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Handbook of Research on Measuring Poverty and Deprivation

Poverty in Latin America *

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1. Introduction

Despite some progress in recent decades, poverty remains a top social concern in Latin America. A large proportion of Latin Americans live with very low incomes and are deprived in other fundamental welfare dimensions such as education, health, housing and sanitation. The measurement of income and multidimensional poverty in the region has advanced significantly in recent decades. In particular, there has been a remarkable increase in the availability of microdata from national household surveys and of poverty statistics published by governments and other institutions. Yet, the measurement of poverty in Latin America still has some limitations that should be addressed in the years to come.

This chapter discusses the measurement of monetary and multidimensional poverty in Latin America, and documents the main patterns and trends. By providing an updated assessment of the level, changes and characteristics of poverty in the region we expect to contribute to the more ambitious debate on its determinants and policy implications.

The rest of the chapter is organized as follows. In Section 2 we describe the data sources and main methodological issues regarding the measurement of income poverty, while in Section 3 we document the main patterns and trends over the recent decades. We repeat the sequence for the measurement of multidimensional poverty: Section 4 for methodological issues and Section 5 for evidence. The paper concludes in Section 6 with some brief concluding remarks.

2. Measurement of monetary poverty

We start with a brief introduction to the region. Latin America is a large area on the American continent with a common history of colonization by Spain and Portugal, which translated into similarities in terms of culture, language and economic structure. Table 1 provides basic information on all Latin American countries.¹ There are large differences in population across nations. In fact, just two countries – Brazil and Mexico – represent more than 55% of the region's population. There are also considerable heterogeneities in terms of economic and social development. Yet, the dispersion is lower than in other

¹ We exclude three countries in the Caribbean with Latin roots: Cuba, where the access to survey microdata is difficult; Haiti, where income data from surveys is infrequent and weak; and Puerto Rico, which is politically, linked to the United States.

regions of the world. All countries in Latin America are middle-income countries with GDP per capita ranging from \$5,146 in Nicaragua to \$28,414 in Panama. Most countries in the region have high levels of the Human Development Index (HDI). Only the poorest countries in Central America are in the group of medium HDI.

Table 1: Population, GDP per capita, HDI, main national household survey and poverty headcount ratio.

	Population (millions)	GDP per capita	HDI	Main survey	Poverty 2019
South America					
Argentina	45.2	19,271	0.845	EPH	14.4
Bolivia	11.7	7,892	0.718	EH	19.9
Brazil	212.6	13,777	0.765	PNAD	19.6
Chile	19.1	22,190	0.851	CASEN	3.5
Colombia	50.9	13,374	0.767	GEIH	29.4
Ecuador	17.6	10,045	0.759	ENEMDU	25.4
Paraguay	7.1	11,828	0.728	EPH	15.9
Peru	33.0	10,895	0.777	ENAHO	20.6
Uruguay	3.5	20,187	0.817	ECH	3.2
Venezuela	28.4	5,259	0.711	EHM	62.8
Central America & Mexico					
Costa Rica	5.1	18,268	0.810	ENAHO	10.6
Dominican Rep.	10.8	17,770	0.756	ECNFT	12.4
El Salvador	6.5	7,948	0.673	EHPM	22.3
Guatemala	17.9	7,821	0.663	ENEI	49.3
Honduras	9.9	5,239	0.634	EPHPM	49.0
Mexico	128.9	17,790	0.779	ENIGH	23.0
Nicaragua	6.6	5,146	0.660	EMNV	31.2
Panama	4.3	28,414	0.815	EH	12.1
Latin America	619.2	13,506	0.752		23.6

Source: Population: estimate for 2020 taken from the United Nations Demographic Yearbook. GDP per capita: estimate for 2020 in international dollars adjusted for purchasing power parity (PPP), taken from the IMF World Economic Outlook Database. Human Development Index (HDI) 2019 is from the UNDP Human Development Report. Main survey: acronym for the main official national household survey used in the computation of monetary poverty. Poverty: headcount ratio with 5.5 dollars a day line at 2011 PPP; own calculations based on SEDLAC (CEDLAS and the World Bank).

