DEVELOPMENT BANK OF LATIN AMERICA AND THE CARIBBEAN

2022 RED Report on Economic Development

Inherited inequalities

The role of skills, employment, and wealth in the opportunities of new generations



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Foreword

As both contemporary and historical evidence shows, Latin America and the Caribbean is one of the most unequal regions in the world. Despite advancements in economic and social aspects witnessed in recent decades, the challenge of achieving a better distribution of income, wealth, education, and employment opportunities for Latin Americans and Caribbeans remains.

Every day we are confronted with the harshest face of this inequality: the poverty in which millions of children and young people in the region live. Moreover, while some regions and groups prosper and improve their levels of well-being year after year, generation after generation, others are left behind. There is an urgent need to better understand the causes of this dualism in opportunities for social progress, in order to collaborate more closely with the governments in the region in their task of ensuring the foundations for sustainable growth for all.

This edition of the Report on Economic Development (RED 2022) analyzes the problem of persistent inequality from a new perspective, which makes it possible to detect the main barriers that prevent the efforts that many families make for their children from translating into greater possibilities of progress due to differences in conditions of origin (social, educational, ethnic and geographic, among others). Thus, RED 2022 analyzes the evolution of intergenerational mobility with a long-term and multidimensional approach. Moreover, it proposes three crucial areas to underpin public policies in the region: leveling starting conditions, especially during the first two decades of life, for a better and more equitable formation of human capital; improving the functioning of labor markets to promote occupational and income mobility; and providing greater opportunities for all individuals of Latin America and the Caribbean to increase and improve the quality of the assets they accumulate.

Low social mobility in the region is a central problem, not only because of its ties with inequality but also because of its impact on growth and political-institutional stability. When individual progress depends too much on family origin, incentives for effort are weakened and the allocation of human talent is distorted, while the foundations of trust in institutions are eroded. Reducing the inequality of opportunities that generates this low social mobility requires decisive action, with policies that are implemented integrally and that address the multiple barriers faced by families in the region. Complementing this report with its core financial activity as the development bank of Latin America and the Caribbean, CAF aspires to contribute to the design and implementation of public policies that reduce inequalities, strengthen institutions, and ensure real opportunities for new generations in the region.

Sergio Díaz Granados
Executive President, CAF

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Introduction

Achieving higher levels of social mobility is a fundamental requirement for inclusive and sustainable development in Latin America and the Caribbean. The lack of opportunities for large groups of the population—such as those living in marginalized areas of cities and regions lacking the most fundamental infrastructure and services for life—continues to be an obstacle to making progress and social advancement possible for everyone. That is why at CAF we work every day, alongside our shareholder countries, to develop infrastructure and social programs to improve the distribution of access to opportunities for productive, educational, and social development.

Quantifying levels of social mobility, as well as assessing the deep causes behind the lack of opportunities, is indispensable to better understand the policy options faced by governments in the region. This report addresses all of these issues through rigorous, systematic, and detailed analysis, offering a comprehensive overview of what we know today about the intergenerational persistence of wellbeing and the menu of policies to address it.

The Report on Economic Development (RED 2022) stands out for its enormous effort to compile data linking the levels of wellbeing achieved by different generations, covering household surveys, longitudinal studies, opinion and value surveys, censuses, and administrative records. It also provides a new source of information, the 2021 edition of the CAF Survey, which explores previously unexplored aspects of social mobility in the region. The combination of these diverse sources yields a very detailed analysis of the mobility phenomenon, covering aspects of gender, ethnicity, and geographic location within the countries. The landscape revealed clearly pinpoints the population groups that have persistently lagged behind throughout the 20th century and the beginning of the 21st century, which constitutes a conjunctural assessment, but also, and crucially for the topic addressed, a structural one.

The report's assessment shows that the barriers to social mobility have been operating in Latin America and the Caribbean for a long time and, as a result, reproduce the gaps in access to education, health, good jobs, and savings. With its publication, CAF seeks to contribute with the necessary knowledge to face the challenge of designing public policies to reduce inequality in the region and promote a more equitable distribution with better opportunities for progress for new generations of Latin Americans and Caribbeans.

I would like to thank all the CAF researchers who participated in the preparation of this RED, especially the Socioeconomic Research Division and the Department of Knowledge, as well as all external collaborators, for their participation in this edition of our flagship report.

Christian Asinelli
Corporate Vice President of Strategic Programming, CAF

Intergenerational mobility in Latin America and the Caribbean: how much, in which ways, and why does it matter?

1

Intergenerational mobility in Latin America and the Caribbean: how much, in which ways, and why does it matter?[1]

Introduction

Latin America and the Caribbean is one of the most unequal regions in the world. Evidence shows that this inequality is not only high, but it could be considered excessive for the level of development in the region, indicating a kind of Latin American exceptionalism. The problem of inequality is not new in the region. It can be traced back to colonial times, when extractive economic activities based on the concentration of land ownership and the exploitation of natural resources with indigenous and slave labor gave rise to highly unequal societies.[2] Despite the many advances achieved in different economic and social development indicators in recent decades, average inequality levels in the region have not changed substantially or sustainably. As such, inequality continues to be a characteristic feature of contemporary Latin American and Caribbean societies. These levels of inequality affect the foundations of inclusive economic growth, political stability, and even crime levels in the region.

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1. This chapter was written by Lucila Berniell, Dolores de la Mata and Ernesto Schargrodsky, with research assistance from Iván Albina.

2. See, among others, Engerman and Sokoloff (1997); Acemoglu et al. (2001, 2002); Acemoglu et al. (2012); and Soares et al. (2012).

Various channels hinder changes in inequality, making it an inertial phenomenon. In essence, this reflects a distribution of resources in a society that has changed very little from one generation to the next. As a result, it is not unusual to see a strong inertia over time of the wealthiest and least wealthy families and individuals in the region. This persistence is the result of the inequality reproduction mechanisms that are the central focus of this report.

The Report on Economic Development 2022 (RED 2022) presents novel measures that illustrate the degree of intergenerational mobility in Latin American and Caribbean societies and analyzes the core mechanisms that promote this intertemporal reproduction of inequality. The report also discusses the consequences for the region's development and public policy alternatives to foster greater social mobility among the region's inhabitants.

This chapter documents that even though high levels of inequality could coexist with significant possibilities for social mobility, this does not seem to be the case in Latin America and the Caribbean. In addition to high levels of inequality in various measures of individual wellbeing, the region's countries are among those with the highest levels of persistence or inertia in the wellbeing of parents and their children. This chapter illustrates that intergenerational mobility—in different dimensions, such as education, occupation, and income—has been limited in Latin America compared to other regions worldwide. Chapter 2 expands on this analysis, contributing with a novel and detailed study of different measures of mobility in the region, considering the wellbeing of parents and children and taking a historical perspective that covers cohorts born throughout the 20th century.

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In addition to high inequality, the region's countries also register high levels of persistence or inertia in the wellbeing of parents and their children

The empirical fact—both between countries and within each of them—that more unequal societies exhibit less intergenerational mobility shows that there are powerful mechanisms driving the persistence of inequalities in different dimensions of wellbeing. This chapter describes three channels that affect intergenerational social mobility, all of which are related to the unequal opportunities that people from families of different socioeconomic status systematically face. The channels analyzed are human capital formation, labor market opportunities, and asset accumulation. This classification provides a conceptual framework that guides the development of chapters 3, 4, and 5, which describe the specific mechanisms that operate through each of these channels.

This first chapter also discusses the reasons why low intergenerational mobility is a concern for citizens and policy makers alike in the region. Social mobility is not only associated with high levels of inequality, but it also interferes with the forces behind economic growth (such as incentives for effort and the efficient allocation of human resources) and can threaten political-institutional stability in the countries in the region.

In the following chapters, this report summarizes a set of policies that could foster greater equality of opportunity and lead to higher social mobility, thereby mitigating the high levels of intergenerational persistence. However, the sustained implementation of this set of policies faces many challenges.

One of the biggest is how citizens of Latin America and the Caribbean perceive the problem of social immobility. The demands for redistribution that citizens will make to their rulers through democratic channels depend crucially on these perceptions. This chapter shows that perceptions of mobility in the region are not always aligned with reality. It also analyzes other important characteristics related to support for different policies for the redistribution of opportunities. For example, new evidence is presented, based on the CAF Survey 2021 (conducted between December 2021 and February 2022), of how much, through which instruments and to whom do Latin Americans consider that governments should direct redistribution efforts. The lessons learned from this analysis shed light on the complex scenario that lies ahead, providing a framework to act as quickly as possible on the urgent issue of inequality and attack the deep roots of inequality with effective policies.

Latin America and the Caribbean, a highly unequal region

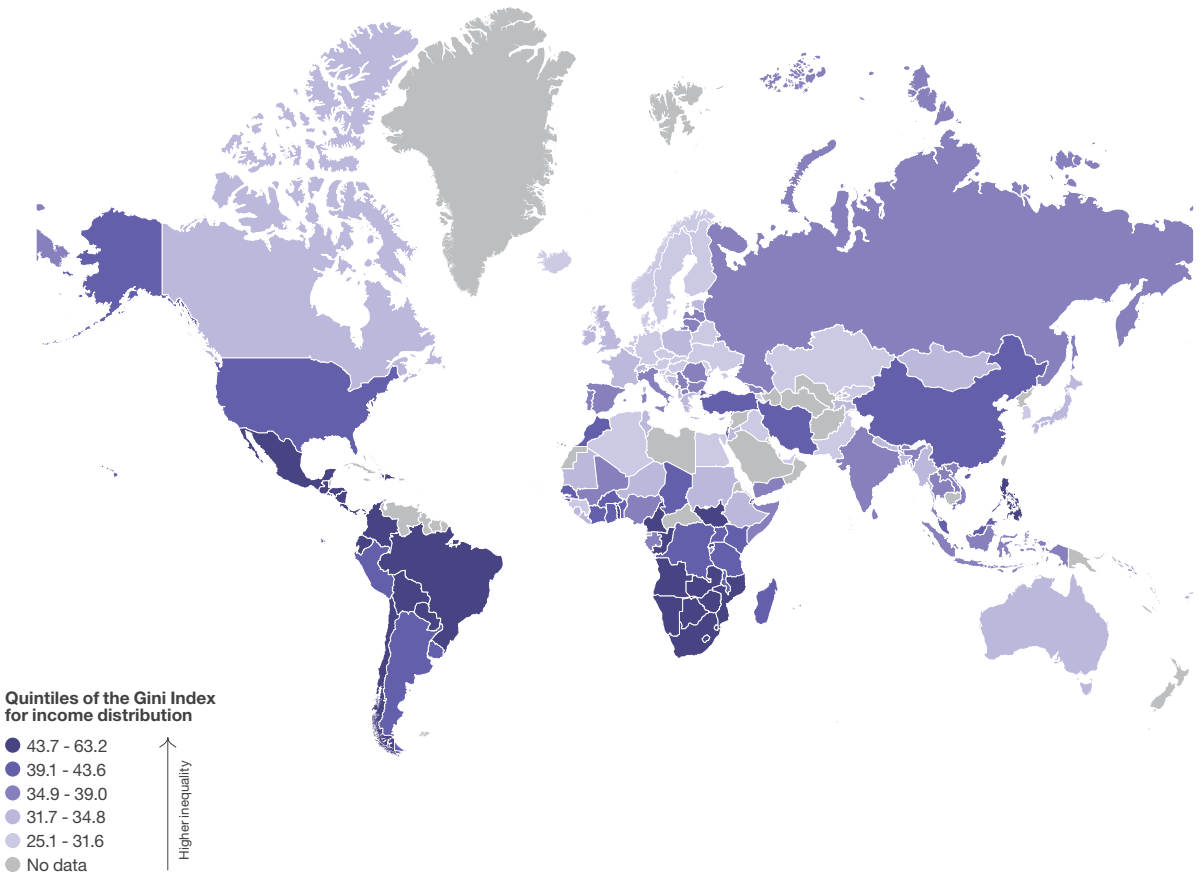
Inequality levels in Latin America and the Caribbean are among the highest in the world. Inequality in the region encompasses different dimensions of wellbeing that are usually correlated. They include income, wealth, education, land tenure, and labor opportunities, among others. Although the first decade of the 21st century was accompanied by a notable reduction in income inequality in the region, the following years marked a significant slowdown and even reversal of that trend in some countries (Gasparini, 2019). Moreover, the crisis associated with the COVID-19 pandemic aggravated this situation in some countries. Thus, the high inequality and the difficulties faced by the region to reduce it in a sustainable manner are a manifestation of its deep roots.

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Inequality encompasses different dimensions of wellbeing that are usually correlated in the region, including, among others, income, wealth, education, land tenure, and job opportunities

A commonly used measure to quantify the level of inequality is the Gini index. The higher this coefficient—with values between 0 and 100—the greater the degree of inequality. Graph 1.1 shows the inequality in income distribution around the world according to this index for the period 2010-2019. It shows that Latin American and Caribbean countries, together with those of Sub-Saharan Africa, are among the most unequal.

Graph 1.1
Inequality in income distribution according to the average value of the Gini index in the period 2010-2019



Note: The color of each country on the map represents the quintile to which the country belongs in the distribution of values of the Gini index, which measures income inequality. Darker colors indicate greater inequality as measured by this index. The average Gini of each country in the period 2010-2019 is considered or, alternatively, the average of the years for which information is available.

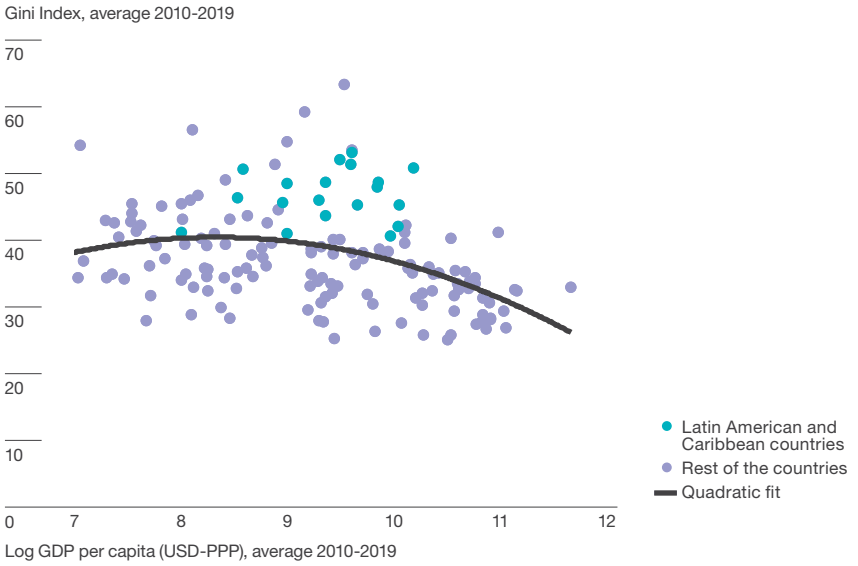
Source: Authors based on data from World Bank (2022).

Income inequality in Latin America and the Caribbean is not only high compared to other parts of the world, but appears to be too high given the level of development achieved by the region's countries, as shown in Graph 1.2. There it is observed that Latin American and Caribbean countries have values of inequality well above those predicted for the countries' per capita GDP levels (typically middle-income).[3]

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Not only is income inequality in Latin America and the Caribbean high compared to other parts of the world but it is also very high for the level of development of the region

Graph 1.2
Excess inequality in Latin America and the Caribbean



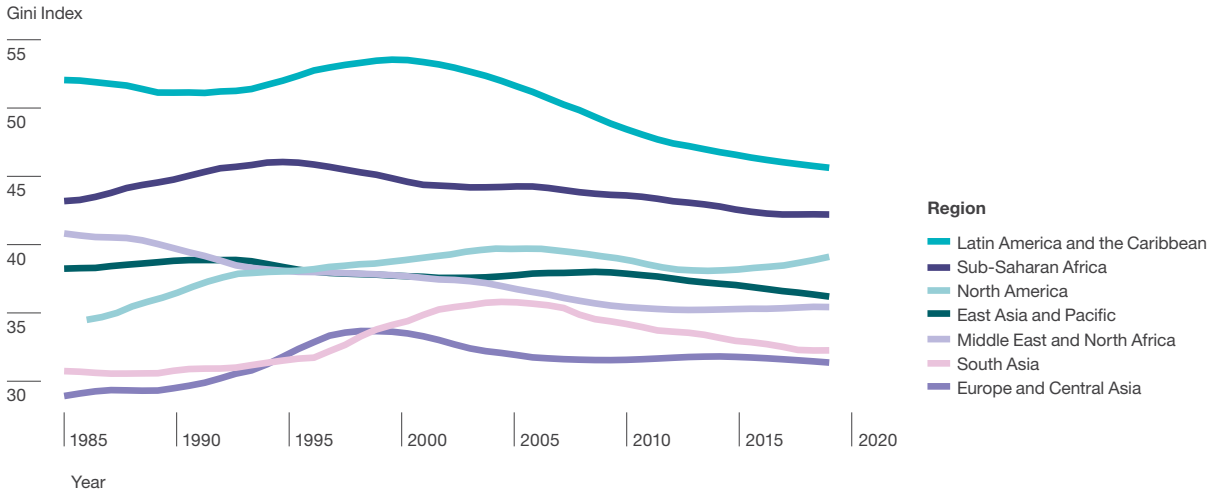
Note: The graph shows the relationship between the logarithm of countries' GDP per capita and a measure of income inequality (Gini index). GDP is measured as GDP per capita in dollars at purchasing power parity (USD-PPP), averaged over the period 2010-2019. To measure income inequality, the Gini index of income distribution is averaged for the same period (or for the years with available information within the aforementioned period). A quadratic fit estimated by ordinary least squares (OLS) is also presented. The group of Latin American and Caribbean countries includes data from Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Haiti, Mexico, Nicaragua, Panama, Paraguay, Peru, Saint Lucia, and Uruguay.

Source: Authors based on World Bank data (2022).

3. The relationship between inequality and income levels has been a central theme in the discussion on economic development. In 1955, Nobel Prize winner Simon Kuznets proposed the existence of a curve that would guide a country's inequality levels along its development path, postulating that it would have an inverted U-shape: initial increases in per capita output are associated with greater inequality and, after a certain threshold of development, inequality begins to fall. However, this type of comparative evidence omits, for example, the importance of historical or institutional factors, which are specific to different countries and regions and may be behind the apparent inverted U-shaped relationship between income and inequality. For this reason, Graph 1.2 should only be only interpreted as evidence about the average differences between inequality observed in very poor countries (those located near the origin of the abscissa axis), middle-income countries (among which are the highly unequal Latin American and Caribbean countries) and high-income countries. That said, a curiosity that emerges from the analysis of Graph 1.2 is that the quadratic adjustment gives an inverted U only when the region's countries are considered in its computation, which speaks to some extent of the exceptional nature of their high levels of inequality.

Graph 1.3 shows that the high average level of the Gini index in the region compared to other regions of the world has been a constant feature for decades. It also shows that inequality in Latin America and the Caribbean fell considerably during the first decade of the 21st century. However, this decline has been slower since the second decade. Moreover, although not shown in this graph, the COVID-19 pandemic crisis may have even led to a reversal of this trend.

Graph 1.3
Evolution of the Gini index of income distribution (average by region and year)



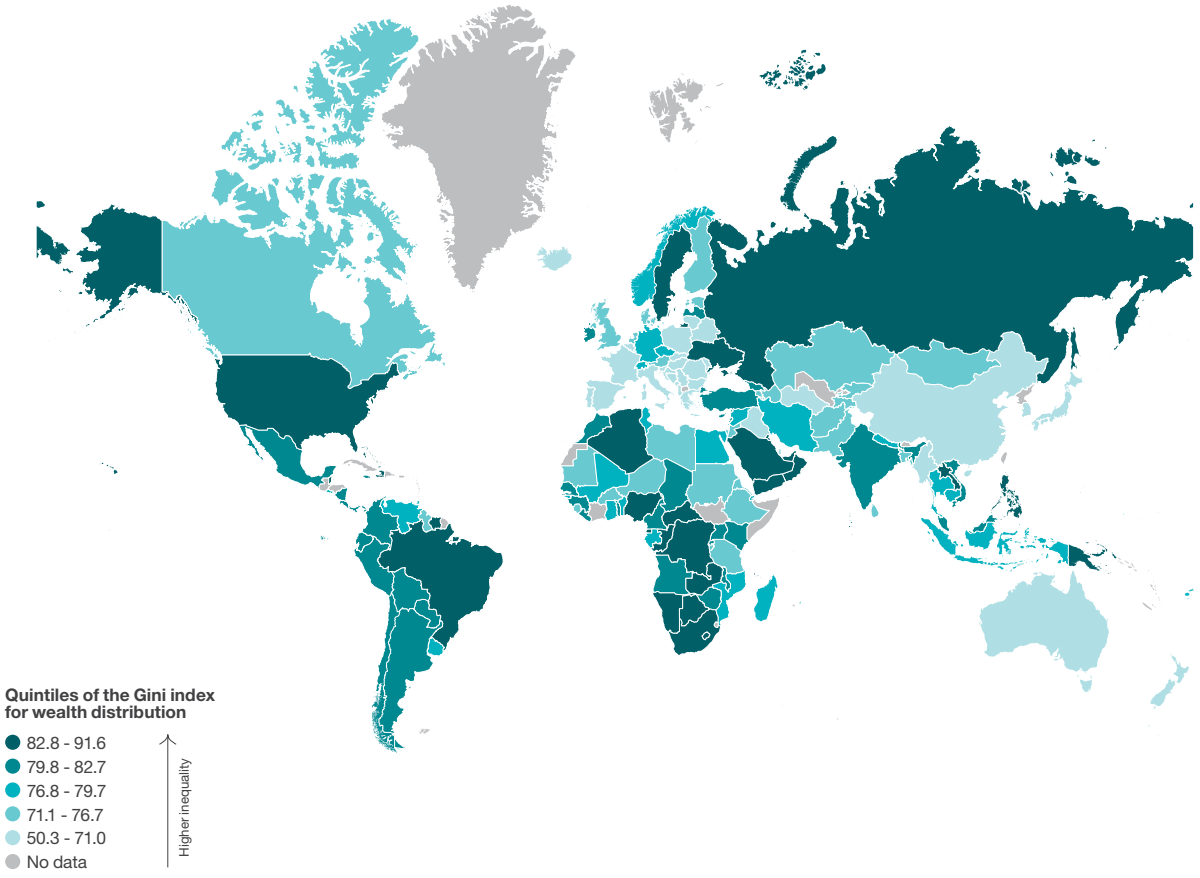
Note: Each line represents a local polynomial smoothing of the Gini index, which measures average income inequality by region. The set of countries included in the regional averages may vary according to data availability for each year. The Latin American and Caribbean countries considered are: Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, St. Lucia, Trinidad and Tobago, Uruguay and Venezuela.

Source: Authors based on data from World Bank data (2022).

Inequality is not limited to income. For example, since income makes it possible to save and accumulate assets that, in turn, generate additional income, inequalities in the distribution of income correspond to inequalities in the distribution of wealth. In general, there are major limitations in the sources of information to measure wealth distribution, especially in developing countries such as those in Latin America and the Caribbean (see chapter 5). Evidence for developed countries based on administrative data, that provide highly reliable data with ample coverage, shows that wealth is even more unequally distributed than income (Chancel et al., 2022; Davies et al., 2021). Despite the data limitations there are multiple efforts to construct metrics of inequality in the distribution of wealth that are comparable across countries, such as those presented in Graph 1.4. It shows that wealth concentration is substantially higher than income concentration. For example, the minimum value of the Gini

index of wealth (lower limit of the first quintile) falls within the range of values of the highest quintile for the Gini index in Graph 1.1. On the other hand, with all due caution in the case of inequality indices that often require imputations of wealth, wealth inequality indicators in Latin America and the Caribbean in Graph 1.4 are above the levels estimated for many developed countries.

Graph 1.4
Inequality measured by the Gini index of wealth distribution in 2020

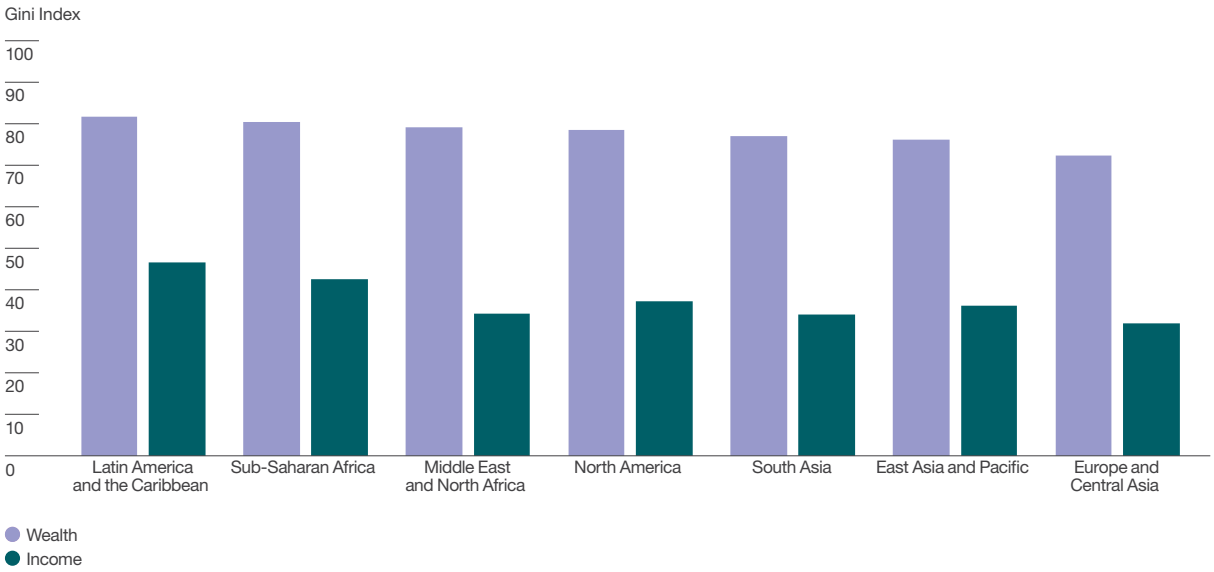


Note: The map shows the Gini index of wealth by country. Of the total sample, 37 countries, including Chile and Uruguay within Latin America, have direct information on wealth distribution. For countries lacking direct data, the estimates presented impute wealth based on income inequality, information obtained from the World Income Inequality Database (WIID). The Appendix of this chapter describes the imputation method in more detail and lists the countries with original and imputed data.

Source: Authors based on Davies et al. (2021), whose imputations are made from the World Income Inequality Database (WIID, 2022).

Graph 1.5 shows the average Gini indexes of income and wealth estimated for different regions of the world. On the one hand, the general pattern is that, in all regions, the levels of inequality in the distribution of wealth are much higher than those of income, illustrating the inability of large groups of the world's population to save and accumulate different types of assets over the course of their lives. On the other hand, Latin America and the Caribbean appears as a continent with very high inequality (both in terms of income and wealth distribution) according to these databases.[4]

Graph 1.5
Gini indexes of wealth and income distribution by region



Note: The graph shows the average values of the Gini indexes for income distribution (average 2010-2019) and wealth distribution (year 2020) in each region. The Latin American and Caribbean countries for which information is available for both measures are: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Haiti, Mexico, Nicaragua, Panama, Paraguay, Peru and Uruguay. The Bahamas, Belize, Jamaica and Venezuela only have information on the Gini of wealth and Guatemala, Honduras, Dominican Republic and St. Lucia only have information on the Gini of income.

Source: Authors based on Davies et al. (2021) and data from World Bank (2022).

4. The two main sources of information on wealth distribution are the Global Wealth Report, published by Credit Suisse, whose data are presented in this chapter, and the World Inequality Report, whose data are available in the World Inequality Database (WID). While the Credit Suisse data ranks Latin America and the Caribbean as the most unequal region, WID ranks it as the fourth most unequal region. However, the two sources coincide in identifying the same four regions as the most unequal. Moreover, in both cases, the estimates of the Gini indices of wealth distribution are valued at around 80 for these four regions.

Inequality levels in a given country come from sources that can be "acceptable" or "unacceptable".[5] The latter, which are strongly related to the idea of inequity and injustice, have a subjective ethical basis. Although not everyone shares the same values, almost all members of modern society condemn the existence of high levels of inequality based on unacceptable factors. This type of inequality refers to differences in wellbeing resulting from unequal opportunities, situations of discrimination or privilege, or corruption mechanisms that result in certain groups facing many barriers to their individual development from birth and throughout their lives. The literature that studies equal opportunities has called this set of reasons the "circumstances" that condition people's wellbeing (Roemer, 1998). In contrast, inequality originating from acceptable sources relates to differences in welfare outcomes that arise from different levels of effort done by individuals and that are less at odds with the goals of social equity (Arneson, 1989; Brunori et al., 2013; Cohen, 1989; Dworkin, 1981b; Ferreira and Gignoux, 2011). In other words, this type of inequality is not only tolerated in the organization of modern economies, but can be considered desirable, since the reward for effort entails incentives that encourage the achievement of higher levels of welfare.

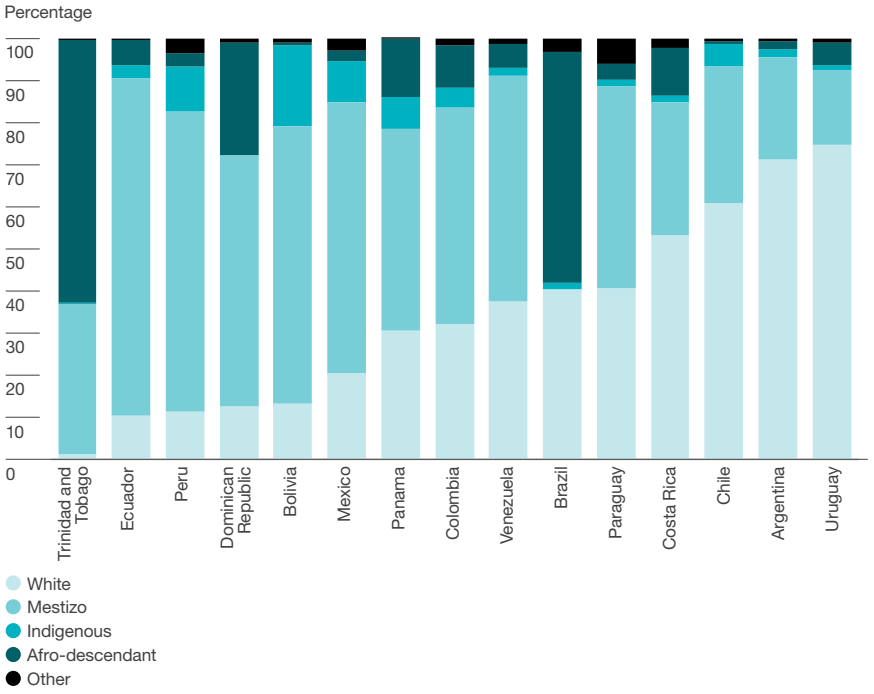
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"Acceptable" and "unacceptable" sources contribute to inequality levels. Unacceptable sources—which are related to inequality of opportunity—play a very important role in the region

In Latin America and the Caribbean, there are certain empirical regularities that highlight the great importance of unacceptable sources to explain the high levels of inequality that the region has been experiencing not only for decades, but for centuries. For example, there are population groups that are systematically over-represented in the lower end of the income distribution, such as Afro-descendants and indigenous people. These groups comprise large sectors of the population. The continent is rich in terms of ethnic diversity, with only about one-third of the population (35%) considering themselves white, while 35% say they are of mixed race, 23% are Afro-descendants, 5% are indigenous and 3% say they belong to another ethnic or racial group. These proportions vary widely among countries within the region, as shown in Graph 1.6. In countries such as Brazil and Trinidad and Tobago, the non-white population is predominantly Afro-descendant, whereas in Ecuador, Peru, Bolivia, and Mexico, the majority is indigenous or mestizo.

5. A recently published book (Gasparini, 2022) clearly describes the differences between these two sources of inequality, as well as the relationships between inequality and poverty, inequality and inequity, and the possible ways in which inequality from acceptable and unacceptable sources interacts with incentives for individual progress.

Graph 1.6
Distribution of the population according to their ethnic self-recognition



Note: The Afro-descendant category includes those people who identified as "black" or "mulatto." Within the indigenous category, those who recognize themselves as belonging to specific indigenous groups, such as the Aymara and Quechua, are also included. The data reported correspond to a compilation of information from all LAPOP surveys with information available between 2004 and 2019.

Source: Authors based on data from LAPOP's AmericasBarometer (www.LapopSurveys.org).

Inequalities in the region also have a spatial dimension. Certain areas within the countries have suffered for decades from deprivations of all kinds, which place the majority of their population in situations of poverty. Finally, gender has also been an important determinant of the material progress of women and LGTQIB+ groups (Aguirre et al., 2022). The following chapters of the report make a novel effort to systematize some of the inequalities to which these population groups are exposed in the region.

In addition, the systematic disadvantages suffered by those born into socioeconomically disadvantaged families are associated with limited possibilities for social progression, which is of the main focus of this report. This is where the concept of inequality is acutely and worryingly related to the idea of intergenerational immobility caused by the lack of equal opportunities in the region.

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Inequalities in the region have marked ethnic, spatial, and gender dimensions

Inequality and intergenerational mobility

Intergenerational mobility

Inequality in the distribution of a welfare variable, such as income, education or wealth, is a static characteristic that can be measured at each moment in time. Mobility, on the other hand, is a dynamic attribute of that distribution over time. Specifically, intergenerational mobility analyzes the dynamics of change in the wellbeing distribution of parents and children, i.e., it takes into account how the children's generation fares both in absolute and relative terms with respect to their predecessors, their parents. Thus, it can be said that while inequality measurements capture a "snapshot," those of mobility show a "movie" of who occupies more or less disadvantaged positions in these distributions over time, which allows us to understand the extent to which inequality is transmitted from parents to children.[6]

While inequality measures capture a "snapshot," mobility measures show a "movie" of who occupies more or less advantaged positions in a society over time

From a conceptual point of view, it could be the case that the inequality experienced by a generation in any dimension of wellbeing[7] is completely independent of what has happened in the previous generation. However, as discussed in this report, this is not usually the case. Mechanisms related to opportunities for human capital formation, access to employment opportunities and wealth accumulation typically cause families and individuals in a society to reproduce the more or less affluent situation of their ancestors. As is also shown throughout this report, inertia or persistence in wellbeing depends to a large extent on having been born into a household with more or fewer resources. The more the opportunities to invest in human capital, to access quality jobs and to accumulate wealth depend on the family context or circumstances, the greater the inertia or persistence of wellbeing between generations is.

Intergenerational mobility is often approached from different perspectives. Moreover, it is compatible with several interpretations. Social disciplines that study mobility use various indexes to capture alternative facets of the phenomenon. This report focuses primarily on two concepts of mobility: absolute upward mobility and relative mobility. Absolute mobility refers to the comparison of the level of wellbeing attained by the children's generation with respect to their parents. Upward mobility indicates that children are able to achieve higher wellbeing levels than their parents. Relative mobility, on the other hand, refers to the level of independence of the child's status with

6. A multigenerational approach can also be taken to analyze intergenerational mobility. However, due to the limited availability of information, usually only the wellbeing indicators of parents and children are linked. Chapter 2 provides novel information on multigenerational mobility in Latin America and the Caribbean, analyzing three or more generations of the same family. A different but complementary approach to the study of inequality focuses on the analysis of the changes experienced by an individual during their lifetime, known as intragenerational mobility.

7. The measurement of mobility usually focuses on different dimensions associated with individual socioeconomic status or level. As discussed in detail in Chapter 2, individual income or wealth are often good summary measures of these different dimensions. However, the data requirements for linking these types of wellbeing outcomes for parents and children usually limit the analysis. Education and labor occupations are two additional dimensions of mobility that are widely studied given the importance they have themselves as dimensions of wellbeing and because of their high correlation with income or wealth.

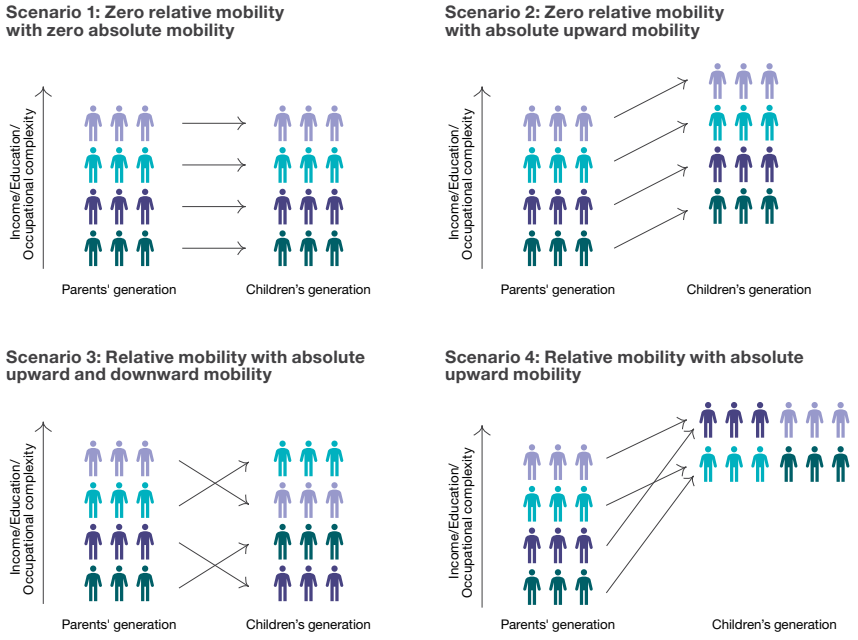
respect to that of their parents or to changes in the position or *ranking* that parents and children occupy within a social order defined by some measure of wellbeing. According to this notion, a more mobile society is one in which the level of wellbeing achieved by children is only weakly associated with the wellbeing experienced by their parents.

Figure 1.1 illustrates different examples that describe the two notions of mobility central to this report and the relationship between them. Scenario 1 shows the case of a society where there is no mobility at all, neither relative nor absolute, as children attain exactly the same level of wellbeing and the same relative position as their parents within the distribution of the variable of interest in their respective generation. Scenario 2 is similar to scenario 1 in that relative mobility is zero. However, all children experience upward mobility relative to their parents. It should be noted that absolute upward mobility in a society is also associated with economic growth and benefits more people to the extent that this growth is distributed among more members of society (in scenario 2 it benefits everyone).[8] As this example shows, even in a period of economic prosperity, there may be no opportunities for anyone to improve their relative position.

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A more mobile society is one in which the level of wellbeing achieved by children is only weakly associated with the wellbeing experienced by their parents

Figure 1.1
Alternative scenarios of absolute and relative mobility



Source: Authors.

8. Absolute mobility, of course, can also be downward in situations of economic crisis or decline, or even during periods of economic growth in the case of some groups.

In scenario 3, while one or several groups experience upward mobility, others move downward. At the same time, there is relative mobility as the order of the most and least advantaged families changes, although with some persistence at the top and bottom of the distribution.[9] Finally, scenario 4 illustrates a situation of absolute upward mobility for all groups, combined with relative mobility. The offspring generation achieves higher levels of wellbeing than their parents, while the relative order varies between different families.

Chapter 2 of this report presents a detailed description of the challenges for measuring intergenerational mobility and the most frequently used indicators. For example, to measure absolute upward intergenerational mobility in education, one usually considers the proportion of children in a given cohort who attain a higher level of education than their parents.[10] Another alternative for measuring absolute upward educational mobility consists of estimating the probability that children will complete a certain minimum educational level conditional on their parents' educational attainment. For example, the probability that children complete or surpass the primary level even though their parents did not complete it. Among the most commonly used measures of relative mobility are those that summarize the degree of statistical association between the wellbeing levels of parents and children. These indicators are, for example, the intergenerational persistence coefficient, the correlation coefficient, and the *rank-rank* (see Chapter 2). All of them increase in value the greater the persistence of wellbeing between generations.

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Measures of absolute upward mobility and relative mobility are very useful for understanding how dependent the possibilities of progress are on family origin for Latin Americans and Caribbean people

Intergenerational mobility in Latin America and the Caribbean

Using the two concepts of intergenerational mobility described above—absolute upward and relative—this section presents evidence on the state of intergenerational mobility in Latin America and the Caribbean with a comparative perspective in regard to other regions. Chapter 2 presents a more exhaustive analysis of these measures, including how levels of intergenerational mobility differ for different population groups (e.g., by gender, ethnicity, or geographic location).

Intergenerational mobility in education

A first approach to measure intergenerational mobility is the mobility in education, i.e., the relationship between the highest educational levels attained by parents and children. Panel A of Graph 1.7 shows two measures of absolute upward mobility for the cohort of children born in the 1980s. The

9. Those who had parents in the bottom 50% of the distribution remain in that group in their generation and those who had parents in the top 50% of the distribution remain in that group.

10. When people who strictly exceed the educational level of their parents are included in the calculations, it is called a "strong criterion" of upward mobility. If the children who attain at least the same educational level as their parents if they are already in the highest educational category are included, it is called a "weak criterion" of upward mobility.

graph uses information from the Global Database on Intergenerational Mobility (GDIM). In 2022, this cohort consists of people aged 33 to 42. The first of these measures—called "weak" upward mobility—considers the proportion of children who attained a higher level of education than their parents, or similar if their parents were already in the highest educational category. According to this indicator, Latin America and the Caribbean appears to have levels of educational mobility in line with other regions of the world, although below that observed in high-income countries.

The second measure—called "conditional" absolute upward mobility—shows the percentage of children who reach a higher level of education than their parents, removing from this calculation those whose parents reached the highest educational level (tertiary education). The value of this indicator for Latin America and the Caribbean positions the region as the second most mobile (after the Middle East and North Africa) and indicates that 57% of the people of this generation have achieved higher levels of education than their parents. This value is higher than that observed in high-income countries.

As documented in chapter 2, these levels of absolute educational mobility in Latin America and the Caribbean are a clear reflection of the significant educational expansion that the region experienced at the primary level and, to a much lesser extent, at the secondary and higher education levels. On the other hand, due to the low percentage of parents with completed higher education, the two measures presented in panel A of Graph 1.7 do not differ much from each other in the region, unlike in Europe and Central Asia or in high-income economies.

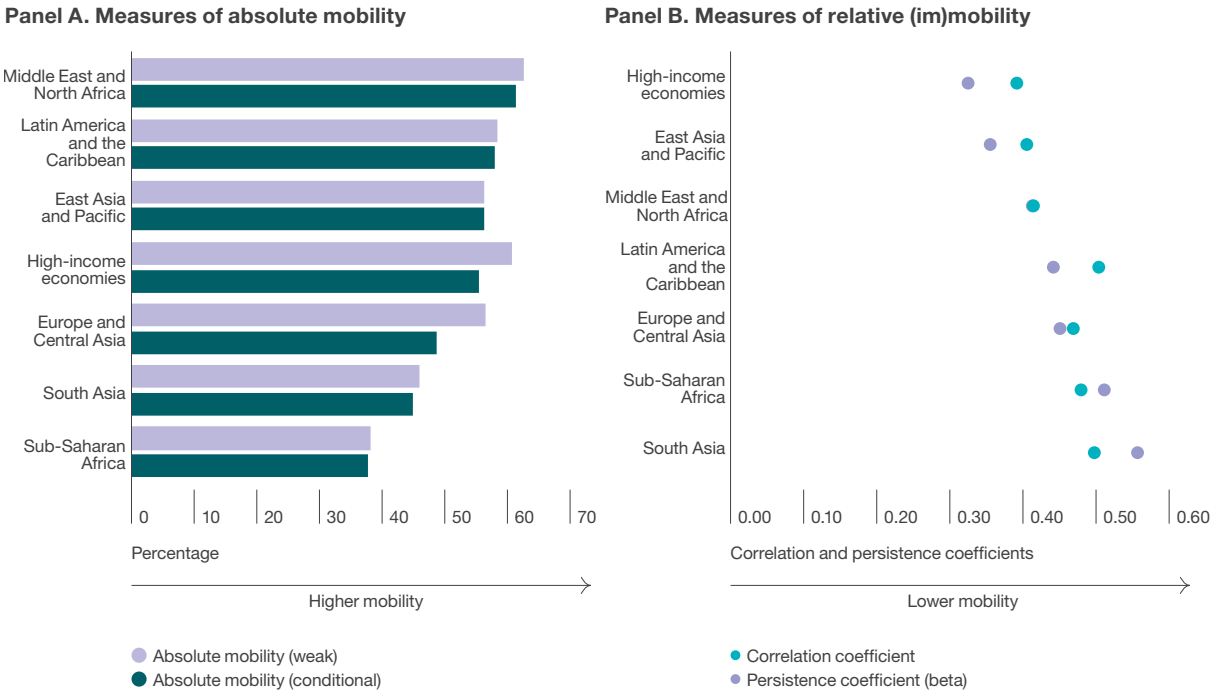
The picture, however, is less encouraging when considering relative mobility. Panel B of Graph 1.7 also shows two indicators of mobility. The first is the correlation in years of education completed by parents and children. The value for Latin America and the Caribbean is the highest relative to other regions of the world, indicating a high degree of association between the educational attainment of parents and children and, therefore, low intergenerational mobility. The second indicator of relative mobility is the persistence coefficient, which captures how many years of children's education are associated with each additional year of parental education. In Latin America and the Caribbean, this value reaches 0.43 additional years of children's education, which places it in an intermediate position with respect to the other regions. However, as discussed in greater detail in Chapter 2, the persistence coefficient mixes relative mobility with changes over time in the distribution of years of education. This feature makes the correlation coefficient a preferable indicator to more directly assess intergenerational immobility in regions where educational expansion occurred markedly in the time interval spanning the birth of the two generations being compared, as was the case in Latin American and Caribbean countries (Torche, 2019).[11]

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The levels of absolute educational mobility in Latin America and the Caribbean are a clear reflection of the significant expansion of education in the region at the primary level and, to a lesser extent, at the secondary and higher-education levels

11. As described in Chapter 2, this indicator "discounts" the differences in the relative dispersion of years of education across generations of parents and children and that are the result of the educational expansion that the region experienced in the second half of the 20th century (Torche, 2019).

Graph 1.7
Educational mobility in Latin America and the Caribbean and other regions of the world for the cohort born between 1980-1989

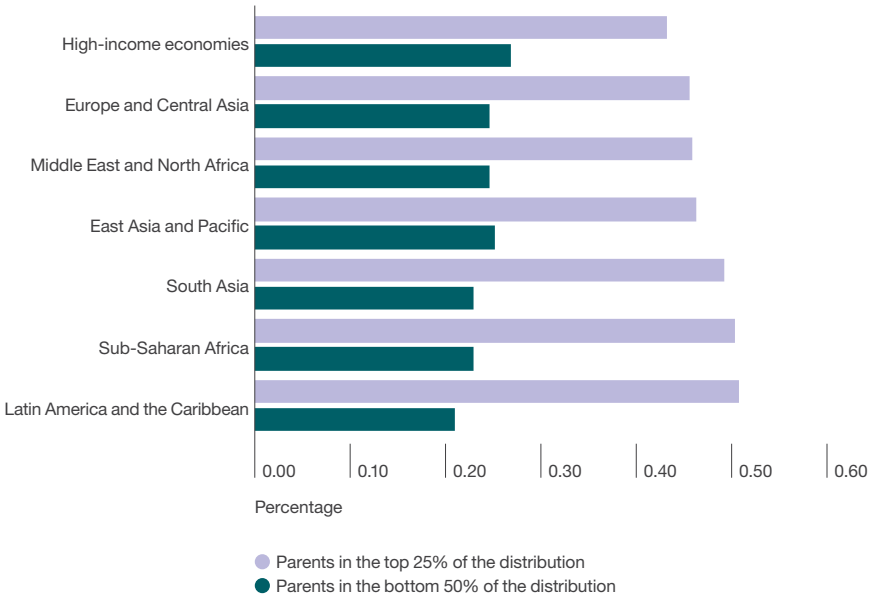


Note: Cohort refers to the decade (1980-89) of birth of the offspring generation. Mobility measures correspond to simple regional averages. Latin America and the Caribbean covers 16 countries. In panel A, the conditional absolute upward mobility measure shows the percentage of children who reach a higher educational level than their parents, excluding those whose parents reached the highest educational category (Tertiary education). This variable is constructed from five educational categories based on the International Standard Classification of Education (ISCED). The weak absolute upward mobility measure shows the percentage of children reaching a higher level of education than their parents or a similar level if their parents attained the highest level of education (tertiary). In panel B, the persistence coefficient (beta) is estimated by an ordinary least squares regression, where the dependent variable corresponds to the child's years of education and the independent variable to the maximum years of education attained by the mother or father. The correlation coefficient is the Pearson coefficient between children's and parents' years of education.

Source: Authors based on data from GDIM (2018).

The low relative mobility result also tells us that the children of the most disadvantaged parents have a very low probability of reaching the highest positions in the distribution of years of education compared to those from more advantaged family backgrounds. Graph 1.8 shows that in Latin America and the Caribbean, people whose parents are in the bottom 50% of the years of education distribution have only a 21% chance of reaching the top 25% of their generation's years of education distribution. Although this percentage is small worldwide, it is particularly low in Latin America and the Caribbean. In contrast, 50% of young people whose parents are in the top 25% are very likely to remain in that same group, the highest percentage of all the regions compared. Thus, the gap in Latin America and the Caribbean between advantaged and disadvantaged to reach positions in the top 25% is the largest in the world.

Graph 1.8
Probability of children (1980-89 cohort) to reach the top 25% of the distribution of years of education based on their parents' education level



Note: Cohort refers to the decade (1980-1989) of birth of the offspring generation. Regional averages result from simple averages of mobility measures across countries in the respective region. Latin America and the Caribbean includes data for 16 countries.

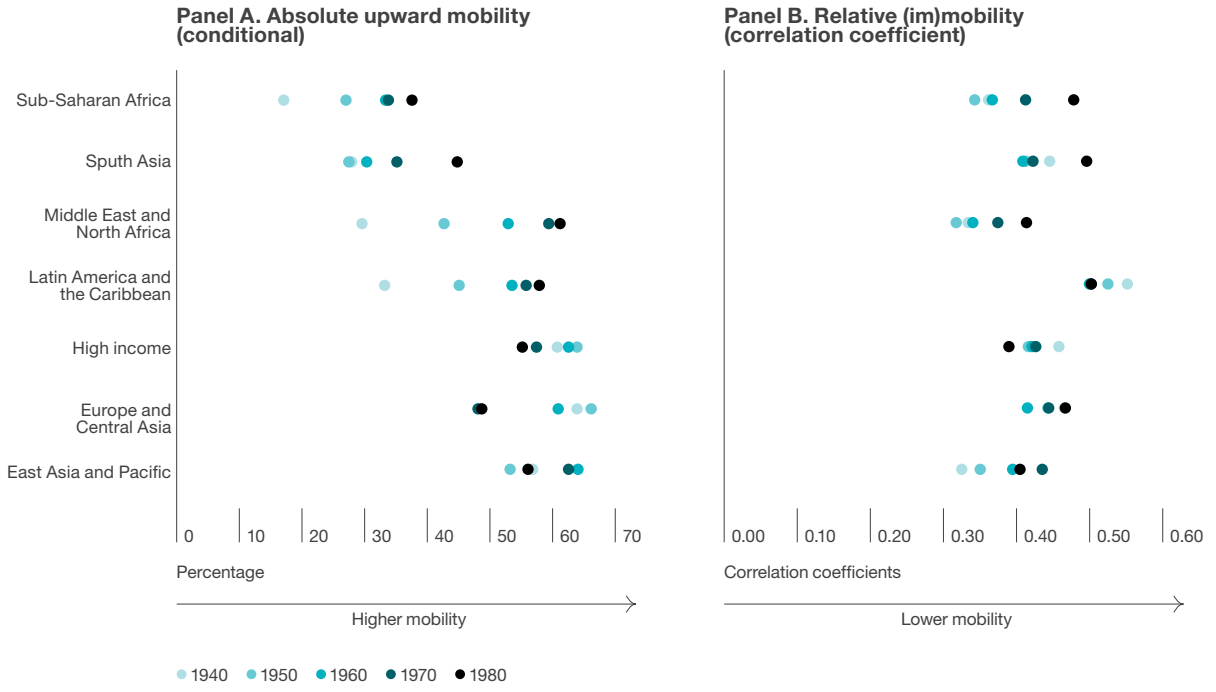
Source: Authors based on data from GDIM (2018).

This contrast between seemingly good news in terms of absolute mobility and not-so-good news in terms of relative mobility is also observed over time. According to the evolution by cohort presented in panel A of Graph 1.9, Latin America and the Caribbean is one of the regions that recorded the highest increases in absolute mobility for cohorts born between 1940 and 1980. While the 1940 generation was extremely immobile, the region managed to double in the following four decades the percentage of children who surpassed their parents' level of education. On the other hand, the Latin American generation of 1940 was the most static in the world in terms of relative mobility, as panel B shows. Despite the educational expansion that the region subsequently experienced, this favorable evolution did not translate into relative improvements in the years of education of the children of the most disadvantaged parents, so that they could reach higher positions in the distribution of years of education of their generation. In short, relative educational mobility seems to be lower in the region for cohorts born between 1950 and 1980 than for the 1940 cohort.

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While absolute upward mobility in education improved over time in the region, relative mobility did much less so

Graph 1.9
Trends in intergenerational mobility in education in Latin America and the Caribbean for cohorts born between the 1940-1949 and 1980-1989 decades



Note: Cohorts refer to the birth decades of the offspring generation. Regional averages result from simple averages of mobility measures across countries in the respective region. Latin America and the Caribbean covers 16 countries. In panel A, the conditional absolute upward mobility measure shows the percentage of children who reach a higher educational level than their parents, excluding those whose parents reached the highest educational category (tertiary education). This variable is constructed from five educational categories based on the International Standard Classification of Education (ISCED). In panel B, relative mobility is measured with Pearson's correlation coefficient between children's and parents' years of education.

Source: Authors based on data from GDIM (2018).

Intergenerational mobility in occupations and incomes

It is possible to perform an analysis similar to that of educational mobility to study the persistence of occupations between generations of the same family, as well as the possibilities of experiencing upward mobility according to the complexity of these occupations. To measure occupational mobility, new estimates were calculated based on the World Values Survey (WVS). The latest round of this survey has information about the respondent's current occupational category and that of their father when the respondent was 14 years old,[12] which is used to compute various indicators, including those proposed by Ciaschi, Gasparini et al. (2021) in their research carried out in

12. Information on the occupation of respondents' mothers is not available in these databases.

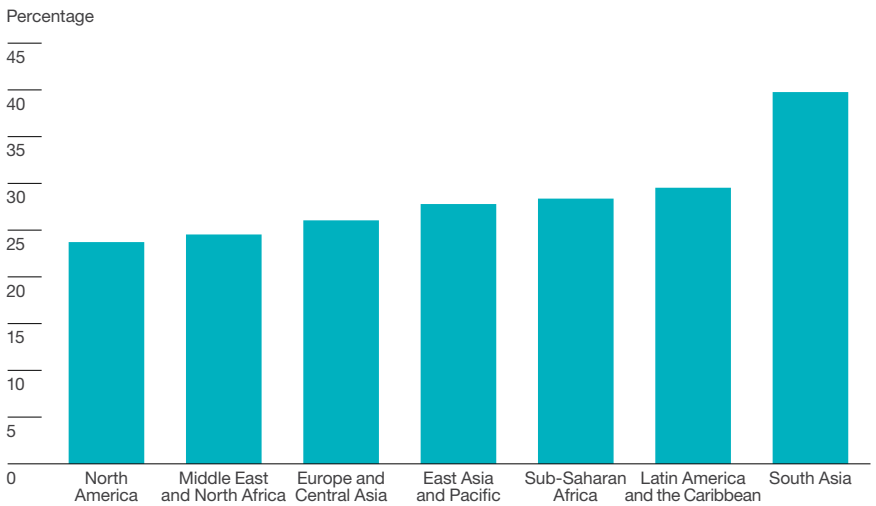
the context of this report. Chapter 2 expands the description of occupational mobility in Latin America and the Caribbean, analyzing its evolution over time and its relationship with educational mobility.

