statistics will enable solid diagnostics and the design of more effective and better-targeted interventions, thereby optimizing investments. Evidence indicates that strategic decision-making, optimal resource allocation, and robust accountability systems are fundamentally linked to the availability and use of appropriate data (Burns et al., 2007; Slavin, 2002).

To contribute to this goal, CIMA (Information Center for the Improvement of Learning, by its acronym in Spanish) was established. It is an educational statistics portal that enhances the availability of comparable data and indicators for countries in Latin America and the Caribbean. Today, to deepen our offering of quality information, we present *The State of Education in Latin America and the Caribbean*, a new series of statistical reports that, in a single document and in summary form, includes the main educational indicators by country, providing a regional overview. Additionally, a comparative analysis of Latin America and the Caribbean with other regions of the world is included, delving into the three main dimensions that account for the level of development of educational systems: financial resources, coverage and efficiency, and learning outcomes.

What does the data show? The analysis results indicate that investment in education in Latin America and the Caribbean remains below the OECD average. In terms of access, timely progression, and completion, the analysis reveals that the region's rates of secondary education completion and transition to tertiary education continue to be significantly below international comparators. From the quality perspective, as evidenced by the PISA 2022 results, learning in fundamental competencies (reading, mathematics, science) is very low, with the pending task of incorporating 21<sup>st</sup>-century skills to address the disconnect between what educational systems offer and what the labor market demands. Finally, the educational landscape in Latin America and the Caribbean is marked by inequality. Gaps by socioeconomic level, gender, area of residence, and ethnicity are present in virtually all of the region's educational indicators.

The homogenized indicators describing the state of education in the region reported in this document can also be viewed on the CIMA online platform ([www.cima.iadb.org/es](http://www.cima.iadb.org/es)), and on the [Latin America and the Caribbean in PISA](#) site, which includes a series of IDB publications analyzing the PISA 2022 results for the region.

We hope that this first issue of The State of Education in Latin America and the Caribbean, as well as future editions, will be useful in creating spaces for discussion not only about the challenges but about potential data and evidence-based solutions.



# 1

## Introduction

Skill accumulation is essential for overcoming structural inequalities, improving social mobility, and driving productivity growth. Yet, educational systems in Latin America and the Caribbean face significant challenges. On one side, there are high dropout rates and low levels of secondary education completion: on average, 35% of young people between 21 and 23 years old have not completed secondary school. On the other hand, the region's youth have low levels of foundational learning: in reading and science, more than half of the region's 15-year-olds do not meet the minimum level of competencies, while for mathematics, the percentage rises to 75% (PISA 2022). Thirdly, there's little relevance or connection with labor market demands, as most students do not develop the basic cognitive and socio-emotional skills needed for success in life, even after graduating from secondary school. Lastly, the region faces high inequality in terms of access, learning quality, and completion, especially harming students from low socioeconomic backgrounds, rural areas, and racial and ethnic minorities.

The closure of schools and educational institutions due to COVID-19 exacerbated structural deficiencies and widened gaps. This interruption in skill accumulation will translate not only into lost opportunities, growth, and future income for children and youth but will also have implications for the sustainable growth of the countries in the region.

In this context, educational policy needs to be oriented towards actions that have proven effective. Having more and better data to help countries visualize problems, identify potential solutions, and decide how to invest resources towards those with the most evidence and potential to make a significant impact on identified educational challenges is key. The State of Education in Latin America and the Caribbean aims to contribute to this goal through a global comparative analysis of the three main dimensions that account for the level of development of educational systems: i) financial resources; ii) coverage and efficiency; and iii) learning outcomes.

The analysis results show that the average investment per student in primary and secondary education (USD, PPP) is three times lower in Latin America and the Caribbean than in the OECD. Regarding coverage and efficiency, the analysis shows that, on average, the region's population has two years less schooling than that of OECD countries. Schooling is 9.07 years, corresponding to the first cycle of secondary education. Finally, the most significant challenges appear at the level of learning outcomes: more than half of the region's 15-year-olds Latin America fails to meet the minimum competency levels in reading and science, double that reported for OECD countries. In mathematics, 3 out of 4 students in the region do not reach the minimum competency level, while for the OECD average, this figure is reduced to 3 out of 10. This report also includes a selection of indicators from the CIMA (Information Center for the Improvement of Learning) educational





statistics portal of the Inter-American Development Bank, allowing country-level analysis—with breakdowns by income quintile and gender—of coverage, efficiency, learning, financial resources, physical resources, and teachers. Country-level indicator analysis reveals common patterns but also significant heterogeneity within the region.

In terms of coverage, significant gaps exist at the secondary level according to income quintile: the net secondary coverage rate shows a 20.3 percentage point gap in favor of the higher-income quintile. Regarding learning, for the sixth grade of primary education, 82% do not achieve minimum performance in mathematics, 79% in science, and 69% in reading (ERCE, 2019). Moreover, data comparison between 2013 and 2019 indicates that learning in the region has stagnated and, in some cases, declined.

The existing challenges highlight the need for countries in the region to increase and make more efficient investments in education. There is approximately a 17% overspending in educational acquisitions, 14% in salary expenses, and 0.27% of the GDP of Latin American and Caribbean countries is lost due to erroneous implementations or resource leakages (Izquierdo et al., 2018).

Despite a seven-percent point average increase in public spending in the region over the last 20 years, this was not reflected in a significant increase in physical and human capital or social benefits. Thus, these estimates underline the need to prioritize spending on elements and actions proven to improve educational quality, such as having well-trained teachers, providing educational resources, and reducing barriers to education access.

The document is divided into four sections. This first section contains the introduction. The second presents an analysis of educational development in Latin America and the Caribbean through a global comparison. The third section focuses on the education panorama in Latin America and the Caribbean, presenting country-level indicators in the dimensions of coverage, internal efficiency, learning, financial resources, physical resources, and teachers. Finally, the fourth section synthesizes the main findings and conclusions of the report.





# 2

## Educational Development in LAC: A Global Comparison

### 2.1 Dimensions of Educational Development

This section presents a global comparative analysis that delves into the three main dimensions of educational development: financial resources, coverage and efficiency, and learning outcomes. The importance of these dimensions as central to educational development follows a logic of results, starting from the inputs (in this case, financial resources invested in education) necessary to achieve the intermediate outcome of all students having access to and completing education (coverage and efficiency), to reach the final outcome of acquiring the necessary competencies and skills (learning outcomes).

While there have been advances in recent years, especially in the dimension of access, educational development exhibits high heterogeneity among the countries of the region and, in general terms, lags behind more developed countries. The main educational challenges are concentrated in the rates of completion of educational levels and the level of achievement and relevance of learning outcomes. This contributes to the dual and paradoxical phenomenon of unemployment and, at the same time, companies' difficulties in filling vacancies, as well as issues affecting students' comprehensive development personally and their ability to function as citizens.

Additionally, there is a high inequity in educational outcomes, in terms of socioeconomic level, geographic location, and ethnic origin. From a gender perspective, it is noteworthy that, on average, women have higher completion rates in secondary and tertiary education and better learning outcomes in reading, while men perform better in mathematics and science.



The following is a comparative analysis of Latin America and the Caribbean with other regions of the world in the three dimensions mentioned: financial resources, coverage, and efficiency, and learning outcomes.<sup>1</sup>

Each subsection presents a set of indicators comparing the average for Latin America and the Caribbean against OECD member countries and other regions of the world, with breakdowns by gender and socioeconomic level. Each subsection concludes with a comparative national-level analysis of a selected indicator for a total of 56 countries, 10 of which are in Latin America and the Caribbean.<sup>2</sup> Finally, the section ends with an aggregated analysis of the educational development dimensions for 10 Latin American and Caribbean countries.

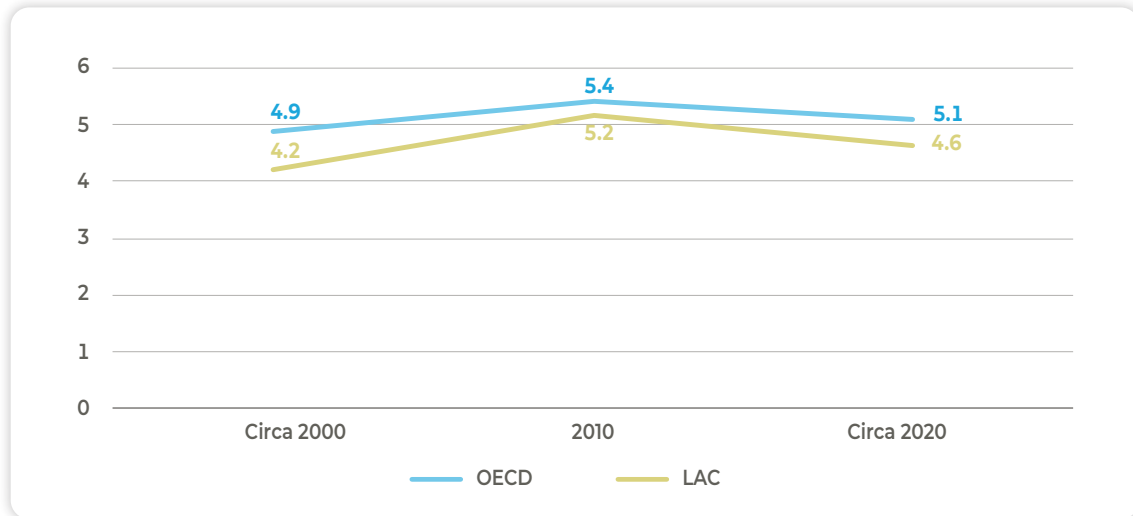
## 2.2 Financial Resources

Overall, public spending on education as a percentage of GDP for countries in Latin America and the Caribbean has increased compared to the year 2000, though this increase was more significant during the first decade of the 21<sup>st</sup> century. It's noteworthy that this growth trend has reversed in recent years. Around 2000, education spending was 4.2% of the Gross Domestic Product (GDP). Ten years later, it reached 5.2% of GDP.<sup>3</sup> However, by 2020, spending had decreased to 4.6% of GDP. In OECD countries, a similar trend is observed: there has been a reduction in average spending in recent years, though at a higher spending level.

- 
1. For the preparation of this report, various types of information were used to allow international comparison. Sources include the UNESCO Institute of Statistics (UIS), World Bank indicators, household survey statistics from the Socioeconomic Database for Latin America and the Caribbean (SEDLAC) project by the World Bank's Center for Distributional, Labor, and Social Studies (CEDLAS), the Information Center for the Improvement of Learning (CIMA) of the Inter-American Development Bank (IDB), and the 2019 Comparative and Explanatory Regional Study (ERCE). Additionally, a literature review was conducted on studies presenting evidence on the topics addressed in this report.
  2. Based on the 81 countries and economies participating in PISA 2022, the analysis in sections 2.1, 2.2, and 2.3, as well as the analysis in section 2.5, considers a total of 56 countries with updated information for the other two indicators analyzed (average spending per student in primary and secondary education –USD, PPP– and expected years of schooling, both from UIS UNESCO). Of these, 10 countries are from the region: Argentina, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Guatemala, Mexico, Peru, and Uruguay.
  3. While one might think the decrease is due to the COVID-19 pandemic, the decrease occurred in previous years (for example, in 2015, spending was 4.4% of GDP).



**FIGURE 2.1 AVERAGE PUBLIC SPENDING ON EDUCATION,  
AS PERCENTAGE OF GDP (CIRCA 2010-2020)**

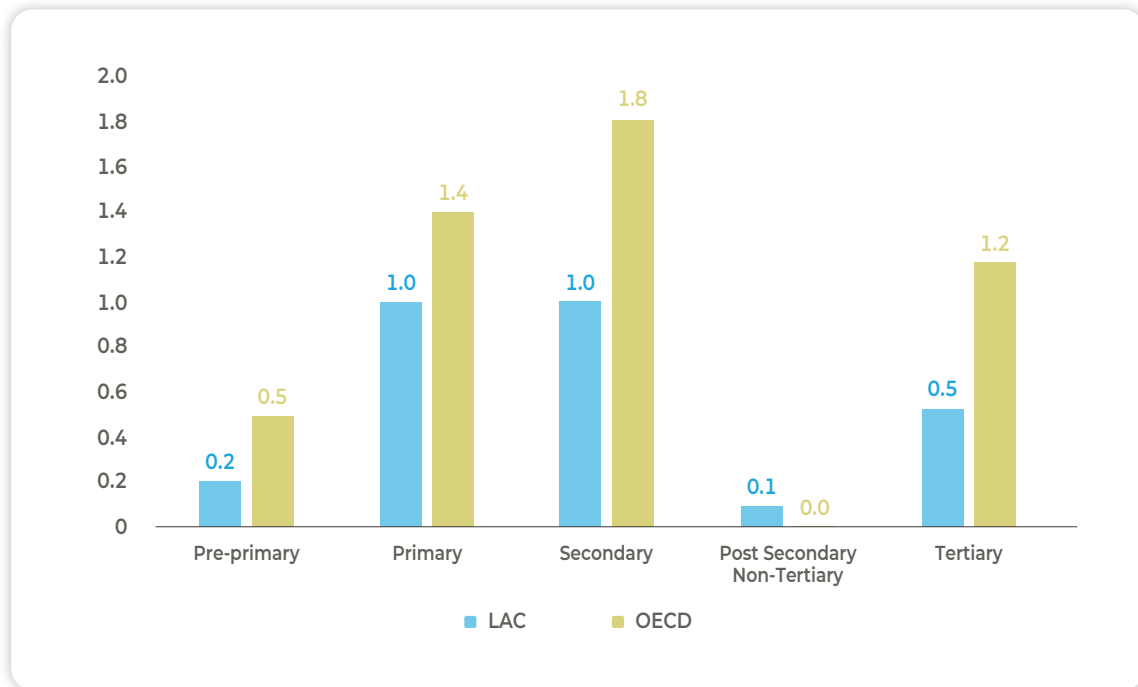


Source: Author's elaboration based on UIS UNESCO data.

When comparing education spending as a percentage of GDP by educational level, investment in education in Latin America and the Caribbean is lower than the OECD at all levels. On average, countries in the region allocate 0.2% for pre-primary, 1% for primary, 1% for secondary, 0.1% for non-tertiary post-secondary, and 0.5% for tertiary education.



**FIGURE 2.2** AVERAGE PUBLIC SPENDING ON EDUCATION  
BY EDUCATIONAL LEVEL, AS PERCENTAGE OF GDP

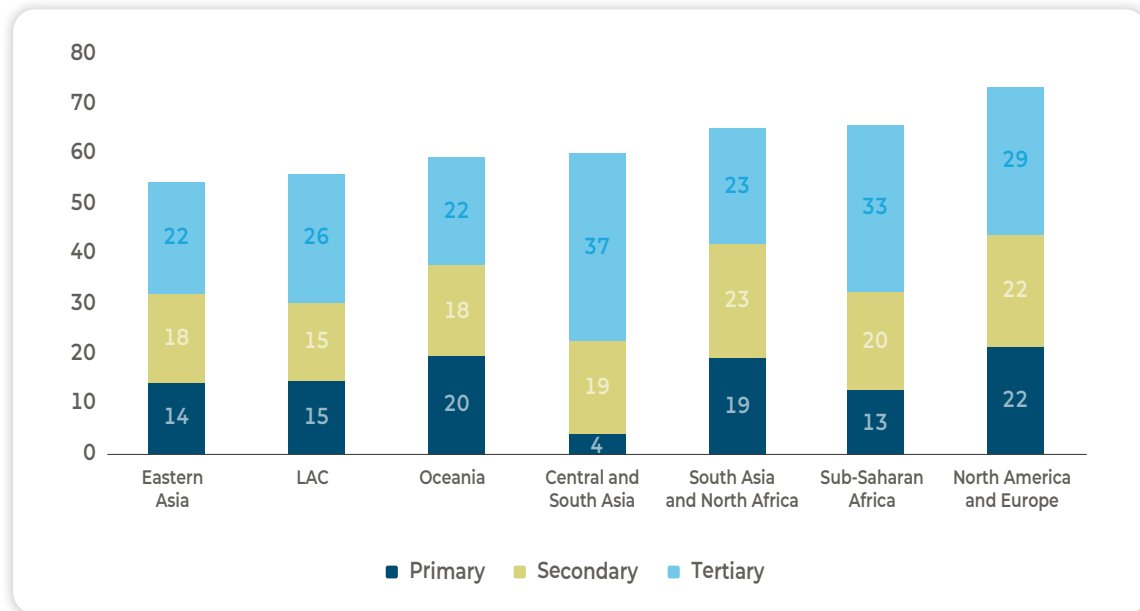


Source: Authors' elaboration.

The figure 2.3 illustrates the initial government spending per student as a percentage of GDP per capita across different regions. It shows that Latin America and the Caribbean (ALC) rank second lowest in initial government spending per student among all regions, with a 15% investment for primary and secondary education and a 26% investment for tertiary education. North America and Europe appear to have the highest level of initial government spending per student across all three levels.



**FIGURE 2.3 INITIAL GOVERNMENT SPENDING PER STUDENT AS A PERCENTAGE OF GDP PER CAPITA**



Source: Authors' elaboration.

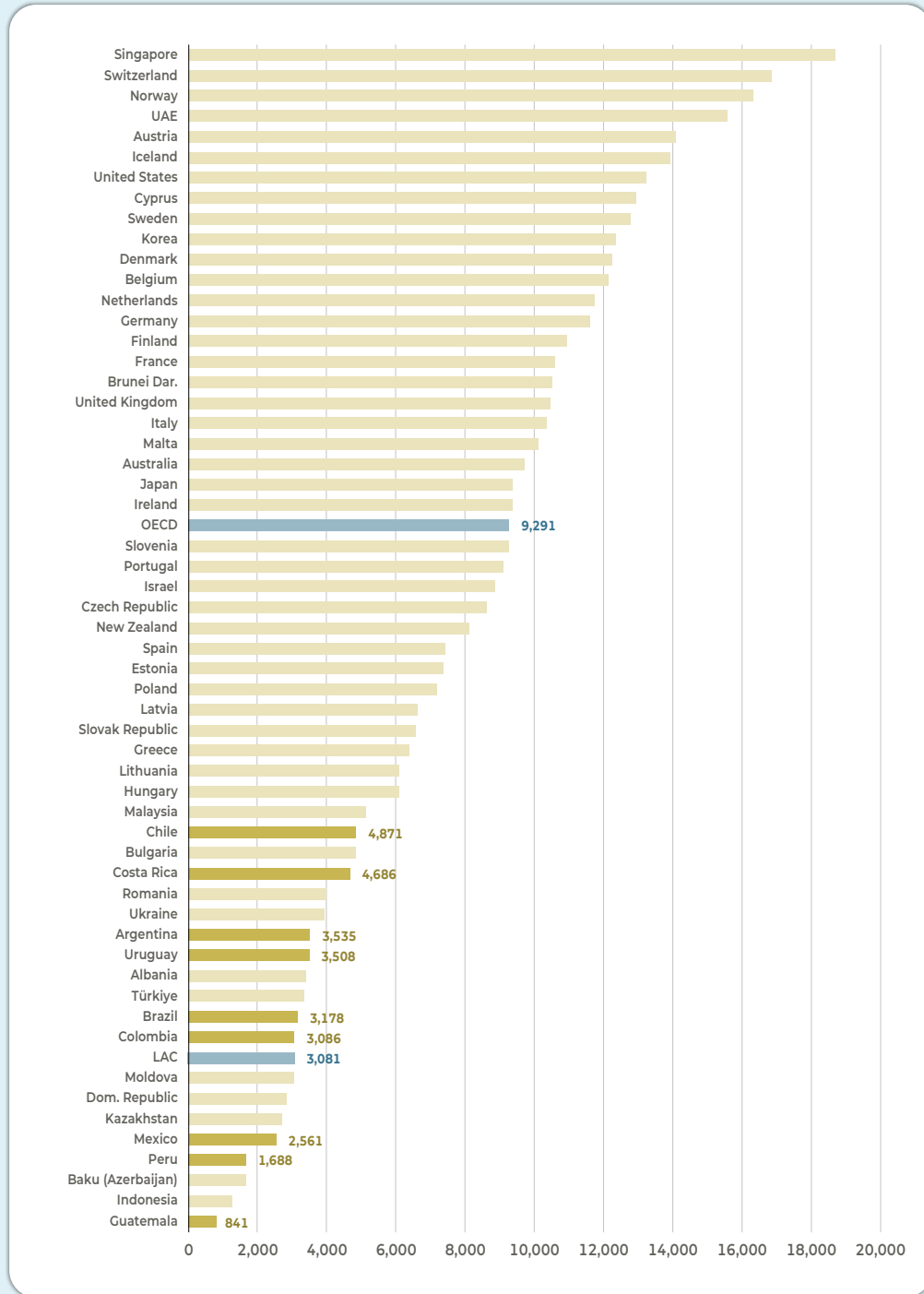
**BOX 2.1 ANNUAL SPENDING PER STUDENT IN PRIMARY AND SECONDARY EDUCATION, USD PPP.**

This indicator measures the average annual spending per student in primary and secondary education, expressed in US dollars (USD) at purchasing power parity (PPP). It is calculated by averaging the annual spending per student in USD PPP for primary and secondary levels as reported by UIS UNESCO.

Of the 10 Latin American and Caribbean countries analyzed, all fall within the second half of the distribution, with the average spending per student in Latin American and Caribbean countries (US\$ 3081) being three times lower than that of OECD countries (US\$ 9291). Chile and Costa Rica stand out within the region as countries with higher investment, surpassing US\$ 4500 annually per student. On the other hand, Guatemala has the lowest investment among the 56 countries analyzed, with less than US\$ 1000 annually per student.



ANNUAL SPENDING PER STUDENT IN PRIMARY AND SECONDARY EDUCATION, USD PPP.



Source: Author's elaboration.





## 2.3 Coverage and Efficiency

The average years of schooling for the population aged 25 and over in Latin America and the Caribbean is 9.07 years,<sup>4</sup> equivalent to an average schooling level corresponding to the first cycle of secondary education.<sup>5</sup> This represents a lag of 2 years in schooling compared to the average of countries in the Organization for Economic Co-operation and Development (OECD),<sup>6</sup> which reaches an average of 11.6 years.

It's worth noting that the average years of education in the region are very similar to the world average (9.13) and that of Western Asia and North Africa (9.34).<sup>7</sup> Eastern Asia,<sup>8</sup> Central Asia,<sup>9</sup> and Sub-Saharan Africa<sup>10</sup> are the regions with the lowest average years of schooling.

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4. UIS UNESCO did not calculate regional averages for this indicator. Therefore, for this report, a calculation was made for the regions presented. It was based on a population-weighted average for each country, similar to what UIS UNESCO does for other indicators. Only countries that have reported information on this indicator in at least the last 7 years are considered for this average, always prioritizing the most recent year, with data circa 2019. Not all countries have information on average years of schooling, so they are not included in this indicator. The countries included in this average are Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Honduras, Mexico, Panama, Paraguay, Peru, Saint Vincent and the Grenadines, Uruguay, and Venezuela.

5. The first cycle of secondary education (CINE Level 2 according to the International Standard Classification of Education 2011 by UNESCO) includes grades 7, 8, and 9, with a theoretical average age of 13 to 15 years old. It is also commonly referred to as lower secondary.

6. The OECD countries listed include: Chile, Colombia, Costa Rica, Mexico, Turkey, Australia, New Zealand, Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom, Canada, and the United States.

7. Western Asia and North Africa include: Armenia, Azerbaijan, Bahrain, Cyprus, Egypt, Georgia, Jordan, Kuwait, Oman, Palestine, Qatar, Saudi Arabia, Tunisia, Turkey, and the United Arab Emirates.

