

AN EARLY-WARNING INDICATOR FOR THE HUMAN CAPITAL PROJECT

The Human Capital Project seeks to raise awareness and increase demand for interventions to build human capital. It aims to accelerate better and more investments in people.

In low- and middle-income countries, the learning crisis means that deficits in education outcomes are a major contributor to human capital deficits. Shortcomings in both the quantity of schooling and especially its quality explain a large part of the distance to the frontier. Addressing these shortcomings will require a multisectoral approach.

For more information on the Human Capital Project, please visit www.worldbank.org/humancapitalproject

WHY MEASURE LEARNING POVERTY?

All children should be able to read by age 10. As a major contributor to human capital deficits, the learning crisis undermines sustainable growth and poverty reduction. This brief summarizes some of the critical aspects of a new synthetic indicator, **Learning Poverty**, designed to help spotlight and galvanize action to address this crisis.

Eliminating Learning Poverty is as urgent as eliminating extreme monetary poverty, stunting, or hunger. The new data show that more than half of all children in low and middle-income countries suffer from Learning Poverty.

WHAT IS LEARNING POVERTY?

Learning Poverty means being unable to read and understand a short, age-appropriate text by age 10. All foundational skills are important, but we focus on reading because: (i) reading proficiency is an easily understood measure of learning; (ii) reading is a student's gateway to learning in every other area; and, (iii) reading proficiency can serve as a proxy for foundational learning in other subjects, in the same way that the absence of child stunting is a marker of healthy early childhood development.

HOW IS LEARNING POVERTY MEASURED?

This indicator brings together schooling and learning. It starts with the share of children who haven't achieved minimum reading proficiency and adjusts it by the proportion of children who are out of school.

$$LP = [BMP \times (1 - OoS)] + [1 \times OoS]$$

where, *LP* is Learning Poverty; *BMP* is share of children in school below minimum proficiency; *OoS* is the Percentage of Out-of-School children; and, in the case of *OoS* we assume *BMP* = 1.

The data used to calculate Learning Poverty has been made possible thanks to the work of the Global Alliance to Monitor Learning led by the UNESCO Institute for Statistics (UIS), which established Minimum Proficiency Levels (MPLs) that enable countries to benchmark learning across different cross-national and national assessments.

LEARNING POVERTY IN MACAO SAR, CHINA

- **Learning Poverty.** 4 percent of children in Macao SAR, China at late primary age today are not proficient in reading, adjusted for the Out-of-School children.
- **Out-of-School.** In Macao SAR, China, 1 percent of primary school-aged children are not enrolled in school. These children are excluded from learning in school.
- **Below Minimum Proficiency.** Large-scale learning assessments of students in Macao SAR, China indicate that 2 percent do not achieve the MPL at the end of primary school, proxied by data from grade 4 in 2016.

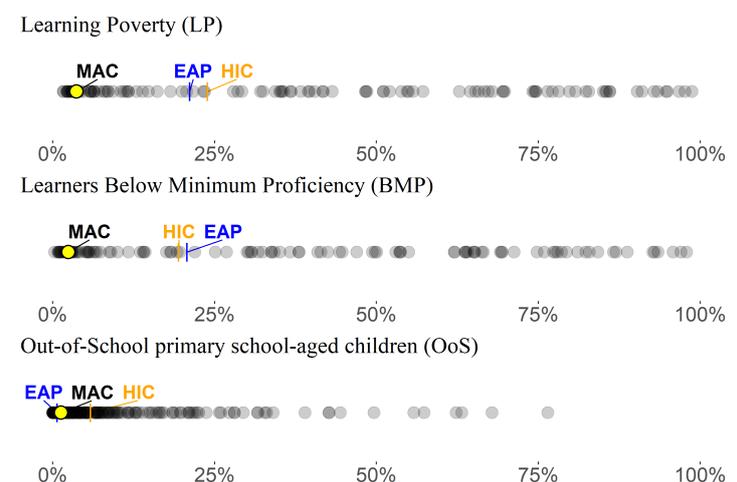
For countries with a very low Out-of-School population, the share of children Below Minimum Proficiency will be very close to the reported Learning Poverty.

Notes: The LP number for Macao SAR, China is calculated using the Global Learning Assessment Database (GLAD) harmonization based on PIRLS and the MPL threshold used was level Low (400 points). For more details, please consult the [GLAD](#) and [Learning Poverty](#) repositories in GitHub.

BENCHMARKING MACAO SAR, CHINA'S LEARNING POVERTY

Learning Poverty in Macao SAR, China is **17.5 percentage points better** than the average for the East Asia and Pacific region and **20.2 percentage points better** than the average for high income countries.

Figure 1. Learning Poverty and components



Source: UIS and World Bank as of October 2019.

Notes: (1) Large circle represents Macao SAR, China; (2) Small circles represent other countries; and, (3) Vertical lines reflect the averages of Macao SAR, China's region and income group.