The measurement of monetary poverty

Broadly, all countries in Latin America measure monetary poverty with a similar methodology: (i) compute a household welfare measure with microdata

drawn from a national household survey (see Table 1)², and (ii) set extreme and moderate poverty lines based on the cost of a food bundle and the Orshansky coefficient. However, there is not a common protocol for any of these two inputs. National household surveys differ in their questionnaires, and countries differ in the construction of the welfare aggregate: most use income and some consumption, most just use a per capita variable, and some apply equivalence scales (Beccaria and Gluzmann, 2013). They also differ in the treatment of non-response, non-monetary income, implicit rent of own housing, regional prices and various other issues. There is also wide dispersion in the choice of poverty lines. Castañeda *et al.* (2018) report that official extreme poverty lines fall within a range between 2 and 4.4 dollars per person per day (2005 PPP), while total poverty lines are more dispersed, ranging from 4 to 12.2 dollars.

Given this situation, any attempt to generate meaningful monetary poverty comparisons and to aggregate national poverty indicators into regional ones requires a standardized measure of household welfare and a common poverty line. In this section we make use of SEDLAC, the Socioeconomic Database for Latin America and the Caribbean, a joint initiative of CEDLAS-UNLP and The World Bank. SEDLAC applies a common methodology across countries to compute a harmonized household per capita income variable, and uses international poverty lines in US dollars “translated” into local currency using consumption purchasing power parity (PPP) exchange rates computed by the International Comparison Program (ICP). In particular, and given the development stage of the Latin American countries, the line most widely used is that of 5.5 dollars a day per person at 2011 PPP. For simplicity, in the rest of this section we always use that line. The United Nations Economic Commission for Latin America and the Caribbean (ECLAC) also regularly compute poverty estimates with a common methodology (CEPAL, 2018). Most results are robust to the use of either SEDLAC or ECLAC data.

Monetary income in Latin America is generally computed over household income, not consumption, since all countries in the region collect information on income and only a few extend the questionnaire to include consumption items. Household surveys typically capture market income and include pensions and other public cash transfers, but fail to consider the burden of indirect taxes (which could be considerable high in Latin America) and the benefits of in-kind transfers (education, health, housing and others). The efforts toward a more comprehensive definition of income are still limited to

² Argentina is the only country where the national household survey covers only large urban areas (around 2/3 of total population).

some academic studies (Lustig, 2017). Administrative data is not used for poverty calculations since most poor people in Latin America are unregistered workers in the informal sector.

3. Patterns and trends in income poverty

According to PovcalNet estimates, the poverty headcount ratio with a line of 5.5 dollars a day in Latin America and the Caribbean was 22.5 in 2019.³ This is an intermediate value in the group of the developing countries: much lower than in sub-Saharan Africa (86.2), South Asia (83.4) and MENA (44.4), similar to East Asia (22.7) and significantly higher than in Eastern Europe and Central Asia (11.6). Results are similar when considering other poverty lines and poverty indicators.

There is substantial heterogeneity across countries. According to our estimates for 2019, poverty ranges from around 3.5 in Uruguay and Chile to around 50 in Guatemala, Honduras and Venezuela.⁴ Typically, poverty has been relatively low in the Southern Cone (Argentina, Chile and Uruguay) and in south Central America (Costa Rica and Panama) and very high in the rest of Central America. Brazil and Mexico, the two largest economies in the region, have intermediate values, which implies that the weighted and unweighted means for the region are similar (23.56 and 23.59, respectively for 2019). There are also large heterogeneities within countries; poverty is particularly high in the Northeast of Brazil, the Bolivian Altiplano, the Selva in Ecuador and Peru, and in the Chiapas and Oaxaca states in Mexico. In most countries poverty is significantly higher in rural areas (15.0 on average) compared to urban areas (34.7 on average). In most countries, and given the extension of public pension systems, income poverty is decreasing in age. On average for 2019, the headcount ratio was 30.9 for children aged 15 or younger, 18.4 in the [16-64] age bracket, and 14.7 for elder adults. Adults below the poverty line suffer higher unemployment rates (15.8 vs 5.9) and work less hours (37.7 vs 44.1). Most workers below the 5.5 poverty line are salaried workers in small firms (17.9%), self-employed (36.1%), family workers (12.0%) or just unemployed (15.8%). In 2019 87% of poor workers in Latin America were unregistered workers without social protection linked to their jobs, a share that did not change much in recent decades. In contrast, non-contributory pensions and