As a first approximation to understanding occupational mobility, Graph 1.10 shows the percentage of people who share the same occupational category as their father, in different regions of the world. It should be noted that the value of this indicator can be higher or lower depending on the degree of disaggregation of occupational categories.[13] Although this value is not as informative as a precise measure of occupational persistence, it is interesting to use it for comparison across regions. For example, Graph 1.10 shows that the percentage of parents and children sharing occupational categories is high in Latin American and Caribbean countries, only below that observed in South Asia.

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The percentage of parents and children sharing occupational categories is very high in Latin American and Caribbean countries, only below that observed in South Asia

Graph 1.10
Percentage of children sharing the same occupation as their father



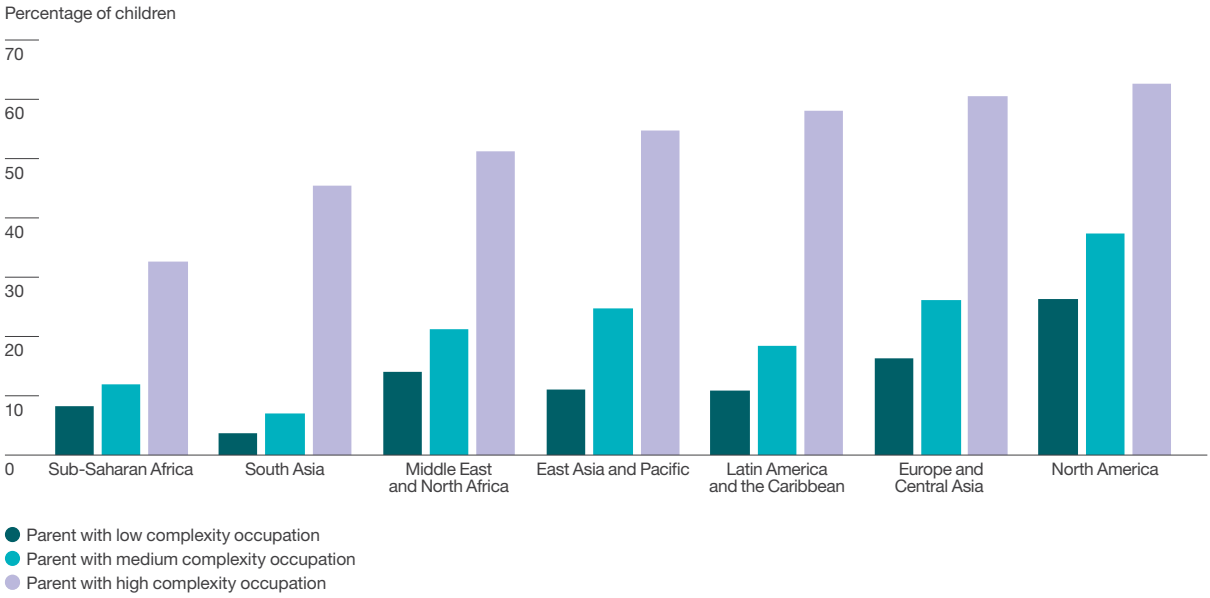
Notes: Bars represent the regional average percentage of respondents sharing the same occupational category as their father when the respondent was 14 years old. Regional averages result from simple averages across countries. The sample comprises individuals who at the time of the survey (between 2017 and 2020) were 25-60 years old and working. The occupational categories available in the World Values Survey (WVS) for parents and children are: professional and technicians, higher administrative workers, clerical workers, sales workers, service workers, skilled workers, semi-skilled workers, unskilled workers, farm workers and farm owners or managers. The Latin American and Caribbean countries considered here are: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Nicaragua, Peru, and Puerto Rico.

Source: Authors based on data from the seventh wave of the World Values Survey (Haerpfer et al., 2022).

13. In this case, the occupations of parents and children are disaggregated into eleven categories, which is the maximum possible in the WVS data.

By ordering the occupations of parents and children in categories according to the level of complexity of the skills required in each one, it is possible to construct transition matrices between the levels of complexity of the occupations of parents and their children (Ciaschi, Gasparini et al., 2021). Graph 1.11 shows a relevant aspect for upward occupational mobility that emerges from this type of matrix: the percentage of children who have high complexity occupations considering the complexity of their parents' occupation. For example, in regions such as North America, the share of children with highly complex occupations whose parents also had this type of occupation is slightly more than double that of those whose parents were in the low category (63% versus 26%). In Latin America and the Caribbean, on the other hand, this ratio is more than five times higher (58% versus 11%).

Graph 1.11
Percentage of children who have a high complexity occupation according to the degree of complexity of their parents' occupation, by region



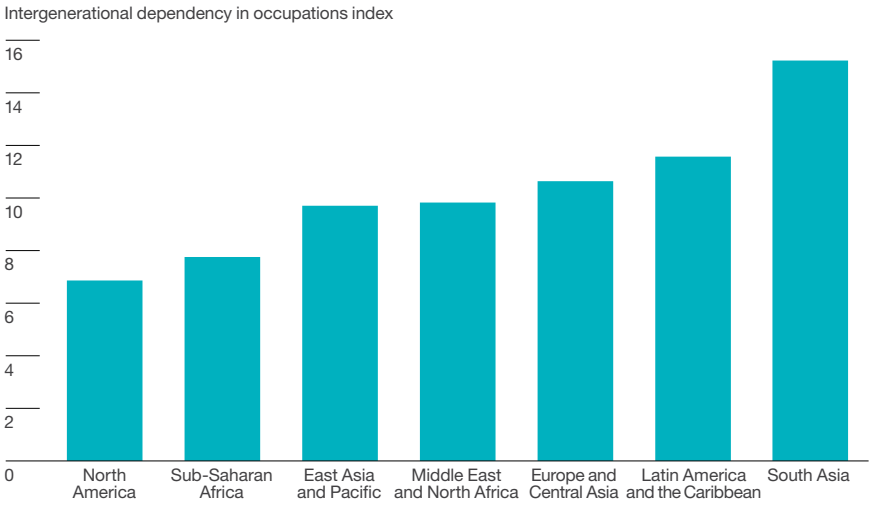
Note: High-complexity occupations include professionals, technicians, and higher administrative workers; medium-complexity occupations include clerical workers, sales workers, service workers, and skilled workers; and low-complexity occupations include semi-skilled workers, unskilled workers, farm workers, and farm owners or managers. The sample comprises individuals who at the time of the survey (between 2017 and 2020) were 25-60 years old and working. The Latin American and Caribbean countries considered here are: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Nicaragua, Peru, and Puerto Rico.

Source: Authors based on data from the seventh wave of the World Values Survey (Haerpfer et al., 2022).

Finally, Graph 1.12 shows a measure of occupational mobility, called the intergenerational dependency in occupations index (Altham and Ferrie, 2007). Intuitively, this measure compares the current distribution of occupations of parents and children with a hypothetical distribution in which there is total

independence in the distribution of occupations of each generation. A higher value of this indicator is associated with a greater distance between the current distribution of occupations of parents and children and the hypothetical situation and, therefore, with lower occupational mobility. Consistent with what has been presented so far, this indicator points to high levels of intergenerational occupational persistence in Latin America and the Caribbean.

Graph 1.12
Average intergenerational dependency in occupations indicator by region



Notes: Regional averages are simple averages across countries in each region. The sample comprises individuals who at the time of the survey (between 2017 and 2020) were 25-60 years old and working. The intergenerational dependency in occupations index is calculated based on three groupings of occupational categories of parents and children, ordered by their level of complexity. The Latin American and Caribbean countries considered here are: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Nicaragua, Peru, and Puerto Rico.

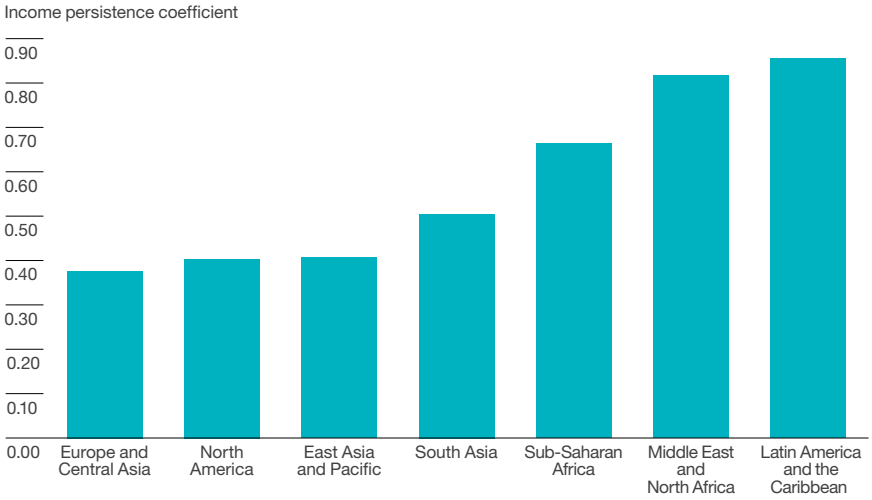
Source: Authors based on data from the seventh wave of the World Values Survey (Haerpfer et al., 2022)

In summary, although absolute upward educational mobility in the region shows encouraging values, the opposite is observed in the case of relative educational mobility and occupational mobility. The higher educational levels attained by children with respect to their parents are not reflected in relative upward mobility in terms of educational levels or labor market opportunities. This may suggest two things. On the one hand, educational progress has been insufficient in the region. On the other, the region's economic structure is failing to absorb or reward these higher educational levels. These results are consistent with low intergenerational mobility in income, which positions Latin America and the Caribbean as the region with the highest persistence in this dimension according to the values shown in Graph 1.13. Thus, in the region, intergenerational persistence in income corresponds to the high inequality discussed above.

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While the region shows encouraging values of absolute upward mobility, the opposite is observed in relative educational mobility, occupational mobility, and income mobility

Graph 1.13
Intergenerational persistence in income by region



Note: Intergenerational persistence in income is measured by the intergenerational income elasticity between parents and children. Regional values are simple averages across countries in each region Information is presented for cohorts of children born in the 1960s or 1970s, depending on the availability of data for each country. The countries included in the average for Latin America and the Caribbean are Bolivia, Brazil, Chile, Colombia, Ecuador, Guatemala, Panama, and Peru.

Source: Authors based on data from GDIM (2018).

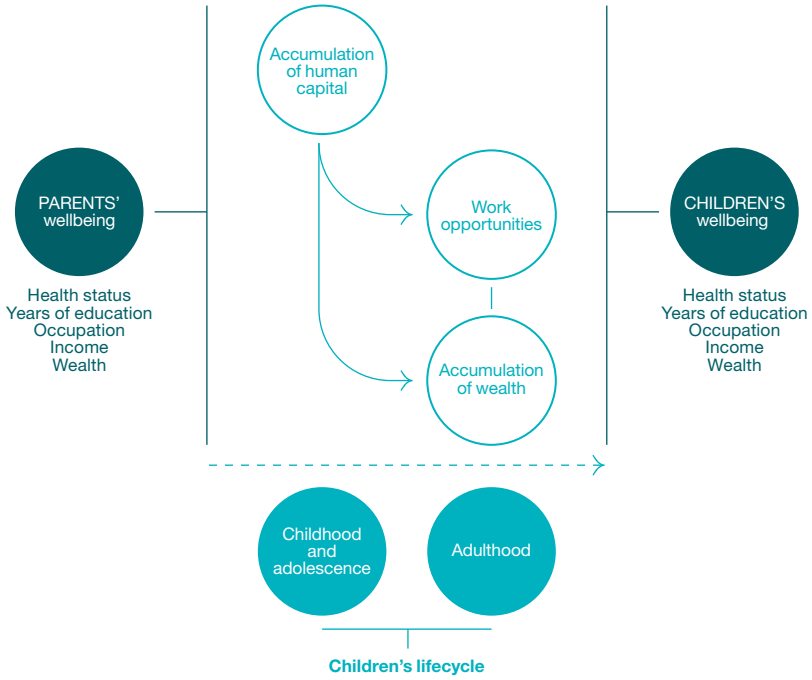
What explains low intergenerational mobility?

The link between high inequality and lower intergenerational mobility indicates that there are powerful mechanisms that reproduce the levels of wellbeing achieved by individuals across generations of the same family. Different complementary theories have been proposed to explain this connection between inequality and mobility.[14] This report analyzes three very important channels that affect intergenerational social mobility in Latin America and the Caribbean. As described in Figure 1.2, these channels are related to the unequal opportunities that people from families of different socioeconomic backgrounds—which are typically characterized by measures of parents' wellbeing, such as their health status, educational level, occupation, income or wealth—face throughout their lives which are conductive to **human capital formation**, access to good **jobs**, as well as the **possibilities for asset accumulation**. The following chapters of this report present a wide variety of

14. A recent review on the subject can be found in Durlauf et al. (2022).

evidence that shows the strong association observed in Latin America and the Caribbean between the socioeconomic level of the family of origin and these opportunities. Chapters 3, 4 and 5 describe the set of mechanisms behind each of these results and discuss policies that could level opportunities in these three dimensions in order to favor greater social mobility.

Figure 1.2
Channels behind the intergenerational reproduction of inequality



Source: Authors.

Human capital

As shown in Chapter 3, inequality is transmitted between generations because, in part, there are large inequalities in human capital formation (broadly understood as the level of education attained, the state of health, and the development of cognitive and socioemotional skills). This chapter delves into the explanations of the empirical findings presented in Chapter 2, which indicate that there is a very strong association among various variables that measure the human capital of parents and children in Latin America and the Caribbean. These variables include years of education or health status

indicators. Chapter 3 argues that parents can strongly affect their children's human capital formation in several ways. One of them is the investments they make in their children at home, for example, those that translate into time spent together, material resources, and parenting styles. In addition, parents make decisions that affect their children's human capital formation possibilities outside the home. Among these key decisions are those of residence, which condition the physical, social and environmental surroundings in which their children develop, or the choice of educational centers, which of course play a crucial role in the formation of children and adolescents. All these decisions and investments that affect the formation of human capital are subject to financial, informational and cognitive-behavioral restrictions and as well as those that limit the possibilities of securing investments Moreover, they are not the same for families from different socioeconomic contexts.

Chapter 3 argues that the accumulation of human capital is the result of a dynamic process, in which certain stages are more sensitive when it comes to taking advantage of key investments for the development of physical, cognitive and social-emotional skills. In this process, parents who face greater financial, informative, cognitive-behavioral or insurance restrictions have fewer possibilities for investing in their children. As a consequence of the characteristics of the human capital accumulation process, the education attained in the first two decades of life is crucial for the achievement of high levels of human capital that will allow individuals to offer high productive capacities in the labor markets once they reach adulthood. In this regard, and in the absence of compensatory mechanisms, disparities in early investments tend to be transferred and amplified, explaining a large part of the inequalities in occupations and income observed later in life.

This approach also considers that the investments received by children may also be affected by differences in family structure (e.g., single-parent or two-parent households, adolescent parents, number of siblings), by the characteristics of the parents' human capital (whose weight is exacerbated in families where there is assortative mating, that is, when the human capital of the father and mother is very similar), by the characteristics of the physical and social environment, and by the occurrence of all kinds of shocks, such as economic shocks or those related to the environment and nature.

Finally, Chapter 3 shows that the high levels of school and spatial segregation in Latin America and the Caribbean, as well as unequal access to basic educational and health equipment and to the coverage of social protection systems, are mechanisms that lead families to make decisions regarding the human capital formation of their children outside the home that not only fail to compensate for the inequalities of investments within the home, but often exacerbate them.

Thus, the process of skill accumulation throughout the lives of Latin American children and young people is the result of a complex interaction of factors that are often completely beyond their control. The inequalities that arise in these first decades of life are highly conditioned by people's circumstances. Moreover, they result in an insufficient level of equality of opportunities in the formation of human capital.

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Parents facing greater financial, cognitive-behavioral or insurance constraints have fewer possibilities to invest in their children's human capital

Job opportunities

Another channel through which inequality is reproduced from one generation to the next results from the conditioning that family origin implies for individual labor decisions and opportunities. This occurs through various channels that are laid out in detail in Chapter 4 of this report. On the one hand, families determine characteristics of individuals that are relevant for their labor performance. In addition to education—and human capital, in more general terms—families define other attributes, such as ethnicity and race, geographic location, and the location of their residence within a city, which affect the opportunities and rewards offered by labor markets. On the other hand, families influence critical labor decisions, such as whether or not to actively participate in the labor market and, if they decide to participate, their occupational choices, including whether to work formally or informally, the specific type of occupation, or the sector of activity. The assessment presented in Chapter 4 shows that the socioeconomic status of the families of origin strongly influences labor participation, unemployment, wages, and formality of workers in Latin America and the Caribbean. Differences in labor outcomes according to the socioeconomic status of families are observed even among workers with the same level of education and skills, and are particularly pronounced for women.

Chapter 4 groups into four categories the mechanisms that link individuals' employment outcomes to the socioeconomic status of their families. The first set of mechanisms pertains to how the social connections of the worker's family condition their chances of obtaining job referrals that are critical for obtaining employment. The family also conditions the decisions that young workers make through the information available to them and the expectations that parents have about their children's employment destiny. More directly, family affects labor choices through business inheritance. In Latin America, family support is a method for obtaining jobs that is widely used by individuals from disadvantaged and advantaged families alike. This implies a barrier to intergenerational mobility because higher-status families have access to better job recommendations and contacts. The influence of family of origin on employment is particularly relevant among business owners—a high proportion of whom run an inherited business—especially those from more advantaged backgrounds.

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In Latin America, family support is a widely used mechanism for obtaining jobs, marking a barrier to intergenerational mobility

The second set of mechanisms includes the different types of discrimination based on ethnicity and race observed in Latin American and Caribbean labor markets. These mechanisms are particularly detrimental to the labor outcomes of Afro-descendant and indigenous workers. This report shows that labor markets contribute to the intergenerational reproduction of the historical disadvantages suffered by these groups in the region both through labor discrimination and a greater presence of Afro-descendants and indigenous people in sectors and types of firms with lower productivity. The latter result is tied to disadvantages in human capital formation suffered by these groups in the region, documented in Chapters 2 and 3.

The third set of mechanisms includes limitations on the worker's labor possibilities if their family of origin lives in a region of the country with low productivity and low economic dynamism. This is particularly relevant in Latin America and the Caribbean, since there are wide wage gaps between rural and urban areas, and between cities with lower and higher productivity (in both cases reaching differences of around 40%). This implies that job opportunities are very different for workers who come from families in rural areas or in cities with low productivity. Within cities, opportunities are also unevenly distributed. Urban mobility and housing deficits mean that the opportunities for access to quality jobs are lower for workers from the peripheral neighborhoods of large cities.

The fourth and last set of mechanisms has to do with the availability of material resources and social connections in the worker's family and their influence on the worker's ability to cope with the frequent negative shocks in the region's labor markets. Workers from more disadvantaged family backgrounds not only face worse job opportunities than those from advantaged families, but are also more vulnerable to the risks of job loss due to the weakness of social protection mechanisms in the region and their families' more limited savings capacity to cushion the consequences of these shocks. Thus, workers from lower socioeconomic families are more exposed to the negative effects of technological change. For example, the economic consequences of COVID-19 and the multiple macroeconomic crises of recent decades in Latin America and the Caribbean affected them more deeply.

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Workers from more disadvantaged family backgrounds are more vulnerable to the risk of job loss, which contributes to intergenerational persistence of income

Accumulation of wealth

A third channel for the reproduction of inequality is through the intergenerational transmission of wealth, analyzed in detail in Chapter 5 of this report. Although part of the persistence in wealth originates in persistence in education levels and labor outcomes, there are important additional mechanisms. The most direct is inheritance. Like in other parts of the world, leaving an inheritance is a common phenomenon in Latin America and the Caribbean, although perhaps with somewhat different characteristics. A high proportion of home, business and other asset owners in the region report having received these assets as part of an inheritance, and this does not differ according to family socioeconomic status. However, given that wealth distribution in Latin America is more uneven than in other regions, this mechanism is key in perpetuating intergenerational inequalities. In turn, some factors that shape family structure, such as fertility, marital unions and separations, and marriages between people with similar levels of wealth, amplify the role of inheritances.

In addition, Chapter 5 shows that certain parental characteristics can influence children's financial behaviors and aptitudes (e.g., the valuation of savings and their level of financial knowledge and sophistication), as well as the particularities of their investment portfolios (e.g., return, liquidity, and risk). Financial literacy—which is very low in the region—presents a clear socioeconomic gradient. Moreover, according to international evidence, it could be one of the central

causes behind inequality in wealth distribution. There is also evidence that points to an intergenerational transmission mechanism in personality traits that affect asset accumulation.

Problems accessing credit, in general, and failures in the functioning of the mortgage markets, in particular, are other causes that increase dependence on family wealth to accumulate assets in the region. In other words, credit markets in Latin America and the Caribbean often act as mechanisms for amplifying inequalities instead of being a source of opportunities for those from more disadvantaged backgrounds.

The functioning of credit markets explains the intergenerational persistence of wealth in the region

Finally, the most disadvantaged groups' vulnerability to shocks of a different nature also has an important intergenerational dimension. Shocks can affect transfers between parents and children by reducing, for example, the amounts of inheritances and even changing the direction of transfers, with children having to assist their parents, thus reducing their saving capacity. There are also mechanisms that contribute to the intergenerational persistence in vulnerabilities to these shocks (such as persistence in health conditions and access to health insurance), originating, for example, in inertia in the condition of labor informality.

Why does intergenerational mobility matter?

Intergenerational mobility not only has important consequences on levels of inequality, but can also affect a country's economic growth and political-institutional stability. These are three key dimensions for inclusive and sustainable development and make mobility an important precondition for achieving greater and more stable long-term progress in Latin America and the Caribbean.

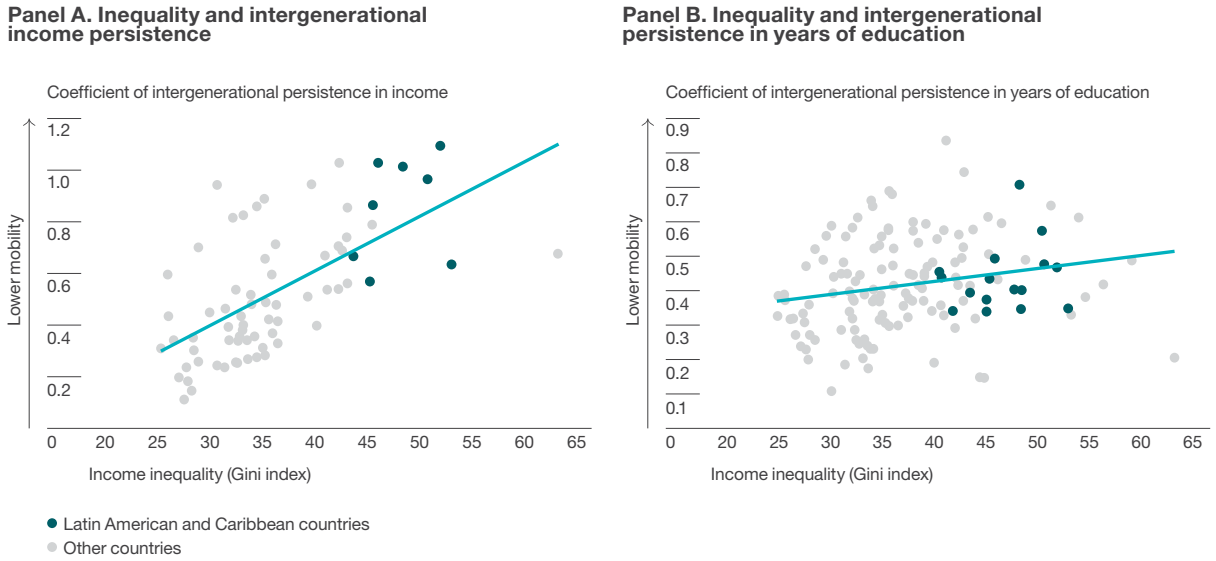
Intergenerational mobility and inequality

As discussed above, inequality in the distribution of a certain measure of wellbeing and intergenerational mobility in that same variable are, in principle, different features of a society. From a theoretical point of view, it could be that there is high income inequality, that is, that in each generation there is a marked difference between rich and poor individuals, but that these differences change dynamically over time so that the members of a family that is advantaged in one generation are not necessarily in that situation of high wellbeing in the next generation. For example, in a society where inequality attributable to individual effort is high, but equality of opportunity exists, high levels of inequality could coexist with low intergenerational persistence in wellbeing.

However, the empirical evidence shows a strong positive association between measures of income inequality at a given point in time and measures of intergenerational persistence, as shown in Graph 1.14. On the one hand, panel A shows that inequality (as measured by the income Gini index) and relative intergenerational immobility in income (as measured by the coefficient of income persistence or beta) move in the same direction. On the other hand, panel B indicates a positive association between income inequality and intergenerational persistence in years of education attained by parents and children. These relationships hold for a broad set of countries and indicate that the most unequal countries are also the most immobile in terms of both income and years of education.

Empirical evidence shows a strong positive association between inequality and intergenerational income persistence

Graph 1.14
Great Gatsby Curve: correlation between income inequality and intergenerational persistence of income and education



Note: Panel A presents the relationship between income inequality (Gini index) and the coefficient of intergenerational persistence in income for a broad sample of countries. The income mobility metric is calculated based on the last cohort for which information is available, usually 1960 or 1970 depending on the country. Income inequality is based on the average Gini index for the period 2010-2019. The Latin American and Caribbean countries included are Bolivia, Brazil Chile, Colombia, Ecuador, Guatemala, Panama, and Peru. Panel B presents the relationship between income inequality and intergenerational mobility in years of education. The education mobility metric is based on an OLS regression between the years of education of the children's generation and the maximum years of education attained by their parents and corresponds to the cohort born in the 1980s. Inequality is based on the average Gini index for the period 2010-2019. The Latin American and Caribbean countries included are Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, Paraguay, Peru, Dominican Republic, and Uruguay. In both panels, the line represents a linear regression fit.

Source: Authors based on data from GDIM (2018) and World Bank (2022).

Internationally, numerous papers have recognized this empirical association (Hassler et al., 2007; Andrews and Leigh, 2009; Corak, 2006, 2013a, 2013b). Moreover, it has attracted the attention of many research studies, such as those summarized by Durlauf et al. (2022). In 2012, Alan Krueger, then head of the U.S. President's Council of Economic Advisors, dubbed this positive relationship between inequality and persistence the Great Gatsby Curve (GGC) in a speech (Krueger, 2012).[15] This empirical relationship has not only been documented across countries, but also within some of them for which information is available, including studies for the United States (Chetty et al., 2014), Canada (Connolly et al., 2019), Italy (Acciari et al., 2022; Güell et al., 2018) and China (Fan et al., 2021). For Latin America and the Caribbean, Neidhöfer (2019) uses harmonized survey data from 18 countries in the region to construct measures of educational mobility for cohorts born between 1930 and 1980. His research found a positive association between income inequality and intergenerational persistence in years of education of parents and children.

Although the evidence reflected in Graph 1.14 does not necessarily represent a causal relationship between levels of inequality and intergenerational mobility, it is consistent with the idea that the lack of social mobility may reflect the existence of high inequality of opportunities in a society.[16] As described by Brunori et al. (2013), if higher inequality hinders mobility (as suggested by the positive association in panels A and B of Graph 1.14), this is likely to be because opportunities for economic progress are unequally distributed among individuals over their lifetimes. Alternatively, lower mobility could contribute to a persistence in inequality, causing the children of poor parents to remain poor and the children of wealthy parents to remain rich. Brunori et al. (2013) show that measures of intergenerational persistence (e.g., relative lack of mobility) are strongly correlated with measures of inequality of opportunity,[17] which refer to inequality in individual wellbeing variables (e.g., income level or years of education) that are not due to factors controllable by individuals (such as their effort), but to factors that are handed them (circumstances), such as the socioeconomic characteristics of the family in which they grew up.

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15. The name of the curve refers to the protagonist of the novel The Great Gatsby, by F. Scott Fitzgerald, published in 1925.

16. The concept of inequality of opportunity has been profusely discussed in philosophy. For example, seminal papers by Dworkin (1981a, 1981b), Arneson (1989) and Cohen (1989) have argued that inequality in the distribution of individual outcomes, such as income, is not the appropriate criterion for assessing the fairness of a given allocation or social system. However, all these papers suggest that certain differences in outcomes (termed "advantages"), attributable to choices for which individuals can be held responsible ("effort"), may be ethically acceptable. Unacceptable inequalities reside in a prior space of resources, capabilities or opportunities (termed "circumstances") for which individuals cannot be held responsible. These differences often delineate the concept of inequality of opportunity and, in principle, should be eliminated from an ethical point of view. The concept of inequality of opportunity was formalized and introduced to economists by Roemer (1998) and Van De Gaer (1993).

17. These authors postulate that inequality of opportunity could be the "missing link" between the concepts of income inequality and social mobility. Chapter 2 documents the same pattern of correlation between inequality of opportunity and intergenerational persistence of years of education in Latin America and the Caribbean.

Intergenerational mobility and growth

The degree of social mobility is also related to economic growth in such a way that it includes both directions of causality. On the one hand, intergenerational mobility requires some level of growth. This is evident for absolute upward mobility, but also for the sustainability of relative mobility. In a stagnant economy, for some to be better off in relative terms, it would be necessary for others to be worse off in absolute terms. On the other hand, social mobility can affect economic growth through at least two channels. First, the prospects for social mobility may affect the degree of effort to invest in human capital formation and to work, both of which are drivers of productivity and aggregate growth. In contrast, in a society in which there are no prospects for social mobility, the incentives for effort become weak. Second, for mobility to be understood as a result of effort, it is important that beliefs be aligned in that regard.[18] Why strive if one's place in a society is already guaranteed? The belief that "effort pays" in both absolute and relative terms is important in determining the degree of effort contributed by individuals at all economic levels of a society. As such, they can affect aggregate growth. Graph 1.15 illustrates this relationship for the average of Latin American and Caribbean countries included in the World Values Survey. It reflects a positive association between respondents' experiences in terms of absolute mobility (improvements over their parents in standard of living and educational level) and the belief that "effort pays" in life.[19]

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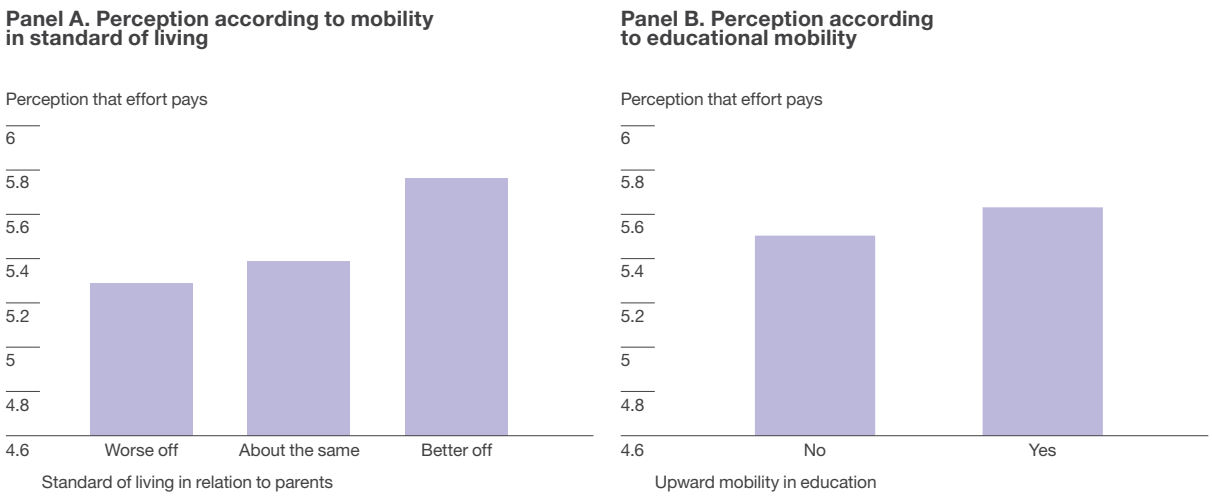
The positive association between intergenerational mobility and economic growth is twofold

The other important factor linking mobility with growth results from the better allocation of talent that can be achieved under intergenerational mobility. Without social mobility, individuals are bound to repeat the educational levels, occupations and areas of residence of their families of origin. However, each individual has capabilities that could result in higher productivity if they could freely choose their skill level, occupation or place of residence, without depending on family history. As discussed in Chapters 3, 4 and 5 of this report, there are numerous conditioning factors that make the reality far from this situation. For example, the lack of access to financing limits the individual's possibilities of choosing an education or an occupation different from that of their families. This can affect not only individuals in the poorest sectors of a society, but also its middle strata. Likewise, when there are problems in the housing market that make housing a very illiquid asset, a person may end up working in a neighborhood or region where their contribution to production or satisfaction is less than what they could obtain by moving. In this regard, social mobility would make it possible to achieve higher levels of efficiency in the allocation of talent and, consequently, better levels of productivity and growth.

18. Since the seminal sociological contributions of Merton (1938), the "tension" theory postulates that the deprivation experienced by the dispossessed in relation to the abundance enjoyed by the rich generates feelings of frustration that can even lead to crime and violence.

19. Very similar results are obtained when considering other countries with information available in the MSE, but which are not part of Latin America and the Caribbean.

Graph 1.15
Perception that "effort pays" according to mobility experienced in standard of living and education



Note: Each bar shows the average response to a question asking respondents for their opinion, on a scale ranging from 1 to 10, where 1 represents the extreme view that "hard work doesn't lead to success—it's more a matter of luck and connections," and 10 represents the other extreme, "in the long run, hard work usually leads to a better life." Average responses are reported for people who did or did not experience upward mobility relative to their parents in terms of both living standards and educational attainment. Mobility in living standards arises from a question in which respondents are asked whether the standard of living attained by their parents—at a similar age to the respondent's—was better, worse, or about the same. For educational mobility, absolute upward mobility (weak criterion) is considered, taking into account five educational categories. The computations consider individuals aged 30 years or older. The Latin American and Caribbean countries included are Argentina, Bolivia, Brazil Chile, Colombia, Ecuador, Guatemala, Mexico, Nicaragua, Peru, and Puerto Rico.

Source: Authors based on data from the seventh wave of the World Values Survey (Haerpfer et al., 2022).

Without claiming to establish causal relationships, Graph 1.16 shows the association between higher intergenerational mobility in income and education (panel A and panel B, respectively) and higher output per capita for a broad sample of countries. On the other hand, Box 1.1 provides more systematic evidence on the causal relationship between mobility and economic growth. The conclusions derived therefrom imply that the discussion on the tension between equity and efficiency should not be limited to the short run, but should consider the long-term efficiency gains that the redistribution of opportunities associated with social mobility brings for the better allocation of talent and growth.

Box 1.1
Can redistribution of opportunities promote growth?

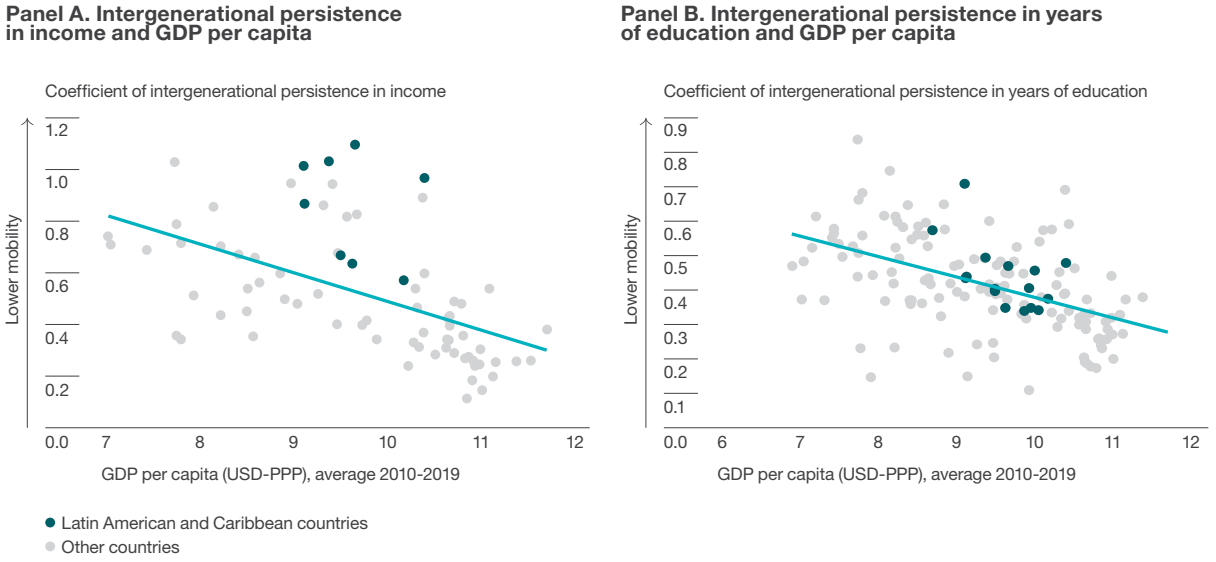
Equality of opportunity and social mobility are values shared by most people. In turn, as policy objectives, they would probably find consensus across a broad political spectrum. However, from an empirical perspective, the question of whether greater social mobility is indeed beneficial for economic growth has not been answered until recently.

As documented in this report (Chapter 3), the evidence indicates that skills are not perfectly transmitted between generations. Therefore, redistributing opportunities to allow greater social mobility to the children of parents in more disadvantaged socioeconomic contexts does not necessarily generate a tension with an efficient allocation of resources. On the contrary, this redistribution could imply efficiency gains by allowing a greater aggregate accumulation of human capital and a better allocation of talent, improving the performance of the economy as a whole.

A number of recent empirical papers find that higher intergenerational mobility or lower inequality of opportunity is positively associated with growth. In a cross-country analysis, Ferreira et al. (2018) find suggestive evidence of a negative association between inequality of opportunity and growth. Likewise, Marrero and Rodriguez (2013) decompose the level of total inequality in U.S. states between inequality due to effort ("acceptable" sources of inequality) and inequality due to opportunity ("unacceptable" sources of inequality), consistently finding that economic growth is positively related to the former and negatively related to the latter. Using the same methodology, Bradbury and Triest (2016) examine the relationship between mobility and growth in small local geographic areas (*commuting zones*) within the United States and conclude that local areas with greater intergenerational mobility—upward and relative—show greater dynamism in terms of economic growth.

Neidhöfer et al. (2021a) explore the role of mobility as a driver of economic development in Latin America. The authors find that greater intergenerational mobility is consistently associated with increases in per capita income and other development indicators. Their estimates confirm that it is not only the overall accumulation of human capital that is positively affecting economic development, but also where in the distribution this accumulation takes place. A greater accumulation of human capital for children from disadvantaged families increases equality of opportunity and leads to a more efficient allocation of talent and thus to better aggregate economic performance. On the other hand, greater human capital accumulation in children from already advantaged families appears to have no direct effect on development. Finally, the authors conclude that the association between inequality and economic development is positive once the level of intergenerational mobility is held constant. However, when social mobility is low, a negative relationship between economic growth and inequality is observed. The findings of Aiyar and Ebeke (2020) are in line with the latter result. In a cross-sectional analysis at the country level, they found that growth is negatively associated with inequality when intergenerational mobility is low.

Graph 1.16
Intergenerational mobility and GDP per capita



Note: The graph presents the relationship between GDP per capita and two metrics of intergenerational (in)mobility: intergenerational persistence of income in panel A and intergenerational persistence in years of education completed by parents and children in panel B. In panel A the Latin American and Caribbean countries included are Bolivia, Brazil Chile, Colombia, Ecuador, Guatemala, Panama, and Peru. Panel B includes the same countries plus Argentina, Costa Rica, Dominican Republic, El Salvador, Honduras, Mexico, Paraguay and Uruguay. In both panels the line represents a linear regression fit.

Source: Authors based on data from GDIM (2018) and World Bank (2022).

Intergenerational mobility and political-institutional stability

Social mobility can also be a crucial characteristic for political stability and all other institutions that frame the relationships between a country's inhabitants. Early on, Alexis de Tocqueville (1835) argued that social mobility increases tolerance among citizens and thus their openness and support for democracy, and that this relationship would be central to the success of democracy in the United States. More recently, work by Leventoglu (2005, 2014) and Acemoglu et al. (2018) have taken up Tocqueville's idea in part by developing theoretical models linking political stability to the possibilities for social mobility. For example, Leventoglu (2005) adds social mobility perspectives (following Benabou and Ok, 2001) to the canonical model of Acemoglu and Robinson (2001), which posits that highly unequal societies are less likely to consolidate their democracy. Instead, they tend to oscillate between highly redistributive and highly regressive fiscal regimes, which cement a negative relationship between inequality and political-institutional

stability.[20] In Leventoglu (2005), the possibility of social mobility facilitates democratization by reducing the redistributive conflict between rich and poor: rich families' fear of becoming poor encourages them to accept greater redistribution as insurance for future wellbeing. Moreover, in this theoretical model, mobility would also facilitate democratic consolidation by reducing the likelihood of elite coups d'état.[21] In particular, the work of Leventoglu (2014) adds a role for the middle class in the consolidation of democratic regimes.[22]

The theoretical mechanisms proposed do not respond univocally to the positive connection between mobility and the quality of democracies. However, a review of recent cases where the tension between greater social mobility and social discontent with regimes that were far from being advanced democracies was explicit (for example, the social mobilization that occurred during the "Arab Spring" of 2010-2012) does support this connection. There is also a considerable empirical literature linking high levels of inequality with political-institutional instability (e.g., Baten and Mumme, 2013). If, as this literature shows, inequality is capable of corroding the foundations of citizen trust in institutions and fueling discontent and politically destabilizing forces, it is very likely that lack of mobility originating in inequality of opportunity (as "unacceptable" sources of inequality) plays at least a similar role. Indeed, as illustrated in panels A and B of Graph 1.17 for a large sample of countries, there is a clear negative statistical association between intergenerational income persistence and either an index measuring the quality of democracy (panel A) or one measuring political stability and the absence of violence in countries (panel B). A related empirical analysis (Houle and Miller, 2019) uses political opinion surveys (Latinobarometer and Afrobarometer) conducted in 33 countries (including 18 in Latin America and the Caribbean) to study the connection between having experienced social mobility and the degree of support for the institutions of democracy. The authors find that such a connection exists, even after controlling for people's level of education and a country's economic situation. This paper also explores possible mechanisms behind the connection between mobility and support for democracy, and provides suggestive evidence that individuals who live in democracies and experienced mobility attribute their chances for upward mobility to that system. The evidence also suggests that social mobility is behind the formation of values more aligned with trust and individual freedom which, in turn, are associated with greater support for democracy. This evidence indicates that

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Certain theoretical mechanisms say that the more intergenerational mobility there is, the greater the political-institutional stability. Others indicate the opposite. However, the evidence suggests that greater mobility helps to consolidate democracies

20. Acemoglu and Robinson (2001) arrive at this result by modeling a game of political forces in which the poor, initially excluded economically and from the political system, can contest the power of the elite class by threatening to uprise, especially in situations where they have little to lose, such as during recessions. While the threat of revolution may force the elite to democratize, true democracy is not achieved because it implies levels of redistribution that the elite do not validate and that encourage them to regain political power through non-democratic channels.

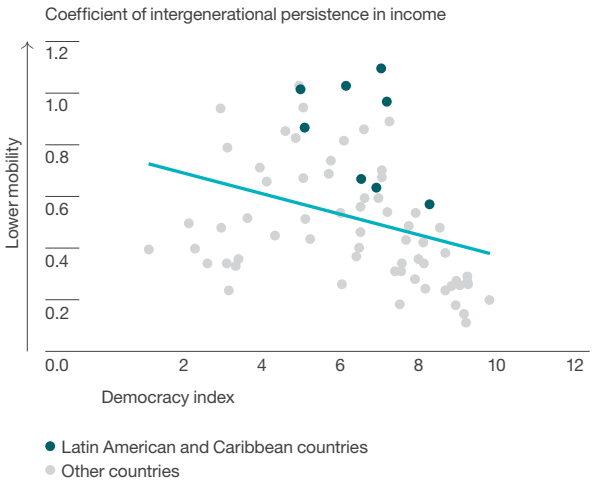
21. The results of Leventoglu (2005) also imply that social mobility could help maintain stability under a non-democratic regime, as it reduces the mobilization of the poor class against political elites.

22. According to Leventoglu's (2014) theoretical model, in an economy with social mobility, the middle class considers that its future will be better under a democracy that provides greater redistribution than under an autocratic regime that, although it ensures a good level of wellbeing at present, would not compensate with redistributive policies an eventual fall in future wellbeing induced by the possibilities of mobility. The work of Acemoglu et al. (2018) disputes this idea, posing another theoretical scenario where social mobility would not necessarily lead to greater political-institutional stability.

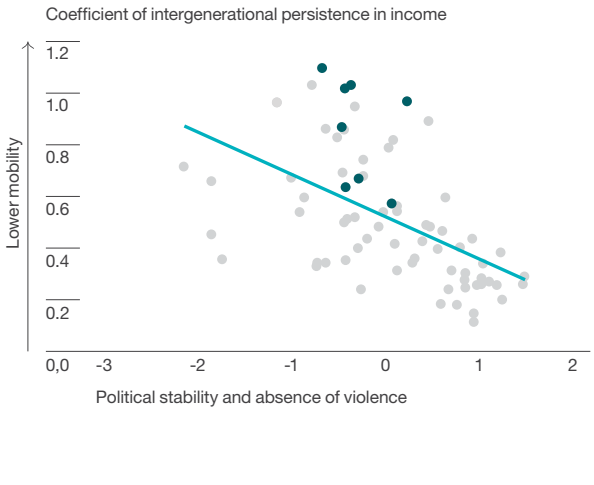
the perception of social mobility may increase support for democracy, while dissatisfaction with the persistence of inequalities may reduce it.[23]

Graph 1.17
Relationship between measures of quality of democracy and intergenerational immobility (persistence)

Panel A. Democracy and intergenerational immobility (persistence) in income



Panel B. Political stability and absence of violence and intergenerational immobility (persistence) in income



Note: Panel A shows the association between the coefficient of intergenerational persistence in income for cohorts born in the 1960s or 1970s and the value of an index that measures the quality of democracy in each country (democracy index computed by the Economist Intelligence Unit—EIU). This is based on 60 indicators grouped into five categories: electoral process and pluralism; civil liberties; government functioning; political participation; and political culture. Panel B shows the association between intergenerational persistence in income and a measure of political stability and absence of violence from the 2022 World Governance Index (WGI), which indicates in each country perceptions of the likelihood of political instability or the emergence of politically motivated violence, including terrorism. The 2020 index takes values between -3 and 2, where 2 indicates greater political stability and absence of violence. In both panels the line represents a linear regression fit.

Source: Economist Intelligence Unit (2021), Kaufmann and Kraay (2022) and GDIM (2018).

23. Barber (1970) even postulates that because upwardly mobile individuals have experienced life in different social classes, they are less likely to adopt politically extreme views.

Intergenerational mobility and preferences for redistributive policies in Latin America and the Caribbean

Intergenerational mobility, especially citizens' perceptions of such mobility, may affect their demands for greater redistribution. Of course, certain redistributive policies may come into conflict with growth, at least in the short term. Therefore, how individuals perceive prospects for mobility is relevant for anticipating potential redistributive demands and for designing policies to compensate inequalities that do not collide with incentives for effort and investment. For example, when mobility prospects are high, the mechanism proposed by Benabou and Ok (2001), known in the specialized literature as "prospects of upward mobility" (POUM) effect, can operate. According to this mechanism, under certain conditions, low-income individuals could choose to oppose redistribution policies if they consider that prospects for upward mobility are sufficiently favorable. The empirical evidence on the validity of this hypothesis is mixed. While the same authors who put it forward did not find strong empirical support, some later studies, such as that of Alesina and La Ferrara (2005) in the United States, did find that citizens living in states with higher upward mobility tend to favor less redistribution.

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Redistribution demands are partly shaped by the beliefs that people have about the deep determinants of intergenerational mobility

Some related works expanded the set of factors that link perceptions of mobility with demands for redistribution. For example, Alesina and Giuliano (2011), who summarize this literature, include as an important mechanism the fact that these demands are formed based on people's beliefs about the underlying determinants of mobility. For example, whether mobility is believed to be the result of luck ("circumstances") or whether it is the result of individual effort.[24] While belief in the important role of circumstances is often associated with left-wing ideologies, belief in the importance of effort is often mentioned as central to right-wing political ideologies. Recent empirical studies, such as Alesina, Stantcheva et al. (2018), have shown that these political positions are an important factor in determining the levels of inequality and redistribution that people are willing to accept.

Alesina and Giuliano (2011) discuss additional reasons that shape the relationship between mobility and preferences regarding redistribution. These include one's own past experience of mobility (which, for example, may affect risk aversion and optimism about mobility). On the other hand, demands for redistribution may be affected by the existence of cultural conflicts in a society, where the group sharing majority ethnic or cultural

24. Individuals' beliefs about social justice or equity in income determination can result in multiple equilibria where, in turn, these beliefs turn out to be fulfilled (Alesina and Angeletos 2005; Bénabou and Tirole 2006). These multiple equilibria may explain the coexistence of what the authors call the "American dream" and "European pessimism." In an "American dream" equilibrium, society believes that income is determined by effort and social mobility is high. As a result, taxes and redistribution are low, people invest more and exert more effort, and inequality is higher. In an equilibrium of "Euro-pessimism," society believes that luck, place of birth, connections and the existence of corruption mechanisms are the main determinants of income. As such, taxes and redistribution are higher, individuals make less effort and invest less, but inequality is lower.

traits does not support redistribution to minority groups, which may face worse mobility prospects (as discussed in relation to immigration in Alesina, Stantcheva et al., 2022). In addition, demands for redistribution may be altered by misperceptions about the real possibility of mobility or about the causes that generate it.

To analyze the importance of this last point, specific information was collected in the 2021 CAF Survey (ECAF) to investigate Latin Americans' perceptions of intergenerational mobility.[25] The horizontal axis of Graph 1.18 presents perceptions of a particular measure of upward educational mobility in each country. Specifically, their perception of the percentage of young people who manage to complete secondary education even though their parents did not. The values reported on average in each country correspond to a relatively narrow range, ranging from 38.5% to 51.5%. The vertical axis of this graph shows the actual measures of mobility for the most recent cohorts for which information is available in each country, according to estimates based on census data.[26] Actual mobility has a wider range of variation than perceived mobility (between 19% and 59%). On average, 56.6% of respondents in the ten cities covered by ECAF 2021 overestimate mobility, with a gap between perceived and actual mobility of 6.7% on average. That said, this difference varies greatly from country to country. Comparing perceived mobility with actual mobility, based on the distance to the 45° line, Graph 1.18 shows that while there is a positive relationship between perceived and actual mobility values, some points are far from the diagonal line. Respondents in Colombia, Peru and Bolivia's main cities are more "pessimistic" in the sense that they underestimate actual mobility. In the rest of the countries, respondents are optimistic and their perceptions of mobility are higher than actual mobility.

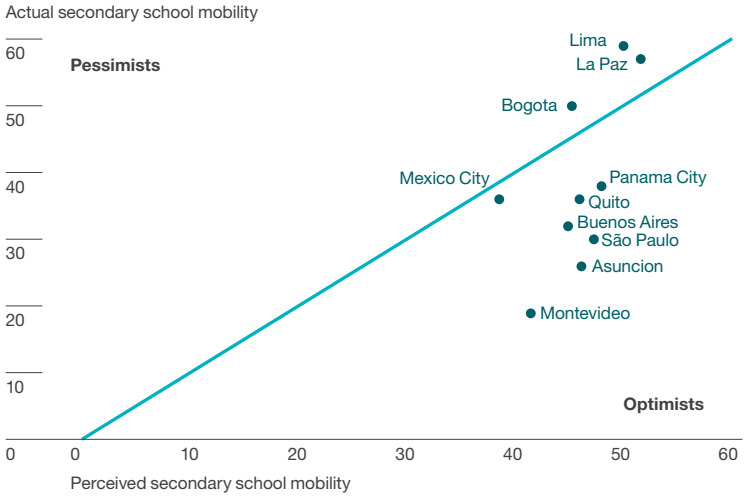
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According to the CAF 2021 Survey, many Latin Americans overestimate social mobility in their countries

25. The CAF 2021 Survey was conducted in ten Latin American cities: Asuncion, Bogota, Buenos Aires, Mexico City, La Paz, Lima, Montevideo, Panama, Quito, and Sao Paulo.

26. The comparison is made with the country-level mobility measures obtained for the cohort born in the 1980s, except in the cases of Colombia, Peru and Paraguay, for which the mobility data for the cohort born in the previous decade is presented based on census data (see Chapter 2).

Graph 1.18
Perceived vs. actual intergenerational mobility in selected Latin American cities



Note: The graph compares the average perceived absolute upward mobility in secondary education at the national level versus the true mobility calculated based on census data, for each city included in the ECAF 2021. Perceived mobility refers to the perceived average of the proportion of children who manage to complete secondary school while their parents did not in each country. The findings are based on their response to the following question: "Think of young people who have parents who did not manage to complete secondary school, i.e., with parents with low education. If we take 100 of these young people, how many do you think do manage to finish high school? Your answer has to be a number between 0 and 100." Actual mobility arises from estimates of this measure at the country level for the latest available birth cohort (decade), generally 1980 or 1990 (see Chapter 2 for more information).

Source: Authors based on data from ECAF 2021 (CAF, 2022).

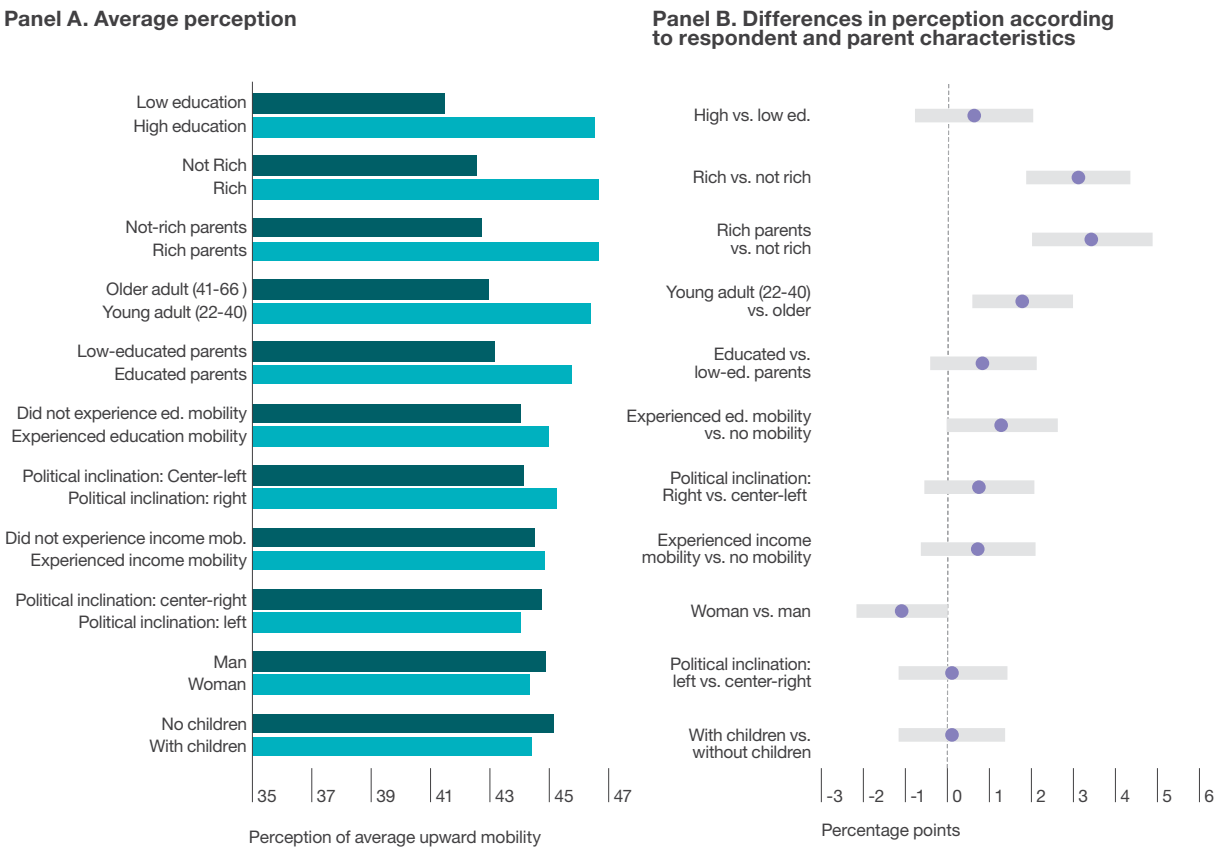
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People with more educated parents and higher incomes, younger people, and men tend to perceive higher upward mobility

As highlighted in the specialized literature, the differences between perceived and real mobility may be related to the particular life experiences of individuals, their reference groups, their political and cultural views, and their personal characteristics, among other factors. Panel A of Graph 1.19 presents the average value of the perception of upward mobility, according to one's own or parents' characteristics, on the vertical axis. The biggest differences in perceived mobility are found among people with different levels of education (both their own and their parents'), different levels of income (both their own and their parents'), and by age. More educated people, those with higher income levels, those with more educated parents and higher incomes, and younger people perceive, on average, greater upward mobility than groups without these characteristics. There are no substantial differences in perceived mobility according to whether or not they have experienced upward educational or income mobility, their political inclination, their gender, or whether or not they have children.