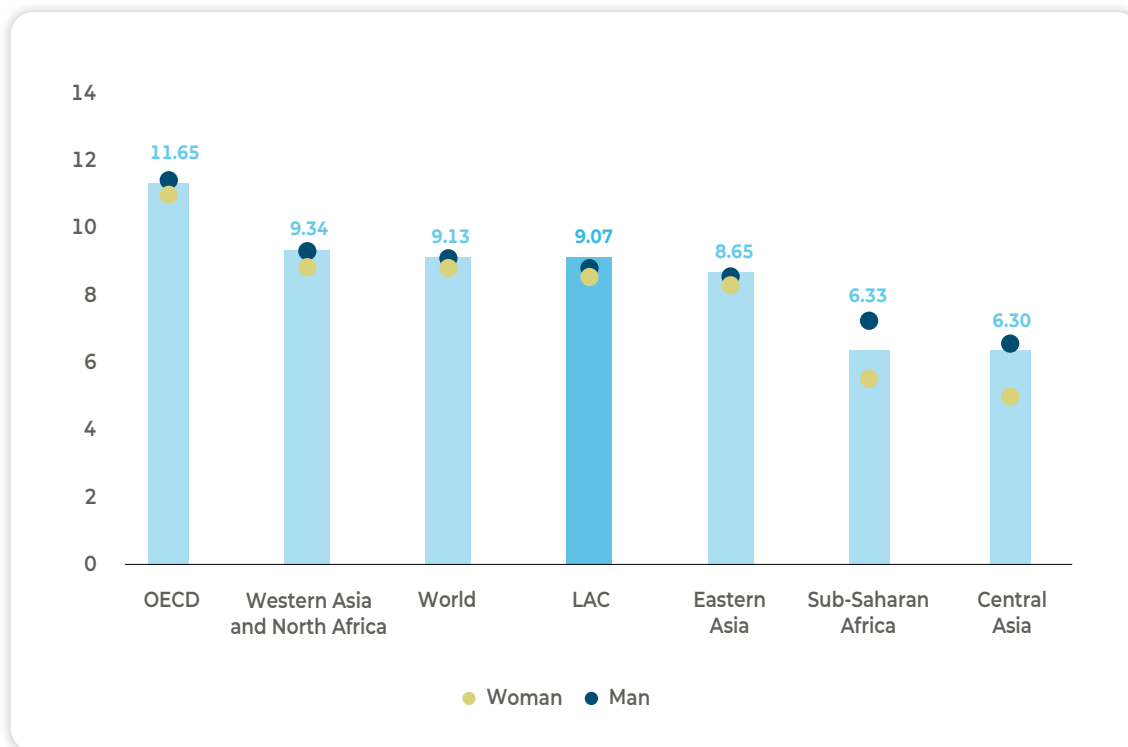
8. Eastern Asia includes: China, Hong Kong, Macao, Indonesia, Malaysia, Mongolia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.

9. Central Asia includes: Afghanistan, Bangladesh, Iran, Kazakhstan, Pakistan, Sri Lanka, Tajikistan, and Uzbekistan.

10. Sub-Saharan Africa includes: Democratic Republic of the Congo, Guinea, Madagascar, Mali, Rwanda, Senegal, and South Africa.



FIGURE 2.4 AVERAGE YEARS OF SCHOOLING BY REGION, CIRCA 2019



Source: Author's elaboration based on UIS UNESCO data.

The average years of schooling for women in Latin America and the Caribbean is 8.88, while for men it is 9.02, meaning there is a gap of 0.14 years in favor of men, something that occurs, to a greater or lesser extent, in all analyzed regions (Figure 2.4).<sup>11</sup>

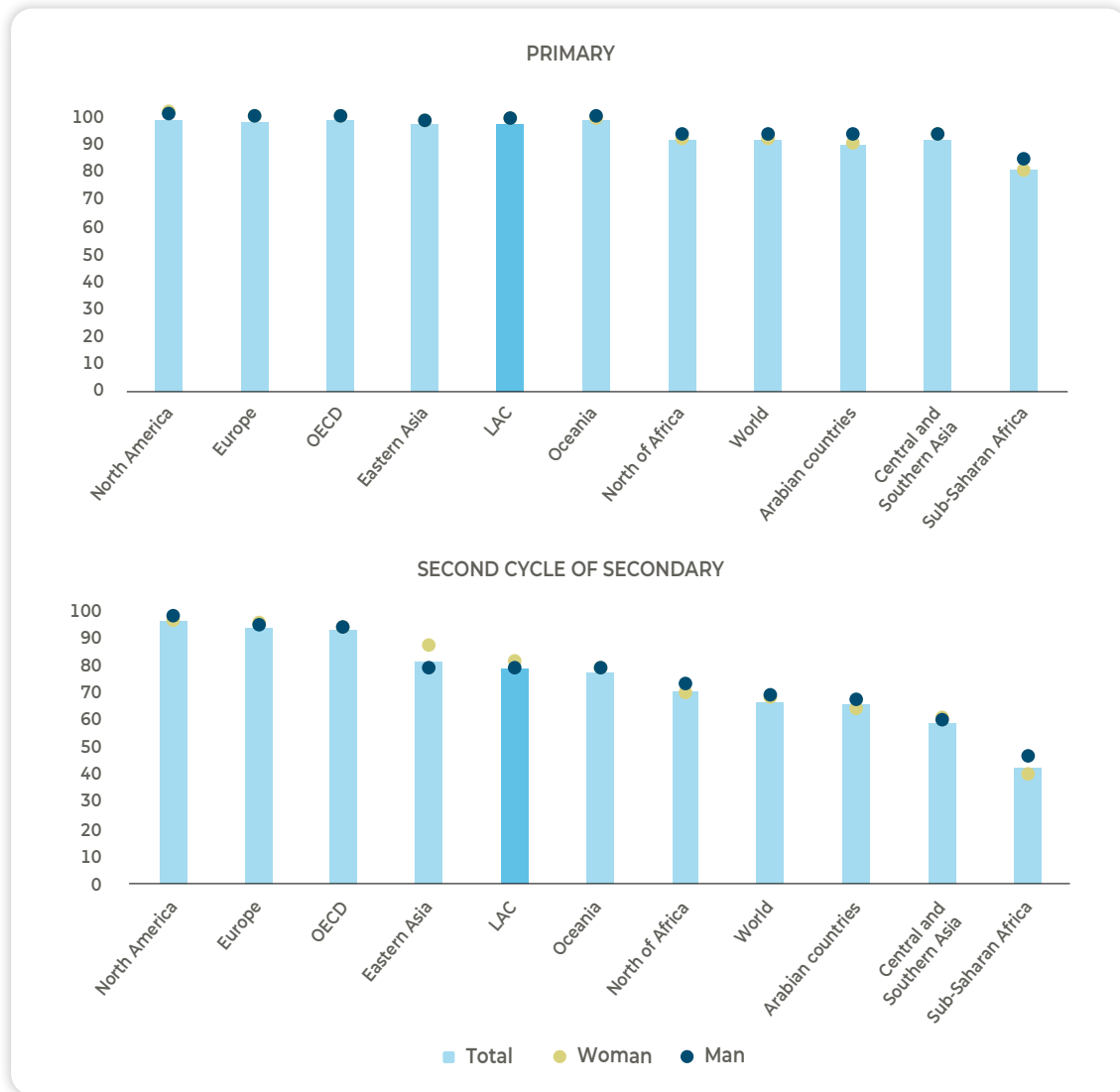
When reviewing net enrollment rates for primary and secondary levels, substantive differences are noted. In the case of primary education, Latin America and the Caribbean have nearly universal coverage (97.1%), similar to that of OECD member countries (98.9%).<sup>12</sup> However, for the second cycle of secondary education, significant challenges in access still persist: the net coverage for Latin America and the Caribbean is 78.7%, 14 percentage points (p.p.) below the average for OECD countries (92.8%). It is worth noting that the coverage rate for this cycle exceeds the global average and the other analyzed regions of the world, except for Europe, North America, and Central Asia (Figure 2.4).

11. It is worth noting that, in younger cohorts, women have higher rates of completion of secondary and tertiary education, and consequently, a greater number of accumulated years of education.

12. Includes all OECD member countries.



FIGURE 2.5 NET COVERAGE RATE, CIRCA 2019 (PERCENTAGE)



Source: Author's elaboration based on UIS UNESCO data.



Gender gaps in net coverage rates for Latin America and the Caribbean are smaller in primary education (0.4 p.p.) than in the second cycle of secondary education (2.6 p.p.), both of little magnitude and in favor of women. In the remaining regions of the world analyzed (Figure 2.4), small coverage gaps in favor of women are also observed, except for Arab countries and Sub-Saharan Africa.

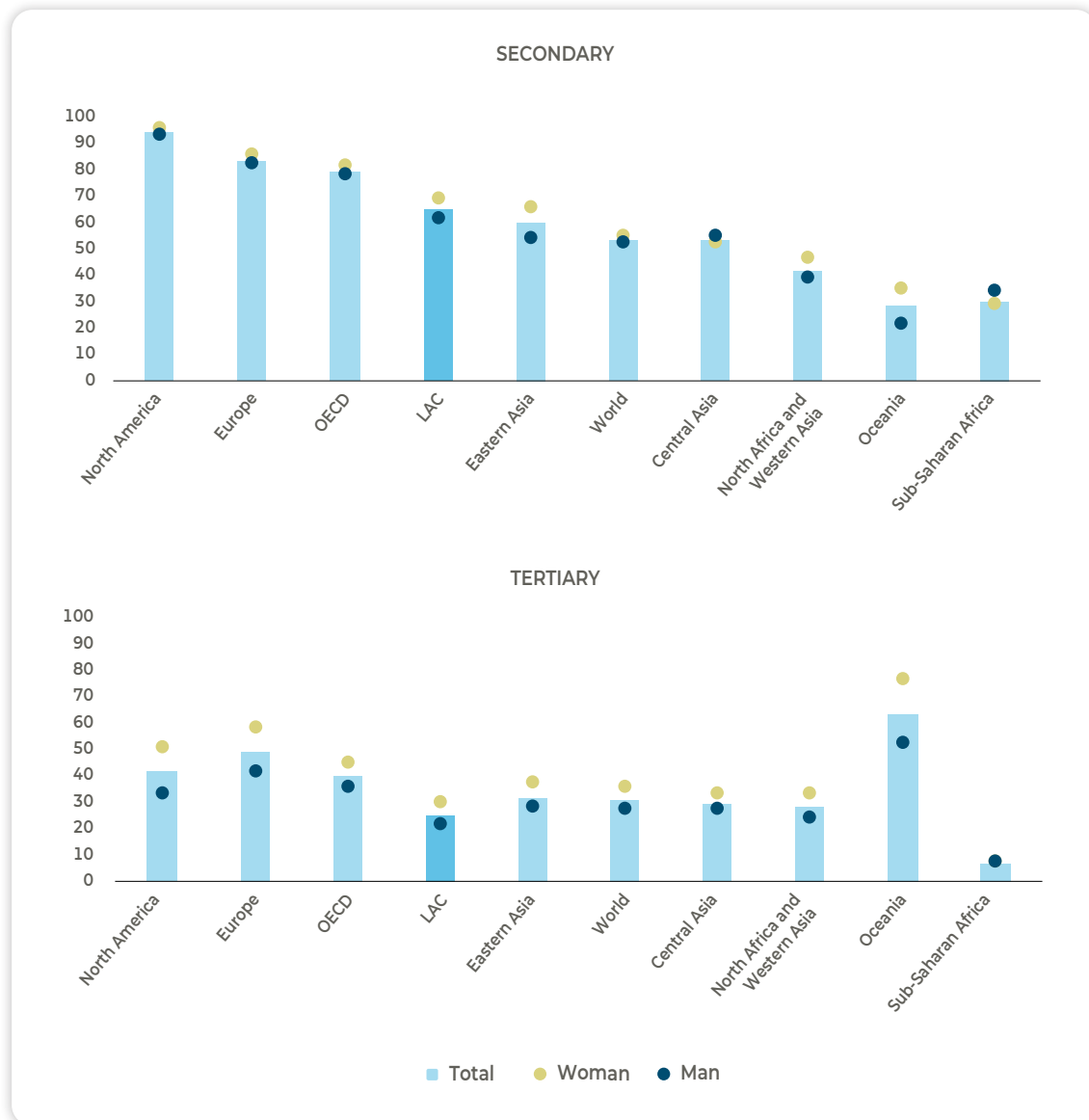
Deficiencies in the net coverage rate of secondary education in Latin America and the Caribbean translate into a low completion percentage for that level, an even lower rate for coverage in the tertiary education cycle (Figure 2.5). On average, 65% of young people in the region complete secondary education.<sup>13</sup> In other words, more than a third of the population of the region fails to complete this level. While the completion rate in Latin America and the Caribbean is higher than the global average (equivalent to 53.2%), it lags behind the OECD average by 15 p.p. (80%), with North America standing out globally for its completion rate of 94%. Women in Latin America and the Caribbean have a higher secondary school completion rate than men (68.7% compared to 61.5%). This trend in favor of women is observed in the other regions analyzed, except for Sub-Saharan Africa and Central Asia (Figure 2.5).

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13. The countries included are Argentina, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Saint Lucia, Suriname, Trinidad and Tobago, Uruguay, and Venezuela. The indicator refers to the percentage of a cohort of young people 3 to 5 years above the expected age for the last grade of secondary education who have completed that grade. For more information, see: <https://uis.unesco.org/en/glossary-term/completion-rate-primary-education-lower-secondary-education-upper-secondary-education>.



**FIGURE 2.6 COMPLETION RATE, CIRCA 2019 (PERCENTAGE)**



Source: Author's elaboration based on UIS UNESCO data.



Completion rates for tertiary education are below 65% in all regions analyzed<sup>14</sup>. In Latin America and the Caribbean, the gross tertiary completion rate is only 25.1%<sup>15</sup>, placing the region 15 p.p. below the OECD average (40%)<sup>16</sup>, and below the global average (30.8%). For the tertiary level, there is also a gender gap in favor of women, reaching, on average, 8 p.p. (29% compared to 21%). This trend in favor of women is also observed in the other regions analyzed (except for Sub-Saharan Africa), highlighting gaps of more than 15 p.p. in North America, Europe, and Oceania (Figure 2.5).

### BOX 2.2 SCHOOL LIFE EXPECTANCY

School life expectancy is measured through the variable of school life expectancy for primary, secondary, and tertiary education determined by UIS UNESCO. This variable is calculated as the sum of specific enrollment rates by age for each of the three levels of education.<sup>17</sup> This indicator reflects the total number of schooling years that a person of a certain age can expect to receive in the future, assuming that the probability of being enrolled in school at a given age is equal to the current enrollment rate for that age. A higher value of the indicator indicates a greater likelihood that students will spend more years within the educational system.<sup>18</sup>

Considering the 10 countries in Latin America and the Caribbean analyzed, the regional average is 15.3 years of school life expectancy, while the OECD average is 17 years. Argentina and Uruguay stand out, with school life expectancy exceeding 17 years, thus surpassing the OECD average. Guatemala ranks at the lower end of the distribution, with school life expectancy of less than 11 years.

14. This refers to the number of graduates from first-degree programs (in CINE 6 and 7) expressed as a percentage of the population at the theoretical graduation age of the most common first-degree program. For more information, see: [http://data.uis.unesco.org/OECDStat\\_Metadata/ShowMetadata.ashx?Dataset=NATMON\\_DS&Coords=%5bNATMON\\_IND%5d.%5bGGR\\_6T7%5d&ShowOn-Web=true&Lang=en](http://data.uis.unesco.org/OECDStat_Metadata/ShowMetadata.ashx?Dataset=NATMON_DS&Coords=%5bNATMON_IND%5d.%5bGGR_6T7%5d&ShowOn-Web=true&Lang=en). 15.

15. This indicator includes Argentina, Aruba, Belize, Chile, Colombia, Cuba, Ecuador, El Salvador, Grenada, Guatemala, Honduras, Turks and Caicos Islands, Mexico, Panama, Dominican Republic, and Saint Martin (Dutch part).

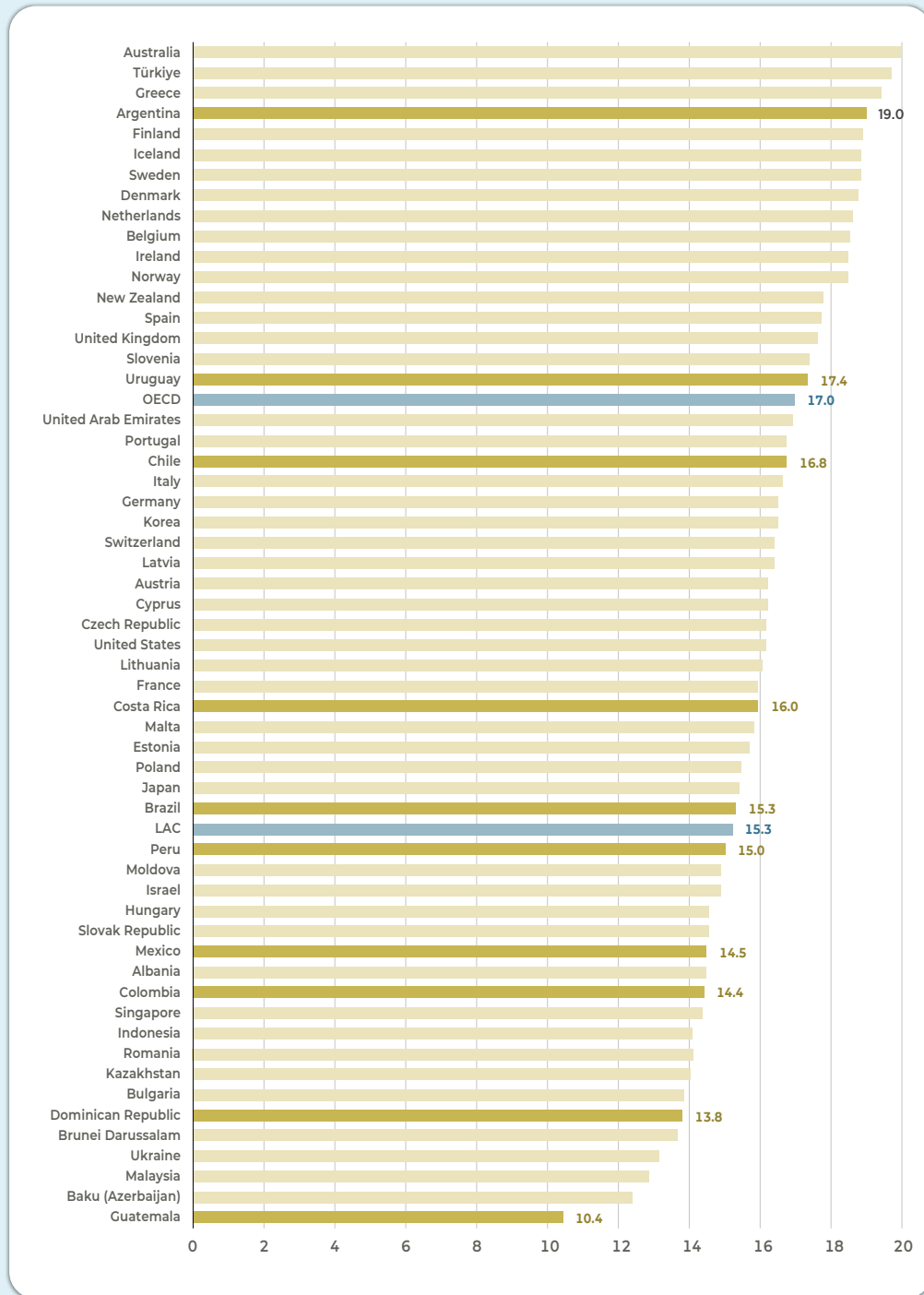
16. The countries reporting are Germany, Australia, Austria, Belgium, Canada, Chile, Colombia, Korea, Denmark, Slovakia, Slovenia, Estonia, Spain, Finland, France, Greece, Hungary, Iceland, Italy, Japan, Latvia, Lithuania, Luxembourg, Mexico, Norway, New Zealand, Netherlands, Poland, Portugal, Sweden, Switzerland, United Kingdom, and Turkey.

17. Enrollment not distributed by age is divided by the school-age population of the educational level in which it is enrolled and multiplied by the duration of that educational level. The result is added to the total of the specific enrollment rates by age.

18. For more information on the school life expectancy indicator, see: [http://data.uis.unesco.org/OECDStat\\_Metadata/ShowMetadata.ashx?Dataset=NATMON\\_DS&Coords=%5bNATMON\\_IND%5d.%5bSLE\\_1%5d&ShowOnWeb=true&Lang=en](http://data.uis.unesco.org/OECDStat_Metadata/ShowMetadata.ashx?Dataset=NATMON_DS&Coords=%5bNATMON_IND%5d.%5bSLE_1%5d&ShowOnWeb=true&Lang=en).



### SCHOOL LIFE EXPECTANCY FOR PRIMARY, SECONDARY AND TERTIARY EDUCATION



Source: Author's elaboration.



## 2.4 Learning Outcomes

The comparative analysis for the dimension of learning is based on the results of the Programme for International Student Assessment (PISA) tests for reading, mathematics, and science. It is worth noting that in the PISA 2022 round, 14 countries from Latin America and the Caribbean participated, so the regional average presented in this section only includes that subset of countries.<sup>19</sup> The comparative analysis of the percentage of students below the minimum performance level,<sup>20</sup> defined by PISA as those students who do not reach level 2 of competencies, allows us to verify that the region not only presents disadvantages in terms of access and completion but also profound gaps in student learning.

### 2.4.1 Reading

In Latin America, 55% of students show low performance in reading, more than double the rate reported by OECD countries (26%), and more than three times the percentage of students in the top 10 countries with the best results (15%). This data reflects a significantly different level of competence in favor of students in OECD countries. Arias Ortiz et al. (2023) point out that only three out of twelve countries in the region have managed to significantly reduce the percentage of students with low performance in reading between 2018 and 2022.

The percentage of students with low performance shows an average gap of 6.2 percentage points in favor of women (57.9% in males compared to 51.6% in females), a trend that is even more pronounced for OECD countries (30.7% compared to 21.7%). When analyzing the results according to the socioeconomic level<sup>21</sup> of students, substantive inequities are observed: while 72% of disadvantaged students in Latin America and the Caribbean show low performance in reading, this percentage drops to 34% for advantaged students (a gap of 38 percentage points). Socioeconomic differences in OECD countries are significantly smaller: 28 percentage points (40% compared to 12%). It is worth noting that less than 1% of young people in the region achieve high performance in reading, 7 times less than the percentage of students in OECD countries (7%).

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19. Argentina, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Jamaica, Mexico, Panama, Paraguay, Peru, and Uruguay.

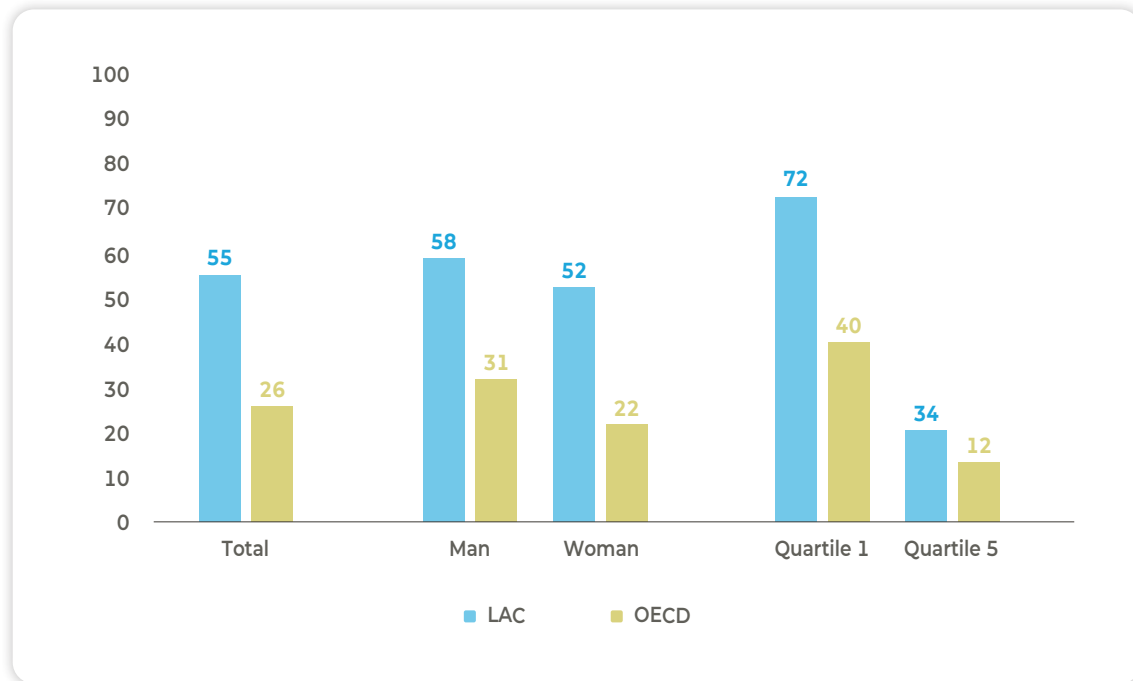
20. PISA defines students with low performance as those below level 2 of competencies. For more data on Latin America and the Caribbean in PISA, see: <https://www.iadb.org/es/quienes-somos/tematicas/educacion/iniciativas-de-educacion/america-latina-y-el-caribe-en-pisa>

21. For the analysis by socioeconomic level, it refers to the PISA Index of Economic, Social, and Cultural Status (ESCS). A socioeconomically advantaged (disadvantaged) student is a student who is in the upper (lower) quartile of ESCS in their own country or economy.





