



realities & perspectives

Social Pulse
in Latin America
and the Caribbean
2016



Suzanne Duryea
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FOREWORD

We need a diversity of perspectives to be able to understand the profound transformation process that is redrawing the face of our Latin America and the Caribbean. We live in a world full of tangible contrasts in which, increasingly, thanks to information and communications technologies, we have the opportunity to be omnipresent observers of global realities as we determine our goals. Without a doubt, the generation most familiar with this complex exercise of self-observation in perspective is the millennials, who carry on their shoulders the weight of decisions we have taken in the past and, at the same time, were born with the enormous challenge of breaking down entrenched paradigms in order to advance in new directions.

Where are we going? What does it mean to be born in Latin America today? At first glance, we can say that, nowadays, being born in our region means having access to better opportunities. Overall, family incomes have increased and parents enjoy the possibility of providing better care and food to their children. In the past 20 years, infant mortality fell by 65%, safe water reached 96% of homes, access to primary education became practically universal and, in general, the improvements in quality of life have allowed Latin Americans to live on average eight years longer than in 1990. Being born in this region also means having increased possibilities of growing up in a middle class family. We have succeeded in transforming the face of a region that, since 2008, left the ranks of those with a majority of poor people and now claims a middle class that numbers 186 million inhabitants. In the context of today’s complex global political and economic climates, we could say that Latin America has achieved relative harmony. We could say that but, as you will see in “Social Pulse: Realities and Perspectives”, our new report on social indicators in the region, we avoid making generalizations and, instead, invite action based on knowledge of the most timely information. It is time to wake up. Being born in Latin America today also means being part of the most unequal region in the world. It represents a strong possibility of belonging to a family that, with per capita income of between 5 and 12 dollars per day, is vulnerable to falling back into poverty. The fight against poverty requires new weapons that take into account not only subsidies but that also reflect a multidimensional understanding among the public and private sectors of this phenomenon, which only recedes if treated with surgical measures. It is not possible to talk of poverty reduction or of improvements in living conditions without first considering the specific characteristics in each country, the dimensions of poverty and the contrasting prospects of each age group throughout the life cycle.

So, where are we going? Pursuing the exercise of self-observation in perspective practiced by some millennials, it would be worthwhile to analyze the recent outcome in the United Kingdom, in which voting patterns showed a divergence of visions between youth and adults. In the current conditions in our region, we must seek common ground between generations to advance in the same direction. We cannot isolate ourselves from the world since those who have traveled the lands of Latin America and the Caribbean will recognize that we are a mixture of worlds and, therefore, adaptability and evolution are our best tools. The children that enjoyed and enjoy a better infancy are today the youth who demand training and skills development that truly reflect adaptability in the labor force in the face of the new international context. It is time to reach out and mentor our youth in these globalized times.

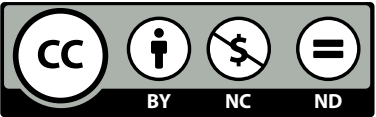
Time marches on without seeking our approval and our population will also age. We cannot forget about the need to continue promoting the creation of formal jobs that provide workers with access to social security benefits, including retirement and pensions. Even when more than 50% of the elderly in the region already receive some type of pension,

Cataloging-in-Publication data provided by the
Inter-American Development Bank
Felipe Herrera Library

Latin American and Caribbean Social Pulse 2016: realities and perspectives / Suzanne Duryea, Marcos Robles.
p. cm. — (IDB Monograph ; 462)
Includes bibliographic references.

1. Poverty-Government policy-Latin America. 2. Poverty-Government policy-Caribbean Area. 3. Latin America-Social conditions. 4. Latin America-Social policy. 5. Caribbean Area-Social conditions. 6. Caribbean Area-Social policy. I. Robles, Marcos. II. Inter-American Development Bank. Social Sector. III. Title. IV. Series. IDB-MG-462
JEL Codes: R20, I32, J13, J01, J11, N36
Key Words: Argentina, Bahamas, Barbados, Belice, Bolivia, Brazil, Chile, Colombia, Chile, Colombia, Costa Rita, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Dominican Republic, Surinam, Trinidad and Tobago, Uruguay, Venezuela, Latin America and the Caribbean, social development, inequality, poverty, demographics.

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given low growth and low interest rates, it is time to find a balance in the pension system, one that does not contribute to increasing the fiscal risk faced by governments. Although it is true that, in demographic terms, we still have a larger proportion of population in productive ages and fewer economic dependents, it is also the case that countries in the region are moving through the most favorable period of this demographic window of opportunity at different speeds. This period, indifferent to our decisions, rushes on and the transitory window of opportunity is already very small.

Finally, it is worth emphasizing that many of the social achievements have had an economic protagonist as a common denominator: the woman. With their contribution to household income rising, from 28% in 1996 to 35% in 2014, women are engines of transformation in family dynamics. We have pending the major tasks of closing the salary gap, creating public policies that facilitate access to child care centers and promoting male participation in child-rearing.

For all of these reasons, I present to you and invite you to read “Social Pulse: Realities and Perspectives”, an informative document that reminds us what we, as a region, have achieved without losing sight of the fact that, to overcome remaining obstacles without sacrificing gains, we must be conscious of the “pulse” of our people in the different stages of human existence. Today more than ever it is time to approach social development as a long-term commitment to improve the lives of each and every one of our citizens.

Luis Alberto Moreno
President
Inter-American Development Bank



ACKNOWLEDGEMENTS

Social Pulse in Latin America and the Caribbean 2016: Realities and Perspectives is a publication prepared by a team of economists of the Social Sector of the Inter-American Development Bank under the direction of Suzanne Duryea and Marcos Robles. The team members were Marcela Rubio, Mayra Sáenz and Drina Saric. Santiago Levy and Norbert Schady provided valuable guidance and suggestions. Special recognition goes to José Juan Ruiz and Héctor Salazar for their vision about the publication. Other support came from Mariana Alfonso, Veronica Alaimo, Monserrat Bustelo, Florencia Jaureguiberry, Andrew Morrison, Héctor Salazar, Marco Stampini and Leslie Stone. The publication was reviewed by Fernanda Potenza and Fabián Repetto.

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Special thanks go to Beatriz Navarro who was in charge of editorial coordination of the publication. To Gador Manzano, Kyle Strand, Elba Luna, Carlos Gerardo Molina and Andres Cavalier who contributed to framing the dissemination strategy. To Ludmila Ávila and Lucy Conger for translation and editing, and to Ailin Ciano and Carolina Bianchi for graphic design and visual identity.

The ideas and opinions expressed in this publication are those of the project coordinators and the authors of the respective chapters and do not necessarily reflect in any way the position of the Inter-American Development Bank nor of its Executive Board.



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**Realities and
perspectives
for social
conditions in
Latin America
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Caribbean**

INTRODUCTION

The recent social gains in Latin America and the Caribbean are indisputable.

Recent social gains in the region are indisputable. Since the beginning of the 1990s, extreme poverty was reduced by half (CEPAL 2016) and infant mortality dropped by 65% (World Bank 2016) while life expectancy at birth increased by nearly eight years (United Nations 2015). Today, primary school attendance is practically universal, water supply from improved sources reaches 96% of households and two thirds of women of working age participate actively in the labor market.

These improvements are related to a series of important facts that have to do not only with economic growth in the region, prudent management of macroeconomic policy and expansion of effective social policies but also with far-ranging processes such as improvement in access to health and education services, the demographic transition, urbanization and other developments.

Since 2014, however, the majority of countries in the region are facing a macroeconomic environment very different from the prevailing context in the recent past (Powell 2015). Today, a scenario of lower economic growth and fiscal constraints may place at risk recent social gains.

In the face of this possibility, this report exhaustively documents the living conditions of the population of Latin America and the Caribbean. The intent is to contribute with data and analysis to the dialogue, discussion and academic research with respect to the focus and emphasis of the policies that can continue supporting social development of the region. The report is directed principally to policy and decision makers, and researchers.

This chapter describes the trends of a concise but comprehensive set of key indicators that describe the living conditions of the population and identifies the changes in those indicators that require the greatest attention. The principal sources of information for this chapter are the *Harmonized Household Surveys from Latin America and the Caribbean* of the Inter-American Development Bank (IDB)¹. These surveys comprise a broad set of microdata constructed from original surveys of national statistics offices with the purpose of making available information that is comparable over time and between countries. Given the coverage and regularity of the available surveys, this report limits the analysis to 22 Latin American and Caribbean countries. It is worth pointing out that, in contrast with macroeconomic data, information obtained by household surveys and social data in general involves lags between data collection in countries and making the data available for use. Therefore, the challenge to provide timely information is enormous.

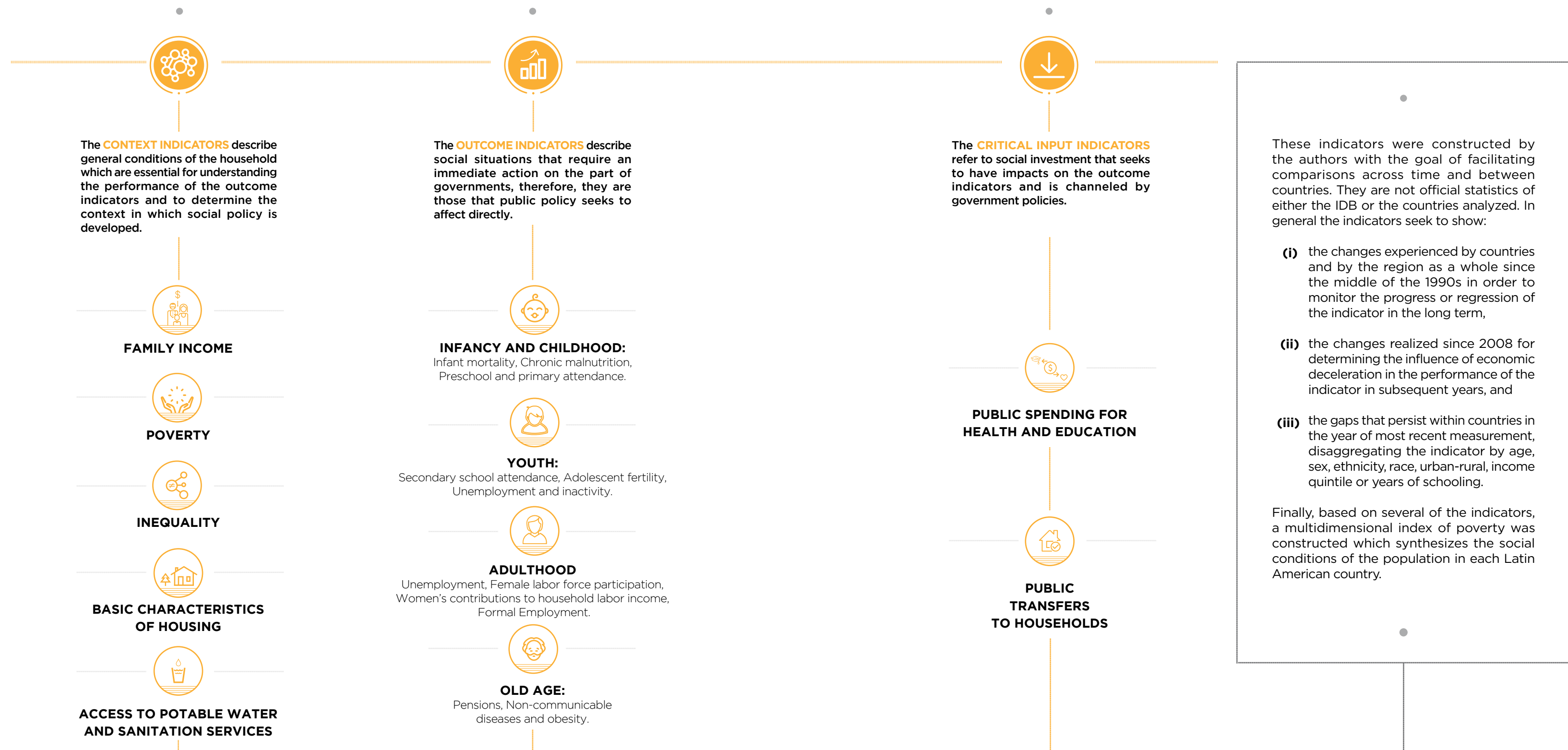
The indicators were selected based on the conceptual framework of the Strategy on Social Policy for Equity and Productivity (IDB, 2011) which holds that if recent social gains are to have sustained impacts on equity and productivity, then countries must confront a series of significant policy challenges: in early infancy, health, education, youth, labor markets, social security, poverty and social inclusion. That is, the Strategy is focused on investing in people, and places emphasis on the continuity of this investment throughout the life cycle and on the benefits that investing in one dimension of human capital can generate in other dimensions.

Within the framework of the life cycle the indicators were grouped into three categories: context, outcomes and critical inputs (**Box 1**)².

¹ Other sources for specific indicators are: United Nations (2015); WHO (2015), UNESCO (2015), USAID (2015).

² The Organization for Economic Co-operation and Development – OECD (2011) utilizes a similar classification to define its system of social indicators.

BOX 1: KEY INDICATORS THROUGHOUT THE LIFE CYCLE³.



³ Detailed descriptions of each indicator and disaggregation are in the Methodological annex of this chapter.

A

1 2 3 4 5

CONTEXT INDICATORS



The context indicators refer to general conditions in the household. Given their impact on the health and access to services among the population, these indicators can be used as part of the objectives of medium- and long-term social policies. In turn, the indicators form the basis for a full understanding of what is revealed by the outcome indicators and they make it possible to contextualize the circumstances in which social policy is developed.

1.



FAMILY INCOME

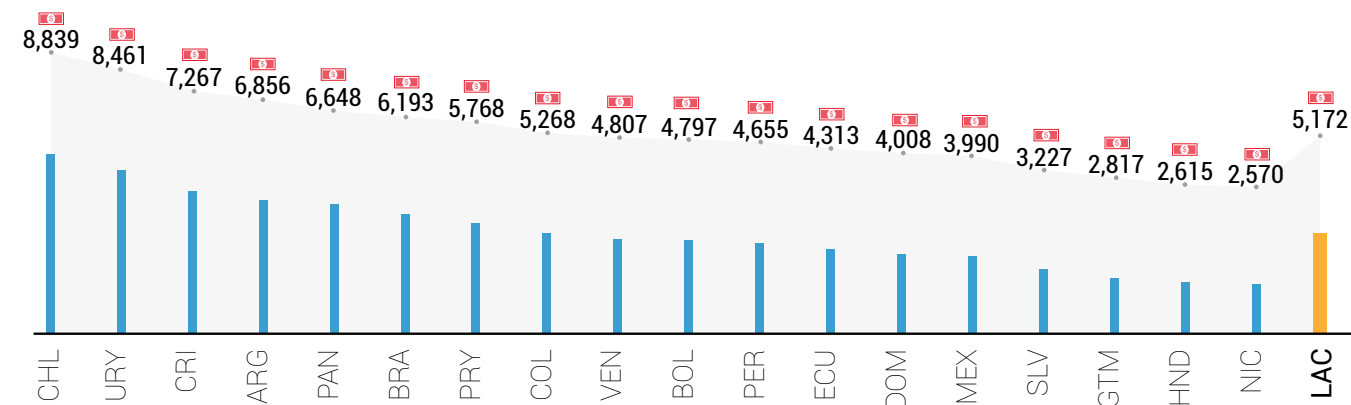
Family income per capita is one of the most utilized indicators for analyzing the living conditions of people because it measures the economic capacity of households to consume and to save.

Family income, which refers only to the material aspect of well-being, is also utilized to observe the economic mobility of people or families, to measure monetary poverty⁴ or the size of the middle class. For the purposes of this report, national currencies were converted to US dollars utilizing purchasing power parity (PPP) of 2011 for private consumption updated with the Consumer Price Index (CPI) of each country from 2011 to the date of each survey used. This makes it possible to construct the level of income of the region, compare income between countries and observe variations in the level of income over time.

Graph 1 shows the incomes for 18 countries in the region, arranged from the highest to the lowest level, and **Graph 2** displays the annualized percent change of per capita incomes between 2002 and 2014. The data on annual changes in income are disaggregated in two, six-year periods: the period of greatest economic growth, 2002-2008 (columns) and the period of economic deceleration, 2008-2014 (diamonds). Various results stand out in the period under study:



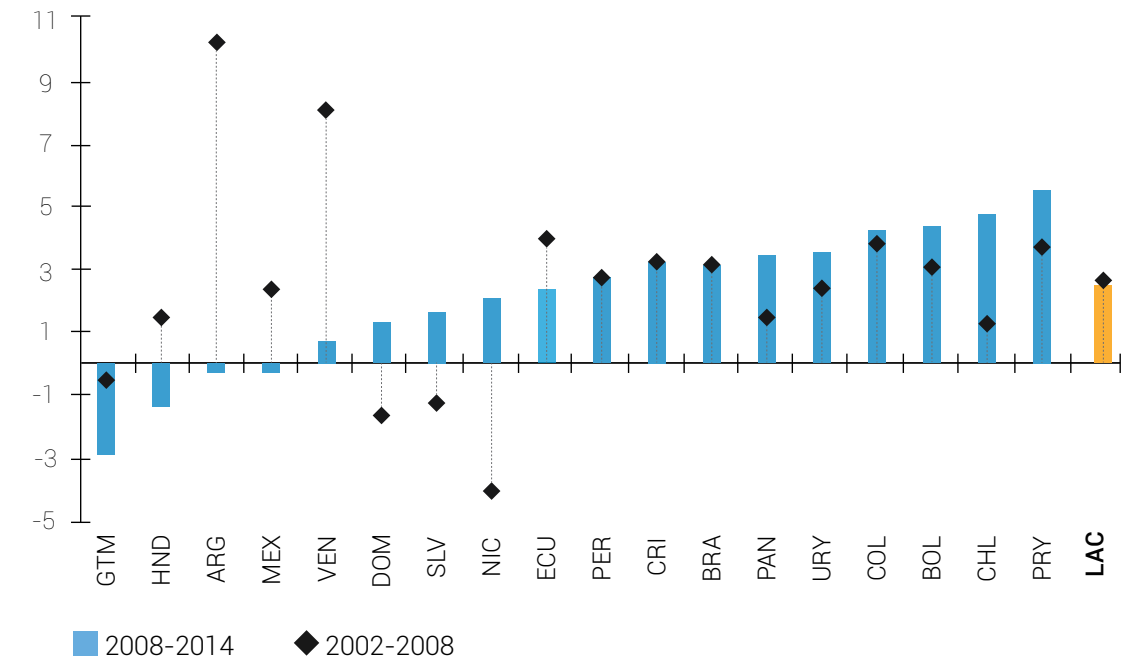
GRAPH 1: ANNUAL PER CAPITA FAMILY INCOME IN 2014 (US DOLLARS, USING PPP)



Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean

⁴ Monetary poverty in this report is the situation of people who have insufficient income for acquiring a basic basket of consumption.

GRAPH 2: PERCENTAGE CHANGE IN FAMILY INCOME PER CAPITA IN 2002-2008 AND 2008-2014 (ANNUAL AVERAGE).



Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean



Incomes vary widely in the region.

For example, in 2014, the population of Chile had 3.4 times more per capita income than Nicaragua and the populations of countries located in the extreme south of the region such as Argentina, Chile and Uruguay have on average higher incomes—almost double—than the residents of the remaining countries.



Incomes increased almost at a similar pace during the period of economic expansion and deceleration.

Per capita incomes grew at an average annual rate of 2.6% between 2002 and 2008 and at 2.4% between 2008 and 2014. These outcomes are somewhat distinct from the changes in GDP per capita during the same periods, however, it is consistent with the evidence about changes in the poverty rates that are discussed below⁵.

⁵ The levels of per capita income obtained with the household surveys and the GDP per capita are distinct because their content differs. GDP includes, for example, business profits and public spending on education and health which are not part of income reported in the surveys. The differences between the two measurements can be broad in countries where public spending is high given that the base of those expenditures (indirect taxes) are not included in household income. Ravallion (2002) and Deaton (2005) show that not only the level, but also the increases in income estimated with surveys are lower than those obtained in national accounts. Although both authors have discussed the possible causes of these discrepancies, it remains an open question whether national accounts or household surveys are the best source for measuring household income (Pinkovskiy y Sala-i-Martin, 2016).



The economic growth that all countries experienced from the beginning of the 2000s was not capitalized on in a uniform way.

In some cases, the gains in per capita income achieved during one six-year period were, in fact, lost in the following six years.

Between 2002 and 2014, per capita income of the Dominican Republic, Guatemala, Honduras, Mexico, Nicaragua and El Salvador—rose minimally or even declined. In contrast, the incomes of Brazil, Colombia, Costa Rica and Peru grew at almost the same rate during both of the two six-year periods. And incomes in Argentina, Ecuador and Venezuela increased more during the period of economic expansion and grew little or not at all in the years following the financial crisis.

Since some of the countries that advanced less were also the countries with the lowest levels of income and other nations that experienced significant progress were also countries with the highest levels of income, **the income gaps between countries widened**. For example, while in Chile and Uruguay per capita income in 2002 was, on average, equivalent to 2.2 times the income prevailing in Honduras and Nicaragua, in 2014 these differences widened to 3.3 times



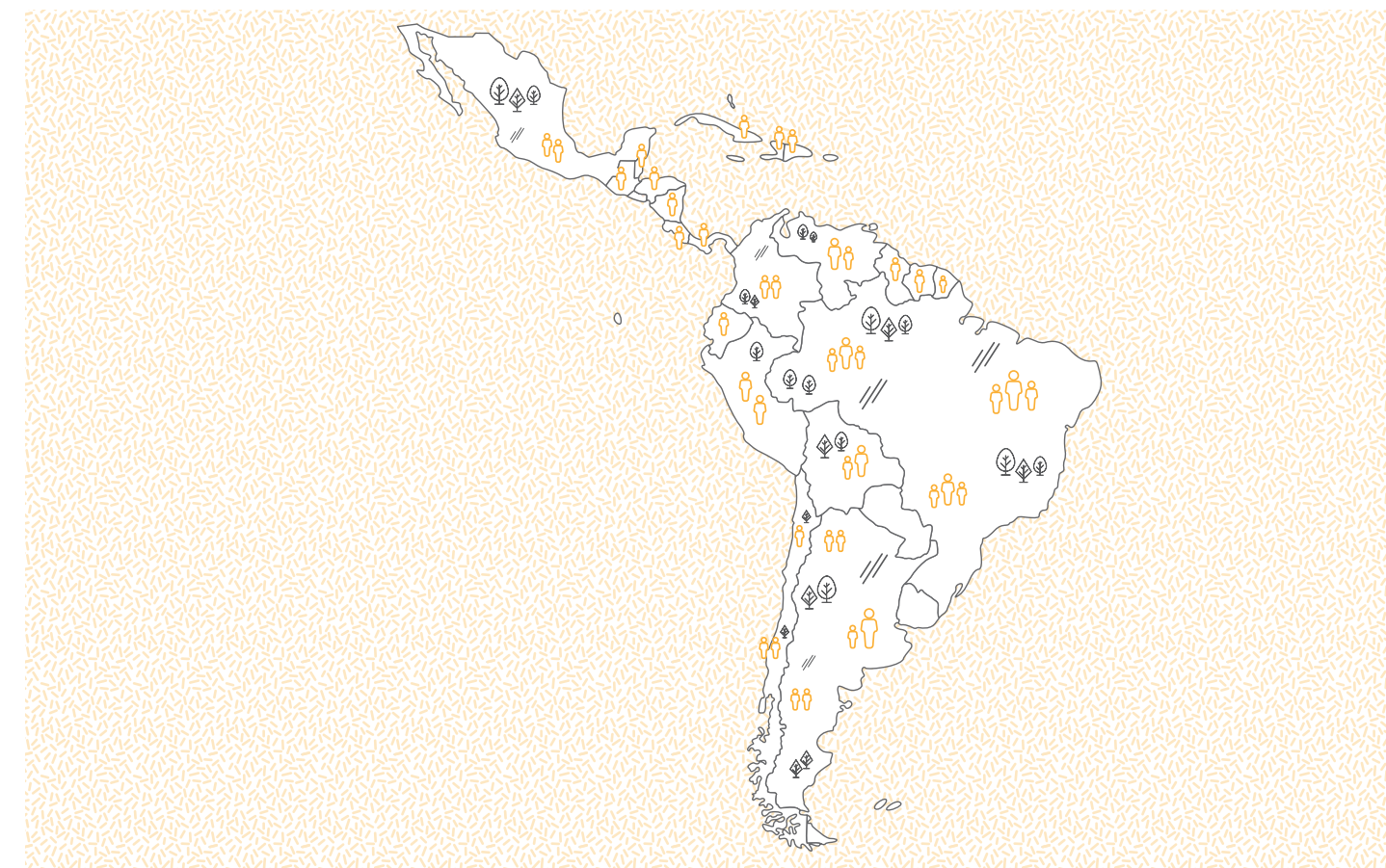
Poverty reduction occurred due to income growth- and by a redistributive process.

Graph 3 shows the change in income between 2008 and 2014 for the average individual of the region and for those who make up the poorest 20% of the population and the wealthiest 20%. It is clear that there is a high correlation (96%) between the increase in average income of each country (blue bars) and the rise in income of the wealthiest 20% (pink diamonds), partly because this group concentrates a significant portion of the income of all countries. For example, in 2014, in Uruguay 48% of all income was concentrated among the wealthiest 20% of the population of Uruguay and in Colombia 60% of all income was concentrated in this group. No clear relationship is observed, however, between an increase in average income and a hike in income of the poorest 20% (black squares). The differences between the increase in income of the poorest and wealthiest 20% define, in general, a pro-poor pattern in the increases in income in the region. The per capita income of the poorest rose on average 2.4 times more than the increase in per capita income among the wealthiest. Between 2008 and 2014, only in Costa Rica and Venezuela did the per capita income of the wealthiest rise by more than the increase among the poorest.

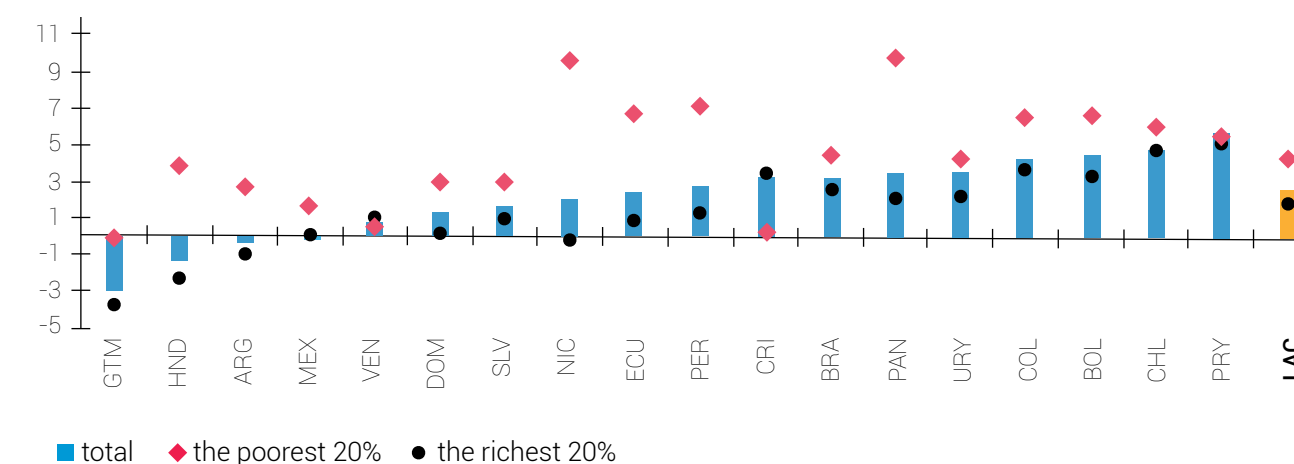


In Ecuador, Nicaragua, Panama and Peru, per capita income of the 20% poorest quintile rose by more than the income of the 20% wealthiest. So, in those countries, monetary poverty would have decreased, more due to growth of income than from distributive changes.

In Argentina and Honduras, however, given the decline or negligible growth of income, the change in poverty would be explained principally by distributive changes.



GRAPH 3: PERCENT CHANGE IN PER CAPITA INCOME, 2008-2014, BY INCOME GROUPS (ANNUAL AVERAGE).



Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.



2



POVERTY

Prior to the international financial crisis that erupted in 2008, Latin America abandoned its status as a region dominated by poor majorities, and since then the vulnerable population became the preponderant group (**Graph 4**). In this section, the poor are people who live in households with a per capita income below US\$5 per day and the vulnerable refers to people with a per capita income between US \$5 and US \$12.4 per day, and as such are vulnerable to slipping into poverty (**Box 2**).





Expansion of the middle class—people with a per capita income between US \$12.4 and \$ 62 per day—was another of the landmarks of the last decade. The middle class nearly doubled in size, adding 87 million people (rising from 99 to 186 million). In absolute numbers, it was the group that experienced the most changes between 2002 and 2014, while the number of poor people diminished by almost one third, dropping by 67 million (from 224 to 157 million) and the number of vulnerable people rose by 57 million (from 170 to 227 million). With these changes, the vulnerable segment, followed by the middle class, became the groups with the greatest presence⁶, and the rich, followed by the poor, became the smallest groups⁷.

If we rank the entire population of individuals in the region in ascending order by per capita income of 2014, the poor are found located below the 28th percentile, the vulnerable are located between the 28th and 65th percentiles, the middle class between the 66th and 98th (above the midpoint of distribution) and the high income group are placed in the two highest percentiles.

BOX 2: IDENTIFICATION AND AGGREGATION OF ECONOMIC GROUPS USING THE NEW POVERTY LINES.

The poverty lines used to monitor poverty worldwide have been adjusted recently with purchasing power parity (PPP) in 2011 (Ferreira et al. 2015). PPP is a factor that converts the local currency of a country into the number of dollars sufficient to buy on the local market the same quantity of goods and services as in the United States. Since the value of the poverty lines correspond to the simple average of the national poverty lines of the 15 poorest countries in the world, it is common in Latin America to use multiples of these lines to compare poverty. To this end, and also for comparing the size of the other income groups, we use multiples of the line of 3.10 dollars per day at PPP 2011. This line is equal to the average of all the extreme poverty lines in the region. To identify the people in each group, the line is adjusted with the Consumer Price Index of each country since 2011 up to the year of the survey before comparing it with income.

We identify as:

-  **Poor** poor those individuals who live in households with per capita incomes below US \$5 per day (1.6 times the line of US \$3.1).
-  **Vulnerable** as those people whose income is between US \$4 and 12.4 per day (1.6 and 5 times the line of US \$3.1).
-  **Middle class** as those individuals with incomes between US \$12.4 and 62 per day (5 and 20 times the line of US \$3.1).
-  **Rich** as people with incomes above US \$62 per day.

The factors of 1.6, 4 and 20 are the same ones used with the prior poverty line of US \$2.5 dollars per day at PPP of 2005 (as in Ferreira et al. 2012). Therefore, a family of four is considered poor if it has annual income below US \$7,242 at PPP of 2011 and is middle class if its income is between US \$18,104 and 90,520. The thresholds defined in this way reflect decreasing probabilities that the people in each group will become poor or rising probabilities that they will maintain their level of income. The size of each groups is estimated by aggregating the number of individuals in each group and expressing as a percentage of the total population.

⁶ At the level of households, given the differences in family size within each group, the middle class is the preponderant group in 2014: 21% of households are poor, 37% are vulnerable, 38% are middle class and 4% are rich.

⁷ The data on extreme poverty (defined with the line of US \$3.1 per day) are displayed in the Statistical annex of this Report.

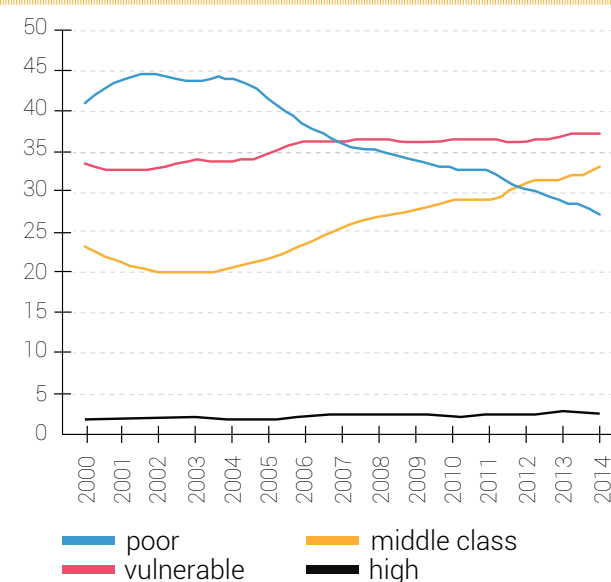
The described changes, consistent with the economic growth in the region from 2002 to 2014 and the decrease in income inequality, show that incomes rose among all groups and the increases were not uniform. The estimation of the growth elasticity of poverty⁸ and other groups, i.e., the sensitivity of the size of each income group (poor, vulnerable, middle class and rich) to economic growth synthesize the diverse changes that take place with expansion.

Between 2002 and 2014, for each percentage point of growth of per capita GDP, the poverty rate was reduced by 0.86%, the size of the middle class increased by 0.88% and that of the vulnerable group rose by only 0.22%. It is also observed that the changes in these income segments were more pronounced between 2002 and 2008 than between 2008 and 2014. **In other words, when GDP per capita growth was greatest (6% per year compared to 3.1% per year, respectively), poverty diminished at an annual rate 11% higher and the size of the middle class grew at a pace 35% greater in the first six-year period compared to the second period⁹.**

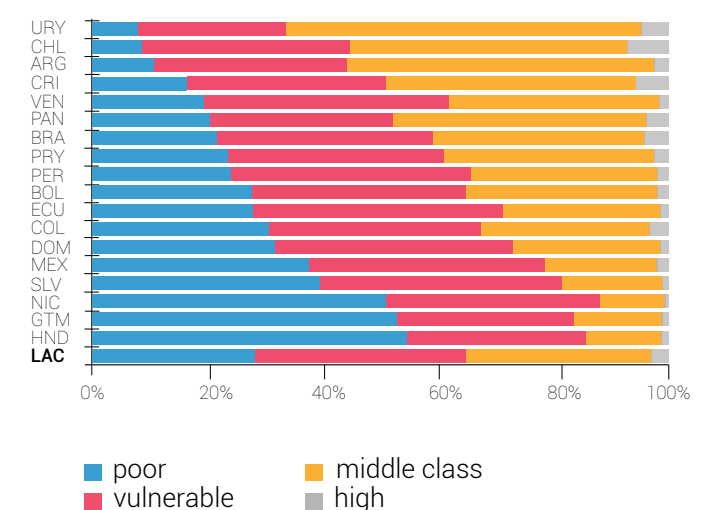
Graph 5 shows the relative size of income groups by country. Individuals with per capita incomes in the vulnerable range make up the most important group which is dominant in 10 countries. The middle class is a majority in five countries, and the poor make up the majority in only three countries. Since the size of the vulnerable population is the most homogenous among countries (three times less disperse) compared to the sizes of the other groups, the differences between countries are more evident in the size of the poor and the middle class. The least poor countries, such as Argentina, Chile and Uruguay, are those where the middle class is the largest (53, 49 and 62%, respectively), while the countries with the greatest incidence of poverty, such as Guatemala, Honduras y Nicaragua, have a smaller middle class (16, 14 and 11% respectively).

Since the size of the vulnerable population is that which changed the least in recent years (see **Graph 4**), it can be deduced that, in general, the poor who rose to become vulnerable were equal in number to the vulnerable people who became middle class. That is, mobility between groups occurred in an orderly fashion: the poor advanced entering the vulnerable group and the vulnerable segment to the middle class which is consistent with finding of Stampini, et al. (2015) who shows, for example, that in the past decade the vulnerable segment had nine times greater probability than poor people of becoming middle class. Finally, in contrast to the mobility between poverty and the middle class, there is no pattern between the size of the high-income group and the other groups. For example, in Brazil the size of the high-income group is larger than is found in several countries with less poverty or a larger middle class.

**GRAPH 4: RELATIVE SIZE OF INCOME GROUPS
IN LATIN AMERICA (SIMPLE AVERAGE OF 18
COUNTRIES), 2000-2014 (%).**



**GRAPH 5: RELATIVE SIZE OF INCOME
GROUPS IN LATIN AMERICA BY COUNTRY
IN 2014 (%).**



Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

⁸ A measurement of the sensitivity of the poverty rate to changes in growth of GDP per capita.

⁹ The Statistical annex shows the rates of poverty and extreme poverty measured with the national lines.

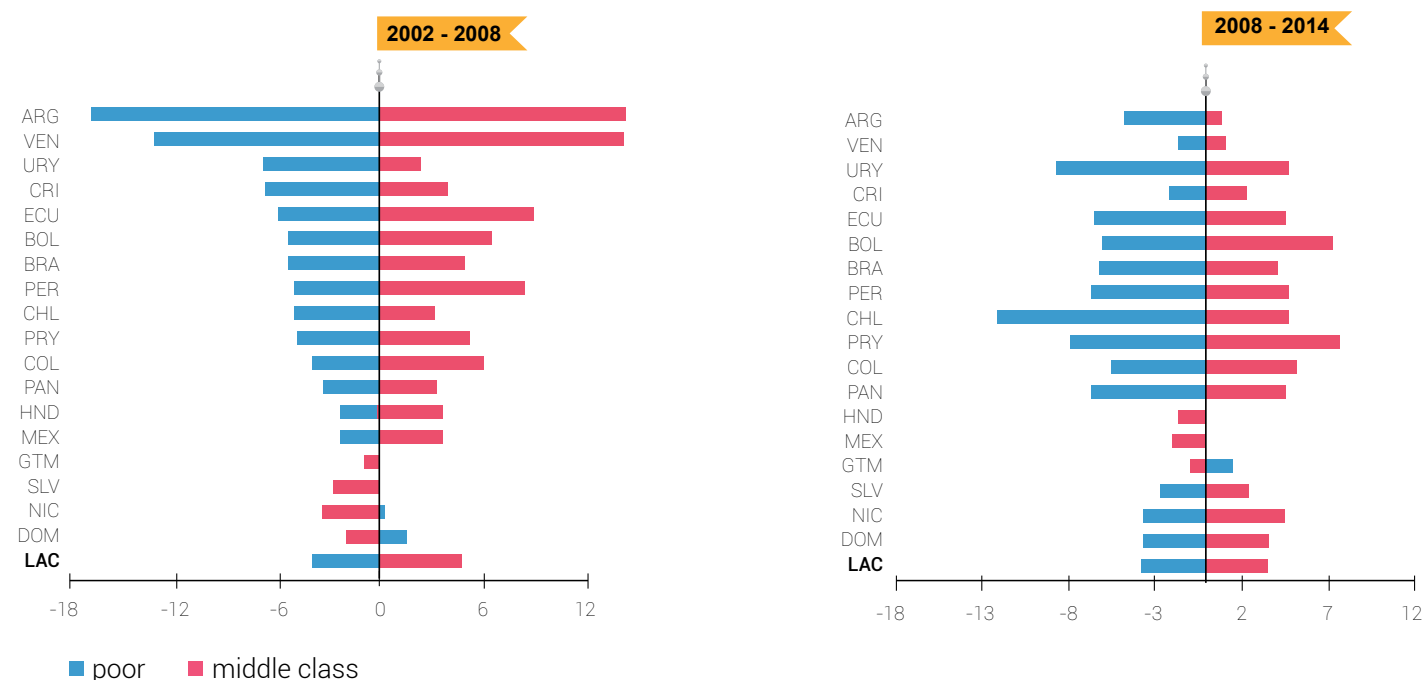
Between 2002 and 2014, the majority of countries showed advances in reducing poverty and in expanding the middle class, albeit with heterogeneous results. In nine countries, poverty was reduced by half or more, and in six of those (Argentina, Bolivia, Ecuador, Paraguay, Peru and Venezuela) the size of the middle class doubled. In other countries (such as Guatemala and El Salvador), progress was minimal or non-existent.

Data show three types of performance during these two six year periods (**Graph 6**):

- (i) countries such as Argentina, Costa Rica and Venezuela achieved substantial results between 2002 and 2008 and subsequently these advances declined significantly,
- (ii) countries with relatively low or null results during the two periods (Dominican Republic, Guatemala, Honduras, México, Nicaragua and El Salvador) and
- (iii) countries that experienced significant progress during the 12 years covered by the two six-year periods (Brazil, Bolivia, Chile, Colombia, Ecuador, Panama, Paraguay, Peru and Uruguay).

What is the profile of these income groups in the region? In 2014, a typical middle class person lived in a household in which the head of household, his spouse and other adult members have higher levels of education than a person with a lower income. For example, 36% of employed workers between 18 and 64 years of age in the middle class have some level of post-secondary education or technical education, and that is a proportion of education seven times greater than the level among the poor and nearly three times more than education among the vulnerable group.

GRÁFICO 6: AVERAGE ANNUAL CHANGE IN RELATIVE SIZE OF THE POOR AND THE MIDDLE CLASS IN LATIN AMERICA (%).



Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

The available data also show that:

- i The vast majority of the middle class population lives in urban areas (96%) while almost half of the poor live in rural areas.
- ii Families of the poor are more numerous (4.3 members) than families of the vulnerable group (3.5) or the middle class (2.8).
- iii Adult women in the middle class have the highest level of participation in the workforce (69% of them work) while among the poor and vulnerable, 50% of women work.
- iv Failure to attend school among poor youth between 12 and 17 years of age is higher (17%) than among the vulnerable (12%) and the middle class (7%).
- v While 73% of middle class elderly persons over 64 years of age receive a contribution-based pension, only 13% of the poor have access to this type of pension.

IS EXPANSION OF THE MIDDLE CLASS RELATED TO A DECREASE IN INFORMAL EMPLOYMENT?

One of the key factors for swelling the ranks of the middle class is formal employment since it allows access to social security. Formal employment is the most distinctive characteristic of the middle class. Almost two thirds of workers in this group are affiliated to social security, 50% more than among the vulnerable and four times more than among the poor. Nonetheless, this characteristic is heterogeneous. In Bolivia, Paraguay and Peru, only 40% of middle class workers hold formal jobs, but in Costa Rica and Uruguay formal workers exceed 80%. Two additional facts confirm the importance of formal employment for this group.

Between 2002 and 2014:

i almost 80% of the increase in formal employment (a rise from 35 to 45 million workers between 18 and 64 years of age) took place among middle class people and

ii for each percentage point of growth in GDP per capita, the number of formal jobs among the middle class grew by 1.7%, more than the drop in the number of poor people (0.6%) and the increase in the number of people in the middle class (1.2%).



3



INEQUALITY

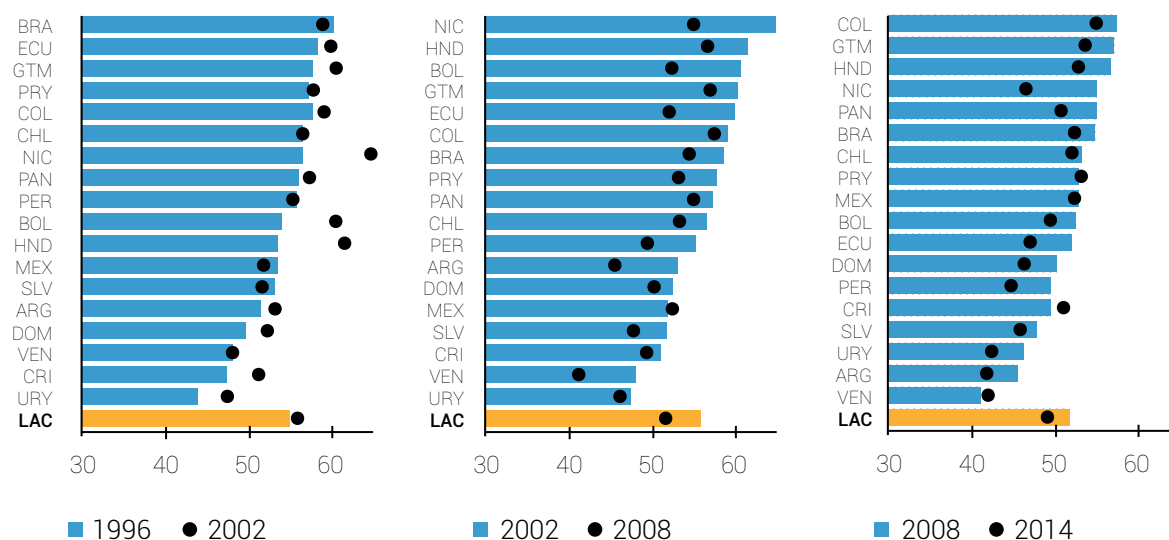
In comparison with other regions,



income inequality has also declined significantly in Latin America and the Caribbean.

Graph 7 shows the changes in the Gini coefficient since 1996. This coefficient is one of the most-used measures of inequality, taking values between 0 (all individuals have the same income) and 1 (one individual has all the income). The Gini held steady in the region between 1996 and 2002, declined by four points between 2002 and 2008 and by 2.7 points between 2008 and 2014. Inequality declined in almost all of the countries, but at a different pace. Between 1996 and 2002, the Gini decreased only in Brazil, Mexico and El Salvador (diamonds inside the bars in the left-most panel). Thereafter, the reduction of inequality was substantial in all countries between 2002 and 2008, with the exception of Mexico where it remained stable. In Argentina, Bolivia, Ecuador, Peru and Nicaragua, the declines in the Gini were greater than 10 points and in nine countries were above five points. During this period, the reductions in the Gini were minimal in Costa Rica, Colombia and the Dominican Republic. Between 2008 and 2014, inequality continued to decline in all countries except for Venezuela and Costa Rica (diamonds outside the bars in the right-most panel).