Although this comparison of means may be informative about the perception of mobility of each group, it is possible that there are strong correlations between

them. To analyze the associations of the different characteristics with perceptions of mobility once the other variables are held constant, a regression exercise was performed, where the dependent variable is the perception of mobility and the independent variables are all the characteristics of the individual, their parents, and the city they reside in. Panel B of Graph 1.19 shows the resulting coefficients and their confidence intervals. This regression analysis indicates that perceptions differ significantly according to the income level of the individual and parents and their age (under 40 versus over 40). One's own experience of educational mobility and being male are associated with greater perceived mobility, although they are marginally not statistically significant.

Graph 1.19
Perception of mobility according to the characteristics of the respondent and their parents



Note: Panel A shows the average perceived upward mobility of individuals belonging to each group. Panel B presents the coefficients and their 95% confidence intervals estimated by ordinary least squares, where the dependent variable is each respondent's perception of the level of upward educational mobility in their country and the independent variables are dichotomous variables for each of the respondent's or their parents' characteristics, on the vertical axis. Also included are controls for city and survey mode, whose coefficients are not reported in the graph. Perceived mobility is each respondent's answer to the following ECAF question: "Think of young people who have parents who did not manage to finish high school, i.e., with parents with low education. If we take 100 of these young people, how many do you think will actually finish high school? Your answer has to be a number between 0 and 100." The Appendix of this chapter includes a definition of each group.

Source: Authors based on data from ECAF 2021 (CAF, 2022).

Experimental evidence from the CAF 2021 Survey

In the context of the 2021 edition of the ECAF, several experiments were conducted that seek to understand how changes in social mobility perspectives are linked to preferences regarding redistribution. As previously documented, perceptions of social mobility can be strongly influenced by individual characteristics and life experiences. Therefore, it would not be informative to analyze the associations between (perceived) levels of mobility and preferences regarding redistribution to infer a causal relationship, since the latter could in turn be affected by the same characteristics of individuals. For example, people who perceive greater mobility could prefer less redistribution simply because many of them belong to higher income groups and more advantaged family socioeconomic contexts, as shown in Graph 1.19. They could therefore be subject to greater tax pressure. Conversely, those who perceive lower mobility—a group in which people from more disadvantaged socioeconomic contexts are over-represented—might prefer greater redistribution since these policies would benefit them directly. To avoid these problems, the ECAF experiments seek to affect perceptions of mobility through randomly distributed information on "real" mobility or other pieces of information, so that these perceptions are not associated with the respondent's characteristics.

The experiments consisted of providing information related to the country's social mobility to different groups of interviewees, in order to find out how their preferences about some aspects of redistributive policies change. On the one hand, this makes it possible to analyze how the perception of greater or lesser social mobility affects preferences on how much to distribute and through which policy instruments to do so. On the other hand, it highlights how the attributes of potential beneficiaries modify support for redistributive policies.[27] The experiments provide novel results on these aspects for Latin America and the Caribbean. Moreover, as a whole, they lead to a better understanding about how aligned citizens' preferences may be with the policies that the region requires to level opportunities in favor of greater social mobility. The main findings are described below.

How much to redistribute?

A first experiment carried out in the context of the ECAF consisted of randomly separating respondents into three groups. Each one was given a different set of information related to the country's educational mobility. The desired levels of redistribution were then analyzed.[28]

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27. See the Appendix for more information about the experiments and the specific questions on the questionnaire.

28. Randomly assigning people to each group ensures that, on average, they have similar characteristics (demographic, socioeconomic, etc.), being the information they receive when surveyed the only difference among groups. This makes it possible to attribute differences in the answers to certain questions exclusively to the information provided to each group.

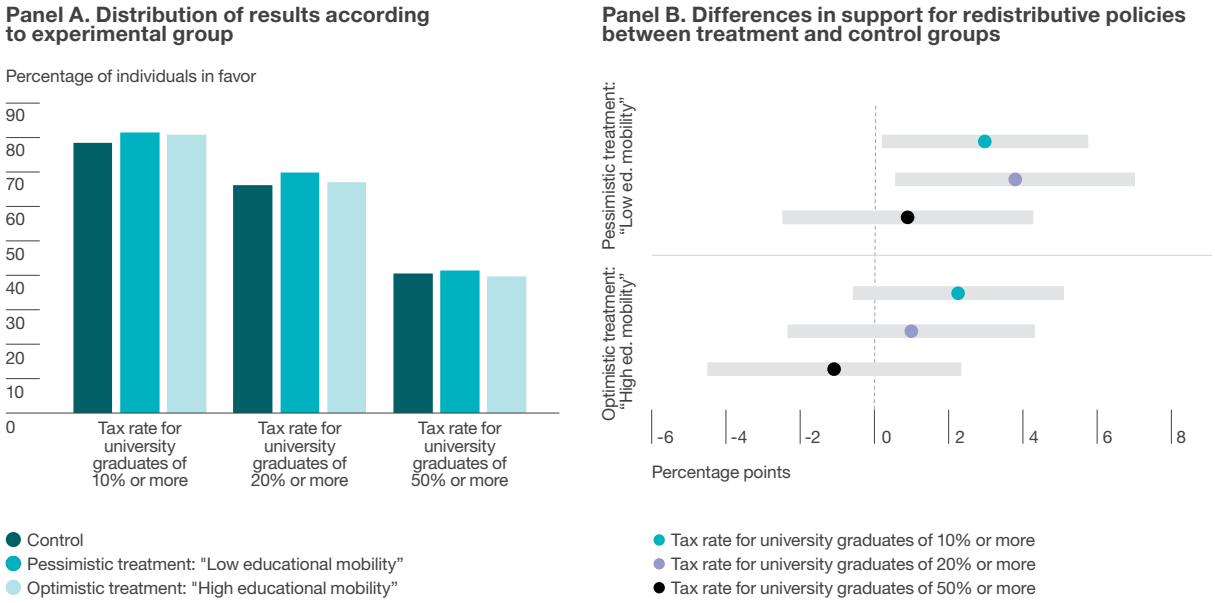
Specifically, respondents were asked their opinion on the percentage of their income that a college graduate should pay in taxes (tax rate), after describing to them the situation of educational mobility in the country. There were 11 possible responses ranging from 0% to 100% tax (with increments between responses of 10 percentage points) to choose from.

One of the groups did not receive specific information on social mobility in the country (control group). The other two were given information that sought to modify their perceptions about educational mobility in opposite directions. While the first treatment group received a "pessimistic" message about the degree of mobility in the country (treatment 1: "low educational mobility"), the second received an "optimistic" message (treatment 2: "high educational mobility").

Panel A of Graph 1.20 shows the percentage of people in each of the three groups who respond that college graduates should be charged: a) 10% or more, b) 20% or more, c) 50% or more. The first variable can be interpreted as the percentage of people who support some redistribution (charging 10% or more). The other two variables are different alternatives to separate people who prefer more redistribution from those who prefer moderate or no redistribution: in case b, people who prefer more redistribution would be those who opted for a tax of 20% or more; in case c, those who opted for 50% or more. It can be observed that the percentage of people in the control group who support some redistribution is high: almost 80% of the respondents support charging a tax. This percentage drops when alternative measures are constructed that raise the threshold for redistribution. Thus, in the control group, 67% of people support levying a tax of 20% or more, but only 40% support levying a tax of 50% or more.

A first pattern that emerges when comparing the values of the alternative preference variables between the groups is that a higher percentage of people prefer higher redistribution when educational mobility is reported as low ("pessimistic" treatment) than when educational mobility is reported as high ("optimistic" treatment). On the other hand, the percentage of people who support higher taxes when given pessimistic information is always higher than in the control group. Finally, the percentage of people supporting redistribution when given optimistic information is higher than in the control group in two cases: when support for redistribution is defined as 10% or more and when 20% or more is suggested. Panel B shows the differences between treatments and controls arising from the estimates of the regression models, where the dependent variables are alternatively dichotomous variables that take the value 1 if the preferred tax takes a value greater than or equal to 10%, 20% and 50%, respectively. The only statistically significant differences are between the control group and the group that received the "pessimistic" treatment, except when the outcome variable is an indicator of support for a tax of 50% or higher.

Graph 1.20
Mobility and preferences regarding further redistribution



Note: Panel A presents the percentage of individuals within each respondent group who believe that a university graduate should pay a tax rate of at least 10%, 20%, or 50%. The three groups of respondents arise from an experimental design implemented in ECAF 2021: the control group, a first treatment group receiving pessimistic information about the degree of mobility in the country, and a second treatment group receiving optimistic information. The outcome variable about redistribution arises from the question, "Out of every 10 [i.e., local currency] that a person who graduated from college earns, how much should they pay in taxes?" Panel B presents the regression coefficients and their respective confidence intervals (at 95%) that arise when estimating by ordinary least squares the effect of the two treatments relative to the control group on redistribution preferences, considering the three definitions of the dependent variable presented in panel A. Controls for the respondent's city of residence, survey mode, years of education, age, and gender are included. The cities in which this experiment was conducted are Asunción, Bogotá, Buenos Aires, Mexico City, and Panama City.

Source: Authors based on data from ECAF 2021 (CAF, 2022).

The results of this experiment show that individuals' perceptions about mobility, beyond whether they are correct or not, have implications for their preferences for redistribution. People in Latin America seem to be especially sensitive to situations of low mobility: when respondents receive a pessimistic message about mobility, they tend to think that the taxes that university graduates should be charged should not be "so low." In contrast, the optimistic message did not significantly change their redistributive preferences. This apparent "insensitivity" to improvements in mobility could be explained, in part, because Latin Americans believe that even though mobility may be increasing, it is still low. This is compatible with the evidence presented in a previous section on the evolution of relative mobility levels in education. It could also be due to the consideration that current redistributive policies are insufficient, so that they might think that it is not advisable to lower the tax burden on the most advantaged groups even further.

Who benefits from redistributive policies?

Preferences about redistribution could change according to the characteristics of the groups benefited. To understand this relationship, respondents were randomly divided into four groups. A first (control) group was presented with the hypothetical situation of a person of humble origin who is having trouble making ends meet with what they earn every month for doing their job. They were then asked how much they agreed or disagreed (on a scale of 1 to 10) with the government allocating more resources to help people in this situation. The other three groups were presented with a similar hypothetical situation, but with more detail on the characteristics of this person. Treatment group 1 was told that this person was "hardworking and talented;" treatment group 2 was told that this person was a " hardworking and talented man;" and treatment group 3 was told that this person was a " hardworking and talented woman." Thus, the experiment allows us to evaluate how preferences for government support for human beings change depending on the valuation of effort and talent (by comparing the responses of the treatment groups with those of the control group) and the gender of the recipient (by comparing how different the responses of treatment group 2 are from those of treatment group 3).

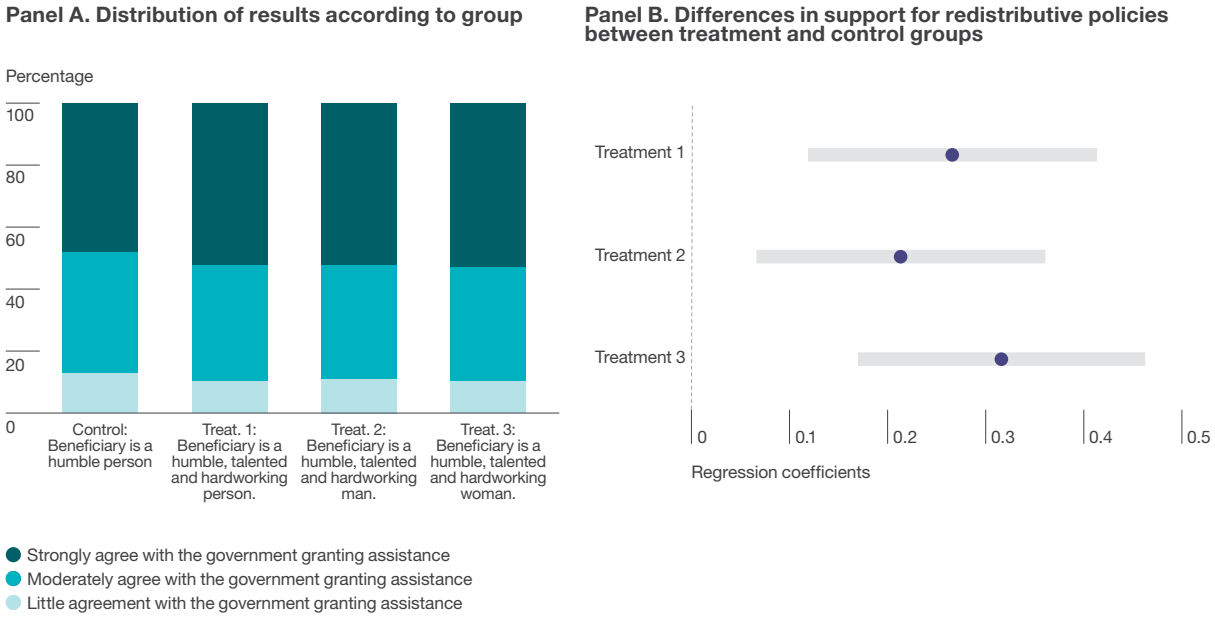
Panel A of Graph 1.21 shows the distribution of responses for the control group and the three treatment groups, grouping these responses into three categories: those who disagree slightly with the idea that the government should allocate more resources to support low-income individuals (values between 1 and 3), those who agree moderately (values between 4 and 7) and those who agree very strongly (values between 8 and 10). Considering the control group, it can be observed that there is a fair consensus among the interviewees that the government should allocate more resources to support the poorest people, since 88% moderately or strongly agree with this policy.

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Support for greater redistribution increases when potential beneficiaries are hardworking and talented, and does not appear to vary based on the beneficiaries' gender

Comparing the responses of the control group with those of the treatment group, it can be concluded that support for greater redistribution increases when the beneficiaries make an effort and are talented, and the differences are not substantial depending on their gender. Panel B shows the differences in preferences for redistribution between the treatment and control groups, which arise from the estimation of a regression model, where the dependent variable is the level of agreement with the redistributive policy (which takes values between 1 and 10). In all three cases, the treatments show positive and significant effects, while the magnitude of the differences between these three coefficients is not statistically significant.

Graph 1.21
Citizen support for redistributive policies according to the attributes of potential beneficiaries



Note: Panel A presents the percentage of individuals in each experimental group according to how much they agree, on a scale of 1 to 10, with the government providing assistance to different beneficiary profiles. The four groups of respondents were randomly defined and each group was presented with a slightly different profile of potential recipients of government assistance. The degree of agreement was categorized into three: slightly agree (responses 1 to 3), moderately agree (responses 4 to 7), or strongly agree (responses 8 to 10). The experiment was conducted in the ten cities covered by ECAF 2021. Panel B presents the regression coefficients and their respective confidence intervals (at 95%) that arise when estimating by ordinary least squares the effect of the different treatments on the degree of agreement (scale 1 to 10) with the government allocating resources to help people with each type of profile. The estimation includes controls for interview modality and the respondent's city of residence, age, gender and years of education.

Source: Authors based on data from ECAF 2021 (CAF, 2022).

Although the gender of the beneficiaries in the total sample does not affect support for the proposed redistributive policy, it support does vary according to the gender of the respondents. Graph 1.22 shows the differences in support for the redistributive policy between treated individuals and control group individuals for men and women separately. The results indicate that shifts in preferences toward greater redistribution according to the circumstances of effort and talent of the beneficiaries only occur in the female group, while they do not occur among men.[29] These differences could originate in the disadvantages that women face in labor markets, where gender gaps prevail even when women have the same talent and make the same effort as men (Berniell et al., 2021).

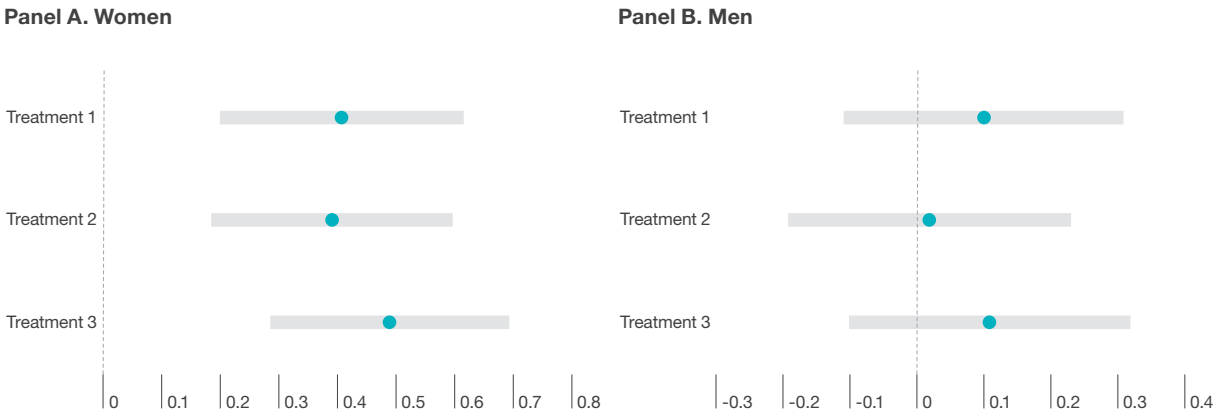
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Results from an ECAF experiment indicate that women, not men, consider effort and talent as additional factors to support redistributive policies

29. Similar exercises were carried out separating the samples by other respondent characteristics. There are no significant differences in the treatment effect between subgroups if the sample is divided by other criteria, such as educational levels, educational mobility, income mobility, overestimation or underestimation of mobility, political inclination, income (rich or poor), education [level attained], and parental wealth.

In summary, the results of this experiment show that respondents value merit—expressed in terms of being a "hardworking and talented" person—when it comes to granting government assistance. The gender of the aid recipient does not seem to be relevant to these opinions, but the gender of the respondent does matter, with women showing greater support for redistributive policies.

Graph 1.22
Differences in support for redistributive policies between treatment and control groups according to respondents' gender



Note: The two panels present the regression coefficients and their respective confidence intervals (at 95%) that arise when estimating by ordinary least squares the effect of the different treatments on the degree of support (from 1 to 10) for the government to grant assistance to different beneficiary profiles. The estimation includes controls for interview modality and the respondent's city of residence, age, and years of education. Panel A presents the treatment effects on the subsample of women, while panel B presents the coefficients corresponding to the subsample of men.

Source: Authors based on data from ECAF 2021 (CAF, 2022).

How to redistribute?

A third ECAF experiment provides evidence on how different scenarios of social mobility may affect preferences over the type of redistributive policies. Respondents were randomly divided into two groups. Both were asked about their perceptions of a specific measure of absolute upward educational mobility. This makes it possible to divide the interviewees into two types: those who perceive lower mobility than the actual mobility (low perception) and those who perceive higher mobility than the actual mobility (high perception). The treatment group received accurate information about this measure of mobility in each of the countries where the experiment was conducted.[30] For those

30. The informational intervention was very simple and consisted of providing respondents with accurate mobility data, after consulting their own perception, as follows: "It may come as a surprise to you, but according to statistics X out of every 100 young people whose parents did not finish high school do manage to finish high school."

individuals who perceived lower mobility than actual, the treatment constitutes "optimistic" information about mobility ("optimistic" treatment), while for those who perceived higher mobility than the real levels, the information provided constitutes "pessimistic" information ("pessimistic" treatment).

Finally, both control and treatment group individuals were asked about the area of government to which resources should be allocated to reduce inequality, among three possible options: education, work or social assistance (aid to the poor). These policy options are intended to reflect areas of intervention that operate at different stages of the household income generation process. According to Rodrik and Stantcheva's classification (2021), redistributive policies can be classified according to whether they seek to correct inequalities before (policies in the pre-production stage), during (policies in the production stage) or after (policies in the post-production stage)[31] employment, investment or innovation decisions have been taken by the different economic agents. Based on this classification, education policies fall into the group of pre-production policies, labor policies correspond to policies during production, and financial assistance policies, in the post-production stage.

●●

Those who receive pessimistic information about educational mobility reorient their preferences toward policies that redistribute opportunities earlier in life

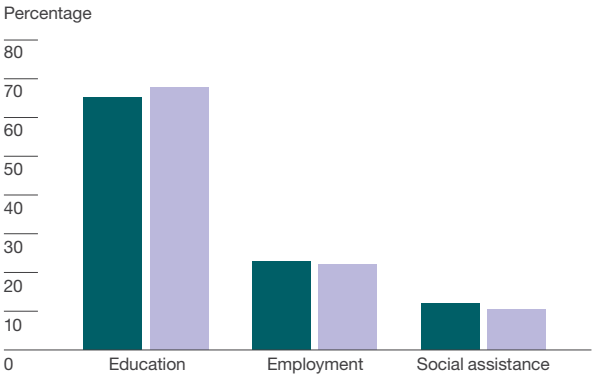
Panel A of Graph 1.23 presents the distribution of responses among the three policy alternatives for the control and treatment groups. First, it is observed that, among individuals in the control group, higher spending on education is the most chosen policy alternative (65.1 percent), compared to employment policies (22.8 percent) and aid to the poor (12.1 percent). Receiving the treatment modifies the distribution of preferences, increasing even more the preference for education policies (67.5%) among individuals in the treatment group, at the expense mainly of the alternative of granting financial assistance to the poor (10.5%).

Panels B and C of the graph again show the distribution between the three policy alternatives for the treatment and control group, but separating respondents into two: those with perceptions of mobility below real levels (panel B) and those with perceptions of mobility above real levels (panel C). These results show that the differences in preferences regarding redistribution between the treatment and control groups are only explained by those for whom the information received represented "pessimistic" news about mobility in the country. The reaction of those given pessimistic news is toward a greater preference for policies associated with providing greater opportunities earlier in life, to the detriment of redistributive policies that correct *ex post* results, that is, once inequalities manifest. The interviewees do not change their preferences for policies that aim to compensate for inequalities that are generated through employment opportunities. Although this result could be a consequence of the specific contextualization of the experiment (focused on educational mobility), it may also indicate the weight that Latin Americans attribute to early human capital formation as a mechanism for equalizing opportunities in pursuit of greater social mobility.

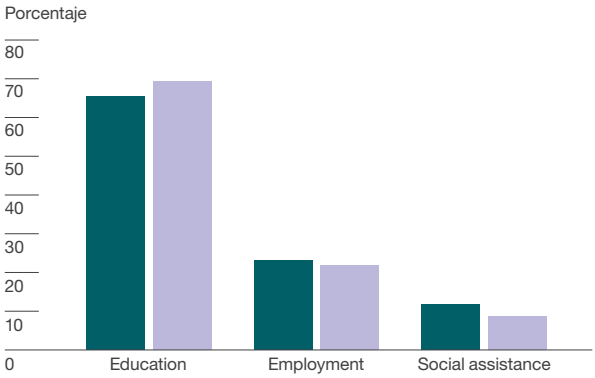
31. Post-production policies are also often referred to as *ex post* redistribution policies.

Graph 1.23
Mobility and preferences regarding the type of redistributive policies

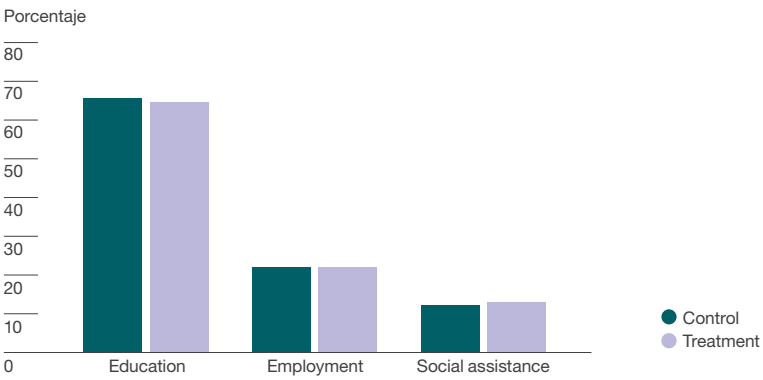
Panel A. Distribution of preferences for the control and treatment group



Panel B. Distribution of preferences for the control and treatment group, persons with higher than actual perceived mobility



Panel C. Distribution of preferences for the control and treatment group, people with lower than actual perceived mobility



Note: Panel A presents the percentage of individuals within each experimental group who consider as most relevant each of three possible areas to which the government should allocate resources to reduce inequality. The sample is divided into two groups, a control group and a treatment group, which receives objective information about the degree of real educational mobility at the national level for the latest available cohort. Panels B and C present the same information as panel A, but divide both the control group and the treatment group into two subgroups: those who perceive a higher mobility than the real one (panel B) and those who perceive a degree of mobility equal to or lower than the real one (panel C). In the case of the treatment group, the former receive "pessimistic" information (actual mobility is lower than perceived mobility) and the latter are given "optimistic" information. The cities in which this question is asked are: La Paz, Lima, Montevideo, Quito, and São Paulo.

Source: Authors based on data from ECAF 2021 (CAF, 2022)-.

Key messages

1 Latin America and the Caribbean is one of the regions of the world with the highest levels of inequality. Inequality is not only high, but could even be considered excessive for the level of development of the region.

2 Although high levels of inequality could coexist with high possibilities of social mobility, this is not what happens in practice. The empirical fact that more unequal societies exhibit less intergenerational mobility shows that powerful mechanisms of persistence of inequalities are at work.

3 Along with high inequality, Latin American and Caribbean countries show high levels of persistence or inertia in parent-child wellbeing compared to other regions.

4 In recent decades, intergenerational mobility in different measures of wellbeing, such as education, occupation, and income, has been modest in the region compared to what has been observed in other parts of the world.

5 The lack of intergenerational mobility compromises the region's development, since it not only affects equity, but can also alter political and institutional stability and hinder economic growth by influencing incentives for effort and the allocation of human resources.

6 Intergenerational mobility and, especially, the perception of mobility among a country's inhabitants, can affect citizens' demands for greater redistribution.

7 The CAF 2021 Survey shows that perceptions of mobility often differ from reality and that these differences are associated with an individual's characteristics as well as those of their parents. The youngest, the richest, and children of parents with higher socioeconomic status perceive greater mobility than those without these characteristics.

8 Experimental evidence from the CAF 2021 Survey indicates that people tend to support greater redistribution when they learn about the limited possibilities for progress (such as finishing university) of the most disadvantaged sectors, but do not demand less redistribution when they are told about some optimistic indicators of educational mobility observed in the region.

9 Another experiment conducted using the CAF 2021 Survey data shows that urban populations in the main Latin American and Caribbean cities value effort and talent when defining who should benefit from redistributive policies.

10 Experimental evidence shows that those who receive pessimistic information about mobility reorient their preferences toward policies associated with providing greater opportunities earlier in life, to the detriment of redistributive policies that correct *ex post* outcomes.

11 Opportunities to build human capital, obtain good jobs in labor markets, and accumulate assets are important channels that lead to the reproduction of inequalities. In the region, opportunities in these three areas are very unevenly distributed among people from families of different socioeconomic levels. These mechanisms are analyzed in the following chapters.

Appendix

Wealth Inequality Estimates by Country

This report uses estimates of inequality in wealth distribution from the Credit Suisse Global Wealth Data Report (Davies et al., 2021). This report computes indicators for a total of 168 countries[32] (23 in Latin America and the Caribbean). Only 37 of them (including two Latin American countries, Chile and Uruguay) have direct information on the distribution of wealth inequality. This group of countries includes Australia, Austria, Belgium, Canada, Chile, China, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, India, Indonesia, Ireland, Italy, Japan, Latvia, Luxembourg, Malta, Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Thailand, United Kingdom, United States, United Kingdom and Uruguay. In these countries, wealth information comes from household surveys. The Nordic countries (Denmark, Finland, Norway and Sweden) are an exception, as the information comes from tax data and other administrative records covering the entire population.

Davies et al. (2021) recognize two potential drawbacks that arise when estimating wealth inequality with these data sources. For those countries with household survey data, an underestimation of wealth inequality is expected since wealthy households are less likely to respond to key questions, e.g., portfolio amounts and composition. The exception within these countries is the United States, which has alternative sources that allow for adjustments to correct for this underreporting. On the other hand, for countries that use administrative records, the authors state that there may be problems with the valuation of some assets, such as pensions and life insurance.

For the group of countries that do not have direct information on household wealth, Davies et al. (2021) impute wealth inequality from income inequality data, based on what they observe for the 37 countries with direct information on both variables. This group consists of the following countries and territories: Afghanistan, Albania, Algeria, Angola, Argentina, Armenia, Azerbaijan, Bangladesh, Barbados, Bahrain, Belize, Benin, Belarus, Burma, Bolivia, Bosnia and Herzegovina, Botswana, Brazil, Brunei, Bulgaria, Burkina Faso, Burundi, Cambodia, Cameroon, Dutch Caribbean, British Caribbean, French Caribbean, Chad, Colombia, Comoros, Comoros, Saudi Arabia, Congo, Costa Rica, Croatia, Djibouti, Ecuador, Egypt, El Salvador, Equatorial Guinea, Eritrea, Ethiopia, Fiji, Gabon, Gambia, Georgia, Ghana, Guyana, Guinea, Guinea, Guinea-Bissau, Haiti, Hong Kong, Iceland, Iran, Iraq, Israel, Jamaica, Jordan, Kazakhstan, Kenya, Kyrgyzstan, Kuwait, Laos, Bahamas, Lesotho, Philippines, Lesotho, Kyrgyzstan, Kenya, Kyrgyzstan, Kuwait, Lao People's Democratic Republic, Liberia, Libya, Lebanon, Liberia, Libya, Lesotho, Lebanon, Liberia, Libya, Liberia, Libyan Arab Jamahiriya, Lithuania, Liberia, Libya, Lithuania, Luxembourg, Luxembourg, Malta, Malta, Netherlands, Monaco, Netherlands, Norway, Paraguay, Paraguay, Peru, Paraguay, Peru, Portugal,

32. Although 168 states are considered, the base includes 162 states plus a group of six island groups that are considered independent states and are as follows: British Caribbean, Dutch Caribbean, French Caribbean, Melanesia, Micronesia, and Polynesia.

Paraguay Lebanon, Liberia, Libya, Lithuania, Madagascar, Malawi, Malaysia, Maldives, Mali, Mauritius, Mexico, Morocco, Melanesia, Micronesia, Moldova, Mongolia, Montenegro, Mozambique, Namibia, Nepal, Nicaragua, Niger, Nigeria, Oman, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, French Polynesia, Qatar, Central African Republic, Czech Republic, Democratic Republic of Congo, Rwanda, Romania, Russia, Sao Tome and Principe, Senegal, Serbia, Seychelles, Sierra Leone, Singapore, Syria, Sri Lanka, South Africa, Sudan, Suriname, Tanzania, Tajikistan, East Timor, Togo, Trinidad and Tobago, Tunisia, Turkmenistan, Turkey, Ukraine, Uganda, Venezuela, Vietnam, Yemen, Zambia, Zimbabwe. The income distribution data for these countries required in the imputation process are obtained from the World Income Inequality Database (WIID).

Because household surveys may underestimate the wealth of the wealthiest, Davies et al. (2021) make use of information from the Forbes world list of billionaires and other sources to adjust the pattern of wealth distribution in the highest wealth ranks in 56 countries in the sample.

Definition of the groups in the ECAF presented in Graph 1.19

The differences between perceived and real mobility, as well as the possible effect on the different informative interventions related to this topic, may be related to the particular life experiences of individuals, their reference groups, their political and cultural views, and their personal characteristics, among other factors.

The 2021 version of the ECAF permits the sample to be divided into groups according to respondents' characteristics. In many cases, the definition of each one was based on previous literature and, in a few cases, correspond to the authors' criteria. The following is a list of each of the groups considered together with their respective definition:

- High education: Binary variable equal to 1 if the educational level attained by the respondent is high school (completed) or higher. The variable takes value 0 otherwise.

- Female: Binary variable equal to 1 if the respondent considers herself to be of female gender and 0 otherwise. There are some individuals that report a missing value in this question even when the alternative "other gender" was available in the questionnaire. The number of individuals is too small to include them in the analysis.

- Experienced educational mobility: A measure of upward mobility in education is used, following the weak criterion. This is measured using a binary variable with a value equal to 1 if the individual has an educational level higher than the highest level attained by their parents or if they have the same level attained by their parents and this is equal to "completed tertiary" or "completed university or more."

- Income mobility: Binary variable equal to 1 if the respondent's self-reported income decile is higher than that reported for their parents or if it is equal, but both belong to the highest decile.

- Left-wing political leaning: Binary variable equal to 1 if the individual self-reports between the values belonging to the first tercile, defined within each country, on a scale ranging from 1 (left) to 10 (right). The variable is equal to zero for the remaining two terciles.

- Right-wing political leaning: Binary variable equal to 1 if the individual self-reports among the values belonging to the third tercile, defined within each country, on a scale ranging from 1 (left) to 10 (right). The variable is equal to zero for the remaining two terciles.

- Rich: Binary variable equal to 1 if the income decile to which the respondent is within the top 50% in each country.

- Rich parents: Binary variable equal to 1 if the respondent's perception of their parents' placement on the income scale within their generation is among the top 50% in each country.

- Educated father or mother: Binary variable equal to 1 if the respondent's father or mother is in the upper half in the distribution of years of schooling corresponding to their cohort, gender, and country.

Perception of mobility and experiments according to ECAF 2021

Given the importance that mobility can have in shaping redistributive policies through citizen perceptions, the ECAF 2021 included a specific question to investigate the perceptions of intergenerational mobility among Latin Americans. In particular, this question refers to upward educational mobility at the secondary level. The question asked to respondents to capture their perceptions is as follows:

> "Think about the young people who have parents who did not manage to finish high school, that is, with parents with low education. If we take 100 of these young people, how many do you think do manage to finish high school? Your answer has to be a number between 0 and 100."

In this edition of the survey, in addition, informative interventions were randomly administered to interviewees to identify the causal effect that perceptions of mobility have on different aspects of preferences regarding redistribution, such as how much to redistribute, to whom to benefit and through which policy instruments to do so. Each of these interventions is referred to as an "experiment."

The following is a detailed description of each of the experiments presented in this chapter, the interviewer's discourse in each case and the cities in which they were conducted.

Experiment 1: How much to redistribute?

This exercise aims to change the respondents' perceptions of mobility in order to study the causal relationship between them and their preferences regarding redistribution in terms of how much should be redistributed. The experiment was carried out in five of the 10 cities covered by the survey: Asuncion, Bogota, Buenos Aires, Mexico City, and Panama City, creating a control group and two treatment groups.

The control group was asked the following question:

> "In our country, there are four main educational levels: early childhood, primary, secondary, and higher education. The government can tax those who were able to study to help families who were not able to study. Out of every 10 (currency of the country in question) that a person who graduated from university earns, how much should he or she pay in taxes? Number between 0 and 10.

The two treatments in the experiment seek to modify the perceptions of individuals: while the first group of subjects is given a pessimistic message about the degree of mobility, the second group receives a message that aims to generate an opposite (optimistic) effect on perceptions of mobility.

In the first treatment, the first sentence stating the educational levels of each country is replaced by the following message:

> "In our country, the probability that a child who was born into a poor family can go on to study at university is very low."

On the other hand, the second one replaces the information about educational levels and the government's role in collecting taxes with the following message:

> "In our country, most of the children of parents who did not finish elementary school are now able to finish it. In university education there are not so many, but compared to previous generations, today more young people of non-university parents are studying at university."

Then, respondents in each treated group are asked the same question as the one asked the control group.

Experiment 2: Who to benefit?

This experiment aims to determine how preferences vary with respect to redistribution, in terms of respondents' degree of agreement or disagreement

with the government helping certain people, when the characteristics of the potential recipient of such aid are changed. In particular, we evaluate whether preferences vary depending on the valuation of effort or the gender of the recipient of the financial assistance. The experiment was conducted in the ten cities covered by the survey, dividing respondents randomly between a control group and three treatment groups. The surveyor's question to the control group is presented below:

> "Consider a person from a humble background, who can barely make ends meet with what he or she earns at work. On a scale of 1 to 10, where 1 is a little and 10 is a lot, how much do you agree with the government devoting more resources to help people with these characteristics? Number between 1 and 10.

The discourse for each of the treated groups remains exactly the same, but characteristics related to the recipient of financial assistance are added, in addition to those already mentioned for the control group. Treatment 1 mentions that the person is "hardworking and talented." Treatment 2 refers to "Luis, a man, hardworking and talented," and finally, the third treatment refers to "Maria, a woman, hardworking and talented."

The exact speech for each of the treatments is as follows:

> Treatment 1: "Consider a hardworking and talented person of humble origin, but with what they earn at their job they can barely make ends meet."
>
> Treatment 2: "Luis is a hardworking and talented person of humble origin, but with what he earns at his job he can barely make ends meet."
>
> Treatment 3: "Maria is a hardworking and talented person of humble origin, but with what she earns at her job she can barely make ends meet."

In all three cases, the same question asked to the control group is repeated.

Experiment 3: Which policy instruments to use?

This experiment aims to assess how respondents' preferences change in terms of the policy instruments that should be used to reduce inequality, once they are provided with information about the degree of educational mobility in each of the countries in question. The experiment was carried out in five cities: La Paz, Lima, Montevideo, Quito, and São Paulo. It consists randomly of a control group and a treatment group that is given accurate information about the degree of absolute mobility in secondary education in each of the countries. The interviewer's discourse is presented below:

> "It may come as a surprise to you, but according to statistics, X out of every 100 young people whose parents did not finish high school do manage to finish high school."

Then, an opinion question is listed about which policy instrument the government should use to reduce inequality. Individuals can choose between: education, work or financial assistance to the poor. This is followed by the interviewer's question:

> "I'm going to give you three areas where the government can put resources to reduce inequality. Which one do you think is the most important?" (read options) (single response)

1. Education
2. Labor
3. Help the poor

The multiple dimensions of social mobility: An assessment of Latin America and the Caribbean

2

The multiple dimensions of social mobility: An assessment of Latin America and the Caribbean[1]

Introduction

In higher-income countries, there is increasingly abundant evidence showing that economic prosperity tends to persist between generations.[2] However, little is known about this phenomenon in Latin America and the Caribbean. To better assess this situation, this chapter provides an overview of intergenerational mobility in the region, presenting detailed indicators of mobility in different dimensions associated with individual wellbeing, such as educational attainment, occupation, levels of income, health, and accumulated assets. It brings together new evidence for Latin America and the Caribbean, produced especially for this report from different sources of information, including the latest CAF Survey (ECAF 2021), official household surveys, population and housing censuses, and data from administrative records.

As a complex and multifaceted phenomenon, the measurement of intergenerational mobility requires different methodological approaches. For this reason, this chapter first presents the most commonly used measures for determining intergenerational social mobility, as well as the practical challenges in obtaining them. Of the large set of measures that exist to quantify this phenomenon, emphasis is placed on those most appropriate for answering questions such as: how associated or persistent is the level of wellbeing of individuals of one generation with respect

1. This chapter was written by Lucila Berniell and Dolores de la Mata, with research assistance from Iván Albina, Ivana Benzaquén, Cristian Bonavida, and Martín Finkelstein.

2. Mogstad and Torsvik (2021), for example, review this evidence.

to that of their parents? Do individuals of the current generation enjoy higher wellbeing than their parents? How is intergenerational mobility in different parts of the wellbeing distribution, particularly of those individuals at the extremes, i.e., the most advantaged and the most disadvantaged in society? How is intergenerational mobility in different parts of the wellbeing distribution, particularly of those individuals at the extremes, i.e., the most advantaged and the most disadvantaged in society?

The assessment of intergenerational mobility presented in this chapter focuses on the analysis of sources of information linking two adjacent generations (parents and children). However, thanks to the availability of new sources that make it possible to link a larger number of generations, there has recently been an increased interest in studying multigenerational mobility (e.g., between grandparents, parents, and children). Studies for high-income countries suggest that the persistence of family socioeconomic status may be substantially higher than that inferred from the analysis of only two generations.[3] This chapter also contributes to quantifying multigenerational persistence in Latin America and the Caribbean based on novel information collected in ECAF 2021 and other work prepared in the context of this report.

This chapter emphasizes that the measurement of intergenerational mobility is only a first step in understanding its causes. The measures reported here pertaining to the association between the levels of wellbeing of parents and their offspring—although essential to assess intergenerational mobility in the region—cannot necessarily be interpreted as direct causal effects of parents on their children. That is, this chapter focuses on the existence of an association between different measures of parents' and children's wellbeing, not on whether the socioeconomic status of parents (based on their level of income or education, for example) determines that of their children. Although the reasons or channels through which different dimensions of children's wellbeing are associated with those of their parents are superficially outlined, detailed analysis is left for the following chapters of the report. The three central mechanisms—human capital, labor markets, and asset accumulation—are described in those chapters.

Which aspects of mobility should be measured and how?

Absolute and relative mobility

Before answering the question of how to measure intergenerational mobility, it is important to establish what aspect of mobility one wants to measure. The concept of intergenerational social mobility is compatible with various interpretations. This has led the social disciplines that study it to use various indexes to capture its different facets. If the indices are not read carefully to understand what each one is trying to measure, the conclusions drawn about

3. Some papers discussing these findings include Clark (2014) and Braun and Stuhler (2018).

mobility levels may be inconsistent a priori. This chapter, and the report in general, focuses primarily on two concepts of mobility: mobility as independence of origin (related to relative mobility) and absolute upward mobility.

●●
Absolute and relative mobility are two important dimensions of mobility

The idea of mobility as independence of origin seeks to understand how (in)dependent the wellbeing of individuals is on that of their parents. According to this notion, a more mobile society is one in which the association between the level of wellbeing achieved by children and their parents' wellbeing is weak. A widely used methodological approach to measure this type of intergenerational persistence consists of analyzing a dimension of socioeconomic wellbeing (income, years of education or wealth, among others) that can be measured for parents and their children. The degree of correlation between the two measures is then calculated. For example, the slope of a regression where the dependent variable is the child's measure of wellbeing and the independent variable is the same measure of wellbeing attained by their parents is typically the indicator most commonly used to summarize the level of intergenerational persistence and, thus, the level of origin dependence on that measure of wellbeing. Two alternative measures have also become popular. Intergenerational correlation, which is simply the Pearson correlation coefficient between the wellbeing variables measured for parents and children, and the rank-rank coefficient, which captures the association in the position within a ranking (e.g., percentiles) that parents and children occupy in the distribution of a given dimension of wellbeing (e.g., income) in their respective generation.

Box 2.1 presents in detail these measures and the relationship between them. The three measures—persistence coefficient, Pearson correlation and rank-rank coefficient—are usually linked to the concept of relative mobility, where the focus of the analysis is on how the relative, rather than absolute, performance of children from advantaged socioeconomic backgrounds compares with disadvantaged ones. It should be noted that higher values in the measures of intergenerational persistence imply lower relative mobility.

A second concept of mobility refers to the absolute changes in wellbeing that children experience with respect to their parents. Of particular interest are upward movements, in which children reach higher levels of wellbeing than their parents. If social mobility were conceived as climbing up a ladder, greater absolute mobility would correspond to the situation in which children reach higher rungs (higher wellbeing) than those reached by their parents. Thus, absolute upward mobility is also related to economic growth. A simple measure of absolute mobility is the percentage of children who reach a higher level of wellbeing (e.g., higher income at certain points in life) than their parents.

It is important to emphasize the differences between the notions of absolute mobility and relative mobility since they do not always move in the same direction. For example, in the case of education, thinking of the children of parents with a low level of education, a process of universalization of basic education may imply that the children will surpass their parents in the level of education attained (greater absolute mobility). However, they will not necessarily be among the most educated people of their generation. This can happen if the children of more educated parents also increase the years of education relative to their parents (see Figure 1.1 in Chapter 1). This is a situation that combines a high absolute mobility with a low relative mobility. This specific example is relevant for the Latin American context, which will be addressed later.

Box 2.1
Measures of relative intergenerational mobility

The most widespread methodology in economic studies to analyze intergenerational persistence consists of estimating a regression of the outcome variable of the child (Y_i^h, with superscript *h*) belonging to parent-child pair *i*, as a function of the outcome variable of their parents (Y_i^p, with superscript *p*):

$$Y_i^h = \alpha + \beta \times Y_i^p + \epsilon_i. \quad (1)$$

The coefficient β—referred to as the persistence coefficient throughout this chapter—is the parameter that captures the degree of association of the results of parents and children and, therefore, is indicative of the degree of intergenerational persistence. Values close to zero would be indicative of low persistence and, consequently, high intergenerational mobility. When the variable of interest is expressed in logarithms (e.g., applied to money income or wealth), the persistence coefficient β is also often called intergenerational elasticity (IGE). On the other hand, the persistence coefficient is a rescaled version of Pearson's correlation coefficient—denoted by *corr* (*x,y*)—since, by definition

$$\beta = \frac{cov\,(Y_i^p, Y_i^h)}{Var\,(Y_i^p)} = corr\,(Y_i^p, Y_i^h) * \frac{\sigma_y^h}{\sigma_y^p}, \quad (2)$$

where $\frac{\sigma_y^h}{\sigma_y^p}$ is the quotient of two measures of dispersion of the distribution of the variable of interest, one for children ($\sigma_y{}^h$) and another for parents ($\sigma_y{}^p$). This expression can also be rewritten as

$$corr\,(Y_i^p, Y_i^h) = \beta \times \frac{\sigma_y^p}{\sigma_y^h}. \quad (3)$$

That is, the β coefficient captures both aspects of the structure of dependence between the wellbeing of parents and children and the degree of relative inequality in the marginal distributions of the outcome variable of parents and children. For this reason, when conducting international comparisons or temporal analyses of intergenerational mobility, the correlation coefficient is often a preferable measure, as it corrects for changes in the inequality of the outcome variable between the compared generations. Moreover, the correlation coefficient is usually less sensitive to sample selection and the way the variables are measured (Hertz et al., 2008). The latter is a very important feature, since, for example, there are many ways to measure parental wellbeing (Y_i^p). Taking education as a case in point, one usually considers alternatively the maximum years of education between the two parents, the average education of both parents, the mother's education or the father's education, according to the availability of data. The disadvantage of the correlation coefficient is that it does not have as straightforward an interpretation as the persistence coefficient when conceived as an elasticity (percentage increase in the child's measure of wellbeing for every 1% increase in the father's measure of wellbeing).

An alternative measure is constructed from the rank-rank regression, popularized by the work of Chetty et al. (2014). This consists of a regression similar to that of equation (1), but where both the dependent and independent variables are replaced by the relative position (e.g., percentile) occupied by parents and children in the distribution within the corresponding generation (people born in the same era). This type of specification makes it possible to isolate changes in intergenerational dependence from changes in intragenerational relative inequality by converting the marginal distributions into uniform distributions and, therefore, into measures invariant to changes in intragenerational inequality.

It is worth mentioning that the β coefficient and the rank-rank coefficient should not be taken as substitute measures for each other, as they provide different information. Although the rank-rank can be considered as a more "pure" measure of relative mobility, as with the rest of the measures, one should be cautious in international comparisons based on it. For example, even if two countries show the same level of relative mobility according to the rank-rank, the magnitude of the increase in wellbeing of people in the higher positions of the distribution may be substantially larger in countries with higher levels of inequality.

The relative and absolute mobility measures mentioned so far are measures that describe, in a single parameter, aspects of mobility for the entire population. However, several studies have shown that mobility is not equal in different parts of the distribution. Furthermore, mobility presents particularities at both extremes, i.e., the most advantaged at one end and the most disadvantaged at the other. To account for these differences, more than one parameter is needed. For this reason, several measures are presented here that attempt to capture the characteristics of mobility at the extremes.

Another relevant aspect in the measurement of intergenerational mobility refers to which dimension of socioeconomic wellbeing to focus on. For example, income or wealth are variables that summarize individual socioeconomic status very well. Since it is rare to have sources of information that contain data on these variables for parents and children alike, other variables that approximate this status, such as education, occupation, or health status, are frequently used. All these variables —in addition to being highly correlated with income or wealth—are also relevant dimensions of wellbeing or socioeconomic status. Moreover, they are associated with specific channels through which inequalities in income and wealth are transmitted between parents and children (as discussed in Chapters 3 and 4).

Intergenerational mobility and equality of opportunities

The prospects for social mobility are greater when children's economic performance is weakly associated with that of their parents. For this reason, the estimates of intergenerational persistence described in Box 2.1 are typically interpreted as a manifestation of the degree of inequality of opportunities faced by people from different family socioeconomic contexts. Thus, a high persistence coefficient reflects the better opportunities that people from advantaged socioeconomic contexts were able to access throughout their lives compared to those given to people who grew up in disadvantaged contexts. A low persistence coefficient is the result of having had conditions throughout life that were more independent of aspects of the family context. The Appendix describes in greater depth methodologies for estimating some

indexes of (un)equality of opportunity and their relationship with the measures of intergenerational mobility that will be used throughout the chapter.[4]

Challenges to building good intergenerational mobility measures

In the 1980s, an influential paper (Becker and Tomes, 1986) summarized the evidence available up to that point on intergenerational income elasticity in the United States, which was around a value of 0.2. One possible interpretation of this result would be that only 20% of the economic advantages of one generation were passed on to the next generation. Intergenerational persistence did not seem to be very high. These results supported the idea that the US was the "land of opportunity."[5] Subsequent studies showed that these early estimates were subject to several measurement biases because the available data sources for measuring the income of parents and children were not adequate to capture the income of individuals in the long run (permanent income). New studies yielded higher values for the same parameter, between 0.3 and 0.6 (Chetty et al., 2014; Mazumder, 2005; Mitnik et al., 2015; Solon, 1992; Zimmerman, 1992), somewhat challenging the conception about high levels of mobility in the US.

The above example highlights the importance of understanding the scope, possibilities, and limitations of the different sources of information available to carry out intergenerational mobility studies. There are important practical challenges to be overcome that require very specific characteristics of the basic information. On the one hand, to analyze the performance of parents and children in a particular dimension (income, wealth, education, health, etc.), data sources are needed that generate reliable information at the individual level and, at the same time, allow the identification of parental links between individuals. For example, many surveys collect information on different family members, but only if they live under the same roof, which introduces problems in the measurement of mobility, since it is not possible to link information on family members who no longer reside in the same household or dwelling. Box 2.2 contains the discussion on the so-called cohabitation biases in the measurement of intergenerational mobility. On the other hand, in order to measure relevant dimensions of socioeconomic status, it is often necessary to have information on the individual throughout various periods of adulthood. This is the case, for example, of income: not only does it change throughout life—for example, as people acquire more experience in their jobs—but it can also be temporarily affected by economic shocks and may not reflect the true socioeconomic status of the individual in the long term.

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To measure mobility accurately, there are important practical challenges to overcome that require specific features of the underlying information

4. See in the Appendix the section "Simple measures of inequality of opportunity and their relationship to measures of relative intergenerational mobility."

5. An extrapolation of these findings implies that, in a second generation, only 4% of the initial family advantage would prevail. This results from iterating the 20% transmission between parents and children to one more generation, implying a transmission between grandparents and grandchildren of 20% of the 20%, i.e., 4%.

Box 2.2
Problems of cohabitation bias in the estimation of intergenerational mobility indicators

A common resource for jointly studying the performance in terms of income, education, health, or other wellbeing indicators for parents and children is to focus on those who live together. The advantage of this strategy is that many sources, especially household surveys and population censuses, tend to collect diverse socioeconomic and demographic information for each of the household members, identifying in turn the family ties between them, an essential input in studies of intergenerational mobility. Thus, following this strategy, it is possible to obtain information on educational levels, labor performance variables and income, among other aspects, for both generations.

However, this alternative is not free of problems. One of the most important is the representativeness of the set of cohabiting parents and children compared to non-cohabiting parents and children. In other words, estimates of intergenerational mobility indicators based on cohabiting parents and children may suffer from cohabitation bias and may not necessarily be extrapolable to the entire population. The sign of the bias will depend on how different the groups of cohabiting and non-cohabiting parents and children are, something that may vary between countries, different population groups in the same country, or over time. As expected, the percentage of cohabiting parents and children declines markedly with certain life-cycle milestones, for example, when children complete their formal education cycle. Thus, cohabitation biases in the estimation of intergenerational mobility measures could be greater the older the age of the children under analysis.

While these biases clearly exist from a theoretical standpoint, few studies have quantified them. Emran et al. (2018) and Emran and Shilpi (2019) study the case of India and Bangladesh. They found that intergenerational persistence in wellbeing, estimated from samples of co-resident parents and children, is lower than that which would result from considering all parents and children, regardless of their cohabitation status. Of great relevance for Latin America is the work of Neidhöfer et al. (2021b), which analyzes cohabitation biases in measures of educational mobility using household surveys from ten countries in the region (Argentina, Brazil, Chile, Colombia, Ecuador, Guatemala, Mexico, Nicaragua, Panama, and Peru). The authors did not find a clear pattern on the sign of the bias in measures of relative mobility, being positive in some countries and negative in others. Moreover, the biases found are not of a substantial magnitude and in some cases are not even statistically significant. However, the ranking of countries that results from placing them in order according to different mobility measures may be altered depending on whether samples of co-habiting or non-cohabiting parents and children are considered. In the case of absolute upward mobility measures (mobility at the bottom of the parental education-level distribution), the biases found in this study are generally positive, leading to an overestimation of social mobility.

The following sections describe some of the main obstacles typically encountered in the measurement of mobility between two adjacent generations, the biases that these problems generate in the measures of interest, and the strategies or methods that have been proposed to overcome them. The discussion is organized around different dimensions of wellbeing that have been used as variables to capture the individual socioeconomic status of

parents and children: income, occupation, education, health, and wealth. Each of these dimensions poses specific challenges in the construction of measures to correctly describe mobility between two adjacent generations (Black and Devereux, 2011; Stuhler, 2018).

Educational mobility

Education is one of the central mechanisms in the intergenerational persistence of socioeconomic status (see Chapter 3). Not only is it a relevant wellbeing outcome in itself but education is also a major predictor of other dimensions of individual wellbeing, such as income, health status, longevity, marital status, social capital, and political participation. To measure educational mobility, both relative and absolute metrics are used, calculating, for example, the degree of association between the education of parents and children or the probability of children surpassing their parents' educational levels.

The measurement of educational mobility has practical advantages over other dimensions of wellbeing, such as income mobility. On the one hand, it is possible to obtain reliable and stable measures of the educational attainment of adults, since most people complete their formal training cycle early in adulthood. Therefore, it is usually sufficient to obtain measures of educational attainment in early adulthood. On the other hand, the educational attainment of parents and children can be measured through surveys that rely on the recall of interviewees about the educational attainment of other family members, whether living or deceased, without the need for information reported by each of those members. For example, children are able to accurately report the educational level attained by their parents (Neidhöfer et al., 2018; Torche, 2021). There are multiple sources that collect this type of information and many of them also allow for comparable estimates across countries.