**FIGURE 2.7 LOW PERFORMANCE IN READING BY GENDER AND SOCIOECONOMIC STATUS, PISA 2022 (%)**



Source: CIMA based on PISA (2022).

## 2.4.2 Mathematics

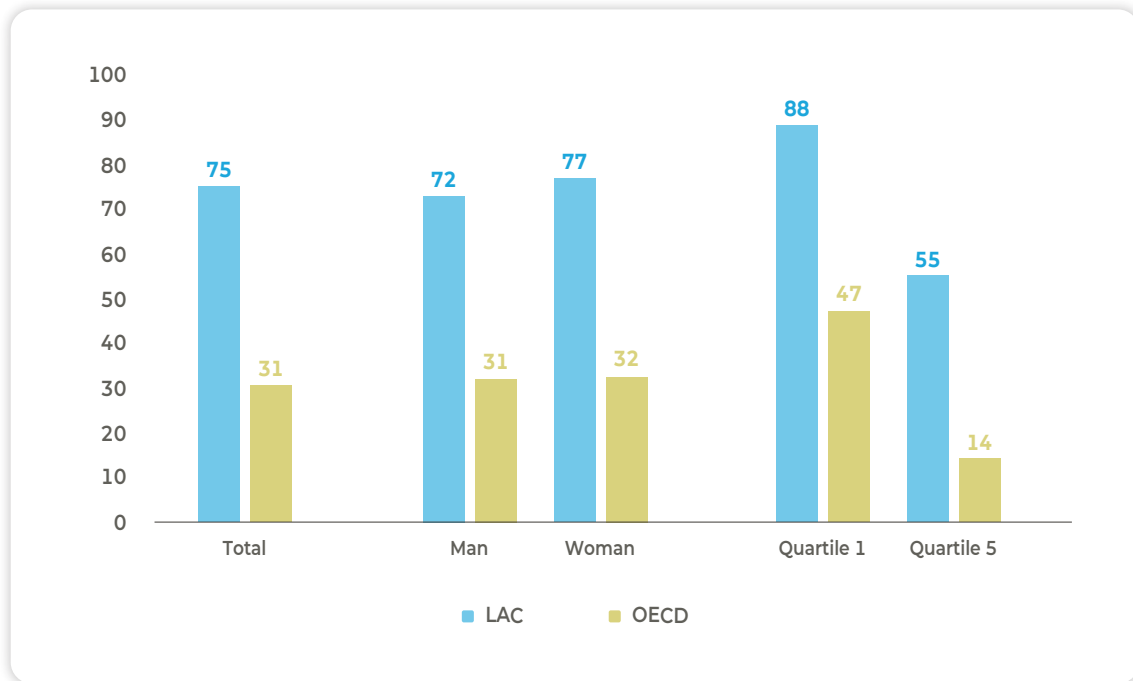
In mathematics, three out of every four students in the region have low performance (75%), two and a half times more than the OECD country average (31%).

In the region, the percentage of students with low performance shows an average gap of 5 percentage points in favor of males (72% in males compared to 77% in females), a trend that is not observed to the same extent for the OECD country average (a gap of 0.9 in favor of males). Similar to reading, results according to socioeconomic level show high inequalities: 88% of disadvantaged students (quartile 1) in Latin America and the Caribbean show low performance in mathematics, a figure that drops to 55% for advantaged students (quartile 4), with a gap of 33 percentage points. The same gap is observed in OECD countries: 33 percentage points (47% compared to 14%). The percentage of students with high performance in mathematics in Latin America is 0.3%, 30 times less than the percentage of students in the OECD (8.7%).<sup>22</sup>

22. For data on high achievement rates, see: <https://cima.iadb.org/index.php/es>.



**FIGURE 2.8** LOW PERFORMANCE IN MATHEMATICS BY GENDER AND SOCIOECONOMIC STATUS, PISA 2022 (%)



Source: Author's elaboration based on data from CIMA.

### 2.4.3 Science

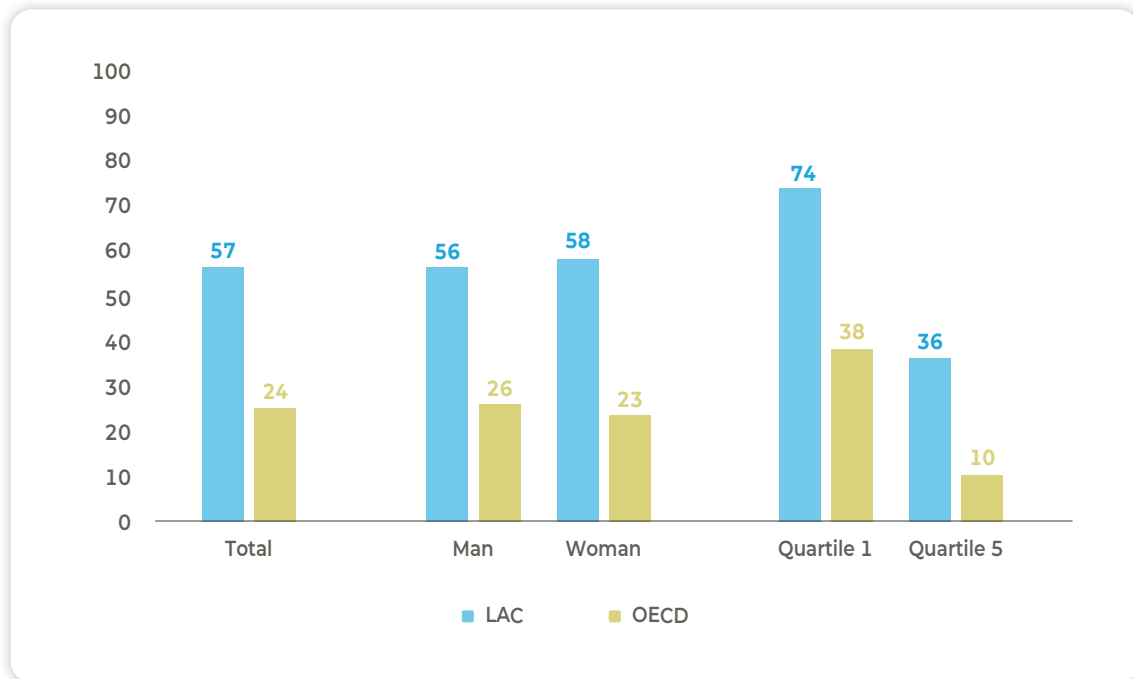
Regarding learning outcomes in science, the percentage of students with low performance is 57% in Latin America and the Caribbean, and 24% for the OECD, reflecting an unfavorable gap for the region of over 30 percentage points.

For the regional average, similar to the case of mathematics, the gender analysis shows differences favorable to males, although of lesser magnitude (56% in males compared to 58% in females). It is worth noting that the OECD shows the opposite trend: a 2-percentage point gap in favor of females. In the case of science, gaps according to socioeconomic level are again observed: 74% of disadvantaged students show low performance, compared to 36% among advantaged students. In OECD countries, a gap of 28 percentage points is observed (38% compared to 10%). The percentage of students with high performance in science in Latin America is 0.4%, 6 percentage points below the value for OECD countries (7.5%)<sup>23</sup>.

23. For data on high achievement rates, see: <https://cima.iadb.org/index.php/es>.



**FIGURE 2.9** LOW PERFORMANCE IN SCIENCE BY GENDER  
AND SOCIOECONOMIC STATUS, PISA 2022 (%)



Source: Author's elaboration based on data from CIMA.



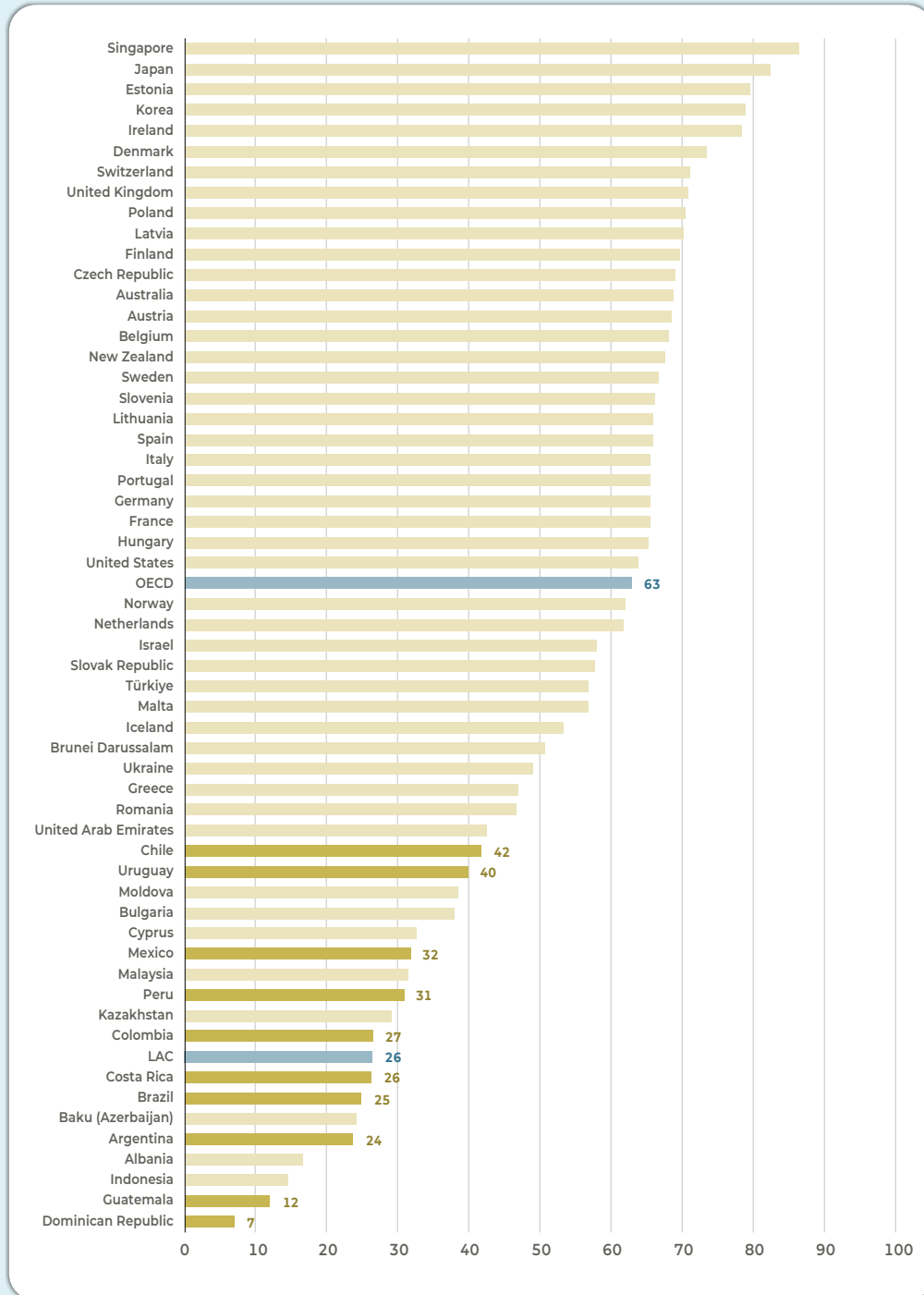
### **BOX 2.3 STUDENTS ACHIEVING BASIC SKILLS IN READING AND MATHEMATICS**

This indicator is measured based on the proportion of students who achieve basic competency levels in reading and mathematics. The selection of this indicator for measuring the learning dimension is based on indicator 4.1.1 of the Sustainable Development Goals (SDGs), which refers to the “proportion of young people at the end of the first cycle of secondary education who achieve at least a minimum level of competency in reading and mathematics.” Data is calculated based on the results of the PISA 2022 tests, presenting the percentage of 15-year-olds who reach the basic competency level (defined as level 2 in PISA) in both subjects.

It is noteworthy that the 10 countries in Latin America and the Caribbean analyzed are below the median, that is, in the bottom half of the distribution, and significantly below the OECD average (62%). On average, 26% of 15-year-old students in the region reach basic competencies in reading and mathematics. Chile and Uruguay have the highest values among the countries in the region, but they are positioned 20 percentage points below the OECD average. Dominican Republic and Guatemala have the lowest values of the 56 countries analyzed: only 7% and 12% of students reach the minimum level of competencies in reading and mathematics, respectively.



### PERCENTAGE OF STUDENTS ACHIEVING AT LEAST THE MINIMUM LEVEL OF PROFICIENCY IN READING AND MATHEMATICS



Source: Author's elaboration.



## 2.5 Aggregate analysis of educational development dimensions

The comparative analysis of indicators across the three dimensions allows us to account for the educational development lag in Latin America and the Caribbean. Below is an exploratory exercise that aggregates the three analyzed dimensions using the three indicators presented in boxes 2.1, 2.2, and 2.3.

The relevance of this analytical exercise lies in its ability to not only illustrate the level of progress in each dimension but also visualize the degree of balance among the three dimensions analyzed for each educational system. It is worth remembering that the presented dimensions are framed within a vertical logic of educational development, starting from inputs (measured as average expenditure per student in primary and secondary education, USD PPP) to achieve the intermediate outcome of access and completion (operationalized through the indicator of years of schooling), thus reaching the final outcome of learning (measured as the percentage of students reaching basic competencies in reading and mathematics).

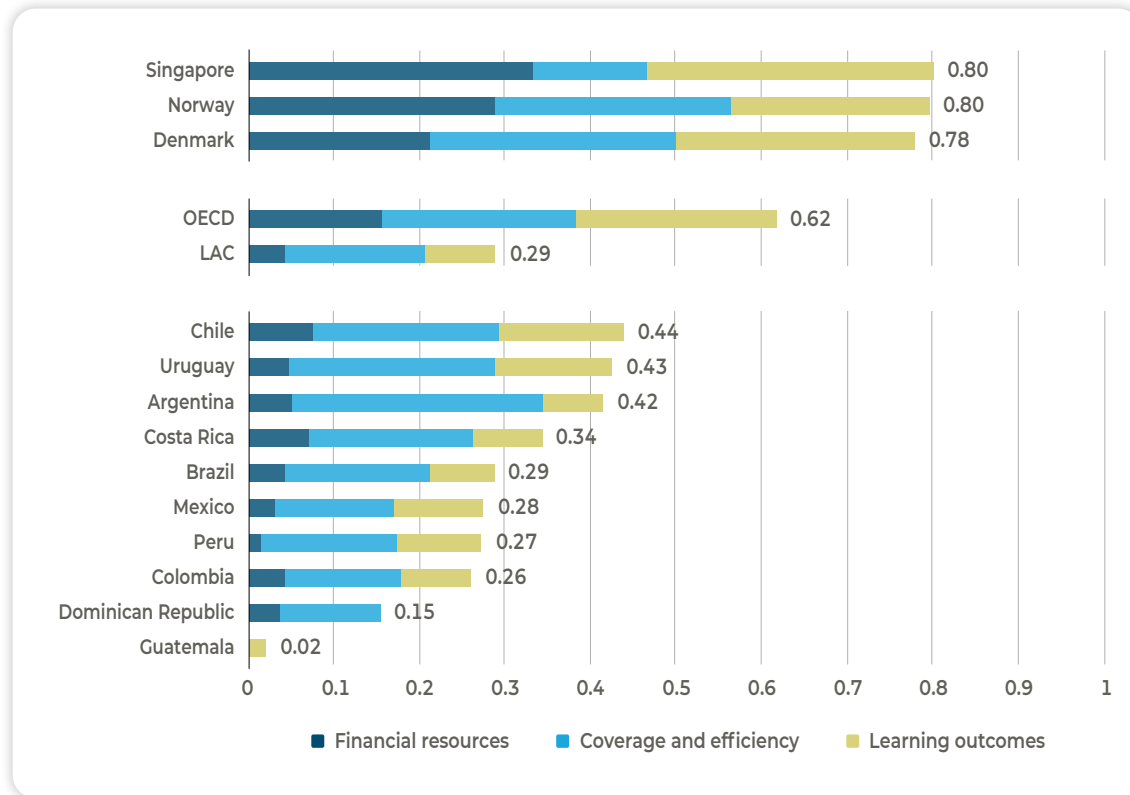
In this sense, not only the aggregate level achieved is relevant, but also the existence of a certain degree of balance among the analyzed dimensions. For example, if a country stands out with high levels of investment in education but shows low levels in terms of coverage and efficiency, and/or in learning outcomes, it inevitably has a wide space for improvement to promote more efficient and equitable spending, so that these inputs translate into the achievement of intermediate results (coverage and efficiency), and the final outcome (learning).

For the aggregation analysis, minimum-maximum normalization was applied to each of the indicators, ensuring a variation between 0 and 1 and, therefore, that when aggregating the variables, one does not dominate over the other only due to scale differences. The aggregation was done through a simple average of the three standardized indicators, implying that the aggregated value varies between 0 and 1.

It is worth noting that 56 countries globally were considered that had information for the three dimensions analyzed in the sources. Of these, 10 belong to Latin America and the Caribbean. Figure 2.2 presents the aggregation analysis for each of the countries in Latin America and the Caribbean, the regional average, and that of the OECD countries, as well as the three countries with the highest aggregated level achieved.



**FIGURE 2.10** AGGREGATE ANALYSIS OF THE DIMENSIONS OF EDUCATIONAL DEVELOPMENT



Source: Author's elaboration.

When analyzing the results for the average of the 10 Latin American and Caribbean countries, it is observed that the dimensions presenting the least contribution in the aggregated analysis are financial resources and learning. In the average of the OECD countries, the contribution of the financial resources dimension quadruples that observed in Latin America and the Caribbean. In the case of learning, it is three times higher in the OECD average than in the LAC average. In the dimension of coverage, the region also shows a lag compared to the OECD average, although to a much lesser extent.

The aggregated analysis at the national level shows certain heterogeneity in the countries of Latin America and the Caribbean, both in the relative contribution of each dimension and in the degree of balance between them. It should be noted that financial resources is the dimension with the least relative contribution in 9 of the 10 countries in the region analyzed.

Chile and Uruguay stand out as the countries in the region with the highest relative contribution of the learning dimension, obtaining the highest aggregated values in the region. Argentina is in third place, mainly due to the high contribution of the coverage and efficiency dimension. In



the case of Guatemala, the relative contribution of the financial resources and coverage and efficiency dimensions is 0, as it ranks as the country with the lowest values of the 56 analyzed. On the other hand, in the Dominican Republic, the relative contribution of learning is 0 as it ranks as the worst country of the 56 analyzed.

Singapore, Norway, and Denmark are the ones with the highest aggregated level of the 3 dimensions. It is worth noting the high degree of development in financial resources and learning for Singapore, presenting a lesser relative contribution in the dimensions of coverage and efficiency. For its part, Norway achieves high values through a greater degree of balance in the three dimensions. Denmark has high values of coverage and efficiency and learning, with a lesser relative contribution of the financial resources dimension.

In general terms, the aggregated analysis of the dimensions of educational development highlights that the dimension of financial resources is the one that explains the largest proportion of the region's lag in terms of educational development and is, therefore, the main pending challenge of the region.



# 3

## The educational landscape in Latin America

This section provides a comparative overview among countries of Latin America and the Caribbean on various educational topics. Firstly, it presents the situation of coverage for primary, secondary, and tertiary education, emphasizing the existing gaps between socioeconomic and gender levels.<sup>24</sup> Following this, the educational efficiency in the region is examined, reflected by completion, repetition, and dropout rates. In the third subsection, the rates of low performance for primary – with data from the Regional Comparative and Educational Study (ERCE 2019) – and secondary – based on the International Student Assessment Program (PISA 2022) – are developed, in addition to presenting an overview of the educational returns in the countries of the region. Lastly, the following subsections develop the state of financial resources, physical resources, and the situation of the teaching staff in terms of the student-teacher ratio and the expenditure dedicated to their salaries.



24. This section presents information from available household surveys. As such, there will be differences from information based on country administrative data.



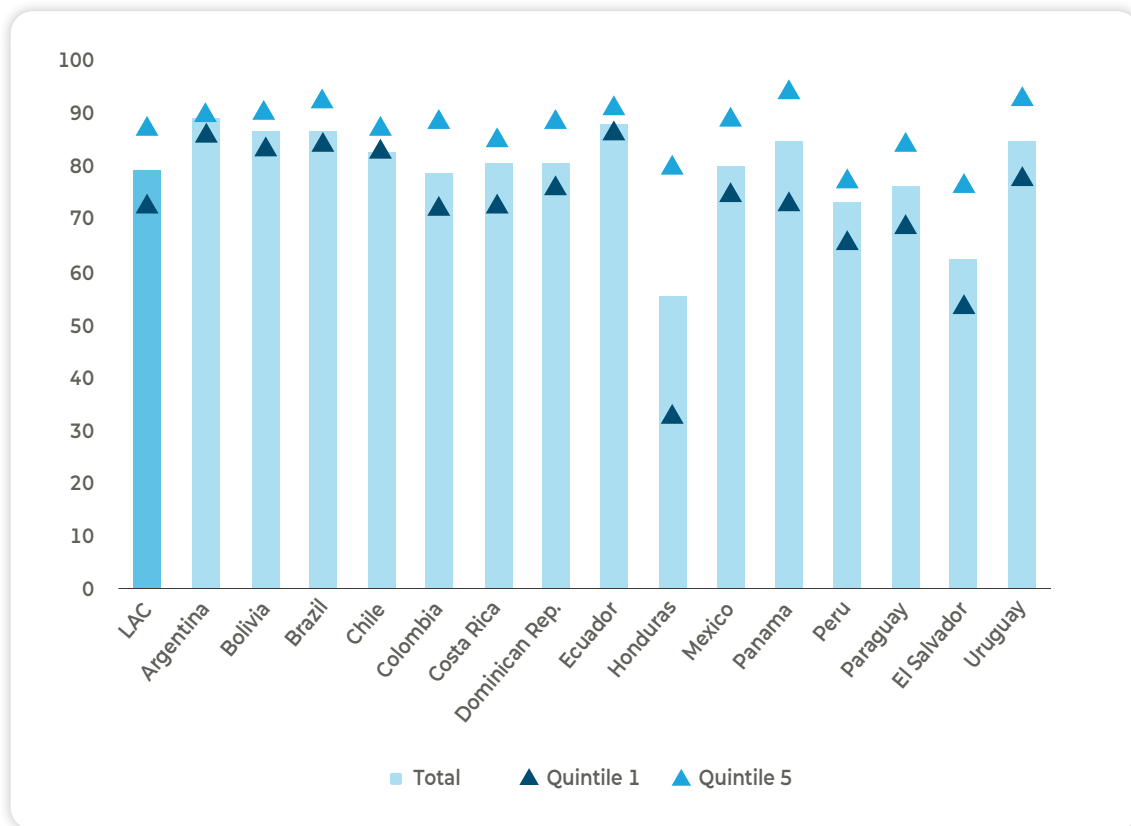
### 3.1 Coverage

#### A PENDING CHALLENGE FOR SECONDARY AND TERTIARY EDUCATION

Countries in Latin America and the Caribbean have increased coverage at all educational levels. In primary education, most countries in the region have achieved universal coverage. However, access to secondary and tertiary education remains a significant challenge for most countries.

On average, nearly 8 out of 10 young people of theoretical age to attend secondary school participate at this level. A 14-percentage point access gap is observed between young people from low and high-income backgrounds (Figure 3.1).