GRAPH 7: CHANGES IN INCOME INEQUALITY (GINI COEFFICIENT X 100).



Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean

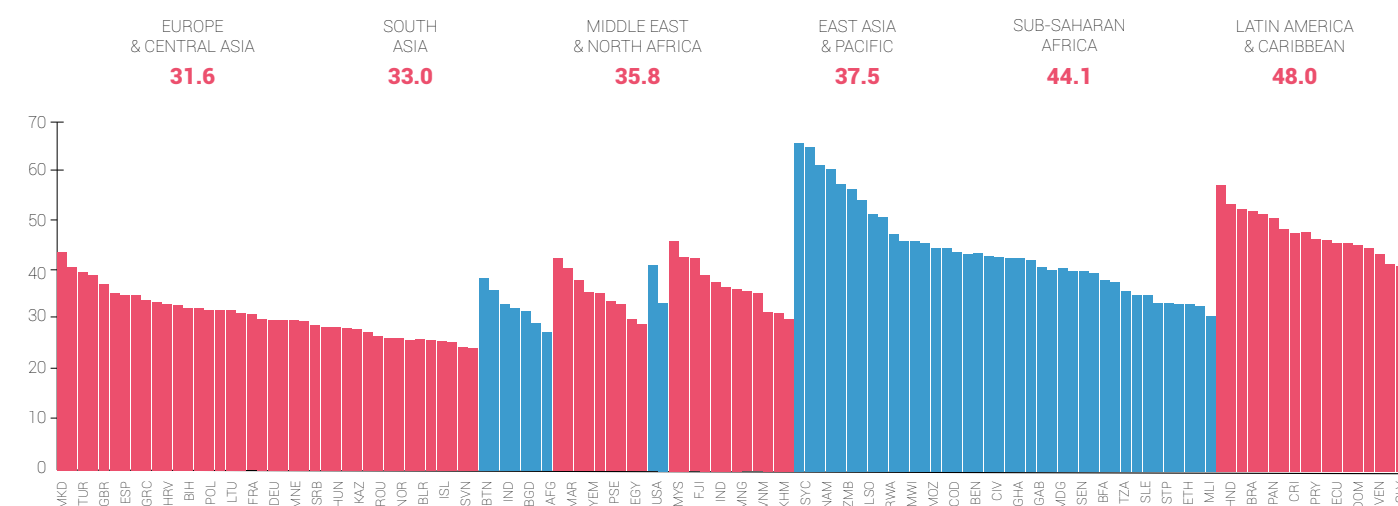
In spite of the progress in reducing inequality, the region remains the most unequal of the world. The Gini for the region is four percentage points above that of Africa, 16 more than for Europe and Central Asia and 11 more than for China (**Graph 8**).



Moreover, 11 of the 20 countries with the highest inequality, of a total of 136, are located in the region.

Reducing inequality is important because it has a close relationship with poverty reduction. If inequality remains the same, poverty diminishes through the increase of income, but if inequality falls, poverty reduction is greater because it amplifies the impact of an increase in income. A simple simulation illustrates this relationship. Brazil, Chile, Costa Rica and Mexico have Ginis of about 52. If these countries had the Gini of Uruguay (42), and income is maintained without change, poverty (measured by the international line of US \$3.1, PPP of 2011) would be reduced by 47, 18, 46 and 29%, respectively¹⁰.

GRAPH 8: INCOME DISTRIBUTION (GINI COEFFICIENT X 100) IN THE WORLD (128 COUNTRIES, LATEST AVAILABLE DATA).



Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean

Various studies have attempted to explain the drop of the Gini in Latin America and the Caribbean. Azevedo et al. (2013), for example, show that the decline in 14 countries between 2000 and 2010 occurred fundamentally due to three factors:

- (i) 54% was due to an increase in wages among the poorest workers that was greater than the pay increase of the other workers
- (ii) 30% was due to transfers to households (21% from targeted social programs and 9% from pensions)
- (iii) 11% due to demographic change (more working-age people in the household and fewer children).

Other studies, such as that of Gasparini et al. (2011), find that for 17 countries the increase in average schooling of adults and the decrease in the return to education are relevant factors that make it possible to understand the changes in inequality between 1992 and 2006 (see **Box 3**).

¹⁰ In graph 7 and graph 8 the Gini has been multiplied by 100. The simulation consisted of redistributing the income of each country with the distribution of Uruguay using 100 percentiles.

**BOX 3: RELATIVE IMPORTANCE OF FACTORS
ASSOCIATED WITH THE FALL OF THE GINI IN
PERU.**

In order to quantify jointly the relative importance of the two studies, we used the approach of Azevedo et al., op. cit., and we introduced the educational dimension in an equation of per capita income (Robles and Robles 2016). **Graph 9** synthesizes the results for Peru. It shows the contribution of each factor (ordered according to their relative importance) in the reduction of the Gini coefficient from 51.3 to 44.2% between 2004 and 2014. The results are as follows:



The decline in returns to education was the principal force behind the decline in inequality; its contribution was 28%. While returns fell for individuals with less education, the returns for primary and secondary school graduates versus non-graduates rose substantially and diminished for graduates of tertiary education versus non-graduates. The declines at the highest levels had an equalizing effect on earnings.



The increase in wage income (fees for a unit of human capital) contributed 18%. The increase in this income was three times greater among workers in the lowest deciles versus the raise for those in the highest deciles. The increase in hours worked contributed 8% and changes in employment made no contribution.

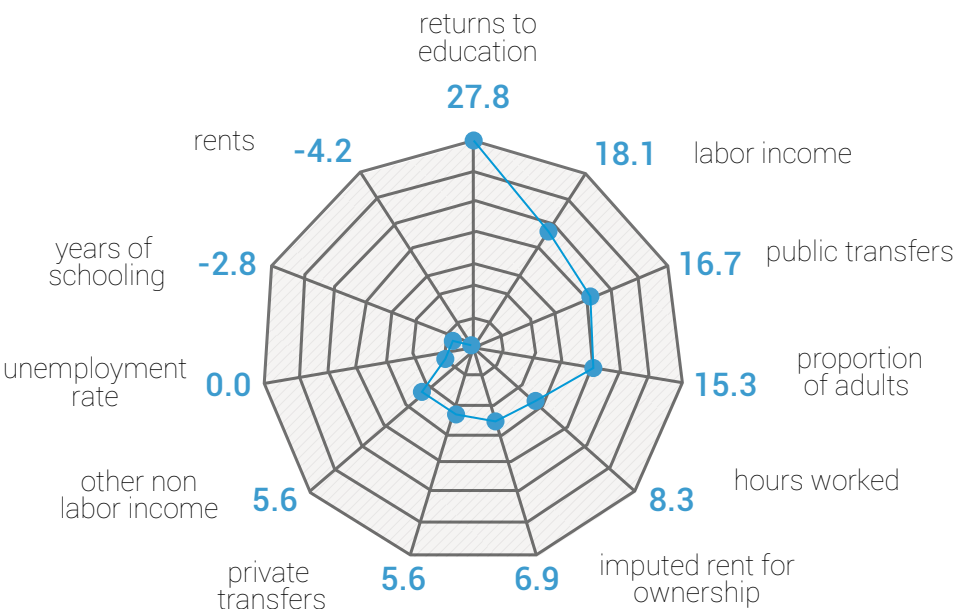


The increase in public transfers was the third force behind the decline in inequality: its contribution was 17%. Despite the fact the increase in transfers was concentrated among the poorest; its effect was not greater because an important portion of the benefits filtered to the non-poor population.



The increase in the proportion of adults contributed 15%. This was the case because households were passing through a demographic period in which the proportion of people in productive age grew 6.3% and dependent people fell by 7.7%. That is, households reduced their size and took on an age structure favorable for generating income. Those changes favored the poor the most: the proportion of adults among the poor grew two times more rapidly than among the less poor groups.

**GRAPH 9: RELATIVE IMPORTANCE OF THE FACTORS
THAT INFLUENCED THE DECLINE IN INCOME INEQUALITY
(GINI COEFFICIENT) IN PERU BETWEEN 2004 AND 2014.**



Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.



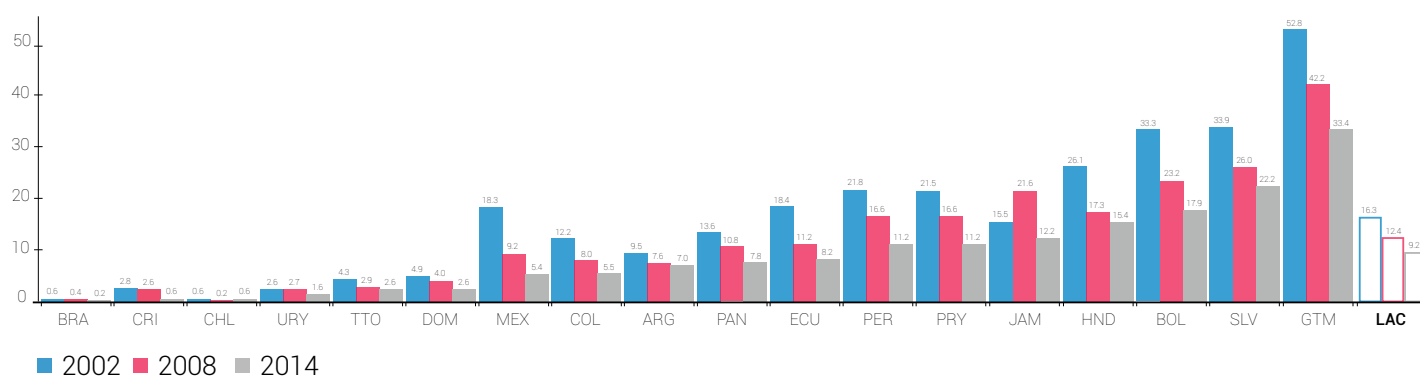


BASIC CHARACTERISTICS OF HOUSING

Basic housing infrastructure plays a fundamental role in the well-being of individuals. Construction materials and overcrowding are key elements for adequate housing. We understand overcrowding to mean more than 2.5 people per room¹¹. One direct consequence of overcrowding is health problems caused by unhealthy conditions (Feres and Mancero, 2001). **Graph 10** shows that overcrowding in households decreased in all countries between 2002 and 2014 and that on average the reduction was from 16 to 9%.

However, the differences between countries remain notable. While Guatemala, El Salvador and Bolivia have the highest levels of overcrowding in 2014 (33, 22 and 18%, respectively), Brazil, Costa Rica and Chile have the best levels (below 1%).

GRAPH 10: PERCENT OF HOUSEHOLDS IN CONDITIONS OF OVERCROWDING: 2002, 2008 AND 2014 (18 COUNTRIES).



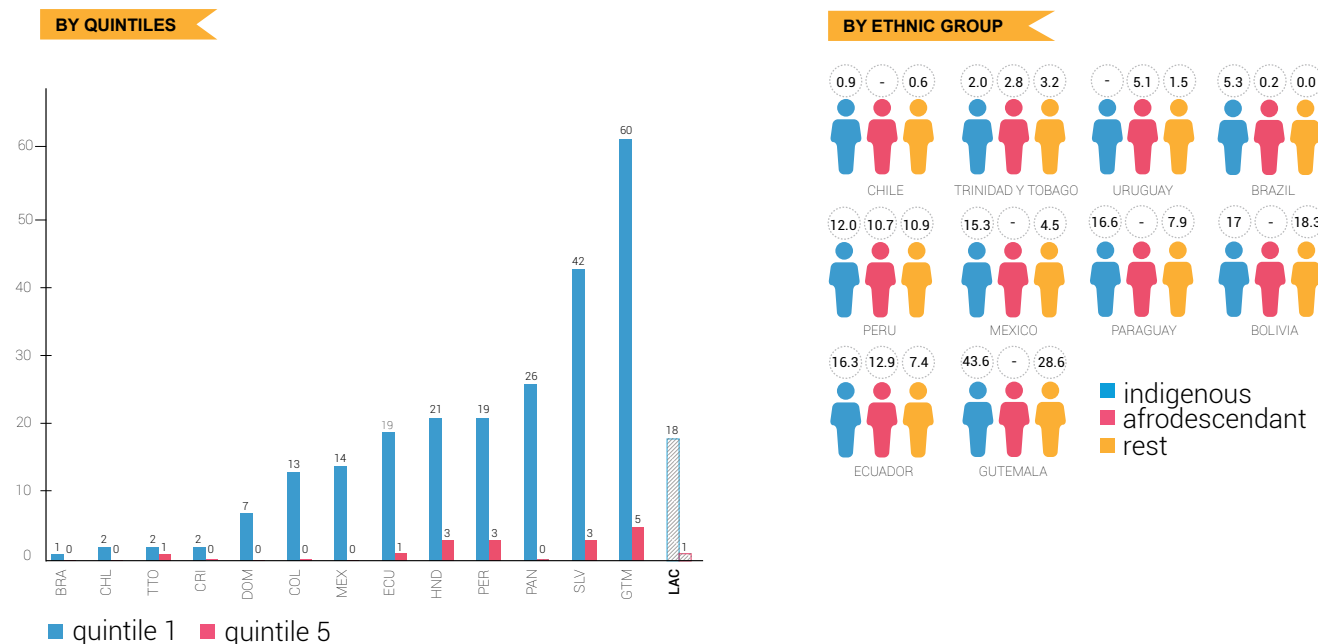
Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

The differences within countries are even more significant. **Graph 11** shows that the majority of overcrowded households are of the poor and are Indigenous peoples and Afro-descendant populations. For example, in Guatemala, 60% of the households in the poorest quintile and 44% of indigenous households are overcrowded. The greatest gaps between households in the poorest and richest quintiles are in Guatemala, El Salvador and Panama with differences of 55, 40 and 25 percentage points, respectively. In Mexico, the difference between the households of Indigenous peoples and other households reach 11 percentage points. On the contrary, these gaps are minimal in Bolivia: there, 17% of the households of Indigenous peoples are overcrowded and the rate is 18% among the rest of households.

As is generally known, a home that is minimally inhabitable protects its residents from inclement weather, provides privacy and offers comfort for carrying out biological and social activities. Although it is difficult to measure fully all of these characteristics, one can use indicators associated with housing construction materials—floor, walls and roof (Feres and Mancero, 2001). Dirt floors can contribute to the transmission of disease if parasites accumulate or they are difficult to clean. The “Firm Floor” program in Mexico (Cattaneo et al. 2014) that replaces dirt floor with cement, achieved a significant impact in children’s health due to the reduced incidence of parasites, anemia and diarrheal diseases. Walls of brick, wood, prefabricated, zinc or cement (permanent materials) protect their inhabitants from storms and cold climates and allow the circulation of air in warm climates. Similarly, they stave off infestation of certain parasites and prevent fires or collapse of the home.

¹¹ This indicator considers all available spaces in the home. It is not restricted only to bedrooms.

GRAPH 11: PERCENTAGE OF HOUSEHOLDS IN CONDITIONS OF OVERCROWDING, 2014.



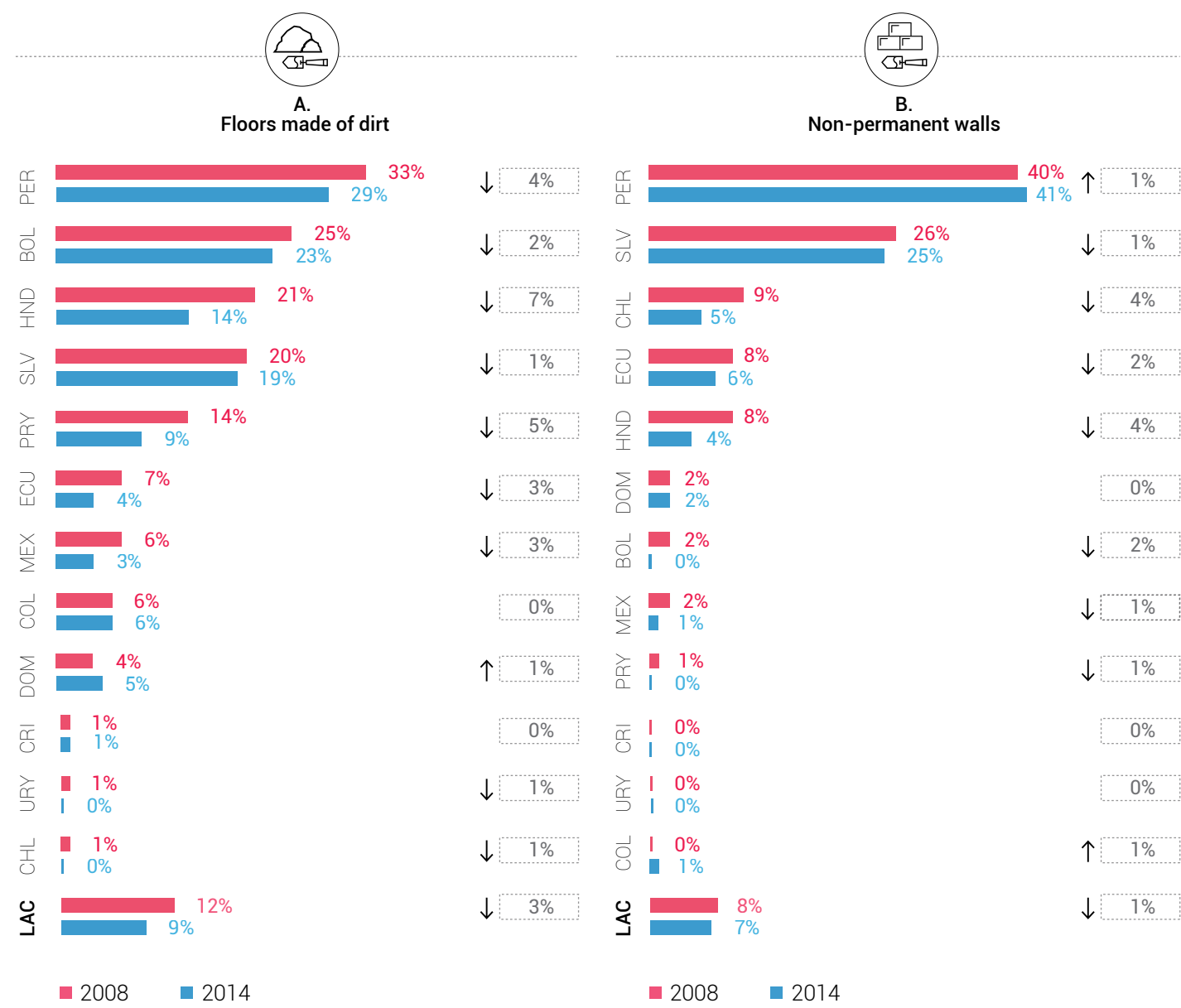
Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

In general terms, housing conditions improved in the entire region. Between 2008 and 2014, the average percentage of households in homes with walls made of precarious materials diminished by three percentage points and those with dirt floors by one point (**Graph 12**). Notwithstanding, the differences in this result between countries are broad. While in Costa Rica and Uruguay, households in homes with inadequate materials are no more than 1% in 2014, in Peru substandard homes make up 41% of the housing stock and also 29% of households live in households with dirt floors.

The housing conditions of Indigenous peoples and Afro-descendant populations are those that present the greatest challenges. In Peru, for example, 44% of the households of these demographic groups have dirt floors and 57% have walls of makeshift materials. The illnesses that are contracted due to the precarious nature of basic services or housing construction materials can limit the development of people and cause permanent damage throughout their lives. The combination of quality housing and improved water and sanitation services can improve the well-being of the population, especially in terms of health and, as a result, in learning and labor productivity.



GRAPH 12: HOUSEHOLDS ACCORDING TO THE QUALITY OF HOUSING CONSTRUCTION MATERIALS: 2008 AND 2014 (17 COUNTRIES, IN %).



Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.





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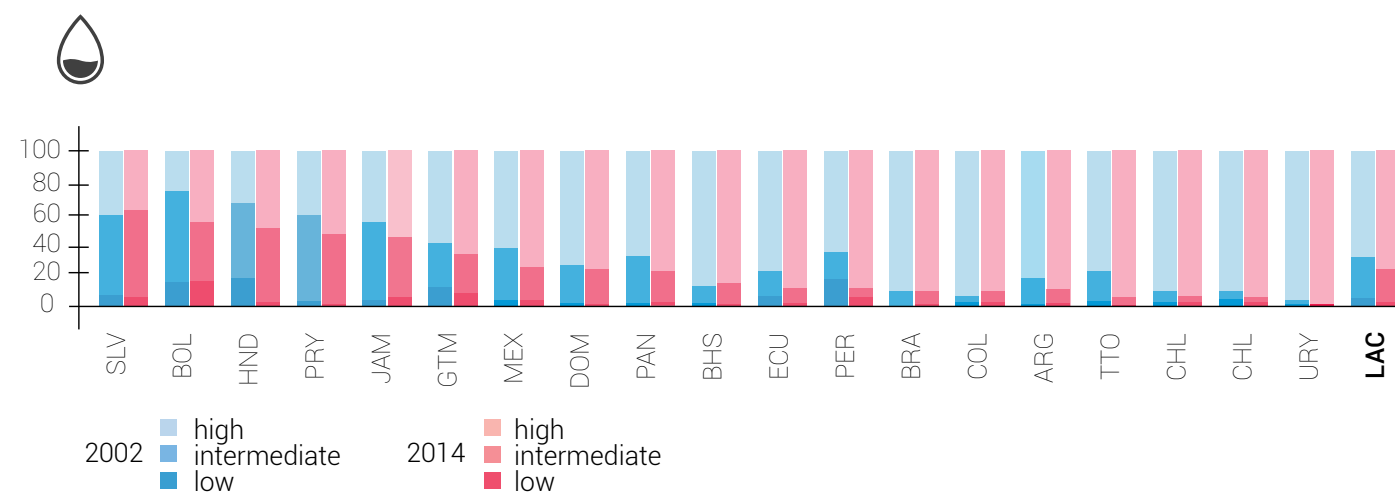
**ACCESS TO
POTABLE WATER
AND SANITATION
SERVICES**

.....

The lack of access to potable water and appropriate sanitation services increase the risk of contracting infectious illnesses, malnutrition and maternal-infant mortality. In recent years, the region achieved important progress in this area. According to the UNICEF Joint Monitoring Programme for Water Supply and Sanitation, the region surpassed the Millennium Development Objective related to potable water and came close to meeting the sanitation goal. This meant that 202 million inhabitants gained access to improved sources of water and 208 million to improved sanitation between 1990 and 2014.

In 2014, 96% of households in the region had access to potable water. On average, access to high quality water increased from 67 to 75% between 2002 and 2014 (see definitions of quality in **Box 4**), and the access to water of intermediate quality decreased from 27 to 21% (**Graph 13**). This period witnessed a notable increase in access to high quality water in Peru (22 percentage points), Bolivia (19 points) and in Honduras and Trinidad and Tobago (17 points). In 2014, in Argentina, Chile, Colombia, Costa Rica and Uruguay, access to this type of source was equal to or greater than 90% and in Honduras, despite progress, more than half of households still lack high quality water service.

GRAPH 13: HOUSEHOLDS ACCORDING TO ACCESS TO SOURCES OF POTABLE WATER: 2002 AND 2014 (19 COUNTRIES, IN %).



Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

Nonetheless, the disparities in access to water are more notable within countries (**Graph 14**). In Guatemala, Honduras and El Salvador, the differences between households of the poorest and richest quintiles in access to high quality water, are 50 or more percentage points. In Trinidad and Tobago, Uruguay, Paraguay and Chile, in contrast, the gap is 1, 5 and 9 percentage points, respectively. Among ethnic and racial groups the differences are also significant. For example, in Bolivia, access to this quality of water reaches 26% of the households of Indigenous peoples and 54% of all other households. In Ecuador, on the contrary, differences by ethnicity and race are less than five percentage points.

BOX 4: CATEGORIZATION OF QUALITY OF WATER AND SANITATION.

According to the World Health Organization, an improved drinking water source is one which is constructed so that it protects water from outside contamination, particularly from fecal matter, and an improved sanitation system is one which hygienically separates human excrement from human contact.

Improved water sources are those that are supplied by:



- (i) pipes connected to the home, plot, garden or patio
- (ii) pipes connected to the adjacent property
- (iii) public taps
- (iv) an encased or drilled well
- (v) protected excavated well
- (vi) protected spring
- (vii) rainwater

Improved sanitation systems are:

- (i) hydraulic discharge (automatic or manual) to a sewage system, septic tank or pit latrine,
- (ii) improved pit latrine with ventilation
- (iii) pit latrine with slab floor
- (iv) composting latrine/toilet

In Schady (2015), drinking-water sources and sanitation systems are classified by quality of service as high, low and intermediate based on the criterion that better technology leads, on average, to better water quality (Günther et al, 2011; OPS, 2011). High and intermediate quality systems are improved systems as described above.

Water is of low quality if the source utilized for drinking and cooking is obtained from superficial water such as rivers, dams, lakes, ponds, gullies or rainwater. Water of intermediate quality comes from a source below the surface such as public taps, wells, or another source that is not part of the public system. Water is of high quality if the home reports that it has access to the public drinking-water system inside the home.

Using the same logic, the categories of access to sanitation are:

- (i) low quality when the home has no toilet
- (ii) intermediate quality when the home has access to a basic or improved latrine or toilet with drainage connected to a septic tank, cesspool, canal or an excavated pit
- (iii) high quality when the home has access to sanitary service with drainage connected to a sewage system (Günther, et al, 2011; OPS, 2011)

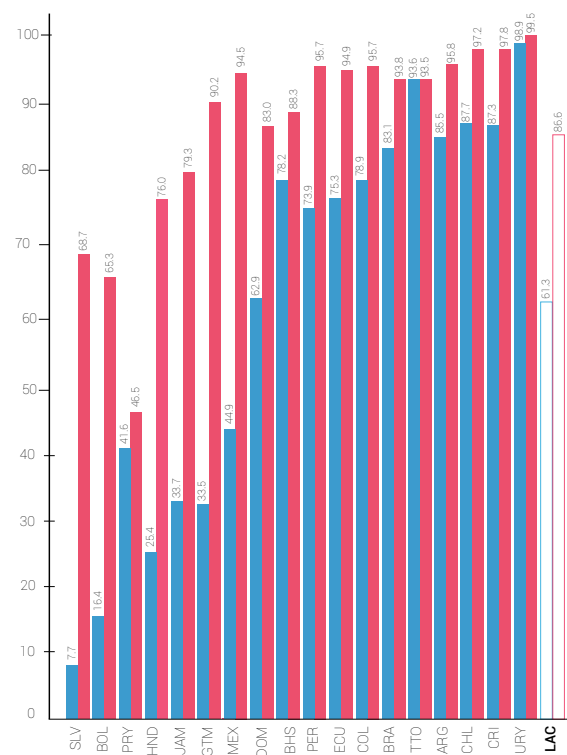
In countries in which the drinking water source cannot be identified in their household surveys (Argentina, Brazil, Colombia, Dominican Republic, Ecuador, Jamaica and Uruguay), the coverage of potable water could be under- or over-estimated (Schady 2015).

Access to improved sanitation systems reached 96% of the households in the region in 2014: 44% had intermediate services and 52% had high quality service. However, progress was uneven. Between 2002 and 2014, in Bolivia, Peru and Guatemala, access to high quality services increased by 35, 19 and 18 percentage points respectively, but in Jamaica and El Salvador there was no increase. Chile has the highest coverage of high quality services (86% of households) followed by Colombia and Mexico (76%). Despite the improvements, 4% of households still have no hygienic services. Access varied according to income, ethnic and racial groups (**Graph 15**). On average, households in the poorest and richest quintile were separated by 40 percentage points in terms of access to high quality services in 2014. In Guatemala, Honduras and El Salvador, this gap was greater than 55 percentage points, and even wider if specific quintiles are compared between countries. For example, in Paraguay only 2.3% of households in the poorest quintile had access to high quality sanitation services while in Chile the number is 77%. Among ethnic groups, Mexico has the widest gaps. Only 39% of households of Indigenous peoples had access to this type of services versus 80% among all other households. In Paraguay, barely 2.1% of the households of Indigenous peoples have access to such services.

There is still ample room for improvement in the region. Given the difficulty of providing these services in rural areas of some countries, on many occasions the most accessible solutions have been chosen, such as protected springs, wells or boreholes and the installation of latrines for sanitation. To insure their effectiveness, it has been suggested that the willingness of people to use these facilities be considered before they are installed (Schady 2015).

GRAPH 14: PROPORTION OF HOUSEHOLDS WITH ACCESS TO HIGH QUALITY WATER IN 2014.

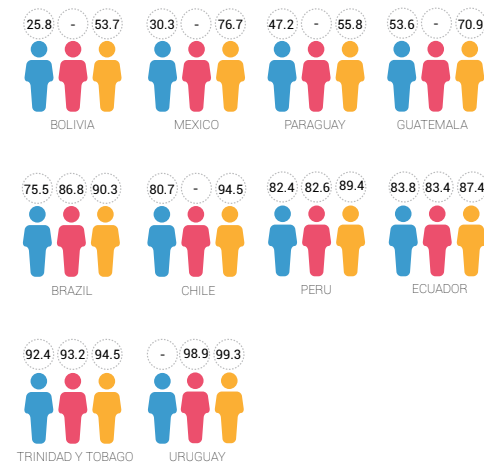
BY QUINTILES



■ quintile 1 ■ quintile 5

Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

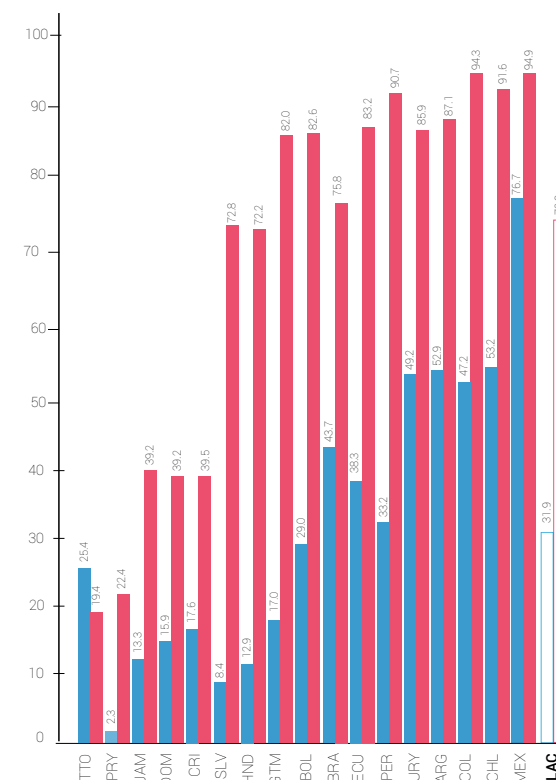
BY ETHNIC GROUP



■ indigenous
■ afrodescendant
■ rest

GRAPH 15: PERCENTAGE OF HOUSEHOLDS WITH ACCESS TO HIGH QUALITY SANITATION IN 2014.

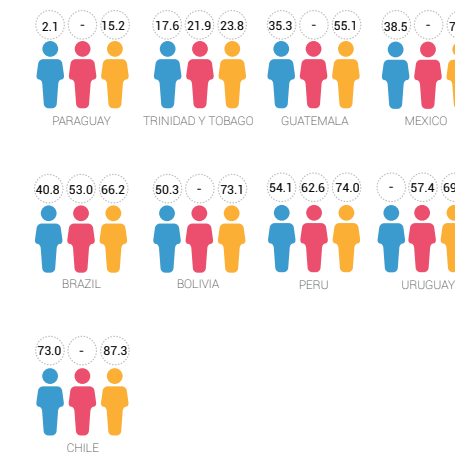
BY QUINTILES



■ quintile 1 ■ quintile 5

Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

BY ETHNIC GROUP



■ indigenous
■ afrodescendant
■ rest



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B

1 2 3 4

OUTCOME INDICATORS



As we previously shown, outcome indicators are those that describe social situations that require immediate attention from governments and, as a result, are incorporated directly into public policy. It is worth noting that, while indicators of poverty and income inequality are classified as context indicators, they are also outcome indicators.

1.



INFANCY AND CHILDHOOD

A. INFANT MORTALITY

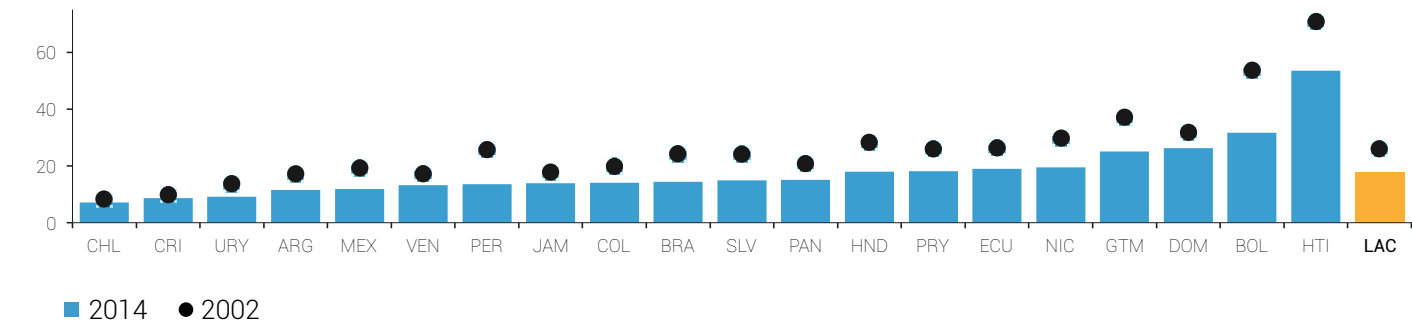
The rate of infant mortality refers to the number of children who die before reaching age one for every 1,000 live births. This rate is often used as an indicator of quality of life, of attention to well-being in general or the level of health care in a country.

In the region, infant mortality dropped from 26 deaths per 1,000 live births in 2002 to 18 in 2014 (**Graph 16**). During this period, the greatest change occurred in Bolivia where infant mortality fell from 54 to 32, that is, 22 of every 1,000 live births survived through their first year. In Chile, Costa Rica and Peru, mortality declined by 85% or more, and in 15 of 21 countries in the region this indicator was reduced by more than 75% (World Population Prospect 2015).

Infant mortality decreased significantly among specific groups. For example, *Development in the Americas 2015* (IDB 2015), finds that in Peru infant mortality dropped by more than 80% among children of mothers with incomplete primary education or less in the past 25 years, and fell by 75% among indigenous children (Berlinski y Schady 2015)¹².

The decrease in infant mortality rates is related to improvements in socio-economic conditions, greater access to basic health services, improvements in the quality of housing, the promotion and duration of maternal lactation, nutrition of mothers and children and other factors. The World Health Organization (WHO) has shown that appropriate home care of newborns, attention to childhood illnesses, extensive immunization programs, infant diet and interventions directed to maternal health are strategies that improve infant health and facilitate progress in reduction of mortality.

GRAPH 16: INFANT MORTALITY RATE FOR EVERY 1,000 LIVE BIRTHS IN LATIN AMERICA AND THE CARIBBEAN: 2002, 2014



Source: World Development Indicators (World Bank), Estimates developed by the UN Inter-agency Group for Child Mortality Estimation (UNICEF, WHO, World Bank, Population Division of the Department of Economic and Social Affairs of the United Nations).

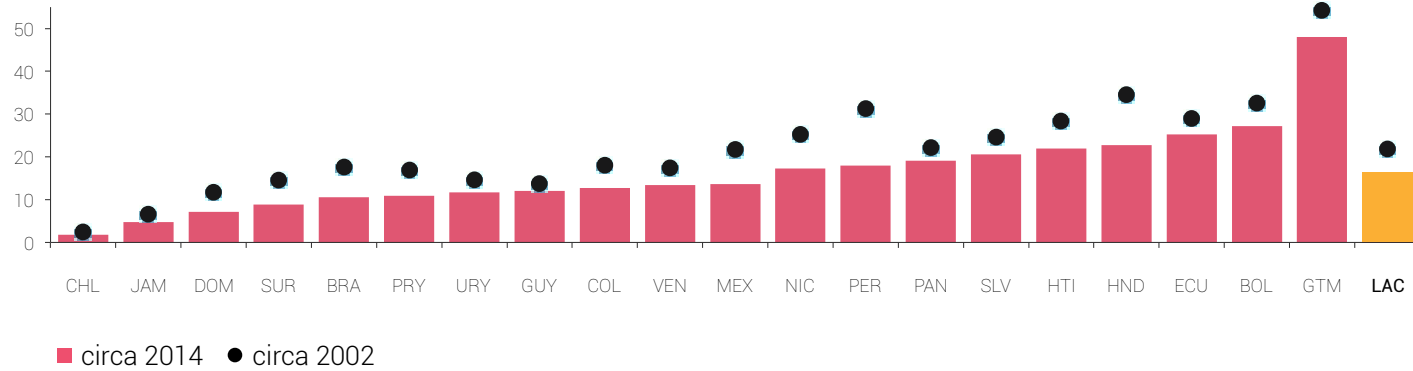
¹² To place this data in context, it's worth comparing it to mortality rates among African-Americans in the United States. It took the United States 50 years to reduce mortality rates among African-Americans from 80 to 25 deaths per 1000 live births(xxx); the same reduction of mortality rates among indigenous communities in Peru, which was carried out in less than 20 years.

B. CHRONIC MALNUTRITION

Chronic malnutrition in children represents a significant delay in expected growth for the age of the child. Children suffering chronic malnutrition have a higher risk of infant mortality, greater difficulty with learning, lower labor productivity and can endure effects on their health throughout their lifetime. These factors effects pass on, in turn, poverty and inequality between generations.

In the region, chronic malnutrition in children under five years of age has decreased significantly in recent years. Since the beginning of the 1990s, malnutrition was reduced by more than 50% in 10 countries and in Mexico by more than 75% (Berlinsky and Schady 2015). Between 2002 and 2014, Peru and Honduras reduced their rates of chronic malnutrition by 13 and 12 percentage points, respectively (**Graph 17**). Nevertheless, while Guatemala has the highest chronic malnutrition rate in the region (48%) and the sixth highest in the world (of 131 countries), the rates in Chile, Dominican Republic, Jamaica and Suriname are below 10%.

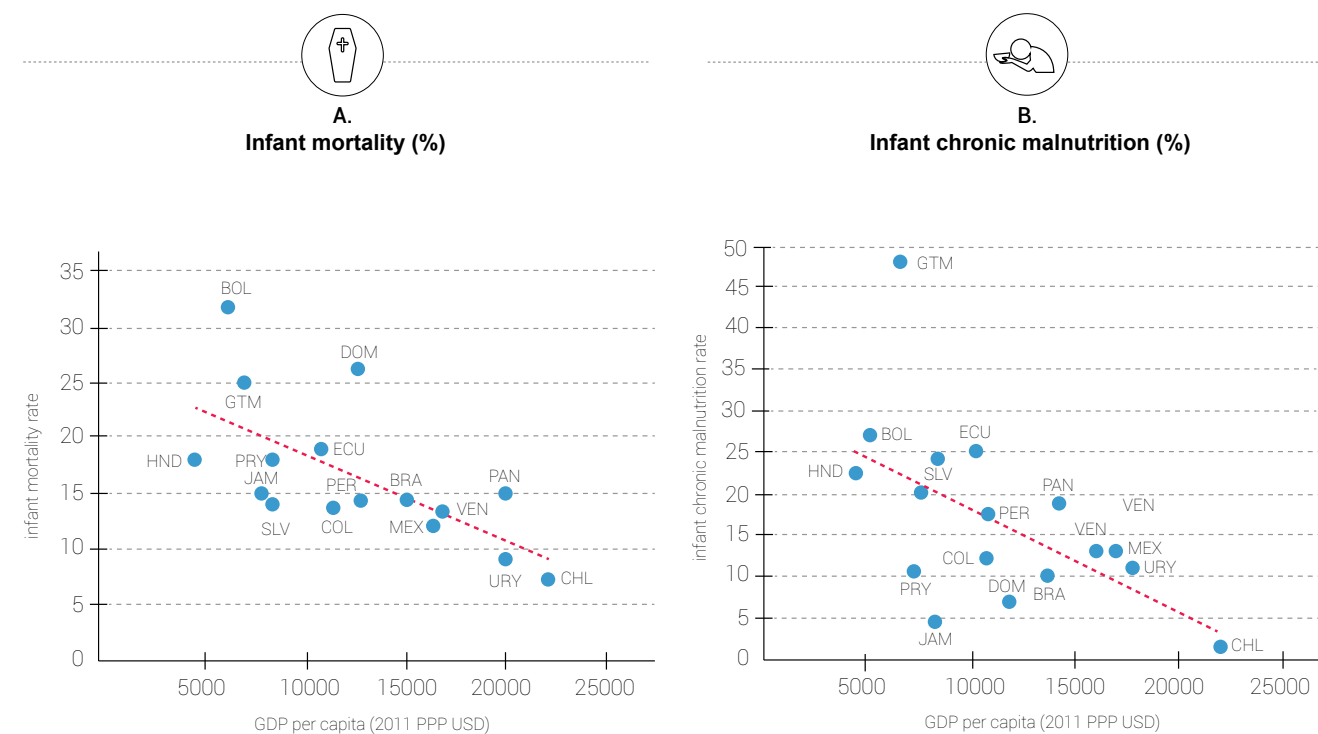
GRAPH 17: CHRONIC MALNUTRITION IN CHILDREN UNDER 5 YEARS: 2002 Y 2014 (PERCENTAGE)



Source: World Bank, World Development Indicators, World Health Organization.

The rates of chronic malnutrition and infant mortality are associated with the levels of economic development of the countries. **Graph 18** shows the relationship between both rates and GDP per capita. In the case of infant mortality, while the majority of countries show rates below those expected according to their GDP per capita (dotted line), the rates of Bolivia, Panama and the Dominican Republic are very much above the expected level, 48, 59 and 40% higher, respectively. With respect to chronic malnutrition, Guatemala has the rate most distant from what would correspond to its GDP per capita (48 versus 23%) and its rate is also higher than the rate of countries at similar levels of development: 2.1 times more than chronic malnutrition in Honduras, 4.4 times more than Paraguay and 10 times more than Jamaica. Nonetheless, despite progress made regarding these indicators, there remain significant differences between children in other aspects of infant development (**Box 5**).

GRAPH 18: RELATIONSHIP OF GDP PER CAPITA AND INFANT MORTALITY RATE (PER 1000) AND CHRONIC MALNUTRITION (PER 100).



Note: Panel (a) corresponds to 2014, Panel (b): when data for 2014 were lacking, the following were included: BOL (2008), BRA (2008), COL (2010), SLV (2008), GTM (2009), HND (2012), JAM (2010), MEX (2012), PAN (2008), PRY (2012), PER (2012), URY (2011), y VEN (2009).

Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean. World Bank - World Development Indicators (WDI).



BOX 5: GAPS IN COGNITIVE DEVELOPMENT AND LANGUAGE, SOCIO-EMOTIONAL AND MOTOR SKILLS.



Development of cognitive, socio-emotional, motor and language skills are important elements in infant development. However, analysis of these abilities in infants is limited due to the scarce information available and the lack of a standard methodology for measurement.

DIA 2015 describes the contributions of several studies that have overcome these limitations.

(i)

Application of the Engle scale of infant development to children between 24 and 59 months of age in Costa Rica, Nicaragua, Paraguay and Peru detected significant differences in cognitive and language development between the poorest and richest children and found small variations in socio-emotional development and motor skills. The dissimilarities between rich and poor in cognitive, language and communication skills increase with the age of the child.

(ii)

Through administering the Peabody Picture Vocabulary Test in rural regions of Chile, Colombia, Ecuador, Nicaragua and Peru revealed significant disparities in the scores achieved in this test in all countries.

(iii)

The Bayley scale of infant development applied to children between six and 42 months in Bogotá found higher point scores in language and cognitive development in the richest decile than in the poorest decile. The gaps widen substantially among children between 31 and 42 months (Rubio-Codina et al 2015).

(iv)

A shortened version of the Denver Developmental Screening Test applied to poor children from zero to 71 months in a sample of rural municipalities of Nicaragua revealed marked differences between different socioeconomic segments in the scoring for language development.

(v)

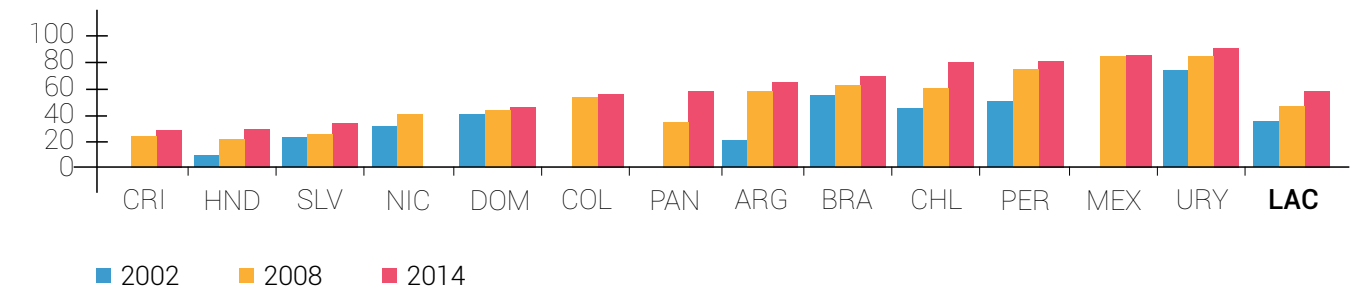
Results of tests of memory, attention, cognitive flexibility and inhibitory control applied to five-year-old children in the coastal region of Ecuador display variations in the executive function among children of mothers with incomplete primary education or without education and mothers with complete secondary education or more.