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Measuring educational mobility has practical advantages over other dimensions of wellbeing and is therefore widely used

Despite these advantages, the measurement of educational mobility also presents challenges. One that is critical has to do with the fact that years of education are not always a good reflection of the true quantity or quality of education acquired, an issue that will be discussed in more detail in Chapter 3. On the other hand, there are a number of other challenges that, due to their level of technicality, fall outside the scope of this report.[6]

6. For example, the years of education variable is a naturally truncated variable; that is, it is not possible to attain many more years of formal education than those implied by a university graduate degree, unlike income, which, by nature, does not have a ceiling. This problem can lead to certain biases in mobility measures. Other problems arise when changes in educational systems make it difficult to perform international comparisons and temporal comparisons in a given country (Karlson and Landersø, 2021) or when large structural changes generate automatic trends in educational mobility measures (Nybom and Stuhler, 2016). It is worth noting that measures such as the rank-rank coefficient are less affected by these types of problems.

In relation to the challenges, the advantages of studying educational mobility are many, which is why it is a phenomenon that has received significant attention, especially in developed countries, where it has been shown to be highly predictive of income mobility. Evidence for developing countries is scarcer (Hertz et al., 2008) but a body of recent work has begun to generate estimates from harmonized data from various population and housing surveys and censuses, allowing international comparisons for a wide set of countries and cohorts. For example, Alesina et al. (2021) study African countries and Van der Weide et al. (2021) analyze 157 countries that comprise 97% of the world's population.[7] Regarding Latin America and the Caribbean, Daude and Robano (2015), Neidhöfer et al. (2018), Neidhöfer et al. (2021b), Muñoz (2021) and Berniell, Bonavida et al. (2021) provide stylized facts on educational mobility for a large number of countries in the region, and in some cases for a significant number of cohorts, which facilitates an understanding of the evolution of educational mobility over time. The work of Berniell, Bonavida et al. (2021), prepared in the framework of this report with the objective of enriching the study of intergenerational mobility in education in dimensions related to gender, ethnicity and geographic location of Latin Americans, includes estimates based on harmonized data from population and housing censuses for 22 Latin American and Caribbean countries and for cohorts born between 1930 and 2005, collected from the Integrated Public Use Census Microdata Series (IPUMS, 2020).[8] In addition, for this report, estimates of educational mobility were obtained from the ECAF 2021, which was specially designed to collect information on various aspects of intergenerational mobility (details on the survey can be found in the first two sections of the Appendix).

Mobility in health

Health—another crucial dimension of individual wellbeing (Jones and Klenow, 2016)—is of particular interest for measuring the degree of intergenerational persistence. Health is strongly connected to labor, consumption, savings, and retirement decisions (Halliday et al., 2021). Like other dimensions of human capital, health is "built" cumulatively from conception, especially during childhood and the transition to adulthood. Early physical development conditions educational performance, occupational outcomes, and an individual's health in adulthood and old age (Almond and Currie, 2011; Currie, 2009; Currie and Almond, 2011; Berniell et al., 2016). In developing countries, health in the early stages of life may play a more significant role than in developed countries as health shocks tend to be more frequent and the remedial capacity of health systems is more limited (Currie and Vogl, 2013). As in other dimensions of human capital (see Chapter 3), the genetic component could partly explain the correlations observed between parents and children. However, several studies have quantified that this channel is not the most important one (Thompson, 2014). There is increasing evidence showing that physical development is

7. This paper compiles harmonized data on educational mobility from the Global Database on Intergenerational Mobility GDIM (2018).

8. For methodology and other details, see the section "Calculating intergenerational educational mobility from population and housing census data" in the Appendix and Berniell, Bonavida et al. (2021).

affected by endowments and investments received from parents, investment channeled through public health systems, and physical and social contexts (Almond et al., 2018; Berniell et al., 2016).[9]

Measuring the association between parent and child health is a major challenge. First, health is a multidimensional concept. In very general terms, at least two dimensions could be distinguished: physical health and mental health. In addition, health is a latent variable in the sense that it is very difficult to observe and often only becomes apparent at an advanced age. All this makes it a dimension of wellbeing that is very difficult to quantify.[10] To this end, anthropometric measures, self-reported measures of health status, or approximations through measurements of health-related habits are often used in practice.

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Given that health is a multidimensional concept that is difficult to observe, constructing measures of the association between parent and child health indicators is a major challenge

Empirical approaches to measuring intergenerational persistence in health can be divided into two. First, there are studies that analyze the association between the health of parents and that of their children when they are still young. Anthropometric measures at birth and in early childhood are used for this purpose (for example, combining height and weight to calculate measures of malnutrition), along with others such as infant mortality. The second approach directly compares parents and children when both are in adulthood. The literature on the latter approach is sparser. This is mainly due to data limitations, not only because few data sources collect data on the health of parents and children in adulthood, but also because, when such information is available, it refers to only a few of the multiple dimensions of health in adulthood, making a comprehensive analysis difficult.[11] For example, Andersen (2021) reviews studies on intergenerational persistence in health and finds that not only do many differ in the variables analyzed, but that the evidence is also very dispersed in geographical, temporal and methodological terms, undermining the possibilities of obtaining general conclusions due to the low comparability between studies. However, the evidence collected indicates that health seems to exhibit lower persistence coefficients than other commonly studied variables, such as income and education. Specific gender patterns have also been found. For example, women's health is more closely related to family health than that of men. Box 2.3 summarizes in more detail the international evidence on intergenerational mobility in health.

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9. Also see Chapter 3 of this report.

10. Examples of widely used anthropometric indicators are height, weight, and muscle mass index. Based on self-reported data, measures are constructed to detect symptoms of stress or depression or the incidence of chronic diseases, in addition to self-reported general health status (SRHS). Habits related to health care, such as regular physical exercise or problematic substance use (e.g., alcohol, drugs, or smoking) also provide indicators used to infer measures of health status.

11. The choice of the study variable is not trivial: the magnitude and, logically, the interpretation of the results, depend very much on the variable used. On the one hand, studies using the SRHS (e.g., Halliday et al., 2021) base their conclusions on a variable that can be affected by the subjectivity of the respondent. On the other hand, studies using anthropometric measures (such as Bhalotra and Rawlings, 2013 and 2011, for a wide set of developing countries) tend to have less margin of error in terms of measurement, but these measures are generally only available or relevant at younger ages of children.

Box 2.3
International evidence on intergenerational mobility in health

The literature on this topic has addressed both persistence in health outcomes and persistence in health-related habits and behaviors. This section summarizes the main findings of the literature analyzing these types of dimensions for parents and adult children.

Health results

Self-reported health status. Typically, this variable arises from questions asked the respondent to assess their health status according to a predetermined scale. The advantage of this type of measure is that it captures the general state of health, unlike anthropometric measures that focus on very specific aspects. In addition, it is a highly predictive variable for mortality. The main disadvantage is that it is a subjective measure. The options contained in the most widely used scale are also only ordinal. Halliday et al. (2021), analyzing data for the United States, convert the variables corresponding to self-reported health status into cardinal variables. The authors estimate regressions of the health status reported by the respondent (converted to a numerical metric, after adjusting for age and gender) and the health status of their parents (after making an adjustment of the same nature in this variable) and find coefficients between 0.2 and 0.25. In addition, they perform rank-rank regressions in which they find coefficients between 0.21 and 0.29. These results are very similar to those estimated by Bencsik et al. (2021) for the United Kingdom, which suggests similar levels of health persistence in both countries, beyond the possible differences in the type of data used in each study. Additionally, in line with Andersen (2021), Halliday et al. (2021) find higher coefficients on the association of parental health with daughters than with sons.

Mental health. Bencsik et al. (2021) construct indexes of physical and mental health for a sample of individuals in the United Kingdom and find that mental health appears as strongly or more strongly related across generations than physical health.

Body mass index and obesity. Dolton and Xiao (2017), comparing body mass index (BMI) in six countries (China, Spain, the United States, Indonesia, Mexico, and the United Kingdom), find that intergenerational elasticities are relatively constant over time and of comparable size across countries, standing at values close to 0.2.

Health habits

Papers studying the intergenerational transmission of habits generally find patterns of persistence. Several studies on a widespread behavior, alcohol consumption, find that the consumption of sons and daughters is positively correlated with that of their parents (Beal et al., 2001; Ennett and Bauman, 1991; Komro et al., 2007; Requate et al., 2006; Rice and Sutton, 1998; Van Gundy, 2002; Zhang et al., 1999). In turn, Schmidt et al. (2011) find heterogeneities in the transmission patterns of this habit, with a higher intensity in households where parents consume a high amount of alcohol.

Other studies, such as Loureiro (2010), conclude that there is a different relationship according to the sex of the parent and child in another widespread habit: smoking. In non-single-parent households they find that mothers play a more important role in determining daughters' smoking decisions, while fathers' smoking habits are mainly replicated by sons. This connection is lost when analyzing the relationship of adolescents in single-parent households.

Although the correlation between the health of children and that of their parents may be mediated by different factors, such as education and income, there is epidemiological evidence that directly links the health of the mother with that of her children during the gestation period.[12] In other words, the health endowment with which a person begins life, which is very important for their later physical, cognitive and socioemotional development, may be affected by the health conditions experienced by the mother during pregnancy. As discussed in Chapter 3, if poor early health conditions are not compensated later in life, poor early physical development can have an impact on the next generation, thus feeding back into health inequalities.

Occupational mobility

An individual's occupation has much to do with their income and social position. In fact, the study of intergenerational mobility led by sociology focuses a lot on the similarity of the occupations of parents and children (Torche, 2014), in order, from there, to infer the intergenerational transmission of social status. The study of occupational mobility also matters for other reasons, which are more related to the growth possibilities of a country, since greater intergenerational mobility in occupations may be desirable from the point of view of efficient allocation of resources or talents. For example, if people's skills are not thought to be perfectly associated with their parents' occupational talents, occupational mobility may reflect the reallocation of talents across occupations, and this may bring remarkable aggregate efficiency and productivity gains (Hsieh et al., 2019).

To measure occupational mobility, indicators are constructed to capture how similar the jobs of parents and children are, which faces methodological and data availability challenges. Many of these challenges are similar to those of measuring other dimensions of mobility, such as cohabitation bias or problems associated with the life cycle, which often prevent fair comparisons between variables of parents and their adult children when they correspond to different life stages. Other challenges are specific to occupations. The main one has to do with the difficulty of constructing a metric to compare different types of jobs. To this end, occupations are usually coded, but with codes that tend to differ across countries and over time. This is why evidence on occupational mobility in Latin America and the Caribbean is very scarce. A notable exception is the work of Ciaschi, Gasparini et al. (2021), caried out in the framework of this report. To address the need for data describing parents' and children's occupations without falling into cohabitation bias, the authors use homogenized household surveys with retrospective questions on parents' occupation, which are available for seven countries in the region and allow for the analysis of a 50-year period.

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Indicators that capture the similarity of the jobs of parents and their adult children are constructed to measure occupational mobility

12. There is some epidemiological evidence that mothers exposed to adverse conditions in childhood tend to show moderate weight gain and a higher risk of developing hypertension during pregnancy, factors that predispose them to have low birth weight babies. Infections in early life tend to cause women to fall short of the height predicted by their genetic potential. They then tend to have reduced uterine and ovarian size, which predicts lower birth weight, shorter height-for-age and lower chances of survival of their offspring (Bhalotra and Rawlings, 2013).

Income mobility

The monetary income of individuals is widely used to characterize their socioeconomic status. Income is also closely linked to mechanisms of intergenerational transmission of different dimensions of wellbeing, since, for example, it is closely related to the ability of parents to invest in the human capital formation of their children (see more details in Chapter 3). For these reasons, the measurement of intergenerational income mobility has received widespread attention.

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The use of income information over a small interval of people's lives can bias mobility estimates

Ideally, the analysis of intergenerational income mobility would require obtaining the income of both parents and their offspring throughout their lifetimes. But, in practice, data sources that measure income and also link parents to their offspring usually have information only for specific points in time or for relatively short life intervals. From a statistical point of view, the use of income information for a small interval in the life of individuals as an approximation of lifetime income introduces measurement errors with serious consequences for inferring the degree of intergenerational transmission (Solon, 1999). This type of error implies underestimating persistence between generations, i.e., it leads to overestimating intergenerational mobility (Nybom and Stuhler, 2017). This is what occurred with the measures popularized in the 1980s in the United States by the work of Becker and Tomes (1986).

In addition, the available sources frequently capture income in an age range that often does not coincide for parents and children. This introduces an additional problem, since people's incomes change over time, being higher at intermediate and advanced ages and lower in the early stages of life. The pattern of income over the life cycle is, in turn, often strongly affected by the family socioeconomic context (Nybom and Stuhler, 2016). Measuring earnings toward the middle of the working life (around age 40) and using rank-rank correlation measures have been shown to minimize biases associated with the availability of earnings histories that only cover certain life stages (Haider and Solon, 2006; Nybom and Stuhler, 2016). Methodological advances to correct the problems associated with the availability of information on income have led to constant revisions in the estimates of intergenerational mobility in this dimension (Jäntti and Jenkins, 2015) and to keep the debate on the validity of international comparisons alive, given that, in the absence of harmonized sources of information, differences in mobility measures could merely be a reflection of methodological differences and variations in the quality of primary information.

The two main data sources that have been used to estimate intergenerational income mobility are longitudinal surveys and administrative records. Longitudinal surveys follow parents and children over time, as in the Panel Study of Income Dynamics in the United States (PSID), which measures economic, social, and health factors throughout the life course of a sample of families over several generations in the United States. More recent is the use of administrative records, such as those derived from transactions associated with payroll taxes, enriched with information that allows the reconstruction of parental links in the data. These sources have been key to advancing the measurement of intergenerational income mobility (Chetty et al., 2014). Both

types of information sources are, for the moment, scarce in Latin America and the Caribbean. As a result, what is known about intergenerational income mobility in the region is limited. Some exceptions are the works of Leites et al. (2020, 2022) and Diaz et al. (2021), which provide measures of intergenerational income mobility from administrative records in Uruguay and Chile, respectively. However, due to the high level of labor informality in the region, only a partial approximation of people's labor income can be obtained using the available sources of administrative records. As such, they offer a limited view of the mobility phenomenon in this dimension. To address this concern, Leites et al. (2022) propose a methodology that corrects the biases caused by the impossibility of observing total labor income in administrative data.

Given this lack of information, studies on intergenerational income mobility in developing countries have relied mainly on survey data, where data on adult children's self-reported income and some characteristics of their parents, such as their education and occupation, are typically available. One of the most popular methods uses these data to impute, in a first stage, the income of the parents based on information from an auxiliary survey of individuals with similar characteristics to the parents, for whom income information is available.[13] In a second stage, this method estimates relative mobility measures using the income information of the adult children in the main sample and the imputed income of their parents.

Wealth mobility

In addition to income, a person's wealth is a very good proxy for their wellbeing. Not surprisingly, higher levels of life satisfaction are found in the highest income group, in countries with higher GDP per capita, and as countries grow and become wealthier (Charles and Hurst, 2003; Sacks et al., 2010). A person's wealth can be composed of a diversity of assets that contribute to wellbeing in different ways. First, assets such as consumer durables and housing do so by enabling a greater flow of consumption. A vehicle provides transportation, a television provides access to entertainment, and a house provides a place to live. In addition, asset ownership can provide a sense of status that, in itself, can be a source of satisfaction. Assets also generate an income stream other than labor. Additional home ownership provides rental income, financial assets offer a return, and business ownership provides profits. This alternative income impacts wellbeing directly by increasing total income, but also by diversifying income sources.

13. The estimation method is known as two-sample two-stage least squares (TSTSLS) and was first proposed by Klevmarken (1982). TSTSLS has been widely used to study intergenerational mobility in the absence of administrative records (Barbieri et al., 2020; Dunn, 2007; Narayan et al., 2018). However, it is still under discussion whether this estimator is a good substitute for the results provided by linked parent and child income data from the same source.

Chapter 5 analyzes the importance of wealth accumulation from an intergenerational perspective. It highlights the main reasons for studying the transmission of wealth between generations. These include the insurance role of assets, which prevents variations in people's current income (e.g., in their labor income) from being translated into variations in consumption or in the investments made, for example, by parents in their children. Insurance, a special type of asset, plays a direct role in insuring against different types of risks, such as illness and losses that result in the loss of housing or certain durable consumer goods, among others. The ownership of assets also allows to finance the creation and development of enterprises and investment in human capital, either directly or by favoring access to or better conditions in bank financing when they are used as collateral.

To study intergenerational wealth mobility, it would be desirable to have a comprehensive measure from each generation that includes financial assets (cash, savings accounts, stocks), non-financial assets (housing, businesses, land, durable goods) and debts. In practice, the assets included depend on the availability of information, which involves significant challenges. To begin with, measuring the value of household assets and liabilities is not usually a dimension explored in conventional household surveys in Latin America and the Caribbean. On the other hand, exploring assets based on household surveys implies biases, given that individuals, especially the wealthiest, under-report their wealth. Therefore, administrative data, such as those obtained from tax records, are usually more appropriate, but are also much less common.[14]

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Due to information restrictions, intergenerational wealth mobility is usually limited to the study of particular assets, such as housing, durable assets or businesses

For the reasons mentioned above, intergenerational wealth mobility is usually limited to the study of particular assets, such as housing, durable assets or businesses, for which there is information in specific sources. A common limitation, as mentioned above, is that this information does not usually reveal the valuation of assets, only their ownership can be identified.

Intergenerational mobility: stylized facts from educational mobility

As discussed above, the study of intergenerational mobility from a comparative perspective between countries and over time is strongly limited by the availability of data. However, sources of information linking the educational levels attained by parents and children have made it possible to advance toward a better understanding of the phenomenon of mobility in this dimension of wellbeing. Using data on years of education and educational levels attained by parents and children, this section makes a detailed analysis of the levels of intergenerational social mobility in Latin America and the Caribbean and its trend for multiple cohorts born in the 20th century.

14. Administrative records may even underestimate the wealth of the richest households by not capturing, for example, assets held abroad. This fraction is not negligible, since, according to Zucman (2014), 8% of household wealth worldwide is held in tax havens.

The analysis focuses on evidence constructed from population and housing census data for 22 countries in the region[15] and data from the ECAF 2021, specially designed to collect information relevant to the study of intergenerational mobility.[16] The contributions of this study are novel in several aspects, including the analysis of mobility among ethnic groups and in small geographic areas—in the spirit of Chetty et al. (2014)—and persistence at the extremes of the distribution, i.e., between the least and most advantaged groups within each country.

It is worth mentioning that the analysis of educational mobility is not only interesting in its own right but also because there are usually links with income mobility. However, the way in which years of education translate into significant increases in people's human capital and the functioning of labor or financial markets can generate frictions that uncouple changes in educational mobility from income mobility. (This is discussed later in this chapter and in Chapters 4 and 5.)

Educational expansion

The study of educational mobility in Latin America and the Caribbean in recent decades cannot overlook the great progress made in educational coverage in the region during this period. This expansion boosted absolute upward mobility levels and placed the region among the most mobile according to this measure, as documented in Chapter 1. However, this educational expansion increased the years of education not only of those from more disadvantaged backgrounds, but also of those from more advantaged ones. As a result, the persistence in the educational level of parents and children, measured, for example, by the correlation in years of education between generations, remains very high and places Latin America and the Caribbean among the most immobile regions from this relative perspective.

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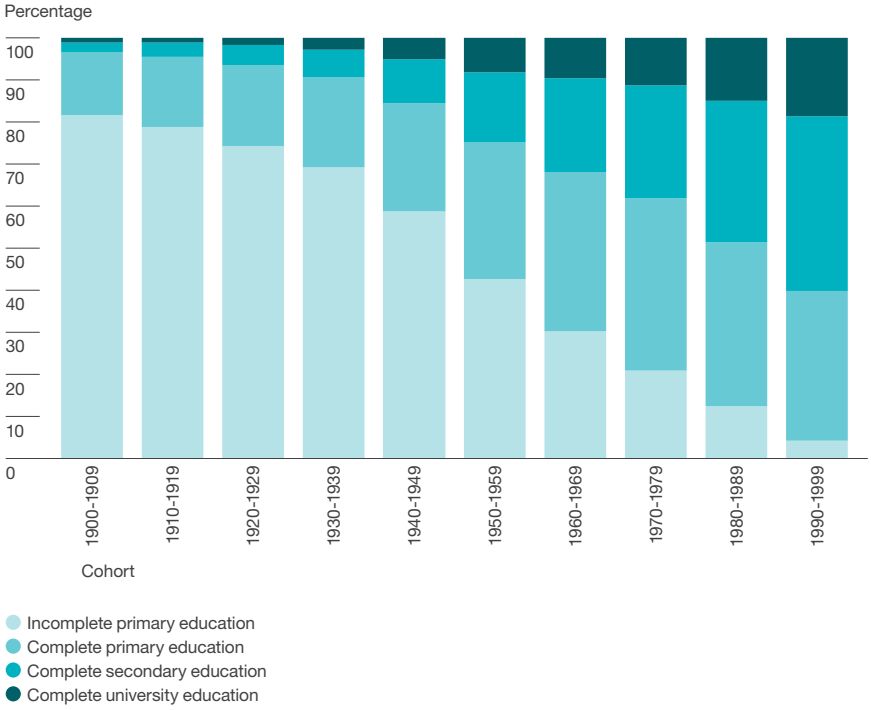
The region's greatest success has been to achieve almost universal primary education coverage, while the expansion of secondary education showed less auspicious progress

This conclusion can be reached by analyzing the educational levels in which coverage expansion was concentrated. The region's greatest success has been to achieve almost universal coverage in primary education, as shown in Graph 2.1, which illustrates the evolution of educational achievement, measured by the highest level attained for cohorts born during the 20th century. The increase in educational coverage in primary education was sustained throughout the period. While 81% of people in the cohort born in the first decade of the 20th century did not complete primary education, this percentage dropped to only 5% by the end of the century. The most accelerated increases in primary education coverage were seen from the cohorts born from 1940 onwards.

15. See section "Calculation of intergenerational educational mobility from population and housing census data" in the Appendix and Berniell, Bonavida et al. (2021) for further details on the analysis conducted in this report using population and housing censuses.

16. For a detailed description of the survey, see the section "CAF 2021 Survey, a new input to study intergenerational mobility in Latin America and the Caribbean" in the Appendix.

Graph 2.1
Educational expansion in Latin America and the Caribbean of cohorts born between 1900 and 2000

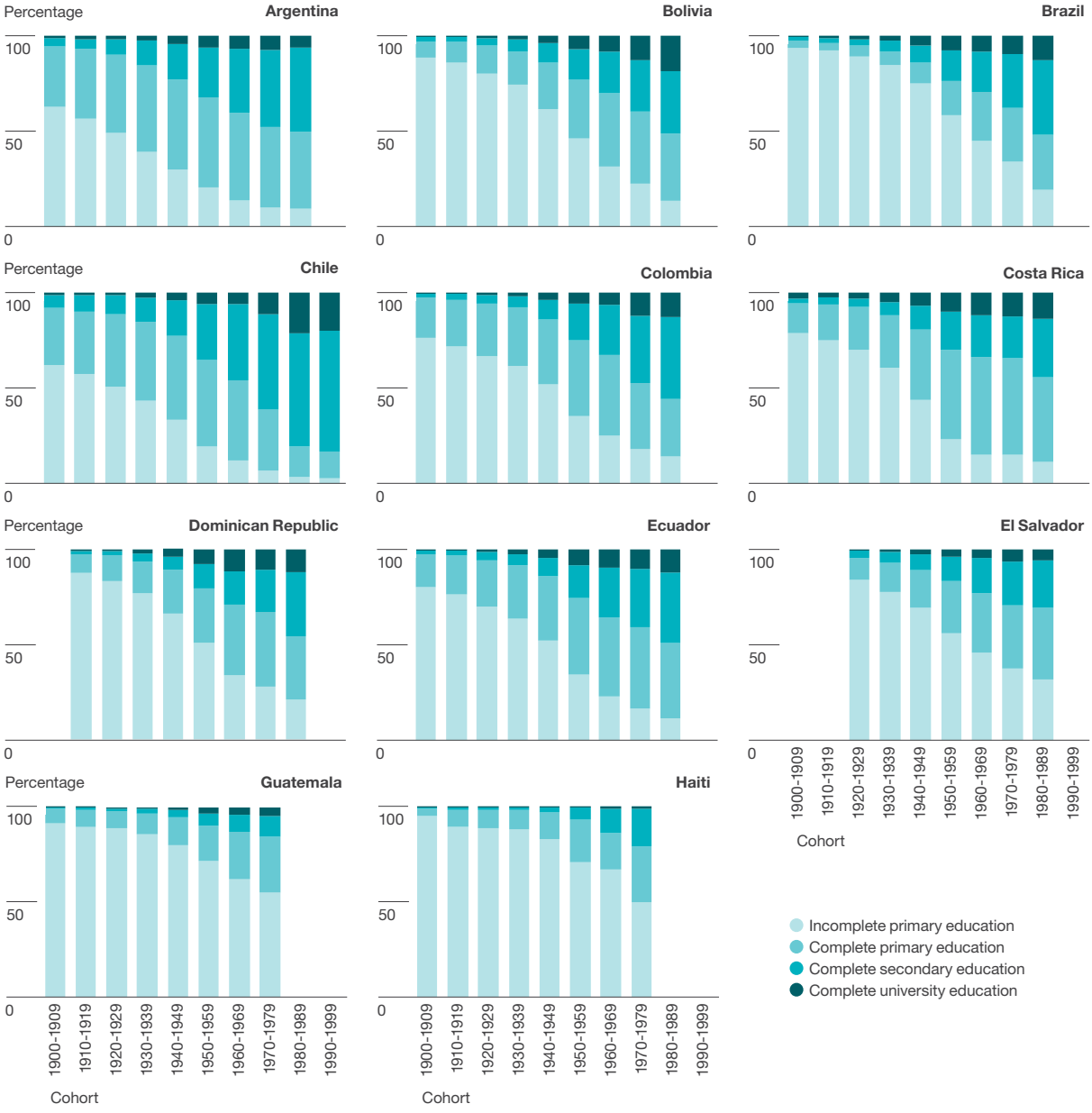


Note: The graph shows the distribution of the population in 22 Latin American and Caribbean countries according to the highest level of education attained by cohorts born between 1900 and 2000. Population-weighted average. For those born in the 1990s, data are only available for Mexico and Chile. For the list of countries included and the definition of educational categories, see the section "Calculation of intergenerational educational mobility based on population and housing census data" in the Appendix.

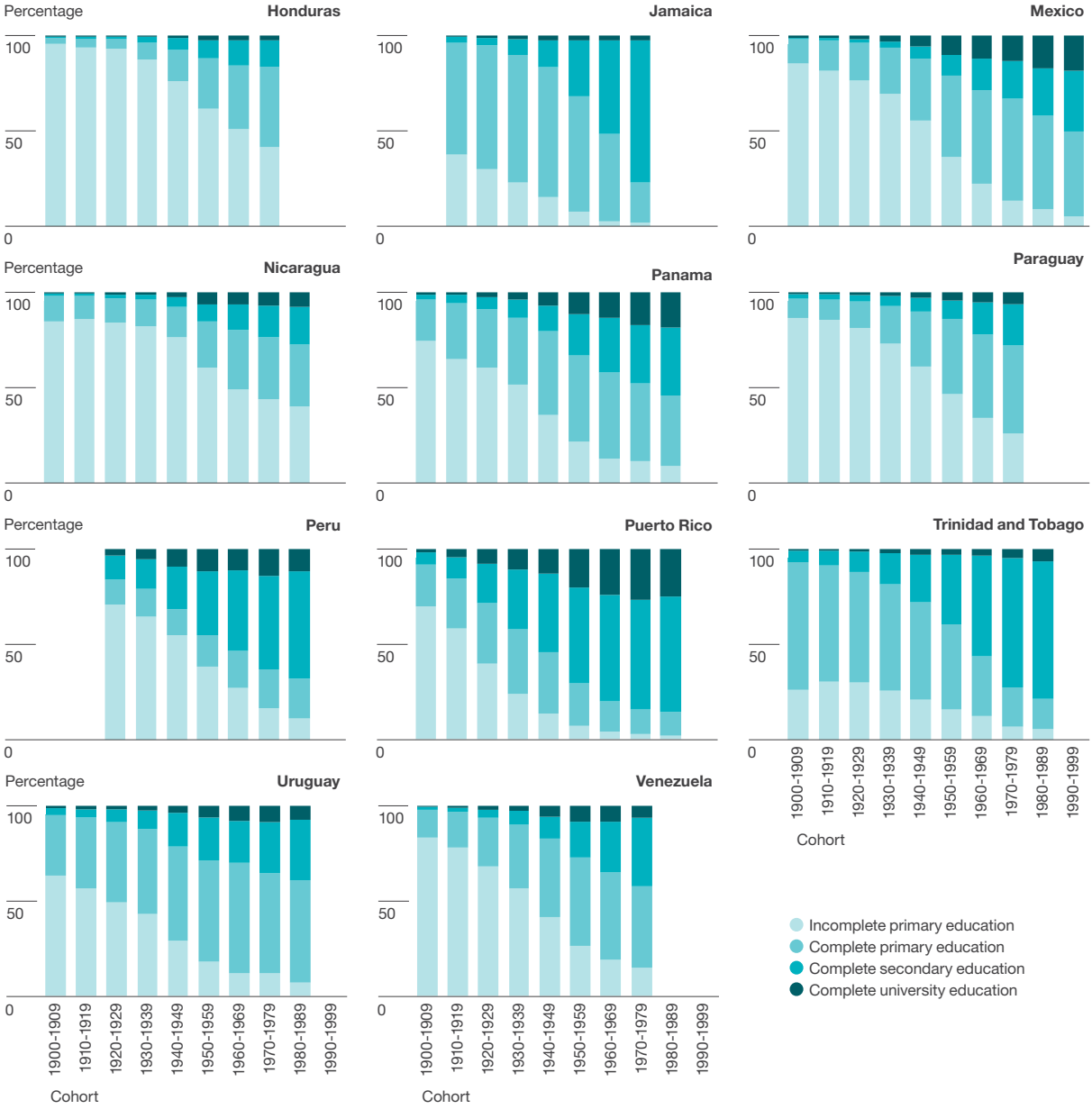
Source: Authors based on data from IPUMS (2020).

The expansion of secondary education coverage showed less auspicious progress. The percentage of people born in the 1980s who managed to complete secondary education is only 50%. For those born at the end of the 20th century, complete secondary education was far from universal in most countries, with a few exceptions, such as Chile, Jamaica, Peru, Puerto Rico, and Trinidad and Tobago. In several countries, such as Argentina, El Salvador, Guatemala, Honduras, Nicaragua, and Uruguay, growth in coverage at this level of education has been very slow or has stagnated (Graph 2.2). Other countries, such as Haiti and Paraguay, despite showing some growth in coverage in recent cohorts, still have very low percentages of people who completed secondary education. Finally, although the increase in university education coverage has been persistent in many cases, growth has been moderate, so that the percentage of the population with this level of education is still low in most countries of the region.

Graph 2.2
Educational expansion in Latin American and Caribbean countries of cohorts born between 1900 and 2000



Continued on next page →



Note: The graph shows, in each country, the distribution of the population according to the highest level of education attained. For the definition of educational categories, see the section "Calculation of intergenerational educational mobility based on population and housing census data" in the Appendix.

Source: Authors based on data from IPUMS (2020).

An international perspective is useful to evaluate whether or not this educational expansion in Latin America and the Caribbean has been significant or not. To this end, it is helpful to compare the experience of the countries of the region with that of today's more developed countries. Tables 2.1 and 2.2 show as

examples the cases of France and Portugal, two countries with interesting trajectories of educational expansion for this comparison. Table 2.1 shows the differences between France and three countries in the region, Argentina, Puerto Rico, and Uruguay. In the first cohorts of the 20th century (born between 1900 and 1929), the distribution of educational levels in the population did not differ much between the European country and the three Latin American countries. However, the contrast is notorious in the cohorts born toward the end of the century (between 1980 and 1989) for which it is possible to obtain comparable census information. For example, in the cohorts born in that decade, 85% had completed secondary education in France and 86% in Puerto Rico, but only 50% and 39% in Argentina and Uruguay, respectively. On the other hand, while approximately one in four people born at the beginning of the 20th century who completed secondary school also completed a university degree in the four countries, this percentage increased notably in France for the youngest cohorts (51%) and remained practically stagnant in the other three countries.

Table 2.1
Distribution of educational levels attained by cohorts born at the beginning and end of the 20th century in France and selected Latin American and Caribbean countries

	France	Argentina	Puerto Rico	Uruguay
Panel A. Cohorts born between 1900 and 1929				
Incomplete primary ed. (%)	53	56	56	56
Up to complete primary ed. (%)	35	36	27	37
Secondary ed. completed or more (%)	12	8	17	6
Completed university ed. over secondary ed. graduates (%)	26	21	27	24
Panel B. Cohorts born between 1980 and 1989				
Incomplete primary ed. (%)	6	10	2	7
Up to complete primary ed. (%)	9	40	12	54
Secondary ed. completed or more (%)	85	50	86	39
Completed university ed. over secondary ed. graduates (%)	51	12	29	19

Note: Panels A and B of the table show the distribution of the population according to the different educational levels attained by cohorts born between 1900-1929 and 1980-1989, respectively.

Source: Authors based on data from IPUMS (2020).

Table 2.2 compares six countries in the region that resembled Portugal in their initial educational distribution, i.e., for cohorts born at the beginning of the 20th century. Once again, the passage of time marked profound differences between the European country and the six countries in Latin American and the Caribbean. In this case, and due to the availability of data, the comparison is made with the

cohorts born in the 1970s. Eighty-two percent of the Portuguese born in that decade completed at least secondary school and, of these, 48% completed a university degree. Although Bolivia and Brazil experienced a remarkable educational expansion among the younger cohorts in this analysis, only about 40% completed at least secondary school and, of these, the fraction that reached a university degree increased slightly in Bolivia or even fell back a little in Brazil. The other four countries have lagged far behind Portugal's trajectory. In some, such as Guatemala and Honduras, only 16% of those born in the 1970s managed to complete at least secondary education, while those proportions for Nicaragua and Paraguay are also very low, at 24% and 28%, respectively.

Table 2.2
Distribution of educational levels attained in cohorts born at the beginning and end of the 20th century in Portugal and selected Latin American and Caribbean countries

	Portugal	Bolivia	Brazil	Guatemala	Honduras	Nicaragua	Paraguay
Panel A. Cohorts born between 1900 and 1929							
Incomplete primary ed. (%)	89	85	91	90	94	85	84
Up to complete primary ed. (%)	6	11	4	9	4	13	12
Secondary ed. completed or more (%)	5	4	4	1	2	2	4
Completed university ed. over secondary ed. graduates (%)	38	21	36	36	31	33	27
Panel B. Cohorts born between 1970 and 1979							
Incomplete primary ed. (%)	9	23	34	55	42	44	26
Up to complete primary ed. (%)	9	38	28	29	42	33	46
Secondary ed. completed or more (%)	82	40	38	16	16	24	28
Completed university ed. over secondary ed. graduates (%)	48	34	27	28	15	31	23

Note: Panels A and B of the table show the distribution of the population according to the different educational levels attained by cohorts born between 1900-1929 and 1970-1979, respectively.
Source: Authors based on data from IPUMS (2020).

Absolute intergenerational mobility

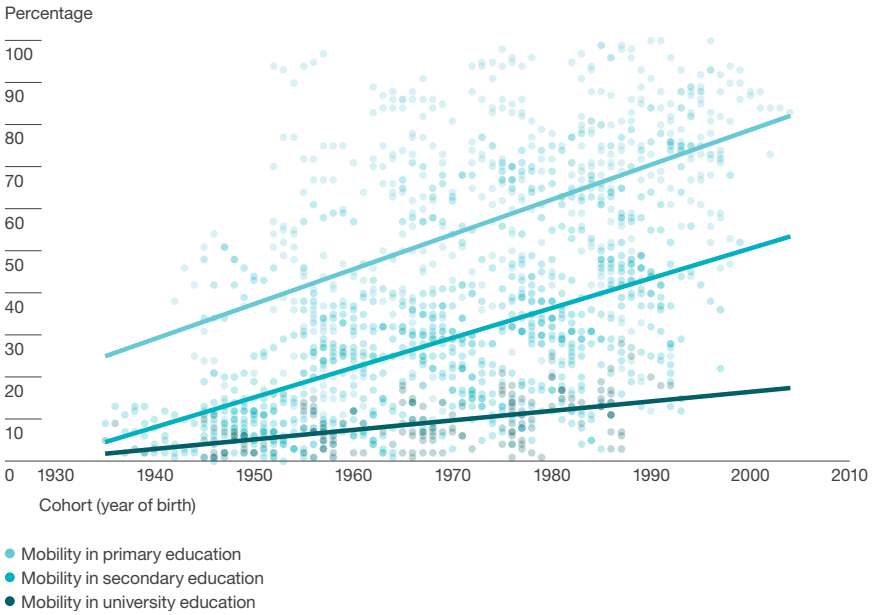
The slow progress in the completion of higher levels of education, especially secondary education, has also limited the possibilities for children to surpass their parents' educational levels. Graph 2.3 analyzes the absolute mobility reported in Chapter 1 in more detail, taking into account the proportion of children who complete certain levels of education that their parents did not achieve.[17] It presents: i) the probability that children whose parents did not

●●
Moderate expansion in higher levels of education limited the possibilities of children to surpass their parents' education

17. Each point in Graph 2.3 represents the cohort of children born in a specific year in a specific country.

complete primary education will complete it, an indicator referred to hereafter as “absolute mobility in primary education;” ii) the probability that children of parents who did not complete secondary school will complete it, an indicator referred to as “absolute mobility in secondary education;” and iii) the probability that children of parents who did not complete university education will complete it, an indicator referred to as “absolute mobility in university education.” In other words, these indicators not only look at whether the children have surpassed the educational level of their parents, but also take into account that the children have at least reached specific educational levels.

Graph 2.3
Absolute upward mobility in education in Latin America and the Caribbean for cohorts born between 1930 and 2010



Note: Each point represents, for each country and the child’s birth year, upward educational mobility at the primary, secondary and university levels, measured as the proportion of individuals completing each of these levels whose parents had not completed the respective educational level. For the calculation of mobility at the university level, the sample is restricted to the main cities of each country. The solid lines represent the average for Latin America and the Caribbean for each indicator, calculated with a linear adjustment. Twenty-two Latin American and Caribbean countries are covered. See the section “Calculating intergenerational educational mobility from population and housing census data” in the Appendix for more details.

Source: Authors based on data from IPUMS (2020).

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Mobility in primary, secondary and university education has been on the rise, although with varying magnitudes

As Graph 2.3 shows, all indicators increase across the cohorts born between 1930 and 2010, which is consistent with the global trend shown in Chapter 1, indicating that the percentage of children surpassing the educational level of their parents has been increasing generation after generation. However, the magnitudes of these indicators differ by educational level. While the

proportion of children who manage to complete primary education when their parents did not complete it exceeds 60% in the last three cohorts, the proportion of children who manage to complete secondary school when their parents did not complete it is only around 40% for the generation born in the 1980s.[18] The proportion of children who manage to complete university studies when their parents did not complete them is even lower and in the last cohorts is around 12%. It should also be noted that the rate of increase of the latter indicator is markedly slower than those of mobility in primary and secondary education.

Again, it is useful to put these mobility indicators into perspective by comparing them with those for countries with similar levels of education at the beginning of the 20th century to Latin-American and Caribbean countries, but since have made greater progress in secondary and higher education. An analysis like this is shown in figure 2.4. Compared to Portugal, the absolute mobility indicators in secondary education look similar, but the gaps between the European country and the average for Latin America and the Caribbean become noticeable in absolute mobility in primary and university education. Compared to France, the gaps are already observed even considering educational mobility in secondary education and widen for mobility in university education. These results highlight the bottlenecks that have put a cap on upward educational mobility in the region, both at the secondary level and—perhaps most notably—at the university level.

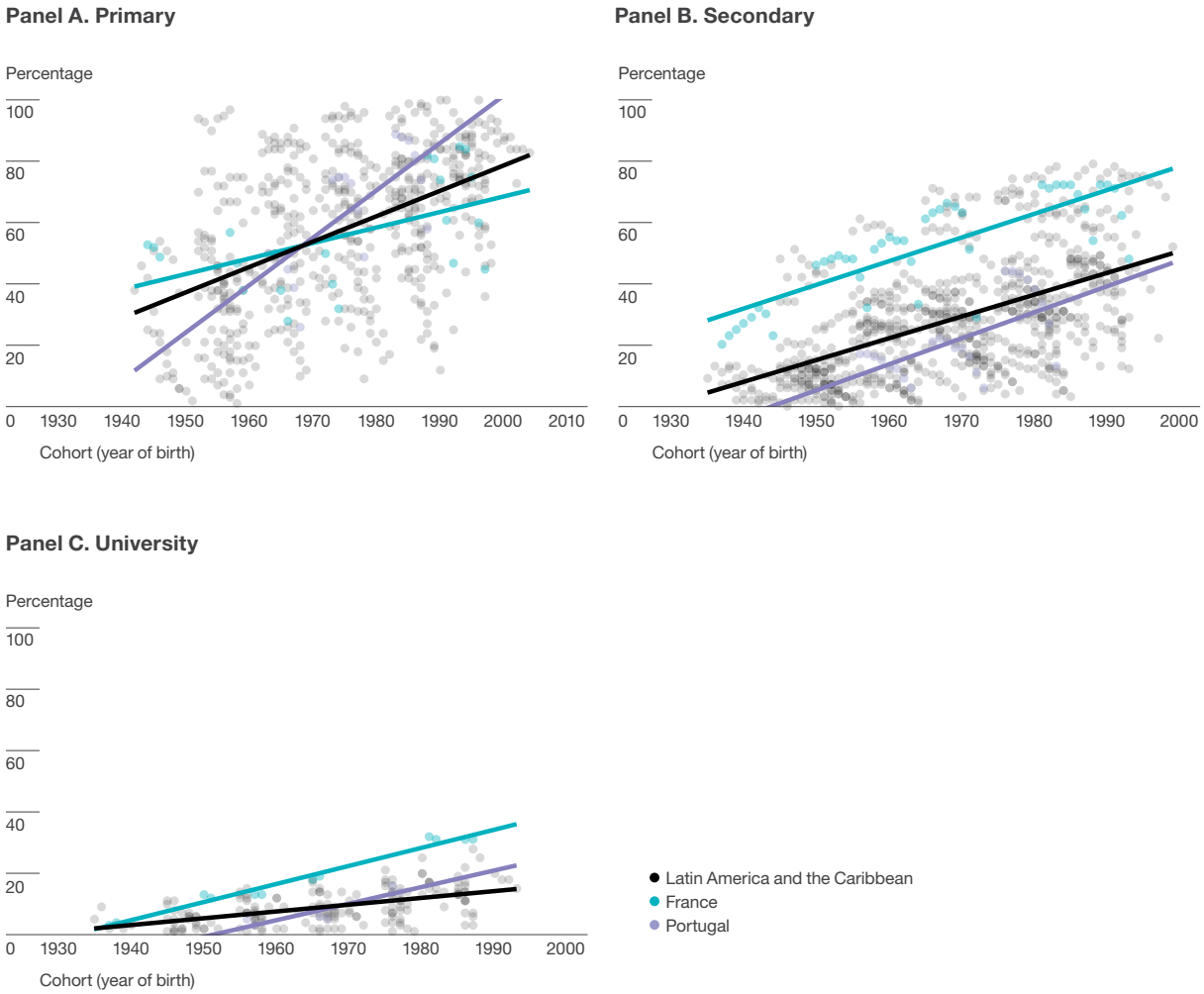
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Changes in mobility in university education have been very limited in every country

Despite the great heterogeneity observed in both the levels and trends of the three mobility indicators in the different countries (Graph 2.5), several common patterns emerge. First, and as is to be expected in the context of the universal expansion of primary education experienced in the region, the values of the upward mobility measures at this level of education are higher than those of secondary and university education. It is true that for the level of demand for knowledge in modern economies, this indicator related to primary education is not very relevant, and it will soon reach a ceiling due to the universality of this level. In fact, countries such as Jamaica, Puerto Rico, and Trinidad and Tobago reached that ceiling several decades ago, with the generations born in the 1970s. Second, upward mobility in secondary education, where coverage remains low, has grown in all countries, but at a slow pace. There are some exceptions, such as Bolivia, Chile, Jamaica, Peru, Trinidad and Tobago, where the growth in secondary education coverage was maintained at a good pace in the most recent cohorts. Finally, progress in mobility in university education has changed very little in all countries. Some of those that have shown some dynamism for university mobility are Bolivia, Colombia, and Costa Rica.

18. The papers by Neidhöfer et al. (2018) and Neidhöfer et al. (2021b) document a similar pattern in the likelihood of completing secondary education for children of parents with low education (who did not complete secondary school), based on data from Latinobarometer and official household surveys in different Latin American and Caribbean countries.

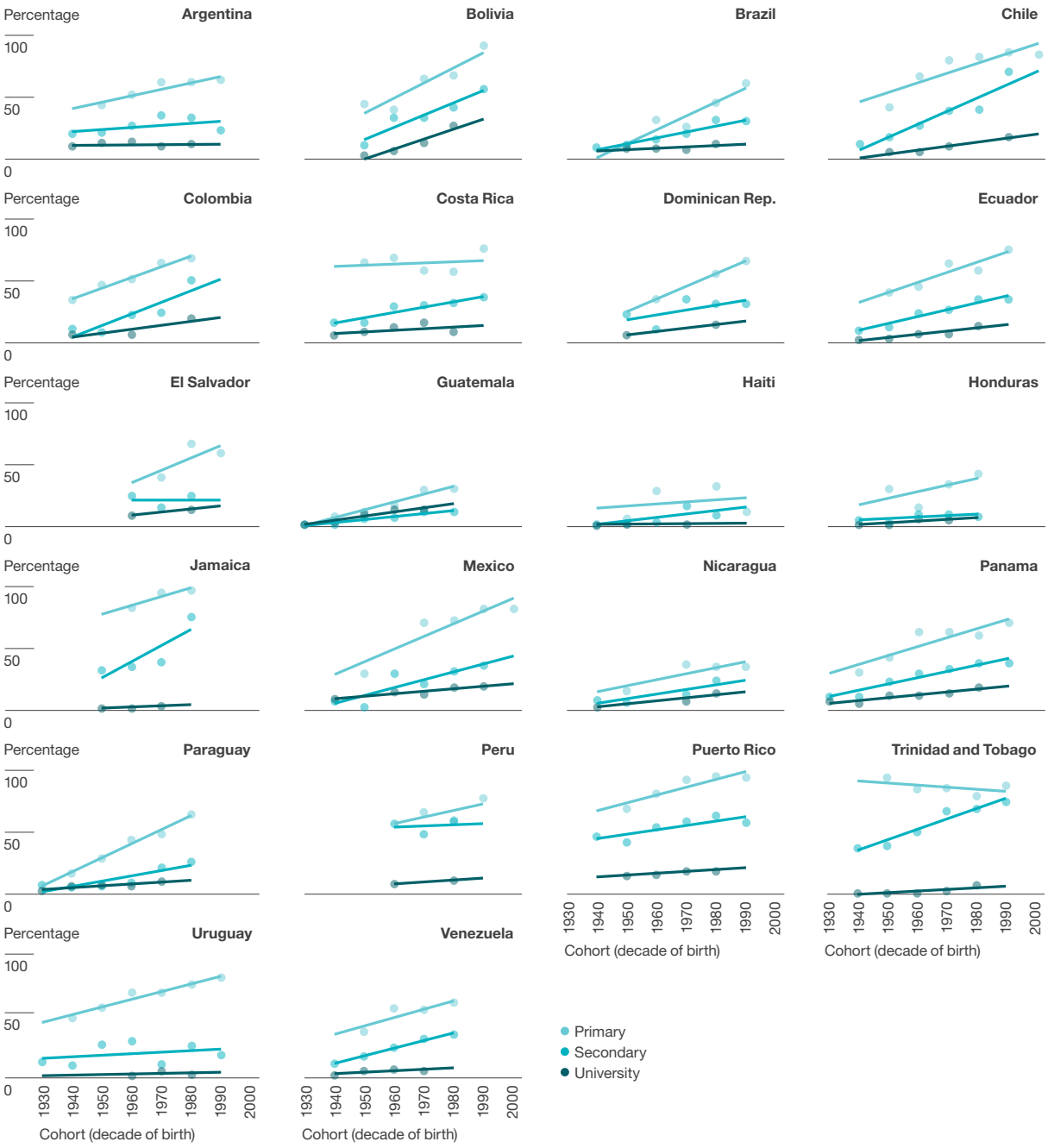
Graph 2.4
Absolute upward mobility in primary, secondary and university education for cohorts born between 1930 and 2010 in Portugal, France, and Latin America and the Caribbean (on average).



Note: Each point represents, for each country and the child's birth year, upward educational mobility for the primary, secondary and university levels, measured as the proportion of individuals completing each of these levels whose parents had not completed the respective educational level. For the calculation of mobility at the university level, the sample is restricted to the main cities of each country. The solid lines represent the average for Latin America and the Caribbean, France and Portugal for each indicator, calculated with a linear adjustment. Twenty-two Latin American and Caribbean countries are covered. See the Appendix section "Calculating intergenerational educational mobility from population and housing census data" for more details.

Source: Authors based on data from IPUMS (2020).

Graph 2.5
Absolute upward mobility in primary, secondary and university education in Latin America and the Caribbean countries for cohorts born between 1930 and 2010



Note: Each point represents, for each country and cohort (decade) of the child's birth, the upward educational mobility for primary, secondary and university level, measured as the proportion of individuals completing each of these educational levels whose parents did not complete the respective level. The solid lines reflect the linear fit. Mexico is the only country for which it is possible to compute upward mobility in primary education in the 2000s. See the section "Computation of intergenerational educational mobility from population and housing census data" in the Appendix for more details.

Source: Authors based on data from IPUMS (2020).

As mentioned above, educational expansion in Latin America and the Caribbean also benefited the children of more educated parents and, in some cases, this benefit was even relatively greater than for the children of less educated parents. Panel A of Graph 2.6 shows the evolution of the probability that children complete secondary school according to the highest level of education attained by their parents (less than complete secondary, complete secondary, complete university). There it can be seen that, although this probability has been increasing over time for the three groups, the values have remained much higher for the group of children of university parents, with gaps that are still far from closing with respect to the group of individuals with less educated parents. On the other hand, the gaps seem to close somewhat between children of middle-educated and low-educated parents, but the opposite is true when comparing children of highly educated parents and those whose parents have middle education.[19] Panel B of Graph 2.6 shows more clearly how the expansion in university education coverage was especially auspicious for the children of the most educated parents. Indeed, although the probability of completing university education has been increasing for all three groups, the trend is markedly higher for the children of parents who also completed this level of education. In other words, among the younger cohorts, completion of university education seems to be increasingly reserved for the more advantaged groups.

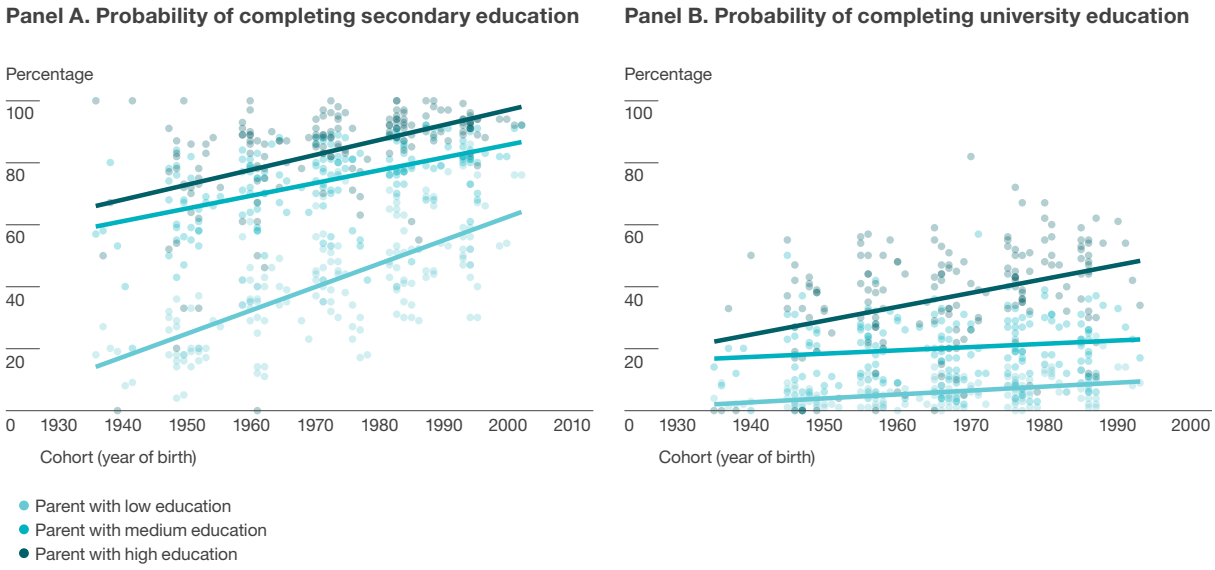
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Among the younger cohorts, completion of university education seems to be increasingly reserved for the most advantaged groups

Taken together, this evidence suggests that both secondary and university education in the region could act as a barrier to increasing levels of upward mobility, both for groups from the most disadvantaged family contexts and for groups with intermediate socioeconomic levels, creating an important bottleneck for reducing the still high intergenerational educational persistence between parents and children documented in the next section. It should be added that completion of secondary education is currently an almost indispensable requirement for aspiring to quality jobs. Therefore, this educational barrier between advantaged and disadvantaged groups may operate as a mechanism so that progress in educational mobility does not necessarily translate into greater mobility in other dimensions that depend on educational attainment, such as occupations or income. However, as analyzed in Chapter 3, the reasons behind the poor progress in secondary education are varied and are linked to barriers to human capital formation from very early in life, which are suffered to a greater extent by people who grow up in unfavorable socioeconomic contexts.

19. Neidhöfer et al. (2021b) find that the gap in the probability of completing secondary school for children of poorly educated parents (who did not complete secondary school) and more educated parents (who completed at least secondary school) closed steadily for cohorts born between 1940 and 1990. While those born in the 1940s to more educated parents were four times more likely to complete secondary school than those born to less educated parents, this gap had narrowed to just under half (1.7 times) by 1990.

Graph 2.6
Probability of completing secondary and university education by parental education level in Latin America and the Caribbean for cohorts born between 1930 and 2000.



Note: Each point represents, for each country and the child's birth year, the proportion of persons completing secondary education (panel A) or university education (panel B), according to the highest educational level of the parents. In panel B, the sample is restricted to the main cities of each country. The solid lines represent the average of each indicator in Latin America and the Caribbean, calculated with a linear adjustment. "Low parental education" includes parents whose highest level of education is completed primary education; "medium education" includes parents who completed secondary school; and "high" corresponds to parents who completed university. The panels cover 22 Latin American and the Caribbean countries. For more information, see the section "Calculation of intergenerational educational mobility from population and housing census data" in the Appendix.

Source: Authors based on data from IPUMS (2020).

Relative intergenerational mobility

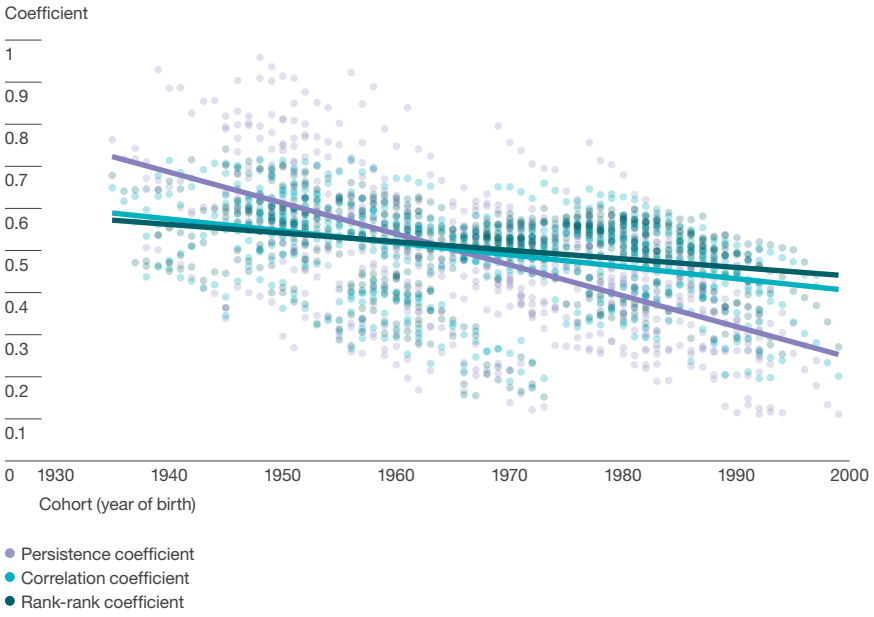
Despite progress in absolute mobility, tempered by marked differences between educational levels, the Latin American and Caribbean region remains highly immobile in relative terms. As documented above, educational expansion has also brought benefits for the most advantaged groups, causing intergenerational persistence between the years of education of parents and children to remain high and with little change over time.