**FIGURE 3.1 GAP IN NET SECONDARY COVERAGE BY INCOME QUINTILES 1 AND 5, CIRCA 2021 (PERCENTAGE)**



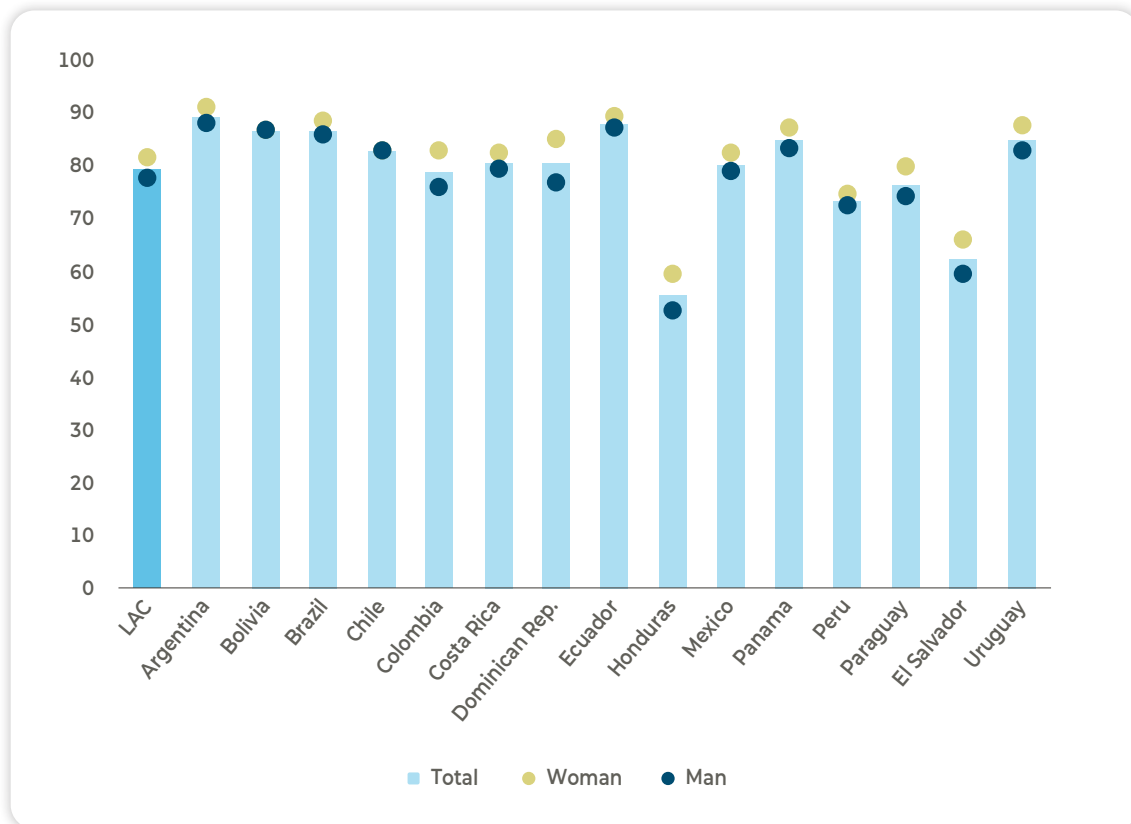
Source: CIMA based on household surveys.

Note: For Chile and Mexico, the data correspond to 2020. For Honduras and Panama, to 2019.



On average, the gender gap is equivalent to 4 percentage points in favor of women. The countries that present a larger gender gap (always in favor of women) are the Dominican Republic (8 points), Colombia, Honduras, and El Salvador (7), as shown in Figure 3.2.

**FIGURE 3.2 GAP IN NET SECONDARY COVERAGE BY GENDER, CIRCA 2021 (PERCENTAGE)**



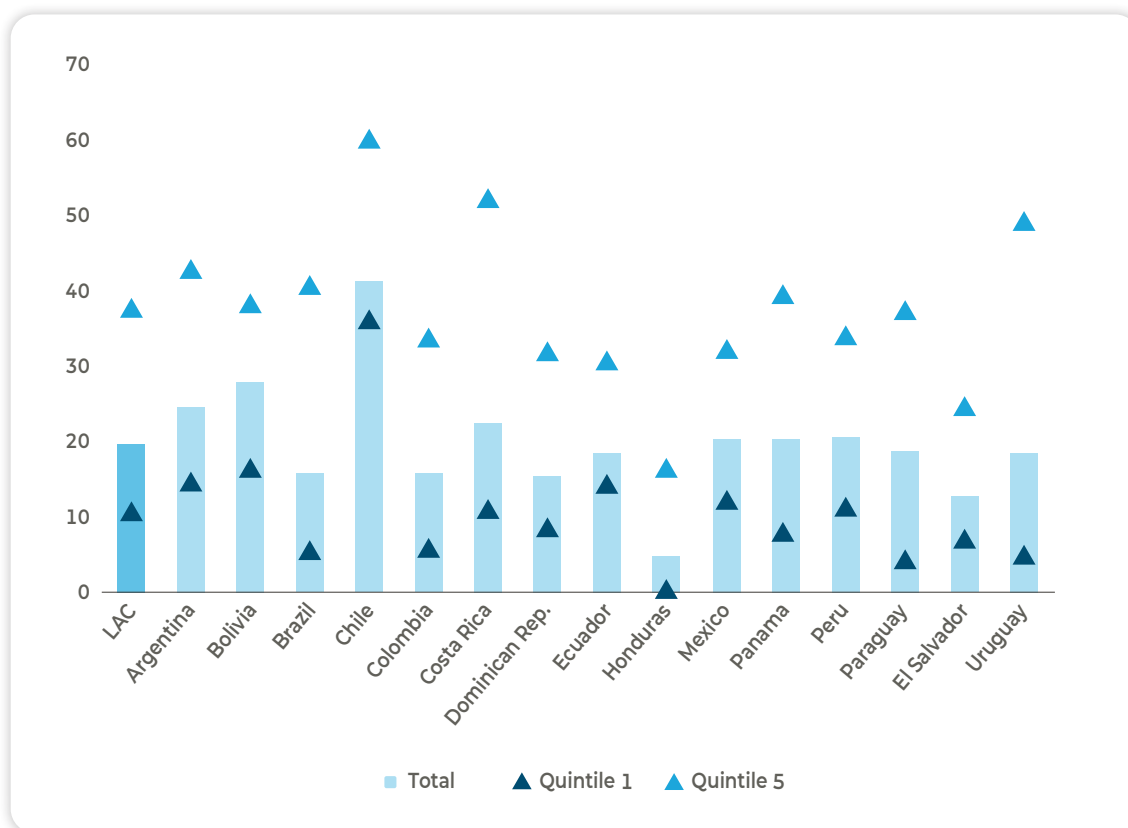
Source: CIMA based on household surveys.  
 Note: For Chile and Mexico, the data correspond to 2020. For Honduras and Panama, to 2019.

Regarding tertiary education coverage, it continues to be low: it is, on average, 20%, and none of the countries present rates higher than 50%. Those with higher coverage are Chile, Bolivia, Argentina, Costa Rica, and Peru. On the opposite end are Honduras and El Salvador.



For tertiary education, gaps are observed both by gender and by income quintile, reaching 27 percentage points between young people from quintile 1 and quintile 5 (Figure 3.3).

**FIGURE 3.3 GAP IN NET TERTIARY COVERAGE BY INCOME QUINTILES 1 AND 5, CIRCA 2021 (PERCENTAGE)**



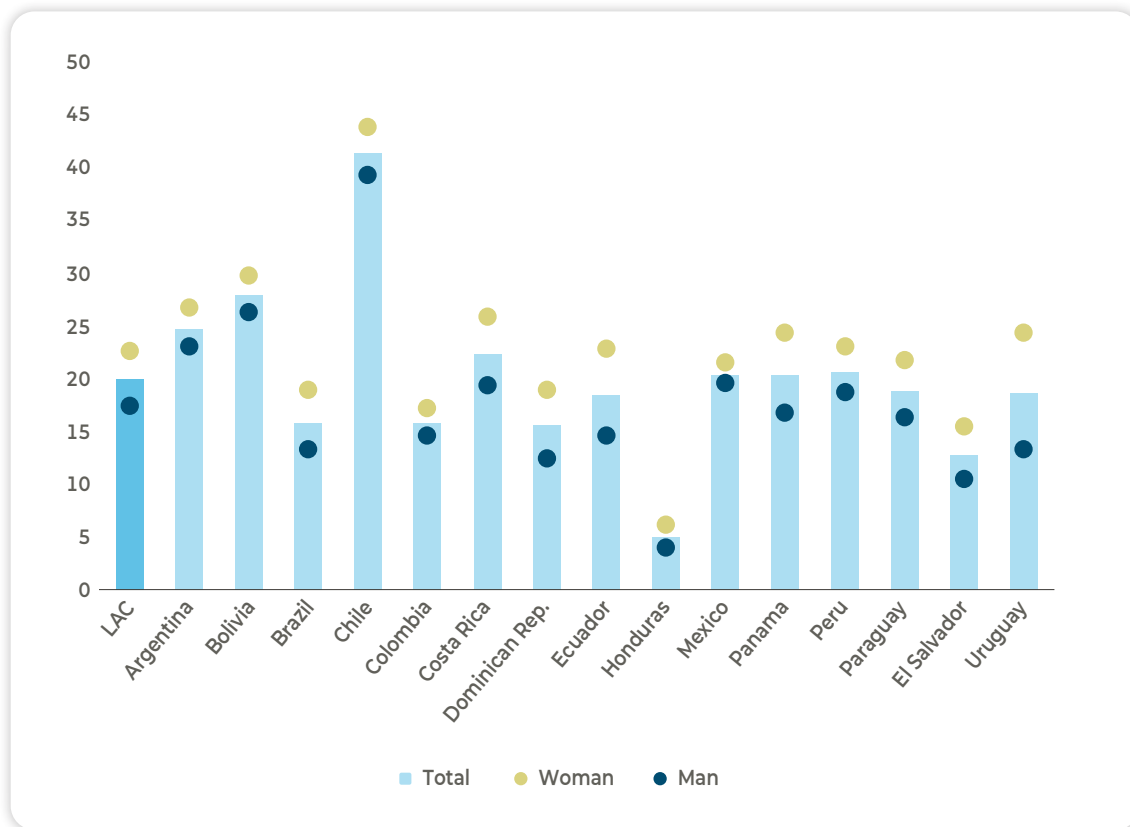
Source: CIMA based on household surveys.

Note: For Chile and Mexico, the data correspond to 2020. For Honduras and Panama, to 2019.

On average, the gender gap is 5 percentage points in favor of women. The countries with a larger gender gap (always in favor of women) are Uruguay, Ecuador, and Panama (Figure 3.4).



**FIGURE 3.4 NET TERTIARY EDUCATION COVERAGE GAP BY GENDER, CIRCA 2021 (PERCENTAGE)**



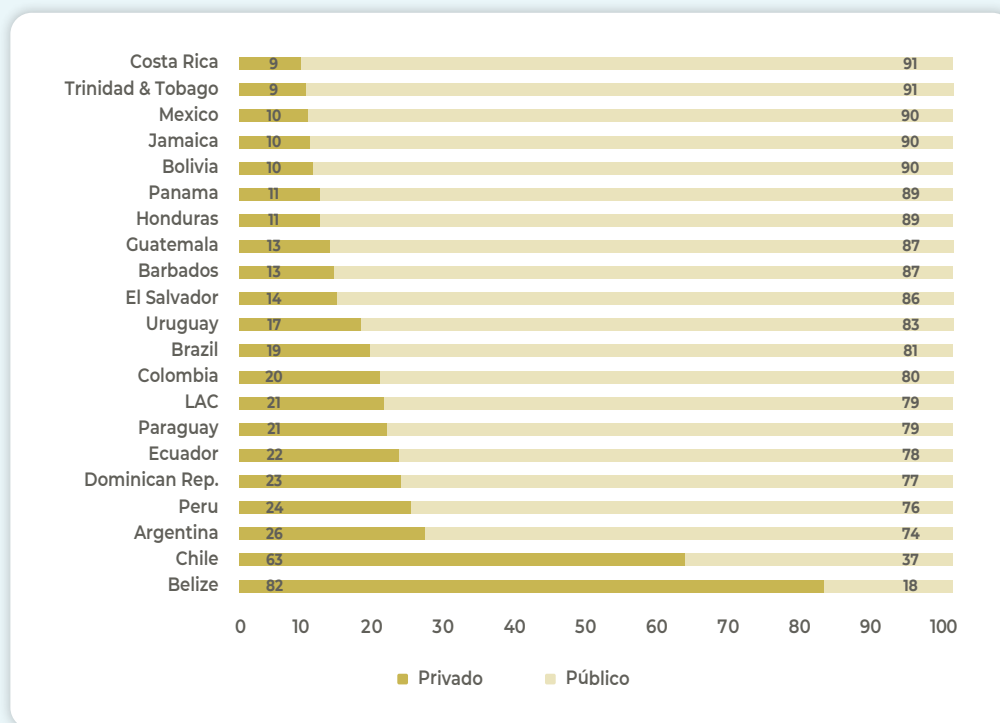
Source: CIMA based on household surveys.  
Note: For Chile and Mexico, the data correspond to 2020. For Honduras and Panama, to 2019.



### BOX 2 ENROLLMENT IN LATIN AMERICA AND THE CARIBBEAN BY TYPE OF MANAGEMENT

According to Elacqua (2018), in Latin America and the Caribbean, private education at the primary and secondary levels has been steadily increasing over the last 14 years. In OECD countries, the proportion of private primary education remained around 10% of total enrollments. For primary education in the region, 21% of students are enrolled in the private sector. The countries with the highest percentage of students in private education are Belize, Chile, and Argentina, while those with the least are Mexico, Trinidad and Tobago, and Costa Rica (Figure 3.5).

**FIGURE 3.5 PRIMARY EDUCATION ENROLLMENT BY TYPE OF MANAGEMENT, CIRCA 2020 (PERCENTAGE)**

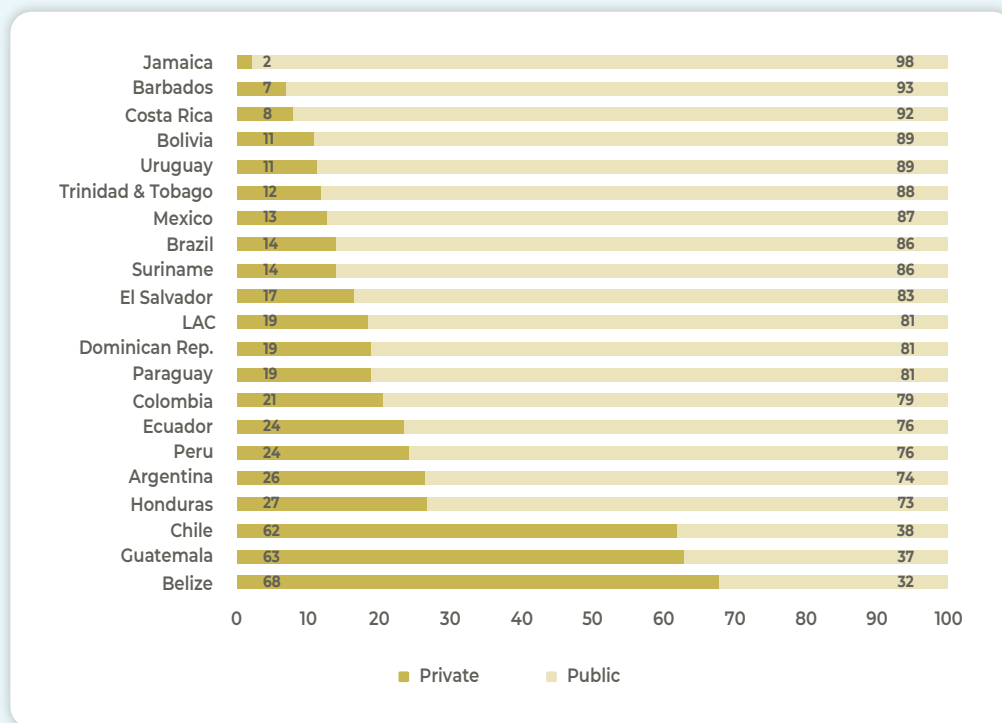


Source: Authors' elaboration based on data from the World Bank.

For secondary education, 19% of students in Latin America and the Caribbean are enrolled in the private sector, with Belize, Guatemala, and Chile having the highest proportion of secondary students enrolled in the private sector, while Costa Rica, Barbados, and Jamaica have the least (Figure 3.6).



**FIGURE 3.6 SECONDARY EDUCATION ENROLLMENT BY TYPE OF MANAGEMENT, CIRCA 2020 (PERCENTAGE)**



Source: Authors' elaboration based on data from the World Bank.

In the cases of countries that still face challenges in expanding coverage, especially in secondary education, the lack of public educational offerings can be a barrier to access, particularly for families that do not have the resources to pay for private education.

With the crisis caused by the pandemic, there may also be a reversal in the growth of private education in the countries of the region, as economic losses in households may lead to families who, before the pandemic, sent their children to a private school, being unable to afford this expense and turning to public education or dropping out of the educational system. According to Elacqua et al. (2022), in a study conducted in Brazil, Chile, Ecuador, Mexico, Panama, and Peru, it was found that COVID-19 caused a reduction in participation in the private sector in most of the countries studied. In this context, the public sector must provide educational offerings so that these students have the opportunity to continue studying and thus avoid significant drops in educational coverage.



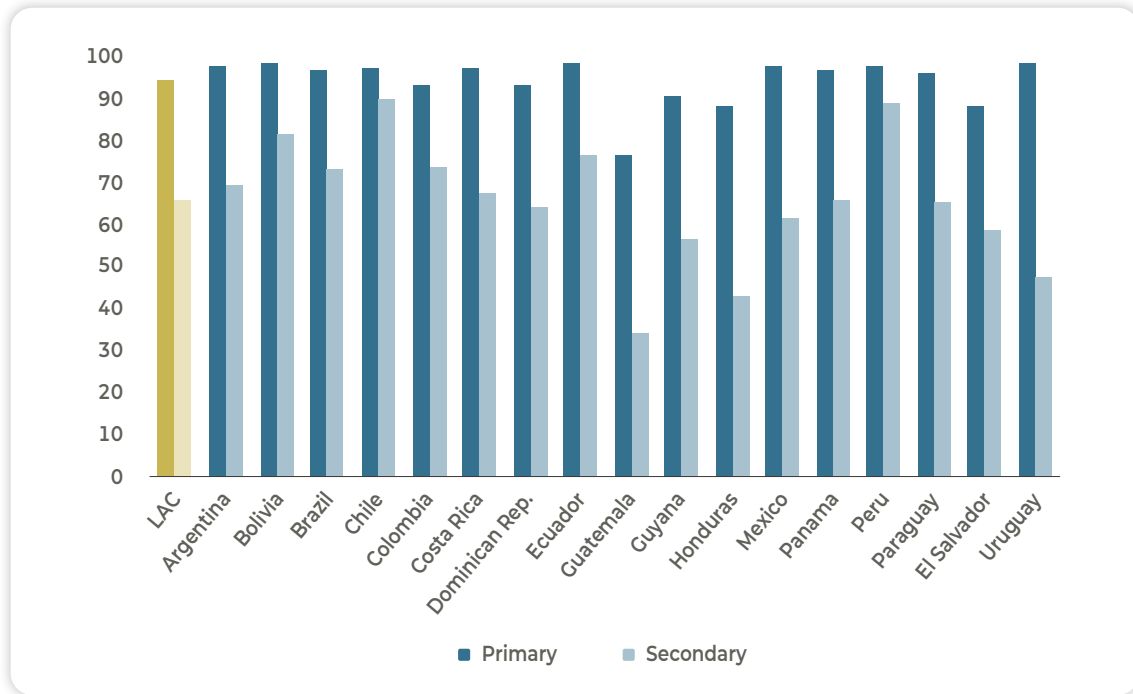
## 3.2 Efficiency

### ALMOST 4 OUT OF 10 YOUNG PEOPLE IN LATIN AMERICA AND THE CARIBBEAN DO NOT COMPLETE SECONDARY EDUCATION

An efficient educational system ensures that most students who enter complete their education, ideally within the theoretical or planned times. Regarding the completion of educational cycles,<sup>25</sup> the majority of the countries in the region that have this information have a primary level completion rate above 90%, except Guatemala, El Salvador, and Honduras.

The secondary completion rate is notably lower compared to primary. The average for the region is 65.7%, with Chile, Peru, and Bolivia having the highest percentage, and Guatemala, Honduras, and Uruguay having the lowest rate (Figure 3.7).

**FIGURE 3.7 PRIMARY AND SECONDARY COMPLETION RATES FOR COUNTRIES IN LATIN AMERICA AND THE CARIBBEAN, CIRCA 2021 (PERCENTAGE)**



Source: CIMA based on household surveys.

Note: For Chile and Mexico, the data correspond to 2020. For Honduras and Panama, to 2019.

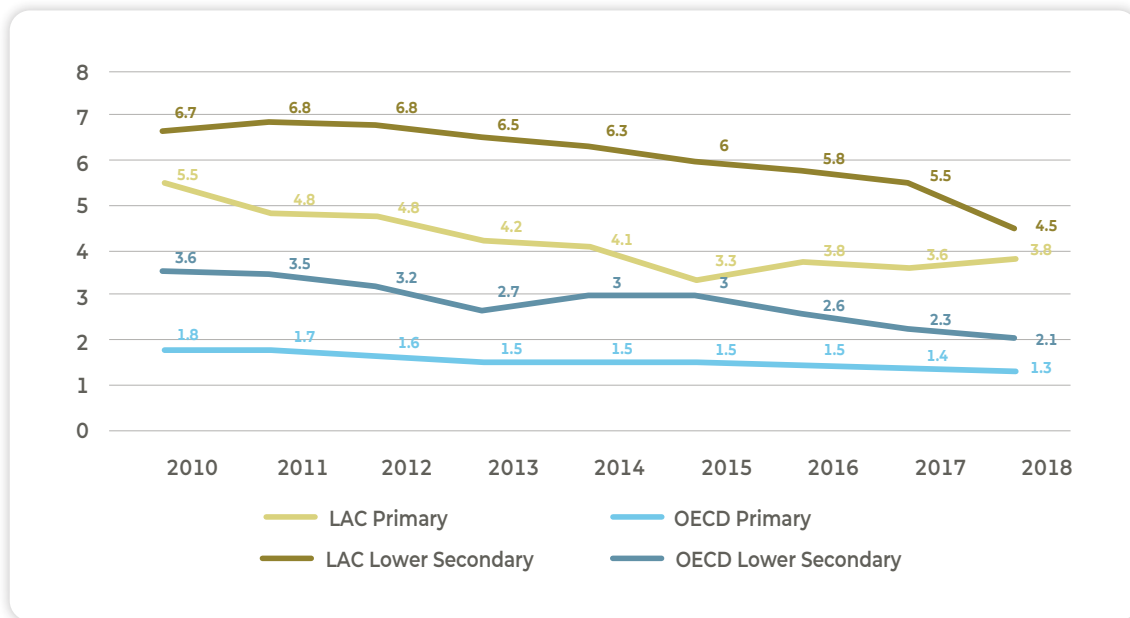
25. Percentage of a cohort of young people aged between 3 and 5 years older than the theoretical age for the last grade of education at each educational level.





Over the last decade, the repetition rate in Latin American and Caribbean countries has decreased, which has led to improvements in completion rates. For example, in the case of primary education, the repetition rate decreased by an average of 1.7 percentage points, although it is still higher than in OECD countries. Moreover, the decreasing trend stopped in the year 2016 (Figure 3.8). The highest primary repetition rates are found in Suriname (16.1%), Guatemala (8.8%), and Belize (6.8%). The same trends are repeated for the lower secondary repetition rate, although, for both Latin American and Caribbean countries and OECD countries, these rates are higher than in primary education (Figure 3.8).