The findings of these studies are consistent among themselves in spite of the disparity in ages and population groups of the subjects and the applied methodologies. The studies conclude that the levels of cognitive and language development are higher among children from wealthier homes and underscore that the disparities deepen as the child grows older, at least until they enter the school system. In general, across the region, significant differences exist between socioeconomic strata in cognitive and language development and lesser variations are found in socio-emotional development and behavioral problems (Berlinsky y Schady 2015).

C. PRESCHOOL AND PRIMARY SCHOOL ATTENDANCE

Human capital develops during the entire life cycle. The sooner investments are made in development of the individual, the higher will be the returns since the achievements of one stage affect development in the subsequent phases. If opportunities are missed in developing skills in the first stages of life, recovery may be costly or irreversible, as in the case of cognitive development. Early education helps to promote this development and prepares children for future challenges. Given the importance of education at this level, a majority of countries have made at least one year of initial education compulsory. Ecuador, Guatemala, Mexico, Peru, El Salvador and Venezuela raised this requirement to three years (Berlinsky and Schady 2015). Graph 19 shows that school attendance among children four years of age is growing in the region. Between 2002 and 2014, the greatest increases in attendance by this group were seen in Argentina (from 21% to 66%) and Chile (from 46% to 80%). However, attendance is still below 50% in Costa Rica, Dominican Republic, Honduras, Nicaragua and El Salvador.

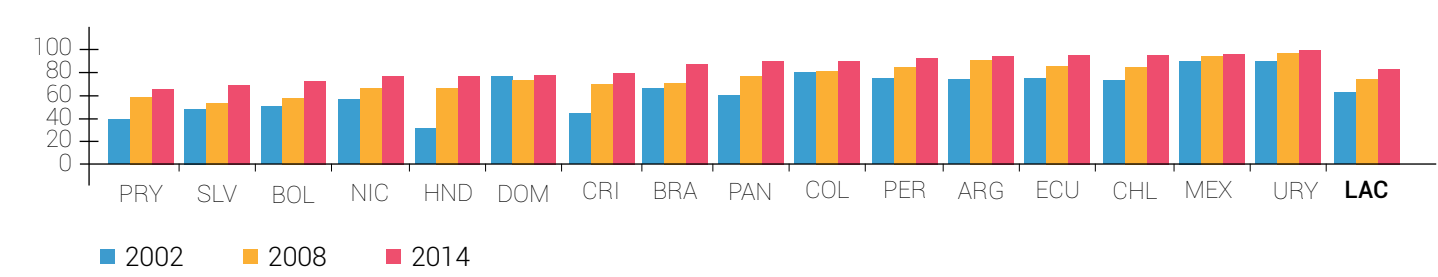
GRAPH 19: SCHOOL ATTENDANCE AMONG CHILDREN 4 YEARS OLD: 2002, 2008 AND 2014 (13 COUNTRIES, IN %).



Note: The average for LAC includes only those countries that have data for urban and rural areas in the last three years.
Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

In the case of children five years of age, attendance is above 65% in all countries (see **Graph 20**), and surpasses 90% in Argentina, Chile, Ecuador, Mexico and Uruguay. The greatest increase in attendance between 2002 and 2014 is seen in Honduras (from 31% to 77%) and Costa Rica (from 45% to 79%). **Graph 21** shows that for children of this age, despite the persistence of differences in school attendance between the poorest and wealthiest quintiles, these gap are closing throughout the region: the variation fell, on average, from 32 to 20 percentage points between 2002 and 2014. The sharpest reductions in the gap occurred in Panama (from 50 to 19 points), Peru (34 to 8 points), Colombia (34 to 10 points) and Ecuador (24 to 8 points). The countries with the narrowest gaps are Uruguay, Chile, Argentina and Mexico. In those four countries, the differences in school attendance at age five are 2, 5, 6 and 7 percentage points, respectively.

GRAPH 20: SCHOOL ATTENDANCE AMONG CHILDREN AGE 5: 2002, 2008 AND 2014 (16 COUNTRIES, IN %).

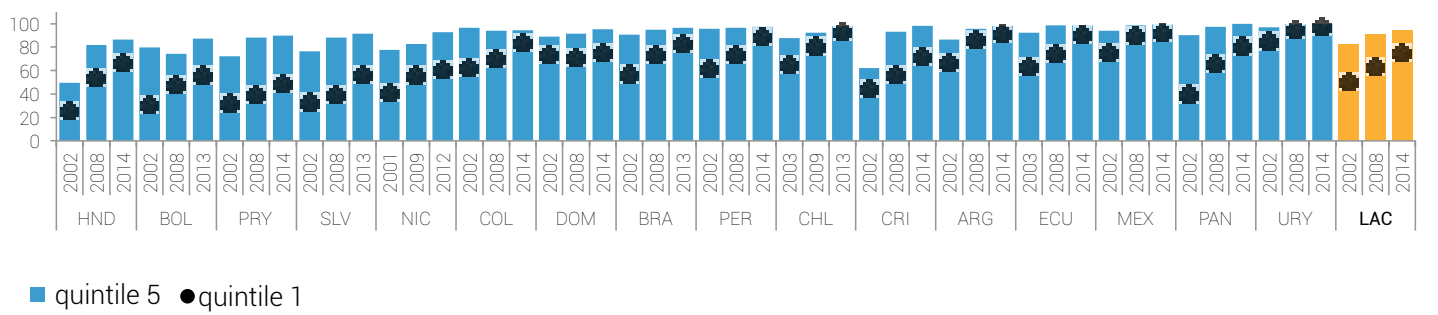


Note: The average for LAC includes only those countries that have data for urban and rural areas in the three years.
Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

 In the last two decades, school attendance of children between six and 12 years has grown throughout the region.

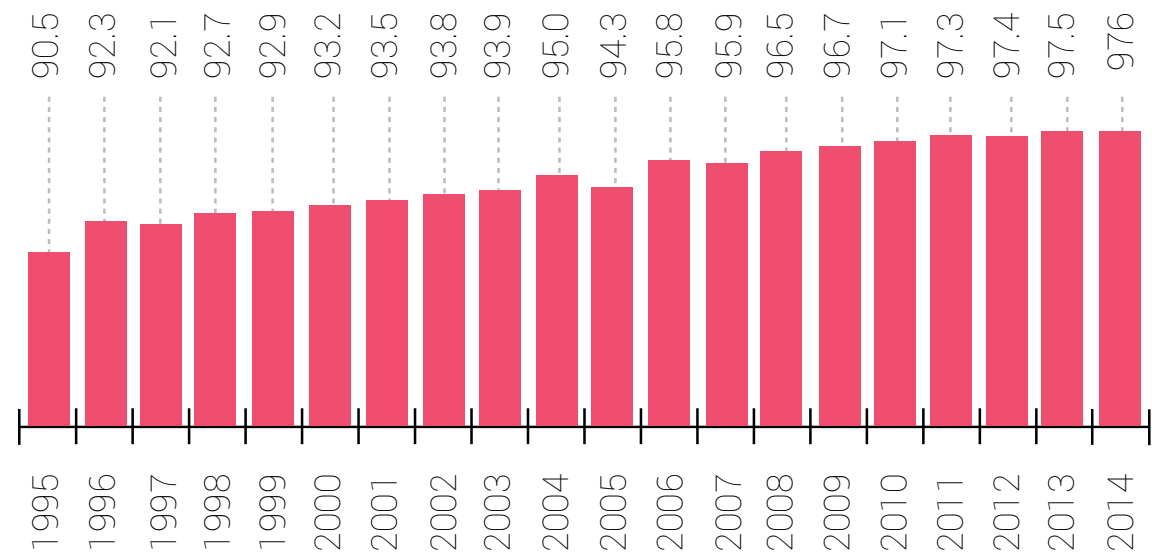
In the majority of countries, this attendance is nearly universal: on average 98% in 2014 (**Graph 22**). Guatemala and Nicaragua, with non-attendance rates of 8%, are the exceptions. Progress in school attendance by this age group also occurred in remote areas. For example, between 2002 and 2014, the differences in school attendance between the poorest and the richest quintiles were reduced in all countries and no significant differences were seen in 2014. The only exceptions were Guatemala and El Salvador that show differences of 12 and 6 percentage points, respectively.

GRAPH 21: SCHOOL ATTENDANCE RATE AMONG FIVE-YEAR-OLD CHILDREN, BY QUINTILES: 2002, 2008 AND 2014 (16 COUNTRIES, IN %).



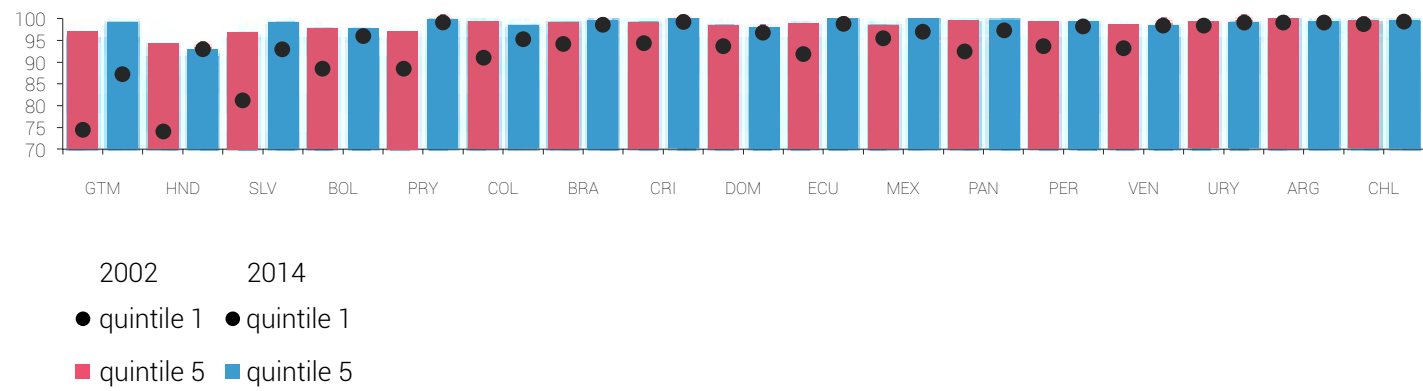
The average for LAC includes only those countries that had data for urban and rural areas in the last three years.
Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

GRAPH 22: ATTENDANCE AT PRIMARY SCHOOL IN LAC (%).



Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

GRAPH 23: RATE OF PRIMARY SCHOOL ATTENDANCE OF THE POOREST QUINTILE (Q1) AND THE RICHEST QUINTILE (Q5), BY COUNTRY (IN %).

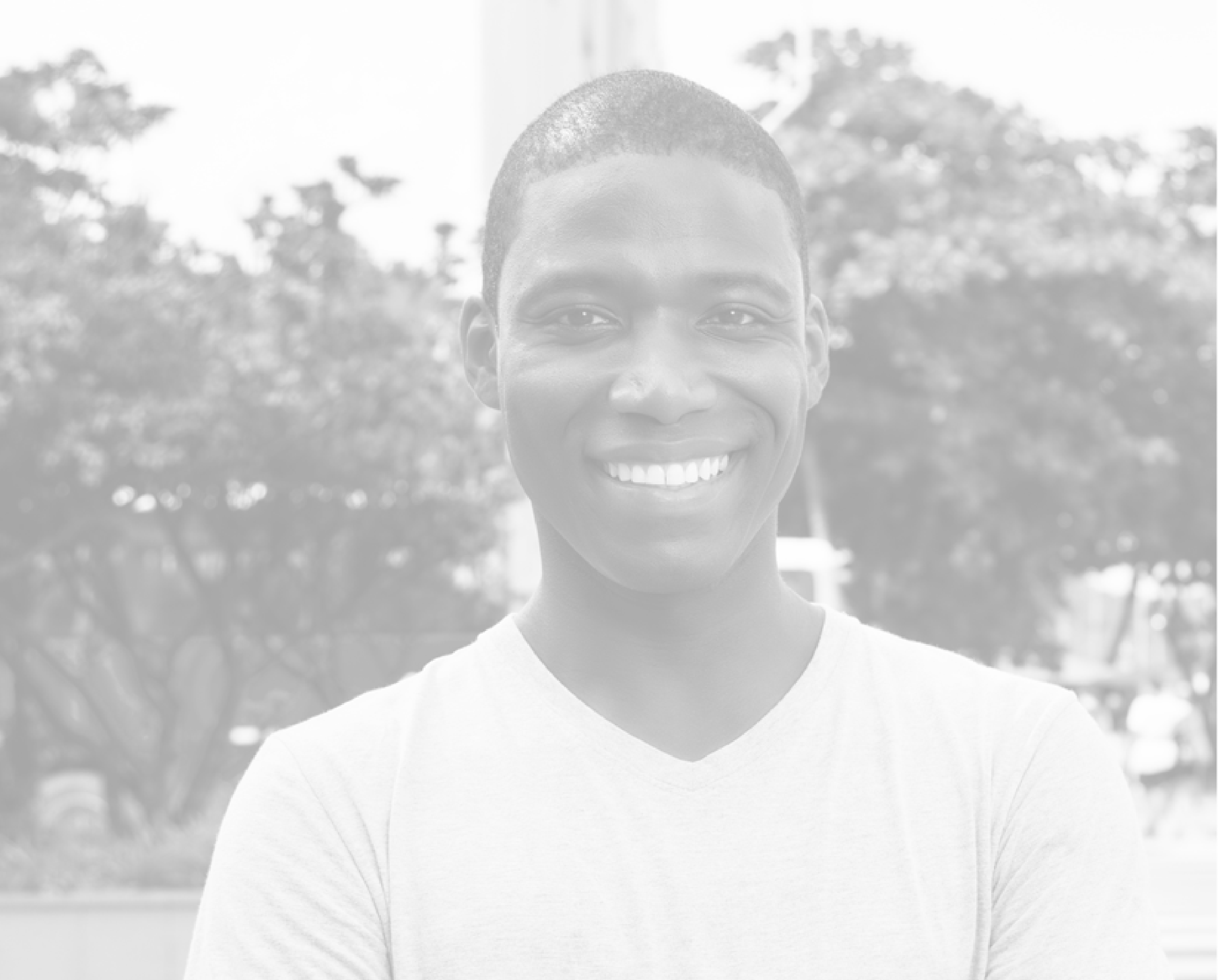


Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.



The critical issue in primary education throughout the region is not coverage but rather the quality of education which has not allowed for improvements in learning.

Even though the Third Comparative and Explanatory Regional Study of 2012 (known by its Spanish acronym of TERCE) contrasted with the Second Study of 2006 (SERCE) shows notable improvements in the reading and mathematics testing of third and sixth grade students in all countries, performance continues to be very low (UNESCO 2015). For example, in the mathematics tests, 47% of third grade students reached the lowest of four levels of performance. In various countries, the results were worrisome: in the Dominican Republic, the scores of 85% of third grade students were in the lowest level and in Nicaragua and Paraguay the corresponding percentages were 68% and 67%, respectively. Chile achieved the best performance of the region but only 22% of Chilean students scored in the highest level.



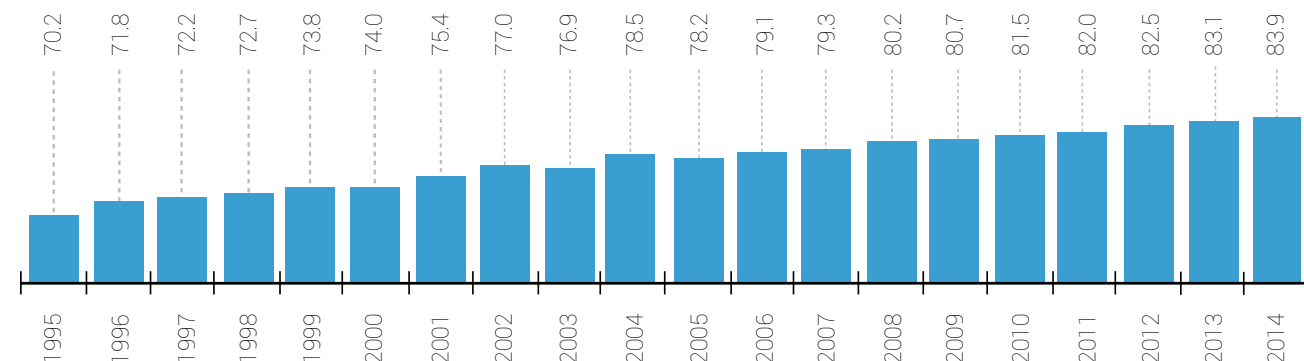
YOUTH



A. SECONDARY SCHOOL ATTENDANCE

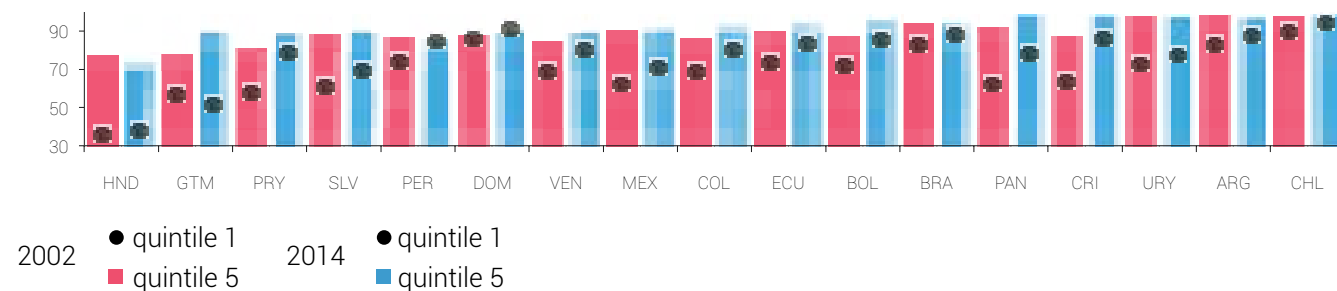
Schools can provide a supervised and constructive environment. Staying in such a setting during the secondary school years, between 13 and 17 years of age, is decisive for developing cognitive skills, building patterns of behavior and acquiring skills for social interaction. Across the region, school attendance of children of this age group advanced steadily in the last two decades (**Graph 24**), although at a slower pace than the increase in attendance by children of the ages of primary school. On average, school attendance among children between 13 and 17 years increased from 70% to 84% between 1995 and 2014. The countries where the increase was greatest are the Dominican Republic (from 55% to 91%), Costa Rica (67% to 90%) and Paraguay (61% to 85%) (see Statistical annex). The gaps in school attendance between the poorest and richest quintiles diminished almost everywhere in the region (Graph 25). However, the gap remained wide in 2014 in countries such as Honduras (39 versus 75%), Guatemala (52 versus 90%) and El Salvador (70 versus 92%). These gaps are non-existent or minimal in countries like Chile, Dominican Republic and Peru.

GRAPH 24: SCHOOL ATTENDANCE OF CHILDREN AGES 13 TO 17 IN LAC (%).



Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

GRAPH 25: SCHOOL ATTENDANCE OF CHILDREN BETWEEN 13 AND 17 YEARS OF AGE AMONG THE RICHEST 20% AND THE POOREST 20%, 2002 AND 2014, BY COUNTRY (IN %).



Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

The rates of school attendance reveal the participation of individuals in formal learning centers, both public and private, but not the academic trajectories of the students. That is, the data do not tell whether people repeat grades, have grade for age delays, leave school, graduate or other aspects of their school career. **Graph 26** shows the grade for age delays among students from 13 to 17 years—whose level of education is two or more years behind where it should be according to their age—in the poorest and richest quintiles, ordered according to the size of the gap between the two groups.

Students from Brazil, Honduras, Guatemala and Nicaragua have the most severe delays in the region (higher percentages in both of the quintiles simultaneously), but do not have greater differences in the school delay between quintiles. In ten of 18 countries, the school delay in the poorest quintile is between three and six times higher than in the richest quintile. That is, contrasts in school delay between quintiles are much more pronounced than the differences regarding school attendance.

The grade for age distortion in secondary school implies not only higher costs per student in the school system. The grade for age distortion also points to challenges with desertion (drop-out), poor performance and low levels of graduation and, in the long term, reduced productivity and lower growth for countries. **Graph 27** shows for the region as a whole the trend in secondary school graduation rates—people between 18 and 20 years of age who completed at least 12 years of schooling—by gender. In two decades, the rates rose among men and women alike by nearly 20 percentage points. In 2014, the average graduation rate remained higher among women, 43% versus 36% among men.



Over the past two decades more women graduated from secondary school than men.

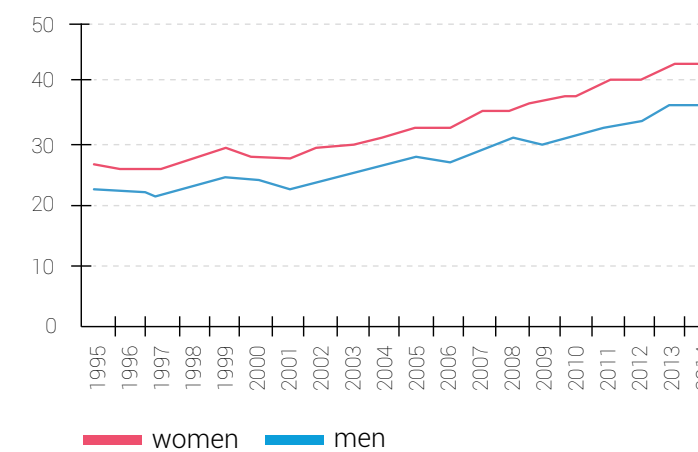
Even with the significant increase in graduation in recent decades, the number of secondary school graduates in the region is very much below the average of European Union countries that belong to the OECD: 82% among women and 79% among men (OECD 2014b). Chile has the best result in the region (81% for women and 76% for men) and Honduras, Nicaragua and Guatemala report the lowest rates of secondary school graduation among men—10, 11 and 17%, respectively.

GRAPH 26: RATE OF SCHOOLING LAG IN SECONDARY (13 TO 17 YEARS), BY INCOME QUINTILE, 2014.



Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

GRAPH 27: RATE OF SECONDARY SCHOOL GRADUATION IN LAC (18 TO 20 YEARS), BY GENDER (%).

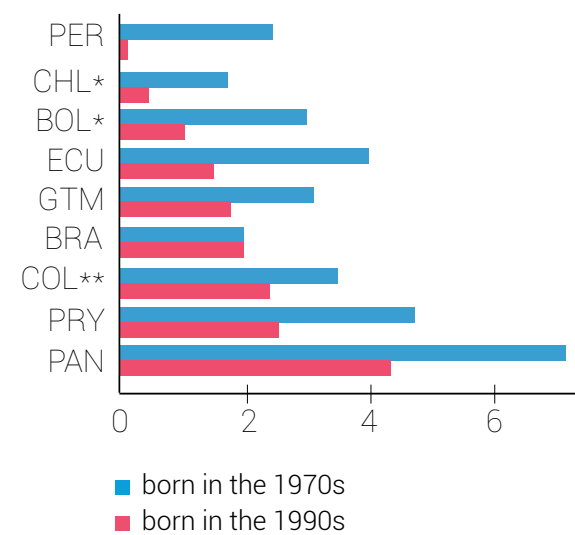


Not only do differences exist across income and gender in school attainment, but also across ethnic groups. Average schooling gaps between non-indigenous and indigenous declined from 3.5 years for those born in the '70s (ages 44-50 in the recent survey) to a gap of 1.8 years for those born in the '90s (ages 18-24) (**Graph 28**).

While improvements occurred in all countries, they were greater in Peru (from 2.5 to 0.1 years) and Chile (1.7 to 0.5 years). In Panama and Paraguay, the differences in schooling between the non-indigenous and the indigenous are still high: 4.4 and 2.6 years, respectively. The differences in the proportion of the non-indigenous and indigenous populations who completed at least nine years of schooling were also reduced, except in Brazil, Colombia and Guatemala where, on the contrary, the differences remained steady or increased (**Graph 29**). Peru has closed the gap in completing lower secondary (9 years) between the non-indigenous and indigenous populations in the younger generation, despite the fact that the gap for those born in the '70s was wider than in other countries. Chile has also substantially reduced the gap to 1.6 percentage points. In Panama and Paraguay, while it is true that the gaps also decreased, they remain significant: 45 and 27 percentage points, respectively.

In addition to desertion, overage for grade, and educational gaps within countries, the quality of education is also a crucial issue in secondary school because it directly affects learning outcomes. Results of the PISA (Programme for International Student Assessment) taken by 15-year-old students in 2012 and 2006 show limited improvement in mathematics in Argentina, Brazil and Chile, insignificant improvements in Colombia and Mexico and regression in Uruguay (OECD 2014). The results also reveal that performance in the eight countries of the region that participated in the 2012 tests (Costa Rica and Peru joined alongside the six previously mentioned) placed among the 15 countries, out of 65, that scored the worst in mathematics. Chile had the best performance of the six countries and Peru the worst. Seven of the eight countries had an average in mathematics below the minimum level of basic competence (only reaching level two of six levels of performance). Students who score below this level cannot interpret and recognize basic questions, nor use algorithms, formulas or simple procedures. The average score in Chile was the only one in the region that marginally exceeded minimum competence.

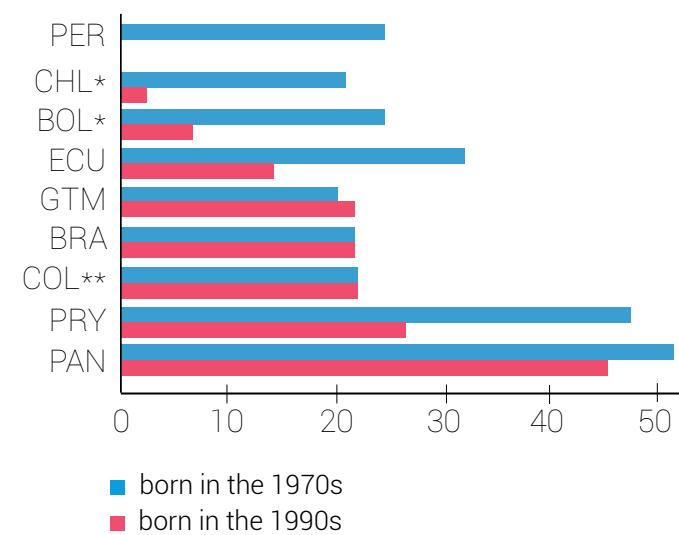
GRAPH 28: DIFFERENCES OF YEARS OF AVERAGE EDUCATION BETWEEN NON-INDIGENOUS AND INDIGENOUS, ~2014.



Note: *Data 2013, **data 2007, *** population with more than 9 years of education.

Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

GRAPH 29: DIFFERENCES IN THE COMPLETION OF BASIC SECONDARY SCHOOL BETWEEN NON-INDIGENOUS AND INDIGENOUS (PERCENTAGE POINTS)*, ~2014.**



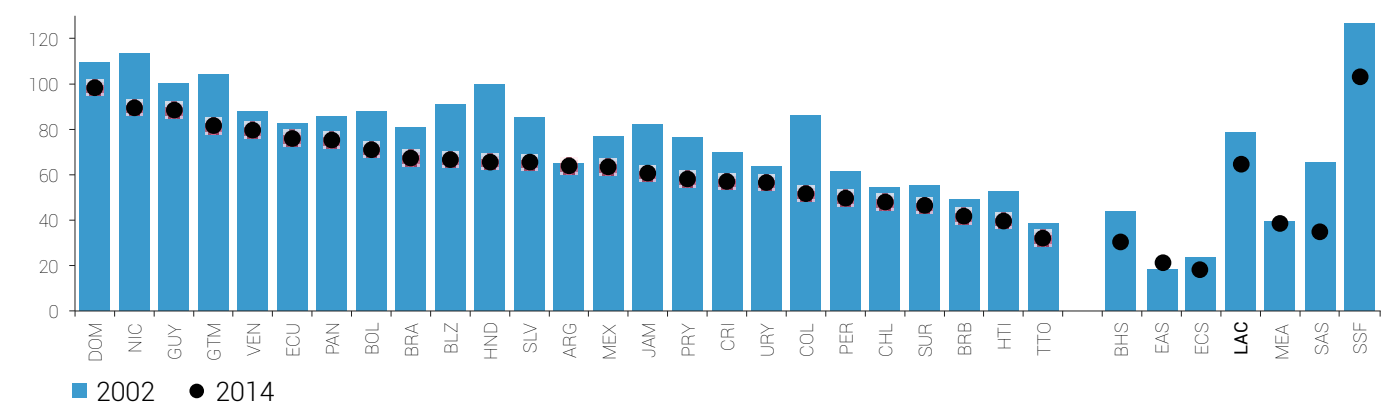
B. ADOLESCENT FERTILITY

Maternity during adolescence is a concern of policymakers as well as family members (Azevedo et al. 2012). While a lively debate remains about whether the impact on mother's outcomes is due to the effect of the birth at a young age or the underlying conditions of poverty, the intergenerational effects on the children's health and education are well-recognized. Fertility rates of women between 15 and 19 years of age in the region are the highest in the world. In 2014, Latin America and the Caribbean registered the second highest rate of fertility, 65 births for every 1,000 women between ages 15 and 19, after Sub-Saharan Africa (SSA) with 103 births. Although these fertility rates have been falling in all regions, the drop has been slow in Latin American and the Caribbean—1.6% per year between 2002 and 2014—compared with decreases of 5.1% in South Asia (SAS) and 2.2% in Europe and Central Asia (ECA).

Variations between countries in the region are large. The highest rates of adolescent fertility in 2014 were seen in Dominican Republic, Guatemala, Guyana and Nicaragua, with more than 80 births for every thousand women between 15 and 19 years of age. Meanwhile, Bahamas, Haiti and Tobago reported the lowest rates, with fewer than 40 births for every thousand women. In all countries in the region, teen pregnancy decreased between 2002 and 2014. The most important drops were in Colombia, from 86 to 52 births per thousand adolescent women and in Honduras, from 100 to 66 births. Argentina, Ecuador and Venezuela experienced the lowest reductions in births to adolescent mothers during this period.

The cost for the mother and child in terms of development of their potential as individuals, as well as public spending involved in early pregnancy, merit policies that consider the complexity of the problem. Beyond interventions that in general reduce poverty and improve opportunities for youth, interventions exist that are directly related to preventing teen pregnancy. Although programs that disseminate information about sexual and reproductive health and family planning are common in the region, rigorous evidence of their effectiveness is scarce. An exception is an on-line course in Colombia (Chong et al. 2013). Likewise, it has been found that programs that seek to improve employability through offering vocational and basic skills training reduce adolescent maternity in the Dominican Republic (Novella and Ripani 2014) and Uganda (Bandiera 2015) because they can improve opportunities and aspirations for the future.

GRAPH 30: FERTILITY RATE IN YOUNG WOMEN (BIRTHS PER 1,000 WOMEN BETWEEN 15 AND 19 YEARS OF AGE).



Source: World Bank "World Development Indicators" 2015.

C. UNEMPLOYMENT AND INACTIVITY

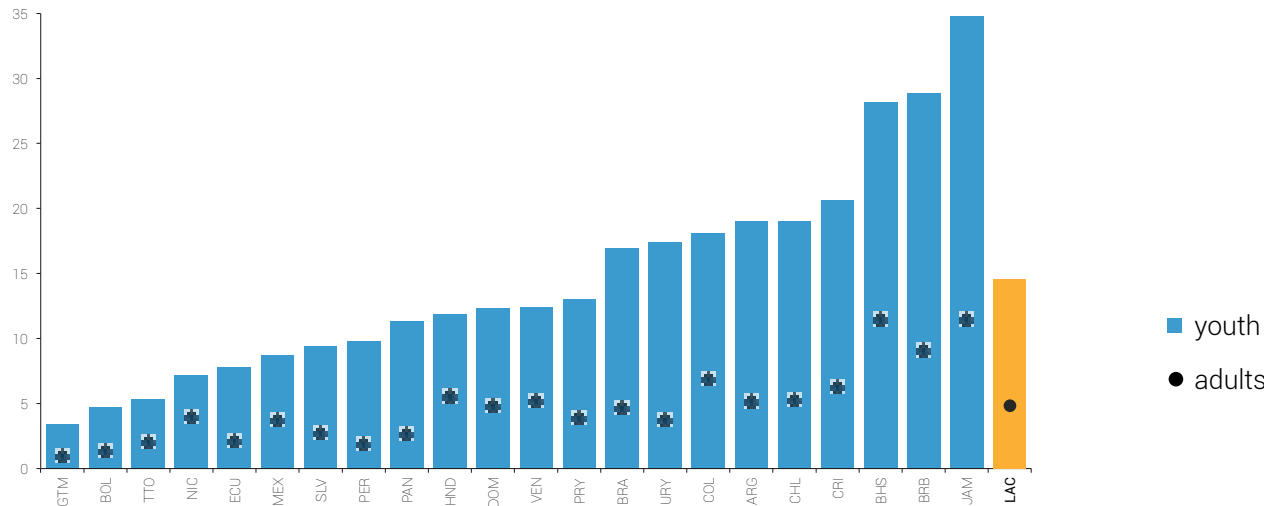
Youth unemployment refers to the economically active population between 15 and 24 years of age that has no employment but is actively seeking work. In the last two decades, the average rate of youth unemployment has been 15%, that is, three times higher than the average rate of unemployment among adults (from 25 to 64 years) in the same period (**Graph 31**). The persistence of unemployment among youth and high rates of inactivity in terms of working or studying are crucial issues for governments in the region due to the potential impact of these phenomena on formation of human capital and job placement as well as their implications for delinquency, drug addiction and teen pregnancy.

In 2014, only five of 22 countries (Bolivia, Ecuador, Guatemala, Nicaragua and Trinidad and Tobago) had youth unemployment rates below 8% while in the Bahamas, Barbados, Costa Rica and Jamaica the unemployment rates were above 20%. Additional data from the 2014 household surveys show that, on average, more education does not mean less unemployment: among youth who have completed primary school, unemployment reached approximately 10%, and among those who studied upper secondary (10 to 12 years of schooling) or have post-secondary studies, unemployment reached almost 14%. While this relationship between schooling and unemployment is most notable in Colombia, Mexico and Peru, unemployment is lower in Brazil, Costa Rica and Uruguay among youth who have tertiary education.

Among youth in the region who are not actively employed, a large portion also does not study. There are approximately 15 million youth who neither study nor work nor seek employment (dubbed NINIs in Spanish), 75% of whom are women and nearly one-fourth are men and poor women. Inactivity depreciates their basic work skills and restricts their prospects for future work and economic and social inclusion. Also, inactivity also reduces the probability of finding work and—as the market interprets inactivity as a sign of low productivity—increases the possibility of being paid a low salary. Even worse, in countries such as those in the region, with high levels of informal employment, inactivity increases the chances that youth begin their work life with informal jobs and low salaries and that they remain in this segment of the labor market (Alaimo et al. 2015).

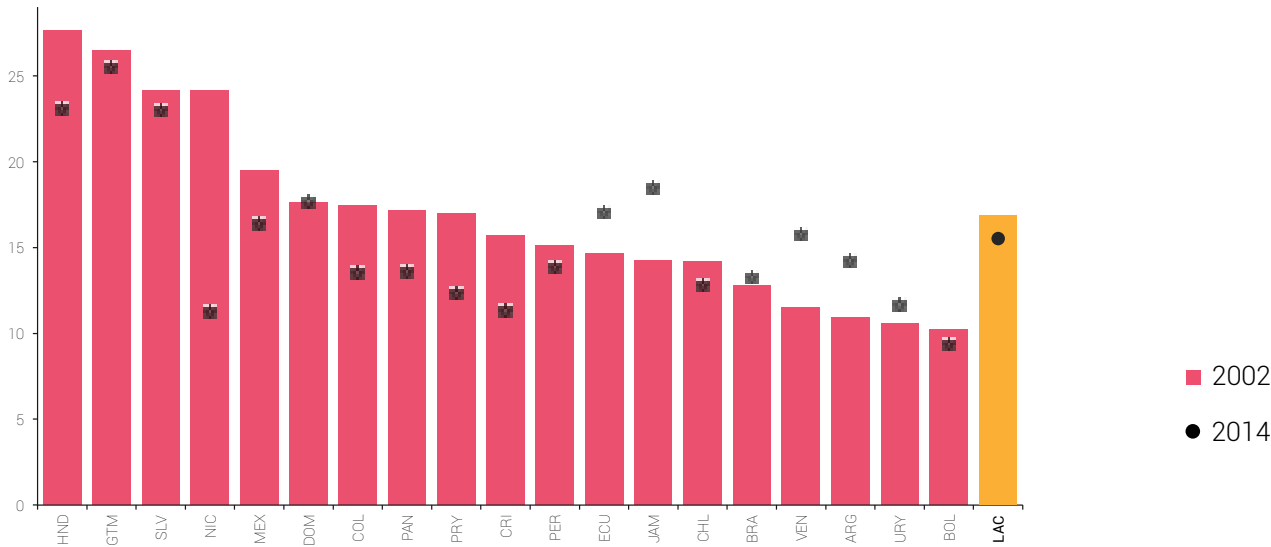
In spite of the fact that between 2002 and 2014 the percentage of NINIs reduced slightly in 12 of 19 countries, dropping on average from 17 to 15% (**Graph 32**), the region has the highest level of NINIs in the world, according to the World Development Indicators of the World Bank. In 2014, the percentage of NINIs among youth ages 15 to 24 exceeded 20% in Guatemala, Honduras and El Salvador. Since 2002, the number of NINIs increased significantly in Argentina, Jamaica y Venezuela (rising on average by 32% to levels between 15% and 18%, approximately). Inactivity among youth is important not only for its immediate impacts on employment and productivity, but also as a factor of risk in the spread of dangerous activities for society in general. Drug addiction and delinquency in particular could create irreversible damage in the formation of human capital and, as a result, in the ability of youth to enter the labor market in the future. Alaimo, et al. (2015) estimate that if unemployed youth and NINIs were incorporated in the labor force, they could add an additional five percentage points to the per capita GDP of the region.

GRAPH 31: UNEMPLOYMENT OF YOUTH AND ADULTS IN 2014 (%).



Note: * data from Jamaica is from 2012
Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

GRAPH 32: YOUTH AGES 15-24 WHO NEITHER STUDY, WORK, NOR SEEK EMPLOYMENT IN 2002 AND 2014 (%)



Note: * data from Jamaica is from 2012
Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.



3



ADULthood

A. UNEMPLOYMENT

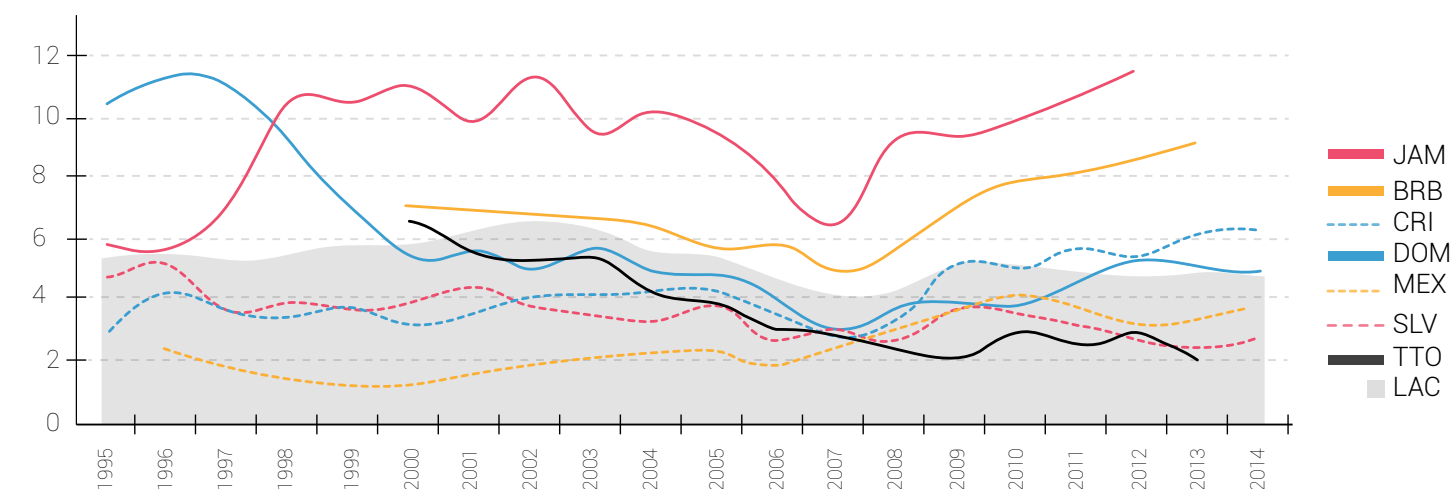
Indicators of employment or unemployment closely reflect fluctuations in economic activity. If the economy grows at a rate higher than that of growth in the working-age population, unemployment tends to decline and vice versa. Periods of economic growth are typically accompanied by a decline in unemployment and an increase in employment. In this sense, employment and unemployment indicators reflect whether economic growth or economic deceleration are converted or not into absorption of the labor force. These indicators are also used as measures of the economic well-being of workers because they are associated with the availability of labor income.

The rate of adult employment—the population 25 years and older that has a job—held steady at about 63% between the beginning of the decade of the '90s and the 2000s, increased almost four percentage points until 2008 and then remained at the same level until 2014 (International Labour Organization, ILO, 2015). This trajectory is consistent with economic growth of the region during the last 25 years. Although the changes in the rate of employment seem small, they were substantial because they suggest that the number of working adults grew at a higher rate than the increase in the total number of adults (2.7% versus 2.3% per year between 2002 and 2014, respectively). That is, it grew more than one of the age groups (people between 15 and 64 years) that demonstrated the most changes in recent years due to the demographic transition experienced by the region (see Chapter 2 of this report). Employment rates of adults vary significantly between countries. For example, in Argentina, Costa Rica and the Dominican Republic, employment rates among adults were about 63% in 2014, and in Bolivia and Peru reached nearly 80% (ILO 2015).

Consistent with economic growth of the region in the decade of the 2000s, the unemployment rate among adults—the economically active population ages 25 to 64 not employed but actively looking for a job—declined during this period except in 2009 when it rose on average between 4.3% and 5.2% due to the drop in GDP (of 1.3%) related to the international financial crisis (**Graph 33**). For seven of 22 countries, however, the crisis precipitated a shift in the trend of declining unemployment among adults seen up until that time. Between 2008 and 2014, unemployment in Honduras tripled, in Costa Rica the rate increased by 90%, in the Bahamas it rose by 74%, in Barbados by 60% and in the Dominican Republic, Jamaica and Mexico grew by about 30 %. In spite of these negative changes, the crisis left Latin America and the Caribbean positioned among the regions of the world with the lowest rates of adult unemployment (ILO 2015) given the increase in unemployment in the other regions: below Eastern, Western and Southern Europe (between 6 and 17%), Central and Eastern Asia (between 7 and 8%) and Northern Africa and South Africa (between 9 and 21%). It is worth pointing out that unemployment of adults in the region is, generally, of short duration due to the fact that fewer than 17% of unoccupied adults seek work for more than 12 months (Alaimo, et al. 2015). Household surveys of 2014 show that the female unemployment rate was 39% higher than that of adult men, 42% greater among workers with some secondary studies than among people with primary education and 3.3 times higher for the poor than for the middle class.



GRAPH 33: UNEMPLOYMENT RATE AMONG ADULTS AGES 25 TO 64 IN SELECTED COUNTRIES.



Note: See details for all countries in the Statistical annex of the Report.

Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

B. FEMALE LABOR FORCE PARTICIPATION

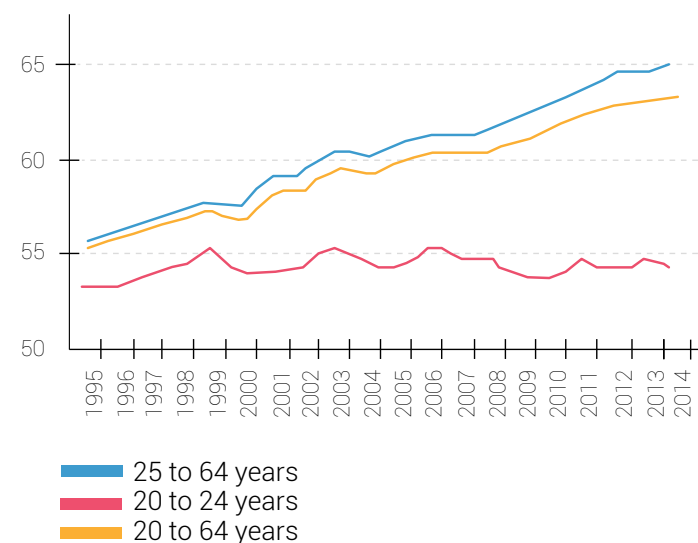
The increase in female participation in the workforce can produce substantial changes not only in living conditions of women and their families but also in social and economic conditions of society as a whole, particularly in the reduction of poverty and inequality and in the development of human capital among children (Gasparini and Marchionni 2015).