Despite progress in absolute mobility, Latin America and the Caribbean remains highly immobile in relative terms

Graph 2.7 elaborates on this stylized fact, presenting in comparative terms the evolution of the three most widely used measures of relative mobility: the persistence coefficient, the correlation coefficient, and the rank-rank coefficient. All three are calculated using census data for people born in different years of the period 1935-1995 in 22 Latin American and Caribbean countries. The correlation and rank-rank coefficients enable an analysis of the evolution of relative mobility independently of changes in the levels of inequality in the distribution of years of education between generations, as described in Box 2.1. Each point in this graph reflects the relative mobility measure for a cohort

of children born in a specific year in a specific country. The graph shows that while the drop in intergenerational persistence is more pronounced when the persistence coefficient is considered as a mobility measure, a rather stagnant picture emerges when using the correlation between years of education of parents and children and between the rankings that each of them occupies in the distribution of years of education of people of the same generation. These results are consistent with the findings of Neidhöfer et al. (2018) and Neidhöfer et al. (2021b), who find the same pattern, but using information from Latinobarometer and other household surveys. This regularity is present in the 22 countries analyzed (Graph 2.8): the evolution of relative mobility inferred from the correlation and rank-rank coefficients is much less pronounced than that inferred from the persistence coefficient.

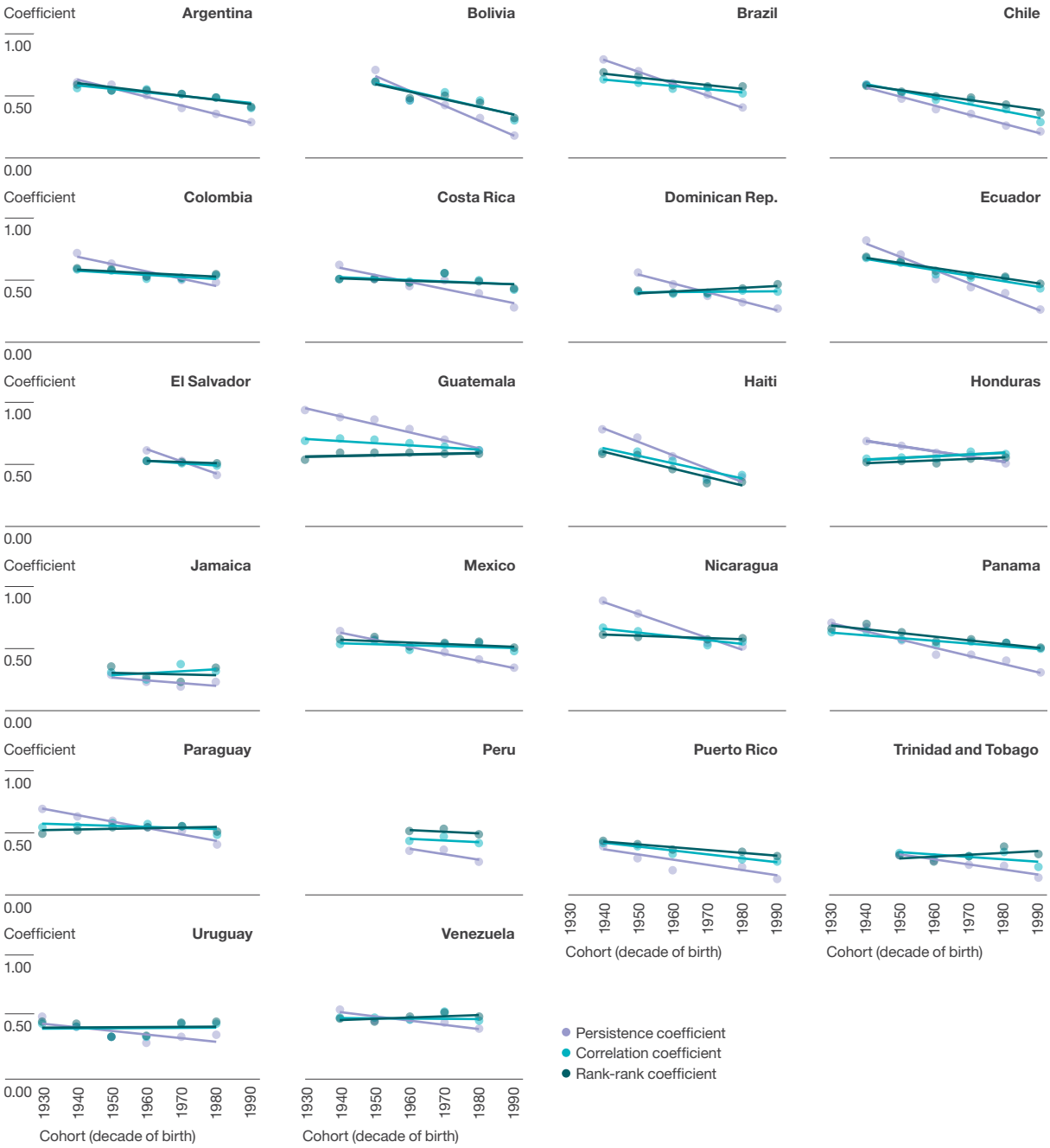
Graph 2.7
Intergenerational persistence in years of education in Latin America and the Caribbean for cohorts born between 1930 and 2000



Note: Each point represents, for each country and the child's birth year, the value of the relative mobility index (persistence coefficient, correlation coefficient and rank-rank coefficient). The solid lines represent the average for Latin America and the Caribbean for each indicator, calculated with a linear adjustment of the respective indicator. Twenty-two Latin American and Caribbean countries are covered. For more information on the methodology used to calculate these indexes, see Box 2.1 and, on the data source, see the section "Calculation of intergenerational educational mobility from population and housing census data" in the Appendix.

Source: Authors based on data from IPUMS (2020).

Graph 2.8
Intergenerational persistence in years of education in Latin American and Caribbean countries for cohorts born between 1930 and 2000



Note: Each point represents, for each country and child's birth cohort (decade), the value of the relative mobility index (persistence coefficient, correlation coefficient and rank-rank coefficient). The solid lines represent the average of each indicator for each country, calculated with a linear adjustment of the respective indicator. For more information on the methodology for calculating these indexes, see Box 2.1 and on the data source, see the section "Calculation of intergenerational educational mobility from population and housing census data" in the Appendix.

Source: Authors based on data from IPUMS (2020).

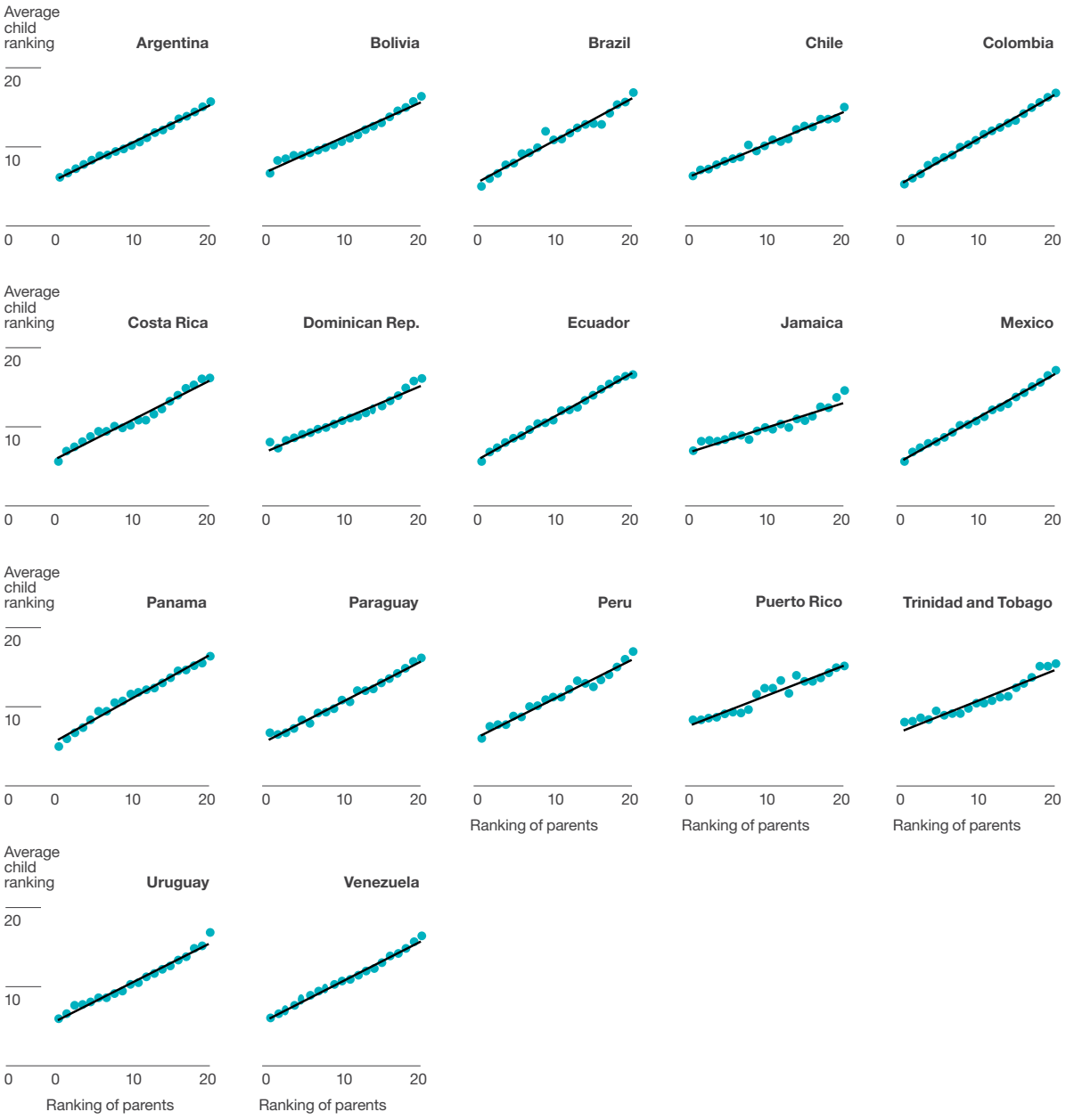
The measures presented so far summarize through a single value the degree of relative mobility between generations. However, this value is not able to reflect the degree of differential mobility or persistence that usually appears at the extremes of the parental education level distribution. These differences, which imply so-called nonlinearities in the relative mobility indicators, are illustrated in Graph 2.9. It shows in greater detail the relationship between the ranking of parents and the ranking of children in the respective distributions of years of education of their generation, for the cohort born in the 1980s. To do so, parents are ranked from lowest to highest according to the number of years of education attained and classified in 20 groups, each of which is made up of the same number of individuals, with the first group including the least educated parents and the last group including the most educated parents (horizontal axis of the graph). Then, for each group of parents, the average ranking achieved by their children in their respective generation is calculated. In a fully mobile society in relative terms, the fitted line should coincide with a horizontal line at the 50th percentile (the median of the distribution of years of education). Deviations from this horizontal line reflect a lower mobility. At the extreme, a situation of perfect immobility would be a 45-degree line, indicating that children occupy on average exactly the same position in the ranking as their parents did. In every county, the line of adjustment appears between the two extreme situations described above with a fairly steep slope.

The graph shows that in some countries the relationship between the ranking position of parents and children does not fit well to a straight line, especially at the upper end (e.g., in the top 25% of the distribution of years of education). These nonlinearities imply that the children of more advantaged parents are substantially more likely to remain at higher positions of the education distribution than predicted by a linear model. Countries where this pattern is most clearly seen include Bolivia, Brazil, Costa Rica, Dominican Republic, Jamaica, Peru, Trinidad and Tobago, and Uruguay.

●●

There are nonlinearities that become more apparent in the upper tail of the education years

Graph 2.9
Association between parents' and children's educational ranking by country for cohorts born between 1980 and 1989



Note: The vertical axis represents the average ranking achieved by the children (in the distribution of years of education of their cohort), while the horizontal axis represents the ranking occupied by the parents (in the distribution of years of education of their cohort). The straight line represents a linear fit. The rankings are constructed by grouping individuals from each generation into 20 groups, ordered from lowest to highest according to the years of education attained. Each group accumulates 5% of the population; that is, the ranking is measured in ventiles. El Salvador, Guatemala, Haiti, Honduras, and Nicaragua are excluded from the analysis because it is not possible to rank people with the available information. For more information, see the section "Calculation of intergenerational educational mobility from population and housing census data" in the Appendix.

Source: Authors based on data from IPUMS (2020).

Intergenerational mobility by gender and ethnicity

The richness of the census data makes it possible to investigate in greater depth some heterogeneities in the patterns of educational mobility in the region. This type of analysis is useful not only because it enables an evaluation of whether educational opportunities are distributed homogeneously for different population groups, but also it facilitates an investigation into the possible causes that explain aggregate mobility, which are explored in detail in the following chapters. Next, the differences in the evolution of absolute and relative mobility measures based on gender and ethnicity are analyzed, followed by an analysis of regional differences within countries.

Gender

Graphs 2.10 and 2.11 show the evolution of absolute upward mobility and relative mobility, respectively, according to a binary division of the gender of individuals (male and female). Absolute mobility in primary, secondary and university education (respectively panels A, B and C of Graph 2.10) indicate that across the cohorts a gap has opened up in favor of women, especially at the two highest educational levels.[20] In the case of university education, there is also a reversal of the gap, since for those women born before the 1950s, upward mobility at that educational level was lower than that of men. This result is consistent with the remarkable educational advancement of women that has been observed in the region for more than four decades (Marchionni et al., 2019). When analyzing these mobility measures in each country, a fairly homogeneous pattern is found in primary education, but there are marked differences in absolute upward mobility in secondary and university education, as can be seen in Graph A 2.3 in the Appendix. In contrast to the gender gaps in absolute mobility, the intergenerational persistence of years of education between parents and children has not shown significant differences based on the gender of the children, as shown in Graph 2.11.[21]

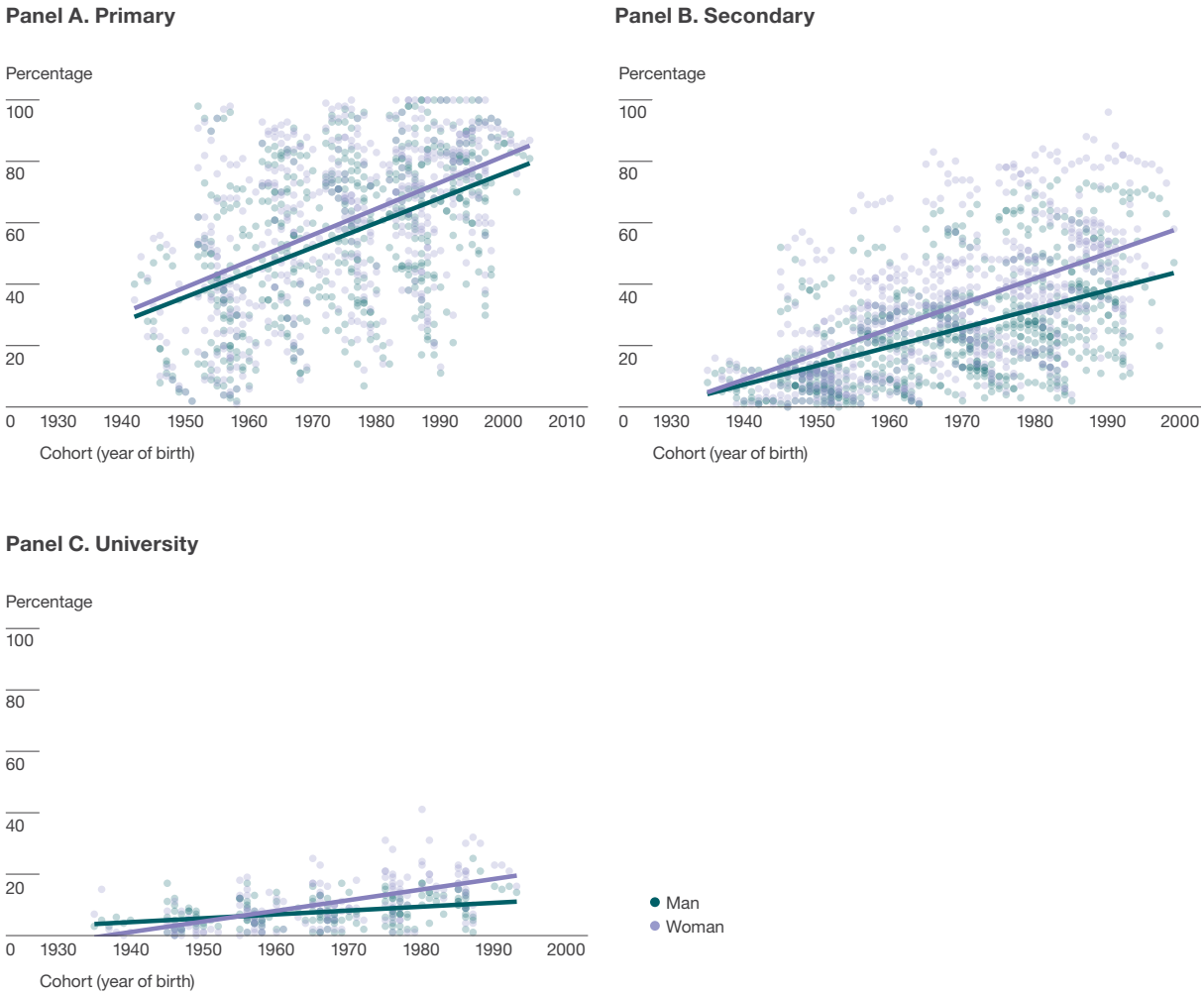
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In absolute mobility, a gap has opened up in favor of women, especially in secondary and university education

20. These results are somewhat different from those obtained by Neidhöfer et al. (2018,2021b), who, on average, find no significant differences by gender in Latin America.

21. Neidhöfer et al. (2018, 2021b) attain this same result for relative mobility.

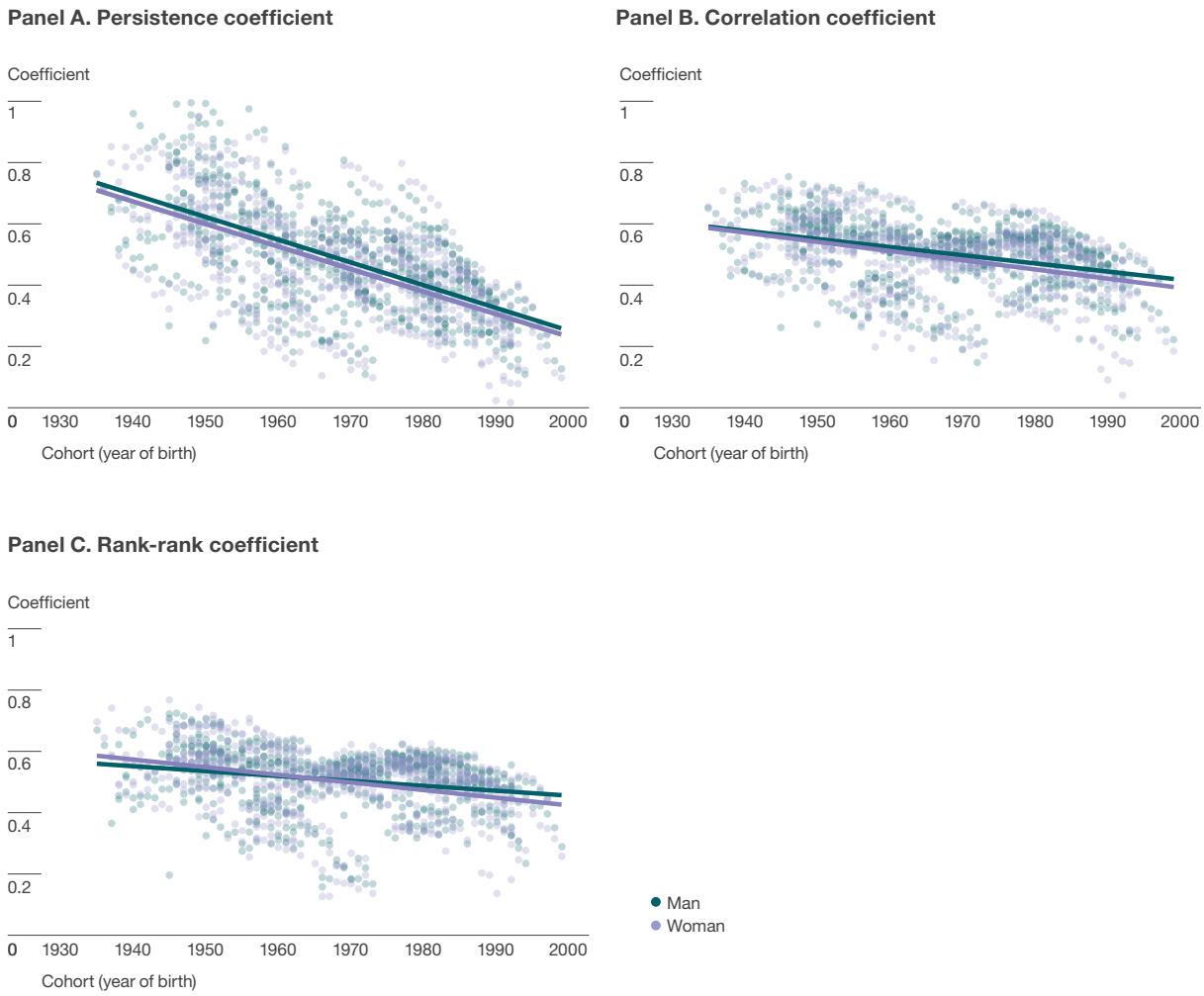
Graph 2.10
Absolute upward educational mobility in Latin America and the Caribbean by child's gender for cohorts born between 1930 and 2010



Note: Each point represents, for each country and the child's birth year, upward educational mobility for primary, secondary and university level, measured as the proportion of individuals completing those educational levels whose parents had not completed the respective level. The solid lines reflect the linear fit. In panel C the sample is restricted to the main cities of each country. Twenty-two countries in Latin America and the Caribbean are covered. For more information, see the section "Calculating intergenerational educational mobility from population and housing census data" in the Appendix.

Source: Authors based on data from IPUMS (2020).

Graph 2.11
Relative educational mobility in Latin America and the Caribbean by gender of the child for cohorts born between 1930 and 2000



Note: Each point represents, for each country and the child's birth year, the value of the relative mobility index (persistence coefficient in panel A, correlation coefficient in panel B and *rank-rank* coefficient in panel C). The solid lines represent the average for Latin America and the Caribbean for each indicator, distinguishing by gender and calculated with a linear adjustment. For more information on the methodology used in the relative mobility indexes, see Box 2.1 and, on the data source, the section "Calculating intergenerational educational mobility from population and housing census data" in the Appendix.

Source: Authors based on data from IPUMS (2020).

Ethnic groups

The literature on intergenerational mobility is extremely scarce in the analysis by ethnic group, and not necessarily for lack of interest in the topic, but rather due to the lack of standardized registry of this type of information (Major and Machin, 2020). For Latin America and the Caribbean, the evidence is even scarcer than for other regions. To fill this information gap, educational mobility measures generated especially for this report are shown below. Two sources were used: census data from six countries (Brazil, Colombia, Costa Rica, Ecuador, El Salvador, and Uruguay) and the ECAF 2021, which for the first time incorporates respondents' (self-reported) ethnicity.

●●

In all countries, upward mobility is greater for whites and mestizos than for Afro-descendants and indigenous people. These gaps widen in secondary and university education

Graph 2.12 shows the ratio of absolute upward mobility measures for three ethnic groups (Afro-American, indigenous and mestizo) to those of the white population. These ratios are shown for primary (panel A), secondary (panel B) and university (panel C) education in the six Latin American countries for which this information is available in the censuses.[22] A value close to 1 for this ratio represents a similar level of mobility between each of the ethnic groups and whites, while values below 1 are indicative of lower mobility of each ethnic group relative to whites. The size of the bubble represents the proportion of each ethnic group in the respective country's population.[23] In all countries, upward mobility is higher for whites and mestizos than for Afro-descendants and indigenous people. Among the latter two groups, indigenous people tend to be even less mobile than Afro-descendants, with some exceptions. The levels of mobility of Afro-descendants and indigenous people with respect to the white group are substantially lower in some countries and are between 60% and 80% lower than those of whites. These gaps widen when considering mobility in secondary and university education. Graph A 2.2 in the Appendix shows that these differences are statistically significant, even when comparisons are made within narrowly defined geographic regions.[24]

Census data from Brazil offer an additional opportunity for analysis: to study how absolute mobility by ethnic group has evolved over time. Brazil stands out for having significant gaps in the mobility of mestizos, Afro-descendants, and indigenous people with respect to whites, as shown in Graph 2.13. The first three groups represent approximately 50% of the population, but their mobility levels are much lower than the average observed in the country. The graph shows that, over time, the gaps between these groups have remained stable or have worsened, as is the case of the indigenous population, whose levels of mobility in secondary education have not followed the same rate of improvement as the rest of the groups, thus falling even further behind. These results support the findings of Cruces et al. (2012), who show that in both Brazil

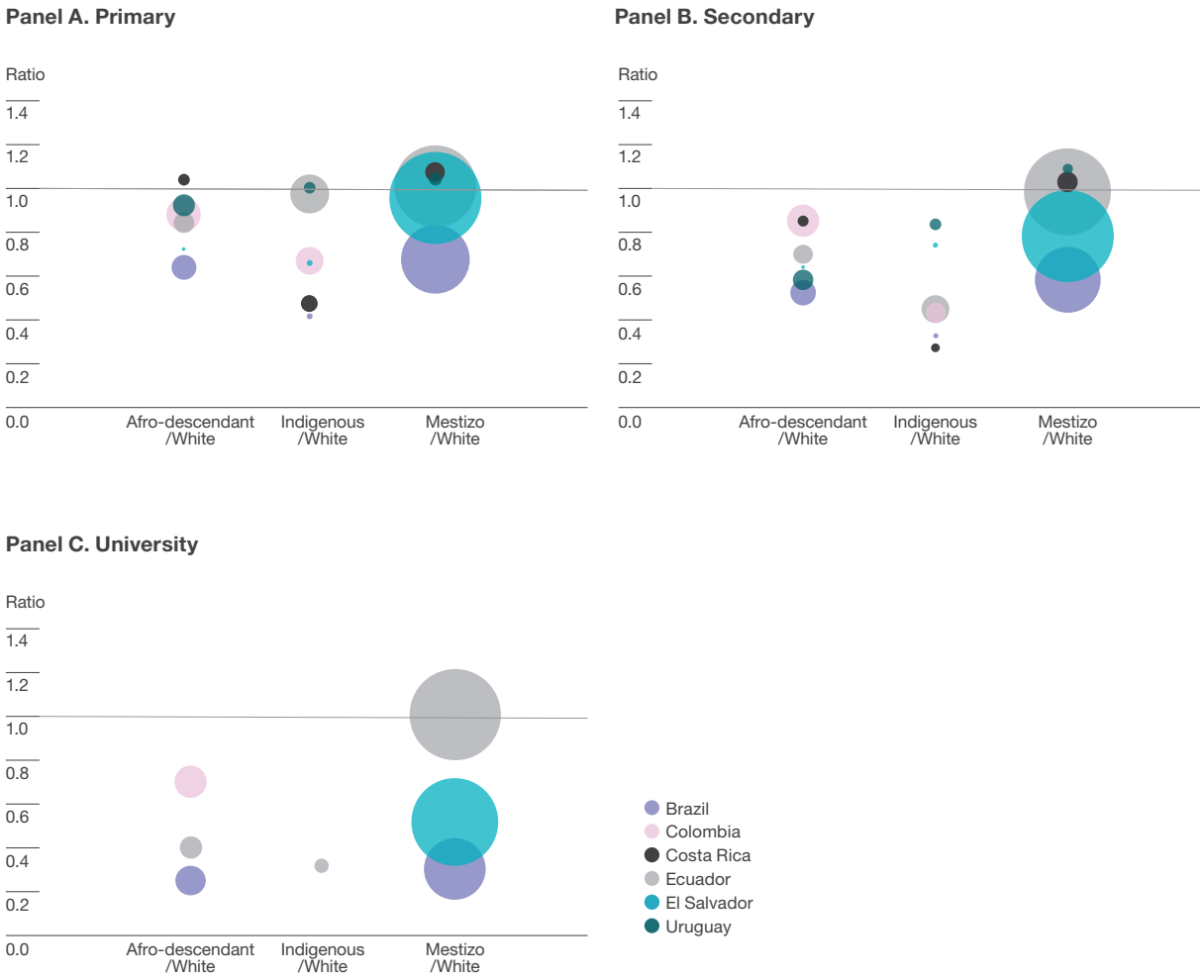
22. The analysis of mobility in university education for African Americans and indigenous people can be done in fewer countries because the sample sizes are smaller. This is because mobility in university education is only computed for the main cities of each country, where, in turn, the proportion of minority ethnic groups is, in some cases, lower than in the country aggregate.

23. The percentage is calculated on the sample of children in the census base. The highest value is the mestizo group in El Salvador, which represents 89% of the population.

24. This result is obtained by estimating the difference in means in the mobility indicators of the groups through regressions that control for region fixed effects, in order to remove the concern that the differences found are due to factors of the geography in which certain ethnic groups reside.

and Chile there is no evidence that the upward mobility gap between ethnic minority groups and the rest of the population is narrowing.

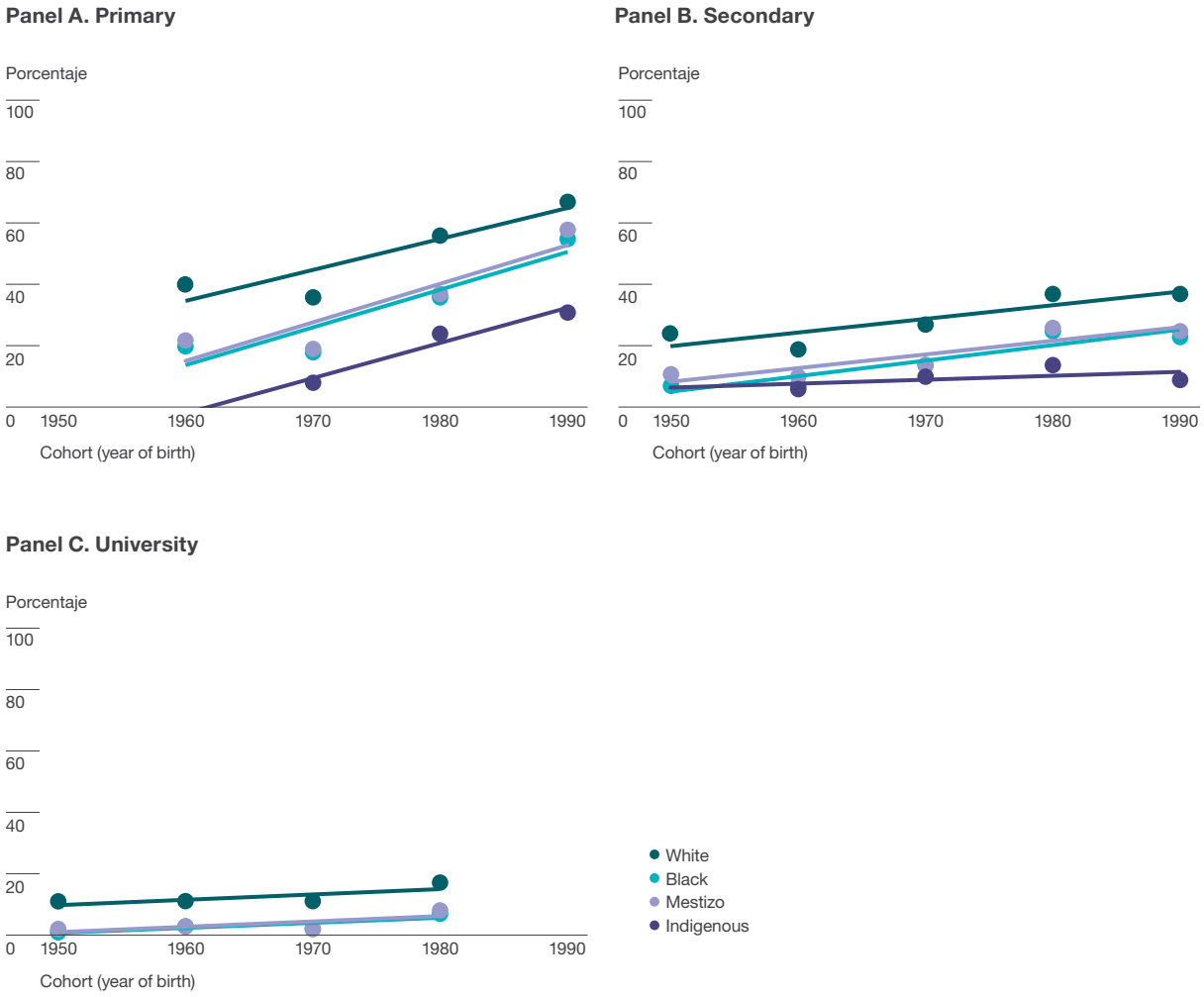
Graph 2.12
Gaps in absolute upward educational mobility of ethnic groups with respect to the white population in selected countries of Latin America and the Caribbean



Note: Each point represents the ratio of each ethnic group's absolute educational mobility measure to the white group. The size of the bubble reflects the share of each group in the total cohort population. Panels A, B and C show, respectively, educational mobility in primary, secondary and university education. In panel C the sample is restricted to the main cities of each country. The cohorts available in each country are: 1960-1990 for Brazil and 1980-1990 for Colombia, Costa Rica, Ecuador, El Salvador, Puerto Rico and Uruguay.

Source: Authors based on data from IPUMS (2020).

Graph 2.13
Absolute upward educational mobility of ethnic groups in Brazil for cohorts born between 1950 and 2000



Note: Each point represents, for each country and child's birth cohort (grouped by decade), the upward educational mobility for primary, secondary and university level, measured as the proportion of individuals completing each of these levels whose parents did not complete the respective educational level. The solid lines reflect the linear fit. In panel C, the sample is restricted to the five main Brazilian cities. In these cities, the indigenous population represents a marginal fraction and is therefore omitted from the analysis.

Source: Authors based on data from IPUMS (2020).

The 2021 ECAF data support the differential patterns in mobility for different ethnic groups found using the census data. Table 2.3 shows that, in effect, white or mestizo individuals have a higher probability of surpassing their parents' educational level than those who identify with minority ethnic groups, regardless of the educational level attained by the parents. The table also shows, consistent with the results of absolute mobility by gender, that men

have shown less upward mobility than women, except in primary education, where there are no gender differences.

Table 2.3
Differential probability of experiencing absolute upward mobility by gender and ethnicity according to the highest level of education attained by parents

	Parents did not complete		
	Primary education (1)	Secondary education (2)	Higher education (3)
Man	-0.021	-0.033*	-0.049***
White or mestizo	0.061***	0.080***	0.038***
Observations	1,009	3,079	4,433

Note: Each column reports the coefficients of separate regressions estimated by ordinary least squares, where the dependent variable takes the value 1 if the adult child (respondent) completed primary education and their parents did not (column 1); if they completed secondary school and their parents did not (column 2); and if they completed higher education and their parents did not (column 3). The independent variables are an indicator of whether the respondent is male, white, or mestizo (both coefficients reported in the table), the age of the adult child and parent (linear and quadratic), country fixed effects, and several variables of the socioeconomic level of the parents when the respondent was 14 years old. The base categories are women and people who do not self-perceive themselves as white or mestizo. Parental education is measured as the highest level between mother and father. The sample covers children born after 1950. Asterisks indicate statistical significance of the respective coefficient: *** at 1%, ** at 5% and * at 10%. For more information on the CAF survey, see the first two sections of the Appendix.

Source: Authors based on data from ECAF 2021 (CAF, 2022).

Mobility in geographic space

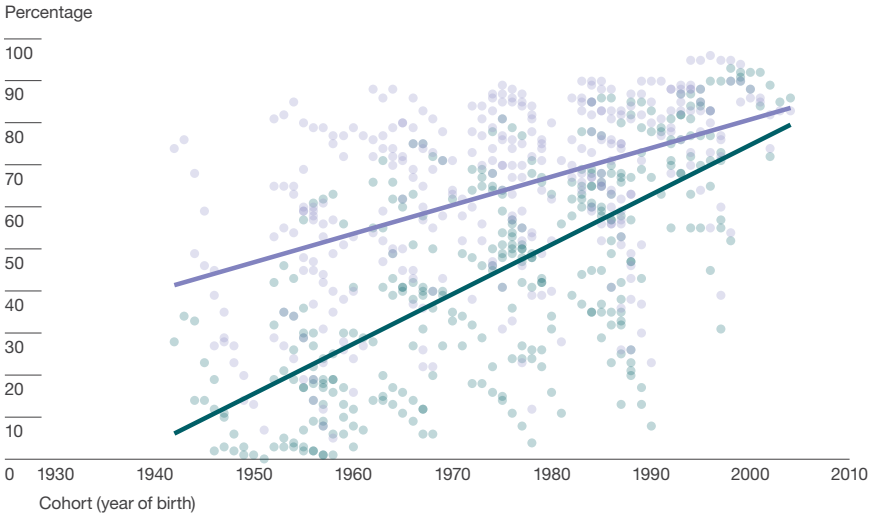
Another relevant dimension, which potentially defines educational opportunities, is related to the degree of urbanization of the geographic space where the household is located. Although the urban-rural dichotomy hides nuances in the definition of each area depending on the country, it is a typical dimension for evaluating this type of heterogeneity. Graph 2.14 shows the average trend for Latin American and Caribbean countries in educational mobility in urban and rural areas.

●●
The rural-urban gap in primary education has practically disappeared, while at the secondary level it persists or has widened

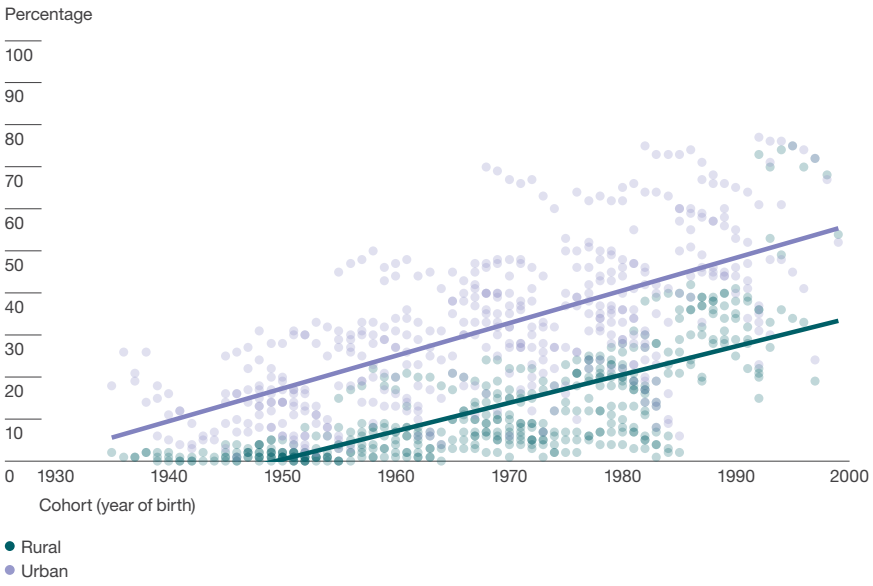
Educational mobility was very asymmetric between urban and rural areas in the cohorts born between the 1930s and 1950s in the region. The universalization of primary education gradually closed the rural-urban gap, until it practically disappeared in the cohort born in the 2000s (panel A of the graph). The picture, on the other hand, differs when observing the performance of educational mobility at the secondary level (panel B). In this case, the initial gap is persistent and even widens for the most recent cohorts. On average for all the countries considered, the probability of completing secondary school for children of parents who did not was about 20 percentage points higher for those living in urban areas than for those living in rural areas. However, progress by country is uneven. Costa Rica is an example of significant reductions in this gap (panel C).

Graph 2.14
Urban-rural comparison of absolute upward educational mobility in Latin America and the Caribbean for cohorts born between 1930 and 2010

Panel A. Primary (average Latin America and Caribbean)

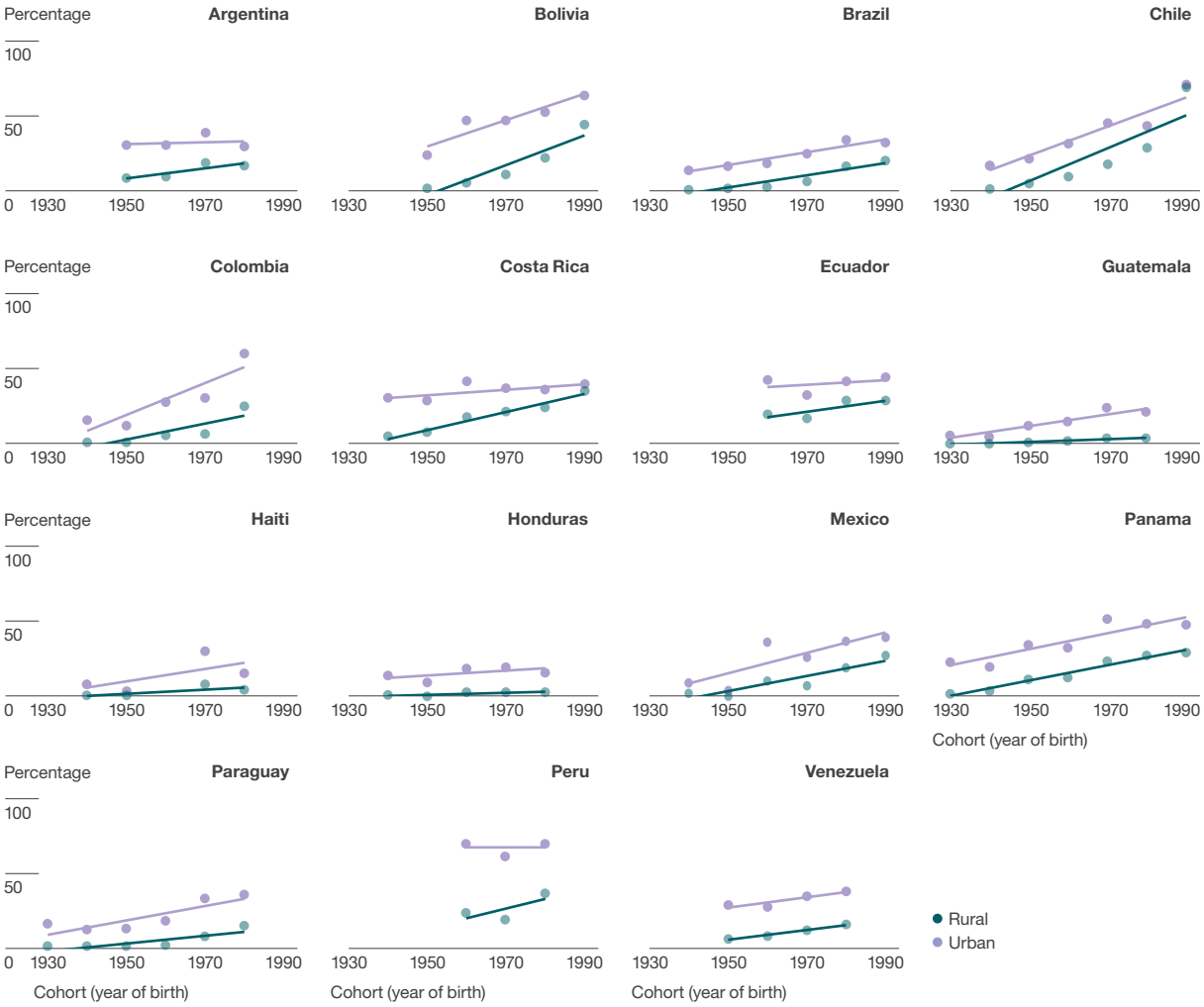


Panel B. Secondary (average Latin America and the Caribbean)



Continued on next page →

Panel C. Secondary, by country



Note: In panels A and B each point represents, for each country and the child's birth year, upward educational mobility for the primary and secondary levels, measured as the proportion of individuals who completed those levels of education while their parents did not. The countries included in both panels are the same as those in panel C, which present, for each country and decade of birth, upward educational mobility for the secondary level. The solid lines reflect the linear adjustment. For more information, see the section "Calculating intergenerational educational mobility from population and housing census data" in the Appendix.

Source: Authors based on data from IPUMS (202500).

Thanks to the increasing availability of sources of information with great geographic detail, several studies have documented the significant heterogeneity of intergenerational mobility within countries. The findings of this literature are consistent with the phenomenon that will be analyzed in greater detail in Chapters 3 and 4, which indicates that not only family characteristics open opportunities for educational or social mobility in general but so does the physical and social environment in which people's lives unfold (Chetty et al., 2014; Alesina et al., 2021; Muñoz, 2021). Using data from the population and housing censuses of countries in the region, Graphs 2.15 and 2.16 present measures of educational mobility for a geographic level equivalent, in most cases, to the lowest level of subnational government (municipalities or departments, for example).[25] These graphs reveal the significant geographic variability in the levels of educational mobility for all indicators, in absolute and relative terms alike.

●●
Within countries, there is significant geographic variability in the levels of educational mobility for all indicators—absolute and relative alike

As is to be expected in the context of a process of universalization of the most basic educational coverage, the geographic dispersion of mobility in primary education within countries has decreased significantly over time. This is shown in panel B of Graph 2.15, where each point represents the standard deviation of the indicator within each country, while the solid line reflects the simple average for the entire region. Relative mobility indicators follow a similar pattern (panel B of Graph 2.16). This convergence does not seem to be occurring, however, in terms of absolute mobility in secondary education. Panel D of Graph 2.15 shows that, in most countries, dispersion within countries has been stable and even increasing across the cohorts. This phenomenon would indicate a growing degree of asymmetry in opportunities in different regions despite the (moderate) expansion in secondary education coverage experienced by the countries of the region.

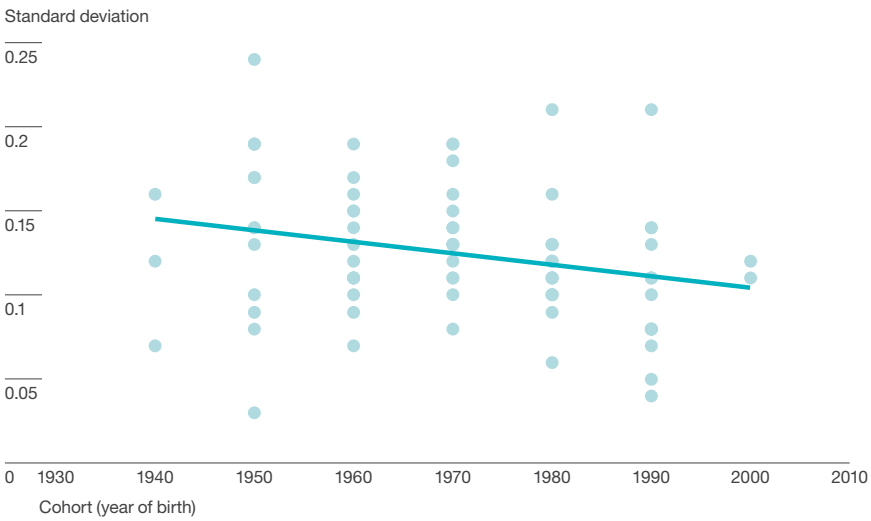
25. Values are shown for those born in the 1980s.

Graph 2.15
Absolute upward educational mobility in primary and secondary education in small geographic areas of Latin America and the Caribbean and the evolution of intra-country dispersion

Panel A. Absolute mobility in primary education (1980-89 cohort)



Panel B. Intra-country dispersion of absolute mobility in primary education

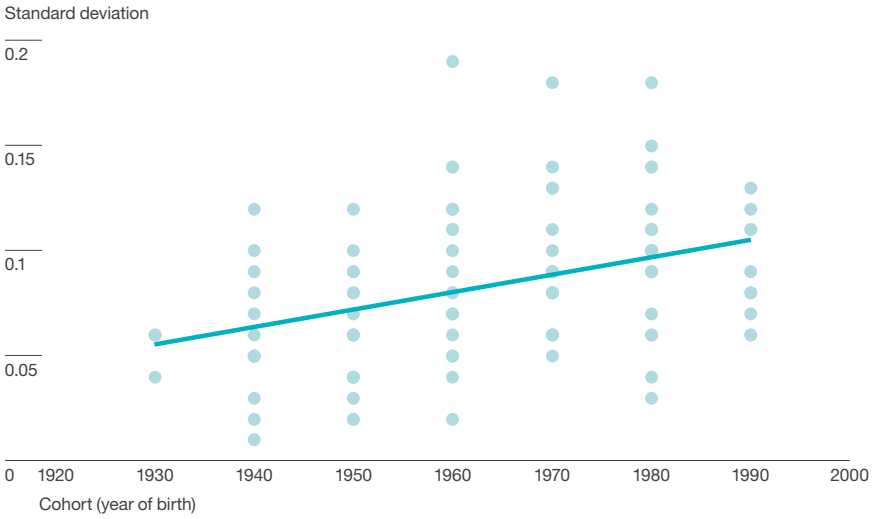


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Panel C. Absolute mobility in secondary education (1980-89 cohort)



Panel D. Intra-country dispersion of absolute mobility in secondary education



Note: Panels A and C present the absolute mobility index values for primary and secondary, respectively, calculated at the subnational level of government (typically municipal or analogous level) for the 1980-1989 cohort. Panels B and D report the intra-country dispersion (standard deviation) for these measures in each cohort (decade); the solid line represents the average for Latin America and the Caribbean, calculated with a linear fit. For more information, see the section "Calculating intergenerational educational mobility from population and housing census data" in the Appendix. Panel A and B do not include Jamaica, Puerto Rico, Trinidad and Tobago because the censuses do not have harmonized information for small geographic areas. Panel A also lacks primary mobility data for the 1980 cohort for the Dominican Republic.

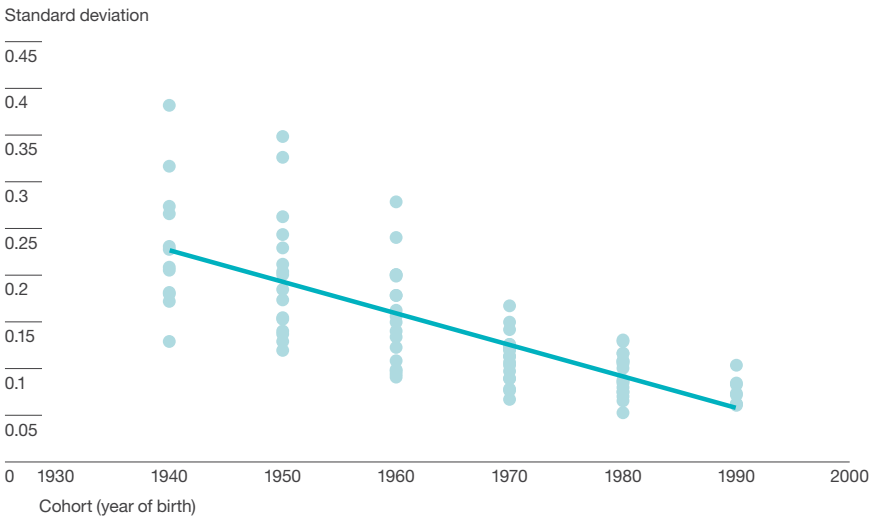
Source: Authors based on data from IPUMS (2020).

Graph 2.16
Relative educational mobility in small geographic areas of Latin America and the Caribbean and the evolution of intra-country dispersion

Panel A. Persistence coefficient (1980-89 cohort)



Panel B. Intra-country dispersion of the persistence coefficient

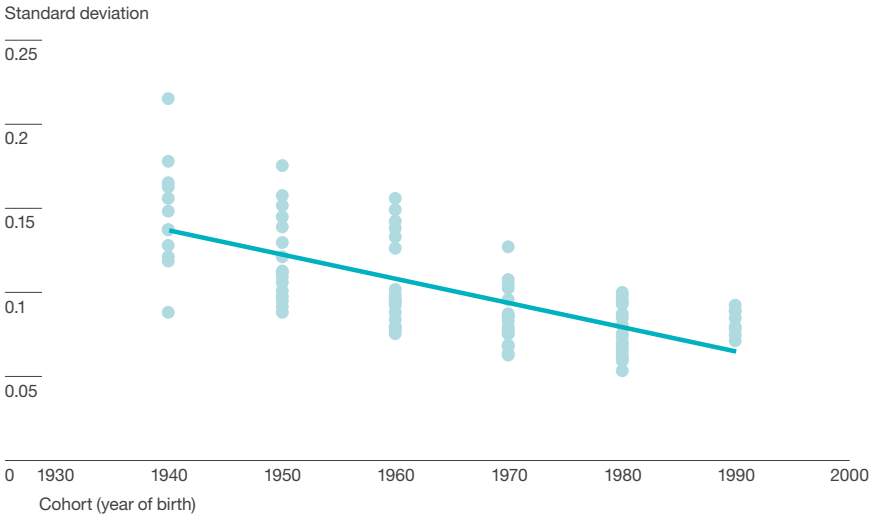


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Panel C. Correlation coefficient (cohort 1980-89)



Panel D. Intra-country dispersion of the correlation coefficient



Note: Panels A and C present the values of the relative mobility index estimated by the persistence and correlation coefficient, respectively, calculated at the subnational level of government (typically municipal or analogous level) for the 1980-89 cohort. Panels B and D report the intra-country dispersion (standard deviation) of these measures in each cohort (decade); the solid line represents the average for Latin America and the Caribbean, calculated with a linear fit. The data for Uruguay corresponds to the 1970-79 cohort because data for relative mobility for the following cohort is not available. For more information, see the section "Calculation of intergenerational educational mobility from population and housing census data" in the Appendix. Panel A and B do not include Jamaica, Puerto Rico, Trinidad and Tobago because the censuses do not have harmonized information for small geographic areas.

Source: Authors based on data from IPUMS (2020).