**FIGURE 3.8 PRIMARY AND LOWER SECONDARY REPETITION RATES FOR COUNTRIES IN LATIN AMERICA AND THE CARIBBEAN BETWEEN 2010 AND 2018 (PERCENTAGE)**

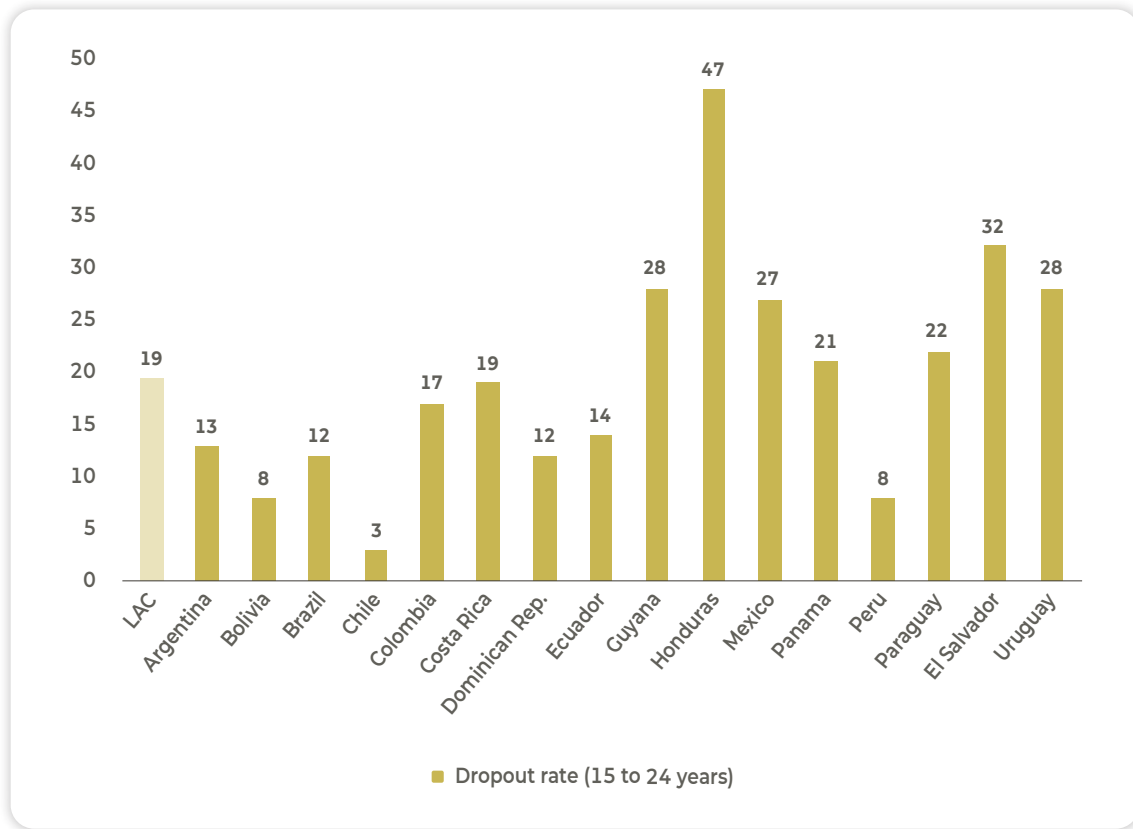


Source: Authors' elaboration based on data from UIS UNESCO.

In Latin America and the Caribbean, there is a high rate of early school dropout: 19% of young people aged 18 to 24 do not attend any level of education and have not completed secondary education. The countries with the highest school dropout rates are Mexico, Guyana, Uruguay, El Salvador, and Honduras (Figure 3.9). Although efficiency rates in the region have improved, work still needs to be done to provide educational opportunities to young people to complete secondary and tertiary education.



**FIGURE 3.9 SCHOOL DROPOUT RATE OF YOUNG PEOPLE AGED 18 TO 24, CIRCA 2021 (PERCENTAGE)**



Source: CIMA based on household surveys.  
Note: For Chile and Mexico, the data correspond to 2020. For Honduras and Panama, to 2019.



#### **BOX 3 THE EDUCATION OF INDIGENOUS CHILDREN AND YOUTH IN LATIN AMERICA AND THE CARIBBEAN**

Indigenous children and youth are less likely than their non-indigenous peers to attend school, graduate from any educational level, and achieve national and regional learning standards.

Gaps in access to education are profound and start at the preschool level with attendance rates of indigenous children (ages 4 to 5) below those of their non-indigenous peers in 10 of 13 Latin American countries with recent data. At the primary education level, in 10 of 17 Latin American countries, indigenous children aged 6 to 11 have lower school attendance rates than their non-indigenous peers, including Brazil (a gap of 14 percentage points), Venezuela (13.4), Colombia (7.8), Panama (6.9), and Costa Rica (6.2). The gaps are even more marked in secondary education where indigenous youth (ages 12 to 18) have lower attendance rates than their non-indigenous peers in 11 of 17 countries, including Guatemala (18), Panama (13), Honduras (13), Venezuela (12.5), and Brazil (10).

Among the indigenous population of school-going age for primary and secondary education, attendance levels in rural areas are significantly lower than in urban areas. In Honduras, the attendance rate of indigenous youth (12-18 years) in rural areas is 28 percentage points lower than among their indigenous peers in urban areas. In El Salvador and Nicaragua, the attendance gap between indigenous youth in rural and urban areas is 18 points, and in Belize 15 points (Näslund-Hadley and Santos, 2022). Once enrolled, the completion rates of indigenous students are lower than among non-indigenous students. The differences range from 1 to 6 percentage points in Trinidad and Tobago, Ecuador, Mexico, Jamaica, and Suriname, up to 10 percentage points in Guatemala (Cortina 2017; ECLAC 2014).

Access to higher education is even more unequal. The gaps between the indigenous and non-indigenous population with some tertiary education exceed 500% in Panama, 250% in Bolivia, and more than 100% in Colombia, Guatemala, Honduras, and Venezuela. In Belize, Costa Rica, Mexico, and Nicaragua, the gap in access to tertiary education exceeds 50% (Näslund-Hadley and Santos, 2022).

Indigenous girls are less likely to speak Spanish or attend school than their peers. Among those who are enrolled, indigenous female students are less likely to attend and complete primary, secondary, and tertiary education than indigenous males and their non-indigenous peers in various countries. In Guatemala, there is a 15-point gap between indigenous girls and non-indigenous girls in completing primary education (69.1% versus 84.3%) and a gap of almost 6 points separates them from indigenous boys (74.6%) (Näslund-Hadley and Santos, 2023). Gender gaps persist in secondary education. For example, in rural Bolivia, there is a 13-percentage-point gap



in the completion of secondary education between non-indigenous boys and indigenous girls (22.9% versus 9.8%). In urban areas, the gap is 28 percentage points (56.3 versus 28.7%). In urban areas in Mexico, 70.3% of indigenous women completed primary school compared to 76.7% of non-indigenous men. In rural areas, these percentages were 54.1 and 61.2, respectively. In Guatemala, only 14.7% of indigenous women complete secondary school, compared to 33.2% of non-indigenous women and 17.5% of indigenous men (Näslund-Hadley and Santos, 2023).

Indigenous students lag behind their peers in educational performance. Disparities in development between indigenous and non-indigenous children have been detected from early childhood in some countries. In Panama, indigenous preschoolers have math skills 25 percent below their non-indigenous peers (Näslund-Hadley et al., 2020). In Peru, it was found that Quechua-speaking preschoolers were 0.61 standard deviations below their Spanish-speaking peers in cognitive learning (Gallego, Näslund-Hadley, and Alfonso, 2019). The gaps widen in primary education with large proportions of indigenous students failing to reach competency levels. In the Regional Comparative and Explanatory Study (ERCE 2019), 37% of students who do not speak Spanish at home (an indirect indicator of being indigenous) do not meet competency standards in reading, compared to 17% of their non-indigenous peers. In mathematics, the proportions are 58% versus 42%, respectively. The gaps persist at the secondary education level. Non-indigenous students outperform indigenous students in language and communication by 0.6 standard deviations and in mathematics by 0.42 standard deviations in Mexico's "Planea" test, administered at the end of secondary education. At the end of secondary school in Guatemala, non-indigenous students outperform indigenous students in the Graduate Evaluation in reading and mathematics by 0.26 and 0.44 standard deviations, respectively (Näslund-Hadley and Santos, 2022).

Differences in access to education and learning persist even when socioeconomic inequalities between indigenous and non-indigenous students are taken into account. Among the most important barriers identified in literature is the geographical distance to school. The further away the school, the lower the enrollment and attendance of indigenous children and youth. At the primary level, the lack of bilingual and culturally relevant instruction also affects the enrollment and completion levels of indigenous students (Näslund-Hadley and Santos, 2022). In secondary education, the economic factor is the most limiting for the education of indigenous males. For young women, barriers include patriarchal norms and family values, early unions and marriages, teenage pregnancy, as well as unpaid domestic work (Cristia and Näslund-Hadley, 2023).



## 3.3 Learning

**THERE IS A HIGH PROPORTION OF STUDENTS IN LATIN AMERICA AND THE CARIBBEAN WHO DO NOT ACHIEVE THE MINIMUM LEVEL OF COMPETENCIES NEITHER IN PRIMARY NOR IN SECONDARY EDUCATION**

To provide a comprehensive overview of the state of learning performance in Latin American and Caribbean countries, percentages of students according to their level of performance are presented. For this, data from the ERCE 2019 test are used to provide the context of learning at the primary level and data from PISA 2022 to analyze the secondary level. Additionally, the situation of educational returns in the countries of the region is presented.

### 3.3.1 Learning in primary education (ERCE 2019)

According to the Comparative and Explanatory Regional Study (ERCE) 2019,<sup>26</sup> at the primary education level, there are challenges in ensuring that students from Latin America and the Caribbean achieve the expected levels of learning. For the third grade of primary school, 44% of students do not reach the minimum level of performance in reading, while the percentage rises to 48% for mathematics. Peru and Brazil stand out for having the highest percentage of students above the minimum level of performance in both subjects.

In the 6th grade, the proportion of students at the regional level who do not reach the expected minimum level of performance rises to 69% in reading and 82% in mathematics. The three countries that show the best performance in 6th grade and a higher percentage of students above the minimum level of performance are Peru (38.9%), Mexico (38%), and Uruguay (38%). In the case of science, 79% of the students in the region are below the established minimum level of performance.

Furthermore, the comparison of data from 2013 and 2019 indicates that learning in the region has stagnated, and in some cases, even decreased. Argentina, Costa Rica, Guatemala, Mexico, and Panama showed an increase in the proportion of students who do not meet the expected minimum level of performance in mathematics for the sixth grade (see Figure 3.10).

In the case of reading, in sixth grade, the vast majority of countries<sup>27</sup> showed an increase in the proportion of students who do not meet the expected minimum level of performance (Figure 3.10), and for science, those countries were Argentina, Colombia, and Guatemala (Figure 3.10).

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26. The ERCE (Comparative and Explanatory Regional Study) is a mathematics, language, and science assessment conducted at the regional level for third and sixth grade primary students, and it additionally incorporated a module on socio-emotional skills for sixth grade students. Unlike the PISA test, the ERCE evaluation was developed taking into account what is expected for students to learn according to the curriculum of each country.

27. Countries participating in the ERCE include Argentina, Brazil, Colombia, Ecuador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, the Dominican Republic, and Uruguay.



**FIGURE 3.10** LOW PERFORMANCE RATE IN SIXTH GRADE MATHEMATICS, READING, AND SCIENCE TESTS TERCE 2013-ERCE 2019 (PERCENTAGE)





### 3. The educational landscape in Latin America

2023



Source: UNESCO.



In the case of ERCE 2019, the evaluation finds statistically significant differences in favor of girls in third-grade reading in Argentina, Brazil, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Mexico, Panama, Paraguay, the Dominican Republic, and Uruguay. For sixth-grade reading, significant differences in favor of girls were found in all the countries included in the study except Guatemala. In no country was a statistically significant gap found in favor of boys in reading.

In the case of third-grade mathematics, a statistically significant gap favorable to boys was found in Costa Rica, Nicaragua, and Peru, and favorable to girls in the Dominican Republic. For sixth-grade mathematics, a statistically significant gap in favor of boys was found in Argentina, Brazil, Costa Rica, Guatemala, and Nicaragua, and in favor of girls in the Dominican Republic.

Lastly, for sixth-grade natural sciences, a statistically significant gap in favor of girls was found in Cuba, Mexico, Panama, Paraguay, Peru, the Dominican Republic, and Uruguay.

#### BOX 4 SOCIO-EMOTIONAL SKILLS IN THE REGION<sup>28</sup>

To understand socio-emotional skills in the region, it is necessary to refer to another instrument, in this case, the ERCE, which included an evaluation of sixth-grade students in three socio-emotional skills:

- a) **Empathy:** the ability to understand the perspective of others; experience emotions congruent with the other's situation; and respond considering the other's situation.
- b) **Openness to diversity:** willingness to accept and establish connections with students who belong to other social groups.
- c) **School self-regulation:** adherence to class rules and norms, the ability to ask for guidance when needed, perseverance, and postponement of gratifications.

28. Socio-emotional skills refer to behaviors, attitudes, and personality traits related to managing emotions, planning and achieving goals, empathy for others, having and maintaining positive relationships, and making responsible decisions. Socio-emotional skills are associated with better levels of academic achievement, schooling, employment, income, and lower probabilities of engaging in risky behaviors (Villaseñor, 2017).





According to UNESCO,<sup>29</sup> 85% of students in Latin America and the Caribbean consider having a positive attitude towards people of different origins and cultures; 74% reported that they persevere and self-regulate to fulfill their school obligations, and 55% expressed that they always or almost always put themselves in the place of others or value points of view different from their own. Similarly, they indicate that schools contribute to the development of socio-emotional skills, although to a lesser extent than to the achievement of learning.

The assessment score is on a standardized scale, where the regional average is 50 points, with a standard deviation of 10 points. It can be observed that the countries above the average<sup>30</sup> in empathy are Argentina, Costa Rica, Cuba, El Salvador, Honduras, Paraguay, the Dominican Republic, and Uruguay. In terms of openness to diversity, those above the average<sup>31</sup> are Argentina, Costa Rica, Cuba, and Uruguay. Lastly, for self-regulation, those above the average<sup>32</sup> are Costa Rica, Cuba, El Salvador, Honduras, Nicaragua, and the Dominican Republic.

Among the conclusions of the study is that schools have an important role to play in promoting socio-emotional skills and that the practices and attitudes of teachers regarding the support of student skills and the interest they pay to their students are associated with the promotion of socio-emotional skills. The research also points out that teachers in the region have hardly received specific training for the promotion of socio-emotional skills, so there is room for improvement.

29. See: <https://www.unesco.org/es/articles/resultados-del-modulo-de-habilidades-socioemocionales-del-estudio-regional-comparativo-y>.

30. Including its confidence interval.

31. Idem.

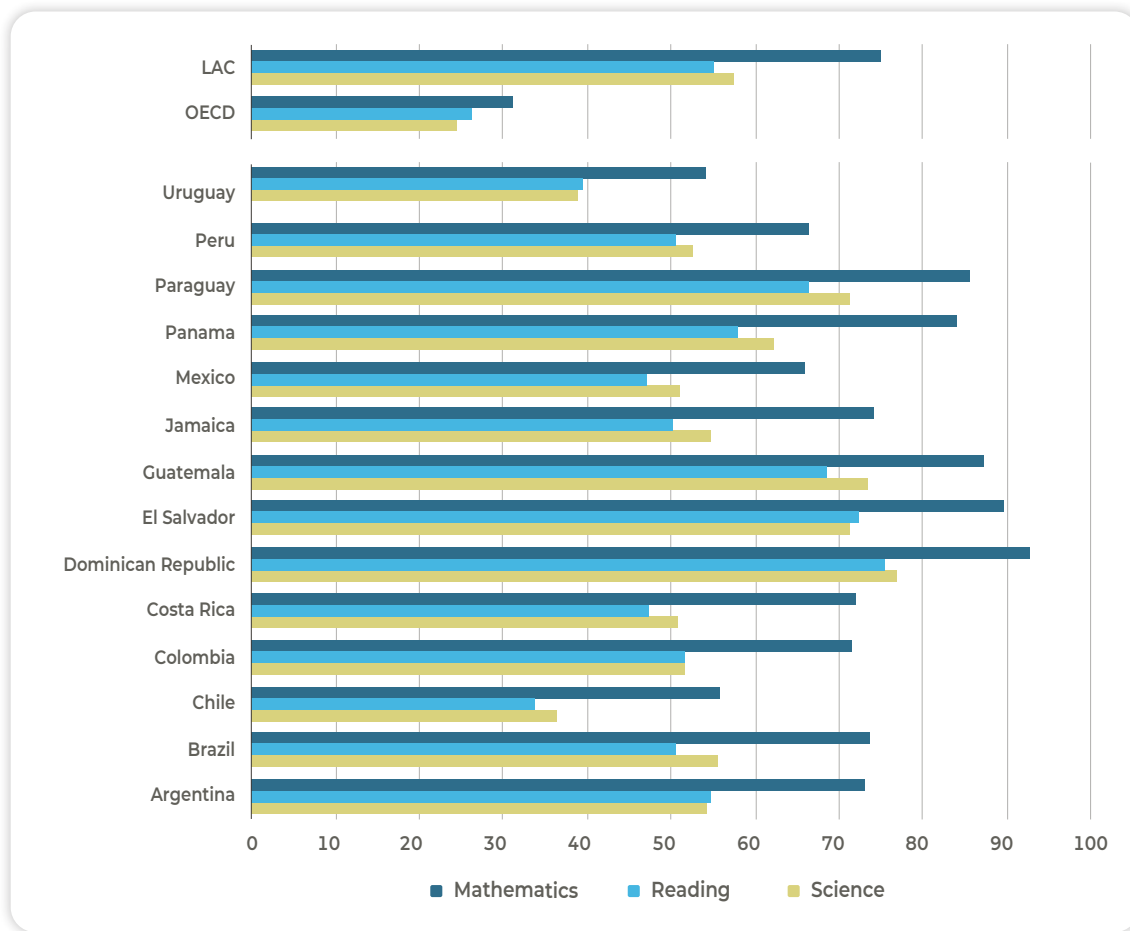
32. Idem.



### 3.3.2 Learning in Secondary Education: PISA 2022

In the case of secondary education, according to the results of PISA 2022, the average rate of low performance in Latin America and the Caribbean was 75% in mathematics, 55% in reading, and 57% in science. Chile is the country in the region with the lowest rates of low performance in all three subjects, followed by Uruguay. On the other hand, of the 14 participating countries from the region, the Dominican Republic has the highest rates of low performance for all three subjects: 92% for mathematics, 75% for reading, and 77% for science (Figure 3.11). It is worth noting that, in all countries in the region, mathematics is the subject with the highest rates of low performance.

**FIGURE 3.11 RATE OF LOW PERFORMANCE IN MATHEMATICS, READING, AND SCIENCE, BY COUNTRY IN LATIN AMERICA AND THE CARIBBEAN 2018 (PERCENTAGE)**



Source: Authors' elaboration based on data from CIMA.



### 3.3.3 Gender Gaps in Learning (PISA 2022)

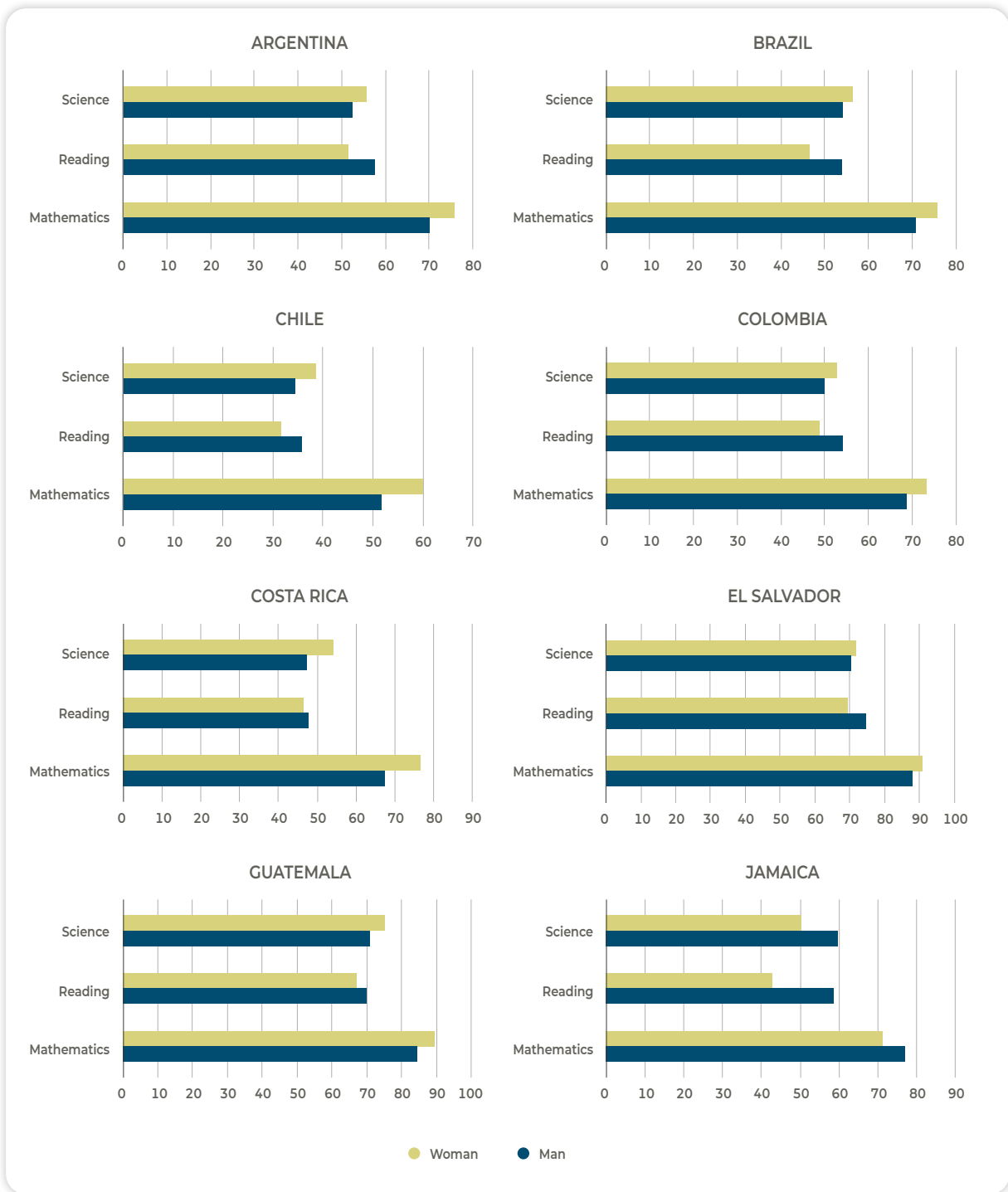
The rates of low performance in mathematics show significant gender differences in favor of males in 12 of the 14 countries in the region participating in PISA 2022. The Dominican Republic and Jamaica do not present significant differences. Costa Rica, Chile, and Peru are the countries with the largest gender gaps in the rate of low performance, exceeding 8 percentage points.

On the contrary, almost all countries present significant differences in favor of females in the rate of low performance in reading. Colombia and El Salvador are the only countries without significant differences, and no country in the region shows differences in favor of males for reading. Brazil and Panama are the countries with the largest gaps in reading, exceeding 7 percentage points in the rate of low performance in favor of females.

The gender differences in science are the most heterogeneous. Mexico, Costa Rica, Peru, Guatemala, Chile, and Argentina show significant differences in the rates of low performance in favor of males. On the other hand, the Dominican Republic and Jamaica show significant differences in favor of females. The remaining 6 participating countries in the region do not present significant gender differences.



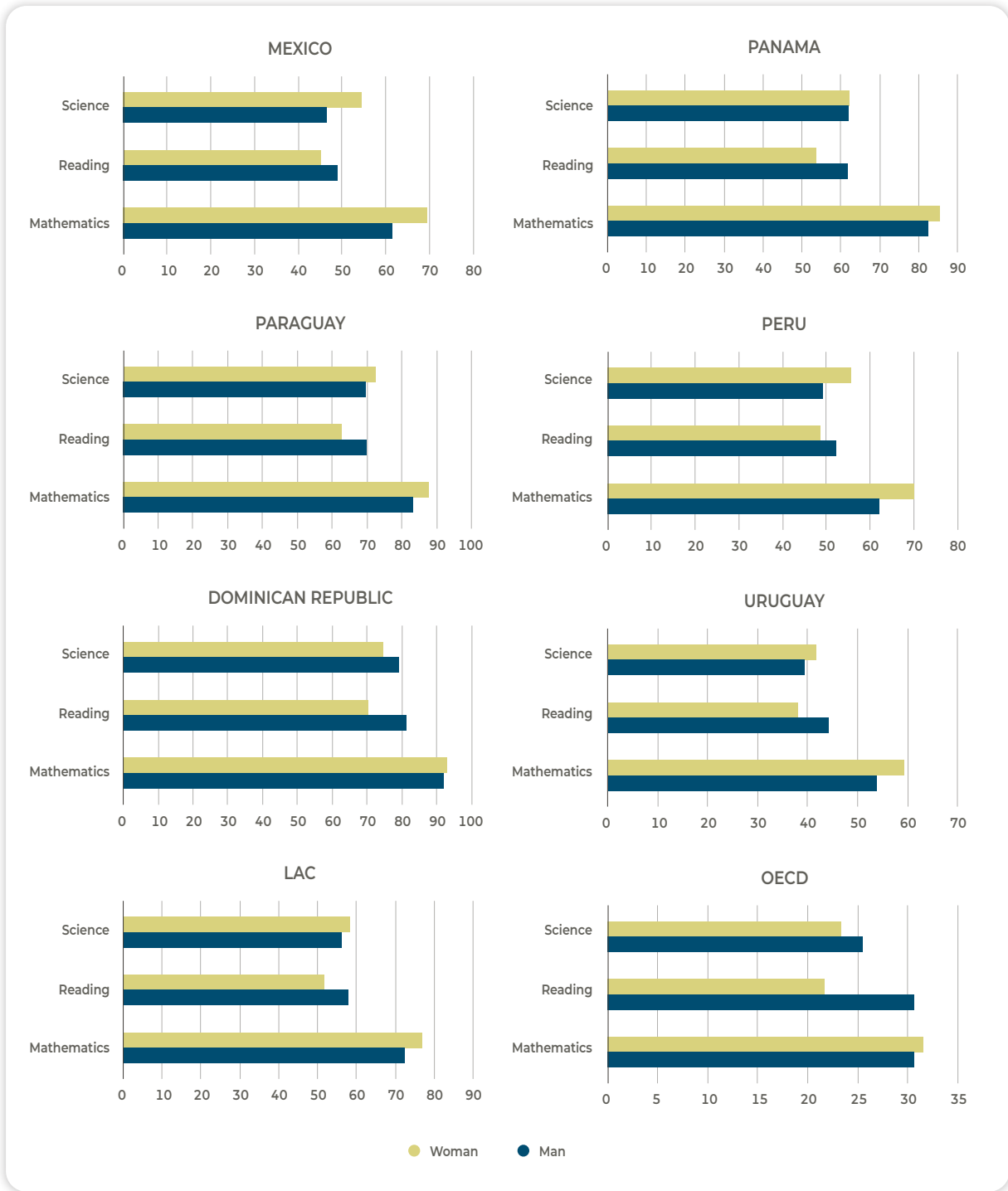
FIGURE 3.12 LOW PERFORMANCE BY GENDER, PISA 2022 (IN PERCENTAGE)





### 3. The educational landscape in Latin America

2023



Source: Authors' elaboration based on data from CIMA.