³ Povcalnet reports the value for Latin America combined with the neighbor Caribbean.

⁴ Venezuela has recently joined the high-poverty group due to a serious economic crisis. This country has typically belonged to the middle/low-poverty group.

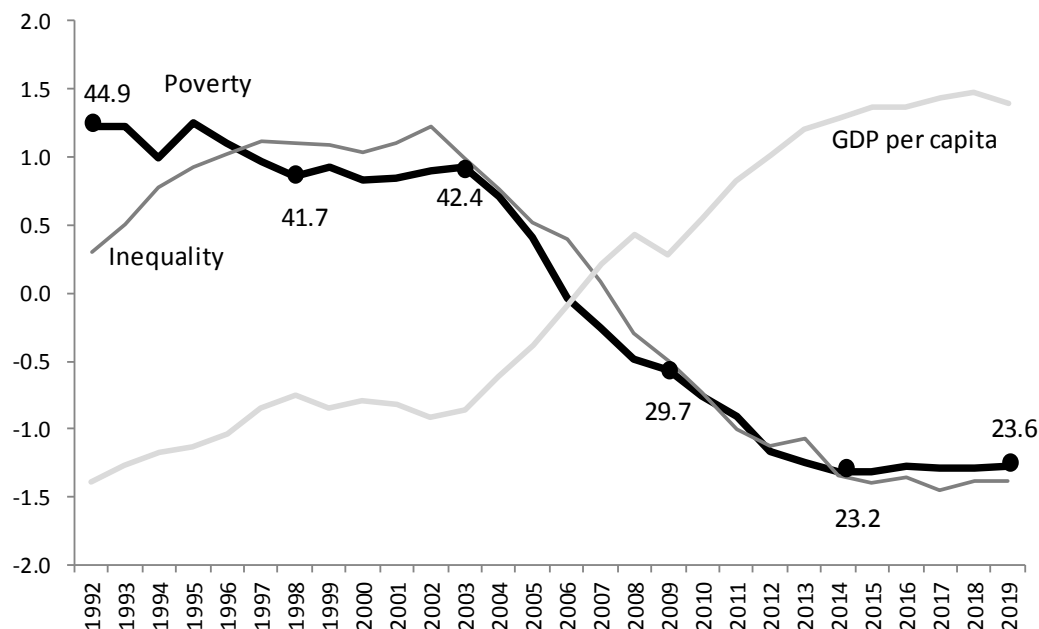
social benefits were substantially expanded in all countries since mid-1990s. In 2019 57% of all poor people in Latin America were covered by a major national cash transfer program. Most poor workers are employed as farmers, domestic service, construction workers or in commerce (64.0%).

Income poverty trends

Income poverty in Latin America can be traced since the 1970s when some countries started to implement national household surveys. The scatter evidence suggests a substantial fall in monetary poverty in that decade, fueled by economic growth (Altimir, 1996). Instead, the 1980s were characterized by recurrent macro crises and output stagnation, which translated into a weak social performance. In fact, most estimates suggest a mild increase in income poverty between 1980 and 1992. Most countries expanded or consolidated their national household surveys in the 1990s, so regional indicators become more reliable from that decade on. Figure 1 shows the income poverty headcount ratio for Latin America since 1992 using the 5.5 dollars a day line. The figure also shows the (standardized) mean Gini coefficient and per capita GDP in the region.