Throughout the region, labor force participation by adult women—the female population between 25 and 64 years of age who participate in the labor market—increased constantly during the last two decades, rising from 56 to 65% (**Graph 34**). Labor market participation of younger women (from 20 to 24 years) rose only until the beginning of the 2000s and then stagnated at a level around 55% in both the years of greatest economic growth and during the economic deceleration in the region. This outcome is associated with the high levels of inactivity of young women described above.

While the increase of labor force participation by adult women managed to reduce existing gaps with their male counterparts, considerable differences remain. In 2014, labor force participation of adult men ages 25 to 64 years was 46% higher than the labor force participation of women (93% among men versus 64% among women). Female rates of participation were relatively the lowest in Nicaragua, Peru and Uruguay (about 25%) and the highest in Costa Rica, Guatemala, Honduras and Mexico (above 65%).

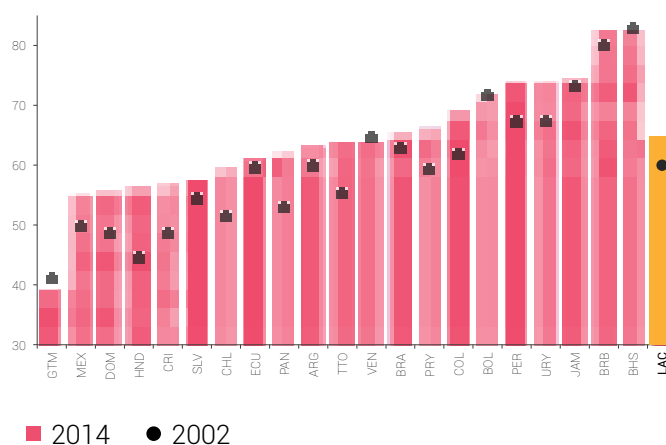
From 2002 to 2014, the greatest changes in adult female labor force participation occurred in Chile, Costa Rica, Honduras and Panama where the rates increased between 16 and 27% (**Graph 35**). Literature about this issue shows that the drivers of the increase of female labor force participation include expansion of access to education, reduction in fertility, increase in basic services and migration to urban areas.

GRAPH 34: FEMALE LABOR FORCE PARTICIPATION BY AGE GROUP IN LAC (%).



Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

GRAPH 35: LABOR FORCE PARTICIPATION OF ADULT WOMEN AGES 25 TO 64 IN 2002 AND 2014 (%).



C. CONTRIBUTION OF WOMEN TO HOUSEHOLD LABOR INCOME.



Between 1996 and 2014, the average contribution of women of Latin America (in 18 countries) to total household labor income rose¹³ significantly (Graph 36) which is reflected in increasing economic autonomy of women and their empowerment within the household and society.

In any household, the contribution of women can vary between 0% and 100% of the total labor income of the household. These contributions vary widely across the region. In Brazil, Chile, Nicaragua, El Salvador, Uruguay and Venezuela, women contribute about 40% of income while in the Dominican Republic, Ecuador, Guatemala and Mexico their contribution is about 30%. The increase in the proportion of income earned by women also varied between countries. Since 1996, women's contribution to the labor income of households rose from 28% to 35%. Chile advanced the most, rising from a relatively low level (25% in 1996), surpassing the regional average in 2008, and reaching 38% at the end of the period, superior to Argentina and close to Uruguay. It bears pointing out that the increase of the contribution of women can reflect better results for them in terms of employment, hours worked or hourly wages, but can also reflect changes for men in these same variables. To explore whether the trends are robust to changes in household composition, analysis was restricted to households with at least one adult male and one adult female. With this more restricted sample, the average contribution of women in the region passed from 22 to 28% between 1996 and 2014,

¹³ Only the income of adults over 18 years is included and only the monetary income considered is that derived from the principal work activity. In the case of independent workers, their earnings are calculated as the sales of their goods and services minus the operational costs of their activity.

that is, a similar trend but starting from a much lower level. In El Salvador, Venezuela, and Uruguay, their contribution reached 33% in 2014 and in Bolivia and Ecuador only 23% (for more information regarding the 18 countries studied see **statistical annex**).

GRAPH 36: CONTRIBUTION OF WOMEN TO HOUSEHOLD LABOR INCOME IN LATIN AMERICA (%).



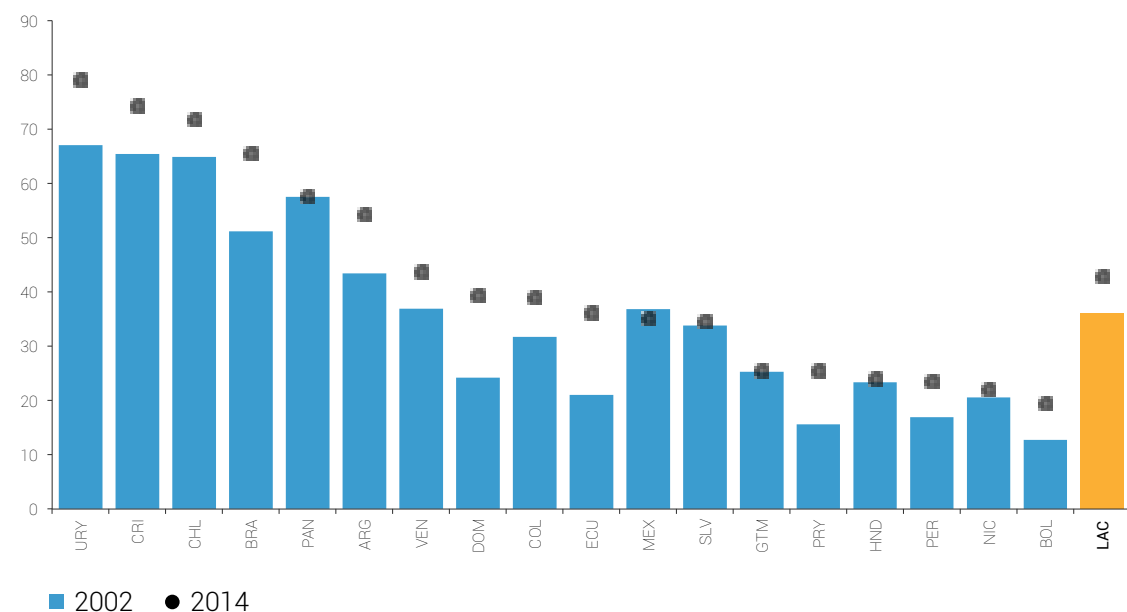
Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

D. FORMAL EMPLOYMENT

Formal employment offers workers access to social security benefits such as retirement, health coverage extending to members of their families, unemployment insurance, protection against work-related accidents and other benefits such as access to bank loans. Formal employment of adults in the region—employed workers between 25 and 64 years of age who contribute to social security—increased, on average from 36% in 2002 to 43% in 2014 (**Graph 37**). With the exceptions of Guatemala, Mexico and Panama where almost no change occurred, formal employment rose in the remaining countries, and in particular the Dominican Republic, Ecuador, Guatemala, Nicaragua and Paraguay where increases of more than 50% were reported. Despite these advances, in six countries (Bolivia, Guatemala Honduras, Nicaragua, Paraguay and Peru) only one fourth of adults or less have a formal job. By contrast, in Chile, Costa Rica and Uruguay, 70% or more of adults have formal employment.

On average, variations by gender in access to formal employment are minimal in the region (Graph 38). By country, the differences are non-existent in seven countries, are favorable to women in three countries (Dominican Republic, Honduras and Venezuela) and favorable for men in the remaining eight countries. However, there are significant differences between social classes and level of schooling. The household surveys of 2014 show that, on average, 57% of adult middle class workers have a formal job while only 17% of the poor have formal employment. Education reduces the risk of having informal employment. Among adults with some level of tertiary education¹⁴, 72% have formal jobs while only 27% of people with incomplete primary education work in formal jobs.

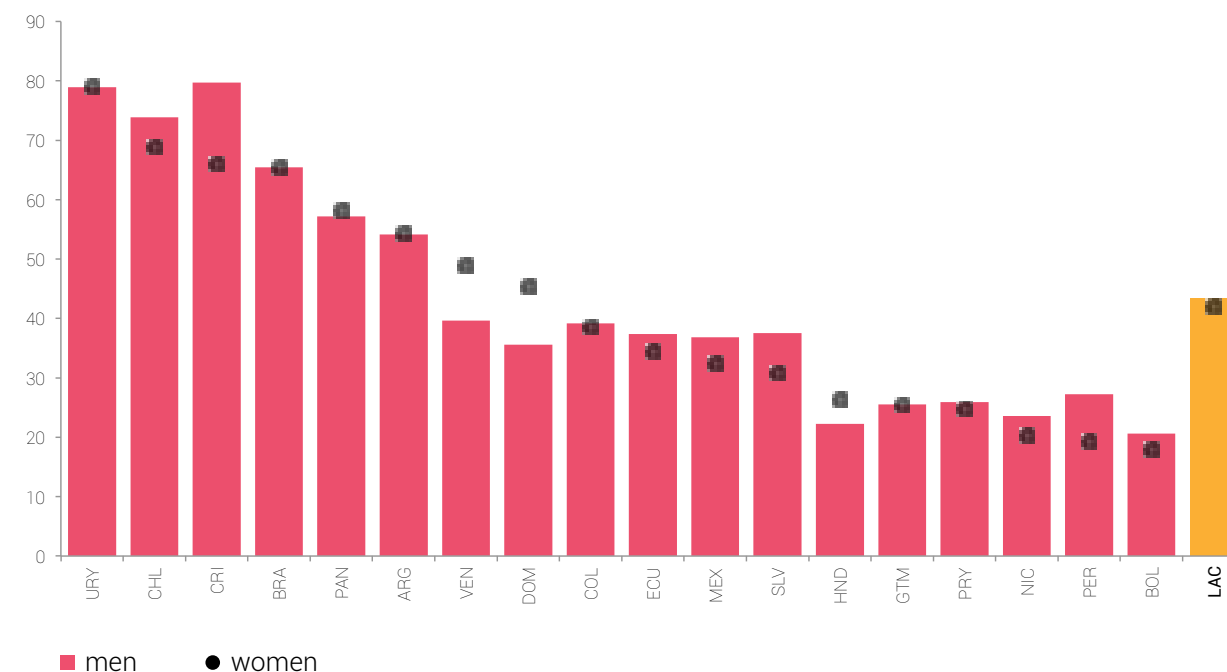
GRAPH 37: ADULT WORKERS BETWEEN AGES 25 AND 64 WITH FORMAL EMPLOYMENT IN 2002 AND 2014 (%).



Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

¹⁴ Tertiary education is understood to be education following completed secondary.

GRAPH 38: ADULT WORKERS BETWEEN AGES 25 AND 64 WITH FORMAL EMPLOYMENT BY GENDER IN 2014 (%).



Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

A simple exercise demonstrates that deliberate measures are needed to confront the persistence of informal employment. If during 12 years, between 2002 and 2014, formal employment of adults increased by seven percentage points and regional GDP grew at an average annual rate of 3.8%, then for each percentage point of GDP growth formal employment grew by 0.39% annually. That means that if the economy grew beginning in 2015 by 4% every year, it would take 45 years for formal employment to double from its 2014 level, from 43% to 86% of workers.



Economic growth is necessary but insufficient to reduce the rate of informal employment of adults.

Informality depends not only on the costs of formalization, shortcomings in the education of adult workers, and rigidities in the labor market but also on the perceptions of workers regarding the costs and benefits of being in one or the other sector. For example, workers consider the benefits of social security relative to the amount of their contributions, the costs of complying with fiscal and labor standards compared to the ability of the worker to absorb those costs, and the benefits of remaining in informality in exchange for receiving the benefits of programs that combat poverty (IDB LMK 2013).



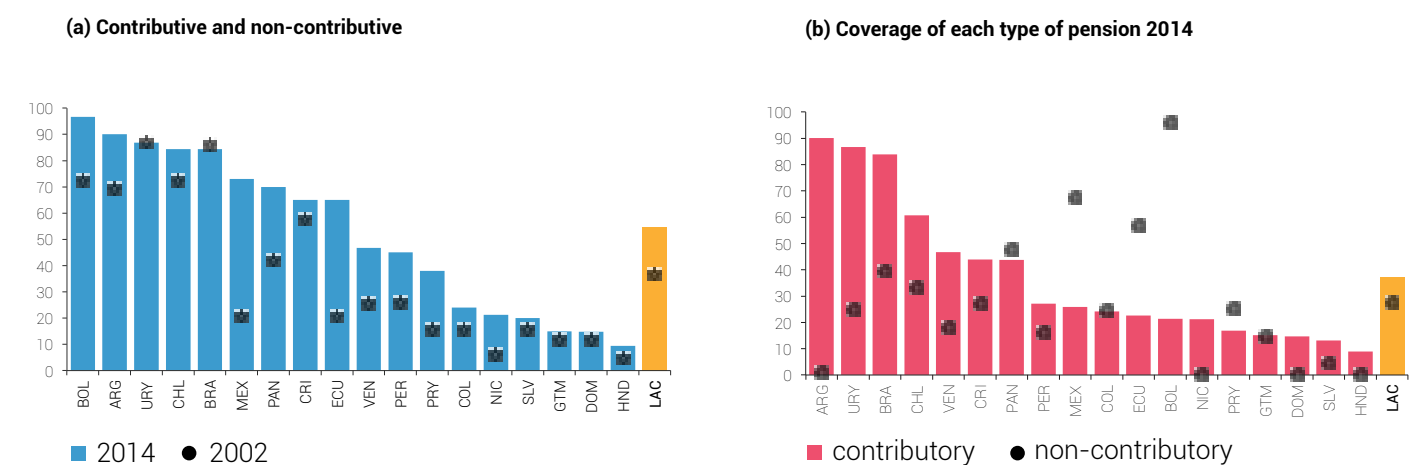
OLD AGE

A. PENSIONS

More than half of the elderly—people older than 65—in the region receive a contributory or non-contributory pension (**Graph 39a**).

In 12 years, between 2002 and 2014, pension coverage increased by 50%. While in Argentina, Bolivia, Brazil, Chile and Uruguay, coverage was almost universal, in the majority of countries of Central America coverage reached less than 20% of the elderly. The most significant increases in the region—a tripling of coverages since 2002—were registered in Mexico (from 21 to 73%), Nicaragua (from 6 to 21%) and Ecuador (from 21 to 65%). Given that the contributory pensions correspond to contributions made by elderly adults during their working life, the increase in coverage of these pensions is related largely to the aging of the population. As a result, the broadening of pension coverage is explained principally by the increase in non-contributory pension programs, that is, due to the decision of governments to expand social assistance channeled to the elderly.

GRÁFICO 39: ADULTOS DE 65 Y MÁS AÑOS DE EDAD CON PENSIONES (%).



Note: The data for the region is the simple average of 18 countries.

Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

Note: The data for the region is the simple average of 18 countries.

Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean and Stampini et al. 2015.

A study by OECD/IDB/World Bank (2014) shows that various of the non-contributory pensions that now exist and the majority of extensions of pensions that already existed were created or occurred during the 2000s. At present, these pensions cover a population of elderly that is equivalent to 75% of the population covered by contributory pensions (**Graph 39b**). Both types of pensions have a similar reach in Colombia, Guatemala and Panama and the non-contributory pensions have broader coverage than the contributory pensions in Bolivia, Ecuador, Mexico and Paraguay. In various countries, non-contributory pensions are granted only to the elderly who do not have contributory pensions. In other countries, the two types of pensions are received by the same person because non-contributory pensions are disbursed as a complement to contributive pensions until the sum of the two reaches a minimum level of income.

According to the data from the household surveys and administrative registries in 14 countries of the region¹⁵, the amounts paid by contributory pensions to the elderly are on average 3.4 times greater than the transfers received for the non-contributory pensions (US\$ 430 versus US \$ 126 per month in 2014). In some countries, the payment for contributory pensions is much higher than the disbursement for non-contributory pensions; in Colombia it is 21 times larger, in Bolivia and Mexico the amount is nine times bigger, in Ecuador eight times and in Peru and El Salvador six times. Therefore, in various cases the amounts of non-contributory pensions, while they alleviate the conditions of poverty of their beneficiaries, they do not allow them to leave poverty.



Non-contributory pensions have helped increase family consumption, close the gender gap regarding income, improve mental health, and raise the possibilities for productive investment among adults over 65. (Bosh et al 2013; Gertler et al 2015)

Non-contributory pensions, however, have also contributed to increasing the fiscal risks of governments: due to the costs of these programs in a context of an aging population in the region and could be affecting negatively the increase in formal employment because in the countries it is possible to receive old-age pensions without having made any contribution (see “Public transfers to households”). As examined in the following chapter, contributory pensions are the source of income that has most helped to lower the risk that the elderly suffer from extreme poverty.

B. NONCOMMUNICABLE DISEASES AND OBESITY

Noncommunicable or chronic diseases (NCDs) are illnesses of prolonged duration and gradual progression. The leading NCDs are the cardiovascular illnesses, cancer, chronic respiratory disease and diabetes (WHO 2015). In 2012, the average rate of death from any NCD in the region was of 487 for every 100,000 people: 573 deaths among men and 433 among women (**Graph 40**).



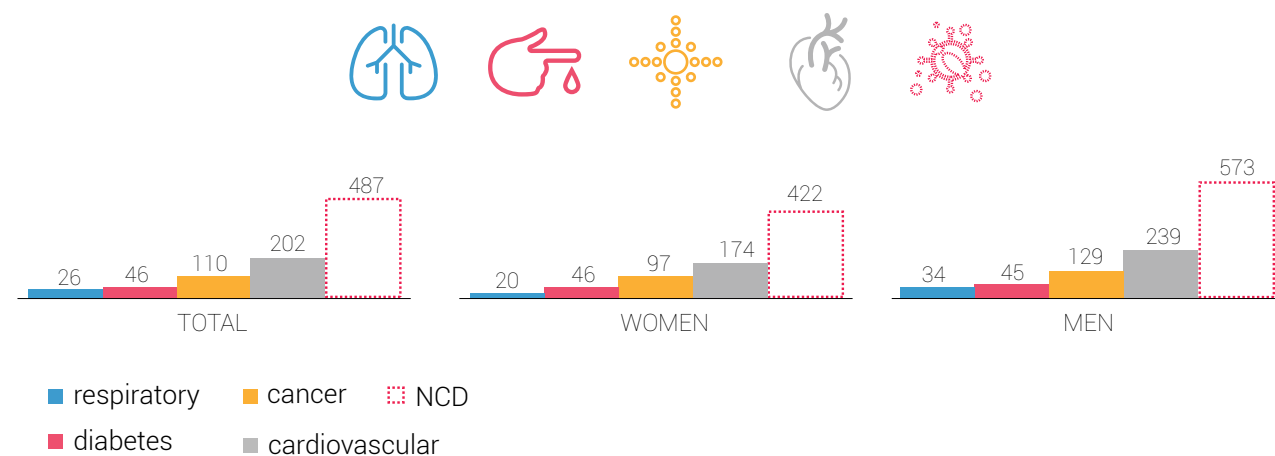
In the region, cardiovascular illnesses are those that affect a greater number of people (202 for every 100,000 people), followed by cancer (110), diabetes (46) and respiratory illnesses (26).

The distribution of chronic illnesses is very heterogeneous among countries. For example, Mexico has the lowest rate of death by cancer in the region (72 for every 100,000 people) but is one of the countries with more deaths from diabetes (91). On the contrary, Uruguay has the lowest rate of deaths from diabetes (12) and at the same time reports the highest rate of deaths from cancer (154). (See the country profiles in the Statistical annex of the Report).



¹⁵ Argentina, Bolivia, Chile, Colombia, Costa Rica, Ecuador, Guatemala, Mexico, Panama, Peru, Paraguay, El Salvador and Uruguay.

GRAPH 40: DEATHS ACCORDING TO TYPE OF NCD IN LATIN AMERICA AND THE CARIBBEAN, 2012 (PER 100,000 INHABITANTS).

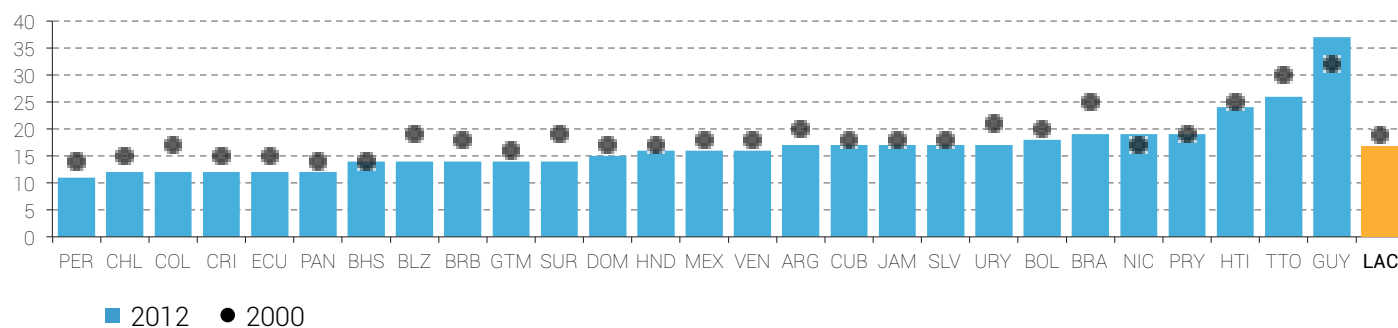


Note: WHO uses mortality rates with a standardized age, that is, the weighted average of rates in specific age groups for every 100,000 people, where the weights are the proportion of people within each age group according to the criteria of the WHO.

Source: Based on data from the WHO – NCD Profiles of countries (2014).

Although the NCDs principally affect people of an advanced age, those under 70 also face this type of illnesses. According to the World Health Organization, more than 16 million of the premature deaths in the world annually are attributed to NCDs.

GRAPH 41: PREMATURE DEATHS DUE TO NCDs IN LATIN AMERICA AND THE CARIBBEAN, 2000 AND 2012 (%).



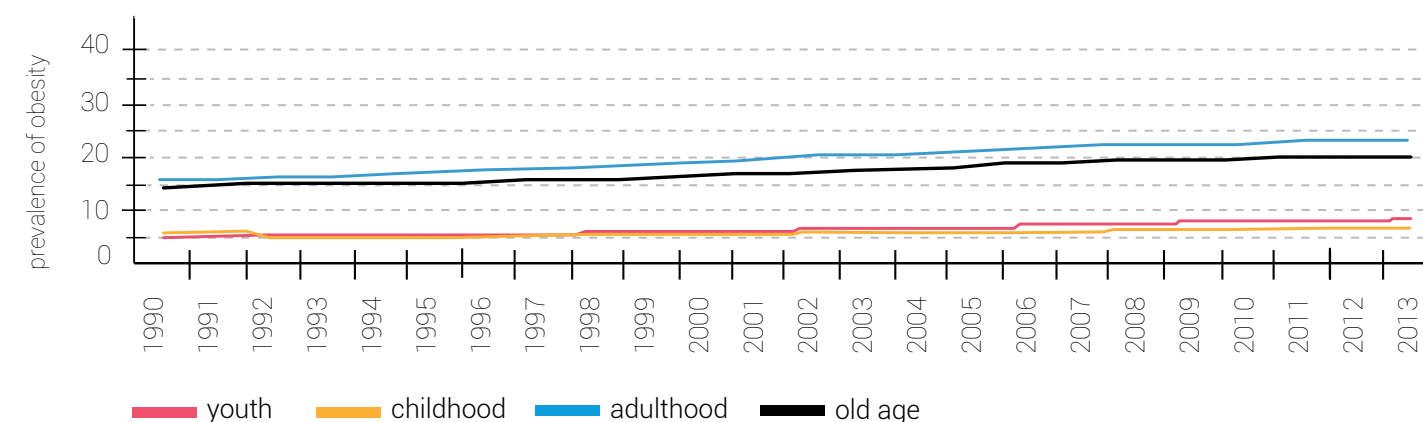
Source: Developed by the author based on data of the World Health Organization – NCD Country profiles (2014).

NCDs are correlated with the socioeconomic conditions of people. Those most affected are those with scarce resources, people who eat unhealthy food and have limited access to health services. Even if NCDs are detected in timely fashion, their limited resources prevent them from receiving appropriate treatment due to the cost and duration of such treatments. Among the risk factors that provoke NCDs, predominant factors are unhealthy diets, lack of physical activity and consumption of tobacco or alcohol (WHO 2015).

One of the principal consequences associated to these factors is obesity, understood as the abnormal or excessive accumulation of fat that can be damaging to health which occurs when a person's weight in kilograms is equal or superior to 30 times the square of their height in meters. Between 1990 and 2013, the region has seen a growing trend

in the prevalence of obesity in all stages of the life cycle (Graph 42). Obesity among adults rose by 16.2% in 1990 to 23.3% in 2013, with Mexico as the country with the highest incidence (30.5%) (Graph 43). Paraguay has the highest rate of obesity among the elderly (30.1%) and Uruguay reports the highest percentages of obesity among children (15.3%) and youth (12.8%). (See the data for 22 countries in the Statistical annex of the Report). Ecuador, Guatemala and Haiti are the countries with the least incidence of obesity and Chile is one of the countries with the highest rate of obesity in every stage of the life cycle. The prevention of NCDs is a challenge for public health policies in the region. The high incidence of the risk factors and the difficulties that can come along with the increase in morbidity and mortality caused by the advanced phase of NCDs—lack of monetary, physical and human resources, inadequate attention to many groups for geographic, ethnic, socioeconomic reasons, among others—justify confronting this challenge.

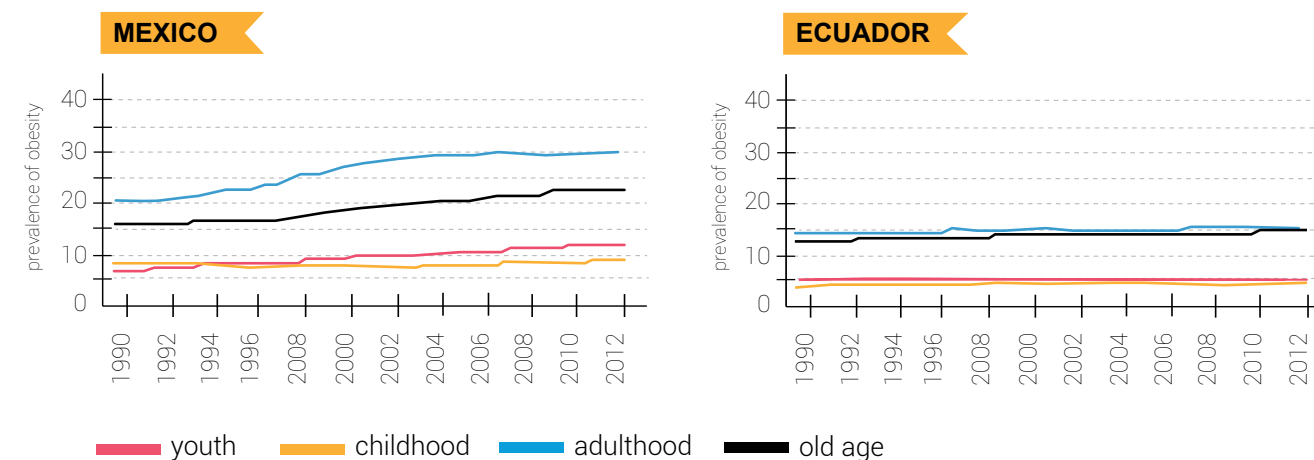
GRÁFICO 42: PREVALENCE OF OBESITY IN CHILDHOOD, YOUTH, ADULTHOOD AND OLD AGE IN LATIN AMERICA (REGIONAL AVERAGE): 1990-2013 (%).



Note: The ages of childhood extend from age 2 to 9 years, youth from 10 to 24 years, adulthood from 25 to 64 and old age 65 and above.

Source: Global Burden of Disease Study 2013. Obesity Prevalence 1990-2013. Institute for Health Metrics and Evaluation (IHME) 2014.

GRÁFICO 43: PREVALENCE OF OBESITY IN CHILDHOOD, YOUTH, ADULTHOOD AND OLD AGE IN MEXICO AND ECUADOR: 1990-2013 (%).




Note: The ages of childhood extend from age 2 to 9 years, youth from 10 to 24 years, adulthood from 25 to 64 and old age 65 and above.

Source: Global Burden of Disease Study 2013. Obesity Prevalence 1990-2013. Institute for Health Metrics and Evaluation (IHME) 2014.

12

C

CRITICAL
INPUTS



The critical input indicators refer to social investment that seeks to have impacts on the outcome indicators and is channeled by government policies.

1.

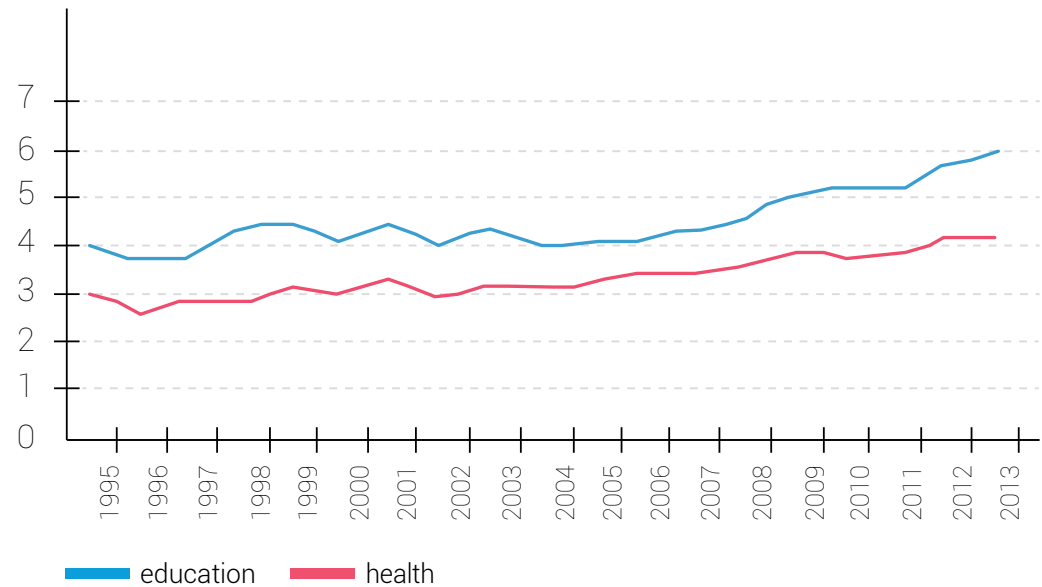


SOCIAL SPENDING
ON HEALTH AND
EDUCATION

Social spending is comprised of public resources that governments earmark for financing their country’s social policies and includes expenditures on: social protection (security and social assistance), health, education, housing and sanitation systems, drinking water and sewerage connections to households. In general, since the beginning of the 2000s, social spending as a percentage of GDP in the region showed gradual increases.

Currently, half of total social spending is targeted for health and education. This expenditure increased from 7.0% to 10.1% of GDP between 1995 and 2013 (**Graph 44**). Argentina, Brazil and Costa Rica lead the region in education expenditures, allocating about 8% of GDP to education, and Colombia, the Dominican Republic and Peru spend 3%, the lowest amounts dedicated to education (**Graph 45**). According to UNESCO, in recent years the largest portion of educational spending in the region was dedicated to secondary education (more than 2% of GDP in 2013). On average, governments channel only 0.4% of GDP to training for children between zero and five years of age, and only 1.6% to middle childhood, that is, children between six and 12 years old (Berlinsky and Schady 2015).

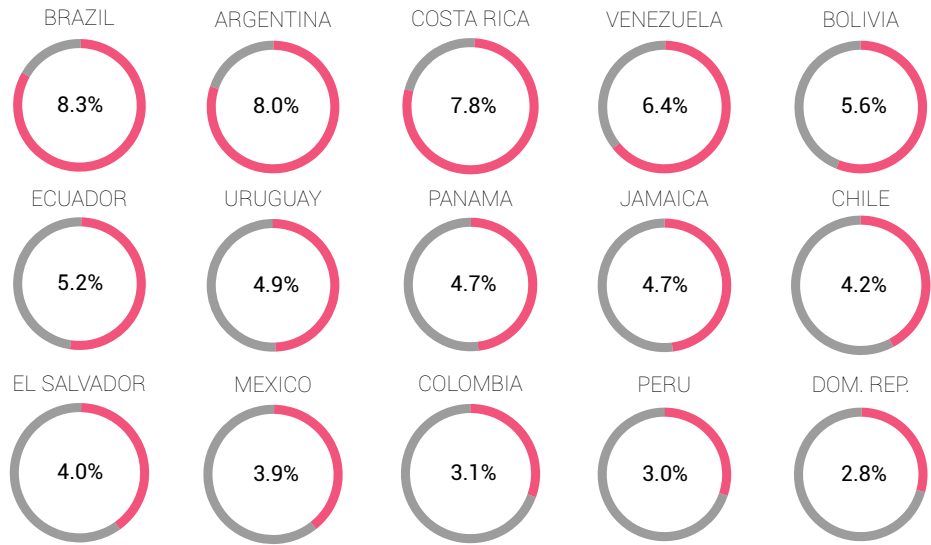
GRAPH 44: PUBLIC SPENDING ON EDUCATION AND HEALTH IN LAC (% OF GDP).



Source: Based on data from ECLAC and IMF.



GRAPH 45: PUBLIC SPENDING ON EDUCATION 2013 (% OF GDP).



Source: Based on data from ECLAC and IMF.

In the region, spending for health also increased in recent years, although at a lower rate than education expenditures: allocations for health rose from 3% to 4% of GDP between 2002 and 2013 (**Graph 46**).

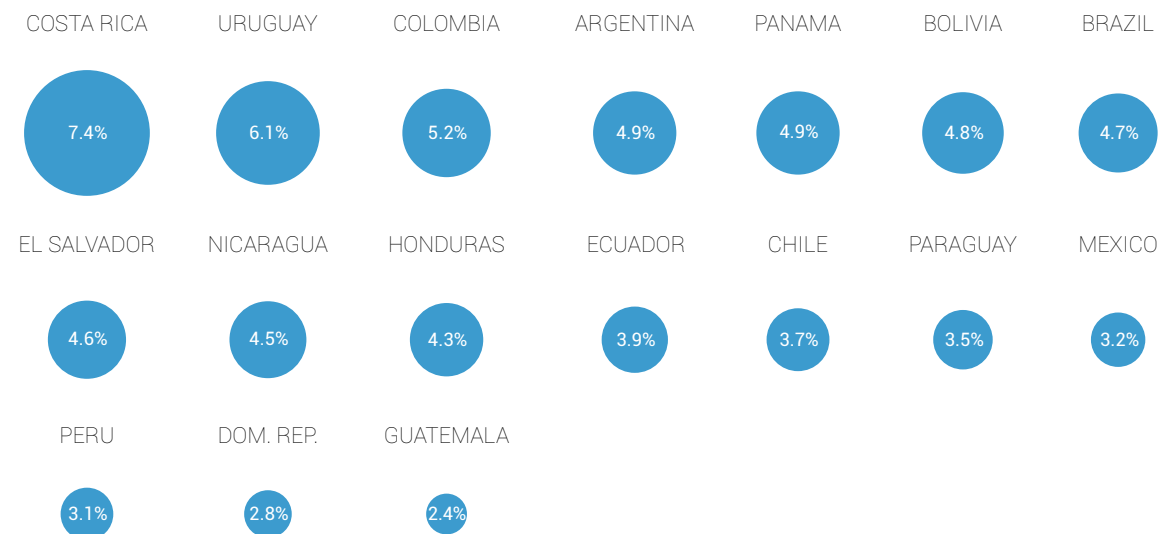
Out-of-pocket expenses, that is, direct disbursements for health paid by households, are an indicator that reveals the inefficiency of national health systems in meeting people’s needs. This expense is high in the entire region. On average, approximately one third of total spending on health is paid by households. What’s more, spending by individuals for health services exceeds 40% of all health expenditures in Ecuador, Guatemala, Honduras, Mexico, Paraguay and Venezuela (**Graph 47**) and this amount is less than 20% of the total only in Colombia and Uruguay,



The need to make out-of-pocket spending to gain access to health services or medications is, undoubtedly, an important source of inequality because it limits the access to those services by the people who most need them.

In Latin America and the Caribbean, the trends in social spending have not demonstrated significant cyclical patterns because many of the budgets are inflexible in the short term, such as salaries and spending on pensions. In recent years, the growing economies across the region allowed governments, through the increase in public revenues, to expand and consolidate a transformation of social policy that began in the late 1990s. This effort was centered on social programs aimed to alleviate conditions of poverty: conditional cash transfers, non-contributory pensions, universal health plans and the like. Total social spending as a percentage of GDP on average increased from 14.8% in 1997-1998 to 19.5% in 2013-2014 (see **Graph 48**). Since GDP in the region increased during the same period by 3.2% per year on average, social spending rose by 50% more (5.0% per year). The Graph also shows that while social spending increased year by year, the sum of the remaining line items in the public budget were reduced during the same period from 13.4% to 9.8% of GDP. Thus, the relative weight of social spending increased from 52.5% to 66.4% of total public spending.

GRAPH 46: PUBLIC SPENDING ON HEALTH 2013 (% OF GDP).

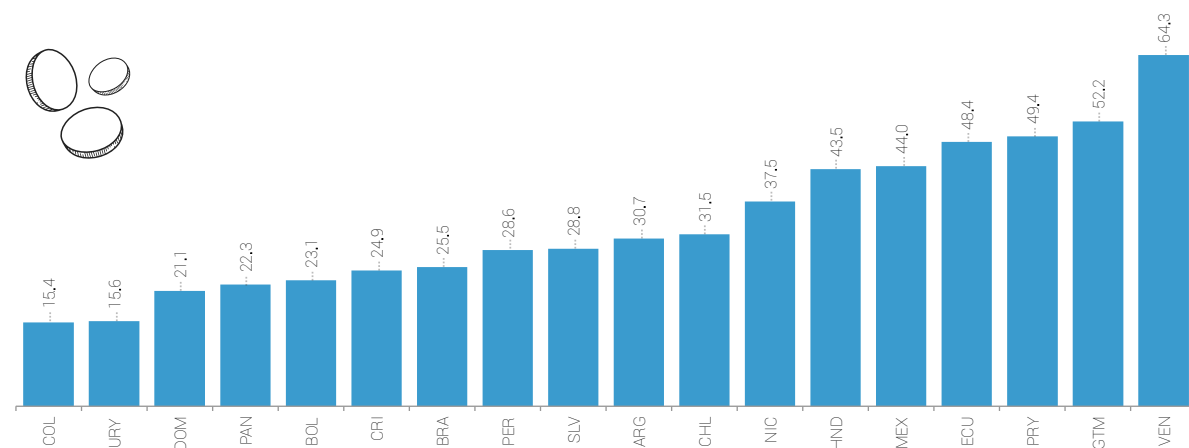


Pan American Health Organization Basic Health Indicators.



The deceleration of economic growth in the region and the worsening of the fiscal situation in many countries compels governments to improve the efficiency of social spending in order to continue supporting social progress and reduce the risks of losing the ground gained in the past decade.

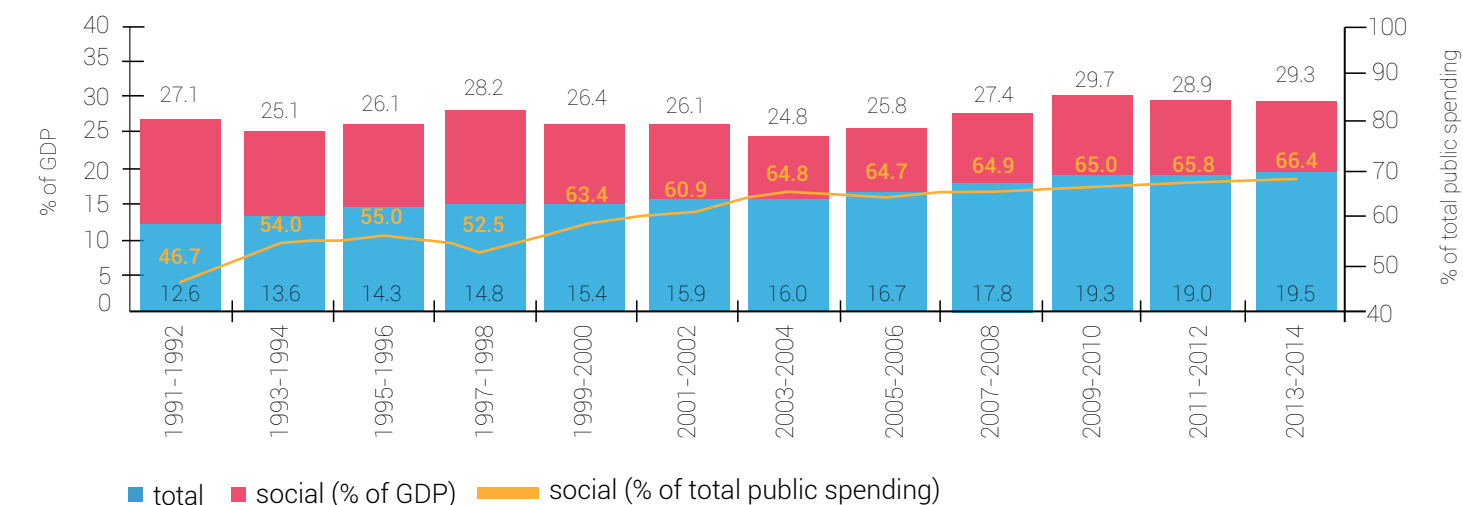
GRAPH 47: OUT-OF-POCKET SPENDING 2014 (% OF TOTAL SPENDING ON HEALTH).



Source: World Bank. World Development Indicators.

Based on an empirical analysis, a recent IDB study for Central America, Panama and the Dominican Republic reveals that, on average, the opportunity for an improvement in efficiency in social spending at the local level is considerable. In health and education, the 96 districts analyzed present an average efficiency of 0.73 and 0.72, respectively. That is, the analysis suggests it would be possible to reduce the rates of school desertion/repetition and infant mortality by more than 25% (Prat and Beverinotti 2016) with the same level of spending. Sectoral studies for the region illustrate specific policies for improving the efficiency of social spending (Bosch et al. 2013, Paes-Sousa et al. 2013, Chisholm and Evans 2010, among others).

GRAPH 48: PUBLIC SOCIAL SPENDING AND TOTAL SPENDING IN LAC (% OF GDP AND OF TOTAL PUBLIC SPENDING).



Note: weighted average of 20 countries of the region.

Source: Economic Commission for Latin America (2016).





2



PUBLIC TRANSFERS TO HOUSEHOLDS

Government transfers are relevant as a source of income because they allow households to mitigate their conditions of poverty and protect themselves from adverse economic changes. From the perspective of the economic life cycle, public transfers are also important because they finance part of the deficit of income in the first and last stages of the cycle (of children and the elderly) and as such public transfers can reduce the gaps in income between age groups. Two of the transfer programs that grew the most in the region in recent years are Conditional Cash Transfers (CCTs) and Non-contributory Pensions (NCPs). In Brazil, Ecuador, Mexico and Uruguay, for example, the two programs explain more than 60% of the social assistance budget (Cerruti et al. 2014). The CCTs and NCPs are considered the best-targeted social programs and, as a result, those that achieve the greatest impacts in reducing poverty.



CCTs are typically channeled to poor households with children and/or pregnant women and combine a cash transfer with a set of commitments on the part of households so they invest in the human capital of their children.

These commitments are: regular medical check-ups of children and pregnant women, and regular attendance at school by children and youth. The cash transfer has the purpose of alleviating conditions of extreme poverty of households and the commitments fulfilled by the households intend to break the transmission of poverty across generations. While CCTs have had positive effects on the well-being of households, in general, there are two leading concerns about them:

- (i) they have raised the use of health and education services, but the impact on final results in human capital has been limited, and
- (ii) the increase of the transfers has been so large in some cases—for example, in Mexico they are the equivalent of more than 40% of the income of the poorest quintile—that they could be affecting incentives for work (Levy y Schady 2013).

In 2013, CCTs operated in 17 Latin American and Caribbean countries and benefited 135 million people (**Table 1**). Governments of the region dedicated between 0.06% and 0.66% of GDP to these programs; El Salvador is the country that spent the least and Honduras spent the most. Except for Honduras, Panama and Paraguay, coverage of CCTs relative to the total population surpasses the number of people living in extreme poverty in all the countries. However, this does not mean that CCTs are covering the majority of the population in extreme poverty, as is explained below.