### 3.3.4 Learning Gaps by Socioeconomic Level (PISA 2022)

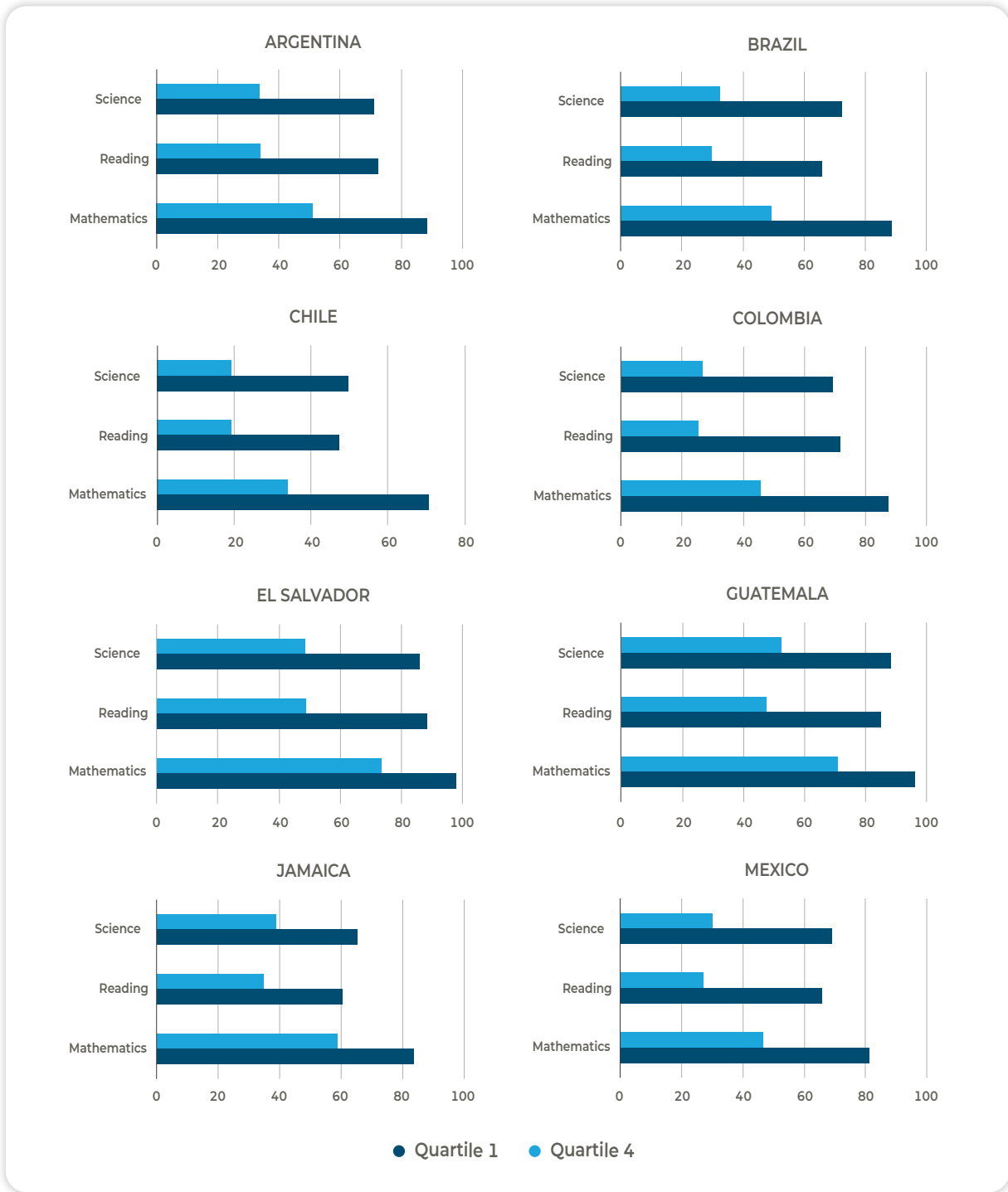
In all countries of the region, for the three subjects analyzed, significant differences are observed in the rates of low performance between disadvantaged students (quartile 1) and advantaged students (quartile 4). On average in the region, the gap by socioeconomic level exceeds 30 percentage points in the three subjects analyzed.

In 4 countries of the region, Panama, Guatemala, El Salvador, and the Dominican Republic, more than 95% of disadvantaged students do not reach basic competencies in mathematics (Arias Ortiz et al., 2023). While in OECD countries only 14% of advantaged students perform poorly in mathematics, in Chile and Uruguay – the best-positioned countries in the region – this value rises to 30% and 34%, respectively (Arias Ortiz et al., 2023). Peru, Uruguay, and Colombia are the countries in the region with the largest gaps according to socioeconomic level in mathematics, exceeding 40 percentage points.

In reading, Peru, Panama, and Colombia present the largest gaps according to socioeconomic level, exceeding 45 percentage points. In the case of science, Panama stands out as the country in the region with the largest gap, as well as Colombia and Peru again.



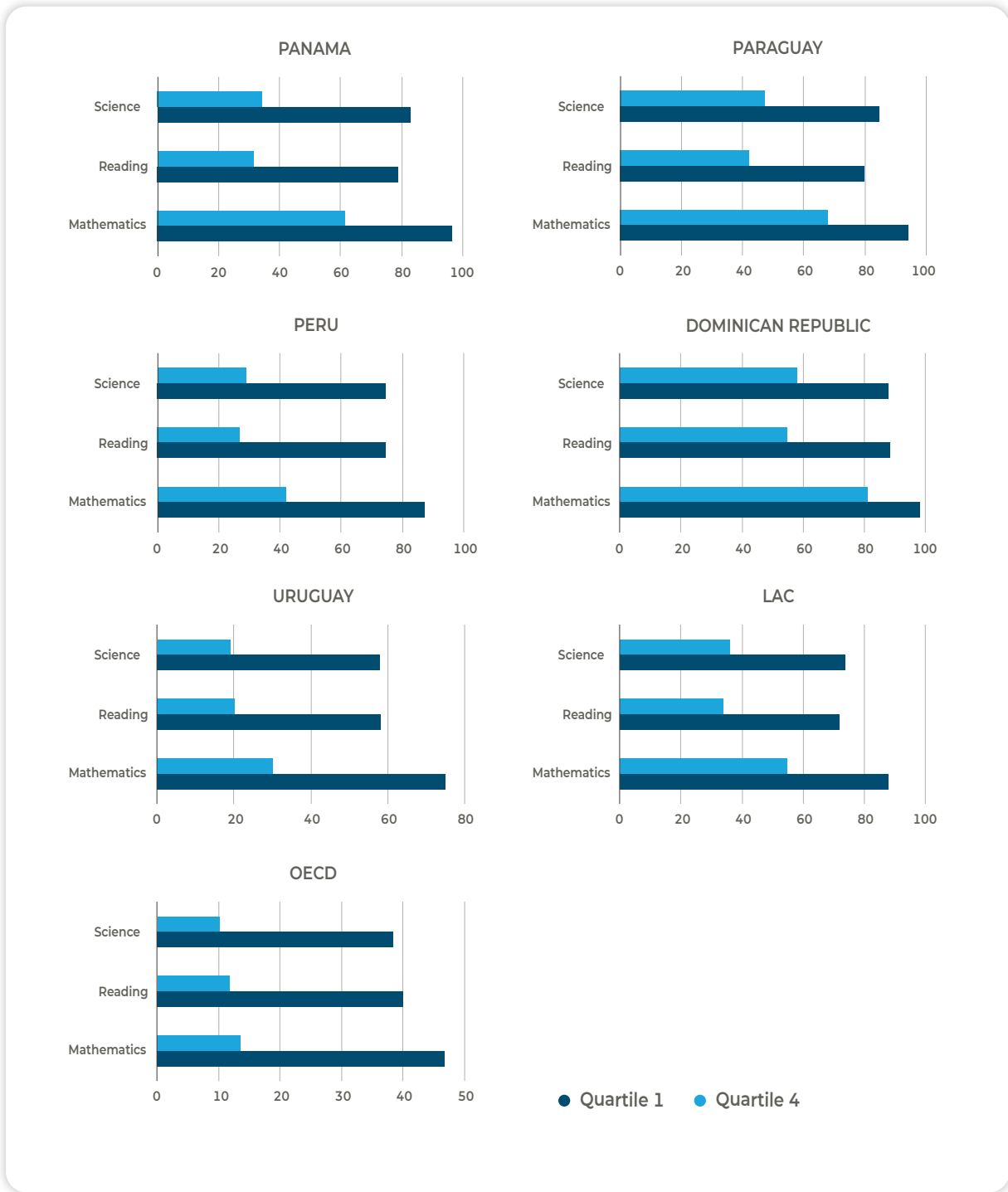
**FIGURE 3.13** LOW PERFORMANCE BY SOCIO-ECONOMIC LEVEL, PISA 2022 SOCIO-ECONOMIC STATUS, PISA 2022 (IN PERCENTAGE)





### 3. The educational landscape in Latin America

2023



Source: Authors' elaboration based on data from CIMA.<sup>33</sup>

33. Consulted on August 5, 2022.





#### BOX 5 SKILLS TO FACILITATE ENTRY INTO THE LABOR MARKET

Educational quality essentially means that a young person, on their journey through the educational system, has acquired the competencies they will need later to perform successfully in the labor market. However, this is a challenge for the education systems of Latin America and the Caribbean, since, as has been seen, students are not achieving the expected competencies, which translates into companies in the region considering that the preparation of people does not cover their real needs. According to Fiszbein and Stanton (2018), citing a survey conducted by ManpowerGroup in 2017, more than 35% of employers in Brazil, Costa Rica, Guatemala, Mexico, and Panama reported difficulties in finding staff to fill their job vacancies. In Argentina, Colombia, and Peru, more than 45% of employers indicated that there is a shortage of skilled labor.

The International Assessment of Adult Competencies (PIAAC) is a test with three dimensions: reading comprehension, numeracy, and problem-solving in technology-rich environments. It is conducted among adults aged 16 to 65 years in their homes and in more than 40 countries. According to PIAAC data (2018), on average, in all the OECD countries that participated, 10% of adults scored at level 4 or above, and 34.6% scored at level 3.<sup>34</sup> 44.6% scored in the three highest levels (levels 3, 4, or 5), while 34.3% performed at level 2, 15% at level 1, and 4.8% below level 1.

Specifically for the participating countries in the region, Ecuador, Peru, Mexico, and Chile show a higher proportion of adults at the lowest level of performance compared to the OECD countries average, which also demonstrates the need to improve student competencies in the educational system to perform adequately in adult life. The percentages at each level of performance are shown in Table 3.2.

34. For each of the dimensions, competence is considered as a continuum of ability. The results are presented on a scale from 0 to 500. Competence levels are defined by the score range. Six levels of competence for reading and mathematics (from level 1 to level 5) and four for problem-solving in technology-rich environments (below level 1, level 1, level 2, and level 3) are defined.



**TABLE 3.2 PIAAC RESULTS FOR LATIN AMERICAN COUNTRIES AND OECD AVERAGE, BY PERFORMANCE LEVELS (2018)**

COUNTRY	LESS THAN LEVEL 1	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4/5	NO INFORMATION
Ecuador	33.5%	37.6%	23.1%	4.9%	0.3%	0.5%
Peru	35.1%	35.0%	23.0%	5.6%	0.5%	0.8%
Mexico	16.3%	34.3%	37.1%	10.9%	0.8%	0.5%
Chile	20.3%	33.1%	31.8%	12.9%	1.6%	0.3%
OECD Average	4.8%	15.0%	34.3%	34.6%	10.1%	1.5%

Source: OECD (2019), citing Survey of Adult Skills (PIAAC, 2018), tables A2.2, A2.4, and A2.7.

Hampf et al. (2017) estimate the returns of increasing performance levels in PIAAC. **According to the study, moving up one (of five) PIAAC competency levels in numeracy skills is associated with an average increase in hourly wages of about 20% and an increase in the likelihood of being employed by approximately 8%.** According to the World Bank (2019), 28.6% of the companies surveyed in Latin America and the Caribbean consider that the inadequate education of the workforce is a major constraint. This percentage is not too far from the OECD countries' average, which is 25.7%. The countries in the region that consider the inadequate education of the workforce as a major constraint in higher proportions are Brazil (74.9%), Guyana (50.5%), Trinidad and Tobago (40.9%), Chile (40.7%), and Argentina (39.7%).

### 3.3.5 Returns to Education

Even considering the previously mentioned challenges regarding low educational quality, education yields positive returns as schooling increases. According to the OECD (2021), adults with a secondary degree earn 22% more than those who do not have such a degree. On the other hand, those who have a technical tertiary education degree earn 20% more than adults with a secondary degree. This increase is 43% in adults who have a degree equivalent to a bachelor's degree and 87% compared to those who have a master's or doctoral degree. The fields of tertiary education associated with higher incomes are engineering, construction, and information and communication technologies (ICT).



Regarding the Latin American and Caribbean countries that belong to the OECD, in Chile, individuals with a secondary degree earn 40.8% more than those who did not complete secondary education; while those with a university technical degree earn 38% more than those with a secondary degree, those with a bachelor’s degree or equivalent earn 179% more, and those with a master’s or doctoral degree earn 357% more. For Mexico, these numbers are 25%, 17%, 53%, and 208%, and for Costa Rica 33.3%, 19%, 103%, and 223% respectively (Table 3.3).

**TABLE 3.3 RELATIVE INCOMES OF WORKERS (SECONDARY = 100) IN 2021**

COUNTRY	LESS THAN SECONDARY	SECONDARY	UNIVERSITY TECHNICAL DEGREE	BACHELOR'S DEGREE	MASTER'S OR DOCTORAL DEGREE
Chile	71	100	138	279	457
Mexico	80	100	117	153	308
Costa Rica	75	100	119	203	323
OECD	82	100	120	143	187

Source: Elaboración propia a partir de OCDE (2021).

Table 3.4 shows the returns to tertiary education relative to secondary education according to Ferreyra et al. (2017). In that study, it is shown that the returns to tertiary education, in most countries (except for those in Central America), have decreased since 2000. Among the explanations is that the number of people with university degrees has increased more than the demand for labor. In other words, the supply of professionals is greater than what the labor market requires. Another explanation could be the devaluation of credentials. Thus, the greater number of people with university degrees tends to be valued less than before the increased access to higher education levels (which would also explain the higher enrollment in postgraduate studies).



**TABLE 3.4 RETURNS TO TERTIARY EDUCATION RELATIVE TO SECONDARY EDUCATION (2017)**

COUNTRY	EARLY 2000s	EARLY 2010s	HALF 2010s
Colombia	156%	207%	180%
Costa Rica	93%	126%	165%
Paraguay	110%	103%	141%
Brazil	152%	141%	131%
Honduras	102%	129%	130%
Chile	174%	147%	122%
El Salvador	111%	124%	115%
Nicaragua	89%	104%	110%
Panama	127%	104%	103%
Dominican Republic	129%	115%	99%
Guatemala	85%	103%	90%
Mexico	112%	78%	85%
Ecuador	95%	96%	84%
Bolivia	217%	93%	75%
Peru	85%	61%	71%
Uruguay	89%	87%	66%
Venezuela	53%	43%	51%
Argentina	99%	59%	49%

Source: Authors' elaboration based on Ferreyra et al. (2017).

On the other hand, on average in OECD countries (2021), a person can expect to receive about US\$ 7 for every one invested in tertiary education. The study points out that for men in OECD countries, the private returns from tertiary education average US\$ 287,200, and for women, it is US\$ 226,800. Additionally, the internal rate of return for tertiary education is 15% for men and 19% for women. These returns are lower than those for secondary education, which are 25% for them and 36% for them. The lower returns are explained because the costs of tertiary education are higher than those of secondary education. On the other hand, public investment in education is also socially profitable: on average in OECD countries, the net public returns from tertiary education are US\$ 127,000 for men and US\$ 60,600 for women (OECD, 2021).



Beyond the rate of return, various studies have identified a relationship between education and economic growth. For example, Hanushek (2008) concludes that the average years of schooling give a boost to the growth rate of more than 10% compared to what would have occurred otherwise. And, when analyzing learning outcomes, the study found that countries with high scores on learning assessments experience high growth rates. Hanushek (2021) mentions that, on average, middle and low-income countries would see gains of 13% in GDP over the next 80 years, but even high-income OECD countries would increase their GDP by an average of 3% by equipping all their students with basic skills. Furthermore, even without an increase in educational quality, the study indicates that for lower-middle-income countries averaging about 80% completion of lower secondary education, the gains from increasing the proportion of the population that completes lower secondary education would increase, on average, future GDP levels by 4.4%. This should be an incentive for countries in the region to invest more resources in improving educational quality, and this is a topic that will be discussed in the next chapter.





## 3.4 Financial Resources

With the crisis caused by the COVID-19 pandemic, countries should have allocated a greater amount of resources, especially aimed at providing virtual and hybrid education and adapting spaces and infrastructures, as well as implementing protocols to have better conditions to prevent contagion. The data from UIS UNESCO available to date still do not allow us to know how educational spending behaved after the year 2020, and not all countries report information for that year. For the countries that have published data on this, not all increased public spending on education significantly from 2019 to 2020. Similarly, it must be taken into account that the pandemic also caused a contraction in the GDP of each country, although this was not uniform, so an increase in public spending on education could have been limited by possible contractions in tax collection and the need to direct resources to the health system to address the pandemic. With that caveat in mind, the countries that increased public spending the most from 2019 to 2020 were Barbados, Colombia, and Guatemala, although, in the cases of Colombia and Guatemala, the increase was smaller than observed in previous years (Table 3.5).

**TABLE 3.5 ANNUAL GROWTH RATE OF PUBLIC SPENDING ON EDUCATION (2017-2020)<sup>35</sup>**

COUNTRY	2017	2018	2019	2020
Argentina	15%	-11%	-3%	-3%
Barbados	-4%	-	-	4%
Colombia	6%	6%	7%	5%
Costa Rica	11%	1%	7%	-2%
Ecuador	-	-	-	-9%
Guatemala	3%	12%	8%	3%
Peru	9%	1%	7%	0%
Uruguay	5%	7%	3%	-8%

Source: Authors' elaboration based on UIS UNESCO.

There is considerable disparity among the countries in the region. Those that allocate the most public spending on education as a percentage of GDP are Bolivia (8.9%), Belize (8.7%), Costa Rica (6.7%), and Barbados (6.5%), while those that allocate the least budget to education are Venezuela (1.3%), Haiti (1.6%), Bahamas (2.8%), Guatemala (3.3%), and Paraguay (3.3%), as shown in Table 3.6.

<sup>35</sup> Negative values represent rates of decrease, meaning there was a decrease in public spending on education compared to the previous year.



**TABLE 3.6 SPENDING ON EDUCATION AS A PERCENTAGE OF GDP, BY EDUCATIONAL LEVEL AND TOTAL (CIRCA 2019)**

PAÍS	PREPRIMARY	PRIMARY	SECONDARY	POSTSECONDARY	TERTIARY	TOTAL
Argentina	0.5	1.5	1.7	–	1.0	4.7
Bahamas	–	–	–	–	–	2.8
Barbados	–	1.5	1.4	0.1	0.2	6.5
Belize	0.3	2.3	2.7	–	0.7	8.7
Bolivia	–	–	–	–	–	8.9
Brazil	0.5	1.5	2.4	–	1.4	6.1
Chile	0.7	1.5	1.5	–	1.4	5.4
Colombia	0.3	1.8	2.0	–	0.8	4.9
Costa Rica	0.3	2.1	2.3	–	1.4	6.7
Ecuador	1.1	1.2	0.7	–	1.1	4.1
El Salvador	0.4	1.6	1.1	–	0.3	3.4
Guatemala	0.5	1.9	0.4	–	0.4	3.3
Guyana	0.3	0.7	0.7	0.1	0.1	4.5
Haiti	–	–	–	–	–	1.6
Honduras	0.4	2.9	1.5	–	0.9	6.4
Jamaica	0.2	1.8	2.0	0.2	0.9	6.0
Mexico	0.5	1.4	1.4	–	0.9	4.3
Nicaragua	–	–	–	–	–	4.6
Panama	0.1	0.7	0.7	–	0.7	3.9
Paraguay	0.4	1.4	1.3	–	0.8	3.3
Peru	0.7	1.4	1.4	–	0.7	4.3
Puerto Rico	0.4	1.3	1.5	0.1	2.2	6.1
Dominican Republic	0.1	2.5	1.4	–	–	4.6
Suriname	–	–	–	–	–	5.0
Trinidad and Tobago	0.1	1.3	1.2	0.3	1.3	4.1
Uruguay	0.5	1.2	1.6	–	1.1	4.7
Venezuela	–	–	–	–	–	1.3

Source: Authors' elaboration based on UIS UNESCO.



### 3.4.1 Spending per Student

Analyzing spending per student provides a different and complementary perspective to the presented data, as, for example, a country may allocate a larger portion of its budget at the primary level due to the composition of its population, but it may be another level where a greater amount of resources is allocated per student served. In general, the average public spending per student for countries in Latin America and the Caribbean is higher in tertiary education than the rest of the levels. The countries where the difference is greater between what is spent per capita on tertiary and the rest of the levels are Ecuador, Honduras, and Costa Rica, while the countries where the differences are less pronounced are El Salvador, Peru, Argentina, and Chile (Table 3.7):

**TABLE 3.7 SPENDING PER STUDENT, BY EDUCATIONAL LEVEL,  
AS A PERCENTAGE OF GDP PER CAPITA (CIRCA 2019)**

COUNTRY	PRIMARY	SECONDARY	TERTIARY
Argentina	15	21	17
Barbados	21	28	–
Belize	17	27	27
Brazil	20	22	33
Chile	18	19	20
Colombia	17	18	22
Costa Rica	21	21	38
Ecuador	10	5	53
El Salvador	16	15	11
Guatemala	12	5	18
Guyana	8	9	14
Honduras	21	20	41
Jamaica	22	30	37
Mexico	14	14	30
Panama	6	9	19
Paraguay	12	12	–
Peru	11	15	11
Puerto Rico	19	20	33
Dominican Republic	16	15	–
Uruguay	13	16	25

Source: Authors' elaboration based on World Bank indicators.





Additionally, due to the inherent characteristics of educational systems (a significant number of teachers are required to serve the school population),<sup>36</sup> it is not surprising that teacher spending is the most significant among educational expenditures. On average, countries in Latin America and the Caribbean<sup>37</sup> allocate 62.1% of public sector spending on teachers. In comparison, OECD countries allocate 53.7%<sup>38</sup>. The countries in the region that allocate the highest percentage of their educational budget to teachers are Ecuador (80.7%), Colombia (76.6%), and Mexico (72.6%). On the opposite end are Chile (31.2%), Trinidad and Tobago (40%), and Peru (50.4%), as seen in Table 3.8.