This marked disparity in educational mobility at the level of small geographic areas raises questions regarding the local factors that may condition individual opportunities to experience such mobility. These factors, related to families' characteristics in these areas and to other institutional and environmental aspects, may be diverse. Chapters 3 and 4 of this report delve into some specific mechanisms behind regional heterogeneities. This chapter analyzes the relationship between the population size of geographic areas and the levels of absolute and relative mobility within countries, from which two interesting patterns emerge. First, the levels of absolute mobility, both in primary and secondary education, increase in all countries as the population size gets larger (Graph 2.17). Thus, large urban centers stand out as having, on average, greater opportunities for upward mobility for children of less educated parents. The results are less conclusive when analyzing relative mobility measures and population size. While larger population sizes are associated with lower coefficients of intergenerational persistence in the years of education of parents and children (panel A of Graph 2.18), this relationship is attenuated and even reversed in many countries when the indicator of relative mobility used is the correlation coefficient (panel B of Graph 2.18). That is, more populated areas also offer opportunities for educational advancement to children of relatively more educated parents. Overall, the relative position of each generation in the distribution of years of education does not change substantially.[26]

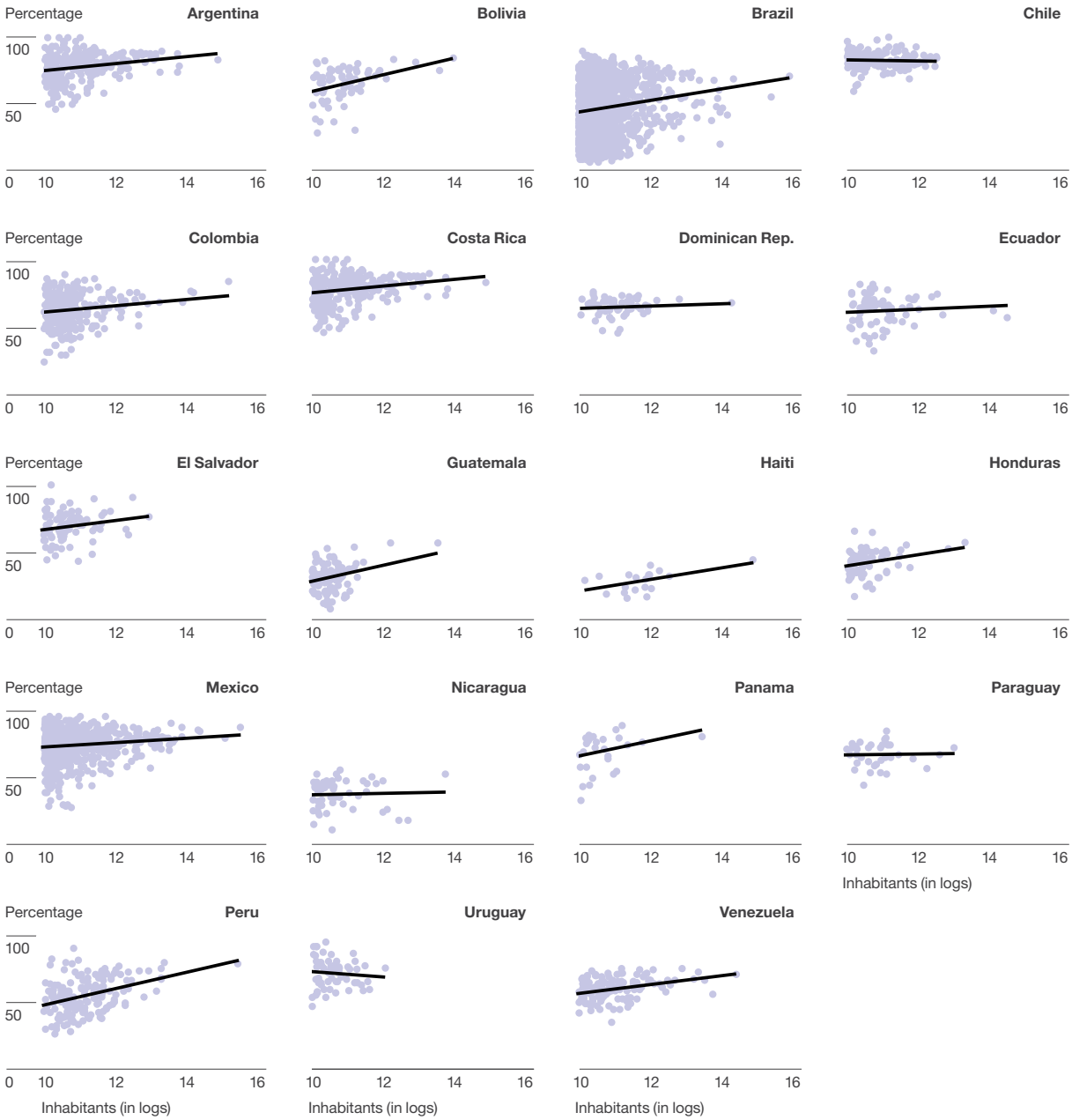
●●

Large urban centers present greater opportunities for upward mobility for children of less educated parents, but this is less clear in relative mobility

26. These results are consistent with those found by Neidhöfer et al. (2021b), who show, based on survey data, that absolute educational mobility in secondary school is higher and the coefficient of persistence of years of education is lower in large cities (with more than 300,000 inhabitants) than in small cities.

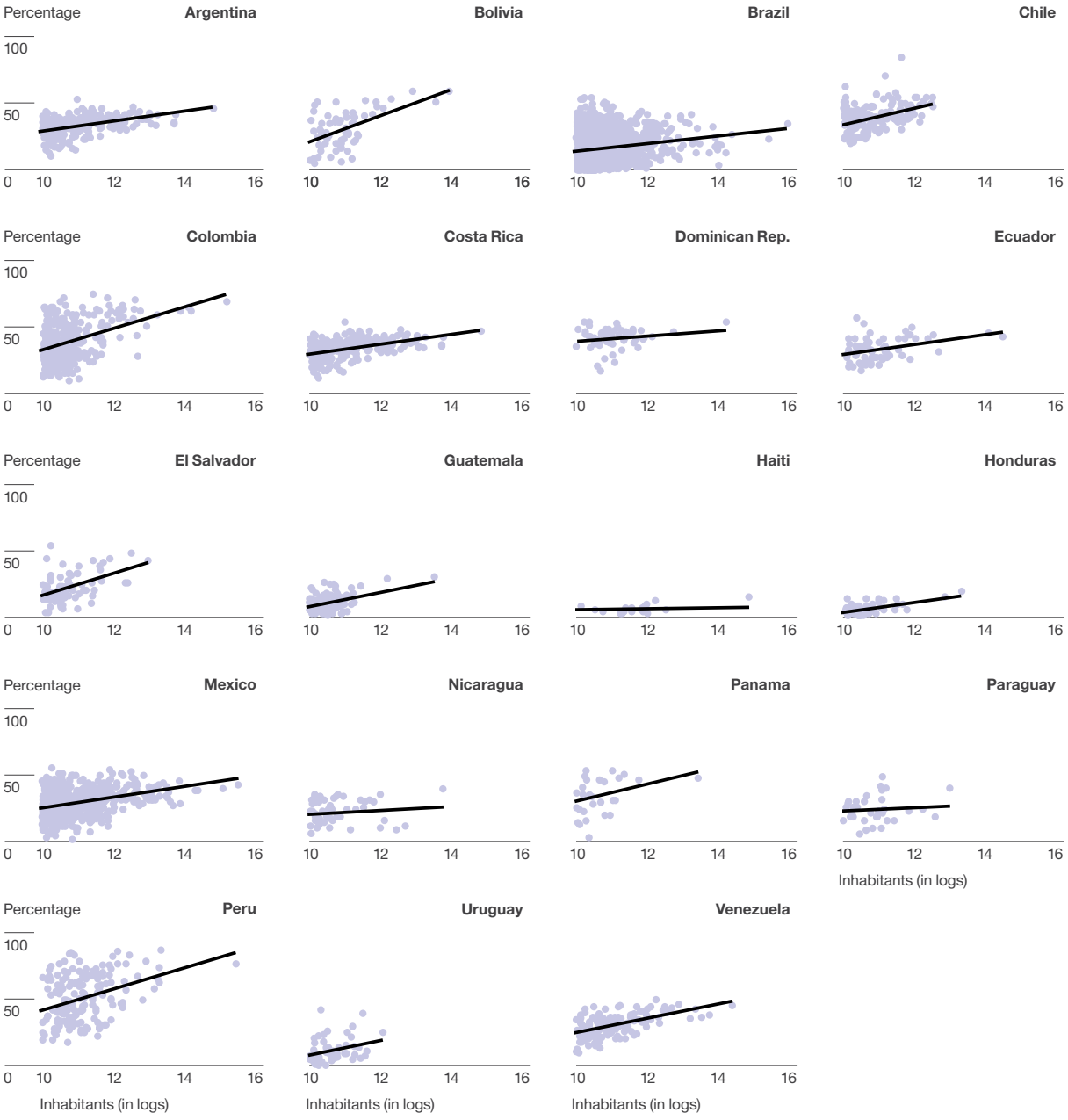
Graph 2.17
Correlation between population size and absolute mobility in small geographic areas for the cohort born in 1980-1989

Panel A. Absolute upward mobility in primary education



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Panel B. Absolute upward mobility in secondary education

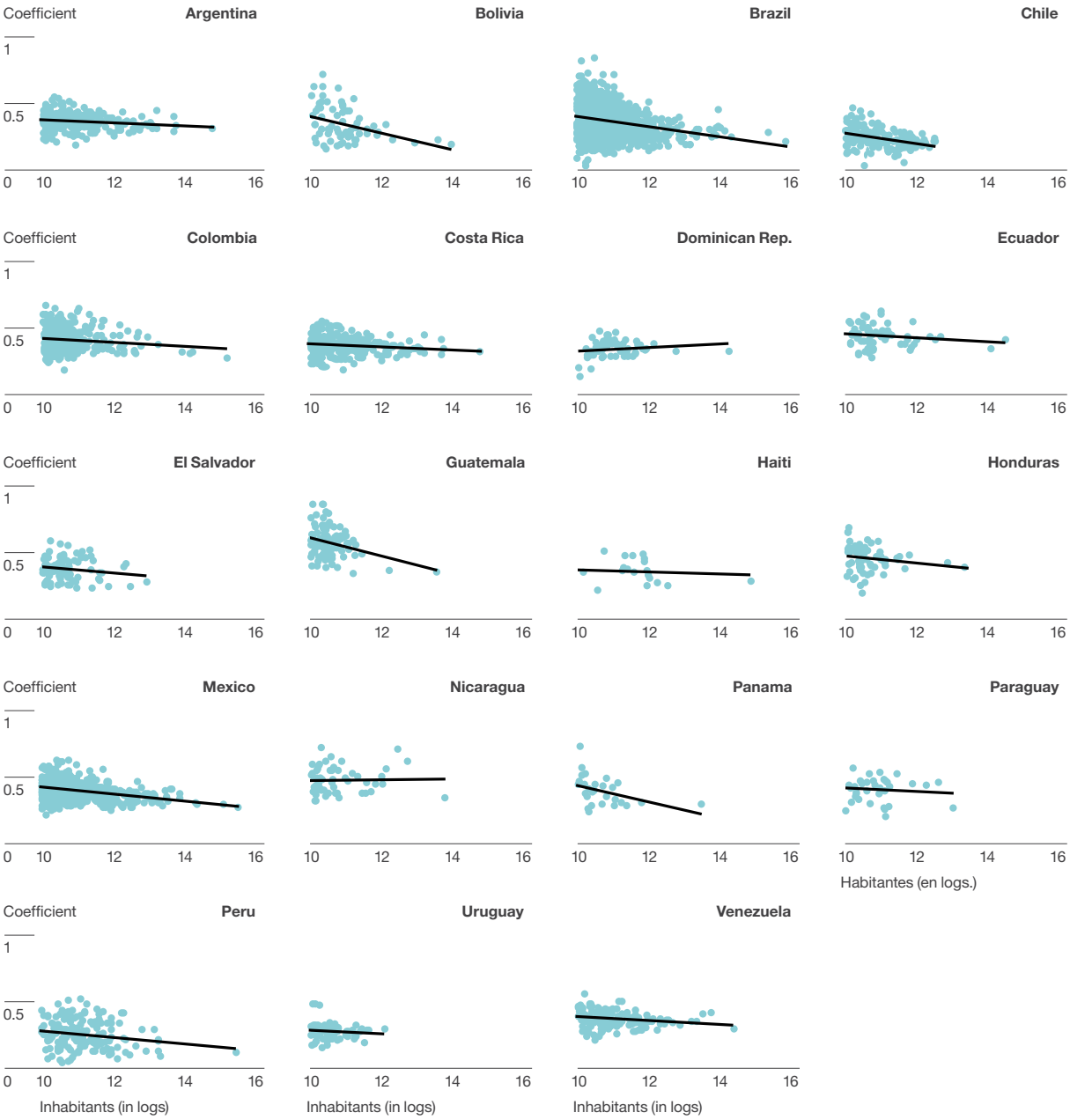


Note: Panels A and B show the correlation between measures of mobility in primary and secondary education—calculated at the subnational level of government (typically municipal or analog level) for the 1980-89 cohort—and the population size of these geographic areas in the same year. Population size is calculated as the logarithm of the total population according to census data. Each point corresponds to a municipality or department. The solid line reflects the linear fit. Jamaica, Puerto Rico, and Trinidad and Tobago are not included because the censuses do not have harmonized information for small geographic areas. In panel A for the Dominican Republic, the data corresponds to the 1990-99 cohort because data for absolute mobility in primary education for the previous cohort is not available.

Source: Authors based on data from IPUMS (2020).

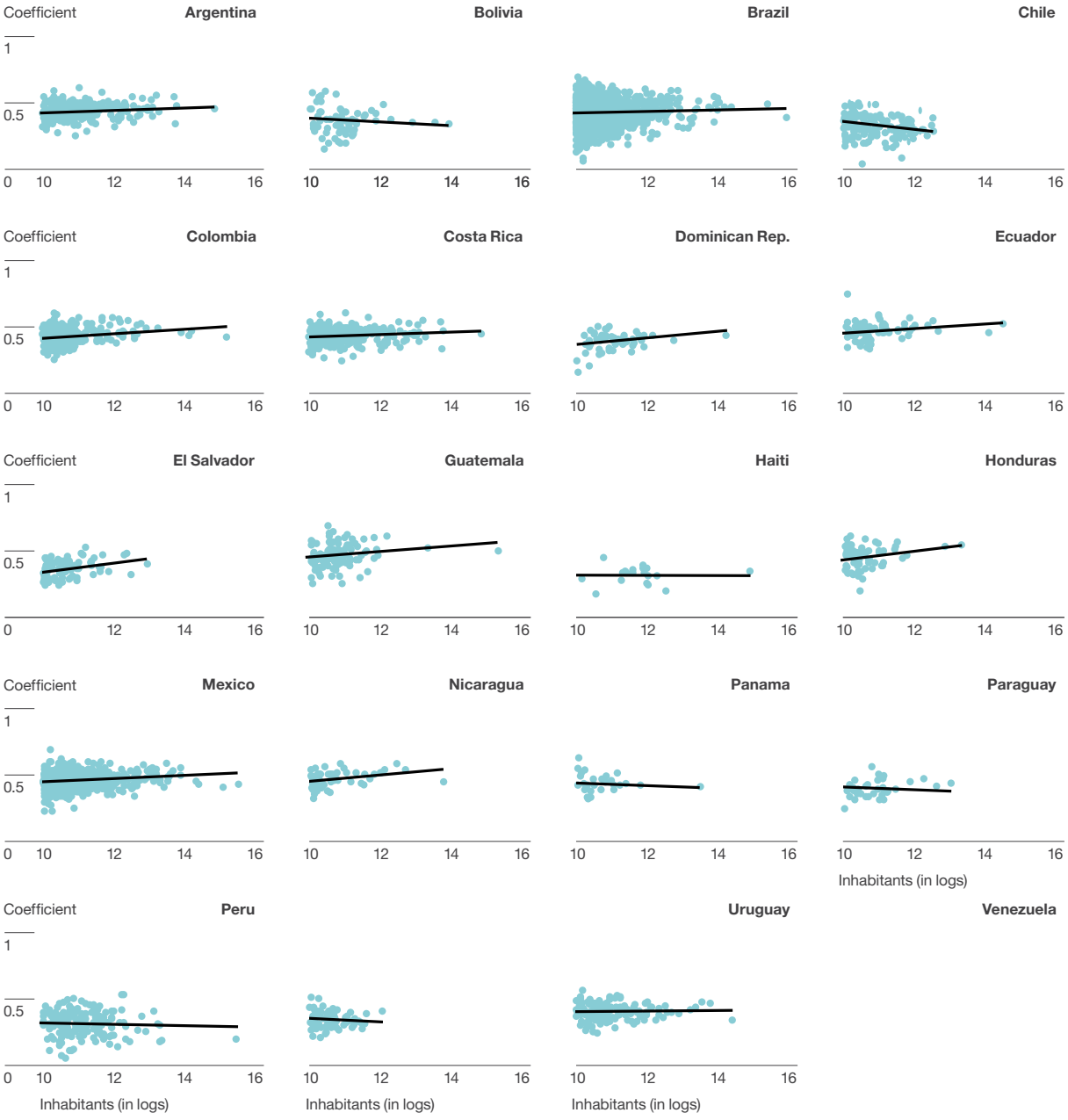
Graph 2.18
Correlation between population size and relative mobility in small geographic areas for the cohort born in 1980-1989

Panel A. Persistence coefficient



Continued on next page →

Panel B. Correlation coefficient



Note: Panels A and B present the relative mobility index values estimated by the persistence and correlation coefficient calculated at the subnational level of government (typically municipal or analogous level) for the 1980 cohort. Population size is calculated as the logarithm of the total population according to census data. Each point corresponds to a municipality or department. The solid line reflects the linear fit. In the case of Uruguay, data are reported for the 1970 cohort because data for relative mobility are not available for the following cohort. Jamaica, Puerto Rico, and Trinidad and Tobago are not included because the censuses do not have harmonized information for small geographic areas.

Source: Authors based on data from IPUMS (2020).

Intergenerational mobility in other dimensions of wellbeing: health, occupation, income, and wealth

This section presents an overview of intergenerational social mobility in Latin America and the Caribbean taking into account wellbeing measures other than educational attainment. However, due to significant information restrictions it is not possible to provide a detailed analysis similar to the previous section, neither in terms of country coverage nor in terms of the periods analyzed. Nevertheless, an effort is made to systematize the best available evidence along with novel evidence generated from the ECAF 2021.

Health

Studies on intergenerational mobility in health of the adult population in Latin America and the Caribbean are practically non-existent.[27] The ECAF 2021 enables an analysis of how persistent this dimension of wellbeing is between generations, since it has harmonized information for several countries on the general health of children and parents.[28] Based on these data, and following Halliday et al. (2021), it is possible to construct an index that takes values between 0 and 100 to characterize the general health status of a person. The higher the value of the index, the better the general health status of the individual for whom it is measured (parents or children). Additionally, adjusting for age and gender, this index serves to construct a ranking of health levels in the population of parents and children.

●●
Children's health is more strongly associated with the mother's health than with the father's

Table 2.4 contains the results of ordinary least squares regression estimates showing the association in the overall health index of parents and children and in their rankings. The results are computed for the whole sample (column 1) and by gender of parents and their offspring (columns 2 to 5). The association of children's health with parents' health is 0.33 while the health rank-rank coefficient estimate is 0.31. Thus, for every 10 percentile increase in the ranking of the parents, the children are expected to climb 3 percentiles in the ranking of their own generation. The comparison of these magnitudes with similar studies for the United States (Halliday et al., 2021) and the United Kingdom (Bencsik et al., 2021) shows that intergenerational persistence in health, as in other dimensions of wellbeing, is higher in Latin America and the Caribbean. The results by gender show that the magnitude of the association of parents and children health is greater when the health of the mother is taken into account than when the health of the father is considered. However, there is no

27. The analysis of the persistence in health outcomes between parents and children, when the latter are in infancy, is made in Chapter 3.

28. The self-reported health status measure (SRHS) is a standard scale used in surveys to capture general health status. Respondents are asked to rate their health status within five possible categories: excellent, very good, good, fair, and poor.

clear pattern that the health of daughters is more correlated with family health than that of sons, as is evident from the results for developed countries.[29]

Table 2.4
Intergenerational persistence of health

	All sample (1)	According to the gender of parents and children			
		Mother-daughter (2)	Father-daughter (3)	Mother-son (4)	Parent-son (5)
Persistence coefficient	0.33***	0.28***	0.20***	0.28***	0.21***
Rank-rank coefficient	0.31***	0.31***	0.24***	0.26***	0.25***
Observations	7,911	3,879	3,050	3,454	2,808

Note: Each cell presents the coefficient of a regression estimated by ordinary least squares. In the first row, the coefficients of separate regressions are reported, where the dependent variable is the self-reported numerical health index of the child (respondent) and the independent variable is the self-reported numerical health index of the mother (column 1) or of the reference parent (column 2 to 5). The second row contains the coefficients of separate regressions, where the dependent variable is the *ranking* (percentile) that the child occupies in the numerical health index distribution and the independent variable is the ranking that the mother (column 1) or the reference parent (column 2 to 5) occupies in their respective generation. The rankings are constructed on the age- and gender-adjusted values. All regressions control for respondent and reference parent age, age squared, country fixed effects, and respondent gender fixed effect where applicable. Asterisks indicate the statistical significance of the respective coefficient: *** at 1%, ** at 5%, * at 10%. For more information on the CAF survey, see the first two sections of the Appendix.

Source: Authors based on data from ECAF 2021 (CAF, 2022).

Occupational mobility

Two sources are used to measure occupational mobility: the seventh wave of the World Values Survey (WVS), which allows comparisons with other regions of the world, and the ECAF 2021, which covers ten cities in two countries in the region.[30]

29. When the same analysis is repeated, but only taking into account people whose mother or father is still alive, daughters show greater dependence on the health of their parents than sons. This pattern is the same as that obtained using data from the ECAF 2019, which collects information on the health of the respondent's father and mother only if they are alive.

30. In both sources, individuals over 25 years of age are considered in order to avoid biases linked to joint educational and occupational decision making, and with upper limits of 60 or 65 years of age, depending on the needs of the analysis. Individuals are considered employed at the time of the survey and, in the case of the ECAF Survey, are also restricted to individuals whose parents were employed when the child was 14 years old. In ECAF, the coding of jobs follows the International Standard Classification of Occupations (ISCO) to one digit, while the WVS uses a close classification, but requires some minor decisions to homogenize occupational categories.

Both sources collect information on occupations of the father of the respondent using retrospective questions.[31]

Implementing the methodology used in the work of Ciaschi, Gasparini et al. (2021), prepared for this report, the sample is divided into three occupational groups according to their complexity, that is, according to a measure that approximates the skill levels required to perform the tasks that characterize each occupation.[32] Using this division, a 3x3 matrix is constructed, which arranges the pairs of occupations of parents and children in nine cells. Based on the elements of this matrix, the intergenerational dependency in occupations index is calculated, which is presented in Graph 2.19. This indicator takes higher values the greater the persistence of occupations between parents and children, i.e., the more populated the main diagonal of the matrix and its surrounding cells are.

Using the WVS data, an estimate of this occupational dependence between generations for people born in three different decades (1960s-1980s) and in different regions of the world can be generated, thus enabling a comparative analysis of the evolution of occupational persistence. The values shown in Graph 2.19 indicate that Latin America and the Caribbean is the region with the highest occupational persistence, and that the pattern of change over time does not show a clear reduction in the three cohorts analyzed. While the evolution of the intergenerational dependency in occupations index in the region (first rising and then falling) resembles that observed in Europe, the pattern in the rest of the regions is rather stable or slightly rising over time. Using information from the ECAF 2021, although the levels of the indicator probably differ because it is a representative survey of large cities and not of entire countries, the conclusion regarding temporal evolution is reaffirmed. These results are consistent with those of Ciaschi, Gasparini et al. (2021), which harmonizes household survey data for seven countries in the region and finds the same inverted U pattern in the evolution of the intergenerational dependency in occupations index.

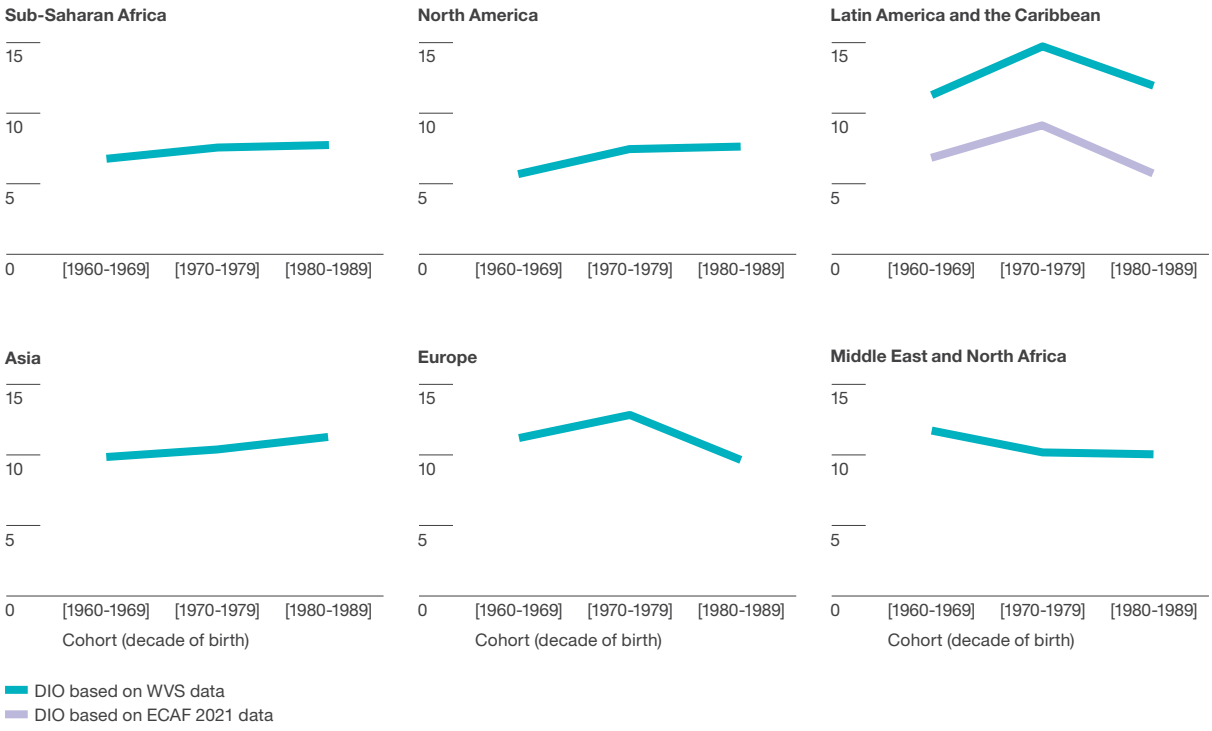
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Latin America and the Caribbean is the region with the highest occupational persistence. Moreover, this persistence does not show consistent declines over time

31. The seventh wave of the World Values Survey (2017-2020) covers 50 countries of the world and more than 70,000 respondents. The countries included in Latin America and the Caribbean are Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Nicaragua, Peru, and Puerto Rico. The WVS also includes Guatemala, but this country does not ask about the parent's occupation.

32. Specifically, using ISCO coding, occupations grouped in digits 1 to 3 (categories 1 and 2 in the WVS) are considered "high complexity;" those in digits 4 to 6 and 10 (3 to 6 in the WVS) are considered "medium complexity;" and those in digits 7 to 9 (7 to 10 in the WVS) are considered "low complexity." It should be clarified that those self-employed informal workers classified in occupations grouped in digit 1 were included in the medium-complexity category. Occupations categorized within the group corresponding to "Armed Forces" were labeled as medium complexity.

Graph 2.19
Intergenerational dependency in occupations index in different regions of the world

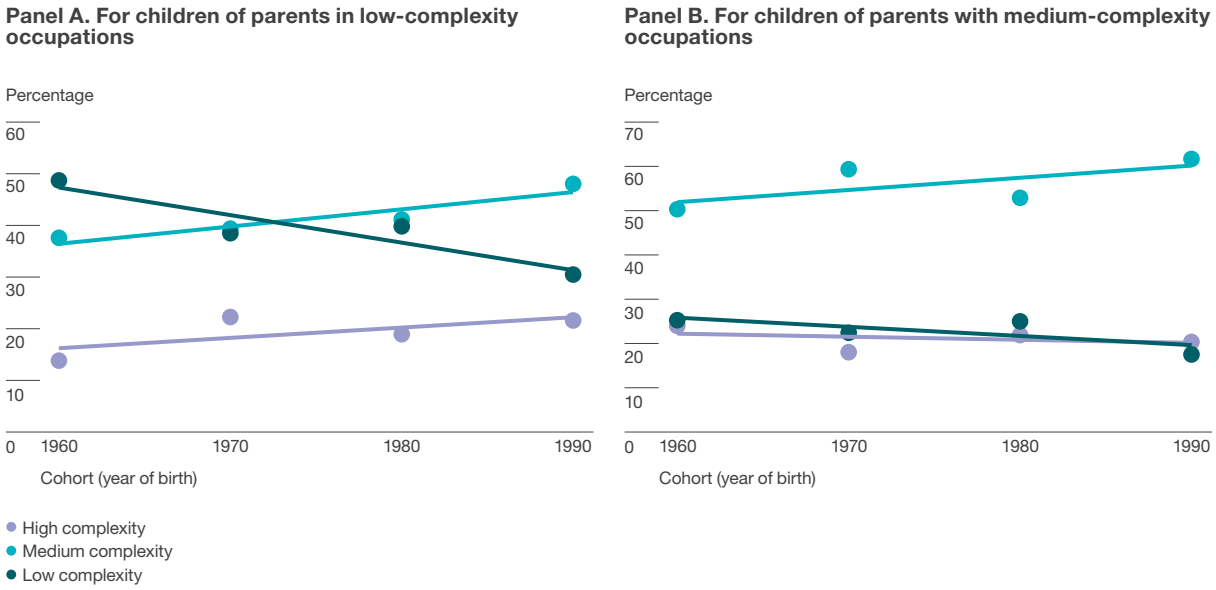


Note: The graph reports the evolution of the intergenerational dependency in occupations index by region. For the WVS data, the sample comprises individuals who at the time of the survey were aged 30 to 60 between the years 2017 and 2020 and were working. Three levels of occupational categories are created from the ten occupations available for parents and children in the WVS. For Latin America and the Caribbean (which includes Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Nicaragua, Peru, and Puerto Rico) an additional trend line is presented, which arises from the ECAF 2021. In this case, individuals aged 30 to 60 years old at the time of the survey are considered.

Source: Authors based on data from the seventh wave of the World Values Survey (Haerpfer et al. 2022). and ECAF 2021 (CAF, 2022).

Graph 2.20 shows additional information on occupational persistence to better understand how the chances of moving up the occupational complexity scale evolved for people with parents who had different occupational levels. Panel A shows the share of children whose parents were in low-complexity occupations who remained in low-complexity occupations or moved up to medium- or high-complexity occupations. The results indicate that the probability of being in low complexity occupations fell over time, a trend consistent with improvements in absolute mobility at the most basic (primary) educational levels for children of low educated parents, and that this fall translated into a larger increase in the probability of moving into medium complexity occupations than into those of high complexity. For the children of parents who had middle-level occupations, the pattern is more stable over time, with a slight increase in the probability of staying in medium-complexity occupations and no increase in the chances of moving up to high complexity ones.

Graph 2.20
Intergenerational mobility in occupations in selected cities of Latin America and the Caribbean by birth cohort (decade)



Note: The graph reports the proportion of respondents who have occupations in each of the three levels of complexity, according to the complexity of their parents' occupations. Values for respondents with fathers who were in low complexity occupations are presented in panel A and for those with fathers in medium complexity occupations in panel B. Percentages are presented for respondents born in different cohorts (from the 1960s through the 1990s). The sample consists of individuals aged 25 to 60 years who were employed at the time of the survey and whose parents were also employed when they were 14 years old. The occupational categories are divided into three levels of complexity, based on the ISCO classification of one-digit occupations (for more information, see footnote 32 of this report). The results reflect averages for the cities covered by the 2021 ECAF.

Source: Authors based on data from ECAF 2021 (CAF, 2022).

The above analysis shows that not all people have the same probabilities of moving up the occupational ladder. In this sense, it is natural to ask to what extent those who experienced educational mobility also experienced occupational mobility. Table 2.5 shows that those who moved up in educational terms have, on average, 19 percentage points additional chances of moving up in occupational terms. However, again, this relationship between educational and occupational advancement is not even among people who come from different socio-economic levels. For example, while the probability of moving up occupationally is only 18 percentage points for those who have moved up educationally and are the children of parents with a low educational level (less than complete secondary school), this probability is 31 percentage points for those who have moved up educationally but are also the children of parents with a higher educational level (secondary school or higher).

Table 2.5
Association between educational mobility and occupational mobility

	Complete sample	Parents with less than secondary education	Parents with education greater than or equal to secondary education completed
	(1)	(2)	(3)
Educational mobility	0.19***	0.18***	0.31***
Observations	3,369	2,080	817

Note: The table presents the coefficients that arise from an ordinary least squares regression on three subsamples. Column (1) reports the values for the total sample, column (2) only includes persons with parents who did not complete secondary education, while column (3) includes only those persons with parents who completed secondary education or some additional level of education. The dependent variable is a measure of occupational mobility constructed based on the ISCO classification and the independent variable is a measure of educational mobility. Occupational mobility is determined with a binary variable that takes value 1 if the individual exceeds the level of complexity of the father's occupation or equals it, in case the father's occupation was of high complexity. Educational mobility is a binary variable that takes a value of 1 if the individual exceeds the father's educational level or equals it, if the father has reached a high educational level. Occupations are grouped into three levels (low, medium, or high complexity) and the educational categories are also three: low (up to incomplete secondary school), medium (complete secondary school or incomplete higher education) and high (complete tertiary or university). Controls for age, age squared, gender, father's year of birth, city of residence and survey mode are included. The sample is composed of individuals between 25 and 60 years old who were employed at the time of the survey and whose parents were also employed when they were 14 years old. In addition, standard errors (robust) are reported in parentheses and statistical significance levels according to the p-value: *** p<0.01, ** p<0.05, * p<0.1.

Source: Authors based on data from ECAF 2021 (CAF, 2022).

This means that the educational expansion that improved absolute mobility, especially at the lower educational levels (primary education, above all), did not necessarily translate into better jobs. It is to be expected, therefore, that it did not translate into better labor income either. As will be discussed in other chapters of this report, this may occur for various reasons, among which are the problems of education systems to effectively train the human capital required for more complex occupations or the malfunctioning of labor markets, which means that certain talents being developed in the education system do not end up being assigned to occupations of a higher level of complexity. Although it is extremely difficult to separate the contribution of each of these forces in explaining the apparent decoupling between educational mobility and occupation, the problems discussed in Chapter 3 on human capital formation and in Chapter 4 on the functioning of labor markets indicate that, in the region, both are possibly acting to the detriment of the connection between skill formation and occupational progress.

Income and wealth mobility

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Available estimates place Latin America and the Caribbean among the regions with least intergenerational income mobility

Available estimates position Latin America and the Caribbean among the regions with the lowest levels of intergenerational income mobility. According to information from the Global Database on Intergenerational Mobility (GDIM, 2018), reported in Table 2.6, having parents with 1% higher income is associated in the region with an average increase of 0.86% in children's income (see column 1 in panel A of the table). These results are based, however, on relatively imperfect methodologies, in the sense that they require parental income imputation methods. Nevertheless, this value is well above high-income countries with estimates using similar methodologies, where the intergenerational income elasticity averages 0.35%. Panel B of the table shows that the coefficients are high in all countries in the region, indicating that high income persistence is a pattern common to all Latin American countries.

In a more limited group of countries there are administrative records (or surveys) that contain income information for both children and parents. According to GDIM (2018), actual intergenerational persistence could be somewhat lower than that estimated through income imputation methods (see column 2 in panel A). The evidence in Latin America and the Caribbean is still incipient. Cortés Orihuela et al. (2022) and Leites et al. (2020) use administrative records from Chile and Uruguay to estimate intergenerational elasticity, with the limitation that their analysis is restricted to the universe of formal workers. In both cases, the estimated intergenerational persistence of income is lower than the regional average (see columns 1 and 2 of panel B). Cortés Orihuela et al. (2022) also show that the income imputation methodology could be effectively overestimating intergenerational persistence.

As discussed in Box 2.1, an alternative measure to the intergenerational income elasticity is to calculate the intergenerational persistence in the *ranking* of parents and children in the income distribution of their respective generations (*rank-rank* coefficient). This alternative usually offers certain advantages in avoiding many of the biases that arise in the calculation of intergenerational elasticity given the limitations in the data. These measures were popularized by the work of Chetty et al. (2014), who estimate from administrative records a *rank-rank* correlation of 0.345 for the United States (Table 2.7), indicating that, for each additional percentile in which parents rank, their children climb 0.34 percentiles in their respective distribution. Using data from Italy, Acciari et al., (2022) and Barbieri et al., (2020) find that the *rank-rank* correlation takes values close to 0.25. An interesting conclusion of this work is that the results hold regardless of whether the parental income data are observed or imputed. The only precedents of this type of measurement for the region are the work of Leites et al. (2020) for Uruguay, which estimates a rank-rank correlation of 0.23 using administrative records, while Jimenez (2011) calculates values between 0.38-0.43 for Argentina, using parental income imputation methodologies.

Table 2.6
Estimates of the intergenerational elasticity of income

Region/Country	Method		Cohort	Age of children	Source
	Income imputation	Ordinary least squares			
	(1)	(2)	(3)	(4)	(5)
Panel A. Comparison of intergenerational income elasticity (IGE) by regions					
East Asia and the Pacific	0.53 [4]	0.40 [1]	1960/1970	48-58	GDIM (2018)
Europe and Central Asia	0.48 [8]	0.33 [1]	1960/1970	47-57	
High income	0.35 [25]	0.27 [6]	1960/1970	52-62	
Latin America and the Caribbean	0.86 [8]	-	1960/1970	45-55	
Middle East and North Africa	0.82 [4]	-	1970	41-51	
South Asia	0.44 [2]	0.59 [2]	1960/1970	46-56	
Sub-Saharan Africa	0.68 [13]	0.36 [1]	1960/1980	42-52	
Panel B. Estimates of intergenerational income elasticity (IGE) in Latin American countries.					
Argentina	0.70-0.78		1970	26-38	Jiménez (2011)
Chile	0.57-0.76		1970	33-43	Núñez Miranda (2010)
Brazil	0.5	0.28	1980	29-34	Cortés Orihuela et al. (2022)
Bolivia	0.69		1960	44-54	Dunn (2007)
Colombia	0.58		1960	44-54	Ferreira y Veloso (2006)
Ecuador	0.87		1970	28-38	GDIM (2018)
Guatemala	1.1		1970	33-43	
Panama	1.03		1970	33-43	
Peru	1.02		1970	34-44	
Uruguay	0.97		1970	28-38	
Perú	0.67		1960	44-54	Grawe (2001)
Uruguay		0.21-0.23	1980-1990	20-40	Leites et al. (2020)

Note: The table presents different estimates of the intergenerational income elasticity, distinguishing according to the method used: TSTSLS in column (1) and OLS (based on information linked to the income of the two generations) in column (2). The value between brackets in columns (1) and (2) of panel A indicates the number of countries with which the average for the region was computed. For more information on the countries included in the regions, see the Appendix.

Source: Authors based on data from the sources mentioned in column (5).

Table 2.7
Estimates of rank-rank coefficients of income

Region/Country	Method		Cohort	Age of children	Source
	Income imputation	Ordinary least squares			
	(1)	(2)	(3)	(4)	(5)
A. International comparison of rank-rank income coefficients					
Italy	0.26				Barbieri et al. (2020)
United States		0.34	1980	30-32	Chetty et al. 2014
B. Rank-rank coefficient estimates of income in Latin American countries					
Chile	0.22	0.24	1980	29-34	Cortés Orihuela et al. (2022)
Argentina	0.38-0.43		1970	26-38	Jimenez (2011)
Uruguay		0.23	1980-1990	20-40	Leites (2020)

Note: The table presents different estimates of the income rank-rank coefficient, distinguishing according to the method used: TSTSLS in column (1) and OLS (based on information that has linked the income of the two generations) in column (2).

Source: Authors based on the documents mentioned in column (5).

In the case of wealth, there are no harmonized data to compare between countries and there are no studies for Latin America either. The next subsection will present novel evidence from the ECAF survey on persistence using an indicator that approximates wealth and asset holdings. Moreover, Box 2.4 summarizes the evidence for developed countries from various studies and Chapter 5 expands on the evidence.

Overall, the limited knowledge on the degree of persistence of income levels of parents and children in Latin America and the Caribbean (in addition to the total absence of knowledge on the persistence of wealth) highlights the need to strengthen both the information systems of administrative records and the development of longitudinal surveys for an in-depth analysis of social mobility in the region. Extrapolating the results of educational mobility in the region to other dimensions of wellbeing, such as income or wealth, could be risky due to the imperfect functioning of educational systems, labor markets, and financial markets. These imperfections can create barriers for, for example, progress in educational mobility to translate linearly into mobility in other dimensions of wellbeing. Indeed, this relationship, although close, is not perfectly linear. Graph 2.21 shows the relationship between intergenerational persistence in years of education and income in all countries for which information is available for cohorts born in the 1960s and 1970s, grouping countries based on the type of methodology used to calculate the latter indicator (using income imputation methods versus those for which income is available for parents and children). In both cases, while there is a positive relationship, there is also wide variability, suggesting that the two measures do not necessarily move in tandem.

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The scarce evidence on income and wealth mobility reflects the need to strengthen information from administrative records and longitudinal surveys

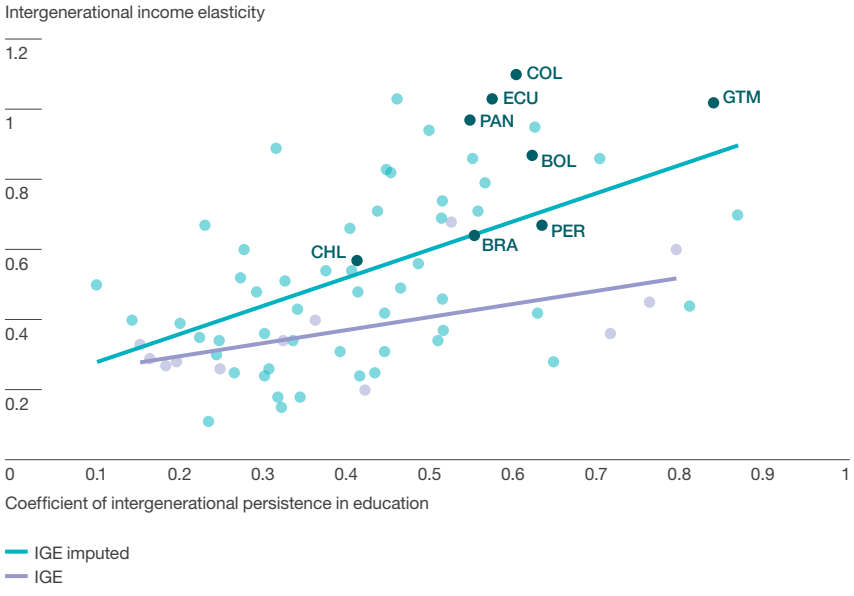
Box 2.4
International evidence on intergenerational (in)mobility of wealth

One of the pioneering works on intergenerational wealth mobility is that of Charles and Hurst (2003), who study the phenomenon for the United States. The authors estimate a coefficient of persistence in net wealth between parents and children of 0.37, pointing to a relatively high persistence in this dimension of wellbeing. More recently, Boserup et al. (2016) turn their gaze to Denmark and, replicating the estimate of Charles and Hurst (2003), find a coefficient of 0.27, consistent with the premise that there is higher relative mobility in that European country than in the United States. Clark and Cummins (2015) estimate the coefficient of intergenerational persistence of wealth in England for five generations from 1858 to 2012, finding values between 0.37 and 0.49, with remarkable stability throughout the study period. Using the *rank-rank* coefficient as an alternative measure of relative mobility and considering housing value as a *proxy* for wealth, Pfeffer and Killewald (2015) estimate for the United States a value of 0.37, which is higher, for example, than estimates of persistence in income rankings in the same country (Chetty et al., 2014). Meanwhile, Adermon et al. (2018) find for Sweden coefficients ranging from 0.3 to 0.39, depending on the generations studied.

The second result of this literature has to do with the greater rigidities in the tails of the wealth distribution. For example, in the work of Pfeffer and Killewald (2015), it is noted that 44% of the children of parents in the richest quintile also belonged to the highest quintile (and up to 70% in the top two quintiles), while 35% of the children of parents in the poorest quintile also ended up in the lowest quintile and 64% of them in one of the two lowest quintiles. Similar results are found for Sweden (Adermon et al. 2018), where the probability that the child belongs to the richest 10% when the father belonged to the same decile is between 17% (between the first and second generation) and 34% (between the second and third).

As discussed later in this chapter, an important aspect of intergenerational persistence of wealth has to do with the "family effect," which can transcend that of two adjacent generations. Several papers have analyzed this aspect for various countries: Boserup et al. (2016) for Denmark, Pfeffer and Killewald (2015) for the United States, Clark and Cummins (2015) for England, and Adermon et al. (2018) for Sweden. Boserup et al. (2016), for example, have information from three adjacent generations (grandfather-father-child) and analyze how the estimate of wealth persistence changes when family fixed effects are included. In that case the persistence coefficient drops substantially. This implies that an important part of the father effect can be explained by the family. Pfeffer and Killewald (2015) also have information from three adjacent generations (grandfather-father and son) and show that the *rank-rank* coefficient estimate drops from 0.37 to 0.29. Again, part of the effect found in the parent-child relationship originates in the family. Weaker results are found for Sweden, studied in Adernon et al. (2018). Specifically, incorporating the grandfather's position has no major effects on the coefficient linked to the father.

Graph 2.21
Intergenerational persistence in education and income in cohorts of children born in the 1960s and 1970s.



Note: Each point represents the value of the intergenerational income elasticity (vertical axis) and the coefficient of intergenerational persistence of education (horizontal axis) for each country. The solid lines represent the linear fit, distinguishing by method of estimating the intergenerational income elasticity (OLS/ income imputation methods).

Source: Authors based on data from GDIM (2018).

Comparative intergenerational mobility in various dimensions of wellbeing: harmonized evidence from the ECAF Survey

ECAF 2021 offers novel information to analyze intergenerational mobility in different dimensions of wellbeing for the same set of individuals in ten countries in Latin America and the Caribbean. The responses collected characterize mobility between parents and children not only in education, health and occupation, but also in some variables associated with income and wealth.[33] This multiplicity of dimensions analyzed places the ECAF 2021 in a privileged position for the comprehensive study of the different facets of intergenerational mobility in this region and to know which of them present a greater degree of persistence.

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The multiple dimensions surveyed in the ECAF 2021 Survey allow for a comprehensive study of different facets of mobility

33. This section analyzes housing quality (as a proxy for wealth) and Chapter 5 examines intergenerational persistence in the ownership of physical assets (housing and other properties).

Table 2.8 shows the *rank-rank* coefficients for four wellbeing indicators (measured in *rankings*), calculated for the same group of individuals: education, health, position in the self-reported income distribution and self-reported housing quality. It is worth mentioning that housing quality could be interpreted as a *proxy* for household wealth. The advantage of estimating the *rank-rank* coefficient is precisely to allow comparability between different dimensions of wealth, since they are all expressed as the percentile that the parent and child occupy, respectively, in the distribution of wellbeing in their respective generation. According to these results, income and (*proxy for*) wealth are more persistent (coefficients of 0.43 and 0.39, respectively) between generations than education and health (coefficients of 0.36 and 0.29, respectively). These results are in line with the progress made by the countries of the region in terms of educational and health coverage, which could have contributed to weakening the intergenerational link in the transmission of inequalities in these two dimensions, as discussed in greater depth in chapter 3.

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Results from the ECAF show that income and wealth are more persistent than education and health

The low relative mobility observed in income and wealth, despite the progress made in the other dimensions, may be a reflection of the important imperfections in the functioning of the region's labor and financial markets, topics that are discussed in more detail in Chapters 4 and 5. For example, Halliday et al. (2021) and Bencsik et al. (2021) show for the United States and the United Kingdom that relative mobility in health is higher than in income.

Table 2.8
Relative mobility in four dimensions of wellbeing according to *rank-rank* coefficients

	Health	Education	Housing quality	Income
Rank-rank coefficient	0.287***	0.364***	0.385***	0.432***
Observations	7,333	,333	7,333	7,333

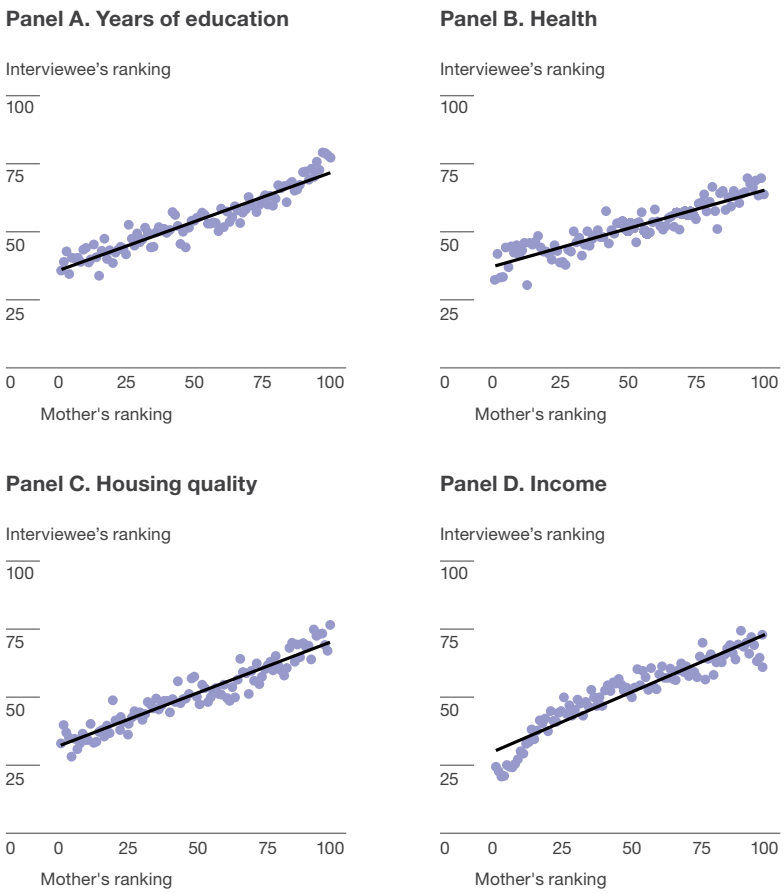
Note: The coefficients reported in each column come from ordinary least squares estimations where the dependent variable is the *ranking* (percentile) that the child (respondent) occupies in the distribution of the wellbeing variable considered and the independent variable is the *ranking* that the mother occupies in the distribution of the same wellbeing variable in her respective generation. The *rankings* are constructed on the values adjusted for the mother's age (all wellbeing variables) and gender (health and education). The sample is restricted to individuals for whom information on the four dimensions of wellbeing is available, both for them and for the mother. A consolidated sample of the ten Latin American and Caribbean cities covered by the ECAF 2021 is used. All regressions were controlled for country fixed effect, child and mother's age (linear and quadratic) and respondent's gender fixed effects. Asterisks indicate the statistical significance of the respective coefficient: *** at 1%, ** at 5%, * at 10%. For more information on the CAF survey and the variables used, see the first two sections of the Appendix.

Source: Authors based on data from ECAF 2021 (CAF, 2022).

Graph 2.22 shows in more detail the relative mobility in each dimension of wellbeing along the entire distribution. It reports the average *ranking* achieved by the children within their generation in each dimension of wellbeing (vertical axes), according to the percentile that the mother occupies in the distribution of years of education (horizontal axis of panel A), health (panel B), housing quality

(panel C) and income (panel D). For some dimensions, the linear prediction (linear fit, whose slope is equivalent to the *rank-rank* coefficient in Table 2.6) is not always adequate as a summary measure of what happens at the extremes, where the slope seems to change. In the case of education, greater persistence is observed in the upper part of the distribution, indicating that the *rank-rank* coefficient within this group would be higher than that reported in Table 2.6, as well as in the lower part of the self-perceived income distribution.

Graph 2.22
Average *ranking* of children in the distribution of four wellbeing indicators according to the mother's *ranking*



Note: The vertical axis of each graph represents the average ranking achieved by children, while the horizontal axis represents the ranking occupied by their mothers. The straight line represents a linear fit. The rankings are constructed by grouping people from each generation into 100 groups, ordered from lowest to highest according to the years of education attained. Each group accumulates 1% of the population. In other words, the ranking is measured in percentiles. In turn, the rankings were constructed controlling for age, gender of the respondent and country, restricting the sample to those people who have complete information for the four dimensions and for both generations. The sample includes information from ten countries in Latin America and the Caribbean. For more information on the survey and the variables used, see the first two sections of the Appendix.

Source: Authors based on data from ECAF 2021 (CAF, 2022).

Table 2.9 explores possible heterogeneities in the relative mobility of the four dimensions of wellbeing according to the gender of the children (panel A) and ethnicity (panel B). An interesting pattern emerges. Neither gender nor ethnicity is associated, on average, with higher levels of intergenerational persistence, except for two exceptions. In the case of health, sons are less dependent on their mother's health (as discussed in Table 2.4), while in the case of income, whites show greater family dependence than those of other ethnicities.

Table 2.9
Differences by gender and ethnicity in relative mobility in four dimensions of wellbeing

	Health (1)	Education (2)	Housing (3)	Income (4)
Panel A. Heterogeneity by gender				
Difference in *rank-rank* coefficient (man-woman)	-0.0466**	-0.0271	0.00934	0.00889
Panel B. Heterogeneity by ethnicity				
Difference in *rank-rank* coefficient (white/mestizo, the rest)	0.0279	-0.022	0.0378	0.0490**
Observations	7,333	7,333	7,333	7,333

Note: The coefficients reported in each column of panel A come from separate estimations by ordinary least squares where the dependent variable is the ranking (percentile) of the child (respondent) in the distribution of the wellbeing variable considered and the independent variables are the ranking of the mother in the distribution of the same wellbeing variable in her respective generation, the gender of the child and the interaction between the mother's ranking and the child's gender (reported coefficient). The country fixed effect and child's and mother's age (linear and quadratic) are also controlled for. The coefficients reported in each column of panel B come from separate estimations by ordinary least squares where the dependent variable is the ranking (percentile) that the son (respondent) occupies in the distribution of the wellbeing variable considered and the independent variables are the ranking that the mother occupies in the distribution of the same variable in her respective generation, an indicator that takes the value 1 if the son or daughter identifies as white/mestizo and the interaction between the mother's ranking with ethnicity (reported coefficient). Country fixed effect and the age of the child and mother (linear and quadratic) are also controlled for. A consolidated sample of the ten Latin American and Caribbean cities covered by the ECAF 2021 is used. Asterisks indicate the statistical significance of the respective coefficient: *** at 1%, ** at 5%, * at 10%. For more information on the CAF survey and the variables used, see the first two sections of the Appendix.

Source: Authors based on data from the ECAF 2021 survey (CAF, 2022).

Table 2.10 explores the personal and family characteristics associated with successful trajectories of social ascent in different dimensions of wellbeing. A successful upward social trajectory is defined here as a child who reaches the top 25% of the distribution while their parents were in the bottom 50% of their generation's distribution (on the respective wellbeing measure). First, there are no differences by gender in this type of trajectories, but there are differences by ethnicity. Those who perceive themselves as white or mestizo showed a higher probability of having a successful trajectory in education and housing quality than those who identify with minority ethnic groups (Afro-descendants or indigenous) or other ethnic groups. Second, higher parental education is positively associated with the probabilities of upward mobility in education,

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Those who perceive themselves as white or mestizo are more likely to have a successful educational trajectory and adequate housing than indigenous and Afro-descendant people

health, and housing quality, although not homogeneously. The children of parents with complete primary education were more likely to have a successful trajectory in education and housing quality than those whose parents have incomplete primary education, but in other dimensions of wellbeing there are no significant differences between these two groups. On the other hand, the children of parents with complete secondary education or more were more likely to move up in terms of health and housing quality than those with incomplete primary education. The ownership of housing or other parental property is positively associated with higher chances of upward mobility in education, but not in other dimensions. Finally, considering that the comparison category is parents who did not have a job when the child was 14 years old, it is observed that individuals with employed parents (in the public or private sector, business owners, or self-employed) did not experience a higher probability of moving up in any dimension. However, among those with employed parents, children whose parents had highly complex jobs showed higher chances of moving up in education and health.