**TABLE 1: CONDITIONAL CASH
TRANSFERS IN LAC.**

Country	Program*	Year	Beneficiaries (x1000)		Coverage as % of population			Budget (% of GDP)
			Households	People	Total	Poor	Extreme poor	
Argentina	AUH	2013	1,905	8,383	20.2	>100	>100	0.47
Bolivia	BJP	2013	1,135	5,786	52.4	>100	>100	0.19
Brazil	BF	2013	14,086	57,753	28.7	>100	>100	0.44
Chile	CS	2013	180	754	4.3	54.8	>100	0.13
Colombia	FA	2013	2,682	11,263	23.9	78.1	>100	0.23
Costa Rica	AV	2013	131	641	13.6	65.7	>100	0.17
Dominican Rep.	PCS	2013	683	2,324	22.3	53.4	>100	0.46
Ecuador	BDH	2013	1,026	4,290	27.2	>100	>100	0.66
El Salvador	CSRU	2013	96	620	9.8	28.2	>100	0.06
Guatemala	BFP	2013	693	3,810	24.6	45.8	>100	0.20
Honduras	B10M	2013	246	1,228	15.0	21.3	31.4	0.86
Jamaica	PATH	2013	169	540	19.4	97.5	>100	0.27
Mexico	OPOR	2013	5,922	32,340	27.3	52.2	>100	0.22
Panama	RDO	2013	73	353	9.5	36.8	89.5	0.12
Paraguay	TKO	2013	76	395	5.8	24.3	57.7	0.09
Peru	JUNTOS	2013	718	3,819	12.3	51.6	>100	0.14
Uruguay	AF	2013	184	791	23.3	>100	>100	0.40
LAC**			30,004	135,001	24.8	89.5	250.9	0.34

* See the complete name of the program in the Methodological annex. **weighted average by population

Note: >100 means the number of beneficiaries is greater than the number of poor or extremely poor persons.

Source: Based on data from official records.

The NCPs are focused on households with elderly adults and arose in the context of reforms to pension systems to expand their coverage. These pensions operate differently in each country. Various NCPs benefit only elderly adults who do not receive contributory pensions (Brazil and Mexico), others are universal (Bolivia) and the majority of NCPs function with targeting mechanisms to channel the funds to the poor (Bosch, Melguizo and Pagés 2013; Rofman, Apella and Vezza 2013; OECD/IDB/World Bank 2014). **Table 2** shows, also, that the minimum age of beneficiaries varies between 59 (55 for women) and 70 years. While NCPs have had positive effects in the reduction of poverty, their expansion poses some concerns:

- (i) as the population is aging quickly, the cost of these programs could increase considerably in coming decades,
- (ii) broadening the coverage of NCPs can weaken the incentives for saving through the contributory system and
- (iii) the NCPs can discourage formal employment since informal workers receive pensions without having contributed to them which implies, at the same time, a restriction on productivity growth (Levy and Schady 2013).

In 2013, NCPs reached 18 million beneficiaries in the region (one third of all elderly adults) and the investment in these benefits exceeded slightly the cost of CCTs (0.38% and 0.34% of GDP, respectively). Argentina is where the least is spent on NCPs and Brazil dedicates the most to this expense.

Of the 15 countries that administer both types of programs (see **Tables 1 and 2**), eight invested more in NCPs (for the elderly) than in CCTs (for children). In Bolivia, Brazil, Chile and Paraguay, between 3 and 6.5 times more was invested in adults than in children, and in Costa Rica, Panama, El Salvador and Uruguay, spending in favor of elderly adults was between 1.2 and 2.6 times more than the transfers for children. With these practices, it is easy to understand that



the public transfers helped to widen the poverty gap between generations instead of reducing it.

That is, in those countries public transfers are of greater benefit to the elderly than to children, even though both, as individuals, live in similar conditions of poverty. This is a polemical outcome because it reflects that government places less emphasis on the younger generations and on development of human capital and the productivity of adults in the future (see “Changes in the age profile of poverty” in this Report).



TABLE 2: NON-CONTRIBUTORY PENSIONS IN LAC.

Country	Program*	Year	Age	Beneficiaries (x1000)	Coverage (% of elderly)	Transfers US\$ (monthly)	% of GDP
Argentina	PPNC	2013	70+	26	0.8	318	0.02
Bolivia	RDIG	2013	60+	871	100	36	1.24
Brazil	BPC	2013	65+	1,863	12.4	314	0.31
Brazil	PR	2013	60+	5,992	27.2	314	1.01
Chile	PBS	2013	65+	584	33.4	166	0.42
Colombia	PPSAM	2013	59+	1,250	21.4	31	0.12
Costa Rica	RNCP	2013	65+	93	27.3	150	0.34
Ecuador	PAM	2013	65+	569	56.9	50	0.36
El Salvador	PBU	2013	60+	28	4.6	6	0.07
Guatemala	AM	2013	65+	103	14.5	51	0.12
Jamaica	PATH	2013	60+	64	25.1	13	0.05
Mexico	PAMA	2013	65+	5,204	67.4	41	0.20
Panama	AM70	2013	70+	88	47.7	120	0.31
Paraguay	PAMP	2013	65+	94	25.2	96	0.36
Peru	PEN65	2013	65+	306	15.7	46	0.08
Uruguay	PNVI	2013	70+	86	24.8	335	0.62
Venezuela	GMMA	2013	60+	522	18.1	338	0.48
LAC**				17,745	33.1	180	0.38

* See the complete name of the program in the Methodological index. ** weighted average by population


Note: For Brazil-PR (Previdência Rural), Colombia and Venezuela, the age shown refers to men; the minimum ages for women are 55, 54 and 55, respectively.

Source: Based on data from official records.

Robles, Rubio and Stampini (2015) **show that, in practice, coverage of CCTs and NCPs is insufficient among the poor and, simultaneously, there is a high leakage of benefits to the non-poor**, and that, therefore, there is space for increasing the efficacy and equity of spending on these programs. Even with more extensive coverage, CCTs and NCPs benefit only close to half the households in extreme poverty with eligible people. At the same time, these transfers benefit fewer than half of those who live in non-poor households (see below the averages for the region in **Tables 3 and 4**). The Tables also show that a re-targeting of the transfers could generate important benefits in both poverty reduction and in fiscal savings.


Tables 3 and 4 were assembled based on data from the cited authors (see their **Tables A6, A10, A13 and A14** in the Annex) and show the extent of coverage of cash transfers and distribution of beneficiaries according to the degree of poverty¹⁶. For CCTs, the analysis is restricted to individuals who live in households with at least one member under 18 years of age, and for NCPs the study examined households with at least one member older than 64 who does not receive a contributory pension.

Then we compare the under-coverage—the percentage of extreme poor not covered by the program—and leakage—the percentage of beneficiaries of the program who are not poor—of the CCTs and the NCPs¹⁷.



In all countries, there is under-coverage in both types of programs: the extreme poor who remain without coverage and there is leakage to non-poor who receive benefits.

These failings are most serious in Chile, Costa Rica, the Dominican Republic and Paraguay where more than half of the extreme poor do not receive benefits and more than 30% of the beneficiaries are non-poor. In Bolivia, Ecuador and Jamaica, the difficulty of reaching the extreme poor stems more from leakage (efficiency) than from under-coverage (efficacy). In these latter countries, the percentage of extreme poor who receive no CCT benefits is relatively lower (between 18 and 35%), and the leakages are relative high (more than 40% of beneficiaries are non-poor).



Regional household surveys show that, in practice, there is insufficient coverage of the poor in CCTs and NCPs, and simultaneously leakage to the non-poor in these same programs.



¹⁶ This analysis was conducted with the previous international lines of poverty (in USD PPP 2011): “extreme poor” are those who live in households with per capita incomes lower than US\$2.50 per day, “moderate poor” have per capita incomes between US\$ 2.50 and US\$4.00 per day and “non-poor” have per capita incomes above US\$4.00 .

¹⁷ Under-coverage is associated with the efficacy of the program for reaching its target population, i.e., it measures the need for additional resources to reach the target group, and leakage is associated with the efficiency of use of program resources, i.e., it measures the inappropriate use of resources by people who should not receive benefits.

TABLE 3: COVERAGE AND DISTRIBUTION OF CCTS.

Country	Year	Program*	Coverage (% of the population)				Distribution (% of population)			
			Extreme poor	Moderate poor	Non Poor	Total	Extreme poor	Moderate poor	Non poor	Total
Bolivia	2013	BJP	82.5	76.4	55.6	63.7	26.5	15.2	58.3	100
Brazil	2006	BF	58.9	33.4	8.7	28.9	61.7	20.4	17.9	100
Chile	2013	CS	25.2	25.9	9.1	10.6	5.7	14.7	79.6	100
Colombia	2013	FA	61.2	51.6	19.8	33.9	36.4	27.4	36.2	100
Costa Rica	2013	AV	24.6	26.1	13.1	15.3	15.3	15.0	69.6	100
Dominican Rep.	2013	PCS	38.3	30.1	17.7	24.9	28.1	26.5	45.5	100
Ecuador	2013	BDH	69.6	52.4	21.3	36.6	36.3	24.3	39.5	100
El Salvador	2013	CSRU	15.8	7.3	2.8	7.0	54.5	24.3	21.1	100
Guatemala	2011	MFP	55.9	33.8	9.2	33.8	61.1	29.8	9.1	100
Honduras	2013	BIOM	35.4	16.2	8.2	23.7	77.0	12.6	10.4	100
Jamaica	2012	PATH	64.6	59.0	27.1	33.7	12.0	22.2	65.8	100
Mexico	2012	OPOR	58.1	37.2	10.8	24.1	42.8	26.5	30.7	100
Panama	2013	RDO	46.7	21.4	3.6	13.8	62.1	19.2	18.7	100
Paraguay	2013	TKO	20.2	7.9	2.2	5.1	44.1	21.9	34.0	100
Peru	2013	Juntos	53.0	27.2	5.4	14.2	47.3	23.6	29.1	100
Uruguay	2013	AF	93.1	91.1	51.6	54.1	2.5	7.9	89.6	100
Average			50.2	37.3	16.6	26.5	38.3	20.7	40.9	100.0

*See the complete name of the program in the Methodological annex.

Source: Based on data from Tables A6 and A13 by Robles, Rubio y Stampini (2015).

In the case of NCPs, high levels of under-coverage are found in Colombia, Guatemala, Jamaica, Paraguay, Peru and El Salvador: more than half of the elderly in extreme poverty and without contributory pensions receive no benefits. In those countries, with the exception of El Salvador, the leakage is above 30% (non-poor who receive transfers from NCPs). In Bolivia, Chile, Costa Rica and Ecuador, the problem of leakage exceeds the problem of under-coverage; that is, there are more extreme poor covered by NCPs (65% or more), but at the cost of more non-beneficiaries (45% or more). In the case of Bolivia, given that its PNC is universal, i.e., reaches all elderly adults regardless of poverty, leakage reaches 65%.

Robles, Rubio and Stampini (2015) show that:



If the non-poor could be excluded from receiving CCT and NCP benefits and the transfers could be reassigned to the extreme poor who are not covered, under-coverage could be eliminated (all extreme poor would be covered), savings could result equivalent to 0.03% of GDP of the region (16 countries) and extreme poverty would be reduced by 1.5 percentage points.

Through a Ministerial Agreement, Ecuador advanced recently in that direction. The agreement ruled to exclude from the data base of people eligible for CCT payments (distributed through the Human Development Bond, BDH) individuals who

- (i) are above a minimum level of well-being established with information in the Social Registry Survey of the Social Development Coordinating Ministry,
- (ii) live in households with at least one member who receives a salary from the state greater than US\$280 per month or
- (iii) receive a social security pension.

Applying this measure, between 2013 and 2014 the number of beneficiaries was reduced by 63% and spending on BDH transfers fell by 59%. It is worth pointing out that in Ecuador poverty was reduced from 64% to 23% between 2000 and 2014 and extreme poverty diminished from 40% to 8%.



**TABLA 4: COVERAGE AND DISTRIBUTION
OF NCPS.**

Country	Year	Program*	Coverage (% of the population)				Distribution (% of the population)			
			Extreme poor	Moderate poor	Non poor	Total	Extreme poor	Moderate poor	Non poor	Total
Bolivia	2013	RDIG	96.7	99.6	96.4	96.9	25.0	10.1	64.9	100
Brazil	2006	BPC	60.3	30.6	12.1	24.7	53.6	18.2	28.2	100
Chile	2013	PBS	87.9	78.7	44.3	47.6	6.9	9.3	83.9	100
Colombia	2013	PPSAM	47.5	40.1	17.4	28.0	37.3	23.8	38.8	100
Costa Rica	2013	RNCP	66.3	50.7	22.1	30.3	27.7	14.1	58.2	100
Ecuador	2013	PAM	74.5	62.7	41.2	52.3	32.7	19.1	48.2	100
El Salvador	2013	PBU	12.6	6.6	2.1	5.3	52.2	25.5	22.3	100
Guatemala	2011	AM	8.5	14.0	8.6	10.1	28.4	39.1	32.5	100
Jamaica	2012	NCPS	41.3	33.9	21.6	24.7	13.3	16.1	70.6	100
Mexico	2012	PAMA	59.2	43.7	28.1	36.8	29.8	17.4	52.8	100
Panama	2013	AM70	56.6	44.2	31.7	38.9	32.2	15.3	52.5	100
Paraguay	2013	PAMP	38.8	30.4	11.3	17.1	24.1	27.6	48.3	100
Peru	2013	PEN65	34.0	24.7	4.6	11.0	41.1	27.6	31.3	100

* See the complete name of the program in the Methodological annex.

Source: Based on data from Tables A10 and A15 by Robles, Rubio y Stampini (2015).



1 2

AGGREGATE
INDEX

1

MULTIDIMENSIONAL
POVERTY

Poverty is a condition characterized by severe privation of the basic human needs that is revealed in various ways, including insufficient income and productive resources for securing the means for sustainable life; hunger and malnutrition; poor health; limited access to education and other basic services; morbidity and mortality caused by diseases, inadequate housing, insecurity, discrimination and social exclusion.

The measurements of monetary poverty show the privation suffered by people in an important dimension—the lack of income for acquiring a basic basket for consumption—does not offer any view of the privations in other dimensions of poverty that people also confront. Some of these privations were considered in the measurements of multidimensional poverty the Inter-American Development Bank has built based on the experiences of Mexico (since 2009), Colombia (since 2011) and Chile (since 2014) as well as the work of the UN Development Programme (since 2010), Santos et al. (2010 and 2015) and Alkire and Santos (2014) in measuring poverty with a multidimensional focus. These measurements provide information that can be compared between countries of the region and, in contrast with what has been developed until now, were developed with the purpose of having evidence about changes in non-monetary poverty since the mid-1990s. After reviewing privations utilized by the authors cited, the information available for countries of the region and the susceptibility of these privations to being overcome with governmental interventions, twelve were chosen that present the scarcities experienced by people in different stages of the life cycle:

• CHILDREN	• ADULTS	• ALL PEOPLE
Not attending pre-school	Low level of schooling	No Access to potable water
Grade for age delay	Unemployment	No Access to improved sanitation
Not attending school (ages 6-17)	Employment without social security (informal)	Deficient housing
		Overcrowding
• YOUTH	• ELDERLY	
Inactivity in labor market and school	With no pension	

Note: See the definition of each privation in the appendix.

With these privations, and utilizing the Harmonized Household Surveys of Latin American and the Caribbean of the IDB, a total of 250 bases with national coverage of 18 countries beginning in the mid-1990s, the incidence and adjusted incidence of multidimensional poverty were measured in each country in the region (see methodological details in **Box 6**). These measurements offer additional instruments for reporting in a more comprehensive way about the situation of poverty in the region.



The poor face a significant number of social privations simultaneously.

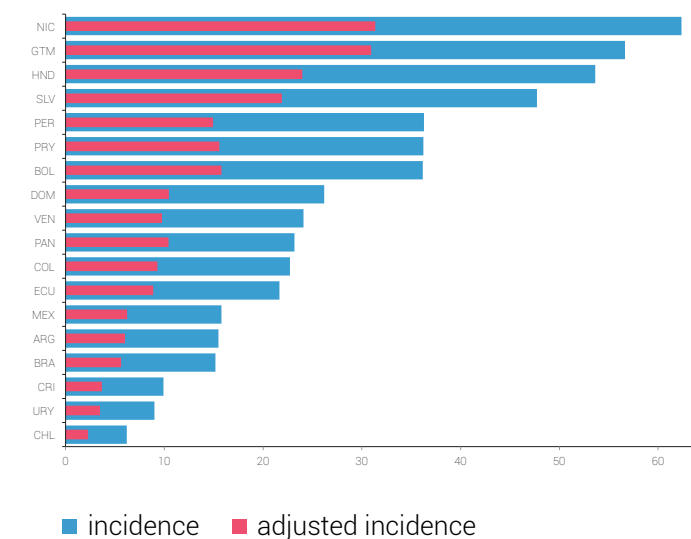
On average, one fifth of the region's inhabitants suffer multidimensional poverty, that is, they experienced four or more privations simultaneously in 2014. In Guatemala, Honduras and Nicaragua, more than half the population experienced multidimensional poverty, but in Chile, Costa Rica and Uruguay no more than 10% of the population suffered this type of poverty (see the lighter colored bar in **Graph 49**). On average, the poor contend with five deprivations at once (42% of the 12 selected), but those who live in countries with the highest incidence of multidimensional poverty faced greater intensity of poverty and vice versa (**Graph 50**). The poor of Nicaragua, the country with the highest incidence of multidimensional poverty, struggle with six privations (50% of the identified privations) while the poor of Chile, the country with the lowest incidence, 4.4 privations, or 37% of the measured scarcities. While the relationship between incidence and intensity of poverty is high, there are exceptions to this rule. For example, Paraguay has a higher incidence of multidimensional poverty than Panama (36 versus 23% of scarcities), but the intensity of this type of poverty is lower (43 versus 45% of the privations). The same is true for Peru versus Bolivia.



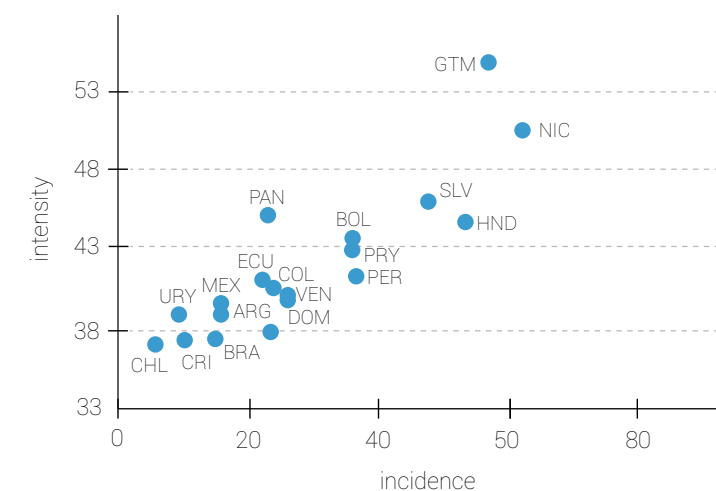
Multidimensional poverty is highly heterogeneous between countries.

The adjusted incidence of poverty is estimated by multiplying the incidence of multidimensional poverty by its intensity. For the region as a whole, the adjusted incidence of multidimensional poverty was 8.6% ($=0.21 \times 0.41$ in 2014). **Graph 49** shows that differences between countries (the darker bar) were broader than the unadjusted incidence of multidimensional poverty. The adjustment permits making more appropriate comparisons. It shows more clearly the differences because it estimates the poor as a proportion of a poor person who suffers all privations. The highest adjusted multidimensional poverty (31.4% in Nicaragua) was 14 times the value of the lowest adjusted incidence (2.3% in Chile), while the highest unadjusted incidence was 10 times the lowest incidence (62.4% and 6.2%, respectively). A comparison of sub-regions shows that, with respect to the Southern Cone, the population of the Andean region experienced twice as much multidimensional poverty, Central America 3.7 times more and Mexico 10% more (5.7%, 11.3%, 21.3% and 6.2%, respectively).

GRAPH 49: ADJUSTED AND UNADJUSTED INCIDENCE OF MULTI-DIMENSIONAL POVERTY IN 18 COUNTRIES (2014, IN PERCENTAGES).



GRAPH 50: INTENSITY AND INCIDENCE OF MULTIDIMENSIONAL POVERTY IN 18 COUNTRIES (2014, IN PERCENTAGES).



Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

BOX 6: CONSTRUCTION OF INDEXES OF MULTIDIMENSIONAL POVERTY

Using the selected privations and according to Alkire and Foster (2011), we identified as the poor those who suffer at least a minimum number of privations and, then, we added this information in two measurements of multidimensional poverty:

- i H incidence (number of poor among the total population) and
- ii adjusted incidence of multidimensional poverty, $MO = H \cdot A$,
 - where A is the average proportion of privations suffered by the poor or is the intensity of poverty
 - H counts the poor without distinguishing the quantity of privations they suffer and
 - Mo counts them expressing each one as the proportion of a poor person who suffers all the privations.

Mo can be decomposed by subgroups of the population and also by privations. The contribution of each subgroup is equal to the value of their Mo weighted by the size of the subgroup in the population and the contribution of each privation is equal to the proportion of the poor who suffer privation (weighted by their weight) with respect to the total population. For every two points in time, the contribution of each privation to the change in Mo can be obtained by multiplying the change in the privation for the poor by the average of the relative contribution of the privation to Mo at the two time points.

The indexes of multidimensional poverty are calculated incorporating these considerations:

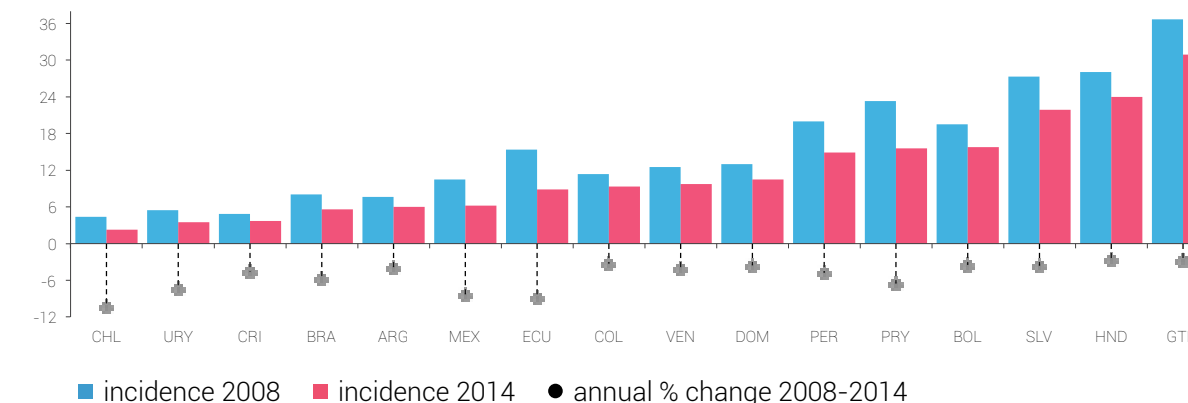
- i the household as a unit of analysis (we assume that all the members suffer the same privations
- ii at least four privations identify those who suffer multidimensional poverty (the equivalent of 33.3%, or one third, of the total number of privations) and, as in previous experiences,
- ii the same weight is given to each dimension and to each privation within each dimension. The 12 privations were regrouped in three dimensions (see Appendix). When there were no data for a privation in a particular year, the remaining privations of the dimension were reweighted so that the dimension has the same weight as the others.



Multidimensional poverty has decreased in all countries since 2008.

The drop in economic growth in the region did not lessen progress in reducing multidimensional poverty. Between 2008 and 2014, the adjusted incidence fell on average by 11.4% to 8.3%. In the period of higher growth, between 2002 and 2008, multidimensional poverty was reduced from 14.4% to 11.4%. This advance was seen in all countries and not necessarily on a greater scale in countries with a lower incidence in 2008, the first year of deceleration (**Graph 51**). The largest drops in poverty between 2008 and 2014 took place in Chile, Ecuador and Mexico (more than 8% on average in each year) and the smallest reductions occurred in Guatemala and Honduras (less than 3% per year). Also the countries with the largest populations reported significant reductions, such as Brazil (5.7% per year) and, as mentioned, Mexico.

GRAPH 51: CHANGES IN ADJUSTED INCIDENCE OF MULTIDIMENSIONAL POVERTY BETWEEN 2008 AND 2014 (16 COUNTRIES, IN PERCENTAGES).



Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.



Lower privations in “low schooling”, “employment without social security”, “grade for age delays”, “no access to improved sanitation” and “no access to improved water” contributed the most to reducing poverty between 2008 and 2014 (Graph 52).

More than 70% of the reduction of adjusted multidimensional poverty in the region is due to the drop in these five privations. The contribution of each deprivation to poverty reduction varies greatly between countries. For Brazil, the region's most populous nation (the equivalent of 62% of the population of 16 countries), the changes in the first four privations were equally important for reducing multidimensional poverty, and a much smaller contribution was made by the privation of “no access to improved water”. In total, the decline in the five privations was responsible for 87% of poverty reduction in Brazil. For Chile, one of the countries that achieved the most progress in reducing multidimensional poverty, the first two privations, combined with the lowering of “deficient housing” and “no access to improved sanitation” had equal weight in combating poverty. For El Salvador, among the nations with less progress in reducing poverty, the declines in “no access to improved sanitation”, “grade for age delay”, “no access to improved water” and “overcrowding” were the factors that contributed the most to reducing poverty. It should be pointed out that the contribution of a privation to reducing multidimensional poverty depends not only on the change experienced over time but also on the incidence of the privation among the poor.



**MONETARY AND
MULTIDIMENSIONAL
POVERTY**



There is a high correlation between the two measurements of poverty.

The comparison of monetary poverty and multidimensional poverty (non-monetary) makes it possible to know not only how many people suffer one or the other type of poverty, but also the relationship and overlap between them. Knowing the extent of each type of poverty and the linkage between them can be useful for designing interventions that seek to reduce both. We use the line of US\$5.00 per day PPP of 2011 to define monetary poverty (people with per capita income below this line) and the criterion of suffering at least four social privations for defining multidimensional poverty. Measurements of both types of poverty show that the incidence of monetary poverty surpasses non-monetary poverty by five percentage points (26% versus 21%, respectively) and there is a high positive correlation between them (87%). In general, the countries with the greatest incidence of monetary are the same countries where there is more prevalence of multidimensional poverty, and vice versa (**Graph 53**). It is worth noting that the cases that most diverge from the line that relates the two measurements are Mexico which has much higher monetary poverty than multidimensional (37% versus 16%) and Paraguay where multidimensional poverty is greater than monetary (36% versus 23%).

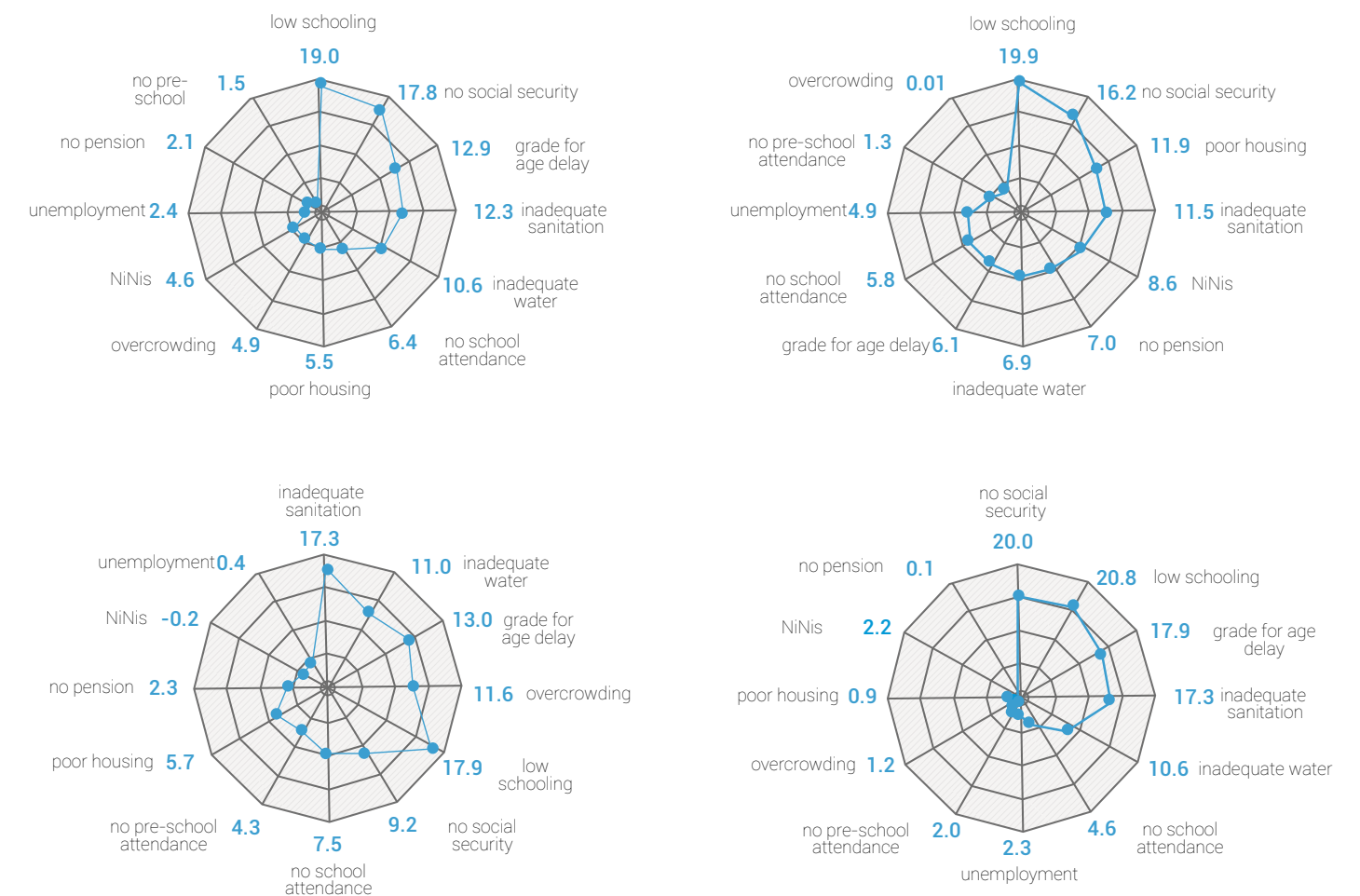


The two measurements of poverty continued to decrease during the economic deceleration.

Multidimensional poverty dropped 40% more rapidly between 2008 and 2014 than between 2002 and 2008 (-4.7% versus -3.4% on average each year, respectively). This outcome is associated more with the increase in social spending by governments in the region to deal with the international crisis and reactivate domestic economies (see “Critical Inputs” subsection). It is shown that changes in monetary poverty were more sensitive to the economic cycle: this type of poverty fell by 5.2% on average every year between 2002 and 2008 and fell 4.0% between 2008 and 2014 (**Graph 54**). At the level of countries, Guatemala was the only country to report an increase in monetary poverty and, at the same time, a slow advance in reducing multidimensional poverty between 2008 and 2014 (**Graph 54**), and the Dominican Republic and El Salvador experienced similar drops in both types of poverty. The remaining countries can be classified in two groups (**Graph 55**). In eight countries, monetary poverty declined more rapidly than multidimensional poverty (particularly in Bolivia, Colombia and Peru) and in the five remaining nations, on the contrary, multidimensional poverty dropped more quickly than monetary (particularly in Mexico).



GRAPH 52: PRIVATIONS THAT CONTRIBUTED THE MOST TO THE REDUCTION OF MULTIDIMENSIONAL POVERTY BETWEEN 2008 AND 2014 (ORDERED FROM GREATEST TO LESSER CONTRIBUTION, IN %).



Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.



The type of poverty that is predominant varies between countries.

Prior estimates show the incidence of monetary and multidimensional poverty is quite similar throughout the region and present a high correlation between the two at the level of countries. These estimations of incidence however, do not necessarily refer to the same people. That is, they do not indicate if the same individuals who are poor in monetary terms also suffer multidimensional poverty. For this reason, we quantified the types of poverty experienced by each person. The aggregate results for 2014 indicate that of the total population of poor people by either of the measurements (35%), only 12% suffered both types of poverty at the same time (**Graph 56**). This means that 44% of those living in monetary poverty also suffered multidimensional poverty and 56% of those who suffer multidimensional poverty also experienced monetary poverty. In Bolivia, Guatemala, Honduras, Nicaragua, Panama and El Salvador, the poor experience the two types of poverty (between 43% and 63% of the total of the poor). In Argentina, Paraguay, Peru, Uruguay and Venezuela, the poor who suffer multidimensional poverty predominate (between 45% and 54%) and in the remaining countries the poor who experience monetary poverty predominate (between 41 and 62% of all the poor).

GRAPH 53: RELATIONSHIP BETWEEN MONETARY AND MULTI-DIMENSIONAL POVERTY IN 2014 (18 COUNTRIES, IN %).



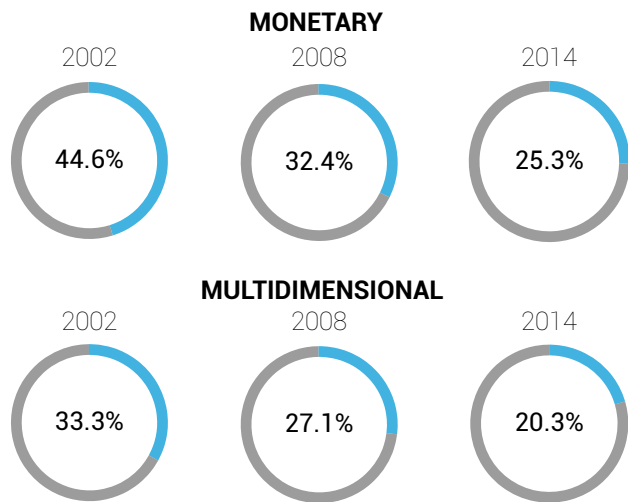
Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

GRAPH 55: ANNUALIZED CHANGE IN INCIDENCE OF MONETARY AND MULTIDIMENSIONAL POVERTY BETWEEN 2008 AND 2014 (16 COUNTRIES, IN %).

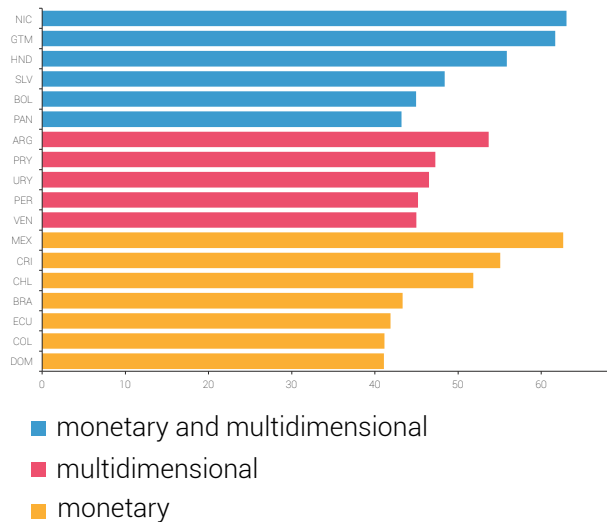


Source: Inter-American Development Bank - Harmonized Household Surveys from LAC.

GRAPH 54: INCIDENCE OF MONETARY AND MULTIDIMENSIONAL POVERTY: 2002, 2008 AND 2014 (16 COUNTRIES, IN %).



GRAPH 56: TYPE OF POVERTY PREDOMINANT IN 2014 (18 COUNTRIES, % RELATIVE TO TOTAL NUMBER OF POOR).



APPENDIX:

Dimensions and privations utilized to measure the indexes of multidimensional poverty

Education and childhood

Low schooling: If at least one member of the household between 18 and 64 years of age has less than 9 years of education

Grade for Age Delay: If at least one member of the household between 7 and 17 years of age lags by two or more years from the schooling he or she should have based on age

Non-attendance of school: If at least one member of the household between 6 and 17 years does not attend school

Non-attendace of pre-school: If at least one member of the household age 5 does not attend school

Employment and social protection

Youth inactive in labor market and in school: If at least one member of the household between 15 and 24 years neither studies nor works nor seeks employment

Unemployment: If at least one member of the household economically active 18 and older is unemployed

Employment without social security: If at least one member of the household economically active between 18 and 64 years old is not affiliated with the pension system

Elderly adults without pension: If at least one member of the household 65 years or more does not receive a contributory or non-contributory pension

Housing and basic services

No access to improved water: If the household has no connection to a public water system

No access to improved sanitation: If the household has no “adequate” sewerage service

Deficient housing: If the household has a floor, walls or roof made of precarious materials

Overcrowding: If the household is occupied by more than 2.5 people per room

References:

Introduction.

- BID (2011), “Estrategia social para la equidad y productividad”, Washington DC.
- Naciones Unidas (2015) “World Population Prospects: The 2015 Revision”, New York.
- OECD (2001), Society at a Glance 2001: OECD Social Indicators, Paris.
- Powell, A. (2015). The labyrinth: How can Latin America and the Caribbean Navigate the Global Economy. Latin American and Caribbean Macroeconomic Report 2015. Washington, DC: IDB.
- UNESCO (2005), “UIS.Stat”: <http://data.uis.unesco.org>
- USAID (2015), “STATcompiler. The DHS program”: <http://www.statcompiler.com>
- WHO (2015), “Global Health Expenditure Database”: <http://apps.who.int/nha/database>

Income, poverty, inequality.

- Azevedo, J. P., Inchauste, G., & Sanfelice, V. (2013). Decomposing the recent inequality decline in Latin America. World Bank Policy Research Working Paper 6715.
- Deaton, A. (2005), “Measuring poverty in a growing world (or measuring growth in a poor world),” Review of Economics and Statistics, vol. 87 (1), pp. 1-19.
- Ferreira, F. H., et al. (2015) “A Global Count of the Extreme Poor in 2012: Data Issues, Methodology and Initial Results”, World Bank Policy Research Working Paper 7432.
- Ferreira, F.H., Messina, J., Rigolini, J. et al. 2012. Economic Mobility and the Rise of the Latin American Middle Class. Washington, DC, United States: World Bank.
- Gasparini, L., Cruces, G. and Tornarolli, L. (2011). “Recent Trends in Income Inequality in Latin America”. Economia 10, 147-201.
- Pinkovskiy, M., & Sala-i-Martin, X. (2016). Lights, Camera,.... Income! Illuminating the National Accounts-Household Surveys Debate, The Quarterly Journal of Economics Advance Access published.
- Ravallion, M. (2003). Measuring aggregate welfare in developing countries: How well do national accounts and surveys agree?. Review of Economics and Statistics, 85(3), 645-652
- Robles, A. & Robles, M. (2016) “Changes in welfare with a heterogeneous workforce: The case of Peru”, IDB Working Paper Series 603, Inter-American Development Bank, Washington DC.
- Stampini, M., Robles, M., Saenz, M., Ibarraran, P., Medellín, N. (2015) “Poverty, vulnerability and the middle class in Latin America”, IDB Working Paper Series 591.

Housing, water and sanitation.

- Schady, N. (2015) “Does access to better water and sanitation infrastructure improve child outcomes? Evidence from Latin America and the Caribbean, Working Paper Series 603, Washington, DC: IDB
- Agua, O. N. U. “Saneamiento: una inversión acertada para la salud, la dignidad y el desarrollo.” Saneamiento: una inversión acertada para la salud, la dignidad y el desarrollo. ONU, 2008
- Feres, J. y Mancero X. (2001). El método de las necesidades básicas insatisfechas (NBI) y sus aplicaciones en América Latina. CEPAL.
- Fink, G., I. Gunther & K. Hill. 2011. “The Effect of Water and Sanitation on Child Health: Evidence from the Demographic and Health Surveys 1986-2007.” International Journal of Epidemiology 40:1196-1204.
- Cattaneo, Matias D., Sebastian Galiani, Paul J. Gertler, Sebastian Martinez, and Rocio Titiunik. “Housing, health, and happiness.” American Economic Journal: Economic Policy 1, no. 1 (2009): 75-105.

Infancy, childhood and youth.

- Alfonso, M., Bos, M. S., Duarte, J., & Rondón, C. (2012). Panorama general de la educación en América Latina y el Caribe. In M. Cabrol, and M. Szekely, Educación para la Transformación (pp. 1-49). Washington, D.C.: IDB.
- Azevedo, J. et al.(2012) “Teenage Pregnancy and Opportunities in Latin America and the Caribbean: On Teenage Fertility Decisions, Poverty and Economic Achievement,” World Bank, Washington, DC
- Bassi, M., Busso, M., Urzúa, S., and Vargas, J. (2012). Desconectados: Habilidades, educación y empleo en América Latina. Washington, D.C.: IDB.
- Bassi, M., Busso M. y Muñoz J.S. (2013). Is the glass half empty or half full? Enrollment, graduation and dropout rates in Latina America. Working Paper. Washington, D.C.: IDB.
- Berlinsky, S. y Schady, N. R. (Eds.). (2015). Los primeros años: El bienestar infantil el papel de las políticas públicas. Desarrollo en las Américas (DIA). Washington, DC: IDB
- BID-EDU. Sector framework document education and early childhood development. División de Educación. 2013. Washington, D.C.: IDB.
- Cabezón, Carlos et al. (2005) “Adolescent pregnancy prevention: An abstinence-centered randomized controlled intervention in a Chilean public high school”, Journal of Adolescent Health, 36(1):64–69
- Cárdenas, Mauricio, Rafael de Hoyos y Miguel Székely (2015). Out-of-school and out-of-work youth in Latin America: A persistent problem in a decade of Prosperity.
- Chong, Alberto, et al. (2013) “Effectiveness and spillovers of online sex education: Evidence from a randomized evaluation in Colombian public schools”. No. w18776. NBER.

Duarte, J., Bos, M. S., and Moreno, M. (2012). En Cabrol, M. and Szekely, M. Educación para la transformación (pp. 133-166). Washington, D.C.: IDB.

OECD (2014), PISA 2012 Results: What Students Know and Can Do – Student Performance in Mathematics, Reading and Science (Volume I, Revised edition, February 2014)

OECD (2014b), Education at a Glance 2014: OECD Indicators, OECD Publishing

Rubio-Codina, M., O. Attanasio, C. Meghir, N. Varela y S. Grantham-McGregor. 2015. “The Socioeconomic Gradient of Child Development: Cross-Sectional Evidence from Children 6–42 Months in Bogota.” Journal of Human Resources 50(2) (primavera): 464–83.

UNESCO (2015) “Informe de Resultados. Tercer Estudio Regional Comparativo y Explicativo. Logros de Aprendizaje”, OREALC/UNESCO Santiago

Vivo, S., y Saric, D. (Eds.). 2013. “Guía para medir comportamientos de riesgo en jóvenes”. Washington, DC: IDB.

Vegas, E. y Coffin, Ch. (2015) Cuando el gasto en la educación importa: Un análisis empírico de información internacional reciente. Documento de trabajo 574. Washington, D.C.: IDB

Adults, Old Age

Alaimo, Verónica; Bosch, Mariano; Kaplan, David S.; Pagés, Carmen; Ripani, Laura. 2015, “Empleos para Crecer”. Banco Interamericano de Desarrollo. Washington DC.

BID 2016. Informe Macroeconómico de América Latina y el Caribe. Tiempo de Decisiones, América Latina y el Caribe ante sus desafíos. Washington DC.

BID-LMK 2013 “Documento de Marco Sectorial de Trabajo”, Washington DC

Bosch, Melguizo y Pagés, 2013. “Mejores pensiones, mejores trabajos”. Banco Interamericano de Desarrollo. Washington DC.

CEPAL. (2007). Demographic trends in Latin America. Latin American Demographic Observatory, 2(3), 17–35.

Cerutti, Paula, Anna Fruttero, Margaret Grosh, Silvana Kostenbaum, Maria Laura Oliveri, Claudia Rodriguez-Alas, Victoria Strokova. 2014. Social Assistance and Labor Market Programs in Latin America: Methodology and Key Findings from the Social Protection Database. World Bank.

Gasparini, Leonardo y Marchionni, Mariana (Eds.) (2015) ¿Brechas que se cierran? Aumento y desaceleración de la participación laboral femenina en América Latina

OECD (2013), OECD Employment Outlook 2013, OECD Publishing, Paris.

Organización Mundial de la Salud (OMS) (2015). Enfermedades no transmisibles. Nota descriptiva. Disponible en <http://www.who.int/mediacentre/factsheets/fs355/es/>

ILO – International Labour Organization (2015). Key Indicators of the Labour Market, Ninth Edition

Stampini, M., Robles, M., Sáenz, M., Ibarrarán, P., y Medellín, N. (2015). Poverty, vulnerability and the middle class in Latin America. Inter-American Development Bank Working Paper Series, (591).

Inputs.

Cerutti, P., A. Fruttero, M. Grosh, S. Kostenbaum, M.L. Oliveri, C. Rodriguez-Alas y V. Strokova. 2014. “Social Assistance and Labor Market Programs in Latin America.” Documento de trabajo sobre investigaciones relativas a políticas de desarrollo N° 1401. The World Bank

CEPAL. (2016). Panorama Social de America Latina. Documento informativo.

Chisholm, D. & D. Evans (2010). Improving health system efficiency as a means of moving towards universal coverage. World Health Report (2010) Background Paper, 28. Geneva, WHO.

Gertler, P., Galiani, S. & Bando, R. (2015). Non-contributory Pensions. Working Papers No WPS-043. Center for effective Global Action. UC Berkeley

OECD/IDB/ World Bank (2014). “Pensions at a Glance: Latin America and the Caribbean.” París, Francia: Organisation for Economic Co-operation and Development Publishing.

Prat, J. & Beverinotti, J. (Eds) 2016. Una mirada al gasto social en Centroamérica, Panamá y República Dominicana: 2007-2013. Washington, DC: IDB

Robles, M., Rubio, M. G., & Stampini, M. (2015). Have Cash Transfers Succeeded in Reaching the Poor in Latin America and the Caribbean? Inter-American Development Bank Policy Brief N° 246

Rofman, R., I. Apella y E. Vezza, editores. 2013. “Beyond Contributory Pensions: Fourteen Experiences with Coverage Expansion in Latin America.” The World Bank, Washington D.C.