**TABLE 3.8 PERCENTAGE OF SPENDING ON TEACHERS OUT OF TOTAL EDUCATIONAL EXPENDITURE (CIRCA 2019)**

COUNTRY	PERCENTAGE OF SPENDING ON TEACHERS OUT OF TOTAL EDUCATION EXPENDITURE
Ecuador	80.7
Colombia	76.6
Mexico	72.6
Guatemala	68.9
Jamaica	66.9
Paraguay	60.6
Costa Rica	56.7
Barbados	55.8
Argentina	54.7
Peru	50.4
Trinidad and Tobago	40.0
Chile	31.2

Source: Authors' elaboration based on UIS UNESCO.<sup>39</sup>

<sup>36</sup>. Especially if the regulations established by the systems regarding the student-teacher ratio are to be met.

<sup>37</sup>. The following countries do not report information: Antigua and Barbuda, Bahamas, Belize, Bolivia, Brazil, British Virgin Islands, Cayman Islands, Cuba, Dominica, Dominican Republic, El Salvador, French Guiana, Grenada, Guadeloupe, Guyana, Haiti, Honduras, Martinique, Nicaragua, Panama, Puerto Rico, Saint Vincent and the Grenadines, Saint Barthélemy, Suriname, Uruguay, and Venezuela.

<sup>38</sup>. The following countries do not report this information: Germany, Canada, Denmark, Slovenia, Hungary, Japan, Latvia, New Zealand, Norway, Netherlands, Poland, Sweden, and Turkey.

<sup>39</sup>. Consultation conducted on August 1, 2022.



## 3.4.2 Efficiency of Educational Spending in Latin America and the Caribbean

In the first decades of the 21<sup>st</sup> century, countries in Latin America and the Caribbean focused on expanding educational coverage at all levels, leading to universal coverage in primary education, as well as advances in secondary and tertiary coverage, although they still face significant challenges (explained in section 2). No sustained improvements in learning achievements have been observed, as the same low levels of performance that the region suffered two decades ago have essentially remained stable, although gaps have been slightly reduced, as emphasized in section 3 of this report. The limited results do not imply that resources for education have not been increased (Section 4), but it does allow questioning the efficiency of that spending.

According to Izquierdo et al. (2018), although public spending in Latin America and the Caribbean increased by an average of seven percentage points over the last 20 years, this was not reflected in an increase in physical and human capital or significant social benefits. They point out that most countries in the region spend inefficiently, something derived from a lack of professionalism, negligence, corruption, or all of the above, which increases the cost of the inputs used to produce services. In this sense, it is worth remembering that there are several types of efficiency, although this document refers to technical and allocative efficiency.

Technical inefficiency results from an increase in personnel costs (paying more than what should be), procurement spending (paying more for goods and services), and the cost of subsidies and transfers, which are subject to leakages. Regarding procurement, the study makes an estimate that places the overspending at 17% in ALC acquisitions, which represents around 1.4% of the region's GDP.

In relation to personnel costs, the study indicates that in Latin America and the Caribbean, salary expenses as a percentage of total public spending exceed the OECD average (29% versus 24.2%). This could be because the average salaries of public sector teachers are higher than those in the private sector. It also points out that this salary premium in favor of public sector teachers in the region is one of the highest worldwide. Additionally, public sector teachers could receive greater non-salary benefits than those in the private sector, such as better retirement plans, job stability, or bonuses, among others. The study indicates that the higher costs due to these reasons are around 1.2% of the GDP.

As for the leakage of transfers, they are due to errors, fraud, or corruption. Targeting error implies that funds are not allocated to those who need them most. This can be due to design errors or poor implementation, which also includes issues of corruption. The same study indicates that, for example, for conditional cash transfer programs, in Central American countries, a leakage of 0.27% of GDP was observed and in South America, 0.86%. Table 3.9 shows the estimate made



by Izquierdo et al. (2018) on the technical inefficiency of public spending for countries in Latin America and the Caribbean.

**TABLE 3.9 ESTIMATE OF TECHNICAL INEFFICIENCY AS A PERCENTAGE OF GDP, CIRCA 2016**

COUNTRY	%
Argentina	7.2
El Salvador	6.5
Bolivia	6.3
Nicaragua	5
Colombia	4.8
Mexico	4.7
Costa Rica	4.7
Honduras	4.6
ALC Average	4.4
Paraguay	3.9
Brazil	3.9
Dominican Republic	3.8
Panama	3.8
Uruguay	3.7
Guatemala	2.7
Peru	2.5
Chile	1.8

Source: Izquierdo et al. (2018).

**Allocative inefficiency**, that is, when spending is not on what it should be, can be an inefficiency even more harmful than technical inefficiency. Efficiency depends on investing resources in interventions considered cost-effective to increase coverage and improve learning outcomes. Data from learning assessments indicate challenges that must be overcome to improve education. Among them is the lack of support strategies and accompaniment for students, the lack of resources such as basic educational infrastructure, educational resources, school feeding, and



connectivity<sup>40</sup> (31% of Latin American students included in PISA 2022 reported having missed at least one full day of class in the two weeks prior to taking the survey), among others.

To identify the most cost-effective elements, it is necessary to explore the literature, which is responsible for determining those elements that schools must incorporate to improve. According to Hopkins (2013), very effective educational systems at least do the following actions:

- a) develop and promote clear goals and standards on professional practice;
- b) ensure that academic achievements are the central focus of the professional lives of the systems, schools, and teachers;
- c) as a result of the above, place the improvement of the quality of teaching and learning as central themes in the improvement strategies of the systems;
- d) achieve part of their success through selection policies that ensure that only highly qualified individuals become teachers and educational leaders;
- e) create ongoing and sustained opportunities for teacher training that develop a common “practice” of the curriculum, teaching, and learning;
- f) emphasize school leadership with high expectations, an unrelenting focus on the quality of the learning-teaching processes, and the creation of protocols that ensure their students consistently undertake challenging tasks for learning;
- g) establish procedures to achieve this goal, providing timely, continuous, and transparent data to give teachers more capacity to make improvements in their professional performance and student learning;
- h) intervene promptly in the classroom to improve school performance;
- i) address equity issues in student performance through quality early education and direct classroom support for those students who are falling behind;
- j) establish system-level structures that link the different levels of the system and promote disciplined innovation as a result of a meticulous professional application of research and “best practices,” facilitated by networking, self-reflection, refinement, and lifelong learning.

In general, the literature agrees that the most important elements in which governments should invest in education are related to the availability and professional development of teachers, such as adequate pre-service training, recruitment and selection processes for teachers based on merit, in-service training, performance evaluations, evaluation of interventions, and adequate administrative support (Fixsen et al., 2005, cited by Bashir et al., 2018).

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40. See: <https://www.thedialogue.org/blogs/2019/04/latin-americas-lowest-performing-education-systems/>.



Snilstveit et al. (2015) conducted a systematic review of interventions to improve access and learning in low and middle-income countries. The study included 59 studies from Sub-Saharan Africa, 38 studies from East Asia and the Pacific, 87 from Latin America and the Caribbean; 51 from South Asia, two from the Middle East and North Africa, as well as one from Europe. In the World Food Programme (2020), citing Bashir et al. (2018), the estimation of the average effectiveness of learning improvement interventions for low and middle-income countries (which, in turn, was based on the study by Snilstveit et al., 2015) is presented. Among the most effective interventions are:<sup>41</sup>

- a) Structured pedagogy<sup>42</sup> (0.18).
- b) Increased class time (0.14).
- c) Community involvement in education<sup>43</sup> (0.11).
- d) Construction of new schools (0.11).
- e) School feeding programs (0.10).
- f) Development of comprehensive policies<sup>44</sup> (0.10).
- g) Teacher recruitment (0.08).
- h) Merit scholarships (0.08).
- i) Public-private partnerships<sup>45</sup> (0.05).
- j) Cash transfers (0.04).
- k) Teacher incentives<sup>46</sup> (0.04).

In that sense, the educational system must aim to implement cost-effective actions, and the management of the educational system can be a driver or the Achilles' heel to do so. Regardless of the differences that may be found in the management of education in different countries of Latin America and the Caribbean, as seen previously there are profound challenges that must be addressed in terms of increasing access and the quality of education in the region as a whole.

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41. The authors present the effects in a standardized manner. For more information, see Snilstveit et al. (2015).

42. Defined as a package that includes teacher training, pedagogical support, and access to educational resources for students and teachers.

43. Actions for community involvement in monitoring public education, resource use, and social auditing.

44. Interventions that include various actions with the goal of reducing different barriers to improving educational quality.

45. Initiatives where private operators are hired to manage public schools, voucher programs, and school infrastructure partnerships (Snilstveit et al., 2015).

46. Incentives related to teacher performance.



There are factors that hinder the achievement of objectives, assuming they are the right objectives. To overcome them, adequate management is needed to deliver educational services to the entire student population with the proper quality. According to Fiszbein and Stanton (2018), in many countries of the region, the capacity to implement reforms, policies, and projects is a challenge in itself. The authors analyze these challenges based on three aspects:

**a) Lack of a strategic vision and plans that guide the educational system towards achieving goals.** The existence of a strategic vision necessarily implies long-term stability of educational policies, something that does not happen in a good part of the countries of the region where educational decisions have a political component that contributes to the instability of the sector. It also implies that government institutions in charge of education have the capacity to design actions to achieve the vision, defining strategies and goals based on evidence and appropriate to the context. According to Fiszbein and Stanton (2018), at the time of the study's preparation, only Brazil, Colombia, Ecuador, Jamaica, Paraguay, and the Dominican Republic had national educational plans with a duration exceeding the period of government of an administration. In general, the plans in the region lack a long-term component or appropriate strategies and indicators.

**b) Management capacity for the implementation of plans.** In the absence of a robust long-term plan, it is difficult to launch coherent strategies for education improvement. However, having adequate implementation capacity goes beyond planning, as it includes all elements of the project cycle to execute the actions. This cycle includes planning (explained in the previous point), which must be evidence-based, and the capacity to execute actions, including sufficient human resources with the appropriate competencies, the necessary physical and financial resources, good procurement systems and contracting services, as well as the political capacity to implement what has been planned. It also includes monitoring, evaluation, and learning, which involves the ability to design appropriate instruments and collect information (for example, learning assessments) and use that information to make necessary corrections and implement new actions and be accountable to society. All of the above must work with the goal of bringing the human, physical, and financial resources required by schools.

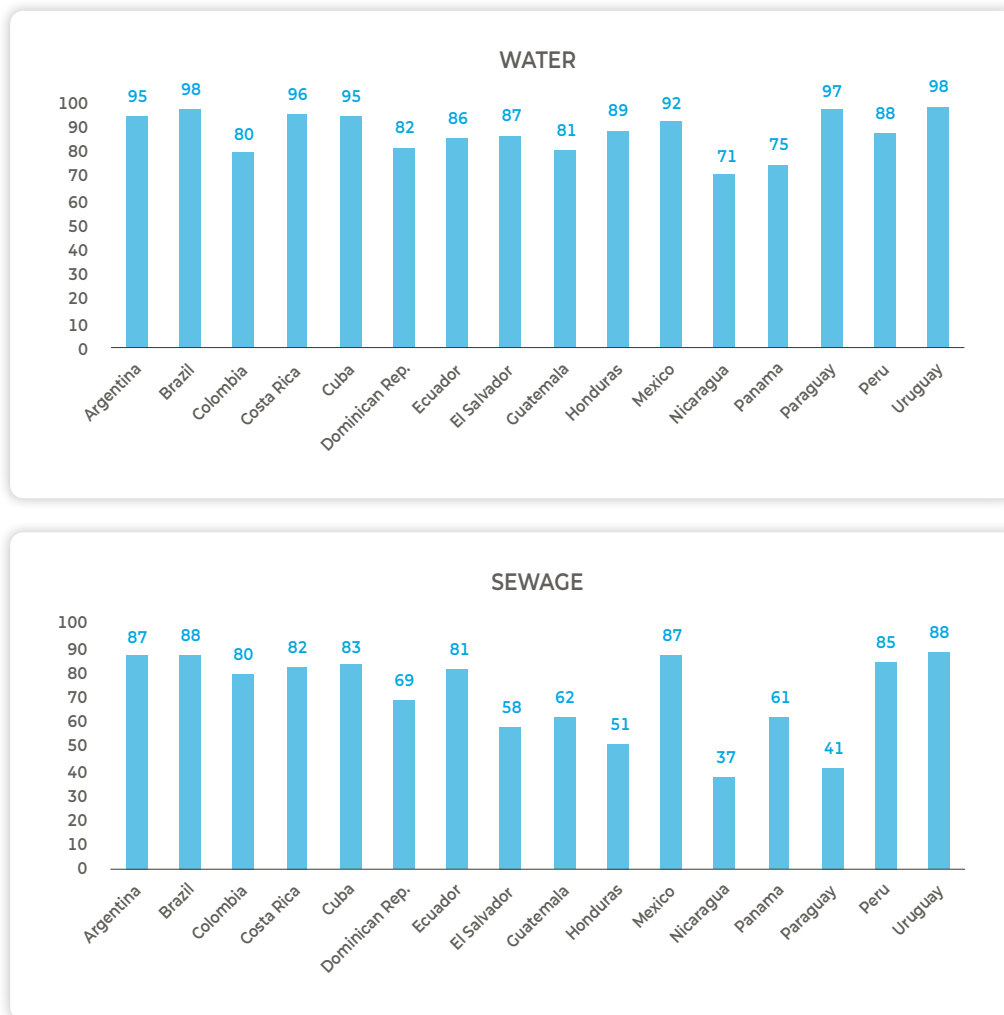
**c) Sufficient financial resources to implement planned actions.** There is a need for some countries in Latin America and the Caribbean to increase their educational spending, but also to increase its efficiency. While educational spending has increased compared to 2000, the increase does not necessarily reflect in better outcomes. Fiszbein and Stanton (2018) point out that countries in Latin America only achieve 87.6% of the coverage and do not reach the learning outcomes that would be possible if spending efficiency were increased compared to the most efficient countries. This inefficiency is partly a consequence of investing in programs and projects that do not have support for their contribution to improving school effectiveness.

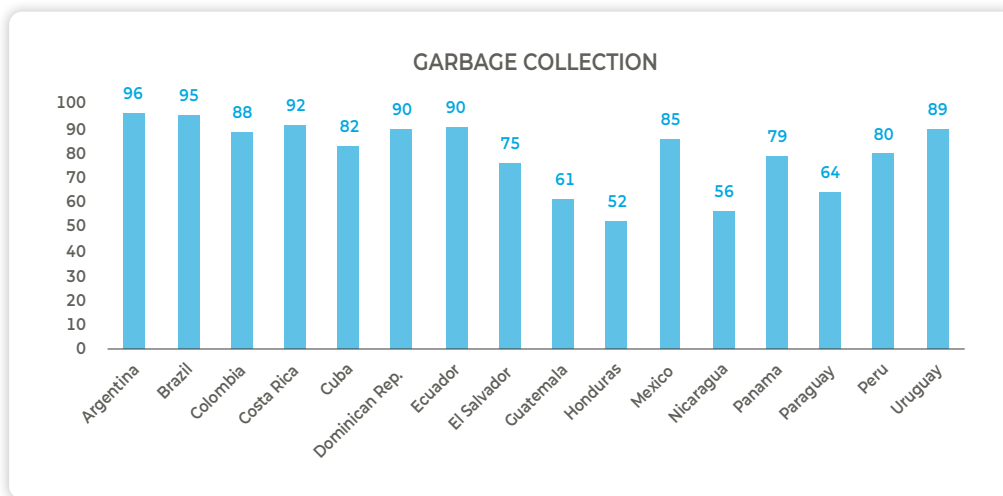
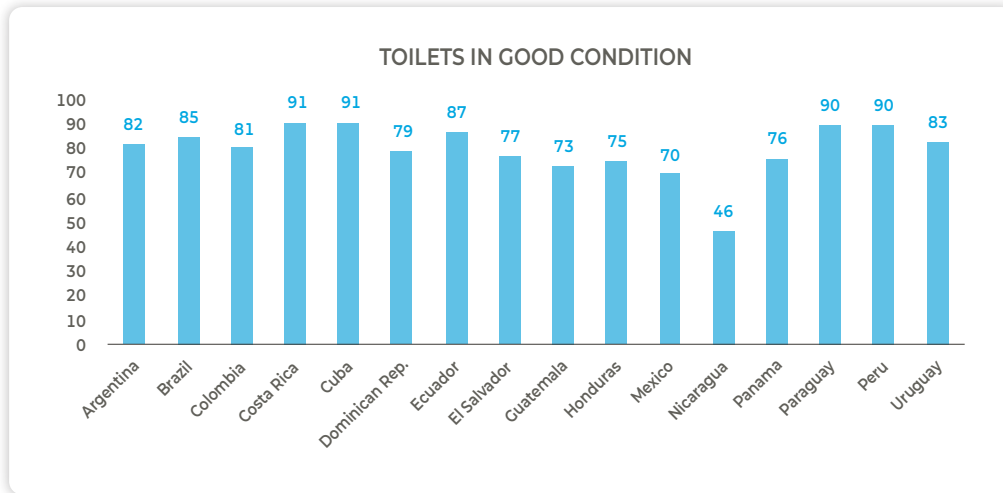


### 3.5 Physical resources

Unfortunately, information on the quality of educational infrastructure in Latin America and the Caribbean is limited. Based on ERCE, information can be obtained from the questionnaire conducted with school principals regarding access to basic services (water, sewage, toilets, and garbage collection). There are countries where 25% or more of the principals mentioned not having access to at least one of the basic services (El Salvador, Paraguay, Panama, Guatemala, Honduras, and Nicaragua). Brazil, Costa Rica, Argentina, and Uruguay are the countries where a higher proportion of principals mentioned having access to basic services, as shown in Figure 3.14.

**FIGURE 3.14 PERCENTAGE OF PRINCIPALS WHO MENTIONED THAT THEIR SCHOOLS HAVE ACCESS TO BASIC SERVICES, ACCORDING TO ERCE (2019)**





Source: UNESCO (2019).

Another important issue related to infrastructure is accessibility for the population with disabilities. According to UIS UNESCO data, in Latin America and the Caribbean, 45.8% of primary schools and 50.1% of secondary schools have access to infrastructure and materials adapted for students with disabilities. However, a low number of countries reported this information (table 3.10)<sup>47</sup>. The lowest percentages are found in Honduras, Jamaica, and Brazil. The highest, on the other hand, are in Uruguay and Costa Rica.

<sup>47</sup>. In the case of the OECD, only 4 countries report information. Therefore, an average calculation of this indicator for OECD countries is not made.





**TABLE 3.10 PERCENTAGE OF SCHOOLS WITH ACCESS TO INFRASTRUCTURE AND MATERIALS ADAPTED FOR STUDENTS WITH DISABILITIES (CIRCA 2019)**

COUNTRY	PRIMARY	SECONDARY
Brazil	27.9	43.3
Costa Rica	71.7	75.6
El Salvador	30.4	49.6
Honduras	5.4	–
Jamaica	11.7	10.0
Peru	36.8	52.7
Uruguay	100	100

Source: Authors' elaboration based on UIS UNESCO.

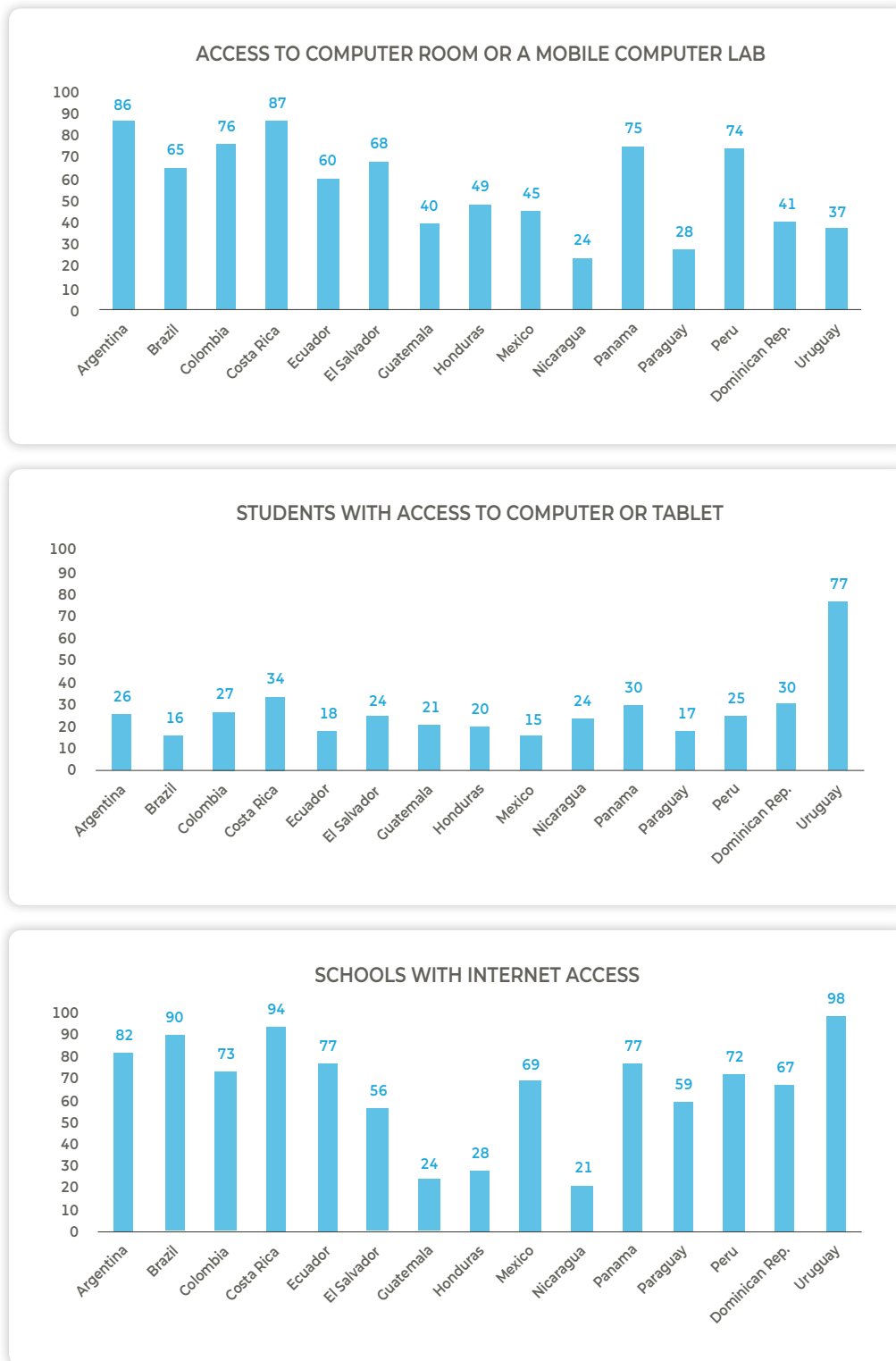
### 3.5.1 Access to Technology in Schools

There are challenges regarding access to technology in schools in Latin America and the Caribbean. According to ERCE 2019 information, 57.1% of the principals who responded to the questionnaire stated that their school has a computer room or a mobile computer lab available for sixth-grade primary students. The countries where the highest proportion of principals mentioned having a computer room or lab are Costa Rica, Argentina, and Colombia, while the countries where the percentage of responses in this regard was lower are Uruguay, Paraguay, and Nicaragua. However, if we analyze the proportion of sixth-grade students who stated they have access to a computer or tablet for use in class, Uruguay is the country with the highest percentage, which is due to the country's strategy not to create rooms or mobile labs in schools but to provide computers for each student, with the proper replacement and support system, through the Plan Ceibal.

Moreover, 65.7% of the principals responded that their school had access to the internet. The countries where a higher proportion of principals mentioned having internet access were Uruguay, Costa Rica, and Brazil, while the least were Honduras, Guatemala, and Nicaragua (Figure 3.15).



**FIGURE 3.15 PERCENTAGES OF ACCESS TO COMPUTERS AND INTERNET (2019)**



Source: Authors' elaboration based on UNESCO (2019).