Table 2.10
Personal and family characteristics associated with the probability that children were in the top 25% of the distribution while their parents were in the bottom 50% of the distribution

	Education	Health	Income	Housing
Man	0.01	0.01	-0.00	-0.00
White/mestizo	0.05***	-0.01	-0.00	0.02*
Mother's education: completed primary education or incomplete secondary education	0.08***	0.02	-0.02	0.03*
Mother's education: secondary education or higher	0.09	0.04*	0.00	0.04**
Parents owning a home or other property	0.04**	0.02	-0.02	-0.00
Father's occupation: private sector employee	0.03	0.04	0.02	-0.08
Father's occupation: public sector employee	0.01	0.04	0.06	-0.07
Father's occupation: business owner	0.12	0.05	0.04	-0.07
Father's occupation: self-employed	0.02	0.03	0.02	-0.09
Parent with high complexity occupation	0.10***	0.05**	0.00	0.00
Observations	2,761	2,792	2,760	2,730

Note: The coefficients reported in each column come from separate estimations by ordinary least squares where the dependent variable takes the value 1 if the respondent reached the highest 25% in the distribution of the wellbeing variable considered, while his mother was in the lowest 50% of the distribution. The omitted (reference) categories in education are mother with incomplete primary education and in occupation, unemployed or inactive father. All regressions include as control variables the country fixed effect and the age of children and parents (linear and quadratic terms). A consolidated sample of the ten Latin American and Caribbean cities covered by the ECAF 2021 is used. Asterisks indicate the statistical significance of the respective coefficient: *** at 1%, ** at 5%, at 10%. For more information on the CAF survey and the variables used, see the first two sections of the Appendix.

Source: Authors based on data from ECAF 2021 (CAF, 2022).

Multigenerational mobility: is it sufficient to compare two generations to measure intergenerational persistence?

The study of intergenerational mobility has focused mainly on the analysis of two adjacent generations, that is, parents with children. To a large extent, the popularity of this approach has responded to the lack of data that allow linking families over three or more generations. This restriction would not be a problem if a large part of the inequalities observed in a generation were transmitted directly and exclusively from parents to children, if the observed characteristics of parents captured all the relevant dimensions of their socioeconomic status, and if this capacity to "inherit" the socioeconomic status of the previous generation did not change over time, remaining constant regardless of the economic and institutional context. Under these assumptions, it could be inferred how much of the initial inequality would continue to be transmitted to subsequent generations by simply extrapolating the results of two-generation studies.

Take the case of a country where the coefficient of intergenerational persistence of education is high, 0.5, for example. A possible interpretation of this result would be that parents who today have ten years more education than others pass on to their children an advantage of five years of education (50%). An extrapolation of these results would indicate that the grandchildren of these two families would maintain only a 2.5 difference in their years of education. This result derives from iterating the transmission of the 50% advantage (of the five-year gap) between the second and third generations.[34] In general, given the levels of persistence typically found in empirical studies, the result of this iteration shows that the initial family advantages would be "diluted" relatively quickly from the third generation onwards.

However, this simplification could be overlooking possible direct effects of grandparents (and even other relatives) on grandchildren (Mare, 2011). In turn, if the wellbeing measures used do not fully capture other types of factors that are transmitted and inherited from the family environment—such as social capital, values, and preferences, which are not fully reflected in the socioeconomic characteristics that can be measured—the standard estimates would only partially capture true intergenerational persistence. Typically unobserved by researchers, specialized literature refers to these other factors as "latent" (Braun and Stuhler, 2018). If any of these mechanisms were operating, the persistence of socioeconomic advantages between generations could be even greater than captured in studies of only two generations.

When information linking more than two generations is available, it is possible to test how good the extrapolation of mobility results derived from "iterating" results from two-generation models is, by comparing, for example, the predicted value with the association that exists between the generation of

34. Fifty percent of 50% of the ten-year gap in first-generation education.

parents and grandchildren, parents and great-grandchildren, and so on. If the persistence observed in the grandchildren and subsequent generations is greater than predicted (i.e., if there is an "excess of persistence"), this suggests evidence of the existence of additional mechanisms of transmission of inequalities.

Persistence of family socioeconomic background is higher when considering multiple generations

ECAF 2021 enables this type of exercise to analyze multi-generational mobility in education, since it has information on educational levels of up to four generations.[35] Panel A of Graph 2.23 shows the results of persistence in years of education (persistence coefficients) among three generations.[36] In the analysis of the first two generations (parents-children), persistence is 0.32 on average in the main cities of Latin America and the Caribbean. Thus, considering two parents who have a gap of ten years of education between them, a gap of 3.2 years is expected to persist in the children's generation. Iterating this result to a third generation, the gap in years of education in the grandchildren's generation would be only one year. This result contrasts, however, with what is observed in the data. The gap in years of education in the grandchildren's generation is almost double. Those who had a grandparent with ten more years of education have on average 1.7 years of education more than the grandchildren of less educated grandparents. This result is indicative that intergenerational persistence in Latin America and the Caribbean is even greater than that captured by studies of two adjacent generations. The work of Celhay and Gallegos (2022), prepared in the context of this report, finds similar results from longitudinal social protection surveys for six countries in Latin America and the Caribbean (Chile, Colombia, El Salvador, Mexico, Paraguay, and Uruguay).

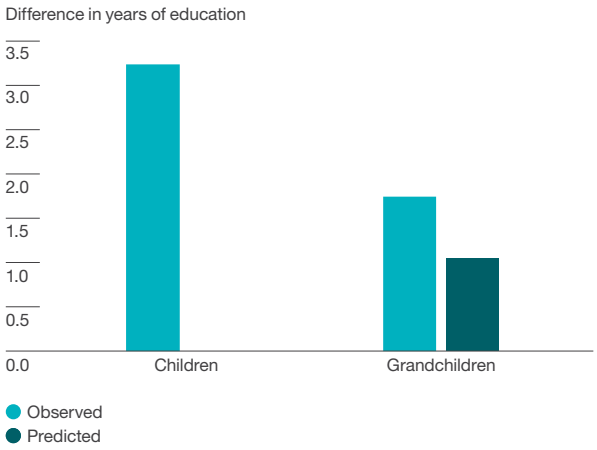
The differences between observed and predicted persistence are even more marked when considering persistence in higher education, a measure that is also available in the 2021 ECAF for a fourth generation. Panel B of the Graph shows the difference in the probability that descendants (children, grandchildren, and great-grandchildren) of individuals with higher education have completed this level of education relative to descendants of individuals with no higher education. The data show that the children of people who have completed college are, on average, 29 percentage points more likely to complete higher education than those of parents who have not attained this level. This gap remains positive in the generation of grandchildren and great-grandchildren, as the difference in the probability of completing higher education remains at 15 and 12 percentage points, respectively. This result contrasts sharply with the differences predicted by a two-generation model, which would have been practically diluted in the fourth generation.

35. See the first two sections of the Appendix for a detailed description of the data.

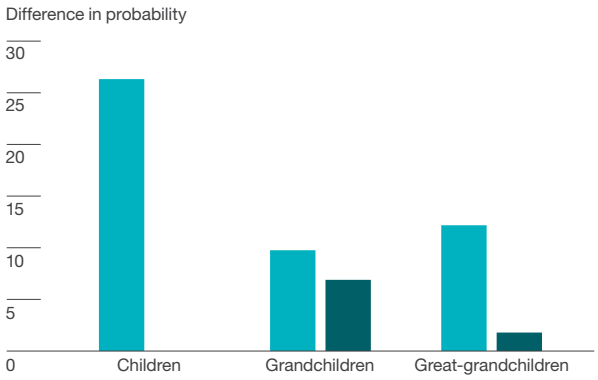
36. Information on years of education is only available for three generations. For a fourth generation the only information available is whether or not they have completed higher education.

Graph 2.23
Educational persistence across multiple generations

A. Persisting difference in years of education between descendants of persons with a ten-year difference in education



B. Difference that persists in the probability that descendants of people with higher education complete college (in percentage points) with respect to those of people without that level of education



Note: Panel A shows the observed persistence coefficient between years of education of parents and their children corresponding to the average of the estimated persistence coefficients between the first and second generation (parent-child) and between the second and third generation (child-grandchild). These coefficients are calculated from ordinary least squares regressions (see Box 2.1) controlling for city and age fixed effects. Education in the first generation (parent) corresponds to the education of the respondent's mother, in the second generation (children) to the respondent and in the third generation (grandchildren) to the respondent's oldest child. The predicted value results from iterating the persistence coefficient observed in the first pair of adjacent generations (parents-children). Panel B presents the observed persistence coefficient between parents and their children corresponding to the average of the estimated persistence coefficients between the first and second generations (parent-child), between the second and third generations (child-grandchild) and between the third and fourth generations (grandchild-great-grandchild). These coefficients are calculated from ordinary least squares regressions (see Box 2.1), where the education variables take the value 1 if parents, children, grandchildren, or great-grandchildren, as appropriate, completed higher education and zero otherwise. All regressions control for city and age fixed effects. Education in the first generation (parent) corresponds to the education of the respondent's grandparents (at least one of them completed higher education), in the second generation (children) corresponds to the respondent's mother, in the third generation (grandchildren), to the respondent, and in the fourth generation (great-grandchildren), to the respondent's eldest child. The predicted value results from iterating the persistence coefficient observed in the first pair of adjacent generations. For more information on the CAF survey and the variables used, see the first two sections of the Appendix.

Source: Authors based on data from ECAF 2021 (CAF, 2022).

Intergenerational mobility and unobserved factors

One hypothesis as to why there is an excess of multigenerational persistence in the data over that inferred from the standard analysis of two adjacent generations, as in Graph 2.23, is that the indicators typically used to measure wellbeing (such as education or income) do not adequately capture true socioeconomic status. This status may be composed of other heritable attributes and assets, such as skills, preferences, or social capital, which are difficult to measure. Braun and Sthuler (2018) build a simple model that captures the idea that socioeconomic status is an unobserved (latent) factor and is imperfectly captured by typically observed wellbeing measures (such as education or income). These authors show how it is possible to estimate the "true" intergenerational persistence of socioeconomic status from information linking three generations. The section "Latent Factor Model" in the Appendix

details the central ideas of this model and how to approximate this parameter when information is available for three or more generations.

Table 2.11
Measures of multigenerational persistence of years of education (observed and predicted) and latent socioeconomic status

	Coefficient of persistence in years of education		Coefficient of persistence of latent socioeconomic status (3)
	Observed (1)	Predicted (2)	
Generation 0 - Generation 1	0.32	-	0.54
Generation 0 - Generation 2	0.17	0.10	0.29
Generation 0 - Generation 3	-	0.03	0.16
Generation 0 - Generation 4	-	0.01	0.08

Note: The observed persistence coefficient of generation 0 and generation 1 is the average of the estimated coefficients of persistence between respondents and their parents and respondents and their children. These coefficients are calculated from ordinary least squares regressions (see Box 2.1) where the dependent variable is the education of the children's generation and the independent variable is the education of the parents' generation, plus a set of fixed effects by city, age of the parent and child. The coefficient of observed persistence between generation 0 and generation 2 is the estimated coefficient of persistence between the respondent's parents and the respondent's children. The education of the respondent's parents always corresponds to the education of their mother, while the education of the respondent's children corresponds to the oldest child (without distinguishing gender). The predicted value results from iterating the observed persistence coefficient between generation 0 and generation 1. The persistence coefficients of the latent socioeconomic status are calculated according to the model described in the section "Latent factor model" in the Appendix. Although not reported in the table, the value of the coefficient capturing how much of the latent socioeconomic status is "transferred to education" is equal to 0.78 (see the section "Latent Factor Model" in the Appendix). For more information about the CAF survey and the variables used, see the first two sections of the Appendix.

Source: Authors based on data from ECAF 2021 (CAF, 2022).

Using years of education data from three adjacent generations available in ECAF 2021, Table 2.11 shows estimates of "true" intergenerational persistence (column 3) following the methodology proposed by Braun and Stuhler (2018), compared to the persistence coefficient values observed in the data (column 1) and those predicted from a two-generation model (column 2). Consistent with the results in Graph 2.23, the persistence of latent socioeconomic status between parents and children in Latin America and the Caribbean is 0.54 ("generation 0 - generation 1" row), 66% higher than the observed persistence in years of education (which takes a value of 0.32). Iterating these values toward subsequent generations, dependence between more distant generations decreases at an even slower rate than that observed in the data: this is verified by comparing the value of the coefficient of persistence of latent socioeconomic status between grandparents and grandchildren ("generation 0 - generation 2" row), which takes a value of 0.29, with the coefficient of persistence in years of education between grandparents and grandchildren observed in the data, which takes the value of 0.17. The differences are even greater when comparing the values of the persistence

coefficients predicted from the two adjacent generations model, which are 0.1 between generation 0 and 2, 0.03 between generation 0 and 3, and 0.01 between generation 0 and 4, against values of 0.29, 0.16 and 0.08, respectively, for the persistence of latent socioeconomic status. These results would indicate that latent factors could play an important role in Latin America and the Caribbean. The differences between the observed persistence in years of education and the persistence in latent socioeconomic status resulting from the analysis of ECAF data are similar to those found in studies for Germany (Braun and Stuhler, 2018) and Sweden (Lindahl et al., 2015), but larger than those found by Colagrossi et al. (2020) for the average of 28 European countries.

Is there a direct role for grandparents?

Another possible explanation for why the persistence in wellbeing outcomes between grandchildren and grandparents is high is that grandparents have a direct effect on grandchildren, as discussed in detail in Chapter 3.[37] Evidence is consistent with this hypothesis for Latin American countries. According to ECAF 2021 results, grandparents' years of education are significantly correlated with grandchildren's education, even when the effect of parents' education is discounted (column 1 of Table 2.12). Celhay and Gallegos (2022) find similar results for six Latin American countries, although the magnitudes of the association between grandparents' and grandchildren's years of education, after discounting the effect of parents' education, is even larger.

However, the correlation between the education of grandparents and grandchildren could be because the education of the former actually captures other socioeconomic characteristics of the parents that affect their children's education. The information available in the ECAF allows discounting the effect of other characteristics of the socioeconomic status of both parents and grandparents beyond their educational level, and to know if, even so, there is still a correlation between the years of education of grandparents and grandchildren. The results in Table 2.12 show that, even considering other socioeconomic characteristics of the parents (column 2) and grandparents (column 3), this correlation remains practically unchanged, suggesting a possible role of grandparents in the transmission of inequality between generations. Using information on a health variable available for three generations in the ECAF 2021, Table 2.13 shows that the correlation between wellbeing indicators of grandparents and grandchildren is not restricted only to years of education. It shows that the correlation between the health of grandparents and grandchildren is positive and significant, even after discounting the effect of parental health. Taken together, these results indicate that inequality is transmitted between non-adjacent generations and across multiple dimensions of wellbeing.

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Inequality is transmitted between non-adjacent generations and in multiple dimensions of wellbeing

37. Evidence of a strong association on various dimensions of wellbeing between grandchildren and grandparents, once the effect of parents is discounted, has been found in different countries and contexts (Hertel and Groh-Samberg, 2014, for Germany; Celhay and Gallegos, 2015, for Chile; Zeng and Xie, 2014, for rural China; Boserup et al, 2018, for Denmark; Olivetti and Paserman, 2015 and Long and Ferrie, 2018, for the United States; Chan and Boliver, 2013, for Great Britain; and Lindhal et al., 2015, for Sweden). A recent study (Ferrie et al., 2021) shows, however, that in the United States the "grandparent effect" might be overestimated due to measurement errors.

Table 2.12
Coefficients of persistence in years of education of parents and grandparents

	Basic controls	Basic controls + parent controls	Basic controls + parent controls + grandparent controls
	(1)	(2)	(3)
Years of parental education	0.292***	0.265***	0.260***
Years of grandparents' education	0.053***	0.038***	0.047***
Observations	2,196	2,196	2,153

Note: The table shows the coefficients calculated from ordinary least squares regressions where the dependent variable is the number of years of education of the third generation (grandchildren) and the independent variables are the years of education of the second generation (parents) and the first generation (grandparents). Education in the first generation (grandparents) corresponds to the education of the respondent's mother; in the second generation (father), to the education of the respondent; and in the third generation (grandchildren), to the education of the respondent's oldest child. In all regressions, city and age fixed effects of children, parents and grandparents are included as basic controls and the sample is restricted to respondents whose children are 20 years old or older. The controls for parents and grandparents in columns (2) and (3), respectively, include variables for their socioeconomic status (self-reported income distribution decile, self-reported housing quality, home ownership and other assets). Asterisks indicate the statistical significance of the respective coefficient: *** at 1%, ** at 5%, * at 10%. For more information on the CAF survey and the variables used, see the first two sections of the Appendix.

Source: Authors based on data from ECAF 2021 (CAF, 2022).

Table 2.13
Persistence coefficients of parent and grandparent health index

Parental health index	0.18***
Grandparents' health index	0.08***
Observations	1,998

Note: The table shows the coefficients calculated from a regression estimated by ordinary least squares where the dependent variable is the health index of the third generation (grandchildren) and the independent variables are the health indexes of the second generation (parents) and the first generation (grandparents). Health in the first generation (grandparents) corresponds to the health of the respondent's mother; in the second generation (parent), to the health of the respondent, and in the third generation (grandchildren), to the health of the respondent's eldest child. In all regressions, city and age fixed effects of children, parents and grandparents are included as basic controls. The sample is restricted to respondents whose children are 20 years of age or older. Asterisks indicate the statistical significance of the respective coefficient: *** at 1%, ** at 5%, * at 10%. For more information on the CAF survey and the variables used, see the first two sections of the Appendix.

Source: Authors based on data from ECAF 2021 (CAF, 2022).

Measuring long-term intergenerational mobility with alternative methods

As previously shown, studying intergenerational social mobility from only two adjacent generations can lead to an underestimation of the "real" persistence of family socioeconomic status. Given the difficulty of obtaining information linking three or more generations, several studies have proposed alternative ways of approximating this "real" persistence parameter, without the need for accurate information on "vertical" family ties (parents, children, grandchildren, etc.). Another advantage of these methodologies is that they can be used to estimate the role played by other channels (beyond the direct ones between parents and children) that affect the intergenerational persistence of wellbeing, such as assortative mating of parents, topics that are discussed in Chapters 3 and 5 of this report.

Multigenerational mobility inferred from first and last names

A first set of papers uses information on surnames to infer family socioeconomic status and the intergenerational transmission of that status.[38] Güell et al. (2015) develop a methodology to infer intergenerational mobility that requires having information on the joint distribution of surnames and a socioeconomic wellbeing variable at a given time (R^2 estimator). The logic behind this methodology is that if both surnames and status are transmitted from generation to generation, surnames should explain a high proportion of the variation in socioeconomic wellbeing between individuals at a given moment in time.[39] Based on the estimation of this proportion and a calibrated structural model, traditional measures of intergenerational persistence of wellbeing are recovered. This methodology can be applied at the regional (intra-country) or group level, allowing an ordering among them according to the degree of intergenerational mobility estimated. Güell et al. (2015) use the 2001 census of Catalonia, Spain, which collects people's surnames and educational level as a measure of economic wellbeing. The authors find that surnames explain about 2-3% of the variation in socioeconomic status and infer, through their model, a correlation measure between adjacent generations of 0.6. In turn, they document that intergenerational mobility has decreased for that region and find an increasing trend of assortative mating, i.e., people with similar characteristics tend to be more closely related to each other.

Güell et al. (2018) apply the same methodology in Italy at the regional level. There, they find, on the one hand, substantial variation across provinces in the levels of intergenerational mobility, which increases when the calculation focuses only on infrequent surnames. On the other hand, mobility is positively correlated with good economic performance (such as value added, wealth, income, employment

38. See Santavirta and Stuhler (2021) for a comprehensive review of surname-based studies to measure intergenerational mobility.

39. To be indicative of family ties and to provide information on socioeconomic status, surnames must be sufficiently "rare." In countries where this is not the case, this methodology would not be useful. Güell et al. (2015) argue that rare surnames are abundant in most Western countries.

rate and activity) and negatively correlated with poor economic performance (such as unemployment rate or labor participation of young people with low levels of education). Thus, the authors conclude that high mobility occurs in places where positive economic outcomes occur. In a paper prepared in the framework of this report, Jaramillo-Echeverri et al. (2021) find that surnames explain about 10% of the variation in socioeconomic status in Chile and Colombia.

An alternative methodology is the one proposed in the work of Clark and Cummins (2015), where the socioeconomic status of the father is imputed based on his surname (clustering methodology). This methodology, like the one described for the calculation of intergenerational income elasticity, is implemented in two stages. In the first, the average socioeconomic status within each group of surnames is computed. In the second, a variant of the conventional intergenerational regression is estimated (see Box 2.1), where the socio-economic status of the father is imputed by the group-level mean. Clark and Cummins (2015) estimate intergenerational wealth mobility for England and Wales over the period 1858-2012. The authors compare standard estimates with estimates from the clustering method, finding that the latter yields a considerably higher intergenerational elasticity (0.40-0.50 versus 0.7). In terms of occupation and education outcomes, Clark (2012) evidenced that mobility in Sweden is low and even lower than in countries such as the United States or the United Kingdom. Moreover, the authors document considerable persistence of status over more than ten generations. Thus, Clark (2012) not only contradicts the results of standard measures that indicate higher mobility of Nordic countries, such as Sweden, relative to other developed countries, such as the United States or the United Kingdom, but also suggests an overestimation by conventional measures of long-term social mobility rates. Barone and Mocetti (2016) also document these levels of intergenerational persistence for the Florence region in Italy, where they evidence a correlation that can persist for six generations, i.e., in the very long term.[40]

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Surnames can explain a significant portion of the variation in socioeconomic status. For example, in Chile and Colombia they explain up to 10%

Multigenerational mobility inferred from "horizontal" family ties

Collado et al. (2022) develop a methodology for estimating intergenerational mobility based on information on "horizontal" family ties (different degrees of *kinship* within the same generation, e.g., siblings, brothers/sisters-in-law, siblings of brothers/sisters-in-laws, etc.). They were able to infer the level of persistence of "unobserved" socioeconomic status, much like with information on "vertical" ties (parents, children, grandparents). This methodology also makes it possible to surmise how intergenerational persistence is affected by various channels through which unobserved factors are transferred between generations, including the level of parental assortative mating. Using data from Swedish administrative records, the authors show that the strong correlation observed in the data between distant horizontal ties (e.g., brothers-in-law or sisters-in-law) is consistent, on the one hand, with higher intergenerational persistence of

40. It is worth mentioning that the levels of persistence found in these papers are substantially higher than those found by studies linking information from three or more generations that were documented in the previous subsection, suggesting that the methodology of Clark and Cummins (2014) would be overestimating intergenerational dependence.

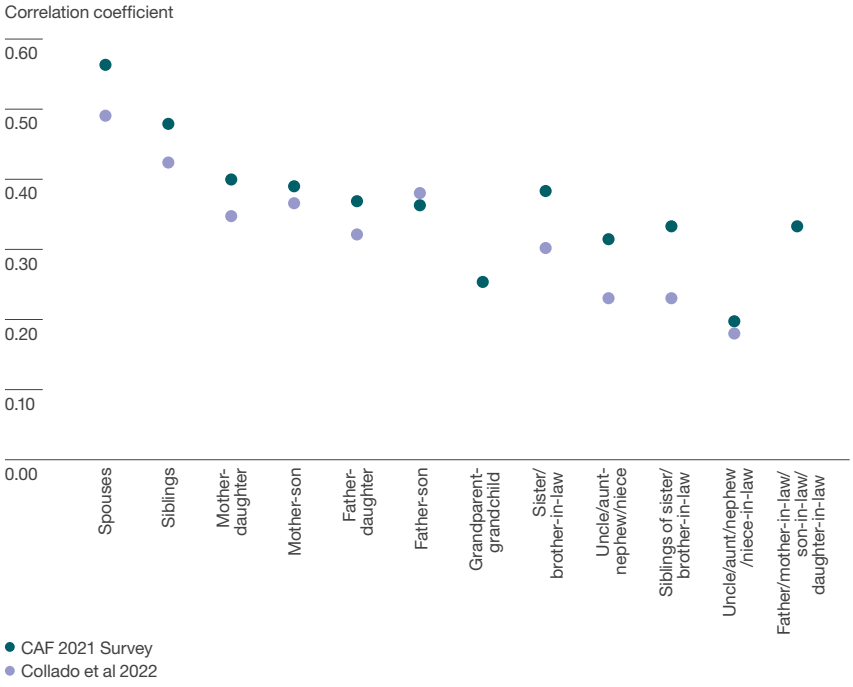
socioeconomic status between generations than inferred with traditional two-generation models and, on the other, with very high levels of assortative mating.

ECAF 2021 collects socioeconomic information on some of the respondent's "horizontal" ties, in addition to the vertical ties previously described (see the first section of the Appendix for more information). Using this information, Graph 2.24 shows the correlation in years of education between these different types of ties (spouses, siblings, brothers/sisters-in-law, etc.), in addition to the vertical ties, and compares them with the results of the work of Collado et al. (2022). As can be seen in the graph, the correlations between "extended" family ties in Latin America follow a pattern similar to that of Sweden, showing high levels of correlation between distant horizontal ties, for example, "brothers/sisters-in-law" or "siblings of brothers/sisters-in-law." While not estimating the model proposed by these authors, these results, similar to those of Sweden, once again suggest a possible higher intergenerational persistence than that inferred in models of only two generations, and that assortative mating of parents could be an important channel of the persistence of intergenerational inequality in Latin America and the Caribbean.

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Correlations on measures of wellbeing within the extended family speak to the high levels of intergenerational persistence

Graph 2.24
Correlation coefficients in years of education of the extended family



Note: Each point on the graph represents the correlation coefficient in years of education of the pairs of relatives referred to in the labels (e.g., brothers-in-law). The years of education variables are adjusted for the age and gender of each of the individuals.

Source: Authors based on data from ECAF 2021 (CAF, 2022) and Collado et al. (2022).

Mobility and equal opportunities

Estimates of intergenerational persistence, such as those documented in this chapter, are usually interpreted as a manifestation of the degree of inequality of opportunities faced by people from different family socioeconomic contexts. Panel A of Graph 2.25 shows, on the one hand, the evolution of an indicator of inequality of educational opportunities calculated from censuses for 19 countries in the region. As this Graph shows, with a few exceptions, the countries of the region experienced moderate improvements or stagnation in their inequality of opportunity indicators during the period analyzed. The portion of inequality in years of education explained by circumstances is still significant in many of them. In general terms, the measures of inequality of opportunity in education reported above show similar general patterns to those observed with the relative mobility measures.

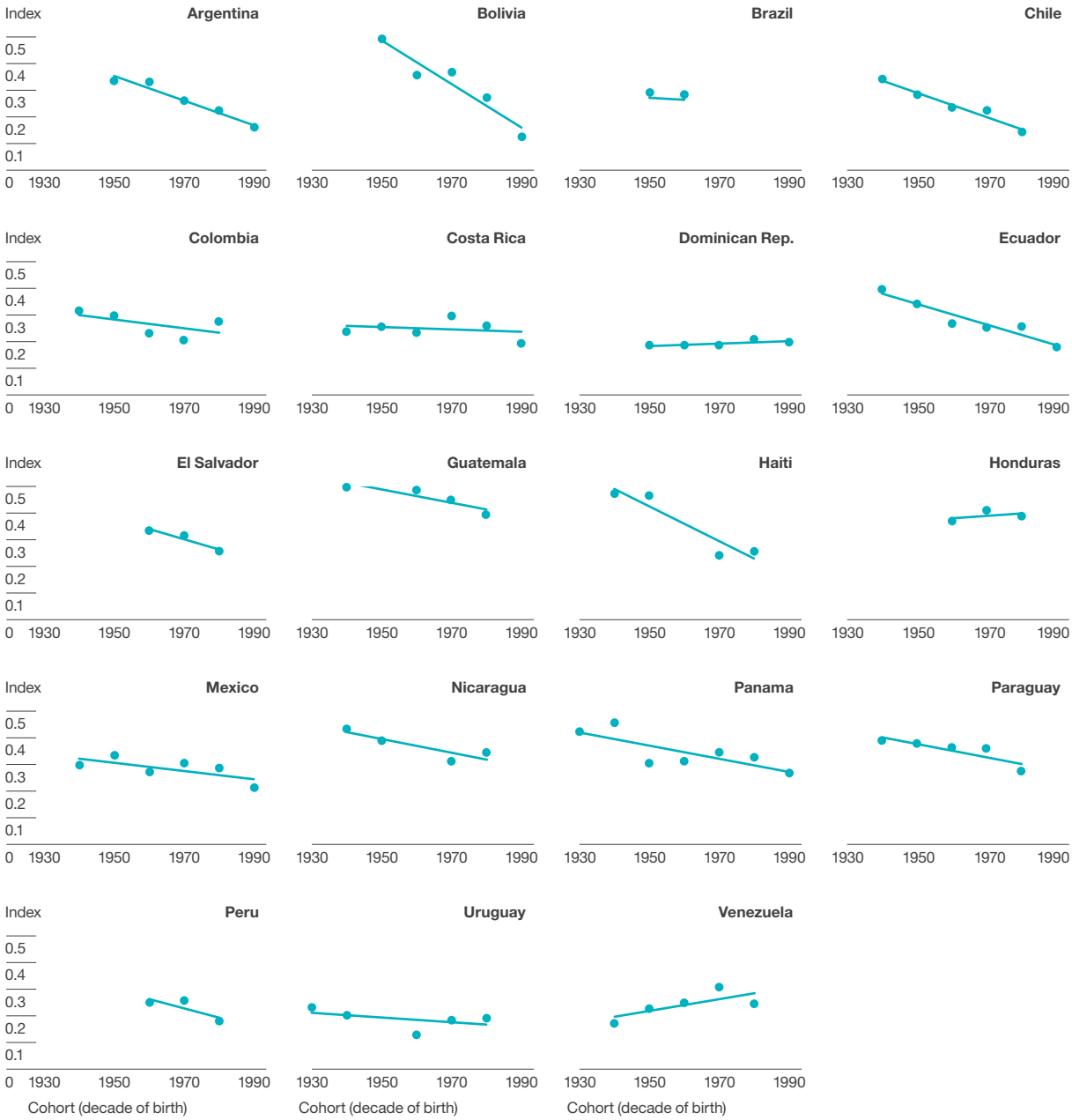
This close relationship between both indicators is verified by correlating them (panel B), a result that is in line with the findings of other studies using other sources of information and other outcome variables (Brunori et al., 2013; Narayan et al., 2018). Although not a causal relationship, this stylized fact is consistent with the idea that higher barriers to equal opportunities cause difficulties for social mobility.

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Estimates of intergenerational persistence are strongly associated with measures of inequality of opportunity

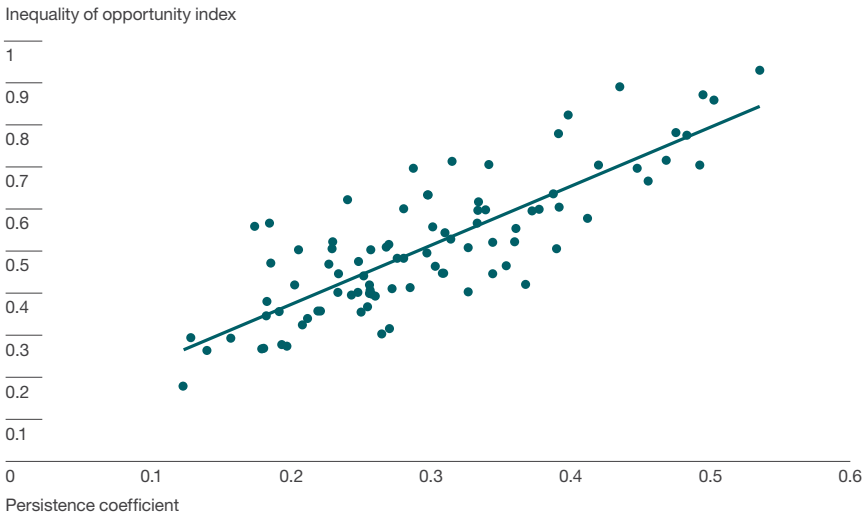
Graph 2.25
Inequality of opportunity index in Latin American and Caribbean countries and correlation with relative intergenerational mobility

Panel A. Inequality of educational opportunities index by country



Continued on next page →

Panel B. Correlation between the coefficient of intergenerational persistence in years of education and the index of inequality of educational opportunities



Note: The inequality of opportunity index is computed according to the methodology described in the section "Simple measures of inequality of opportunity and their relationship to measures of relative intergenerational mobility" in the Appendix. The set of circumstances (and according to data availability by country) includes indicators of family background (parents' education, parents' type of employment, parents' occupation, housing characteristics), gender, ethnicity, location (region of residence or birth), cultural capital (religion and language spoken at home).

Source: Authors based on data from IPUMS (2020).

Key messages

1 Latin America and the Caribbean—in addition to being highly unequal—is one of the regions of the world with the lowest intergenerational mobility across various dimensions of wellbeing. While progress has been observed in absolute mobility in certain dimensions (there are children who are better off than their parents) in recent decades, very little has changed in terms of relative mobility, meaning that well-being remains highly persistent across generations.

2 The information generated in this report for generations born between 1930-2010 shows that progress in intergenerational mobility in recent decades has been very moderate in terms of education and occupations, from which also stem meager advances in income and wealth mobility.

3 The long-term analysis indicates a progressive increase in educational coverage that favored absolute mobility, especially at the most basic levels. However, the analysis of the most recent generations shows evidence of a clear ceiling associated with moderate advances in secondary and higher education coverage, especially among the most disadvantaged groups.

4 The absolute mobility is reflected in the figures. It is estimated that 70% of those born in the 1990s whose parents did not complete primary education did complete it; 42% of those whose parents did not complete secondary school did complete it; and 15% of those whose parents did not complete university did complete that level. However, ethnic minorities (Afro-descendants and indigenous people) and residents of rural areas and smaller cities continue to face greater upward mobility obstacles than the rest of the population.

5 The increase in educational coverage benefited all socioeconomic groups, making relative mobility remain very low. Estimates for the cohort born in the 1990s show that a 10 percentile increase in parents' position in their generation's distribution of years of education is associated with five additional percentiles of children's position in the same variable.

6 Between 1930-2000, there was a gap in upward educational mobility in favor of women, especially in secondary and university education. However, there are no differences between men and women in relative educational mobility.

7 There is a wide dispersion in the measures of absolute and relative educational mobility within countries—although there has been a notable decrease in terms of primary education—suggesting that local factors largely condition individual opportunities to experience mobility.

8 Latin America and the Caribbean is the region with the highest occupational persistence. Moreover, there is no evidence that this has decreased over time. In recent decades, the likelihood of children of parents in low-complexity occupations to work in medium-complexity occupations has increased, but not in high complexity occupations. On the other hand, the likelihood of children of parents in medium-level occupations having high complexity jobs has not changed.

9 There is a relationship between absolute educational mobility and occupational mobility, which varies across socioeconomic backgrounds. Experiencing upward educational mobility is associated with 18 percentage points higher probability of upward occupational mobility for children of poorly educated parents and 31 percentage points for children of more educated parents.

10 The educational expansion that improved absolute mobility did not necessarily translate into better occupations. It is to be expected, therefore, that it did not do so in terms of better labor income either.

11 The decoupling between educational and occupational mobility can be explained by the problems of educational systems to effectively train the human capital that higher complexity occupations require, and by the limitations of labor markets to generate opportunities to allocate talent to higher complexity occupations.

12 Available estimates place Latin America and the Caribbean among the regions with the lowest intergenerational income mobility. A 10% increase in parental income is associated with an 8% increase in children's income.

13 In terms of health, intergenerational persistence in Latin America and the Caribbean is greater than that observed in developed countries. The progress achieved by the countries of the region in terms of health coverage seems to have contributed to weakening the intergenerational link in the transmission of inequalities in this dimension.

14 The analysis for the same group of parents and children in the main Latin American cities concludes that income and wealth show the highest levels of intergenerational persistence, followed by education and health. In addition, there are nonlinearities that are more evident in the high tail of years of education and in the low tail of income distribution.

15 15 Evidence from multiple generations shows that the persistence of family origin in Latin America and the Caribbean is higher than that inferred from studies that restrict the analysis to only two adjacent generations.

16 16 Finally, there is a high correlation between measures of relative mobility and equal opportunity indexes, which reinforces the hypothesis that the different circumstances faced by individuals that are beyond their control play an important role in intergenerational persistence.

Appendix

CAF 2021 Survey. A new input to study intergenerational mobility in Latin America and the Caribbean

Coverage

Ten thousand households (individuals) in ten cities in Latin America and the Caribbean.

The cities included in the 2021 edition are: Asuncion (Paraguay), Buenos Aires (Argentina), Bogota (Colombia), Mexico City (Mexico), Panama City (Panama), La Paz (Bolivia), Lima (Peru), Montevideo (Uruguay), Quito (Ecuador) and Sao Paulo (Brazil).

Representativeness of the sample

The ECAF 2021 is a survey of 10,000 observations representative of ten large cities in Latin America. The universe under study was the urban population between 23-66 years of age. In each city, 1,000 resident surveys were carried out, satisfying at the aggregate level quotas for gender and water and sanitation service coverage, with the objective of interviewing a representative group of the population. The construction of the quotas was obtained, for the most part, from censuses and census projections from official statistics institutes in each country included in the sample.

The ECAF survey follows a stratified sampling design, with random sampling of clusters that make up the sampling points (SP). According to the information available and the characteristics of each city included in the survey (such as size, administrative and neighborhood boundaries), strata are used and, occasionally, geographic substrata to ensure the spatial dispersion of the sample. In turn, SPs are defined as the minimum census unit used by official statistics institutes, which generally coincides with the block in areas of high population density. Within each stratum, a random selection of SPs is made, in which a systematic random walk-through of the dwellings where the surveys are conducted is carried out.

Dimensions of wellbeing captured for multiple generations and family ties

Intergenerational mobility is the cross-cutting theme in the ECAF 2021. Therefore, unlike many existing databases, it was designed with the fundamental objective of surveying different dimensions of the wellbeing of the interviewee's life and

that of their close relatives. Specifically, three novel aspects of the ECAF 2021 can be highlighted for the study of intergenerational mobility in Latin America: (i) it collects information for two adjacent generations (interviewee and their parents) on various dimensions of wellbeing (education, health, position in income distribution, housing quality, asset holdings, labor outcomes); (ii) it collects information for more than two generations on education, health and employment, allowing multigenerational analyses (three or four generations); (iii) it collects information on "horizontal" family ties (interviewee's spouse, interviewee's older sibling, interviewee's sibling's spouse). Taken together, these aspects represent a significant advantage in relation to other sources of information available in the region.

All questions are answered by the interviewee, who provides information about themselves and their family members. Many questions are retrospective in nature and may not be free from the subjectivity of the respondent in reporting them. Table A 2.1 summarizes information relevant to the intergenerational analysis in this report and then provides details on the type of information obtained or the specific questions asked in each domain.[41]

Table A 2.1
Dimensions of wellbeing captured for multiple generations and family ties

	Interviewee	Interviewee's mother/father	Interviewee's eldest child	Interviewee's grandparents	Interviewee's spouse*	Interviewee's eldest sibling**	Spouse of the interviewee's sibling***
A. Education	X	X	X	X	X	X	X
B. Health	X	X	X				
C Income	X	X					
D. Property	X	X					
E. Quality of	X	X					
D. Property assets	X	X					
E. Employment	X	X		X		X	
F. Occupation	X	X					
G. Informality	X	X				X	

Note: * The age of the partner is known, but not their gender. ** The age of the sibling is known, but not their gender. In case the respondent is the oldest sibling, the next sibling was asked about. *** The age and gender of the sibling's spouse are not known.

Source: Authors.

41. For more information on the questionnaire, see CAF (2022).

A. Education

- Interviewee: report information on attendance at educational institutions and highest level of education attained.
- Eldest child of the respondent: reports information on attendance to educational establishments and the highest level of education attained.
- Grandparents: *Did any of your grandparents go to college?*
- Rest of the family ties covered in the survey: they indicate the highest level of education attained.

B. Health

- Interviewee: current self-reported health status.
- Child of the interviewee: current self-reported health status.
- Mother/father: health status over their lifetime.

Five possible options are always offered: excellent, very good, good, fair and poor.

C. Income

- Interviewee: *Imagine a ten-rung ladder, where at "1" are the "poorest" people and at "10" are the "richest" people in your country: Where are you on the ladder?*
- Respondent's parent*: Imagine a ten-rung ladder, where "1" places the "poorest" people and "10" places the "richest" people in your country: where would you place your parents when you were 14 years old?*

D. Home ownership

The respondent is asked about the ownership of the dwelling where they resided at two points in time.

- At the time of the survey: whether the dwelling in which the interviewee lives is owned and fully paid for, whether it is owned but still in the payment phase, or some other option.
- At age 14: *Was the dwelling in which you lived at age 14 owned by any household member?*

E. Housing quality

The respondent is asked about the quality of the housing where they resided at two points in time.

- At the time of the survey: *In your opinion, on a scale from one to ten, how would you rate the quality of your housing assuming 1 for the worst housing in (city in which the survey takes place) and 10 for the best housing in (city in which the survey takes place).*
- At age 14: *From 1 to 10, how would you rate the quality of the housing you lived in compared to housing at that time? Assuming 1 for the lowest quality and 10 for the best quality housing.*

F. Other assets: other properties

- Interviewee: *Not counting this dwelling, do you or any other member of your household own another dwelling, a place for commercial use, or farmland?*
- Respondent's mother/father: *Excluding the dwelling where you lived, did either of your parents own another dwelling, a place of business, or farmland? If your parents were not living or you had no contact with them, please answer with respect to your guardians.*

G. Employment

- Interviewee: *Regarding your employment status: Do you currently have a job?*
- Mother/Father: *When you were 14 years old, did your father/mother have a job for which he/she obtained money?*
- Grandparents: *Of your two female grandmothers, did at least one of them have a job for which she obtained money?*
- Sibling: *Is your brother/sister currently working?*

H. Occupation

- Interviewee:
  1. *Are you: self-employed; an employer or business owner (with at least one employee in charge); employee.*
  2. *What type of work do you do?* Ten possible response categories, similar to the categorization provided in SCO-08.

- Father:
  1. *In that job, your father was: self-employed; employer or owner of a business (with at least one employee in charge); employee.*
  2. *What type of work was your father doing at the time?* Ten possible response categories, similar to the categorization provided in ISCO-08.

I. Labor informality

- Interviewee: *Do you or your employer make contributions to the social security or pension fund for your retirement?*
- Father: *Was the job that your father had at the time what we would call today a formal job?*
- Older sibling: *Is your brother or sister employed in a formal job?*

Construction of variables for the analysis of intergenerational mobility with the ECAF

Construction of a continuous health index

Following the methodology proposed in works such as Halliday et al. (2021) and Bencsik et al. (2021), a continuous health index is constructed. The variables used as inputs are obtained from the self-reported health questions:

1. *Would you say your health is...* (for the case of the interviewee).
2. *Would you say your mother's/father's health has been throughout their life ...* (for the case of the parents).
3. *The health of your son/daughter is....* (for the respondent's oldest child).

There are 5 possible response options: excellent, very good, good, fair, poor.

The methodology proposed in the reference works is designed to approximate the quality of health during a year of life (Halliday et al., 2021). The following values are assigned for each reported category: 15 for those who report having poor health; 50 for those who report having fair health; 77 for those who report having good health; 90 for those who report having very good health; 97 for those who report having excellent health. These values arise from taking the midpoint of the range defined in the literature for each of the categories.

Construction of rankings in different dimensions of wellbeing

The ECAF 2021 survey makes it possible to construct variables for adjacent generations considering several dimensions of wellbeing, including education, health, housing quality and perceived location in the income distribution. Following Halliday et al. (2021), it is possible to construct percentiles from each of the variables using the residuals of a regression that correlates the reference variable (of the respondent or their parents, depending on the case) with age (of the respondent or their parents, depending on the case) and gender as control variables. Once the residuals of the corresponding regression are obtained, percentiles are constructed for each country.

It should be taken into consideration that the variability of each of the variables used as inputs is different by construction. That is, the health variables have five categories, the housing and income variables have ten categories, while the educational variables have between 9-12 categories, depending on the imputation used. The greater or lesser variability in the input variables can condition the creation of rankings and, thus, the regressions performed. Therefore, additional analysis was performed creating rankings from alternative variables with a homogeneous number of categories (five categories due to the original categorization of the health variables) which allowed to confirm that the results are robust to these alternative specifications.

Self-perception of ethnicity

The following question is asked: *In our country live people of multiple characteristics, ethnic and cultural origins, could you tell me with which of the following groups do you identify with?*

This is a multiple-choice question, with six possible answers:

1. Indigenous
2. Afrodescendant
3. Mulatto
4. White
5. Mestizo
6. Other

For the regression analysis, a variable is constructed that takes a value of 1 when the respondent reports identifying as white or mestizo as the only ethnicity. This variable takes value 0 for all those who report identifying themselves as indigenous, Afro-descendant, mulatto or "other" as the only ethnicity, and those individuals who report identifying themselves with more than one ethnicity or do not specify it.

Homogeneous educational categories across countries

Variables of years of education of the respondent and all their relatives were constructed transforming educational categories into numerical variables. For the construction of this variable, those persons with no education or whose current or maximum level of education is "Initial education" are considered to have 0 years of education. The number of years assigned to subsequent levels completed may vary from one country to another, depending on the specifics of the educational systems. In all countries, completed tertiary, completed university and postgraduate are considered to represent, respectively, three, five and seven additional years with respect to completed secondary (or the equivalent level in each country). For more information, see CAF (2022).

Calculation of intergenerational educational mobility based on population and housing census data

The methodology used to calculate indicators of intergenerational educational mobility using data from the population and housing censuses is detailed below. For more information, see also the work of Berniell, Bonavida et al. (2021), prepared in the framework of this report.

Country coverage: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, Trinidad and Tobago, Uruguay, and Venezuela. Additionally, Portugal and France are also considered as comparison countries with higher level of development.

Source of information. Individual-level microdata bases harmonized by the IPUMS International project (IPUMS, 2020) are used. The IPUMS-I databases consist of random samples of the official censuses of each country and cover between 5%-10% of the total population. All available censuses conducted between the 1960s-2010[42] in the 22 countries (96 censuses) are taken. The population represented in these 96 censuses totals 169,372,000 people in 43,879,000 households.

Education variables. The IPUMS (2020) databases contain two variables related to individual educational attainment that allow for a broad comparison of countries. One of the variables pertains to the highest level of education attained by the individual, divided into four categories (less than complete primary education, complete primary education, complete secondary education[43] and complete university education). The other represents the number of years of formal education received (counting from primary education). This variable reaches values of up to 17 or 19 years of education in most countries, with the exception of Peru and Colombia in specific years. For all countries, the consistency of the IPUMS classification with a classification based on the original educational variables of each census was reviewed, finding, in the case of Bolivia, Costa Rica and Venezuela, some minor discrepancies. For these countries, a few reclassifications were applied to improve consistency. For the calculation of the mobility measures, the maximum educational level between parents is considered if both are present in the household. Otherwise, the educational level of the parent present is used. The results are robust when only the father's education or only the mother's education is considered alternatively.

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42. Strictly speaking, available censuses that include a household identifier, required to link parents and children, are considered. There are censuses available in some years for which this variable is not included

43. It should be clarified that IPUMS includes technical postsecondary education within the category of complete secondary education and not within the university level. This classification is maintained here since it is not possible to identify the technical postsecondary education category separately in all countries. In those countries where it is possible to disaggregate the complete secondary education category into its different components (Argentina, Bolivia, Chile, Colombia, Costa Rica, Ecuador, Haiti, Honduras, and Mexico), post-secondary technical education represents between 1%-15% of the last cohort considered in each country (the highest values, around 10-15%, are found in Argentina, Bolivia, Colombia, Chile, and Haiti).

Measures of educational mobility. The main educational mobility measures reported in this chapter are the following:

A. Absolute upward mobility:

1. Mobility in primary education. Percentage of children whose parents did not complete primary education who manage to complete this level of education.
2. Mobility in secondary education. Percentage of children whose parents did not complete secondary education who manage to complete secondary education.
3. Mobility in higher education. Percentage of children whose parents did not complete higher education who manage to complete that level of education.

B. Relative mobility:

1. Persistence coefficient.
2. Pearson's correlation coefficient.
3. Rank-rank coefficient.

Sample selection. The sample is restricted to children living with their parents at the time of the census in the corresponding country. If neither the mother nor the father is present in the household, a member of the same household belonging to a generation prior to that of the child or young person is identified. Among them, the one with the highest educational level, 15-40 years older than the child or young person, is selected, following an assignment rule that takes into account the type of relationship of the child with the different members of the household. To minimize problems of cohabitation bias (see Box 2.2), the analysis concentrates on children between 13-25 years of age. The subsample of children between 13-18 years old is used to calculate the measures of absolute mobility in primary education. For measures of absolute mobility in secondary education and measures of relative mobility (persistence coefficient, correlation, and rank-rank), the analysis focuses on children between 18-25 years of age. For the absolute mobility measures in higher education, the analysis focuses on children aged 24-25 and is restricted to the geographic districts with the highest population in each country. The large sample sizes of the resulting databases (approximately 30.5 million observations in the sample of children between 13-25 years of age from the 95 censuses analyzed) allow for robustness exercises on possible biases. The estimates are robust to different sample definitions, which fosters confidence in the validity of all the results reported from this source.

Cohorts. According to the sample selection criteria and the available censuses, it is possible to construct measures of educational mobility for the generations born between 1930-2010.

Construction of rankings of parents and children in the education distribution. Information from the entire universe of individuals in a cohort (by given decade of birth) observed at the time of the census (not only those included in the sample) is used to calculate the *rankings* of parents and children in the distribution of years of education of the respective generation. Excluded from the analysis are El Salvador, Guatemala, Haiti, Honduras, and Nicaragua, where more than 50% of the parents have less than five years of education, so it is not possible to construct a proper *ranking.*

Geographic analysis. The analysis at the geographic level is performed for:

1. Urban and rural areas. The IPUMS database provides information on the place of residence of households at the time of the census, distinguishing between urban and rural areas in 15 of the 22 countries of Latin America and the Caribbean. These countries are: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, Guatemala, Haiti, Honduras, Mexico, Panama, Paraguay, Peru, and Venezuela. The definition of urban may vary between countries and IPUMS uses the criteria of each country.

2. Small geographic areas. The IPUMS database provides geolocated information on the residence at the time of the census of each individual. The maximum geographic disaggregation available corresponds, in most countries, to the subnational level of government (typically municipal or analogous). Although this information is available for most censuses, some of them (particular countries and years) omit it.

Cities considered for the calculation of mobility in higher education. Between one and five districts or departments with the largest population in each country were considered following the criteria described below. In the case of the countries with the largest populations and the greatest university education coverage, the five main districts were included. These countries include Argentina, Brazil, Chile, Colombia, Mexico, Uruguay, and Venezuela. In the case of smaller countries with less university coverage (Bolivia, Ecuador, Peru, Paraguay), only the three main districts were considered. Finally, in the case of Central America and the Caribbean (Costa Rica, Dominican Republic, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Nicaragua, Panama, Puerto Rico, Trinidad and Tobago), only the main district was considered. In the specific cases of Jamaica, Puerto Rico and Trinidad and Tobago, where the second subnational level is not available in the IPUMS database, the first larger subnational level was considered.[44] For the comparison with Portugal and France, the analysis considered only the main city, that is, the first largest subnational level, since the censuses of these countries did not collect data for the second subnational level.

Ethnicity variables. To construct the estimates by ethnicity, the "race" variable is used for the countries and census years in which IPUMS reports this data. This is the case for seven of the 22 countries included (Brazil, Colombia, Costa Rica, Ecuador, El Salvador, Jamaica, and Uruguay). The disaggregation and categories reported by IPUMS are not completely harmonized by country, presenting variability according to the representation of each ethnic group and the different classifications or denominations used. In order to homogenize the analysis between countries, a harmonization process was carried out that consisted of grouping the disaggregated information in each country into more general categories. As a result, for all countries with available information on ethnicity, there is a distinction between white and Afro-descendant. In several of these seven countries, there is also the category of indigenous, Asian and mestizo.

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44. The final list was manually corroborated to exclude known cases of large districts, but without relevant university offerings in the period analyzed. The only district excluded was "La Matanza," which was in the list of departments considered for Argentina.

Comparison of the educational mobility results calculated from the census database with the results obtained from surveys. The mobility patterns that emerge from the censuses presented in this chapter are similar to those resulting from databases such as Latinobarometer (Neidhöfer et al., 2021b) and the Global Intergenerational Mobility Database (GDIM, 2018).

Clarifications on Table 2.6

The countries included in each region of the table are listed below and, in parentheses, the estimation method used to calculate the intergenerational income elasticity in each case is detailed.

East Asia and Pacific: Malaysia, Mongolia, Timor-Leste and Vietnam (TSTSLS) and China (OLS)

Europe and Central Asia: Russia (OLS), Albania, Belarus, Bosnia and Herzegovina, Macedonia, Kazakhstan, Kyrgyzstan, Romania, and Uzbekistan (TSTSLS).

High income: Australia, Canada, Cyprus, Norway, New Zealand, Singapore (OLS), Austria, Belgium, China, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Latvia, Luxembourg, Netherlands, Portugal, Slovak Republic, Slovenia, South Korea, Spain, Sweden, Switzerland, Taiwan (TSTSLS), United Kingdom, and United States.

Latin America and the Caribbean: Bolivia, Brazil, Chile, Colombia, Ecuador, Guatemala, Panama, and Peru (TSTSLS).

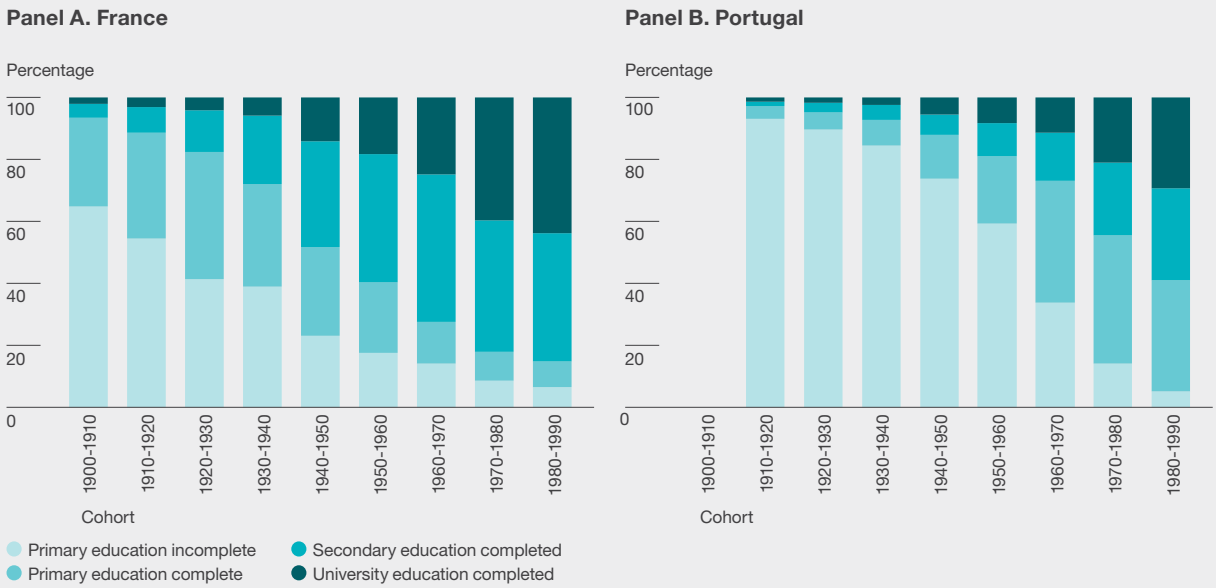
Middle East and North Africa: Egypt, Jordan, Morocco, Syria, and Tunisia (TSTSLS).

South Asia: Bangladesh, India (OLS), Nepal, and Pakistan (TSTSLS).

Sub-Saharan Africa: Benin, Congo, Democratic Republic of Congo, Ghana, Guinea, Kenya, Madagascar, Malawi, Mali, Nigeria, Rwanda, South Africa, Tanzania, and Uganda (TSTSLS) and Ethiopia (OLS).