Paes-Sousa, R., Regalia, F., & Stampini, M. (2013). Condiciones para el éxito de la puesta en práctica de programas de transferencias monetarias condicionadas: lecciones de América Latina y el Caribe para Asia. Resumen de Políticas 192, Washington, DC: IDB

Multidimensional Poverty.

Alkire, S. & Foster, J. (2011). “Counting and multidimensional poverty measurement”, Journal of Public Economics, 95, 476–487.

Alkire, S. & Santos, M. (2014). Measuring acute poverty in the developing world: Robustness and scope of the Multidimensional Poverty Index. World Development, 52, 71–91.

Angulo, R., Díaz, Y., & Pardo, R. (2011). “Índice de pobreza multidimensional para Colombia (IPM-Colombia): 1997-2010”, Archivos de Economía 382.

CONEVAL (2009). “Metodología para la medición multidimensional de la pobreza en México”.

Ministerio de Desarrollo Social (2015). “Nueva Metodología de Medición de la Pobreza por Ingresos y Multidimensional”, Serie Documentos Metodológicos 28, Chile .

UNDP (2010). “The real wealth of nations: Pathways to human development. Human Development Report 2010”, New York.

Santos, M., Lugo, M., Lopez-Calva, L., Cruces, G., & Battiston, D. (2010). “Refining the basic needs approach: A multidimensional analysis of poverty in Latin America”, Research on Economic Inequality, Vol 18.

Santos, M., Villatoro, P., Mancero, X., & Gerstenfeld, P. (2015). “A multidimensional poverty index for Latin America”, OPHI Working Paper 79.

Methodological annex:

This annex describes the definitions and disaggregations of the indicators utilized in this Report. It also explains the abbreviations used in Tables and Graphs—the codes for country names and the acronyms of social programs and lists the national surveys consulted as data bases for analysis.

Context indicators:

Income:

Family Income: This is the total of wage and non-wage income of all members of the household. It excludes the implicit rent derived from the household’s own occupied property and taxes whenever possible. The sum does not include imputations of missing, zero or atypical income additional to that which exists in data bases provided by national statistics offices. The amount also does not include adjustments for regional price differences. Income is expressed in US dollars adjusted with PPP 2011 for private consumption (USD PPA 2011).

Per capita household income: total income of the household divided by the number of household members.

Purchasing Power Parity (PPP): PPP is a factor that converts the currency of one country to US dollars that can buy on the local market the same amount of goods and services as the dollars can acquire in the United States.

Income groups:

Extreme poor: Quotient between the total of people who live in households with per capita incomes below US\$3.1 PPP 2011 per day and the total population.

Poor: Quotient between the total of people who live in households with per capita incomes below US\$5.00 PPP 2011 per day (1.6 times the poverty line of US \$3.1) and the total population.

Vulnerable: Quotient between the total of people with incomes between US \$5.0 y \$ 12.4 PPP 2011 per day (between 1.6 and 4 times the line of US\$3.10) and the total population.

Middle class: Quotient between the total of people with incomes between US \$12.4 and \$62 PPP 2011 per day (between 4 and 20 times the line of US \$3.1) and the total population.

Rich: Quotient between the total of people with incomes arrive US \$62 PPA 2011 per day and the total population.

Multidimensional poverty: Quotient between the total of people who experience simultaneously four or more privations and the total population.

Note: (i) US \$3.1 per day is the average value and the median of the lines of extreme poverty (equivalent to a basic food basket) in 18 Latin America countries expressed in dollars PPP 2011. **(ii)** To identify each income group, the income is compared with the poverty lines, and these lines are adjusted with the Consumer Price Index of 2011 until the year of the survey in each country.

Income inequality:

Gini Coefficient: Measurement of inequality in income distribution. Values range between 0 (completely equal distribution) and 1 (completely unequal distribution). Per capita family income is used to calculate the coefficient.

Housing conditions:

Proportion of overcrowded households: Quotient between the number of households inhabited by more than 2.5 people per room and the total number of households.

Proportion of households with dirt floors: Quotient between the number of households that have dirt floors and the total number of households.

Proportion of households with walls of non-permanent materials: Quotient between the number of households made with walls built primarily from waste material and the total number of households.

Proportion of households with access to high quality water: Quotient between the number of households that have access to the public water system within the house and the total number of households.

Proportion of households with access to intermediate quality water: Quotient between the number of households that have access to a source of water located below the Surface (such as public taps, wells or another source that is not part of the public system) and the total number of households.

Proportion of households with access to low quality water: Quotient between the number of households that have access to a superficial source of water (rivers, dams, lakes ponds, gullies or rain water) and the total number of households.

Proportion of households with access to high quality: Quotient between the number of households that have Access to sanitation service with drainage connected to sewerage and the total number of households.

Proportion of households with access to intermediate quality sanitation: Quotient between the number of households with access to a basic or improved latrine or toilet with drainage connected to a septic tank, cesspool, canal or a dug pit and the total number of households.

Proportion of households with Access to low quality sanitation: Quotient between the number of households that have no toilet and the total number of households.

Outcome indicators

Infancy and Childhood:

Infant mortality rate: Number of children who die before completing one year of life per 1,000 live births.

Chronic infant malnutrition: Percentage of children whose stature in relation to their age is more than two standard deviations below the average stature of children of the same age and sex in the population of reference.

Preschool attendance: Percentage of children from 4 to 5 years of age who state they are attending a formal teaching center at the time of the interview. Day care facilities and foster homes are not considered as formal teaching centers.

Rate of primary school attendance: Quotient between the total of people from 6 to 12 years of age who state they are attending primary school and the total number of people between 6 and 12 years.

Youth:

Secondary school attendance rate: Quotient between the total number of people from 13 to 17 years of age who state they are attending secondary school and the total number of people between 13 and 17.

Graduation rate from secondary school: Percentage of students between 18 and 20 years of age who graduate from upper secondary school.

Rate of school for age delay in secondary school: Percentage of students from 13 to 17 years of age who are two or more years behind as regards the level of schooling they should have for their age.

Gap between non-indigenous and indigenous in years of education: The difference in average years of schooling between the non-indigenous and indigenous for two birth cohorts: those born during the 1970s and those born during the 1990s.

Gap in lower secondary attainment between non-indigenous and indigenous (in percentage): The difference in the percentage of people with nine or more years of schooling between non-indigenous and indigenous for two birth cohorts: those born during the 1970s and those born during the 1990s.

Unemployment Rate: Quotient between the population of unemployed youth (from 15 to 24 years of age) and the economically active population (known by the Spanish acronym of PEA). A person is considered unemployed if he or she did not work at least one hour in the period of reference, but is willing to work and has taken concrete action to find work.

Percentage of youth who neither study, nor work, nor seek employment: Quotient between the total number of youth 15 to 24 years old who neither study, nor work, nor seek employment at the time of the survey and the total of youth ages 15 to 24, multiplied by 100.

Adolescent fertility rate: Numbers of births to adolescents between 15 and 19 years of age per 1,000 women ages 15-19.

Adulthood:

Employment rate: Quotient of the total of employed people and the economically active population. A person is considered employed if they have worked at least one hour in the period of reference (generally, the last week or the last month), or has a job but has not worked due to extraordinary reasons (sick leave, strike, vacation, etc.).

Female labor force participation: Quotient of the total number of women employed or looking for work and the total number of women of working age, multiplied by 100.

Female contribution to total household income from labor: This is calculated as the ratio between the total labor income of women and the total labor income of the household (men and women). The calculation includes only adults over 18 years and only the monetary income derived from the principal labor activity. Households with zero income from the principal activity are excluded. In the case of independent workers who do not have a salary, their earnings are calculated as the sales of their goods and services minus the operating costs of their activity. For the calculation of labor participation in households with at least one adult male and one adult female, the adults are counted without considering their family relationship.

Percentage of formal employees: Quotient of the total of contributors to social security and the total of working people, multiplied by 100. In the case of the indicator of formal salaried employees, the denominator is the total of salaried employees.

Workers who contribute to social security: Quotient of the total of contributors to social security and the total of working people, multiplied by 100.

also had questions about languages spoken. For Paraguay, since the majority speaks Guaraní, the question, “What language do you speak in the home most of the time?” could overestimate the size of the indigenous population. In spite of this, the analysis of the country was maintained in the Report given that the objective is to highlight ethnic differences between countries. For Mexico, although recently survey questions were added to capture information based on self-identification, the criterion of spoken language continues to be used for purposes of making comparisons over time. In the case of averages at the level of the household, we define a household as indigenous or Afro-descendant if the head of household self-identifies, whether by demographic group or by the language spoken. Identifications of racial and ethnic groups were made only for those countries that include questions related to ethnic or racial identity in their surveys.

Old Age

Percentage of elderly adults who receive a—contributory or non-contributory pension: Quotient between the total of people 65 years old and over who receive a contributory or non-contributory pension and the total of people ages 65 and above, multiplied by 100.

Non-communicable diseases (NCDs): A medical condition or disease that is non-transmissible among people and typically of slow progression.

Prevalence of Obesity: Percentage of population with body mass index ≥ 30 kg/m2, following Global Burden of Disease Study 2013.

Disaggregations:

Total: average at the national level by country and by year.

By gender: average for men and for women by country and by year.

By area: average for the urban and rural area by country and by year. Not all countries have data for rural areas (see below the list of surveys)

By income quintiles: averages by groups of households or individuals ordered from the poorest to the richest according to their income and divided into five equal parts, by country and by year. The first quintile represents the poorest 20% of households or population, and the fifth quintile represents the richest 20%.

By race and ethnic group: averages for Indigenous peoples, Afro-descendant populations and the rest of the population, by country and by year. Self-identification was the top criterion when surveys

Size of the population of each group in the survey samples

Country	Last year of survey	Criterion used to identify the group	% of group in sample			% of group in expanded sample		
			afro	indigenous	rest	afro	indigenous	rest
Bolivia	2014	Self-identificaiton	0.1	26.9	73.0	0.1	32.7	67.2
Brazil	2014	Self-identificaiton	56.8	0.5	42.7	53.6	0.4	46.0
Chile	2013	Self-identificaiton	0.0	12.6	87.4	0.0	9.1	90.9
Ecuador	2014	Self-identificaiton	4.8	13.4	81.9	4.1	6.9	89.1
Guatemala	2014	Self-identificaiton	0.1	32.6	67.3	0.1	36.3	63.6
Mexico	2014	Language spoken	0.0	7.5	92.5	0.0	9.1	90.9
Peru	2014	Self-identificaiton	2.0	33.1	64.9	2.4	29.0	68.6
Paraguay	2014	Language spoken	0.0	35.1	65.0	0.0	31.6	68.4
Trinidad y Tobago	2013	Self-identificaiton	39.5	37.8	22.7	39.5	37.8	22.7
Uruguay	2014	Self-identificaiton	4.6	1.5	93.9	4.7	1.5	93.8

Country codes (Abbreviations)

Country	Code		
Argentina	ARG	Guyana	GUY
Latin America & Caribbean	LAC	Haiti	HTI
Bahamas	BHS	Honduras	HND
Barbados	BRB	Jamaica	JAM
Belize	BLZ	Mexico	MEX
Bolivia	BOL	Nicaragua	NIC
Brazil	BRA	Panama	PAN
Chile	CHL	Paraguay	PRY
Colombia	COL	Peru	PER
Costa Rica	CRI	Dominican Republic	DOM
Ecuador	ECU	Suriname	SUR
El Salvador	SLV	Trinidad and Tobago	TTO
Guatemala	GTM	Uruguay	URY
		Venezuela	VEN

Source: International Organization for Standardization (www.iso.org).

Harmonized household surveys

Country	Survey	Acronym	Years
ARG	Encuesta Permanente de Hogares - Puntual	EPHP	1999-2002
ARG	Encuesta Permanente de Hogares - Continua	EPHC	2003-2014
BHS	Labour Force Survey	LFS	2001-2009, 2011-2014
BOL	Encuesta Continua de Hogares	ECH	1999-2009, 2011-2013
BRA	Pesquisa Nacional por Amostra de Domicilio	PNAD	1999, 2001-2009, 2011-2014
BRB	Continuous Labour Force Sample Survey	CLFS	2000, 2004-2013
CHL	Encuesta de Caracterización Socioeconómica Nacional	CASEN	2000, 2003, 2006, 2009, 2011, 2013
COL	Encuesta Nacional de Hogares-Fuerza de Trabajo	ENH-FT	1999-2000
COL	Encuesta Continua de Hogares	ECH	2001-2005
COL	Gran Encuesta Integrada de Hogares	GEIH	2006-2014
CRI	Encuesta de Hogares de Propósitos Múltiples	EHPM	1999-2009
CRI	Encuesta Nacional de Hogares	ENAHO	2010-2014
DOM	Encuesta Nacional de Fuerza de Trabajo	ENFT	2000-2014
ECU	Encuesta Periódica de Empleo, Desempleo y Subempleo	ENEMDU	1999-2009
GTM	Encuesta Nacional de Ingresos y Gastos Familiares	ENIGFAM	1999-2014
GTM	Encuesta Nacional de Condiciones de Vida	ENCOVI	2000, 2006, 2011
GTM	Encuesta Nacional de Empleo e Ingresos	ENEI	2002, 2003, 2004, 2010-2014
HND	Encuesta Permanente de Hogares de Propósitos Múltiples	EPHPM	1999-2014
JAM	Labour Force Survey	LFS	1999, 2000, 2003-2010, 2012
JAM	Survey of Living Conditions	SLC	1999, 2000, 2003-2010
MEX	Encuesta Nacional de Ingresos y Gastos de los Hogares	ENIGH	1998, 2000, 2002, 2004-2006, 2008, 2010, 2012, 2014
NIC	Encuesta de Hogares sobre medición de Niveles de Vida	EMNV	2001, 2005, 2009
NIC	Encuesta Continua de Hogares	ECH	2010-2012
PAN	Encuesta de Hogares	EH	1999-2010
PAN	Encuesta de Propósitos Múltiples	EHPM	2011-2014
PAN	Encuesta de Niveles de Vida	ENV	2003, 2008
PRY	Encuesta Permanente de Hogares	EPH	1999-2014
PER	Encuesta Nacional de Hogares	ENAHO	1999-2014
SLV	Encuesta de Hogares de Propósitos Múltiples	EHPM	2010-2014
TTO	Continuous Sample Survey of Population	CSSP	1999-2013
URY	Encuesta Continua de Hogares	ECH	1999-2014
VEN	Encuesta de Hogares por Muestreo	EHM	1999-2013

Note: In Uruguay surveys prior to 2006 are only urban, in Ecuador the surveys before 2000 and 2002 are urban, in Paraguay the rural samples of the surveys of 1990-1992 and 1996 are not representative.

Acronyms and names of the Conditional Cash Transfer (CCT) and Non-contributory Pension (NCP) programs

Country Acronym CCT Program Name			Acronym NCP Program Name	
ARG	AUH	Asignación Universal por Hijo	PPNC	Programa de Pensiones No Contributivas (Vejez)
BOL	BJP	Bono Juancito Pinto	RDIG	Renta Universal de Vejez “Renta Dignidad”
BRA	BF	Bolsa Família	BPC	Benefício de Prestação Continuada
			PR	Previdência Rural
CHL	CS	Chile Solidario (Ingreso Ético Familiar)	PBS	Pensión Básica Solidaria
COL	FA	Familias en Acción	PPSA,	Programa de Protección Social al Adulto Mayor
CRI	AV	Avancemos	RNCP	Régimen No Contributivo de Pensiones por Monto Básico
DOM	PCS	Progresando con Solidaridad		
ECU	BDH	Bono de Desarrollo Humano	PAM	Pensión para Adultos Mayores
SLV	CSRU	Comunidades Solidarias Rurales y Urbanas	PBU	Pensión Básica Universal/Nuestros Mayores Derechos
GTM	MFP	Mi Familia Progres	AM	Programa de Aporte Económico o del Adulto Mayor
HND	B10M	Bono 10 Mil		
JAM	PATH	Advancement Through Health and Education	NCPS	Non-Contributory Pension Scheme
MEX	OPOR	Oportunidades	PAMA	Pensión para Adultos Mayores
PAN	RDO	Red de Oportunidades	AM70	Asistencia Económica para Adultos Mayores de 70 y Más
PRY	TKO	Tekopora	PAMP	Pensión Alimentaria para Adultos Mayores en Pobreza
PER	Juntos	Juntos	PEN65	Programa Nacional de Asistencia Solidaria “Pensión 65”
URY	AF	Asignaciones Familiares (Plan Equidad)	PNVI	Pensión No Contributiva por Vejez e Invalidez
VEN			GMMA	Gran Misión Amor Mayor

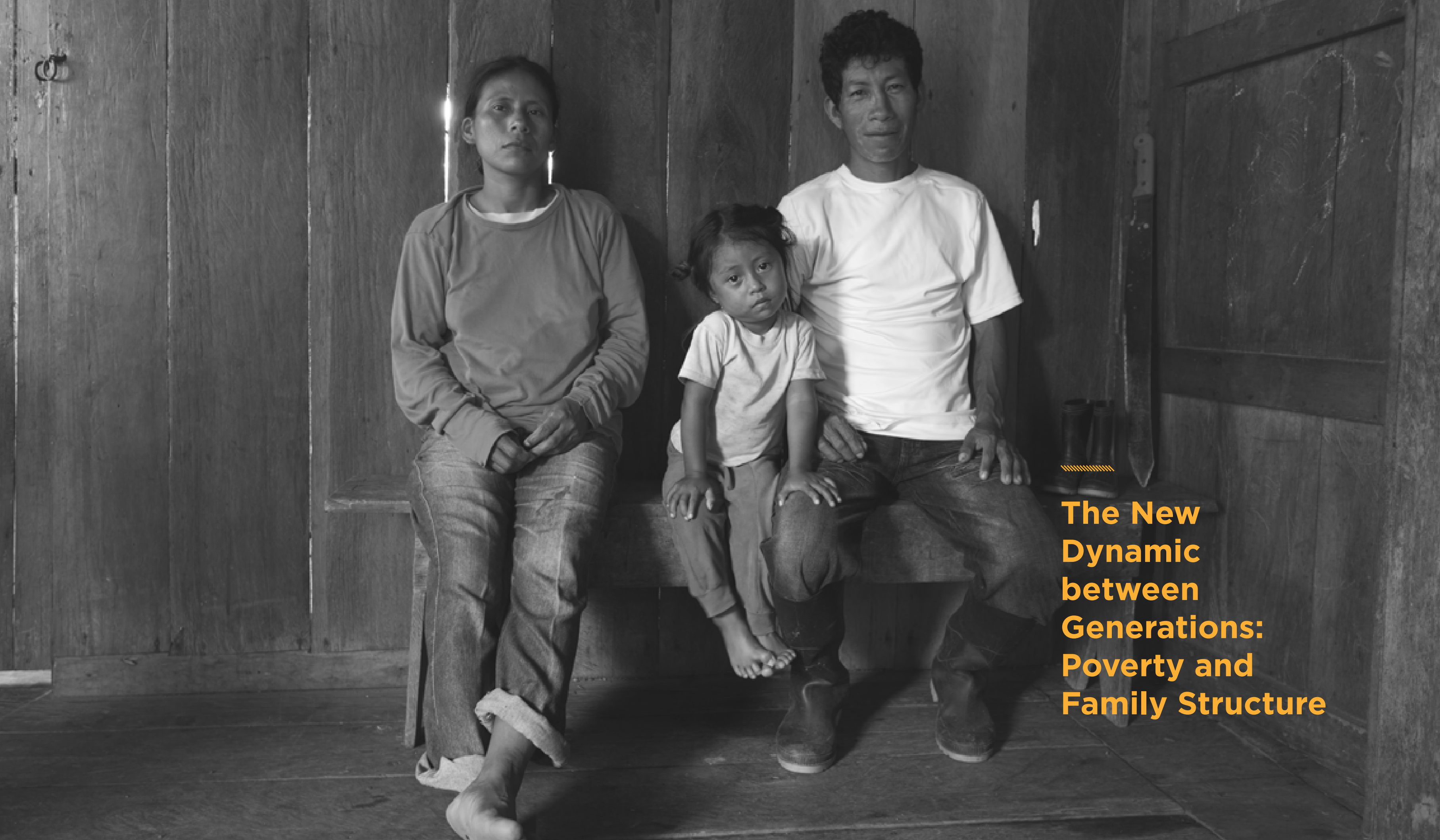
Source: based on data from official registries.

Statistical annex:



<https://mydata.iadb.org/idb/dataset/d4e4-kvp2>













**The New
Dynamic
between
Generations:
Poverty and
Family Structure**

INTRODUCTION

This Chapter analyzes demographic transition, changes in the age profile of poverty and the role of income sources in poverty reduction. The chapter goes on to address the evolution of family structure, focusing on potential implications for children and caregivers in the region.

FINDINGS:

-  **The change in the age structure of the region’s population has been a deep and heterogeneous process which has led to a significant decline in the ratio of dependents to working age adults.**
-  **This decrease accounted for almost 25% of the reduction in extreme poverty between 1996 and 2014, the second most important factor after growth in income per worker (which brought about 40% of the reduction in poverty).**
-  **While the percentage of people of all ages in poverty declined significantly in recent years, this reduction occurred unevenly across age groups. On average, the extreme poverty of LAC children is three times the poverty of the elderly. 18 years ago, in 1996, the extreme poverty of children was only twice.**
-  **Public transfers have been important for reducing poverty in the region. However, children are benefiting less from these transfers than other age groups.**
-  **The percentage of all households with children under 18 fell from 63.4 percent in 2002 to 55.5 percent in 2014, including nuclear and extended households.**
-  **For the elderly, two types of household structure are increasingly common throughout the region: living alone and living only with one’s spouse.**
-  **Children are increasingly likely to live with one parent rather than with two parents, approximately one fifth of children have access to only one parent in the household, and this trend is strongest in Brazil and Ecuador.**
-  **The structure of the family with respect to the presence of parents in the household continues to be a significant factor in terms of children’s education and health outcomes as demonstrated in Brazil and Ecuador.**

One of the characteristics of Latin America and the Caribbean households that has changed most dramatically in recent decades is age structure of their members. The shift began half a century ago as the region experienced a demographic transition (**Graph 1**), from a structure where younger age groups predominated to one in which older age groups prevail. Relative to the total population, the proportion of the population aged 0 to 14 decreased from 43% to 26% between 1965 and 2015. Meanwhile, the population aged 15 to 64 grew from 53% to 66%, and the population aged 65 and older rose from 4% to 8%. In other words, the LAC population grew older. During that same period, the median age increased by 10 years, from 19 to 29 years of age.

For the most part, the change in age structure brought about improvements in household living conditions because it was associated with substantial declines in both fertility (from 5.8 to 2.1 live births per woman of childbearing age between 1965 and 2015) and mortality (from 11.6 to 5.9 deaths per 1,000 inhabitants between 1965 and 2015). These advances resulted from the convergence of several important socioeconomic changes that increased survival of infants and prolonged life for adults. Improved access to health services and education in all countries and, more generally, global technological advances undoubtedly raised survival rates and improved well-being among all age groups. Between 1965 and 2015, life expectancy at birth increased by eight years, from 67 to 75 years.

The change in age structure has also allowed LAC households to take advantage of a demographic period with fewer dependents per each household member of working age that, in particular, since 2005¹, has been favorable for economic growth and generation of family income. This period is referred to as the *demographic window of opportunity*² (Barlow, 1994; Bloom and Williamson, 1998; Behrman and others, 2002) and will reach its peak in the region in the early 2020s (when there will be an average of 0.48 dependents per each family member of working age) and will close around 2040 (Graph 1). In other contexts, it has been shown that if countries are able to exploit this period to make investments that promote growth—improving the quality of education, health and job training—then returns will be high. Improved conditions will then enable countries to cope with the difficulties posed by the demographic transition toward a higher proportion of dependents in the following decades (Bloom and Williamson, op. cit.)³

In the context of these profound demographic changes, several studies have paid special attention to the projected increase in the elderly population and the economic, fiscal and institutional difficulties that could arise in the region once the demographic opportunity comes to an end (IDB-ECLAC, 1996; ECLAC, 2008; Cotlear, 2011; Bosch and others, 2013, among others).

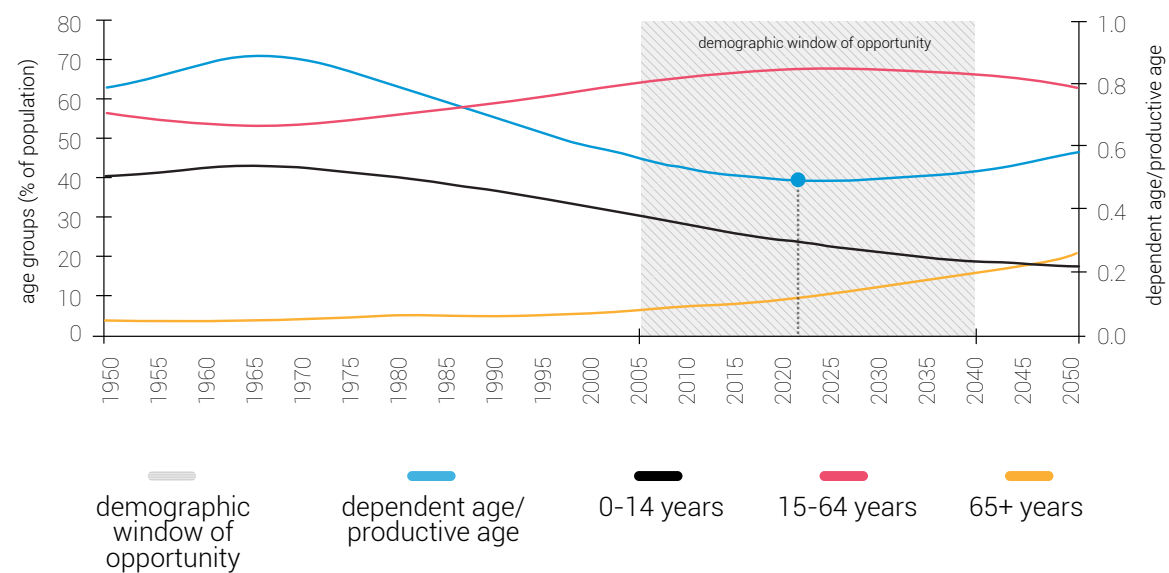
In contrast, this chapter explores the relationship between the changes in the age profile of the population and changes in poverty. Since the economic behavior of individuals—particularly with regard to income and savings—varies with where they are in the life cycle, it is expected that the higher number of working-age persons and lower number of dependents have had a significant effects on poverty reduction. Furthermore, given that progress through the demographic transition cycle varies considerably by country, it is expected that the impact on poverty have been very different across the region.

¹ The window opened much earlier in Barbados, Chile, Trinidad and Tobago and Uruguay, as will be seen below.

² In this chapter, we will use the United Nations (2004) definition: a period when the proportion of children and youth under 15 years falls below 30% and the proportion of people 65 years and older is still below 15%.

³ These authors showed that the demographic window of opportunity explained one third of unprecedented growth between 1965 and 1990 in Southeast Asia, where poverty also declined dramatically.

GRAPH 1: CHANGES IN AGE STRUCTURE AND THE DEMOGRAPHIC WINDOW OF OPPORTUNITY IN LAC.



Source: Based on data from the United Nations World Population Prospects (2015) and the UN definition of the demographic window of opportunity (2004).

In subsequent sections of this chapter, we seek to answer the following questions: What is the magnitude of changes in the age structure of populations, and how uneven are these changes among countries? How have the changes contributed to poverty reduction? Has the well-being of children, youth, adults or the elderly been more responsive to the change in age distribution? Has equal importance been given to all age groups living in poverty when allocating public transfers? How important are other sources of household income in reducing poverty for people at different stages of the life cycle?



A

1 2 3 4

DEMOGRAPHIC
CHANGES
AND POVERTY



1.



AGE
STRUCTURE OF
COUNTRIES

The current demographic transition is a long process bookended by two situations of low population growth: one initial, with high birth and death rates and other final, with low birth and death rates. Between these two extremes, we see initially an increase in the rate of population growth due to a drop in mortality followed by a decline in population growth due to a drop in fertility (IDB-ECLAC, op. cit.). The age structure of a population is also affected by this process, mainly by the initial high fertility rates. A drop in fertility has the effect of reducing the number of young people and, therefore, increasing the relative weight of people over age 65 in the population. Over time, this effect will gradually shape the age structure of successive generations, bringing about a decline in the relative weight of adults and growth in the proportion of the elderly, whose numbers rise through longer lifespans and a decrease in the relative weight of the other two age groups⁴. These forces at work in the demographic transition give rise to a gradual aging of the population.

Changes in population growth and age structure depend on the progress of a country through the demographic transition, that is, the moment that changes in mortality and fertility begin and the speed at which those changes advance. In order to determine the extent of this progress, we group countries according to the total fertility rate (TFR) and life expectancy at birth (LEB) recorded in the period from 2010 to 2015. We use the LEB variable instead of the crude death rate because it more clearly shows the differences between countries (Chackiel, 2004; ECLAC, 2008). For example, although Haiti and Uruguay have similar death rates (about nine deaths per 1,000 inhabitants), there is a 15-year difference in life expectancy between the two countries (62 years versus 77, respectively). LEB reflects the level of mortality without the averaging effect caused by the age structure of the national population⁵.

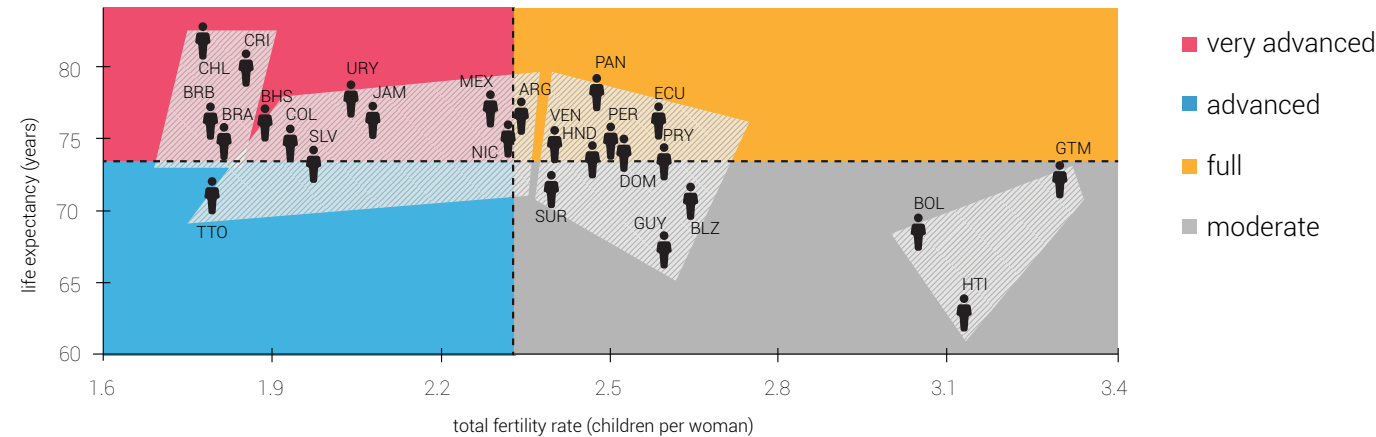
Based on average fertility rates and life expectancy, 26 countries are classified according to their stage of demographic transition: moderate, full, advanced or very advanced. In Graph 2, each point represents the value of both indicators and clusters the countries according to their stage of the transition.

Bolivia, Guatemala and Haiti are at a moderate (i.e., less advanced) stage of transition, while Barbados, Brazil, Chile and Costa Rica are classified as very advanced. The differences between these two groups of countries are important not only in terms of fertility (an average of 3.2 children per woman versus 1.8 children, respectively) and life expectancy (67 years versus 77 years) but also in terms of the point at which the countries began to see a drop in these rates. For example, in Costa Rica, fertility began to decline in the mid-1960s, yet in Haiti fertility did not begin to fall until a quarter of a century later, in the early 1990s.

Ten of the 26 countries are in full transition, with fertility rates between 2.4 and 2.6 children per woman. In most countries, the decline in this indicator began in the 1960s, except in Honduras and Belize, where fertility began to drop in the 1970s and 1980s, respectively. This group's LEB ranges from 66 years in Guyana to 77 years in Panama.



GRAPH 2: LAC COUNTRIES ACCORDING TO THEIR STAGE OF DEMOGRAPHIC TRANSITION (26 COUNTRIES).



Source: Based on data from the United Nations World Population Prospects (2015).

Lastly, nine countries are at an advanced stage of transition, most with low mortality rates (i.e., high life expectancy at birth, above the regional average) and fertility rates below replacement level (2.1 children per woman). It is worth noting that Argentina and Uruguay, unlike other countries, saw fertility decline sharply before the 1950s (from approximately six children per woman to three children), with further declines beginning in the 1980s.

With these results and additional UN data (2015), we established that there is a negative relationship between the stage of demographic transition and the rate of population growth between 2010 and 2015.

In other words, the more advanced the stage of transition, the slower the population growth.

During this period, countries at a moderate stage of transition saw annual average population growth of 1.7%, countries in full transition had growth of 1.3%, and those at an advanced or very advanced stage recorded growth of 0.9%. Furthermore, population growth rates in all countries are converging toward the lowest average regional rate of 1.1%. The standard deviation around the 1.1% average annual regional growth rate in the period 2010 to 2015 was 43% lower than the deviation around the 2.6% growth rate in the period 1960 to 1965.

⁴ International migration also affects population growth and age structure, albeit less significantly than mortality and fertility. However, considering how closely tied migration is to the economic situation of countries, it is difficult to predict its evolution in the long term. El Salvador has the highest negative net migration in the region, a rate of 7.9 per 1,000 inhabitants in 2015 (United Nations, 2015).

⁵ This is consistent with the definition of life expectancy at birth: the number of years that a newborn is expected to live if current mortality rates continue to apply.

We also found that a close relationship exists between progress in the demographic transition and the change in age structure. That is, the more advanced the stage of transition, the greater the change in the size of one age group with respect to the others. Graph 3 shows the changes in age structure for 26 countries over a period of 50 years, from 1965 (blue bars) to 2015 (black dots). For all countries, the relative weights of the economically active and elderly populations exceed the weight of the child population (the difference between the black dots and the end of the blue bars). In addition, the following is observed:

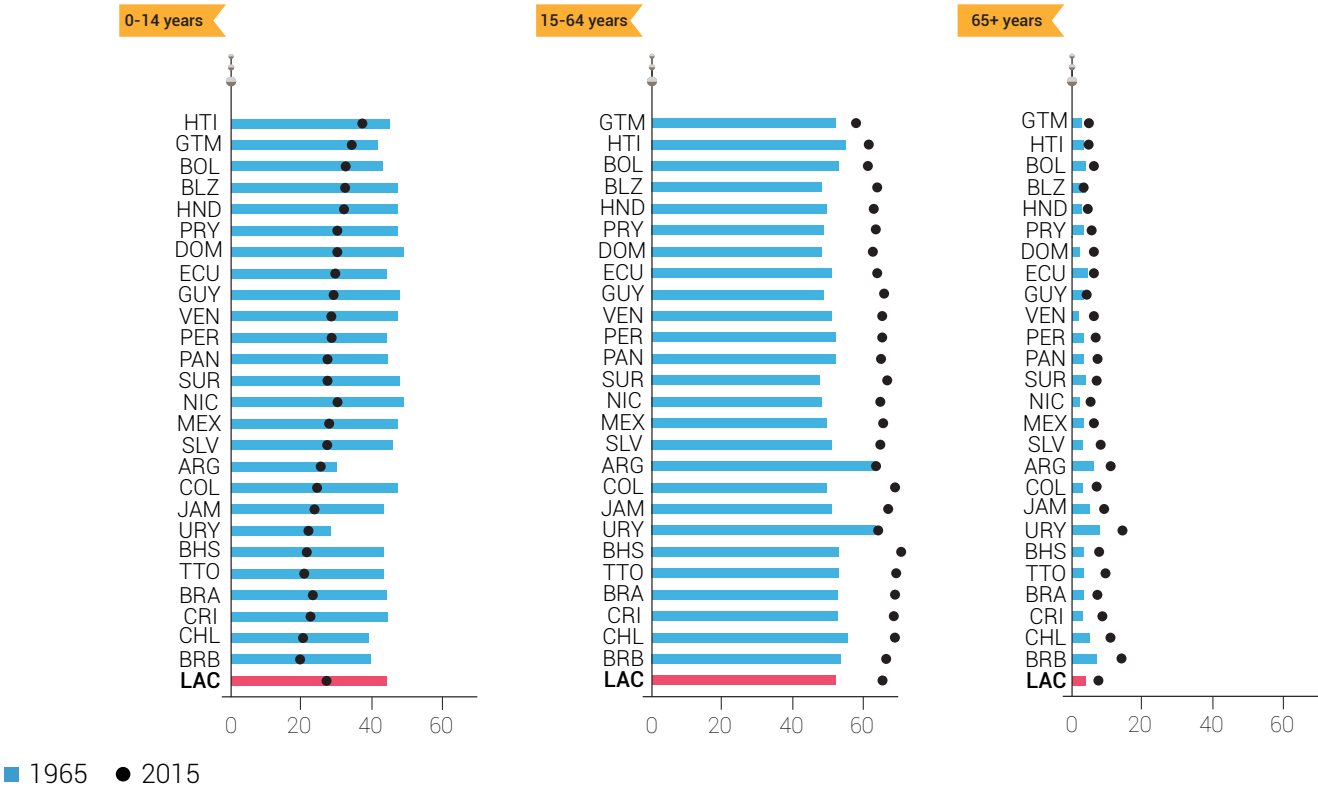
The relationship between the stage of demographic transition—with countries ranked in ascending order from moderate to very advanced—and the trends illustrated with the black dots is consistent with the premise that the relative weight of children declines (downward trend) and the relative weight of the economically active and elderly populations increases (upward trend) as a country progresses from one stage to the next. After reaching its peak in 2020, the relative size of the economically active population will begin to decline early in the next decade (as seen in Graph 1 for the region). As discussed below, several countries have already begun to experience this change, but for others, it is still far off.

The change in age structure over the last 50 years was not only intense but also uneven among countries. For example, although Guatemala and Costa Rica had the same age structure in 1965 (52% adults, 45% children, and 3% elderly), a half century later, the structures of the two are now quite different. Costa Rica was among the countries that underwent more changes while Guatemala experienced fewer. The size of the adult population jumped from 52% to 69% in Costa Rica but grew from only 52% to 59% in Guatemala. In addition, the size of the elderly population tripled in the former, and only doubled in the latter.

The variation in changes in age profile is also apparent when examining the extreme cases in each age group. They are not always the same countries. In 2015, as shown by the black dots, the countries with the highest proportion of adults were the Bahamas and Trinidad and Tobago (70.8% and 69.8%, respectively), while Guatemala and Bolivia had the lowest proportion (58.1% and 61.1%, respectively). Uruguay and Barbados recorded the highest proportion of elderly people, with 14.4% and 14.2%, respectively, while Belize and Haiti had the lowest. Lastly, Guatemala and Haiti had the highest proportion of children, with 36.6% and 33.7%, respectively, while Barbados and Chile had the lowest, with 19.4% and 20.2%.



GRAPH 3: POPULATION STRUCTURE BY AGE GROUP AND COUNTRY IN 1965 AND 2015 (LAC, 26 COUNTRIES).



Countries have been moving through the most favorable period of change in age structure, the demographic window of opportunity, at different times⁶.

Based on the UN (2004) definition of the demographic window—a period when the proportion of people under age 15 falls below 30% and the proportion of people age 65 years and older is still below 15%—Graph 4 summarizes information about the years when this window opens and closes, its duration (red column), and the point at which the transition reaches its most favorable level (black dot inside the bars), for 26 LAC countries. During this period, the dependency ratio—the proportion of dependents (people younger than 15 or older than 64) to working-age individuals (those ages 15 to 64 years)—dips to a low level previously unseen. The potential implications of these conditions for increased family incomes make the demographic window a highly advantageous time for individuals and for national economies overall⁷.

The order of the countries, determined by the year the demographic window closes, is found to be consistent with the stage of progress in the demographic transition (summarized in **Graph 2**), i.e., the slower the transition, the longer it takes for a country to reach the window of opportunity. Although most countries (21 out of 26) have already entered this period, the transition process began only recently in the region:

⁶ Further below, it is shown that these changes were key to understanding the progress made toward reducing poverty in the region.
⁷ The 2016 Development in the Americas: Saving for Development (IDB, 2016) found that the region had so far failed to take advantage of the demographic window in terms of building savings.

The demographic window is yet to begin in six countries: Honduras (2018), Bolivia (2022), Belize (2021), Haiti (2026) and Guatemala (2033).

The window opened within the last decade for 12 countries: Suriname (2005), Jamaica and Panama (2006), Peru (2009), Mexico and Venezuela (2010), El Salvador (2011), Ecuador (2013), Guyana (2014), Dominican Republic (2015), and Paraguay and Nicaragua (2016).

Only four countries are halfway or more than halfway through the window. From most advanced to less advanced, the countries are: Barbados, Uruguay, Chile, and Trinidad and Tobago.

The first country in the region to see its demographic window close will be Barbados in 2017, followed by Uruguay in 2020 and Chile in 2024 (the last red bars).

The advantages to be gained by countries moving through the demographic window of opportunity are linked to the economic impact that the prevailing age structure may have during this period.



Before the window of opportunity closes, it is possible for countries to take advantage of increases in per capita income and savings due to the fact that the working-age population will be larger than the number of dependents.

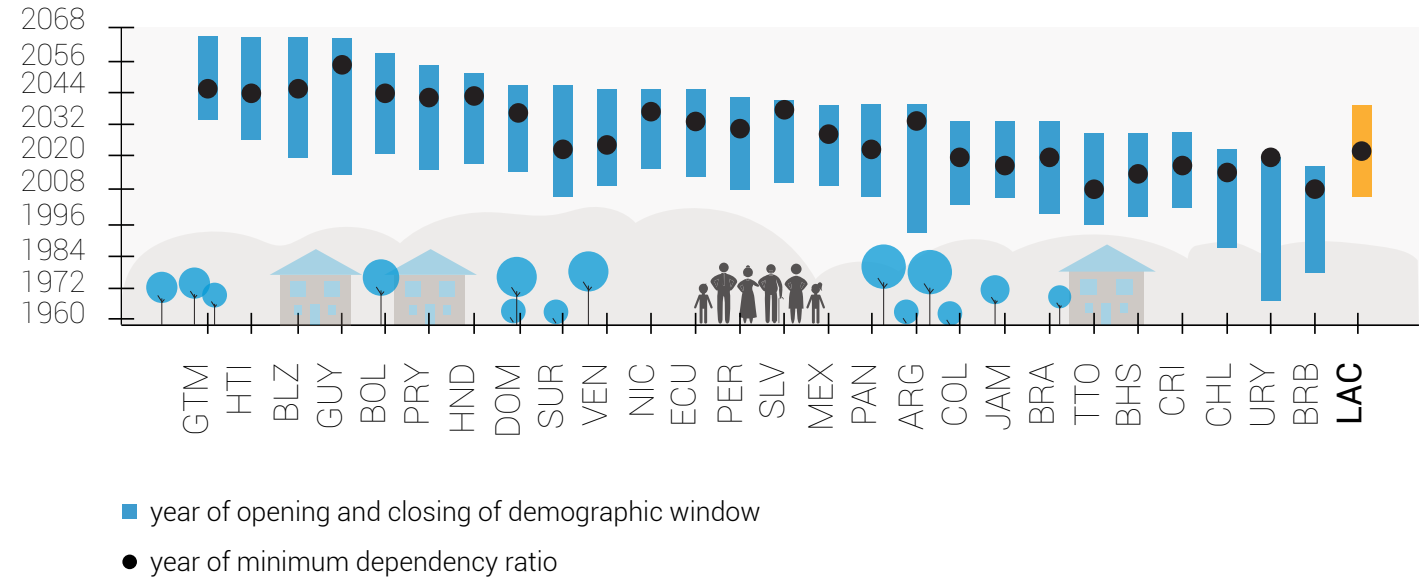
In other words, more adults could earn salaries and household consumption by children and the elderly could decline (as observed in various contexts by Lee and others, 2000; Deaton and Paxson, 2000; Behrman and others, 2002). At the country level, although the demographic window presents a situation that favors accelerated growth and development, it does not guarantee better living standards. The outcome depends on adoption of appropriate public policies and investment in human capital, especially education for youth.

Countries could also benefit from the absolute decline in the number of children and, consequently, the lower demand for resources to fund basic education. Countries that were among the first to enter the demographic window of opportunity are benefiting now from the reduction in the number of children. In 2015, Brazil reported the population of children ages 0 to 14 had fallen by 8% (4.3 million) since 2000, and in 2030, the number of children will have shrunk by 20% (10.3 million). For those same years, Trinidad and Tobago expects reductions of 13% and 27%, while Chile expects decreases of 10% and 15%. By contrast, the population of children in countries such as Guatemala and Belize, which have not yet entered the window of opportunity, continues to increase in absolute numbers, and the demand for resources for basic education also rises, even though the relative weight of this age group has declined. In 2015, Guatemala reported a 19% increase in the number of children since 2000, and Belize saw a 16% increase. In 2030, the increases are expected to be 31% and 28%, respectively, compared to the year 2000.