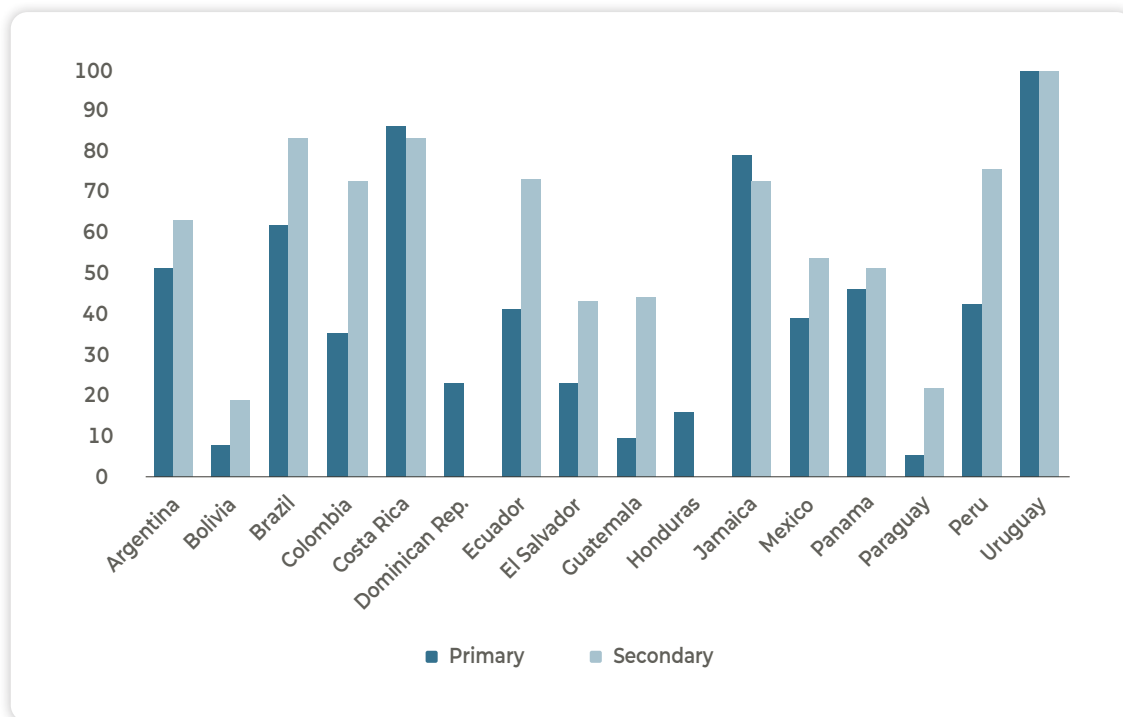
According to UIS UNESCO data, 62% of primary schools and 78.2% of secondary schools in Latin America and the Caribbean have access to the internet for pedagogical use. For OECD countries, these percentages are 91.5% and 94.5%, respectively. The UNESCO indicator does not specify what characteristics are considered to classify internet access (for example, if it is through mobile, or if the connection is available to everyone, among others). This data contrasts with calculations by Inter-American Dialogue (2021), which indicates that only 33% of schools in the region have access to broadband internet, although in that publication they do define the characteristics to consider that a school has access to broadband: connectivity must have a speed of at least 10 Mb/s or 4G mobile connection; it must be regular and accessible for daily use, and must have sufficient data, that is, a stable connection. The fact that there are different ways to define what is internet access can explain these discrepancies.

Another issue to consider is that even if a school has internet access, this does not mean that all its facilities have that access or that it is available at any time of the day, so the proportion of schools that have internet access can be overestimated if those schools that only have connection in some areas (for example, the administration) but do not have the possibility to use it for teaching are taken into account.

According to UNESCO, the countries where schools have the least access to the internet are Honduras, the Dominican Republic, Bolivia, Paraguay, and Guatemala. On the other end are Uruguay, Costa Rica, and Jamaica (Figure 3.16).



**FIGURE 3.16** PERCENTAGE OF SCHOOLS WITH INTERNET ACCESS (CIRCA 2019)

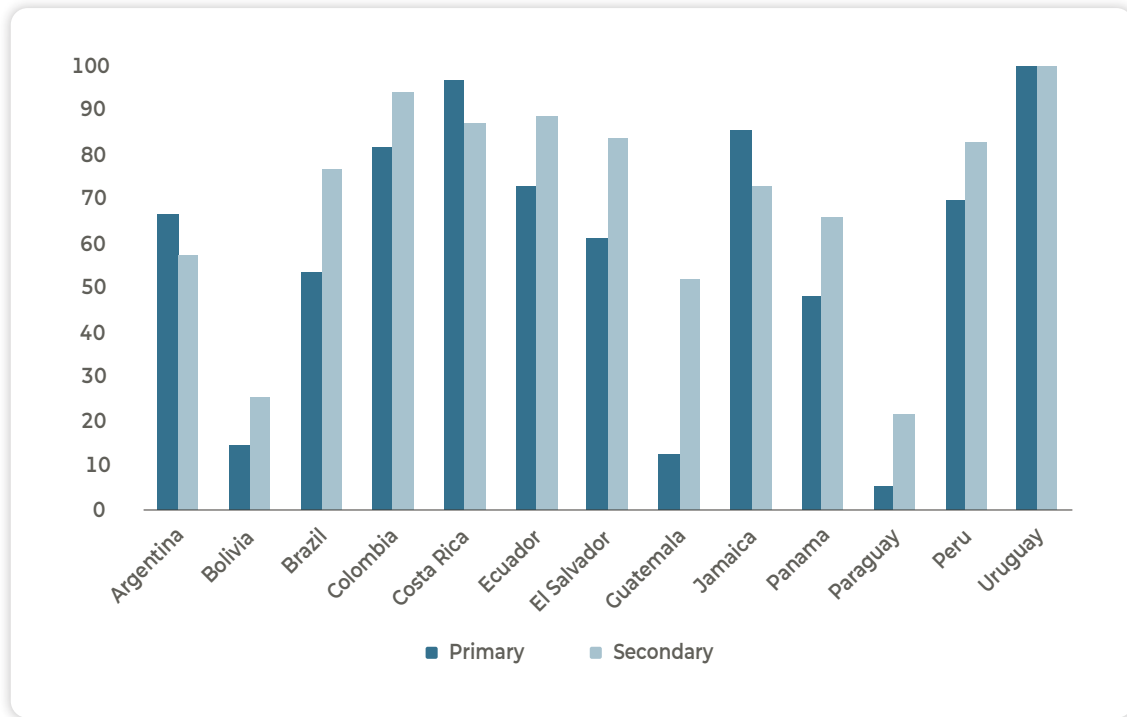


Source: Authors' elaboration based on UIS UNESCO.

Regarding access to computers for educational purposes, in Latin America and the Caribbean, the average percentage of primary schools with computers is 76%, and for secondary schools, it is 82.52%. For OECD countries, these percentages are 98.1% and 98.2%, respectively. Similar to the case of internet access, UNESCO does not specify what it means for a school to have access to computers, i.e., whether it refers to the existence of computer labs or a minimum number of computers per student. Countries with a lower proportion of schools with computer access include Paraguay, Bolivia, and Guatemala, while those with a higher proportion include Uruguay, Costa Rica, and Colombia (Figure 3.17).



FIGURE 3.17 PERCENTAGE OF SCHOOLS WITH ACCESS TO COMPUTERS (CIRCA 2019)



Source: Authors' elaboration based on UIS UNESCO.



## 3.6 Teachers

International literature clearly identifies teachers as the most relevant factor for educational quality (Scheerens, 1990; Sammons et al., 1998; McKinsey and Company, 2007; and Hanushek, 2011, among others). Two aspects are key to defining effective teachers: mastery of the content they are going to teach and the skills to do so. This implies the need for them to have adequate initial training and further training and support once they are in service.

The student-to-teacher ratio is an indicator that literature generally relates to educational quality. Some studies indicate that as this ratio decreases, learning increases, especially in the lower grades. For example, a study by Rivkin, Hanushek, and Kain (2005) found positive effects in reducing the number of students per teacher in fourth grade, a lesser effect in fifth grade, and no differences in later grades.

On the other hand, another study by Jepsen and Rivkin (2009) notes that while there are positive effects in reducing the number of students per teacher, if teachers without the necessary competencies are hired to reduce this ratio, those positive effects are lost. In any case, countries have typically set maximum standards for the number of students each teacher should have, and based on the literature, the recommendation is that this maximum be lower in lower grades (i.e., the maximum in pre-primary is lower than in primary, and in turn, the primary maximum is lower than in secondary).

The average student-to-teacher ratio for countries in Latin America and the Caribbean is 35.6 in pre-primary, 33.2 for primary, and 23.1 for secondary. In the OECD,<sup>48</sup> the average number of students per teacher in pre-primary is 14.9, for primary is 14.5, and for secondary is 13. In general, it can be noted that the shortage of teachers is greater in pre-primary. In the case of secondary, the fact that the ratio is lower can also be explained because there is less coverage. Table 3.11 shows the student-to-teacher ratio for countries in the region.

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48. For more information, see: <https://stats.oecd.org>.



**TABLE 3.11 STUDENT-TEACHER RATIO (CIRCA 2019)**

COUNTRY	PRE-PRIMARY	PRIMARY	SECONDARY
Belize	42.02	–	54.47
Paraguay	45.6	27.89	38.58
Colombia	39.57	23.68	26.33
Guyana	17.1	48.88	20.56
El Salvador	28.21	26.89	27.56
Ecuador	21.35	26.62	21.99
Dominican Republic	20.92	19.83	26.67
Chile	25.66	17.79	18.37
Bahamas	22.11	21.66	15.03
Suriname	24.32	12.89	20.05
Panama	15.04	24.37	16.26
Puerto Rico	17.5	13.54	17.16
Jamaica	13.49	19.49	14.94
Barbados	13.6	13.04	16.05
Trinidad and Tobago	11.22	18.13	13.3
Costa Rica	11.17	11.69	12.86
Uruguay	–	11.68	–

Source: Authors' elaboration based on UIS UNESCO.

UIS UNESCO calculates the indicator of “average teacher salary in relation to other professions that require a comparable level of qualification”.<sup>49</sup> For Latin America and the Caribbean,<sup>50</sup> the average of this indicator is 1.3, which implies that the teacher’s salary is slightly higher than the salaries of comparable professions. This contrasts with the average of OECD countries (0.8). The results for the countries in the region can be seen in table 3.12.

<sup>49</sup>. According to UIS UNESCO, data on teacher salaries are collected based on the statutory salary set by each country, while salaries for professional occupations are obtained from ILOSTAT. In this sense, this data represents teachers who earn that statutory salary and not those who are not employed full-time or work in other sectors where the statutory salary does not apply.

<sup>50</sup>. Information is only presented for Argentina, Barbados, Belize, Bolivia, Chile, Ecuador, El Salvador, Mexico, and the Dominican Republic.



**TABLE 3.12 AVERAGE TEACHER SALARY IN RELATION TO OTHER PROFESSIONS THAT REQUIRE A COMPARABLE LEVEL OF QUALIFICATION FOR COUNTRIES IN LATIN AMERICA AND THE CARIBBEAN (CIRCA 2019)<sup>51</sup>**

COUNTRY	TEACHER SALARY COMPARED TO OTHER PROFESSIONS
Argentina	1.01
Barbados	0.93
Belize	0.82
Bolivia	1.28
Chile	0.78
Dominican Republic	2.91
Ecuador	1.61
El Salvador	1.26
Mexico	1.13

Source: Authors' elaboration based on UIS UNESCO.

To the teacher salary must be added that young people continue choosing careers in teaching. Elacqua et al. (2018) suggests that the requirements for entering teaching careers are lower and that students have, on average, lower academic performance. The same study indicates that initial teacher training has not been the mechanism to level and provide competencies to future teachers, noting that there is evidence (in Brazil, Chile, and Colombia) that the academic performance of students at the end of teacher training is lower than that of other higher education graduates. Further evidence can be found in Guatemala, where candidates for a position must take a diagnostic test in mathematics, communication, and language. In that test, only 10% of those evaluated obtain 60/100 points or more, in mathematics only 3 out of 10 answers were correct while in communication and language only 5 out of 10.<sup>52</sup>

51. It is the ratio between the annual statutory compensation of a teacher with typical qualifications (the preferred definition of typical qualifications is the level of qualifications and training possessed by the largest proportion of teachers) and 15 years of experience (numerator) and the annual income of people with similar qualifications (denominator).

52. See: <https://www.prensalibre.com/guatemala/comunitario/solo-uno-de-cada-10-maestros-logro-60-puntos-o-mas-en-la-evaluacion-diagnostica>.





The distribution of (good) teachers is highly inefficient and inequitable. On one hand, they tend to concentrate in urban areas and are scarce in rural areas. Parallely, the expansion of school coverage - especially at the primary and secondary levels - has resulted in more lax recruitment strategies that do not maintain the same standards as in urban areas.<sup>53</sup> The lack of incentives to attract teachers to disadvantaged areas creates a shortage of the best teaching talent for the neediest schools.



<sup>53</sup>. According to Elacqua et al. (2018), citing Tenti Fanfani and Steinberg (2011), the expansion of coverage caused pressure to relax the requirements for access to teaching jobs in basic education systems in Latin America.



# 4

## Conclusion

Education and skill accumulation are fundamental for addressing structural inequalities, improving social mobility, and fostering productivity growth in Latin America and the Caribbean. However, the data presented account for the significant educational challenges facing the region.

The report analyzes three key dimensions for educational development: financial resources, coverage and efficiency, and learning. Despite some progress, the region still faces a significant lag compared to other regions of the world, particularly against OECD countries.

First, public spending on education as a percentage of GDP in Latin America and the Caribbean saw a notable increase during the first decade of the 21<sup>st</sup> century, followed by a decline in recent years. However, investment in education in the region remains very low: the average spending per student in primary and secondary (USD, PPP) is three times lower in Latin America and the Caribbean than in the OECD. This data highlights the need to increase investment and improve efficiency.

Second, despite advances in primary education coverage in Latin America and the Caribbean, challenges persist in access to secondary education. The secondary education completion rate is low, resulting in an insufficient number of students continuing into tertiary education. Additionally, inequalities in coverage by socioeconomic and gender levels are observed, with more notable gaps in secondary education.

Third, the countries in the region continue to have a low level of learning compared to OECD countries in reading, mathematics, and sciences based on PISA 2022. Learning gaps between quintiles show that, on average, disadvantaged students report a low performance rate more than 30 percentage points higher than advantaged students, a result repeated for mathematics, reading, and sciences (PISA 2022). The region lags in the proportion of students achieving at least the minimum level of competencies.

The aggregated analysis of the dimensions of educational development highlights that while the countries in the region show lags in the three dimensions analyzed, the dimension of financial resources explains to a greater extent the educational development lag in the region, compared to OECD countries.



The report also analyzes a selection of educational indicators that offer a country-level panorama – with disaggregation by income quintile and sex – on the state of education in different dimensions: coverage, efficiency, learning, financial resources, physical resources, and teachers. The analysis of these indicators accounts for the great heterogeneity of the region but also the existence of common patterns.

- **Educational coverage:** Although most countries in the region have achieved universal coverage in primary education, access to secondary and tertiary education remains a significant challenge for most countries. There are enormous access gaps by income level. Gender gaps are observed in access to secondary and tertiary education in favor of women, with some countries presenting greater disparities.
- **Educational efficiency:** The primary education completion rate is virtually universal in most countries, while the secondary education completion rate continues to be a pending issue. A high percentage of young people in the region do not attend any level of education and have not completed secondary school. Substantial income-level gaps are also noted in all countries.
- **Learning:** ERCE 2019 and PISA 2022 data indicate that a high percentage of students in Latin America and the Caribbean do not reach the minimum level of competencies in reading, mathematics, and sciences in primary and secondary education. Gender gaps in academic performance vary across different countries, but in general, it is observed that women perform better in reading, while men perform better in mathematics. The gaps in academic performance according to the income quintile of the students reflect significant inequalities in educational quality, with low-income students at a great disadvantage in all countries.
- **Financial resources:** The COVID-19 pandemic forced countries to allocate additional resources to adapt education to virtual and hybrid modalities, as well as to ensure health safety. The increase in public spending on education was not uniform, as some countries faced limitations due to economic contraction and the need for resources for the health system. Barbados, Colombia, and Guatemala were the countries that increased public spending on education the most from 2019 to 2020. On average, countries in Latin America and the Caribbean allocate 62.1% of their sectoral public spending on teachers, surpassing the OECD. While Bolivia, Belize, Costa Rica, and Barbados allocate a higher proportion of their GDP to public spending on education; Venezuela, Haiti, Bahamas, Guatemala, and Paraguay are the countries that allocate the least budget to education.
- **Physical resources:** The quality of educational infrastructure in Latin America and the Caribbean is limited, and based on ERCE data, a high percentage of principals mention a lack of access to basic services in some schools. Access to technology in schools is a challenge, with significant



variations between countries and urban and rural environments. Uruguay, Costa Rica, and Brazil are countries with greater access to the internet and technology in schools, while Honduras, Guatemala, and Nicaragua have more limited access.

- **Teachers:** The student-to-teacher ratio is a key factor in educational quality, and the shortage of teachers is more pronounced at the pre-primary level. The training and quality of teachers are challenges, as entry standards are lower, and the distribution of teachers is inefficient and inequitable, with a concentration in urban areas and a lack of incentives to work in disadvantaged areas.





The analyzed results point to the need for countries in the region to increase and be more efficient in their investment in education. The high levels of technical inefficiency reported by Izquierdo et al. (2018) reflect that there is approximately a 17% overspending in educational procurements, 14% in salary expenses, and up to 0.27% of the Gross Domestic Product (GDP) of Latin American and Caribbean countries lost due to erroneous implementations or leakage of resources. In turn, the estimates of allocative inefficiency in the region (Izquierdo et al., 2018) reflect the need to prioritize those elements that have been shown to improve educational quality, such as having well-trained teachers, providing educational resources, and reducing barriers to access education.

In general, Latin America and the Caribbean still have pending challenges to overcome to achieve improvements in access, the internal efficiency of the educational system, and the improvement of learning outcomes, and mainly in terms of equity. We trust that the results presented in this document will contribute to a more efficient allocation of resources in the educational systems of Latin America and the Caribbean. Also, that they serve to promote the execution of projects and policies that strengthen the components that have been shown to be related to improvements, taking into account the specific characteristics of each country.



# 5

## Bibliography

- Arias Ortiz, E., M.S. Bos, C. Giambruno, and P. Zoido. 2023. "PISA in Latin America and the Caribbean 2022: How Many Are Underperforming?". <https://publications.iadb.org/publications/spanish/document/America-Latina-y-el-Caribe-en-PISA-2022-cuantos-tienen-bajo-desempeno.pdf>.
- Bashir, S., L. Marlaine, E. Ninan, and T. Jee-Peng. 2018. "Facing Forward: Schooling for Learning in Africa". Washington, DC: World Bank. <http://hdl.handle.net/10986/29377>.
- Bos, S., A. Viteri, and P. Zoido. 2019. "Latin America in PISA 2018: Basic Data on PISA". Washington, DC: Inter-American Development Bank (IDB). <http://dx.doi.org/10.18235/0002439>.
- Buttenheim, A., H. Alderman, and J. Friedman. 2011. "Impact Evaluation of School Feeding Programs in Lao PDR". Policy Research Working Paper. Washington, DC: World Bank.
- Di Gropello, E. 1999. "Educational Decentralization Models in Latin America". CEPAL Review, No. 68. Santiago: Economic Commission for Latin America and the Caribbean (ECLAC). <https://hdl.handle.net/11362/12183>.
- Drake, L., A. Woolnough, C. Burbano, and D. Bundy. 2016. "Global School Feeding Sourcebook: Lessons from 14 Countries". London: Imperial College Press. <https://openknowledge.worldbank.org/handle/10986/24418>.
- Duarte, J., F. Jaureguiberry, and M. Racimo. 2017. "Adequacy, Equity, and Effectiveness of School Infrastructure in Latin America According to TERCE". Inter-American Development Bank (IDB) and UNESCO Regional Bureau for Education in Latin America and the Caribbean, OREALC/UNESCO. <https://publications.iadb.org/es/suficiencia-equidad-y-efectividad-de-la-infraestructura-escolar-en-america-latina-segun-el-terce>.
- Elacqua, G., D. Hincapie, E. Vegas, and M. Alfonso. 2018. "Profession: Teacher in Latin America: Why has the Teaching Profession Lost its Prestige and How to Recover It?". Washington, DC: Inter-American Development Bank (IDB). <http://dx.doi.org/10.18235/0001172>.
- Elacqua, G., M. L. Iribarren, and H. Santos. 2018. "Private Schooling in Latin America: Trends and Public Policies". Technical Note No. IDB-TN-01555. Washington, DC: Inter-American Development Bank (IDB). <http://dx.doi.org/10.18235/0001394>.
- Elacqua, G., C. Méndez, and M. Navarro. 2022. "Private Schools in Times of COVID-19 in Latin America and the Caribbean". Technical Note No. IDB-TN-02529. Washington, DC: Inter-American Development Bank (IDB). <http://dx.doi.org/10.18235/0004434>.



- Ferreya, M., C. Avitabile, J. Botero Alvarez, F. Paz, and S. Urzúa. 2017. "At a Crossroads: Higher Education in Latin America and the Caribbean". Washington, DC: World Bank. <http://hdl.handle.net/10986/26489>.
- Fiszbein, A., and S. Stanton. 2018. "The Future of Education in Latin America and the Caribbean: Possibilities for United States Investment and Engagement". Washington, DC: Inter-American Dialogue.
- Hampf, F., S. Wiederhold, and L. Woessmann. 2017. "Skills, earnings, and employment: exploring causality in the estimation of returns to skills". Large-scale Assess Educ 5, 12. <https://doi.org/10.1186/s40536-017-0045-7>.
- Hanushek, E., and L. Woessmann. 2021. "Education and Economic Growth". Oxford Research Encyclopedia of Economics and Finance. <https://doi.org/10.1093/acrefore/9780190625979.013.651>.
- Hopkins, D. 2013. "Exploding the myths of school reform". School Leadership & Management, 33: 304-321.
- Jepsen, C., and S. Rivkin. 2009. "Class Size Reduction and Student Achievement: The Potential Tradeoff between Teacher Quality and Class Size". Journal of Human Resources, 44(1): 223-250.
- Jomaa, L., E. McDonnell, and C. Probart. 2011. "School feeding programs in developing countries: Impacts on children's health and educational outcomes". Nutrition reviews, 69: 83-98.
- Kristjansson, E. A., V. Robinson, M. Petticrew, B. MacDonald, J. Krasevec, L. Janzen, T. Greenhalgh, G. Wells, J. MacGowan, A. Farmer, B. Shea, A. Mayhew, and P. Tugwell. 2007. "School Feeding for Improving the Physical and Psychosocial Health of Disadvantaged Students". Cochrane Database of Systematic Reviews. <https://doi.org/10.1002/14651858.cd004676.pub2>.
- Murillo, F. J., E. Castañeda, S. Cueto, J. M. Donoso, E. Fabara, M. Hernández-Rincón, M. L. Herrera, M. Murillo, O. Román, and P. Torres. "Ibero-American Research on School Effectiveness". Bogotá: Andrés Bello Agreement.
- OECD (Organisation for Economic Co-operation and Development). No date. "The OECD PISA programme: What it is and what it is for". Paris: OECD Publishing.
- , 2019. "Skills Matter: Additional Results from the Survey of Adult Skills". Paris: OECD Publishing. <https://doi.org/10.1787/1f029d8f-en>.
- , 2021. "Education at a Glance". Paris: OECD Publishing. <https://doi.org/10.1787/19991487>.
- World Food Programme. 2020. "The State of School Feeding Worldwide 2020". ISBN 978-92-95050-06-8.
- Rivkin, S., E. Hanushek, and J. F. Kain. 2005. "Teachers, Schools, and Academic Achievement". Econometrica, 73(2): 417-458.



Snilstveit, B., J. Stevenson, D. Phillips, M. Vojtkova, E. Gallagher, T. Schmidt, H. Jobse, M. Geelen, M. Pastorello, and J. Eyers. 2015. "Interventions For Improving Learning Outcomes and Access to Education in Low- And Middle-Income Countries: A Systematic Review".

UNESCO (United Nations Educational, Scientific and Cultural Organization). No date. "Socio-emotional skills. Empathy, Openness to diversity, and school self-regulation in sixth-grade students of the region. ERCE 2019". <https://es.unesco.org/sites/default/files/presentacion-llece-hse-jorge-manzi.pdf>.

Villaseñor, P. 2017. "How can teachers foster (or hinder) the development of socio-emotional skills in their students?" Voices Blog. Washington, DC: World Bank. <https://blogs.worldbank.org/es/voices/como-pueden-los-maestros-fomentar-o-impedir-el-desarrollo-de-habilidades-socio-emocionales-en-sus-estudiantes>.

Wang, D., S. Shinde, T. Young, and W. Fawzi. 2020. "Impacts of school feeding on educational and health outcomes of school-age children and adolescents in low- and middle-income countries: Protocol for a systematic review and meta-analysis". J Glob Health 2021;11:04051. <https://doi.org/10.7189/jogh.11.04051>.