After a “lost decade”, Latin American economies grew in the 1990s, but in a context of increasing inequality. As a result, poverty went mildly down: the headcount ratio for the region fell from 44.9 in 1992 to 41.7 in 1998. In the turn of the century many economies experienced serious macroeconomic crises while others continued growing. On average, the divergent patterns compensated each other: poverty was roughly constant between 1998 and 2003. The exceptional international economic situation in the 2000s and the expansion of ambitious cash transfer programs combined to generate a strong fall in all poverty indicators in that decade. Nearly all Latin America countries experienced significant reductions in income poverty. The overall poverty headcount ratio went down from 42.4 in 2003 to 29.7 in 2009. Poverty continued falling in the following years, although at a lower rate, even in the midst of the financial international crisis at the end of the 2000s. In the 2010s most countries experienced a slowdown in economic growth and some even suffered recessions and crisis; Venezuela was the most salient case. In this scenario, income poverty stopped falling. In fact, at the end of the decade income poverty in Latin America was basically at the same level as in 2013. The global COVID-19 pandemic in 2020 and 2021 dramatically altered the situation, increasing the poverty rates in the short run, but at the time of writing this report we do not have information to assess its full impact.

Figure 1: Poverty, inequality and per capita GDP



Source: Poverty and inequality: Own calculations based on data from SEDLAC (CEDLAS and The World Bank). GDP per capita: IMF Economic Outlook. Note: Poverty: poverty headcount ratio with line of 5.5 dollars a day (2011 PPP). Inequality: mean national Gini coefficients for the distribution of the household per capita income distribution. GDP per capita, constant prices, international dollars PPP 2017. The vertical axis shows the standardized value of each variable (variable minus the mean over the standard deviation). The labels in the poverty line correspond to the values of the headcount poverty ratio. All Latin American countries, except El Salvador and Guatemala.

4. Measurement of multidimensional poverty

Latin America has been a pioneer region in the measurement of multidimensional poverty. Back in the 1980s, when there were no regular household surveys, poverty started to be measured using the Unsatisfied Basic Needs (UBN) Approach, selecting some key non-monetary indicators available in census data on minimum standards in housing, basic services, basic education and economic capacity (Feres and Mancero, 2001). The UBN method used an intuitive measure: counting the proportion of people in households with at least one unsatisfied basic need.

Over the 2000s, new measures of multidimensional poverty emerged as natural extensions of the axiomatic framework in the income space. Most of these measures follow a counting approach, just like the UBN Index, but innovate in the aggregation index and/or in the identification criteria. Among the new measures, the methodology proposed by Alkire and Foster (2011) (AF

hereafter) gained particular prominence in the academic literature and in official measurements at national level, especially in Latin America.⁵

One of these measures, the Adjusted Headcount Ratio or M_0 measure, is simply the product of the proportion of people who have been identified as multidimensionally poor in the population (incidence), and the intensity of poverty, defined as the average share of weighted indicators in which poor people are deprived. The M_0 measure has the convenience that (i) it can be computed with a mix of cardinal and ordinal indicators -a recurrent case in multidimensional poverty measurement- in a robust way, (ii) it can be decomposed by population subgroups, and (iii) it can be broken down by indicator (which cannot be done with the Headcount Ratio).

The M_0 measure has been widely implemented and it overcomes several of the UBN Index issues. Naturally, it also has limitations. Ravallion (2011) has argued that “no single index can capture all that matters in all settings” and that aggregation should be conducted in attainment rather than deprivation space, preferably using prices as weights. Rippin (2013) and Datt (2017) highlight that M_0 is not sensitive to inequality among the poor and Datt (2017) argues in favor of a union approach.