Furthermore, countries benefit from a decline in household size because this has a direct impact on people's economic well-being. This decline is primarily determined by a drop in the fertility rate in previous years (Jiang and O'Neill, 2007) that also reaches its lowest levels during the demographic window of opportunity. For example, for a given level of household income, a reduction in household size from five to four members generates a 25% increase in per capita income, while a reduction from four to three members produces a 33% increase. According to household surveys across the region, between 1996 and 2014, the average size of Latin American households dropped 18% (from 4.1 members to 3.3). Brazilian households shrank by 20% (from 3.6 to 2.9), while those in El Salvador and Uruguay dropped 22% (4.7 to 3.7) and 13% (3.2 to 2.8), respectively.



GRAPH 4: DEMOGRAPHIC WINDOW OF OPPORTUNITY BY COUNTRY (LAC, 26 COUNTRIES).



Source: Based on data from the United Nations World Population Prospects (2015) and the UN definition of the demographic window of opportunity (2004).



**CHANGES
IN THE AGE
PROFILE OF
POVERTY**

In the previous section, we saw, primarily through the analysis of UN data (2015), that changes in fertility and mortality affect population growth and age structure in LAC and how these changes, in turn, have the potential to influence the population's economic well-being. At the end of this section, we show that changes in the region's age structure account for one quarter of the reduction in the poverty rate in recent years. But first, we provide a detailed description of the magnitude of this reduction by age group, beginning in the mid-1990s. The breakdown of poverty reduction by age is based on information from the IDB's Harmonized Household Surveys from Latin America and the Caribbean, a set of databases that includes surveys from 26 countries in the region, dating from the late 1980s, which have been standardized to allow comparisons over time and between countries. Specifically, we use 72 surveys from 18 countries at four points in time: 1996, 2002, 2008 and 2014⁸.

Despite the conceptual advantages of consumption as a welfare indicator, we use an income-based measure of poverty, since most countries in the region regularly capture this information. We also use the poverty line of US\$3.1 per day per capita at 2011 PPP⁹, equivalent to the average national extreme poverty lines¹⁰, i.e., the average cost of a basic food basket in the countries of the region¹¹. Using these criteria, individuals are identified as extreme poor if they live in households with a per capita income below the threshold of US\$3.1 per day¹², and the incidence or rate of poverty (percentage of the population that is poor) is obtained by aggregating this information. Then, to evaluate the robustness of the incidence estimates by age group, we use the concepts of equivalence scales and economies of scale as described below.

Recent literature sheds light on how progress in the demographic transition may have had an impact on poverty. In different contexts and time periods, it has been shown that changes in population growth and age structure affect poverty rates in three ways:

- (i) lower population growth reduces consumption needs and, therefore, increases the growth rate of per capita income and household savings (growth effect);
- (ii) a faster reduction in the number of children relative to the working-age population in poorer households positively affects income distribution (distribution effect); and
- (iii) a faster reduction in the proportion of children may help households to be more efficient at converting income into well-being and capabilities through access to education, health, and care of children by their mothers (conversion effect) (Deaton and Paxson, 2000; Eastwood and Lipton, 2003; Bloom and Canning, 2003).

Table 1 and **Graph 5** provide an overview of extreme poverty in Latin America over the last 18 years (1996 to 2014). They show the incidence of extreme poverty at four different points and changes over three six-year periods. It is noted that the extreme poverty rate regionwide fell by more than half between 1996 and 2014 (from 29.9% to 12.9%) with a variable pace of decline throughout the period. The poverty rate declined 3.7 times faster between 2002 and 2008 (an average of 6.5% per year) than between 1996 and 2002 (an average of 1.7% per year). There was also a significant drop between 2008 and 2014, albeit slightly less (5.5% per year) than in the previous six-year period. These changes are linked to economic growth experienced by the region in the same periods. The GDP of Latin America (converted to US dollars using 2011 PPP rates) grew an average of 2.5% annually between 1996 and 2002, 4.1% between 2002 and 2008, and 2.8% between 2008 and 2014¹³.

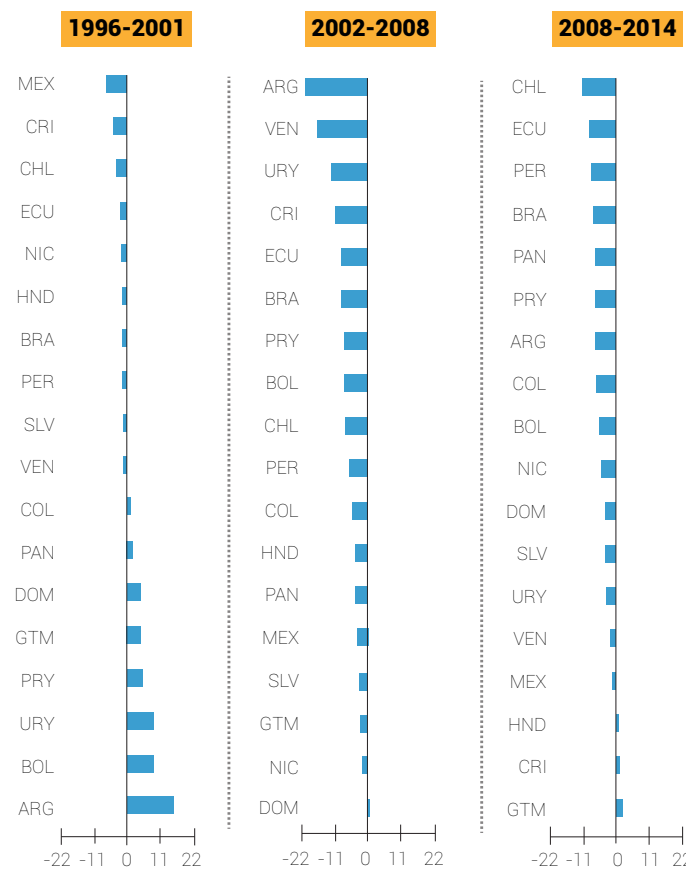
⁸ The surveys are described in Table A1 of the Statistical annex.
⁹ Purchasing Power Parity is a factor that converts the country's currency into dollars that can buy in the local market the same amount of goods and services as in the United States.
¹⁰ This value, in turn, is equal to the line suggested for the monitoring of poverty in middle-income countries under the framework of the new sustainable development goals (Ferreira and others, 2015).
¹¹ See details in Table A2 of the Statistical annex.

At the country level, it is observed that Argentina's economic crisis in the early 2000s substantially affected the country's poverty rate between 1996 and 2002 (an increase from 10% to 25%), as well as that of its neighbors Bolivia (23% to 38%), Paraguay (26% to 34%) and Uruguay (4% to 7%). In contrast, significant declines in the poverty rate were observed in this period in Mexico (38% to 24%), Costa Rica (17% to 13%), Chile (12% to 10%) and Ecuador (43% to 38%). The 2002 to 2008 period was the most favorable for the region, with poverty declining in 17 of 18 countries. This achievement was the product of macroeconomic stability, fiscal and monetary prudence, stricter financial supervision, and the transformation and expansion of social programs. The region's economies also got a substantial boost from an increase of 4.4 times in the prices of the principal commodities exported by the region between January 2002 and August 2008¹⁴. Poverty rates plummeted in Argentina, Paraguay and Uruguay, more than making up for the increases of the previous period, while in Venezuela, Costa Rica and Ecuador, poverty fell at rates of 17%, 11% and 9% per year, respectively. In Brazil, Chile, Colombia and Peru, poverty declined at an annual rate of more than 5%. Finally, despite the economic slowdown between 2008 and 2014, significant progress in poverty reduction continued. In Brazil, Chile, Ecuador, Panama, Peru and Paraguay, poverty rates were reduced by more than 8% over the period.

TABLE 1: EXTREME POVERTY RATES IN LAC, BY COUNTRY, 1996-2014 (%).

	1996	2002	2008	2014
ARG	10.4	24.9	5.8	3.7
BOL	23.4	37.8	23.6	15.8
BRA	27.4	25.5	15.4	8.9
CHL	12.3	9.8	6.1	2.8
COL	35.3	35.5	26.5	16.6
CRI	17.5	13.5	6.8	6.7
DOM	15.9	19.8	20.2	15.1
ECU	43.0	38.4	22.5	12.0
GTM	26.9	34.3	32.0	35.3
HND	52.3	47.8	38.0	36.3
MEX	37.5	24.0	19.8	17.4
NIC	49.7	45.2	42.8	29.0
PAN	21.0	22.8	18.7	11.1
PER	31.5	29.6	20.2	11.1
PRY	26.1	33.9	20.9	12.6
SLV	29.8	28.9	25.2	18.9
URY	4.3	6.9	3.3	2.5
VEN	28.2	27.6	8.8	7.7
LAC-s	27.4	28.1	19.8	14.6
LAC-p	29.9	26.9	18.0	12.9

GRAPH 5: ANNUAL % CHANGE IN EXTREME POVERTY IN LAC, BY COUNTRY, 1996-2002, 2002-2008 AND 2008-2014.



Note: The poor are defined as those living in households with per capita income of less than US\$3.1 per day at 2011 PPP.
Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

¹² This figure is further adjusted using the CPI for each country from 2011 to the date of the survey before comparing it to income. In the case of Argentina, the Congress CPI, an average of private estimates by consultants, was used.
¹³ According to World Development Indicators 2015 (accessed with the World Bank's wbopendata Stata module).
¹⁴ IMF Primary Commodity Prices (2015), available at <http://www.imf.org/external/np/res/commod/index.aspx>

A simple disaggregation of extreme poverty by age—including the assumptions that all household members have the same needs and that no goods are shared by household members—shows four clear trends between 1996 and 2014:

- (i)

all age groups experienced a significant reduction in poverty;
- (ii)


child poverty rates always remained above the average rate;
- (iii)

the reduction in poverty among children was less than for other age groups and
- (iv)

the elderly had the lowest poverty rate of any age group in recent years and, at the same time, experienced the greatest reduction in poverty

All of these trends meant that the poverty gap between the young and the old widened over the last 18 years.

Graphs 6 and 7 provide evidence of these trends for the region as a whole (18 countries).



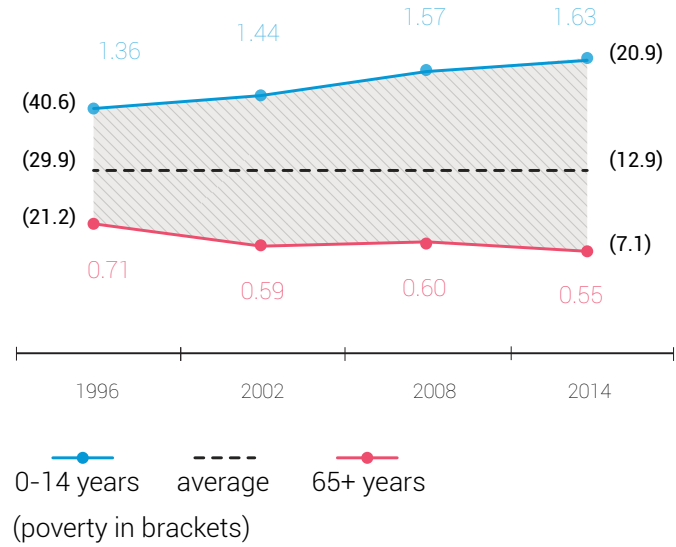
Extreme poverty rates among children ages 0 to 14 years became increasingly higher than the average for the total population: 36% higher in 1996 and 63% higher in 2014. This occurred because extreme poverty declined at different rates across age groups.

While extreme poverty among children ages 0 to 14 years decreased an average of 3.6% each year, it declined by 4.2% among youth (ages 15 to 24 years), 4.8% among adults (ages 25 to 64 years) and 5.9% among the elderly (ages 65 and over). These unequal changes caused the child/elderly poverty ratio to increase from 1.9 times in 1996 (41% and 21%, respectively) to 2.9 times in 2014 (21% and 7%, respectively).

At the country level, although overall trends were similar to regional ones, poverty reduction by age group was markedly uneven. Table 2 shows the poverty ratio of child/adult (ages 0 to 14 and 15 to 64 years, respectively) and of child/elderly (ages 65 and over). A value greater than 1 indicates that the proportion of children living in poverty is higher than that of adults or the elderly. Graph 8 shows the average annual change in poverty over 18 years (1996 to 2014) for three age groups; negative values indicate poverty reduction. The following results stand out:

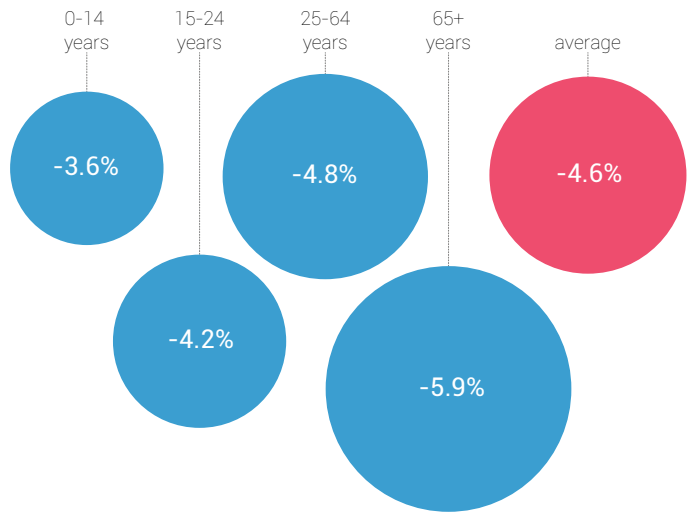
In all countries, without exception, poverty is much higher among children than among older age groups. In 2014, the child/adult poverty ratio was highest in Argentina, Brazil and Uruguay (an average of 2.7) and lowest in Guatemala, Honduras and Nicaragua (an average of 1.5). With regard to the elderly, the ratio was similarly low in these Central American countries (an average of 1.4) but was noticeably higher in the three Southern Cone countries. In Uruguay, Argentina and Brazil, although poverty among adults 65 and over was less than 1%, among children under 15 years the rates were 6%, 7% and 18%, respectively.

GRAPH 6: RATIO OF EXTREME POVERTY OF CHILDREN AND ELDERLY WITH RESPECT TO POVERTY FOR ALL INDIVIDUALS (AVERAGE FOR 18 COUNTRIES IN LAC), 1996-2014 (%).



Note: The poor are defined as those living in households with per capita income of less than US\$3.1 per day at 2011 PPP.
Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

GRAPH 7: ANNUAL % CHANGE IN EXTREME POVERTY IN LAC, BY AGE GROUP, 1996-2014



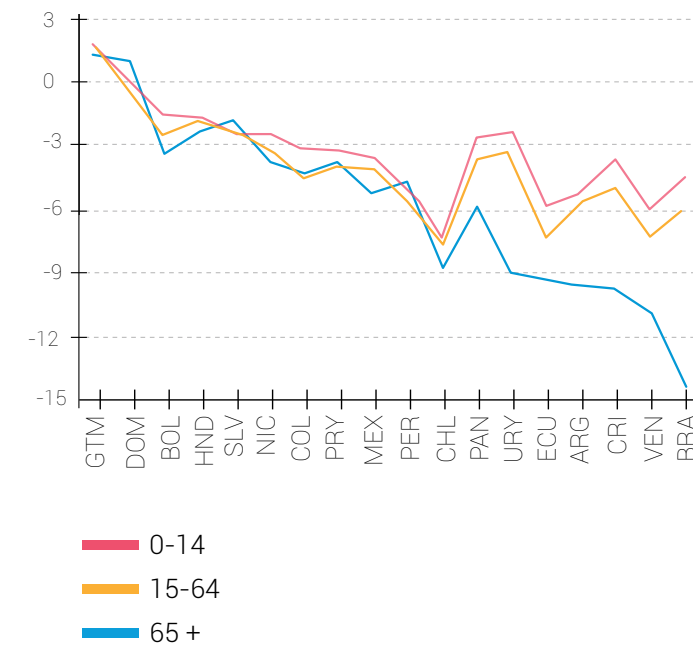
Poverty differences between age groups increased in all countries. Between 1996 and 2014, child/elderly poverty ratios quadrupled in Argentina, Brazil and Uruguay from levels that were already high in the mid-1990s, and they tripled in countries such as Costa Rica, Panama and Venezuela where ratios had been relatively low in 1996. These changes, as shown below, are associated with changes in people's sources of income.

Although poverty by age group declined at almost similar rates between 1996 and 2014 in 11 of the 18 countries analyzed (the segments from Guatemala to Chile in Graph 8), the changes observed in the poverty rates of other countries (the segments from Panama to Brazil) were quite varied, resulting in wider gaps between age groups. In Brazil, Venezuela, Costa Rica, Argentina, Ecuador, Uruguay and Panama—in that order—the annual rate of poverty reduction was significantly higher (an average of 2.5 times) among the elderly than among the younger age groups. As previously discussed, poverty differences among these age groups increased the most in these countries.

TABLE 2: CHILD/ADULT AND CHILD/ELDERLY EXTREME POVERTY RATIOS IN 1996 AND 2014.

	Child/Adult		Child/Elderly	
	1996	2014	1996	2014
ARG	2.1	2.3	5.7	2.4
BOL	1.5	1.7	1.1	1.4
BRA	1.8	2.4	2.8	7.3
CHL	1.8	1.8	3.4	1.3
COL	1.5	1.9	1.4	1.2
CRI	1.6	2.1	1.0	3.2
DOM	1.5	1.7	1.4	0.9
ECU	1.3	1.8	1.0	2.0
GTM	1.5	1.5	1.5	1.1
HND	1.3	1.4	1.2	1.1
MEX	1.5	1.7	1.3	1.3
NIC	1.3	1.5	1.1	1.3
PAN	1.7	2.1	1.6	1.9
PER	1.6	1.8	1.7	1.0
PRY	1.6	1.8	1.9	1.1
SLV	1.5	1.5	1.6	0.9
URY	2.9	3.5	15.8	3.5
VEN	1.5	1.8	1.3	2.6

GRAPH 8: AVERAGE ANNUAL % CHANGE IN EXTREME POVERTY IN LAC, BY COUNTRY AND AGE GROUP, 1996-2014.



Note: The poor are defined as those living in households with per capita income of less than US\$3.1 per day at 2011 PPP.

Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

Graph 9 presents extreme poverty rates by age in 1996 and 2014¹⁵. The data confirm that the population of all ages from all countries of the region—except for Guatemala and the Dominican Republic—benefited from poverty reduction during the last 18 years (the difference between the solid and the dashed lines). This Graph also reveals a clear bias against children (greater difference between the lines on the left side of the horizontal axis) and in favor of the elderly (lesser difference between the lines on the right side of the horizontal axis) in terms of poverty reduction. This trend is particularly pronounced in Costa Rica, Ecuador, Panama and Venezuela.

By observing the dashed line corresponding to 2014, three groups of countries can be distinguished according to the trend of the line from the midpoint of the life cycle¹⁶. In Argentina, Brazil, Chile, Uruguay and Venezuela, poverty decreases steadily with age (a favorable situation for the elderly). In contrast, poverty increases with age in Bolivia, Colombia and Guatemala (an unfavorable situation for the elderly). In the other 10 countries, poverty remains more or less constant with age. By observing the full range of this line, it is noted that in all 18 countries, poverty is always higher among children, at least until the age of 10, than among the rest of the population.

¹⁵ The poverty data in this figure were smoothed with locally-weighted regressions for each country and year using the lowess command in Stata, with a bandwidth of 0.1, i.e., minimal smoothing.

¹⁶ Similar evidence exists for 2006 in Cotlear and Tornarolli (2011).

GRAPH 9: GRAPH 9: EXTREME POVERTY RATES IN LAC, BY AGE, IN 1996 AND 2014 (%).



Note: The poor are defined as those living in households with per capita income of less than US\$3.1 per day at 2011 PPP.

Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

It is worth noting that in the five countries where the elderly benefit from a favorable trend in poverty reduction, this age group has the lowest poverty rates in the region and exhibits the greatest differences in poverty as compared with children. At the other extreme, in the three countries where the elderly are faced with an unfavorable situation, poverty rates are among the highest in the region, not only for this group but also for children.

Up until this point in this section, the poverty analysis was based on per capita income as a measure of well-being. Although the analysis controls for the effect of household size on poverty, this measurement by income does not consider that the needs of households vary according to the age of their members (equivalence scales) or that household members share goods and services (economies of scale). In other words, per capita income does not adequately express the ability of households to purchase the goods and services they require. Children usually require less income than adults to ensure that their needs are met (e.g., food and clothing), and households share goods whose costs are not necessarily proportional to the number of members who enjoy them (e.g., housing, electricity, internet service, etc.). Although these observations can hardly be refuted, the economics literature does not provide a standard for properly adjusting the income Graph to actual ability to consume. The generally accepted method is to :

- 1

apply a weighting system in which each household member is counted as a fraction of an adult,
- 2

adjust for economies of scale and
- 3

obtain the per adult equivalent income (Deaton, 1997; Deaton and Zaidi, 2003).

In order to evaluate the robustness of the initial results on poverty by age, we used two scales to adjust for household size: the OECD scale (Hagenaars, et al. 1996), one of the most frequently used scales to measure and analyze poverty, even outside the scope of the Organization's member countries, and the revised version of the US Census Bureau (USCB or USA) scale (Meyer and Sullivan, 2012).

- The OECD scale assigns a value of 1 to the household head, 0.5 to each additional adult member, and 0.3 to each child under the age of 15. There is no explicit adjustment for economies of scale.
- The USCB scale assigns a value of A0.5 to one- and two-person households, a value of $[A+0.8+0.5*(C-1)]0.7$ to one-parent households, and a value of $(A+0.5*C)0.7$ to all other households, where A is the number of adults and C is the number of children under the age of 18. The superscripts 0.5 and 0.7 indicate adjustments for economies of scale.

The way in which these scales assign weights to household members and adjust for economies of scale makes it possible to predict that the incidence of adjusted poverty will be lower in all age groups and lower still among groups given less weight¹⁷. Table 4 shows, for the region as a whole (18 countries), how poverty rates by age for the period 1996 to 2014 were affected by adjusting for household size with these two scales. The results are as follows:¹⁸

- Ignoring the presence of equivalence scales and economies of scale in households generates inflated poverty estimates based on per capita income. For example, in 2014, the unadjusted poverty rate for the region was nearly three times the adjusted poverty rate: 12.9% versus 4.7% with the OECD scale and 4.5% with the USCB scale.

¹⁷ Despite the differences in weights, both scales produce comparable results since they have similar equivalence elasticity (implicit economies of scale), i.e., ratios between the log adjusted for household size and the log unadjusted for household size of 0.620 and 0.605, respectively. Here, the smaller the elasticities, the higher the economies of scale. Compared with the scales of Jamaica, Argentina and Mexico, the only ones existing in the region, with elasticities of 0.77, 0.81 and 0.90, respectively, the implicit economies of scale of the USCB and OECD are relatively higher.

¹⁸ Similar results for all developing countries, using the OECD and other equivalence scales, can be seen in Batana, et al. (2013).

TABLE 3: EXTREME POVERTY RATES IN LAC (18 COUNTRIES), ADJUSTED VS. UNADJUSTED FOR HOUSEHOLD SIZE, BY AGE GROUP (%)

Age group	Unadjusted				Adjusted with OECD sacale				Adjusted with USCB scale			
	1996	2002	2008	2014	1996	2002	2008	2014	1996	2002	2008	2014
0-14	40.6	38.8	28.2	21.0	16.7	15.3	9.7	7.3	15.2	14.3	9.0	6.8
15-64	24.8	22.3	14.4	10.5	9.9	8.8	5.3	3.9	9.1	8.3	5.0	3.8
65+	21.2	15.8	10.9	7.1	10.0	8.0	5.8	3.2	10.0	8.0	5.7	3.2
total (all ages)	29.9	26.9	18.0	12.9	12.2	10.7	6.6	4.7	11.2	10.1	6.2	4.5

Note: The poor are defined as those living in households with per capita income of less than US\$3.1 per day at 2011 PPP.
Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

When examining extreme poverty by age group, it is noted that, although overestimation occurs in all groups, it is higher among children than among older adults because children tend to live in larger households. In 2014, the unadjusted poverty rate for children was 2.9 times higher than the rate adjusted with the OECD scale, and it was 2.2 times higher for older adults.

The adjusted rates also reduce the child-elderly poverty gap, but this does not change the trends observed in the unadjusted rates. In 2014, the unadjusted child/elderly poverty ratio was 2.7, and the adjusted ratio using the USCB scale was 2.1. In other words, child poverty rates are significantly higher than elderly poverty rates, adjusted or not.



At the country level, with few exceptions, adjusted poverty rates do not modify the trends observed in unadjusted rates. Table A3 of the Statistical Annex disaggregates the information in Table 4 for 18 countries. In 2014, for example, it is observed that adjusting for household size with the USCB and OECD scales significantly reduces the poverty rates of the three age groups in all countries, but it does not change their order in the ranking. The correlation between the ranking of countries by adjusted and unadjusted poverty rates for each age group is very high, ranging between 94% and 98%. The adjusted rates also reduce, but do not eliminate, the child-adult and child-elderly poverty gaps in almost all countries. Lastly, six of the seven countries with unadjusted poverty reduction rates that reveal a bias toward the elderly maintain that bias after rates are adjusted.

To conclude this discussion on the importance of age composition of a population for changes in poverty, we evaluate the factors related to these changes. In the context of the economic downturn that has affected the region since 2009, it is especially important to understand the role that factors other than economic growth play in poverty reduction. Consistent with the discussion on the relationship between demographic change and poverty at the beginning of this section and close to the analysis of Ros (2009), we measure the dependence of poverty (measured with the poverty line of US\$3.1 per day at 2011 PPP) on these factors: the level of income per worker (in 2011 PPP dollars), the degree of inequality in income distribution (the Gini coefficient), public social spending (as a percentage of GDP) and the age structure of the population (dependency ratio). In this analysis, an increase in income per worker, a reduction in inequality, a rise in social spending and a decline in the dependency ratio are expected to have positive effects on poverty reduction.

Working with information from 18 LAC countries taken at four points in time (1996, 2002, 2008 and 2014), we estimate how each independent variable brings about changes in poverty reduction (upper part of **Table 4**)¹⁹ and the relative contribution of each of these variables to changes in poverty rates (lower part of **Table 4**)²⁰. Results show that all independent variables are statistically significant²¹. The sole exception was social spending in the 1996-2002 period when spending was at its lowest level relative to the later years. Results also show that independent variables have expected effects on poverty reduction. For example, for each percentage point increase in income per worker, holding all else constant, poverty is reduced by an average of 1.6% and for each percentage point increase in the Gini coefficient, poverty increases by 2.5% (last column of upper part of **Table 4**). It is worth noting that the changes in independent variables are highly correlated to changes in poverty reduction (adjusted R2 greater than 90%, for all four time periods), and the years fixed effects are small and not statistically significant.

Outcomes showing the relative contribution of these variables to poverty reduction demonstrate that changes in income—specifically, increases—were the greatest driver throughout the years studied. In addition, it is clear that changes—a decline—in income inequality were as important as a drop in the dependency ratio at least until 2002. From that year on, a decline in the dependency ratio overtook change in income inequality as the second most important, and growing, force contributing to poverty reduction. For example, during the economic downturn, the lower dependency ratio explained 29% of the reduction in poverty²². In other words, even in times of lower economic growth, it was possible to achieve statistically significant results in reducing poverty. Changes in social spending—which has increased during the period of economic downturn—also contributed to the reduction in poverty (about 16%) in recent years.

¹⁹ We use a double-logarithmic estimate, i.e., for both dependent and independent variables, and year fixed effects in order to control for unexpected variation or special events not attributed to the independent variables that may affect changes in poverty.

²⁰ We use a Shapley-value decomposition of the adjusted coefficient of determination (R2) for each period with two points in time. Alternatively, the shapley, rego and shapley2 commands in Stata can perform this exercise using the Shorrocks decomposition (1982).

TABLA 4: FACTORS ASSOCIATED WITH THE INCIDENCE OF EXTREME POVERTY IN LAC (18 COUNTRIES).

	1996-2002	2002-2008	2008-2014	1996-2014
Household income per worker (log)	-1.384 (10.11)***	-1.594 (10.48)***	-1.666 (8.51)***	-1.557 (11.11)***
Gini coefficient (log)	2.430 (4.09)***	2.137 (5.73)***	2.571 (5.81)***	2.481 (6.45)***
Dependency ratio (log)	0.634 (3.54)***	0.706 (3.08)***	0.903 (3.57)***	0.766 (3.77)**
Public social expenditure as % of GDP (log)	-0.103 -1.33	-0.245 (2.17)**	-0.234 (2.03)*	-0.158 -1.72
Constant	3.028 -1.34	5.938 (3.49)**	4.686 (2.51)**	4.114 (2.58)**
Years fixed effects (F statistic)	0.026	0.209	0.477	0.030
Adjusted R ²	0.909	0.907	0.930	0.926
Number of observations	36	36	36	72
Shapley-value decomposition of the adjusted R ² (relative contribution of each regressor, %)				
Household income per worker	48.7	41.8	42.9	40.4
Gini coefficient	19.6	18.7	12.0	16.6
Dependency ratio	21.3	24.2	29.0	24.8
Public social spending as % of GDP	10.8	12.6	15.7	13.8
Years fixed effects	-0.3	2.8	0.4	4.4

Note: Robust standard errors in parentheses. * p<0.10; ** p<0.05; *** p<0.01

Source: Based on data from the IDB, IMF and ECLAC.



²¹ That is, there is a 99% chance (3 stars) that the coefficient value of an independent variable is different from zero. Two stars are associated with a 95% chance and one star with a 90% chance.

²² The contribution attributed to demographic change is consistent with what was found by Azevedo et al. (2013) when they decomposed the decline in poverty (measure with the poverty line of US\$4 a day at 2006 PPP) in ten LAC countries between 2000 and 2010. They found that the contribution of demographic change was 26%.



In summary, these findings have important implications for poverty reduction. **They show that the decline in the poverty rate would have been lower if countries had not been moving through the demographic window of opportunity. Although the region will look to take advantage of this period, with the dependency ratio approaching a historic low and remaining at that low level until at least the late 2030s, the findings also show that in order for income growth per worker to have a greater impact on poverty reduction in coming years, interventions should focus on improving labor productivity (with programs of education, health and job training), especially among youth. This emphasis will also better prepare countries for the difficulties that will come with the end of the demographic window.**





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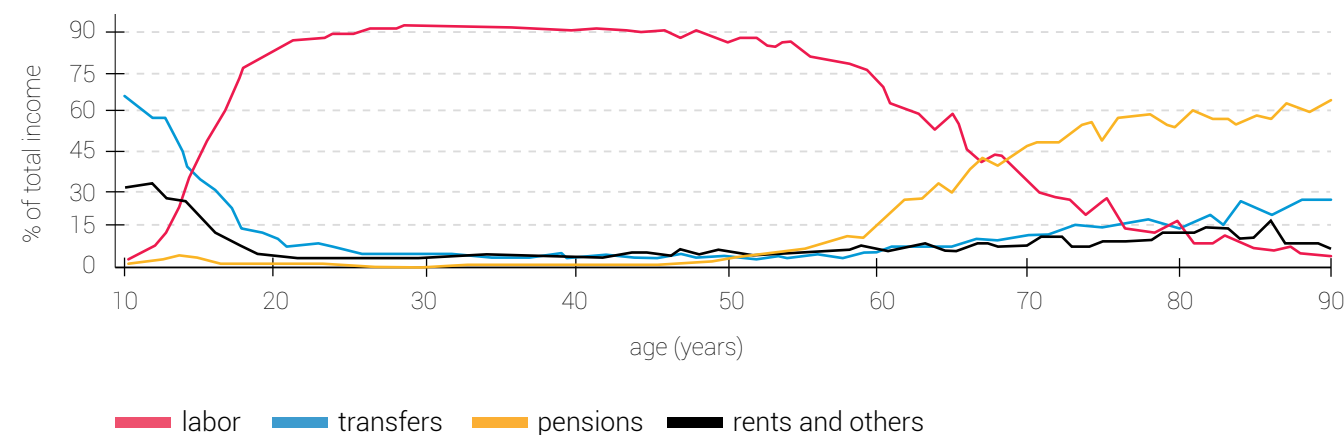


SOURCES OF INCOME AND POVERTY

In this last section, we analyze the relationship between individual sources of income and poverty rates by age. Since poverty is estimated using income as a measure of well-being, it is expected that the relative weight of each income source and its prevalence in certain age groups would have different effects on poverty rates. In this context, the role played by public transfers is of particular interest because the analysis of their effects—and, in general, any resource or relevant government policy—is in part ruled by the principle of horizontal equity, which helps evaluate the equity of that effects across individuals in similar conditions (Duclos, 2006).

Based on microdata from the latest household survey available for each country²³, pooled in a single database, Graph 10 shows the importance of each income source by age for the entire region. To avoid bias in the results toward the values of the most populous countries, first we obtained the average income by age for each country using the survey sample weights, followed by the simple average at the regional level. It is observed that labor²⁴ is the most important source of income for working-age individuals. It accounts for 90% or more of the total income for adults ages 25 to 46 years and between 80% and 90% of the income for youth ages 18 to 24 years and adults ages 47 to 56 years. This income source loses relevance after age 65 and before age 15. For these groups, contributory pensions²⁵ and current transfers, respectively, are more important sources of income (about 60% of total income for each group). Rental income and other types of income are relatively less important for all age groups.

GRAPH 10: INDIVIDUAL INCOME SOURCES, BY AGE, IN LAC (17 COUNTRIES), 2014.



Source: Inter-American Development Bank - Harmonized Household Surveys from LAC.

²³ There were 17 surveys in total: 14 from 2014 (Argentina, Brazil, Colombia, Costa Rica, Dominican Republic, Ecuador, Guatemala, Honduras, Mexico, Panama, Peru, Paraguay, El Salvador and Uruguay), two from 2013 (Bolivia and Chile) and one from 2012 (Nicaragua).

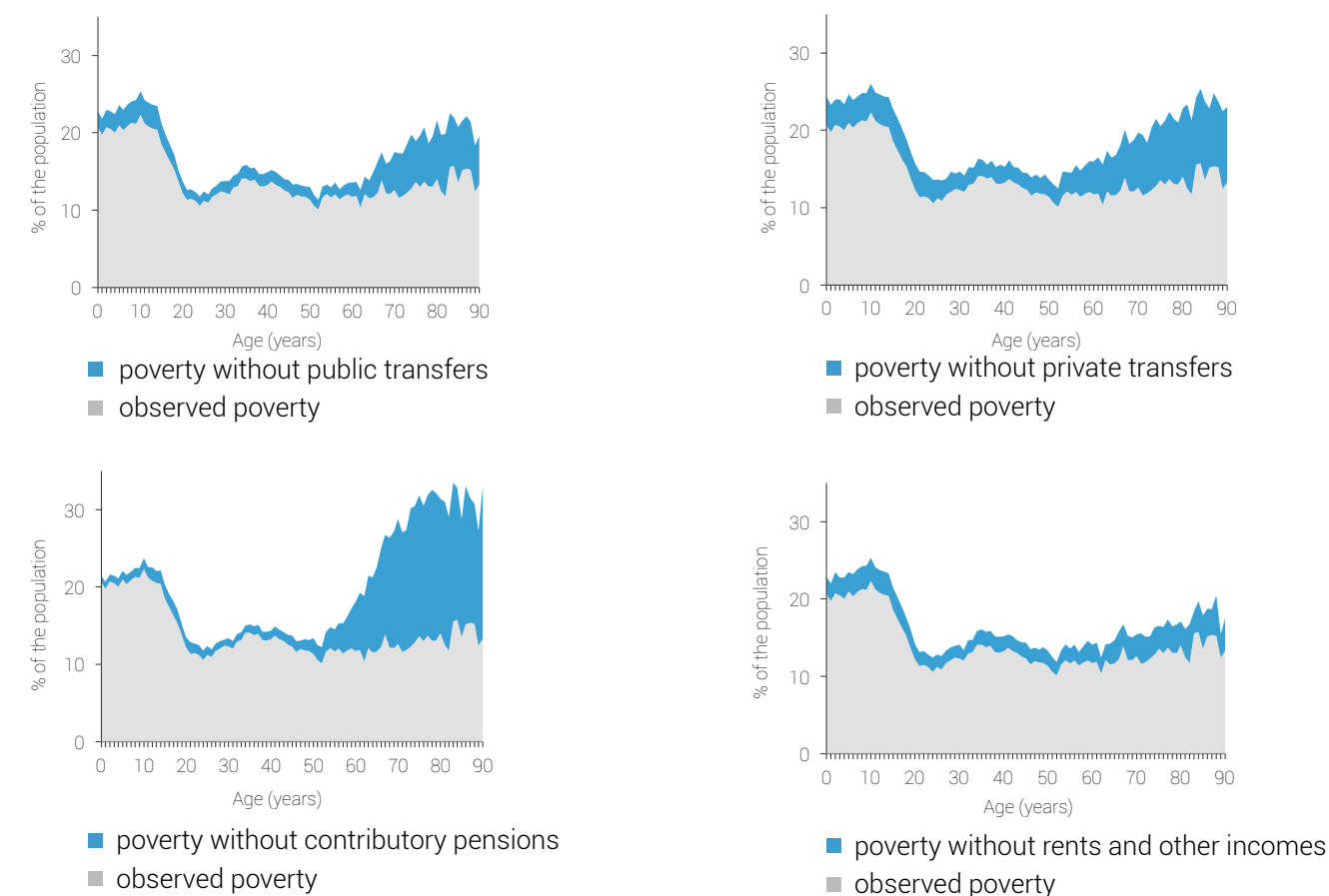
²⁴ Labor income includes all compensation that is a return to work effort, including wages and salaries earned by employees and earnings from self-employment (in cash and in-kind) from the primary and secondary employment.

²⁵ Income received for occupational risks of various kinds (unemployment, worker's compensation, sickness, disability), old age, widow(er)hood, divorce, etc., financed by the contributions of pensioners and/or the company and made during active working life.

At the country level, income structure varies significantly throughout the life cycle (see Table A4 in the Statistical annex). For example, labor income remains the main source of income for the elderly in countries such as Paraguay (58% of total income), Honduras (49%) and Guatemala (46%). In contrast, contributory pensions are the most relevant income source in countries such as Argentina (75%), Brazil (76%) and Uruguay (75%). Income from labor is also the most important income source for children in Guatemala and El Salvador, but in countries such as Colombia, Honduras, Peru and Uruguay, transfers constitute what is almost the exclusive source of income for children.

In order to understand how these types of income influence poverty rates throughout the life cycle, we generate simulated rates (simple counterfactuals) for poverty based on total income excluding separately public²⁶ and private²⁷ transfers, contributory pensions or rental income. The differences between these simulated rates and the observed rates of poverty provide an approximate measure of the direct, short-term effects of different income sources on poverty²⁸. First we obtained the average poverty rate by age—both simulated and observed—from the income data for each country using the survey sample weights, and then we calculated the simple average for the region. In the four panels of Graph 11, the bottom lines show actual poverty rates and the top lines show simulated poverty rates. The difference between the two (the shaded area) shows the estimated effects of each income source on poverty by age. Some highlights of the results are as follows:

GRAPH 11: OBSERVED AND SIMULATED POVERTY RATES (% BELOW US\$3.1 PER DAY), BY AGE, IN LAC (17 COUNTRIES), ~2014.



Note: The poor are defined as those living in households with per capita income of less than US\$3.1 per day at 2011 PPP.
Source: Inter-American Development Bank - Harmonized Household Surveys from LAC.

²⁶ It includes conditional cash transfers, non-contributory pensions and other social programs, as well as gifts and donations of goods and services, in cash and kind, from public institutions.

²⁷ It includes all current transfers, as well as gifts and donations of goods and services, in cash and kind from other households and private institutions in the country or abroad.

²⁸ The exercise assumes that the exclusion of income does not affect the behavior of individuals with regard to the consumption of goods and services or to their participation in the labor market.

Public transfers are not the income source with the greatest effects on poverty reduction. In fact, contributory pensions are the income source that makes the strongest contribution to reducing poverty, and this effect largely benefits the elderly²⁹. The presence of public transfers, compared to a simulated situation without these transfers, reduces poverty rates in the region by 24%, a percentage that is lower than the rate of 34% for private transfers and 52% for contributory pensions. When examining poverty by age, we find that public transfers reduce poverty among the elderly by an average of 45%, but their effects on poverty among children, youth and adults is only about 12%. This result is likely associated with the unequal allocation of transfers among people of different ages with the same poverty condition. According to the surveys of countries that capture disaggregated data on these sources³⁰, half of public transfers correspond to conditional cash transfers (CCTs) and non-contributory pensions (NCPs), which are focused on children and the elderly, respectively³¹. Of that total, 57% corresponds to CCTs benefiting 10.3 million households and 43% to NCPs benefiting 5.8 million households. In other words, the average NCP transfer to poor households with older adults is 41% larger than the average CCT transfer to poor households with children.

The bias of public transfers in favor of the elderly is substantially higher in Chile, Costa Rica and Uruguay than elsewhere. In these three countries, the presence of these transfers, compared to a simulated situation without them, reduces poverty rates of the elderly, on average, by 75%. In Bolivia, Brazil and Panama, public transfers reduce poverty among the elderly by a little more than half. In contrast, in Guatemala, Honduras, Nicaragua and El Salvador, public transfers have little effect on poverty reduction for any of the age groups.

Private transfers constitute the most important source of non-labor income in the Dominican Republic, Guatemala, Honduras, Nicaragua and El Salvador (accounting for 50% of non-labor income, or more) and are the least important source of non-labor income in Brazil, Costa Rica, Panama and Uruguay (6% or less). These transfers reduce the poverty rate among the elderly almost three times more (from 22% without private transfers to 14% with transfers) than they reduce poverty among the rest of population (a drop from 19% to 16%). Using data from household surveys, it can be seen that, in general, the effect of private transfers on poverty for any age group does increase but not necessarily in the same proportion as the greater of the amount of these transfers. For example, in Guatemala and Honduras, private transfers reduce poverty among the elderly by less than the regional average. The explanation lies in the fact that most foreign remittances—the main category of private transfers—benefit households that are not necessarily poor, but instead, go to primarily vulnerable or middle class households. Of total foreign remittances sent to Guatemala and Honduras, only 8% and 2% reach households in extreme poverty, respectively. Private transfers have a greater impact on reducing poverty among the elderly than public transfers (by 60% versus 45%, respectively), mainly because the amount of private transfers to the elderly is, on average, 61% higher than the amount of public transfers. This holds true despite the fact that coverage of private transfers (reaching 25% of older adults in the region) is slightly lower than coverage of public transfers (serving 28% of older adults).

Lastly, contributory pensions have the most significant impact on poverty rates among older adults. These pensions are the most important source of non-labor income in Brazil (84%), Argentina (65%), Uruguay (61%) and Chile (51%), and are of little relevance to the rest of the countries in the region. If contributory pensions did not exist, the region's average extreme poverty rate for this age group would increase 2.2 times, from 13.6% to 30.3%. In the four countries mentioned above, the rate of extreme poverty would skyrocket from an average of 1.2% to 42%, while the other countries would see an increase from 16% to 24%. Household surveys show that contributory pensions reduce the poverty rate among the elderly 2.7 times more than public transfers (123% versus 45%). This is because pension coverage is higher than coverage by public transfers (36% versus 28% of elderly in the region) and this group receives larger sums for pensions (nine times greater than the amount of public transfers). That is, a larger absolute number of non-poor elderly would become poor if contributory pensions were to disappear than if public transfers were to be eliminated. These results show the importance of contributory pensions in understanding the low levels of poverty among

the elderly in countries where this income source and system coverage are significant. Conversely, this outcome also explains the high levels of poverty in countries where people must continue working well into old age. The countries that invest today in improving worker productivity and the ability of labor markets to create more formal employment will hold the keys to changing this situation in the long term.



²⁹ Since families are composed of family members from different age groups, a transfer to any member will improve the household's per capita income.

³⁰ Seven countries: Chile, Colombia, Costa Rica, Mexico, Panama, Peru and Paraguay.

³¹ Similar to the results with administrative registries in ten countries (Table 4 of Cerruti et al., 2014).



**FINAL
REMARKS**

In most Latin American countries, the percentage of people of all ages living in poverty declined significantly in recent years. However, this change occurred at a very uneven pace.



The rate of child poverty decreased more slowly than that of other groups and, as a result, the poverty gap between the young and the old widened.

In 18 countries, the average child/elderly poverty ratio increased from 1.9 to 2.9 between 1996 and 2014 and from 1.7 to 2.2 in the same period, after adjusting for household size with the OECD equivalence scale. This section shows that the change in age structure of national populations—an intense process in all countries and rather heterogeneous among them—was an important factor in poverty reduction. The decrease in the dependency ratio accounted for almost 25% of the overall reduction in poverty between 1996 and 2014, and was the second most important factor after increase of household income (40%).

This section also demonstrates that particular sources of income—given the relative weight of each income source and its prevalence in certain age groups—had different effects on poverty rates. On the whole, income from any of diverse sources contributed to a reduction in poverty across the board, albeit at a relatively slow pace for children and a quick one for the elderly. That is, public transfers also widened the poverty gap between generations. Contrary to what is suggested by the principle of horizontal equity, individuals in similar conditions of poverty did not benefit equally from transfers. Although public transfers as a source of income have a significant impact on reduction of extreme poverty, their impact was three times greater among the elderly than among children. Thus, these transfers played a less important role in reducing poverty among children, precisely the age group most likely to suffer from it. This result is controversial since it suggests that governments place less emphasis on the younger generations, namely, the future productivity of nations. In this context, the debate over the fate of public transfers in the region should include, at the very least, the evidence on the likelihood of poverty among different age groups and the need to improve the efficiency of such transfers.