HOW DOES MACAO SAR, CHINA'S GENDER GAP COMPARE GLOBALLY?

As in most countries, **Learning Poverty is higher for boys than for girls** in Macao SAR, China.

This result is a composition of two effects. First the share of **Out-of-School children is higher for boys (1.6%)** than for girls (1%).

And second **boys are less likely to achieve minimum proficiency at the end of primary school (2.6%)** than girls (2.2%) in Macao SAR, China.

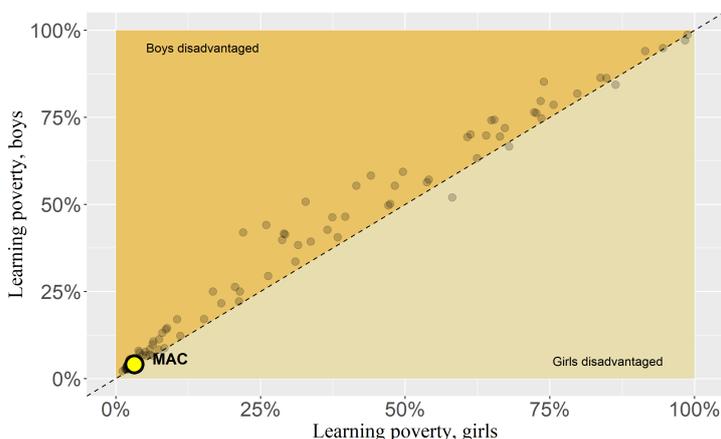
Table 1 shows sex disaggregation for Learning Poverty and HCI education components whenever available.

Table 1. Sex Disaggregation

Indicators and Components	Boys	Girls	All
Learning Poverty	4.1	3.2	3.7
Below Minimum Proficiency	2.6	2.2	2.4
Out-of-School	1.6	1	1.3
Human Capital Index	0.73	0.79	0.76
Learning-adjusted Years of Schooling	10.7	11.3	11

Source: UIS and World Bank for LP, BMP and OoS as of October 2019; EdStats/WDI for [HCI](#) and [LAYS](#); The Full Learning Poverty database is available for download at the [Development Data Hub](#).

Figure 2. Gender Gap - Learning Poverty by Sex



Source: UIS and World Bank as of October 2019. Notes: (1) - Large circle represents Macao SAR, China; and, (2) The closer a country is to the dotted line the smaller its LP gender gap.

POINT OF CONTACT

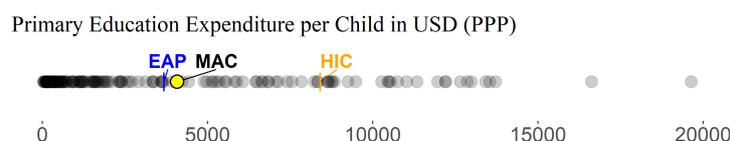
Macao SAR, China: N/A

East Asia and Pacific: Ning Fu

PRIMARY EDUCATION EXPENDITURE

Primary education expenditure per child of primary education age in Macao SAR, China is **USD 4,080 (PPP)**, which is **11% above** the average for the East Asia and Pacific region and **51.5% below** the average for high income countries.

Figure 3. Expenditure per child in primary school age



Source: UIS and World Bank as of October 2019. Note: Primary education expenditure per child is calculated as total expenditure on primary education divided by total number of children of primary school age. Data for Macao SAR, China is from 2003.

DATA AND DATA GAPS ON LEARNING AND SCHOOLING IN MACAO SAR, CHINA

Macao SAR, China does not administer a National Large-Scale Assessment (NLSA) at the End of Primary school, according to UIS SDG 4.1.2b monitoring.

Macao SAR, China participated in the following published cross-national learning assessments in recent years: PIRLS (2016) and PISA (2006, 2009, 2012, 2015).

Macao SAR, China has not participated in the World Bank's LeAP diagnostic exercise to analyze its assessment system. To get started, contact the LeAP team.

The Out-of-School adjustment in our Learning Poverty indicator relies on enrollment data. Our preferred definition is the adjusted net primary enrollment as reported by UIS. This data relies both on the population Census and the EMIS. In the case of Macao SAR, China, the preferred definition based on the EMIS data is for 2016.

Notes: The definition of NLSA does not include National Exams; LeAP: Learning Assessment Platform (LeAP-team@worldbank.org). PIRLS: Progress in International Reading Literacy Study. PISA: Programme for International Student Assessment.

 [#investinPeople](#)

Disclaimer: The numbers presented in this brief are based on global data harmonization efforts conducted by UIS and the World Bank that increase cross-country comparability of selected findings from official statistics. For that reason, the numbers discussed here may be different from official statistics reported by governments and national offices of statistics. Such differences are due to the different purposes of the statistics, which can be for global comparison or to meet national definitions.