The AF method offers general formulas. One particular implementation of the M_0 measure gained world-wide visibility: the Global Multidimensional Poverty Index (G-MPI, hereafter) (Alkire and Santos, 2010, 2014), which was jointly elaborated by the Oxford Poverty and Human Development Initiative (OPHI) and the United Nations Development Programme (UNDP) in 2010 for the 20th Anniversary of the Human Development Report and published there since then. The G-MPI is composed of ten household indicators in the dimensions of health, education and living standard.⁶ Each dimension weights 1/3, and indicators are equally weighted within each dimension. Those who experience at least a third of the weighted deprivations are identified as multidimensionally poor. The G-MPI is estimated mainly using the Demographic and Health Surveys (DHS) and the Multiple Indicators Cluster Surveys (MICS) with a standardized methodology.

From 2009 onwards, many countries started to develop national Multidimensional Poverty Indices. At the time of writing this chapter, nine

⁵ See the chapter on the measurement of multidimensional poverty by M.E. Santos in this volume.

⁶ The G-MPI indicators are: nutrition, child mortality, child school attendance, years of schooling, housing, safe water, improved sanitation, clean cooking fuel, electricity and a very minimum number of assets.

countries in Latin America had introduced an official national MPI.⁷ National MPIs are computed with national household surveys in each country. These indices are important for the Sustainable Development Goals Declaration, as Target 1.2 consists of “reducing at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions *according to national definitions*”. Yet, the varying definitions of national MPIs do not allow assessing the relative performance across countries.

In turn, the *regional* MPI-LA proposed by Santos and Villatoro (2018), while being internationally comparable, uses indicators with deprivation thresholds more in line with the living standards in the region. This index can be computed with the regular household surveys of each country (at the cost of not including indicators of health). The MPI-LA is composed of 13 indicators grouped into 5 dimensions, integrating the income poverty indicator with non-monetary indicators of poverty.⁸ In what follows we offer a succinct overview of multidimensional poverty in the region as measured by the G-MPI and the MPI-LA, as they offer complementary views.

5. Patterns and trends in multidimensional poverty

In line with income poverty results, the LAC region is the third least acutely poor region, as measured by the G-MPI, as well as by each of its components: incidence and intensity. Still, in absolute numbers, over 38 million people in the region live in acute poverty (over the total size of Peru); 42% of them live in Brazil and Mexico. As it happens with income poverty, the region is heterogeneous in multidimensional poverty levels across and within countries. G-MPI incidences range from 4% in Dominican Republic to 29% of the

⁷ Mexico was the first country to introduce a national MPI in 2009, Colombia in 2011, Chile, El Salvador and Costa Rica in 2015, Ecuador and Honduras in 2016, Panama and Dominican Republic in 2017.

⁸ The MPI-LA indicators are housing materials, overcrowding, housing tenure, improved water sources, improved sanitation, access to clean energy, adult schooling achievement, children’s school attendance, children’s schooling gap, employment, social security (health insurance, and social security or pension), income poverty and durable goods. All indicators weight 7.4%, except for income poverty (14.8%) and social security (3.7%). A household is identified as poor if it experiences at least 25% of the weighted deprivations.

population in Guatemala.⁹ Acute multidimensional poverty is -on average- 1.5 times more prevalent among children 0-17 years old than among adults (18+) (OPHI, 2020). Regional disparities within countries also outstand. For example, while Bolivia's G-MPI is 0.094, five times that of Ecuador's G-MPI of 0.018, the region of Pastaza in Ecuador has the same G-MPI value as the region of Oruro in Bolivia: 0.083. Similarly, while Honduras has a G-MPI 4.7 times higher than that of Paraguay (0.090 vs. 0.019), the region of Colon in Honduras has a G-MPI of 0.061, about the same as that of the region of Alto Paraguay, which is 0.063. Moreover, rural areas are on average over 8 times poorer than urban areas (OPHI, 2020).