References:

Azevedo, J., Inchauste, G., Olivieri, S., Saavedra, J., and Winkler, H. (2013). “Is labor income responsible for poverty reduction? A decomposition approach”. World Bank Policy Research Working Paper 6414. Washington, D.C.: World Bank Group.

Barlow, R. (1994). “Population Growth and Economic Growth: Some More Correlations”. Population and Development Review. 20(1): 133-165.

Batana, Y., Bussolo, M., and Cockburn, J. (2013). “Global extreme poverty rates for children, adults and the elderly”. Economics Letters. 120(3): 405-407.

Behrman, J., S. Duryea, and M. Székely (2002). “We Are All Getting Older: A World Perspective on Aging and Economics”. East Asian Economic Perspectives. 13(2): 18-51.

BID-CEPAL (1996). “Impacto de las tendencias demográficas sobre los sectores sociales en América Latina.” Santiago de Chile: CELADE.

BID (2016a). “Sociometro-BID: www.iadb.org/en/research-and-data/sociometro-bid,6981.html Washington, D.C.: IDB.

---- (2016b). Development in the Americas: Savings for Development. How Latin America and the Caribbean Can Save More and Better. Eds. Eduardo Cavallo and Tomás Serebrisky.

Bloom, D. and D. Canning. 2003. “Cumulative Causality, Economic Growth, and the Demographic Transition”. In: Birdsall, N., Kelley, A.C. and Sinding, S.W., eds., Population Matters: Demographic Change, Economic Growth, and Poverty in the Developing World. New York: Oxford University Press.

Bloom, D. E., and Williamson, J. G. 1998. “Demographic transitions and economic miracles in emerging Asia”. The World Bank Economic Review.12(3): 419-455. Washington, D.C.: The World Bank Group.

Bosch, M., Melguizo, Á. and Pagés, C. (2013). Better Pensions, Better Jobs: Towards Universal Coverage in Latin America and the Caribbean. Washington, D.C.: IDB.

CELADE (2008). Transformaciones demográficas y su influencia en el desarrollo en América Latina y el Caribe. Santiago de Chile; CEPAL.

Cerutti, P., Fruttero, A., Grosh, M., Kostenbaum, S., Oliveri, M.L., Rodriguez-Alas, C. and Strokova, V. (2014). “Social Assistance and Labor Market Programs in Latin America”, World Bank Discussion Paper 1401. Washington D.C.: World Bank Group.

Chackiel, J. (2004). “La dinámica demográfica en América Latina”. Serie Población y Desarrollo, N° 52 (LC/L.2127-P). Santiago de Chile: CEPAL.

Cotlear, D., ed. (2011). Population aging: is Latin America ready? Washington, D.C.: World Bank Publications.

Cotlear, D., and Tornarolli, L. (2011). “Poverty, the aging and the life cycle in Latin America”.I In: Cotlear, D., op. cit., Population Aging.

Deaton, A. (1997) The analysis of household surveys: a microeconomic approach to development policy, Washington, D.C.: World Bank Publications.

Deaton, A. and Paxson, C. (2000). "Growth, Demographic Structure, and National Saving in Taiwan." In R. Lee and C.Y.C. Chu, editors. Population and Economic Change in East Asia, A Supplement to Population and Development Review. New York: Population Council.

Deaton, A., and Zaidi, S. (2003). Guidelines for constructing consumption aggregates for welfare analysis. LSMS (Living Standards Measurement Survey) Working Paper 135. Washington, D.C.: World Bank Group.

Duclos, J. Y. (2006). Innis Lecture: Equity and Equality. Canadian Journal of Economics/Revue canadienne d'economie, 39(4) : 1073-1104.

Eastwood, R. and Lipton, M. (2003) "Demographic transition and poverty: effects via economic growth, distribution and conversion". In: Birdsall, N, Kelley, A.C. and Sinding, S.W., eds., op. cit., PopulationMatters.

Ferreira, F. H., Chen, S., Dikhanov, Y., Hamadeh, N., Jolliffe, D., Narayan, A., ... and Yoshida, N. (2015). "A Global Count of the Extreme Poor in 2012: Data Issues, Methodology and Initial Results". World Bank Policy Research Working Paper 7432. Washington, D.C.: World Bank Group.

Hagenaars, A. J., De Vos, K., and Zaidi, M. A. (1996). "Poverty statistics in the late 1980s: Research based on micro-data". Brussels: Publications Office of the European Union.

Jiang, L., and O'Neill, B. (2007). "Impacts of demographic trends on US household size and structure". Population and Development Review. 33(3): 567-591.

Lee, R., Mason, A., and Miller, T. (2000). "Life Cycle Saving and the Demographic Transition: The Case of Taiwan". In: R. Lee and C.Y.C. Chu, editors. Population and Economic Change in East Asia, A Supplement to Population and Development Review.

Levy, S., and Schady, N. (2013). "Latin America's social policy challenge: education, social insurance, redistribution". The Journal of Economic Perspectives. 27(2): 193-218.

Meyer, B., and Sullivan, J. (2012). "Identifying the disadvantaged: Official poverty, consumption poverty, and the new supplemental poverty measure". The Journal of Economic Perspectives. 26(3); 111-135.

Ros, J. (2009). "Poverty reduction in Latin America: the role of demographic, social and economic factors". CEPAL review. 98: 35-45.

Shorrocks, A. (1982). "Inequality Decomposition by Factor Components". Econometrica, 50(1), 193-211.

United Nations Development Programme (2015). World Population Prospects: The 2015 Revision. <http://esa.un.org/unpd/wpp/DVD>

United Nations, Department of Economic and Social Affairs (2004). World population to 2300. www.un.org/esa/population/publications/longrange2/WorldPop2300final.pdf .



B

1 2 3 4

EVOLVING TRENDS
IN HOUSEHOLD
COMPOSITION AND
FAMILY LIVING
ARRANGEMENTS



1



HOUSEHOLD COMPOSITION

Changes in household composition are relevant for a wide variety of policy outcomes ranging from care-taking arrangements to housing markets. To analyze long-run trends in household structure in Latin America and the Caribbean, household structure is categorized into six types: one-person, nuclear couples, nuclear with children, extended without children, extended with children, composite and co-residential. The classification is based on the relationship of individuals to the household head³². Between 2002 and 2014, the most important change in the household composition for individuals in LAC has been a decline in the percentage of individuals living in households with children present. This is the case for both nuclear households (a decline to 30% from 33.60%) and extended families (a decline to 24.8% from 29.1%). The household structures becoming more common are one-person, nuclear couples and extended family, all without children, as shown in **Table 5**. The increase in the percentage of individuals living in one-person households in the region is slight, and rose from 3.1% in 2002 to 4.6% in 2014.

The percentage of individuals living in nuclear couple households and extended households, both without children, increased from 4.4 to 5.9% and 25.9 to 31.2%, respectively. Composite households, in which a non-family member lives with two or more household members, have declined overall. However, in one third of the countries in the region (Brazil, Colombia, Mexico, Peru, El Salvador, Trinidad and Tobago and Uruguay), the percentage of individuals living in this household structure has increased slightly.³³



HOUSEHOLD COMPOSITION

³² For the detailed description of the household structure categories, see Annex 1.

³³ Table 1 does not include co-residential homes made up of individuals who are not related, because they represented less tan 0.8% of homes in LAC.



CHANGES IN FAMILY STRUCTURE AMONG THE ELDERLY

For the elderly, household composition is closely linked to social welfare because of the important role traditionally played by the family in providing social protection in later years. Among people 65 and older, we find that for all countries in the region, except Uruguay, the dominant household structure in 2014 is the extended family without children.³⁴ On average, 50.3% of the elderly in LAC live in extended family households without children, as shown in **Table 6**.

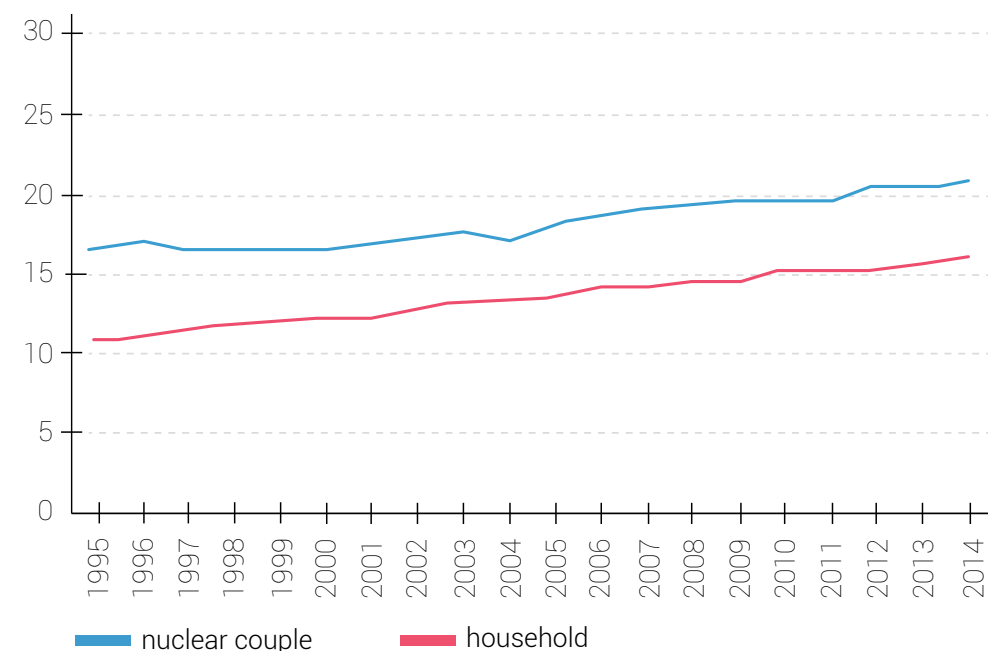
Compared to all age groups, the changes in household structure among the elderly are more dramatic. While the extended family remains predominant, this living arrangement is generally declining among the elderly. In the majority of countries in the region, in 2014, the elderly are also less likely to live in household structures that include children compared with 2002.



The percentages of elderly people who live in nuclear or extended families with children are diminishing.

In contrast, elderly persons in all countries in the region are increasingly living alone in 2014 compared to 2002, with the exception of Barbados. Colombia exhibits a sharp rise in elderly persons living alone, an increase from 8.6% in 2002 to 14.9% in 2014. Likewise, elderly people are increasingly living with their spouse but no other household member except for the case of Argentina. **Graph 12** shows the regional trends in one- and two- person households from 1995-2014.

GRAPH 12: HOUSEHOLD COMPOSITION AMONG THE ELDERLY IN LAC (IN %), 1995-2014 .



Note: Countries include those in Table 1 except for BAH, BRB, NIC, TTO in which data series are not sufficient for interpolation in years without data.

Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

³⁴ While the category of extended family excludes children under 18, this does not mean that elderly people are not living with their children, merely that they share homes with children who are older than 17.

TABLE 5: HOUSEHOLD COMPOSITION FOR ALL INDIVIDUALS AND THE ELDERLY IN LAC (%), CIRCA 2002 AND 2014.

		All individuals						Elderly					
	Year	One person	Nuclear couple	Nuclear children	Extended no children	Extended children	Composite	One person	Nuclear couple	Nuclear children	Extended no children	Extended children	Composite
LAC	2014	4.6	5.9	30.0	31.2	24.8	3.0	16.3	20.2	1.4	50.3	8.2	3.0
LAC	2002	3.1	4.4	33.6	25.9	29.1	3.7	13.8	16.5	1.5	51.8	12.1	3.9
ARG	2014	5.8	7.9	32.1	29.8	23.0	0.8	24.6	28.6	0.6	41.1	4.0	0.5
ARG	2002	5.0	7.3	33.6	28.5	24.9	0.6	22.3	29.0	0.4	40.6	6.8	0.6
BHS	2014	9.1	6.9	36.4	12.3	30.6	2.6	20.6	22.7	10.9	21.2	21.6	1.0
BHS	2002	4.9	5.8	31.9	15.7	41.8	NA	17.1	17.2	4.5	28.5	32.8	NA
BOL	2014	4.0	5.6	41.5	20.4	27.6	0.8	18.2	28.6	1.1	40.6	10.6	0.8
BOL	2002	2.2	3.1	45.4	14.5	33.3	1.3	17.2	22.7	2.5	42.3	13.3	1.6
BRA	2014	4.9	12.0	37.1	28.9	15.5	1.2	18.0	29.1	1.1	46.2	4.1	1.1
BRA	2002	2.8	7.4	45.3	21.7	21.5	1.0	13.8	25.4	2.2	48.5	8.4	1.3
BRB	2014	10.0	7.3	16.9	28.5	28.7	7.5	22.6	22.2	1.2	36.4	10.9	5.8
BRB	2002	8.7	7.8	20.1	24.6	29.2	8.4	26.4	18.5	0.8	35.1	11.8	5.8
CHL	2014	3.9	7.5	24.6	39.6	22.0	1.9	15.1	25.4	0.4	51.5	5.3	1.9
CHL	2002	2.4	4.6	31.4	32.5	26.8	1.9	12.3	19.8	0.6	56.3	8.3	2.0
COL	2014	4.4	5.4	33.1	28.8	21.7	6.0	14.9	15.7	0.6	53.3	8.9	5.8
COL	2002	2.0	3.1	35.4	27.6	26.2	5.3	8.6	13.4	1.7	60.3	11.1	4.4
CRI	2014	3.5	6.4	27.4	36.8	22.6	2.8	14.1	19.6	0.8	56.1	6.1	2.4
CRI	2002	1.8	4.4	37.8	22.2	30.3	3.2	9.8	17.3	0.8	57.7	10.7	3.1
DOM	2014	4.1	6.0	29.8	34.8	22.0	2.8	12.5	16.1	1.4	59.6	6.7	2.7
DOM	2002	2.7	4.0	34.5	29.1	24.1	5.3	12.0	11.3	2.5	60.4	8.5	4.4
ECU	2014	2.5	4.1	33.9	27.2	30.1	2.1	14.6	22.4	1.0	51.2	8.5	2.1
ECU	2002	2.2	3.2	35.2	24.6	29.3	5.2	12.7	13.4	1.6	53.5	14.4	4.1
HND	2014	1.5	2.7	31.3	27.0	28.2	9.0	8.9	11.2	1.7	57.3	9.6	10.9
HND	2002	0.9	1.7	36.5	18.4	32.2	10.0	6.5	9.4	2.9	54.2	13.4	12.9
JAM	2014	9.4	4.6	25.4	31.7	25.4	2.9	24.1	16.4	1.0	48.9	6.2	2.4
JAM	2002	6.3	4.3	25.3	33.2	25.1	5.1	19.3	12.9	0.8	51.5	8.1	5.7
MEX	2014	2.6	5.5	34.2	32.4	24.2	0.8	14.1	23.4	0.6	53.0	7.7	1.1
MEX	2002	1.7	4.3	40.3	24.9	28.0	0.6	10.6	22.3	1.3	54.2	10.8	0.4
NIC	2014	1.2	2.4	28.5	32.7	31.6	3.5	9.1	10.1	1.7	61.1	11.8	5.6
NIC	2002	0.9	1.3	31.3	23.6	39.2	3.5	7.5	5.4	1.6	59.2	19.7	5.9
PAN	2014	4.1	5.5	30.2	31.9	26.4	1.5	15.4	19.9	1.0	54.3	8.0	1.3
PAN	2002	2.6	4.0	32.6	30.0	28.5	2.1	11.7	14.7	0.8	59.4	10.4	2.4
PER	2014	2.8	4.1	25.4	34.2	27.5	5.7	12.9	19.5	0.7	52.5	8.0	6.0
PER	2002	1.9	2.5	32.6	25.4	32.1	5.4	9.7	15.3	1.4	53.8	13.8	5.4
PRY	2014	2.8	4.5	28.8	30.4	31.7	1.5	13.2	17.9	1.3	53.6	12.1	1.6
PRY	2002	1.8	2.6	35.7	18.9	34.1	6.8	10.5	13.8	0.9	52.3	14.4	7.5
SLV	2014	2.8	4.4	31.0	33.2	25.6	2.9	13.4	15.2	1.2	57.0	8.9	4.3
SLV	2002	2.0	2.7	31.1	33.3	29.5	1.4	11.8	11.2	1.2	60.1	13.4	2.0
TTO	2014	6.9	6.6	22.7	46.0	15.9	1.8	18.9	16.1	0.6	60.2	3.0	1.0
TTO	2002	5.0	5.3	27.6	36.1	24.3	1.4	18.5	15.3	0.8	57.6	6.1	1.1
URY	2014	7.7	12.4	24.4	27.1	15.9	1.9	27.3	33.4	0.4	33.7	2.9	1.5
URY	2002	5.8	10.5	29.5	31.5	20.3	1.7	22.6	30.4	0.5	39.6	4.7	1.4
VEN	2014	2.3	3.2	26.0	40.5	25.1	2.7	8.9	10.7	0.8	67.4	8.1	3.5
VEN	2002	1.5	2.4	32.5	27.9	31.2	4.2	7.8	8.7	1.1	62.9	13.5	5.2

Note 1: Circa 2014 and 2002 for all countries with the exception of BHS (2013), BRB (2013 and 2004), CHL (2013 and 2003), JAM (2012), NIC (2012 and 2001), TTO (2013) and VEN (2013). Note 2: The surveys for BHS and BRB do not provide information on the relationship to household head of children younger than 16. We assume that all household members reported as younger than 16 are children of the household head. As a consequence, we overestimate the percentage of individuals living in nuclear families with children and underestimate those living in extended families with children. Note 3: Between the period 2001-2005, BHS does not include the relationship category of non-relative, as such it is not possible to estimate the percentage living in composite households.

Source: Inter-American Development Bank - Harmonized Household Surveys in LAC.



3



CHANGES IN LIVING CONDITIONS OF CHILDREN

To examine the trends in living arrangements for children in the region, we depart from standard categorizations that use the household head as the reference point and instead we characterize family structure from the perspective of the children. Detailed information for this categorization, in which the surveys provide a means to link survey information about children to information about parents, is available for a small set of countries that includes Brazil, Colombia, Ecuador, Panama and Peru. While it is common to classify the household itself as single-parent or two-parent based on the marital status of the household head, this standard classification is less than accurate from the perspective of children because a household may contain more than one family and/or the household head may be an extended family member rather than the child's parent. For example, if two adult sisters live together with their children and one sister is married to the head of the household, under the standard categorization, all the children will be described as living in a two-parent household. Using the more detailed categorization, the children of the mother without a partner will be categorized as living with one parent and the children of the married sister will be classified as living with two parents. In this way, we are able to present a more accurate description of children's living arrangements.³⁵

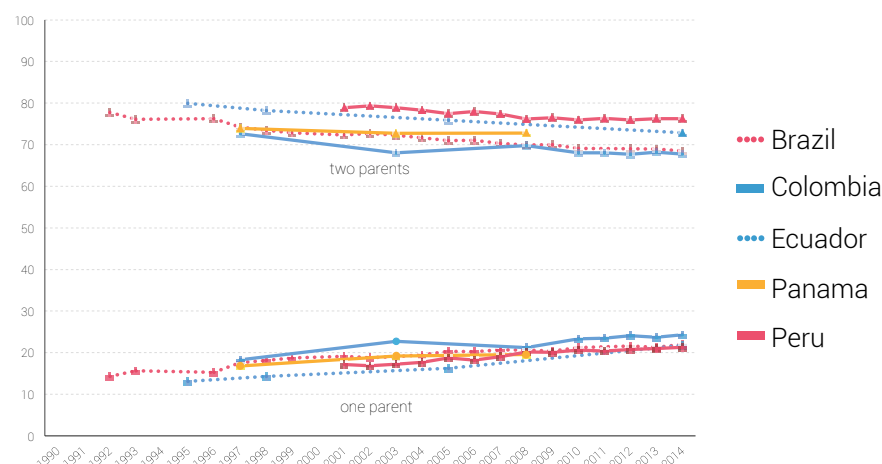
Across the region, the residential patterns of children in terms of family structure are changing in striking ways. These changes in family structure may influence the access of children to parents' attention and education, and financial or other resources that have an impact on children's outcomes. To capture a more inclusive conceptualization of children's access to parental figures in the household, we have characterized children as living with one parent, two parents³⁶ or other relatives without imposing restrictions on the data with respect to formal marriage arrangements or gender. For example, a child living with cohabiting parents of the same gender is counted as residing with two parents. In all five countries, we find a pronounced decline in the percentage of children living with two parents. The steepest declines are observed in Brazil and Ecuador. Over a 20-year period, the percentage of children in Brazil who live with two parents fell from 78% to 69%. In Ecuador, the percentage of children living with two parents dropped from 80% in 1995 to 73% in 2014. As shown in Graph 13, children in Brazil and Colombia are as likely to live with two parents as children in the US where 69% of children younger than 18 currently live in two-parent families in 2014 (PEW 2015).

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Children are increasingly likely to live with only one parent.

GRAPH 13: CHILDREN UNDER 18 LIVING WITH ONE AND TWO PARENTS (%)



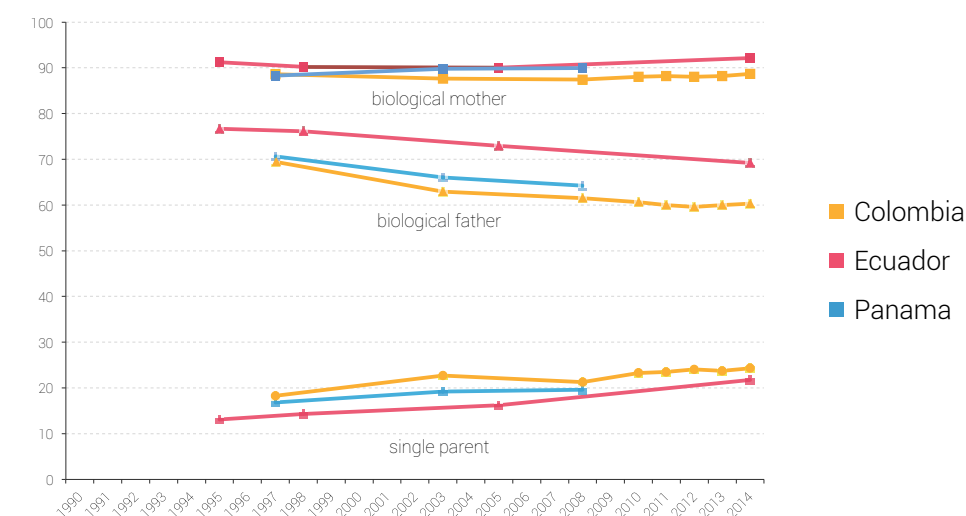
Source: Own calculations based on the IDB, Harmonized Household Surveys from Latin America and the Caribbean for Brazil and Peru and on the Living Conditions Survey for Colombia, Ecuador and Panama.

³⁵ An exercise comparing the standard methodology based on relationship to the household head misclassified approximately 11% of children in comparison to the more detailed approach used in this Report. This includes both errors of exclusion and errors of inclusion.

³⁶ The Appendix to this note presents the methodological details of the analysis.

A small group of surveys asks whether the child's biological mother and father reside in the same household. The rise in single parent households in Colombia, Ecuador and Panama is driven overwhelmingly by the separation of fathers from the households. As can be seen in **Graph 14**, co-residency of children younger than 18 with their biological mothers is remarkably stable in Colombia, Ecuador and Panama. The percentage of children living with biological mothers holds steady over time at 88% in Colombia, with no decline found for Panama or Ecuador where the percentages range between 88-89% and 91-92%, respectively. Steep declines are observed in the same period, however, with respect to children living with their biological fathers. The percentages fall from 69% to 60% in Colombia over 1997 to 2014. In Ecuador and Panama, the share of children residing with biological fathers also falls sharply, from 77% to 69% and from 70% to 64%, respectively. These trends reflect changes in both formation and dissolution of partnerships. Our measurement of the two-parent household includes a range of parental figures (partners of same or different sexes, cohabitating or formally married partners, formal or informal step-parents, etc.).

GRAPH 14: PATTERN: FATHER SEPARATION AND THE RISE OF SINGLE-PARENT HOUSEHOLDS (%)



Source: Own calculations based on the Living Conditions Survey for Colombia, Ecuador and Panama.

The positive trends in the increasing presence of non-biological parental figure do not compensate for the stark decline in the presence of biological fathers. The overall result of these trends is steady growth in the percentage of mothers who manage the day to day responsibilities of parenting without the support of a partner in the home. In Colombia, the percentage of children living with a mother but no other parental figure increased from 17% to 22% from 1997 to 2014, and in Ecuador the percentage of children living with single mothers rose from 12% to 20% between 1995 and 2014. Single parenthood has historically been the domain of women and this tendency has not declined in the region. Of all children living with single parents, over 90% live with their mothers in all five countries studied. This is higher than the gender composition among single parents reported for Canada (82.3% of single parents are women) and the United States (83.3% are women)³⁸.

³⁷ Statistics Canada (2012) reports that, according to the 2011 census, 19.3% of children under age 14 live with one parent.

³⁸ For the sex composition of single parents in Canada, see Statistics Canada (2012) based on the 2011 census, and for the US, see (US Census Bureau) based on the 2013 Current Population Survey. Note that the statistic for Canada is for single parents of children 14 and younger whereas for the US and LAC the children are younger than 18.



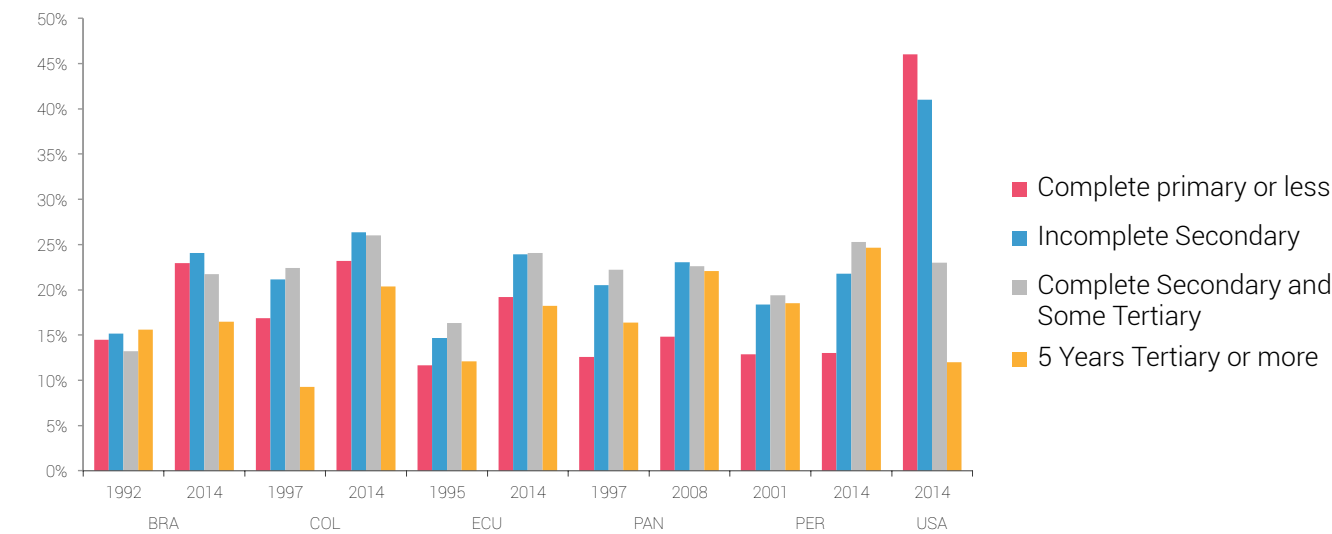
Unlike the US A Higher Level of Mother’s Education in LAC Does Not Necessarily Lower the Probability of Single Parenting.

The probability of parenting without a partner decreases with mother’s education in the United States (PEW, 2015). For example, children of college graduates are three times less likely to have single mothers than children of high school graduates, and those with the lowest levels of schooling have the highest rates of single parenting (PEW, 2015). In contrast, in LAC, more educated mothers do not have a lower likelihood of being single mothers, as shown in Graph 14. In Brazil, the likelihood of being a single mother is nearly flat across all educational levels, while in Panama and Peru, single motherhood is more widespread among mothers with higher levels of education. Among mothers with primary schooling or less in Panama, 14% are single mothers whereas 24% of women with secondary schooling or more are single mothers. In Peru, 17% of mothers with primary schooling or less are single mothers and 25% of mothers with complete secondary school or some years of higher education are single mothers. In Colombia and Ecuador, the relationship of education to single motherhood has an inverted U shape: mothers who have graduated from secondary school or with some studies of higher education have the highest rates of single parenting.



Whereas additional education provides a path to relationship stability in the US, for women in LAC greater levels of education are not correlated with an increase in marriage.

GRAPH 15: PERCENTAGE OF CHILDREN LIVING WITH SINGLE MOTHERS BY MOTHER’S EDUCATION LEVEL.



Note: Categories for the US are slightly different (less than high school, some college, college graduate).

Source: Living Conditions Survey for Colombia, Ecuador and Panama. Household Surveys for Peru and Brazil. Pew Research Center analysis of 2014 American Community Survey (IPUMS) for the US.





IMPLICATIONS FOR CHILDREN'S OUTCOMES

The decline in the co-residency of children with two parents captures secular changes in family structure that may have important implications for children’s outcomes. A longstanding literature in the US has examined the benefits of marriage for partners as well as for the next generation. Since family composition reflects many choices and preferences, care should be taken not to interpret patterns as causal relationships. Children living with two parents in the household are likely to benefit from higher family income and may have access to additional resources such as parents’ education and supervised activities (Jeynes, 2002). Many children living in single-parent households receive financial, emotional and educational inputs from parents in other households. Nonetheless, studies have found that having parents co-residing with children has a favorable effect on children’s outcomes. Using the international test scores from the Third International Mathematics and Science Study (TIMSS), Schiller et al. (2002) found that math scores were higher for middle school students who reported that they live with both parents than for those with one or no parents after controlling for the level of education available in the household. Arends-Kuening and Duryea (2006) found that adolescents in four countries in LAC who live with both parents had higher levels of schooling achievement than adolescents in single-parent households after controlling for income. For the US, Chetty et al. (2014) match generations across tax records and find that the ranking in the income distribution of the younger generation born between 1980-1991 is 4.6 percentile points higher for those who had married parents. They also find that intergenerational mobility is lower in geographical areas historically associated with a higher fraction of single parents.

Given the decline in the stigma associated with single parenthood and the more active role played by social policy in the region, we might expect to find little or no impact of family structure on children’s outcomes in contemporaneous data. However, analysis of education and health outcomes in Ecuador and Brazil suggests that growing up without two parents poses obstacles to the development of human capital.³⁹

In Ecuador, we have explored the relationship between children’s school progression, vaccinations and stunting using the 2014 Survey on Living Conditions. The results can be seen in the set of regressions shown in **Table 2**. After controlling for the level of education of the family, per capita household income, urban residence, and the age, sex, and ethnicity of the child, we find that children living with both parents are less likely to exhibit a grade-for-age delay of two or more years in schooling attainment.⁴⁰ Among children who live with only one parent, those who live with a single father lag further behind in school than those who live with a single mother. We also find that the probability of being up-to-date with required vaccinations is significantly more likely for children living with both parents, again after controlling for the same covariates. For children ages two to four, the likelihood of missing a required vaccination is greater for those who live with a single mother than for those residing with a single father. The probability of children younger than five being stunted—a measure of chronic malnutrition—is also lower for children who live with both parents.⁴¹ The chances that children younger than five will suffer chronic malnutrition is greater for those who live with a single mother than with a single father.



³⁹ The quality of the parenting relationship, with resident or non-resident parents, has been shown to have important effects on outcomes for children and adolescents. Booth et al. (2010) find that adolescents who report a close relationship with non-resident fathers in the US report higher self-esteem and fewer delinquent behaviors than adolescents who live with a father with whom they are not close.
⁴⁰ To be consistent with the study by Ayllón and Ferreira-Batista on Brazil, we do not include in the analysis the small percentage of children living with other relatives but without parents.
⁴¹ Children whose height-for-age is more than 2 standard deviations below the WHO median growth standard are considered stunted.

TABLE 6: SINGLE PARENTHOOD AND CHILDREN'S EDUCATION AND HEALTH OUTCOMES: REGRESSIONS USING 2014 ECV SURVEY ECUADOR

	School delay ages 8-17		Incomplete vaccinations ages 2-4		Stunting ages <5	
Both parents	-0.0231*** (0.0047)		-0.0220** -.0102		-0.0169* (0.0097)	
Single mother		0.0172*** (0.0049)		0.0237** (0.0104)		0.0205** (0.0098)
Single father		0.0698*** (0.0124)		-0.0058 (00378)		-0.0699 (0.0432)
Male	0.0312*** (0.0039)	0.0307*** (0.0039)	0.0023 (0.0083)	0.0024 (0.0083)	0.0438*** (0.0079)	0.0439*** (0.0079)
Age dummies	Yes	Yes	Yes	Yes	Yes	Yes
ln pc hh income	-0.0159*** (0.0026)	-0.0166*** (0.0026)	-0.0049 (0.0056)	-0.0047 (0.0056)	-0.0280*** (0.0053)	-0.0277*** (0.0053)
Mother educ*	-0.0147*** (0.0005)	-0.0147*** (0.0005)	-0.00621*** (0.0012)	0.00626** (0.0012)	-0.0102*** (0.0011)	-0.0103*** (0.0011)
Indigenous	0.0029 (0.0072)	0.0031 (0.0072)	0.0292* (0.0156)	0.0290* (0.0156)	0.200*** (0.0147)	0.199*** (0.0147)
Urban	-0.0274*** (0.0048)	-0.0269*** (0.0048)	-0.0103 (0.0100)	-0.0104 (0.0100)	-0.0452*** (0.0094)	-0.0452*** (0.0094)
_cons	0.253*** (0.0134)	0.233*** (0.0133)	0.243*** (0.0262)	0.220*** (0.0266)	0.416*** (0.0255)	0.398*** (0.0259)
N	22,496	22,496	6,896	6,896	10,952	10,952

Standard errors in parentheses

* p < 0.10, ** p < 0.05, *** p < 0.01

Note: If mother does not reside in the household, the education of the father is used.

Source: IDB, Harmonized Household Surveys from Latin America and the Caribbean.

A recent study for children in Brazil by Ayllón and Ferreira-Batista (2015) also reports detrimental outcomes on health for children living with single mothers. They find that children under five years of age living with single mothers have a higher probability of a lower height-for-age z-score than children living with two parents. This study is notable in that it addresses the causal effect of single motherhood by using an instrumental variable methodology in which the probability of being a single mother is predicted by conditions in the marriage market and the sex of the first born child.⁴² Single motherhood is more likely if the local marriage market has a high relative supply of women to men and if the first-born child is female. In other words, while other studies and analyses have controlled for observable differences across households, they leave open the question of whether the underlying reasons that determine household composition also influence children’s educational or health outcomes. This recent study suggests that for the case of Brazil, family structure has a causal relationship with height.

⁴² Angrist and Evans (1998) first employed the gender composition of children as an instrument for identification.



**FINAL
REMARKS**

The past two decades in Latin America and the Caribbean have witnessed dramatic changes in family conditions that affect dynamics within families and intergenerational relationships. Poverty has declined for all groups, yet children in the region have become relatively poorer compared with older age groups. Children are three times more likely to be in extreme poverty than the elderly in 2014, an increase from two times in 1996. Public transfers to households have reduced poverty in the region, but a simple simulation shows that the cash transfers have also contributed to widening the gap in extreme poverty between children and the elderly.

The most salient changes in household composition for all individuals over the past two decades in the region are the decrease in households with children and the rise in one-person households. The changes among the elderly are even more striking. The greatest increase in one-person households occurs among people over age 65, and the elderly are increasingly more likely to live with only their spouse. The corresponding decline of the aged who reside in extended family households may reduce their access to intergenerational caregiving and social protection.

Living conditions for children have also changed considerably in the region. Children are increasingly likely to live with one parent rather than with two parents, and the percentage of children living with one parent is on the rise in all countries studied. The vast majority of children living in single parent homes live with their mothers--over 88% of one-parent households in the countries studied are headed by mothers. In the US, the probability of parenting without a partner decreases with mother's education. However, this pattern is not uniform across the region. More educated mothers in the region have a higher likelihood of being single parents in Peru and Panama with a slightly less pronounced pattern in Colombia and Ecuador. In Brazil, mothers with the lowest levels of education have higher rates of single parenting.

The structure of the family with respect to the presence of parents in the household continues to be a significant factor in determining the education and health outcomes of children. Recent studies have found that the presence of two parents favors better outcomes for children. In Ecuador, we found that children living with both parents are less likely to exhibit a grade-for-age delay of two or more years in educational attainment, are more likely to be up-to-date with required vaccinations and are less likely to be stunted before age five. The study for Brazil finds that children living with single mothers have a higher probability of presenting a lower height-for-age z-score at less than five years of age than children who live with two parents. Analysis suggests that, for both Brazil and Ecuador, children without access to two parents in the home are at higher risk of lower human capital development.

Household structure is not the primary determinant of well-being for children, nor for the elderly, but it certainly plays a role in determining patterns of inequality and mobility. While important, efforts to change the formation and composition of families may be far from the first-best policy option. Families can be supported through policies that provide an enabling environment for participating in the labor market and fulfilling caregiving responsibilities. There is also strong evidence that targeting children who have additional vulnerabilities through social programs improves their human capital development and achieves better results for children than policies that aim to influence family composition.

APPENDIX

Methodology for classifying types of households and living arrangements

This appendix describes the methodology used to classify the residential arrangements for households, elderly and children.

i. Households. Households can be classified under seven categories:

One-person: a one-person household.

Nuclear couples: a household consisting entirely of a single family nucleus made up of the household head and spouse only, where there are no children 17 years old or younger, no children older than 17, no other relatives and no non-relatives.

Nuclear with children: a household consisting entirely of a single family nucleus made up of the household head with or without spouse, with at least one child age 17 or younger, no children older than 17, no other relatives and no non-relatives. For example, a single father with children 17 years or younger.

Extended without children: a household consisting of the household head with or without spouse, without children age 17 or younger, with children older than 17 or other relatives, and no non-relatives. Children older than 17 are considered other relatives under this analysis. For example, a single mother with children older than 17 or the household head with other relatives.

Extended with children: a household consisting of the household head with or without spouse, with at least one child 17 years old or younger, with children older than 17 or other relatives, and no non-relatives. For example, a married couple with one seven-year old child, a 20-year old child, and other relatives.

Composite: a household where there are at least two related individuals and at least one unrelated person. For example, a female household head living with her elderly mother and a non-relative.

Co-residential: household consisting of non-related persons only.

ii. Children

In the case of children, we rely on a small set of countries for which detailed household survey data is available that allows us to carefully match children to parents within the household. We implement two different types of classifications to capture the trends in residential patterns using the following household surveys.

Country	Year	Name of Survey
Brazil	1992, 1993, 1995-1999, 2001-2009, 2011-2013	Pesquisa Nacional por Amostra de Domicílios (PNAD)
Colombia	1997, 2003, 2008, 2010-2014	Encuesta Nacional de Calidad de Vida (ENCV)
Ecuador	1995, 1998, 2005, 2014	Encuesta de Condiciones de Vida (ECV)
Panama	1997, 2003, 2008	Encuesta de Niveles de Vida (ENV)

Note: Children who live in group quarters (for example, orphanages or other institutions) are not included in the household surveys and as thus are not covered in the calculations. There have been recent calls to include institutionalized children in surveys and censuses.

iii. Living arrangements with biological parents

Colombia, Ecuador and Panama inquire whether the biological parents of each child are also living in the household, and provide a link across these records. In the case of Brazil, the question is only included with respect to the biological mother. Based on this information, we can estimate the percentage of children residing with their biological parents in these countries. The classifications under this specification (living with biological mother or father or both biological parents) do not depend on any other information provided in the household survey such as marital status.

iv. Living arrangements – family conceptualization

To capture a more inclusive conceptualization of families and parents residing in the household, we incorporate other information in the survey that identifies non-biological parents and parental figures such as adult partners of parents. The information about non-biological parents, or parental figures, is obtained through the variable of marital status or the variable that describes the relationship of adults to the head of the family.

The following descriptive variables are created:

- Single mother:** child resides with mother but no father figure lives in the household.
- Single father:** child resides with father but no mother figure lives in the household.
- Two parents:** child resides with two parents (includes informal unions and same-sex marriages).
- Other relatives:** child resides with other relatives (without parents).

The country surveys differ in the specific type of information they provide and how it is applied.

For Colombia, Ecuador, and Panama, the biological parents are identified from the questions linking them to each child. Other parental figures are identified from questions on the marital status of the biological mother or father, i.e., a child is denoted as having two parents if both biological parents live with the child, or if the biological father or mother has a partner living in the household. Same sex couples are included and are considered as a two-parent household.

The survey information for Brazil differs from that of Colombia, Ecuador and Panama because it includes a mixed-methodology approach. First, it allows the direct matching only of the biological mother and child. No question asks whether the biological father lives in the household. A relationship to a father can be identified through the question about relationship to the family head (as a child of a male head). Furthermore, since marital status was temporarily removed from the survey from 1997 to 2008, we do not rely on this variable for determining the relationship between parents. The variable indicating relationship to the family head reveals the relationship between parents. For instance, a child is denoted as having two parents if the biological mother is listed as the spouse of the family head or she is the family head and has a spouse. Same sex couples are included.

The survey for Peru, the Encuesta Nacional de Hogares, does not have a specific question that identifies the biological mother and father of each child within the household. However, the survey delineates specific nuclear families within the same household. Within the family nucleus, a child is identified to have a father and mother figure based on the declared relationship to the family head. A child is identified as living with both parental figures if he or she is classified as the son or daughter of the nucleus head and the nucleus head is a female with a spouse or a male with a spouse. Same sex couples are included as two-parent households. Although this methodology can be described as indirect compared to the methodology for Colombia, Ecuador, Mexico and Panama, a check for robustness with data from Ecuador demonstrates that the indirect approach is reliable in capturing the more inclusive living arrangements. The 2014 ECV of Ecuador allows us to explore the family composition of children via the direct and indirect methodologies. The survey includes questions on the residence of biological parents for the direct analysis and it also disaggregates household membership into family nuclei for the indirect analysis. The results of both analyses can be found in the table below. The results from each type of analysis are so similar that they fall within the margins of statistical error, so the two methods are shown to be reliable for determining family composition.

FAMILY COMPOSITION IN ECUADOR
OBTAINED THROUGH DIRECT AND
INDIRECT SURVEY METHODS.

Country	Year	Analysis	Single Mother	Single Father	Two Parents	Other Relatives
Ecuador	2014	Indirect	20.8%	2.1%	70.8%	6.3%
Ecuador	2014	Direct	19.9%	1.8%	72.8%	5.4%

References:

- Anderson, K, A. Case, and D. Lam. (2001). "Causes and Consequences of Schooling Outcomes in South Africa: Evidence from Survey Data". *Social Dynamics: A Journal of African Studies*. 27(1).
- Angrist, Joshua and Willian Evans (1998). "Children and Their Parents' Labor Supply: Evidence from Exogenous Variation in Family Size". *The American Economic Review*. 88(3): 450-477.
- Arends-Kuenning, Mary and Suzanne Duryea (2006). "The Effect of Parental Presence, Parents' Education, and Household Headship on Adolescents' Schooling and Work in Latin America". *Journal of Family and Economic Issues*. 27(2): 263-286.
- Ayllón, Sara and Ferreira-Batista, Natalia N. (2015). "'Mommy, I miss daddy'. The effect of family structure on children's health in Brazil". *Economics & Human Biology*. 19(C): 75-89.
- Booth, A, M.E. Scott, and V. King (2010). "Father Residence and Adolescent Problem Behavior: Are Youth Always Better Off in Two Parent Families?" *Journal of Family Issues*. 31(5): 585-605.
- Chetty, Raj, Nathaniel Hendren, Patrick Kline, and Emmanuel Saez (2014). "Where is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States". *Quarterly Journal of Economics* 129(4): 1553-1623.
- Lloyd, C and A. Blanc (1996). "Children's Schooling in Sub-Saharan Africa: The Role of Fathers, Mothers, and Others." *Population and Development Review*. 22(2): 265-298.
- Magnuson, K and L. M. Berger (2009). "Family Structure States and Transitions: Associations with Child Well-Being During Middle Childhood". *Journal of Marriage and Family*. 71:575-591.
- McLanahan, S, and G.D. Sandefur (1994). *Growing up with a Single Parent: What Hurts, What Helps*. Cambridge: Harvard University Press.
- Schiller, Kathryn. S., Vladimir T. Khmelkov and Xiao-Qing Wang (2002). "Economic Development and the Effects of FaMily Characteristics on Mathematics Achievement". *Journal of Marriage and Family*. 64(3): 730-742.
- Statistics Canada. 2012. *Portrait of Families and Living Arrangements in Canada: Families, households and marital status, 2011 Census of Population*.
- United States Census Bureau. 2013. *America's Families and Living Arrangements: 2013: Family groups* Table FG10 <http://www.census.gov/hhes/families/data/cps2013FG.html>