Regarding poverty composition, salient deprivation levels in clean cooking fuel and improved sanitation are recurrent, followed by other indicators of the living standard dimension such as housing materials, electricity, safe water or assets, depending on the country. Deprivation in nutrition, certainly, 'the most telling aspect of poverty' (Sen, 1981), also outstands in several countries; deprivation in years of schooling is also high in the region.¹⁰

Data from Alkire *et al.* (2020) study on trends of G-MPI for 80 countries, which include 13 of Latin America, indicates that some of the poorest countries in the region -Nicaragua, Bolivia and Honduras- experienced substantial reduction in acute poverty, both in absolute (1.4 and 1.6 p.p per year) and relative terms (around 10% per year), in the first decade of the century. All countries experienced statistically significant reductions in incidence, but, noteworthy, Bolivia, Honduras, Nicaragua, Peru, Mexico, and Dominican Republic also experienced statistically significant reductions in poverty *intensity*.

When measured with the MPI-LA circa the year 2017 (estimates from Gallardo *et al.*, 2020), poverty incidence ranges from 5% in Uruguay to 60% in Honduras.¹¹ Incidences are higher than with the G-MPI because of the different and more demanding specification of the index. Countries exhibit higher rates in deprivation in social security -reflecting the precarious

⁹ The countries in the region covered in this chapter for which the G-MPI has been computed are: Dominican Republic, Brazil, Ecuador, Paraguay, Colombia, Mexico, Peru, El Salvador, Nicaragua, Honduras, Bolivia and Guatemala.

¹⁰ For example, in Ecuador, Peru and El Salvador, about 3% of the population lives in a G-MPI poor household which is deprived in nutrition. This share is around 5% in Mexico and Nicaragua, and around 9% in Honduras, Bolivia and Guatemala.

¹¹ As this index uses the regular household survey of each country, it includes countries which are not included in the G-MPI because they do not have a recent DHS or MICS and *vice versa*. Countries included in the MPI-LA estimates are: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Mexico, Paraguay, Peru, Uruguay. The MPI-LA estimates were computed with the household surveys of each country homogenized by ECLAC.

employment prevalent in the region-, and income poverty, followed by high rates of deprivation in years of schooling, energy (either lack of electricity or clean cooking fuel), employment, lack of improved sanitation and overcrowding in dwellings.

Estimates over time by Gallardo *et al.* (2020) indicate that in the period 2006-2012, all countries except for Mexico reduced poverty, with some of the poorer countries -Bolivia, Peru and Paraguay- experiencing the biggest absolute reductions, and some of the least poor exhibiting significant relative poverty reductions. As also observed with income poverty, in the subsequent period 2012-2017, reductions were much more modest in general, except for Dominican Republic, El Salvador, Honduras, Costa Rica and Mexico. In fact, at the time of the outburst of the COVID-19 pandemic, the region was in a context of low economic growth, high labor informality and a rising proportion of the poor and extreme poor population (ECLAC and PAHO, 2020).

6. Concluding remarks

There has been a remarkable improvement in the measurement of poverty and deprivation in Latin America in recent decades. There remain, however, various data limitations. In particular, comparability across countries is weakened by differences in household surveys, the construction of welfare variables and the setting of the poverty lines. More efforts are needed to standardize the methodology or at least to agree on some criteria to gather and process information.

The evidence suggests a decline in the level of absolute income poverty in Latin America during the 1990s and especially in the booming 2000s, with significant reductions also in multidimensional poverty, especially among the poorest countries. There are however reasons for concern. With less favorable international conditions Latin American countries could not significantly reduce income poverty in the 2010s, and in some countries poverty actually increased and multidimensional poverty reductions decelerated. The task of fighting poverty continues to be very challenging: around 145 million Latin Americans live with less than 5.5 dollars a day, 200 million people are multidimensionally poor according to the MPI-LA, and 32 million live in acute poverty, according to the G-MPI. Also, most of the people who succeeded in jumping that line in recent decades remain highly vulnerable if economic conditions worsen, as the recent COVID-19 crisis has proved. Reducing poverty certainly remains a top concern in Latin America.

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