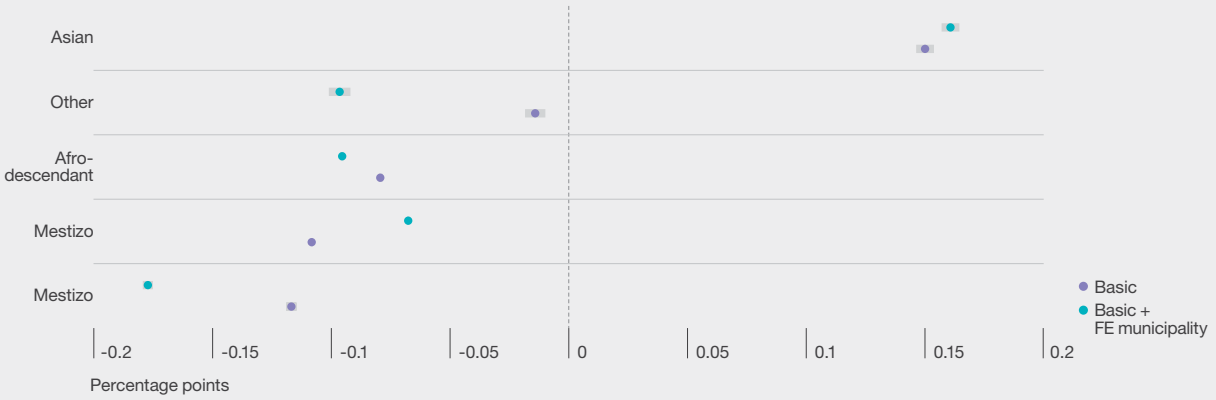
Graphics

Graph A 2.1
Educational expansion in France and Portugal for cohorts born between the decades 1900-1990



Note: The graph shows the distribution of the population according to the highest level of education attained, for cohorts born between the decades 1900-1990.
Source: Authors based on data from IPUMS (2020).

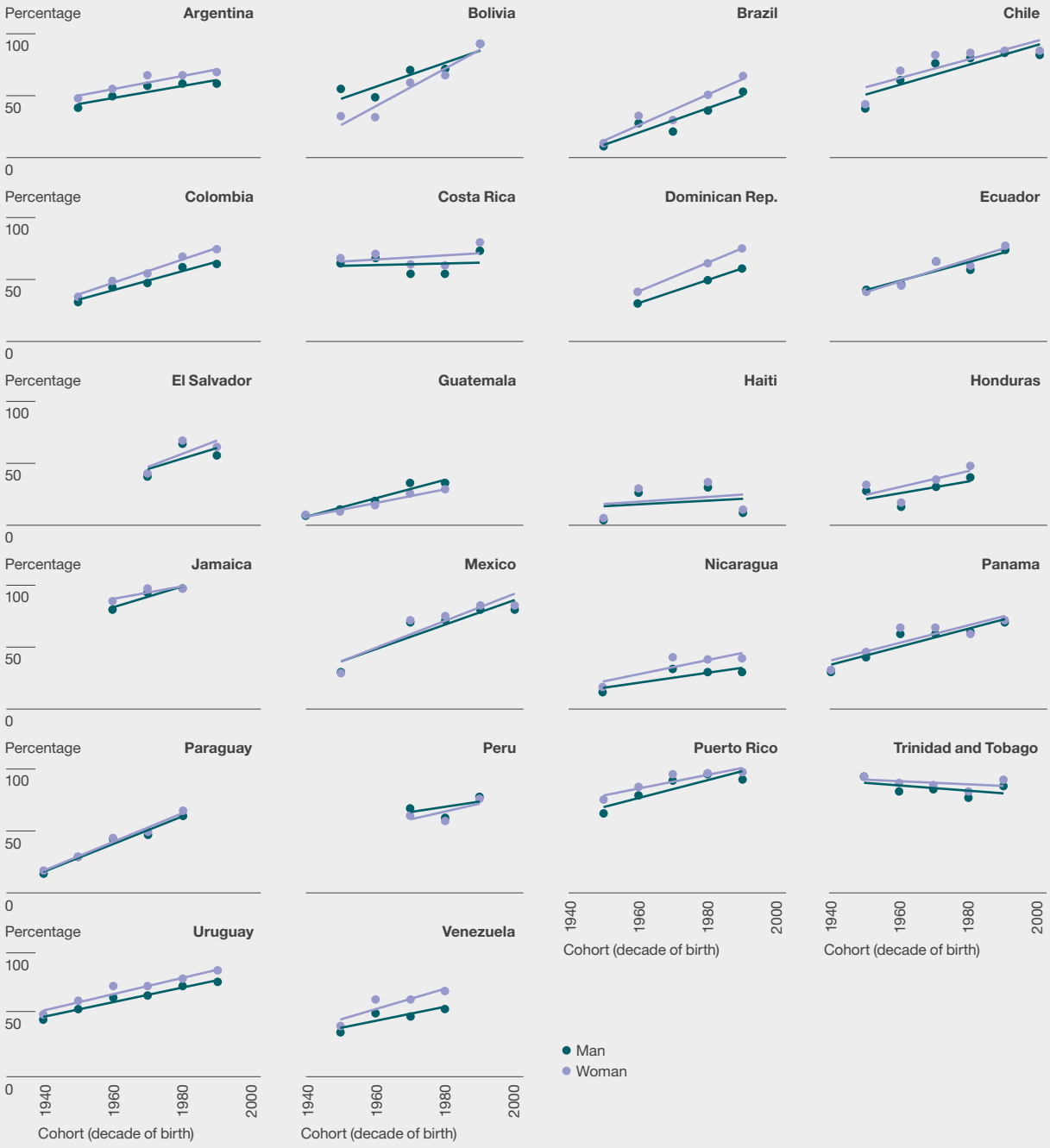
Graph A 2.2
Differences in absolute mobility in secondary education of different ethnic groups with respect to that of whites



Note: The graph shows the differences in absolute mobility of each ethnic group with respect to that of whites, calculated from an ordinary least squares regression. Under the basic specification, only average differences between groups are estimated, while the specification with fixed effect (basic + FE municipality) incorporates fixed effects of municipality of residence as controls. The countries included are Brazil, Colombia, Costa Rica, Ecuador, El Salvador, Jamaica, Puerto Rico, and Uruguay.
Source: Authors based on data from IPUMS (2020).

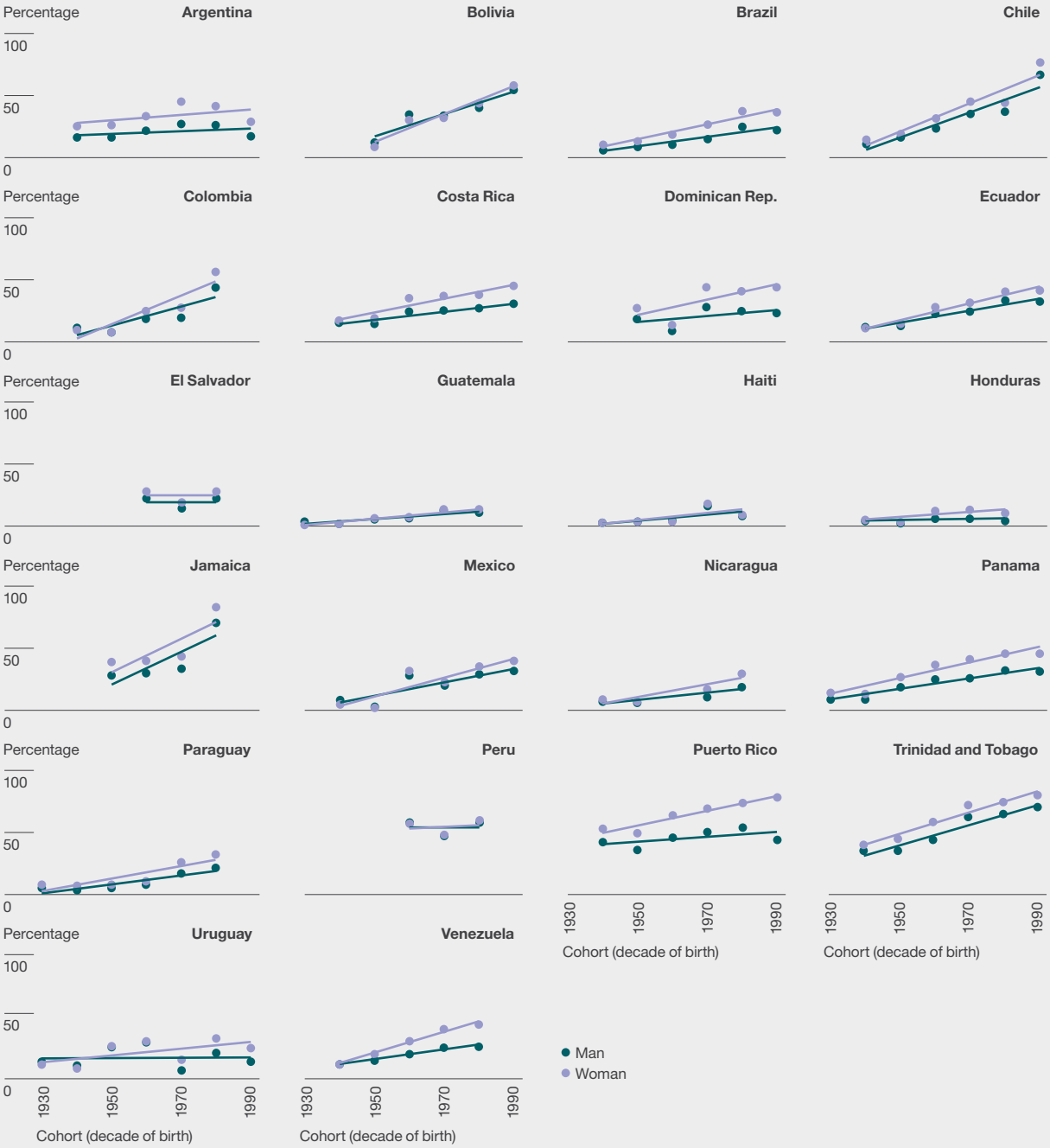
Graph A 2.3
Absolute educational mobility in Latin American and Caribbean countries by child's gender for cohorts born between 1930-2010

Panel A. Primary



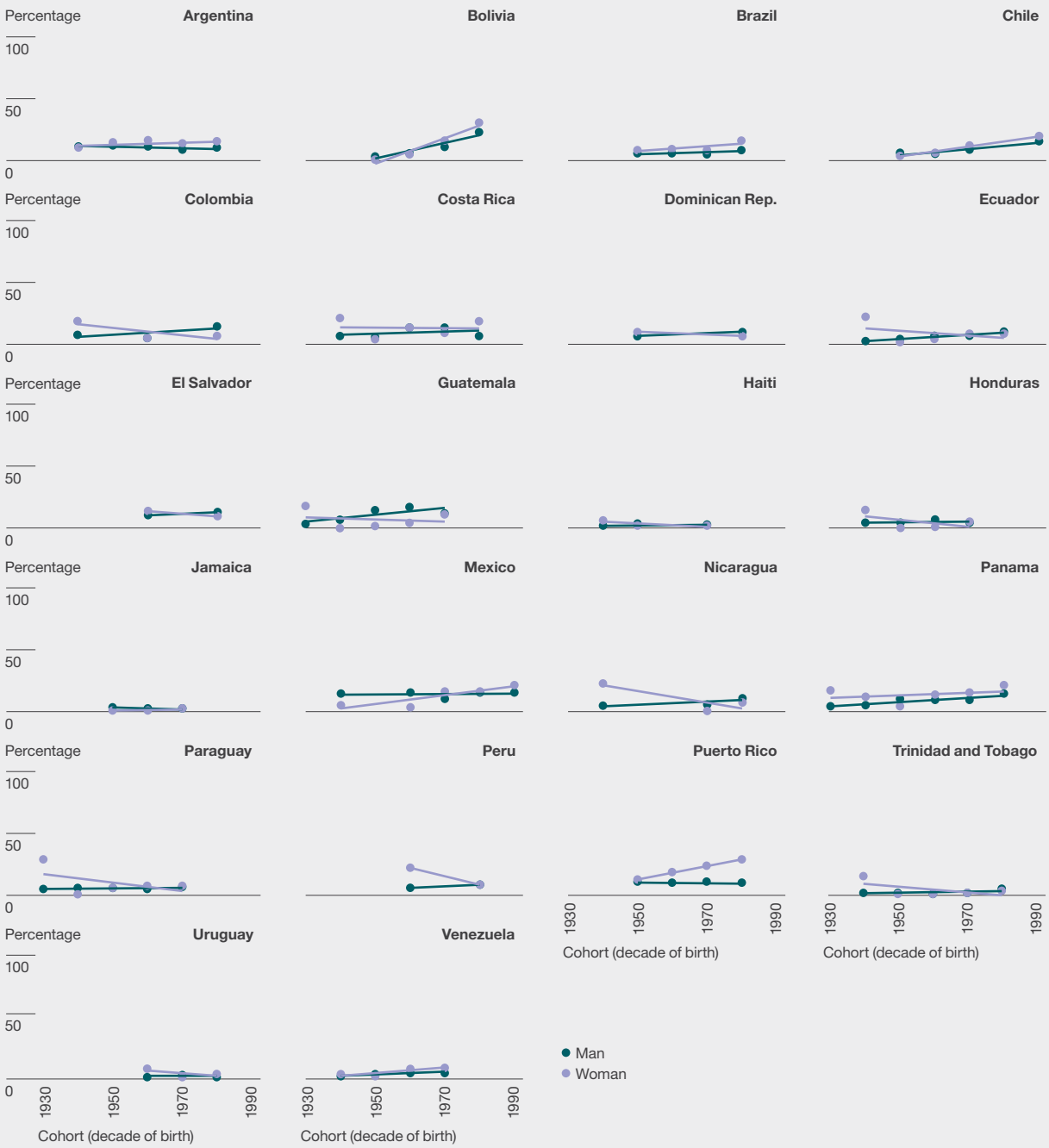
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Panel B. Secondary



Continued on next page →

Panel C. Universitaria



Note: Each point represents, for each decade of the child's birth, the upward educational mobility for the primary, secondary and university levels, measured as the proportion of individuals completing those educational levels whose parents had not completed the respective level. The solid lines reflect the linear fit. In panel C, the sample is restricted to the main cities of each country. Twenty-two countries in Latin America and the Caribbean are covered. For more information, see the section "Calculating intergenerational educational mobility from population and housing census data" in the Appendix.

Source: Authors based on data from IPUMS (2020).

Latent factor model

Simple model for inferring the importance of intergenerational persistence when socioeconomic status is unobserved

Braun and Sthuler (2018) propose a simple model of intergenerational transmission of socioeconomic status in which the observable wellbeing measure (y) of a generation t depends on an unobserved individual endowment ($e_{i,t}$), which is inherited from the previous generation, t –1. This transmission process can be simplified in the following two equations:

$$y_{i,t} = \rho * e_{i,t} + u_{i,t} \quad \text{(A 2.1)}$$

$$e_{i,t} = \lambda * e_{i,t-1} + v_{i,t} \quad \text{(A 2.2)}$$

where u and v are random variables, which do not depend on the endowments. The two central parameters in this model are the parameter λ, which reflects the degree of "heritability" of socioeconomic status between generations, and the parameter ρ, which shows the extent to which the observed wellbeing variable *and* reflects the latent socioeconomic status and can also be interpreted as the return to that status. The parameter λ would be the parameter of interest in a mobility study, as it captures the true intergenerational persistence of inequality.

Braun and Sthuler (2018) show that, relying on information from three or more generations, it is possible to estimate λ and ρ. Specifically, by relying on wellbeing measures of three adjacent generations (parents, children, and grandchildren) and obtaining typical measures of intergenerational persistence captured by the coefficients of the regressions between parent-child and parent-grandchild wellbeing as

$$Y_{i,t} = \alpha + \beta_{-1} * Y_{i,t-1} + \epsilon_i \quad \text{(A 2.3)}$$

$$Y_{i,t} = \alpha + \beta_{-2} * Y_{i,t-2} + \mu_i \quad \text{(A 2.4)}$$

it is possible to show

$$\beta_{-1} = \frac{Cov\,(y_{\{i,t\}}, y_{\{i,t-1\}})}{Var\,(Y_{\{i,t-1\}})} = \rho^2 * \lambda \quad \text{(A 2.5)}$$

$$\beta_{-2} = \frac{Cov\,(y_{\{i,t\}}, y_{\{i,t-2\}})}{Var\,(Y_{\{i,t-2\}})} = \rho^2 * \lambda^2 \quad \text{(A 2.6)}$$

Thus, the parameters of interest can be computed as

$$\lambda = \frac{\beta_{-2}}{\beta_{-1}} \quad \text{(A 2.7)}$$

$$\rho = \left(\frac{\beta_{-1}^2}{\beta_{-2}}\right)^{\frac{1}{2}} \quad \text{(A 2.8)}$$

Equation (A 2.5) shows that to the extent that ρ is less than 1, the coefficient of intergenerational persistence obtained from studies of adjacent generations (β_{-1}) would be underestimating true intergenerational persistence.

Simple measures of inequality of opportunity and their relation to measures of relative intergenerational mobility

Measures of inequality of opportunity attempt to quantify what percentage of the total inequality observed in a wellbeing outcome—e.g., income inequality—is explained by factors that are beyond the control of the individual. These factors are called "circumstances" in the specialized literature and are associated with sources of inequality considered "unacceptable," precisely because they are not related to the decisions that individuals can make and are related to the factors that are given to them. These unacceptable sources of inequality are thus distinguished from others that could be considered "acceptable" and derive from individual effort. The family socioeconomic context (parental education, income, and wealth, among others) and other characteristics such as gender, nationality, ethnicity, religion, and region of birth are usually the variables used to capture the circumstances. Some studies, such as Hufe et al. (2017), go so far as to include within circumstances all behaviors and achievements of individuals before reaching the age of consent (generally, age 18).

There are numerous ways of measuring inequality of opportunities. A simple indicator, which is closely related to the intergenerational persistence indicators, is that developed by Ferreira and Genoux (2014), who propose to approximate inequality of opportunities as:

$$IOp = \frac{Var\,(C'\hat{\beta})}{Var\,(Y)} \qquad \text{(A 2.9)}$$

where $Var\ (Y\ )$ is the variance of the outcome variable of interest—that is, a measure of the level of inequality in the distribution of Y—, and $Var\,(C'\hat{\beta})$ is the variance of the predicted outcomes according to a linear regression model such as the following:

$$Y_i = C'\beta + u_i, \qquad \text{(A 2.10)}$$

where C is a vector of "circumstances," i.e., factors beyond the individual's controlof the individual.

The index in equation (A 2.9) is simple to calculate and interpret, since it is equivalent to the well-known R-squared value of the ordinary least squares estimation of equation (2). The R-squared takes values between 0 (circumstances explain none of the observed inequality in Y) and 1 (circumstances explain 100% of the observed variability in Y). Ferreira and Gignoux (2014) show that if not all circumstances affecting the variable Y can be observed, the R-squared gives a measure of the lower bound of the level of inequality of opportunities.

As can be seen, equation (A 2.10) is very similar to that used to calculate the measures of intergenerational persistence described above, such as the β coefficient, which is one of the most widely used measures of relative mobility:

$$Y_i^h = \alpha + \beta \times Y_i^P + \epsilon_i, \qquad \text{(A 2.11)}$$

where Y_i^h is the child's wellbeing variable and Y_i^P is the parent's wellbeing variable. The main difference between equation (A 2.10) and (A 2.11) is that the parental outcome variable (Y_i^p) in equation (A 2.11) is replaced in (A 2.10) by a vector of characteristics *C*. Removing gender, the inequality of opportunity measures can be viewed as a measure of intergenerational persistence, where the vector of circumstances *C*, which captures socioeconomic characteristics of the parents, is an approximation of Y_i^p. In light of these differences, the relative mobility captured by the coefficient β can be interpreted as a proxy for the inequality of opportunity measure provided that two conditions are met (Roemer, 2004): i) that the measure reflecting parental wellbeing in equation (A 2.11) is a good summary of all circumstances faced by the individual; ii) that the entire effect of the parental wellbeing variable on the children is unacceptable, i.e., there is no chance that the children inherit acceptable factors (e.g., hereditary talent).

Human capital formation and intergenerational mobility

3

Human capital formation and intergenerational mobility[1]

Introduction

The multiple facets of human capital—which includes cognitive, non-cognitive, and health-related dimensions—are crucial in determining people's wellbeing. Not only is greater human capital associated with higher wages or possibilities of accumulating wealth, but it is also tied to other aspects that contribute to quality of life. This includes reaching a healthier old age, enjoying a broader social capital, and participating more actively in civic life. In addition, the human capital of individuals has high social returns. It facilitates social organization and the collective provision of key public goods for economic development.

It is also indisputable that human capital is unevenly distributed among the population, although the deep roots of this inequality are not entirely clear. The benefits and costs of policies that attempt to counteract these disparities have also been the subject of debate in the public policy arena for decades.

This chapter analyzes the origin of inequalities in the distribution of human capital, linking it to the transmission that occurs between generations within the same family. Understanding this intergenerational perspective is crucial. Unlike what happens with other forms of capital, whoever accumulates human capital does not have complete agency over decisions of investment, which are highly conditioned by the home or family. This is the central reason for the connection between the human capital of parents or caregivers and that of

1. This chapter was written by Lucila Berniell and Dolores de la Mata, with research assistance from Agustín Staudt.

their children, which is evident in the reproduction, and often deepening, of inequality.

The intergenerational links that condition the formation of the human capital of children and young people occur fundamentally through two channels: the decisions of parents that affect the upbringing of their children within the home and those that affect them outside the home. The former include all prenatal and post-birth investments to provide children with sufficient material resources, time shared with adults, and a structure of rules that organize life in the home. The latter includes the choice of place of residence (neighborhood[2] or city) and educational institutions. In addition, because there are risks to investments in human capital, parents can employ different strategies to insure them. Examples of private strategies they can employ include relying on the support of relatives or choosing safer childrearing environments for children and young people. There is also social insurance (for example, they can access health coverage and other forms of social protection).

This chapter analyzes the influence of these two pathways, providing novel and relevant evidence for Latin America and the Caribbean. It also proposes a series of interventions and public policies with the capacity to provide opportunities for human capital formation that are more independent of the family socioeconomic context. This array of policies can be grouped into three categories: 1) alleviation of restrictions that limit intra-household investments in children and adolescents; 2) improvements in the supply (coverage, quality and relevance) of basic, technical-vocational and higher education; and 3) attention to habitat and accessibility to key facilities for the development of children and young people in the most segregated and disadvantaged neighborhoods. Many of these policies point to the need to undertake profound changes in the way education, health, urban, and social protection services are provided, but others are aimed at low-cost interventions and greater short-term scalability. All of them are aimed at strengthening equal opportunities for the full development of the region's children and young people. They support upbringing in the home and environmental conditions with measures that, for example, improve accessibility to different facilities in cities or free that environment from the risks imposed by shocks associated with conflict, violence, and natural catastrophic events.

2. The Spanish word used for neighborhood varies among the different countries in Latin America and the Caribbean, although *barrio* is a widely shared denomination. However, in some countries the word *barrio* refers to informal urban areas, like what in Brazil are called *favelas*. In other countries, neighborhoods are referred to by other terms, like *colonias* in Mexico or *urbanizaciones* in Venezuela.

Human capital formation from an intergenerational perspective

As with physical capital, human capital is made up of multiple parts and, as such, is multidimensional. On the one hand, it encompasses cognitive skills. These are typically related to the concept of "intelligence." Cognitive skills include the mental capacities and processes for learning, information processing, and decision making (Borghans et al., 2008). On the other hand, human capital encompasses socioemotional skills, which include the management of emotions, feelings (emotional regulation) and social relations, and mental health. A third and final key dimension that makes up a person's human capital is their stock of physical health. All three dimensions of human capital are formed very early in life, even before birth, in a process of accumulation in which the role of the family is fundamental.

The modern approach to understanding human capital accumulation posits a dynamic process. This process is based on a production function that combines different inputs. Its main properties are self-productivity (i.e., high human capital in a given period favors future accumulation) and dynamic complementarity (i.e., it is more profitable to invest in those who have previously accumulated greater human capital).[3] Combined, these two properties imply that early inequalities tend to carry over and amplify later in life, especially if compensatory mechanisms are absent. The role of the household at birth is crucial in this technology of human capital formation. This is because parents or guardians bear the major responsibility for investing sufficiently early in the human capital of the youngest members of the household. Of course, these decisions made by parents are supported by the entire supply of public goods and services that complement these investments.

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All three dimensions of human capital are formed at a very early age in life, even before birth, in a process of accumulation in which the role of the family is fundamental

The literature has shown that it is not enough to invest early. The first decades of life comprise, as a whole, a broader window of opportunity in which to invest in the development of people's human capital. In this regard, recent studies indicate that, in addition to childhood, adolescence is also a fundamental moment in which to make investments to improve the human capital of new generations. Carneiro, López García et al. (2021) show that—given a certain level of permanent family income (i.e., discounting temporary shocks to household income)—the more balanced family income is between periods of development (early childhood, middle childhood, adolescence), the greater a child's human capital will be. In addition, these authors find that the middle childhood period (6–11 years old) is relatively less important than the other two extremes. Early childhood (0–5 years old) and adolescence (12–17 years old) are two key moments in which to invest. These findings are consistent with other studies that show the importance of these stages of life for the

3. There are also somewhat more subtle interactions between the different dimensions that make up human capital accumulation. For example, a high level of cognitive skills can bear greater fruit when accompanied by high levels of determination or perseverance to achieve one's goals, i.e., when there is a good level of socioemotional skills. These types of interactions reflect a form of cross-productivity, which is also relevant in the human capital production function described in the specialized literature (see, for example, Cunha and Heckman, 2010).

neurobiological and socioemotional development of individuals. They lay the foundations for cognitive and non-cognitive skills, as well as for the general health status they will enjoy in adulthood.[4]

The importance of these stages already hints at the relevance of the family—especially the human capital of parents or guardians—in the formation of the human capital of children and youth. As discussed in Chapter 2, the persistence of human capital levels in Latin America and the Caribbean is among the highest in the world. Consistent with this result, equality of opportunity is low. This indicates that the circumstances children and adolescents in the region are subjected to play a very adverse role for those who grow up in disadvantaged environments and a very favorable one for those who grow up in high socioeconomic contexts. As will be seen below, parents' human capital levels are one of the key circumstances for equal opportunities in human capital formation.

●●

The decisions of parents to build their children's human capital within the household involve investments in three key inputs: material resources, time, and household organization rules

There are several factors that connect this capital between parents and children. On the one hand, there are reasons to think that parents with high levels of human capital may invest more in the human capital of their children. On the other hand, there are linkages between the human capital of parents and children that are less affected by public policy, such as those related to the genetic transmission of characteristics that facilitate or hinder the formation of skills in children (see Box 3.1). Moreover, the human capital of the parent and the child tend to mirror one another because of the influence of similar social and environmental settings during their respective upbrings. These settings may strongly condition their cognitive, socioemotional or health development.

This chapter analyzes the underlying reasons for the high persistence and low equality of opportunities to form human capital. It focuses on two ways in which the human capital of parents and, more generally, the entire family context intervene in the formation of children's human capital. The first of these pathways operates within the home and the second, outside the home.

On the one hand, families make decisions that have a direct effect on their children's human capital **within the home** (see Figure 3.1). These decisions include parental or guardian investments in **three types of key** parenting **inputs**: material resources (purchase of food, clothing, housing expenses, etc.), time devoted to children and youth, and household organization rules, which translate into parenting styles and role models.[5]Of course, families are not free to choose any level of investments for their children. They are subject to different types of **constraints**: financial, cognitive-behavioral (e.g., due to

4. For a summary of this literature, Chapters 1 and 2 of RED 2016 (Berniell et al., 2016) can be consulted.

5. The categorization of all decisions made by parents or guardians within the home into these three unique groups was proposed in RED 2016. It is taken up again here to present an analysis—as succinct as possible—of the tremendously complex role played by parents and guardians in this task.

lack of information or knowledge, or due to excessive stress and the resulting limited attention span) and possibilities for insuring investments.[6]

Box 3.1
Intergenerational transmission of attributes with a strong genetic component

The approach outlined in this report helps to escape from the views of genetic determinism regarding the intergenerational transmission of human capital. That is, thinking of human capital as an accumulation variable that can grow over time according to the investments made during a person's lifetime implies that the individual's development potential is not necessarily imprinted before birth. This is not to deny that all people are born with different genetic characteristics, some of which may imply a greater potential for the development of certain cognitive, socioemotional, and physical skills (Harden, 2021). Recent evidence suggests that these differences may be important for the expression of this potential throughout life (for example, through mechanisms of genetic expression) but that the strongest determinants for achieving greater potential are rooted in the different barriers or opportunities for human development offered by the family, social, and environmental contexts in which the first decades of life are spent (Heckman and Mosso, 2014).

However, it is undeniable that certain characteristics are more affected by genetic inheritance than others. For example, there is a strong genetic component to physical characteristics such as skin color, hair color, eye color or certain attributes of physical build. The literature on racial discrimination in labor markets, discussed in greater depth in Chapter 4, indicates that the return on certain heritable attributes, such as skin color, is not insignificant in Latin America and the Caribbean. In fact, in comparing the labor outcomes of people with similar sociodemographic characteristics, but with different skin colors, the darker a person’s skin in Latin America and the Caribbean, the lower the wages and the higher the unemployment. This is a strong indication of the importance of discrimination mechanisms on genetic characteristics that are totally beyond an individual’s control. Moreover, the economic literature has also found that other genetically heritable attributes, such as physical beauty, are valuable in the labor market (Mobius and Rosenblat, 2006; Hamermesh, 2013).

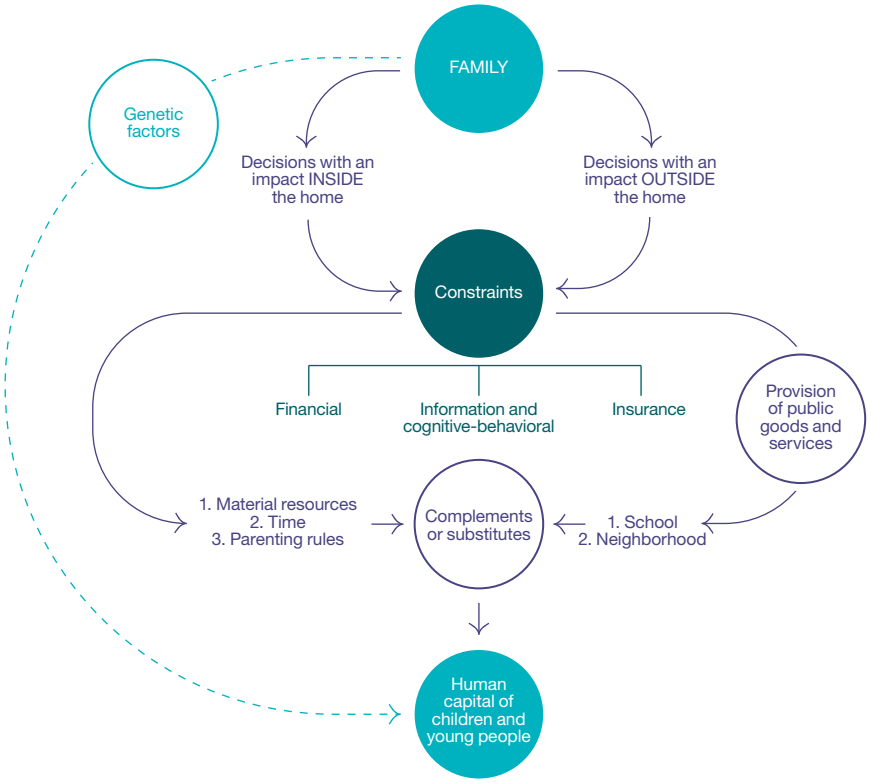
6. A broad definition of cognitive constraints includes not only the absence of key information or knowledge for decision making but also problems in organizing the available information and knowledge in the process. The inclusion of the latter aspect in the study of poverty is relatively recent. For example, Shah et al. (2012) hypothesize that these cognitive constraints are additional explanations to other more traditional barriers that operate to generate poverty traps, such as the more unfavorable contextual circumstances faced by vulnerable families (e.g., poorer access to quality education, health and habitat services, or lower political participation) or more individual factors (e.g., personality traits). Unlike these other barriers, cognitive constraints overload mental decision-making processes in such a way that they change the way people approach problems and devise solutions, including alterations in the ability to assess risks and consistently plan and execute solutions.

On the other hand, there are the decisions made by families that have an impact on the possibility of training their children's human capital **outside the home**, among which the **choice of place of residence** (neighborhood or city, for example) and the choice of **educational establishment** are key. Once again, these decisions are influenced by financial, information, cognitive-behavioral, and insurance **constraints.** Three other elements influence the formation of human capital: 1) genetic transmission (represented by the dotted line in Figure 3.1), which does not involve family decisions and occurs through biological mechanisms (see Box 3.1); 2) the provision of public goods and services, especially related to educational institutions and the place of residence; and 3) the complementarity or substitutability of the investments that parents make to form human capital inside and outside the home.

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To build human capital outside the home, parents invest in two key aspects for their children: place of residence and educational establishment

Figure 3.1
Ways in which family influences the human capital of children and youth



Source: Authors.

As analyzed in the following sections, family decision-making restrictions are key to determining the unequal development opportunities faced by children and young people from more or less advantaged households. This constitutes the critical knot that links the levels of human capital between generations of the same family.

Lifetime inequalities in human capital

In order to analyze how early inequalities in human capital begin and how they are reinforced over the years and end up strongly connecting the human capital of parents and children, it would be desirable to have systematized longitudinal information for different cohorts of people. In Latin America and the Caribbean there are few sources that make it possible to follow these trajectories throughout life, which is not the case in more developed regions. A notable exception is Young Lives, a study that includes this type of longitudinal data for Peru,[7] where it is carried out under the name of *Niños del Milenio*. The study shows that inequalities are already evident at birth. For example, the probability of low birth weight and the probability of chronic malnutrition in children under five decrease significantly with the highest level of education attained by the parents. Box 3.2 reinforces this type of initial inequality result, but analyzing vital statistics records for the cases of Colombia and Uruguay.

It is not fortuitous that gaps in health, as a key component of human capital, open up so early, nor is it innocuous for people's development throughout the rest of their lives. According to recent but already abundant literature, health at birth is a specific channel through which inequalities in human capital are transmitted from one generation to the next. Moreover, health at birth is highly conditioned by the circumstances of the family environment and the mother's own health prior to gestation, during pregnancy, and at the time of birth. It has been shown that this "initial endowment" of health can have long-term consequences. For example, low birth weight affects educational performance, occupational outcomes, and health in adulthood (Bharadwaj et al., 2018; Aizer and Currie 2014). As Box 3.2 shows, there are still significant socioeconomic gradients in the probability of low birth weight in Latin America and the Caribbean. For this reason, this channel of

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Health at birth, which is strongly conditioned by for the family environment and for the mother's own health, is a critical mechanism for the transmission of inequalities in human capital

7. The Young Lives project is a multi-country initiative (four countries in different regions, including the case of Peru for Latin America), which follows the developmental trajectory of children in two cohorts: one born in 1994–1995 and the other born in 2001–2002. The other countries covered are: Ethiopia, India (Andhra Pradesh and Telangana) and Vietnam. The longitudinal follow-up now spans six rounds, including a final one conducted during the pandemic by COVID-19 in 2020 (via telephone, with three sets of calls). This data source is of great value for studies on human capital accumulation in the region, as it currently covers the most important stages of people's development, from early childhood to the transition to adulthood. Young Lives is cofunded by the UK government's Foreign Commonwealth and Development Office (FCDO) (2001–2023), the Netherlands Ministry of Foreign Affairs (2010–2014) and the Old Dart Foundation (2022–2025). The views expressed here are those of the authors and are not necessarily shared by Young Lives/ *Niños del Milenio*, the University of Oxford, or other donors.

perpetuating inequalities is still in force and predicts inequalities that will remain in the long term.

Box 3.2
Early physical development indicators from vital statistics

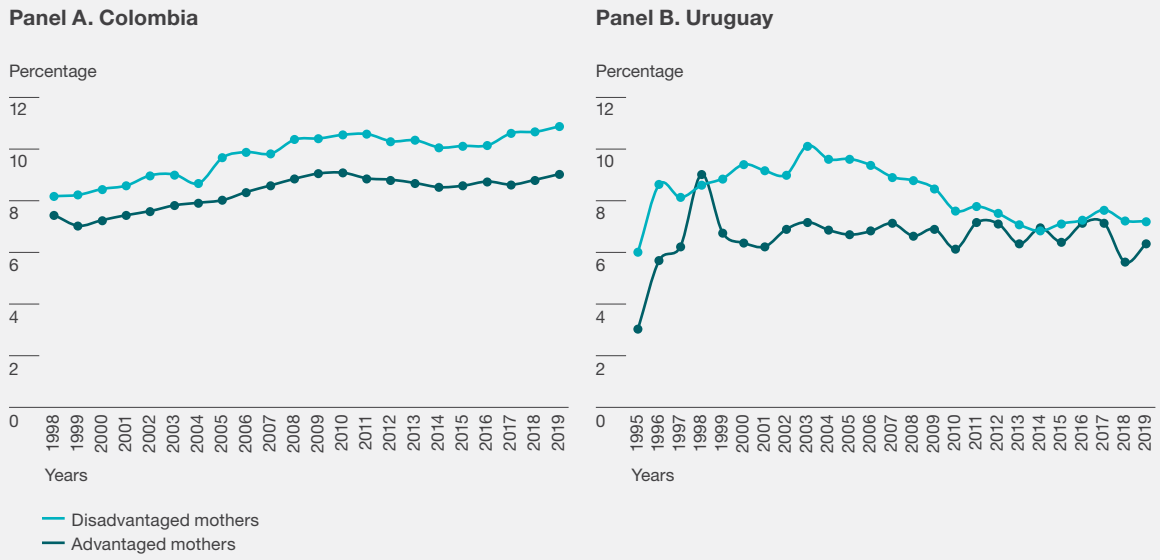
Many indicators of early physical development (health at birth) exist, but, in general, their scope does not always allow standardized comparisons between countries or over time. Here we present indicators that are generally available and comparable for many countries. These are vital statistics records, which typically include the child's weight and height at birth, among other measures, such as the Apgar test result (a rapid test that measures parameters of the general health of the newborn in the first and fifth minute of life) and sociodemographic characteristics of the mother and the health services provider.

These types of records, when shared in the form of open and anonymized microdata, allow for interesting analyses of inequalities in early life. Aizer and Currie (2014), for example, use these microdata for the case of the United States. They show that, for advantaged mothers (married, university-educated, and white), the incidence of low birth weight remained between 3% and 4% of births, while for disadvantaged women (incomplete secondary education, unmarried, and of African descent) levels evolved from 16% in the early 1990s to 13% in the early 2010s. The authors note that this decline in low birth weight gaps occurred at the same time that income inequalities were amplifying in that country, suggesting that birth weight is malleable and influenced by policy interventions or other changes not necessarily determined by income.

Colombia and Uruguay are two countries in the region that publish these records as open microdata, covering a long period of time. For Colombia, this source includes about 11 million births over the period 1998–2019, while for Uruguay the records comprise almost one million births over the period 1995–2019. Graph 1 shows the evolution of low birth weight for two groups of mothers over these periods in the two countries: "advantaged" women (with completed secondary school or higher and who are married or cohabiting with their partner) and "disadvantaged" women (did not complete secondary school and are single, widowed or separated).

The two countries show contrasting patterns. On the one hand, while in Colombia the gaps in the incidence of low birth weight do not seem to close over time, in Uruguay they have been narrowing since 2011. The levels are also different between the two countries. For example, while in Colombia the percentage of children with low birth weight in 2019 was 11% in the case of disadvantaged mothers and 9% for children of advantaged mothers, the rates in Uruguay were 6.7% and 6.4%, respectively. On the other, there is also a notable upward trend in the incidence of low birth weight for both groups in Colombia, while the values appear to be more stable in Uruguay. However, given that the groups of advantaged and disadvantaged mothers may be changing over time, a more detailed analysis is needed to clean these average values from possible differences in the composition of the groups. This is possible thanks to the richness of the microdata shared in open format.

Graph 1
Percentage of infants born with low birth weight based on mother's characteristics



Note: The graph reports the proportion of low birth weight births (<2,500 grams to total births for each year. The set of disadvantaged mothers includes single, widowed or separated mothers who did not complete secondary school. The group of advantaged mothers includes mothers who are married or cohabiting with their partner with an educational level equal to or higher than completed secondary school.

Source: Authors based on vital statistics from Colombia (National Administrative Department of Statistics, DANE) and Uruguay (Ministry of Public Health of Uruguay).

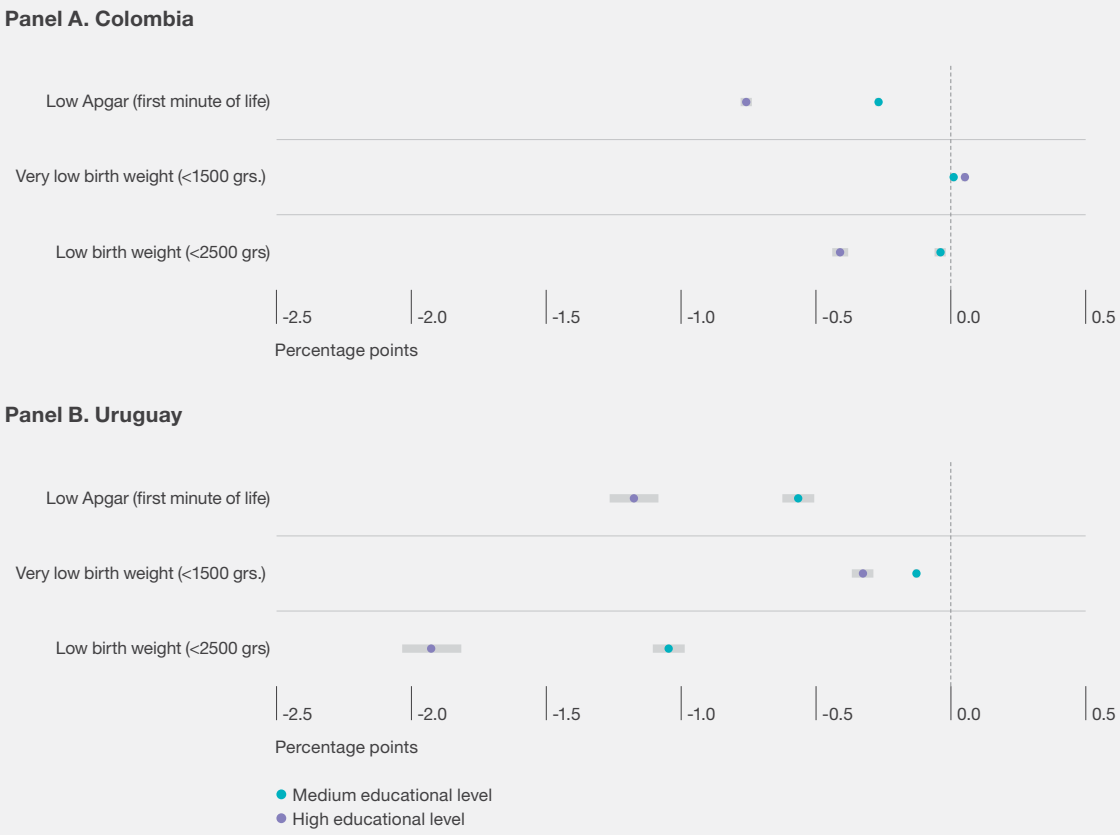
Specifically, the association between mothers' highest level of education and children's health at birth can be quantified once the effect of other variables also associated with children's health is discounted. Graph 2 shows these associations between the mother's educational level and three indicators of children's health (low birth weight, very low birth weight and a low Apgar test value), which result from estimating this regression:

$$S_{it} = \alpha + \beta_M \, Edu_{it}^{M} + \beta_A \, Edu_{it}^{A} + X_{it} \, \lambda + \epsilon_{it}, \qquad (1)$$

Where S_{it} is the health of the child i at time *t*, Edu_{it}^{M} is a dichotomous variable that takes the value 1 if the child's mother has a medium level of education (maximum level of education is complete secondary school), Edu_{it}^{A} takes the value 1 if the mother has a high level of education (complete higher education), and X_{it} is a set of control variables that include mother's age, marital status, sex of the child, number previous pregnancies, whether birth was multiple, and year and region fixed effects. The coefficient β_M indicates by how many percentage points the health outcome of the infant of a mother with medium education changes compared to the child of a mother with low education (less than high school completed). For its part, the β_A coefficient indicates the change in each health outcome of the infant of a highly educated mother with respect to the child of a low educated mother.

Graph 2 shows results that indicate that the educational gradient is more marked in Uruguay than in Colombia. For example, while in Colombia the probability of having low birth weight for children born to mothers with medium or high education is almost no different from that of children born to mothers with low education, in Uruguay the probability is 1 percentage point lower if the baby has a mother with medium education and almost 2 percentage points lower if the mother has high education. The same pattern is repeated when the probability of having a very low birth weight or a low Apgar score is considered as the health outcome.

Graph 2
Association between a mother's education and child's health outcomes at birth



Note: The graph reports the coefficients and their confidence intervals (95%) estimated by ordinary least squares, where the independent variable is the mother's education, which is divided into low level (reference category, which includes up to incomplete high school), medium level (complete high school) and high level (education higher than high school). The dependent variables are three binary variables: low birth weight (if birth weight is less than 2,500 grams), very low birth weight (if birth weight is less than 1,500 grams) and having a low Apgar test score. The controls included are: multiplicity of delivery, number of pregnancies, year of birth registration, department of residence, age and marital status of the mother and gender of the newborn. The data correspond to the period 1998–2019 (Colombia) and 1995–2019 (Uruguay).

Source: Authors based on vital statistics microdata for Colombia (National Administrative Department of Statistics, DANE) and Uruguay (Ministry of Public Health of Uruguay).

The Young Lives Study also makes it possible to assess inequalities in early physical development based on an indicator called height-for-age (HPA), from which key measures can be constructed to monitor chronic (moderate or severe) malnutrition. Low HFA indicator values indicate insufficient growth for the child's age. With this database, rank-rank measures can be obtained which, as explained in Chapter 2, correlate the positions of parents and children in the distribution of different measures of wellbeing. Graph 3.1 shows the correlation between the percentiles of household wealth at birth (indicating the relative position of parents in the wealth distribution) and the percentiles that children occupy in the distribution of the HFA measure (indicating the relative position of the child in the distribution of this measure of physical development). In addition, Young Lives makes it possible to construct rank-rank measures for different life stages, starting when the children surveyed were, on average, 12 months old and at approximately 5, 8, 12 and 15 years of age, always in relation to the wealth position of the household at the time of birth. The initial rank-rank coefficient is high, with an approximate value of 0.35, which results from the slope represented in panel A of Graph 3.1. That graph shows that children from households in the lowest percentiles of the wealth distribution are those who also, on average, occupy the lowest percentiles on the physical development measure and conversely, those in the highest percentiles of the wealth distribution are in the highest percentiles of physical development. Panel B indicates that the connection between household wealth at birth and relative position on this measure of physical development becomes stronger at ages 5, 8, and 12, with the rank-rank coefficient rising to 0.48, 0.45, and 0.43, respectively. It then falls appreciably, to a value of 0.36, but is still higher than the already high value estimated when the children were one year old.

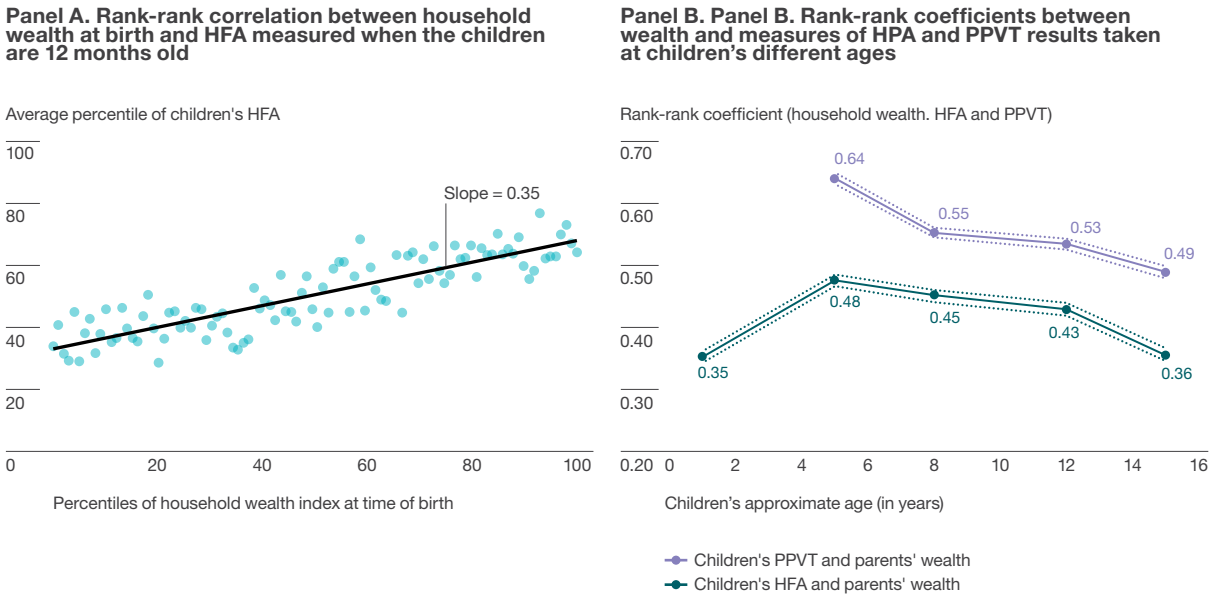
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Socioeconomic gaps in cognitive and physical development open up very early in life, and are maintained during childhood and adolescence

The pattern observed in panels A and B of Graph 3.1 for physical development is also present in other measures of early human capital development. For example, panel B shows estimates of rank-rank correlations between the level of household wealth at birth and a measure of cognitive performance (Peabody Picture Vocabulary Test [PPVT]). There it is observed that the degree of persistence in this dimension is even greater than that obtained for the physical development metric, implying that socioeconomic gaps in the cognitive dimension open very early, even before entry into elementary school, and that they tend to remain high over time. This pattern of early inequalities appears systematically in other Latin American and Caribbean countries. The work of Schady et al. (2015) documents notable gaps by socioeconomic level for this type of cognitive measures in five countries in the region (Chile, Colombia, Ecuador, Nicaragua and Peru). Consistent with what is observed in panel B of Graph 3.1, in these countries the gaps are already present when the child is about three years old. They are around 0.9 standard deviations when comparing children of mothers who only completed primary school with children of mothers who completed secondary school or higher.

Graph 3.1

Rank-rank associations between percentiles of household wealth at birth, average percentiles in the height-for-age (HFA) distribution, and children's scores on a language development test (PPVT) in Peru



Note: Young Lives calculates the household wealth index based on three dimensions (quality of housing, access to services, and possession of durable goods). Children's height-for-age (HFA) is a standardized measure (z-score) that indicates the position of a child's height relative to the distribution of heights for children of the same age. Thus, a HFA score of -1 means that the child's height is one standard deviation below the average height of children of the same age. The Peabody Picture Vocabulary Test (PPVT) score captures children's cognitive performance in terms of receptive vocabulary (i.e., it measures the degree of association between words mentioned by the rater and the pictures available on the test cards). The scores used in the graph estimates are those standardized by Young Lives. The rank-rank correlation is estimated as the coefficient of a regression where the independent variable is the wealth percentile of the parents at the time of the child's birth and the dependent variable is the average percentile in the HFA distribution (or PPVT score) in which children of parents sharing percentile in that initial household wealth distribution rank. Rank-rank coefficient estimates come from the same sample of children as they get older, which is possible because of the longitudinal nature of the data. The dotted lines represent the confidence intervals of the point estimates (95%).

Source: Authors based on Young Lives Study, Rounds 1–5 (https://ninosdelmilenio.org).

Additionally, other longitudinal surveys that focus on early development, such as the ELCA in Colombia, the ELPI in Chile or the ENDIS in Uruguay, provide metrics on other dimensions, such as early socioemotional development.[8] For example, data from the ENDIS 2018 in Uruguay show strong early socioeconomic gradients in this dimension. While 25% of children with mothers who did not complete secondary school present socioemotional development problems (internalized or externalized behavioral problems), this proportion only reaches 10% among children of mothers with completed higher education. In addition, according to recent work using such measures for both parents and children,

8. ELCA is the Colombian Longitudinal Survey (Universidad de los Andes). ELPI is the Chilean Early Childhood Longitudinal Survey (Ministry of Social Development, Chile). ENDIS is the Uruguayan Nutrition, Child Development and Health Survey (National Institute of Statistics, Uruguay).

externalizing and internalizing behaviors of parents and children are similar (Attanasio et al., 2020).

Young Lives' longitudinal structure enables an analysis of the chances that the children and youth in the study had of reaching high levels of education once they reached adulthood (around the age of 25 or 26), also taking into account certain important milestones for the development of human capital during the first decades of life. Panel A of Graph 3.2 shows that these chances are highly dependent on the level of education attained by the parents. A first aspect to note from this graph is the educational expansion that occurred in Peru (see Chapter 2), which implied that the proportion of parents who achieved some post-secondary education ("high" level) was only 22.3%, while it is 65.5% for the children and youth included in the study. However, the graph in panel A also shows that the fractions of children of parents with different educational levels who reach a high educational level are quite different. For example, while more than 90% of the children of highly educated parents reach that same level, the share for children of parents with low educational attainment is less than half. It can also be observed that there are practically no children with low educational levels who come from families with highly educated parents and that almost all the children who end up with low educational levels come from families with parents who only reached that level.

Panel B of Graph 3.2 adds intermediate developmental milestones with the potential to affect the maximum number of years of education completed. For example, the majority of children (6–10 years old) with early literacy problems come from homes with parents with low educational attainment, while the share of children of highly educated parents who face these early problems in their educational trajectory is practically insignificant. With respect to poor health status (as reported by parents), again, the proportion of children coming from homes with poorly educated parents is substantially higher than those coming from homes with more educated parents. The graph shows the proportion of children who became parents early (before age 23) as the last intermediate link. This fraction is high among children of poorly educated parents and practically nil among those with highly educated parents. In addition, a large proportion of those who come from homes with low-educated parents and had children young only reach low or medium levels of education. This type of analysis leads to several hypotheses about developmental episodes in childhood and adolescence that reinforce certain initial conditions (advantageous or disadvantageous) and thus condition the probabilities of reaching high levels of human capital in adulthood. The remainder of this chapter deals with these episodes and the mechanisms that operate behind them.

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Most children and young people who face intermediate problems on their pathway to higher levels of education come from homes with parents with low educational attainment

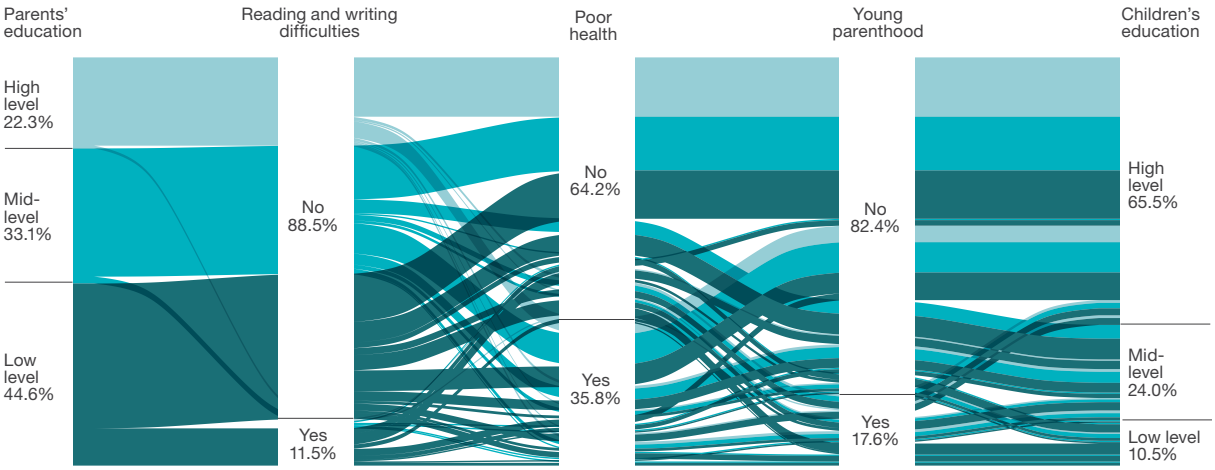
Graph 3.2

Human capital trajectories depending on family background (parents' education) in Peru

Panel A. Parents' education at the time of their children's birth and education attained by their children by age 25–26 (older cohort in Young Lives Study)



Panel B. Connection between parent and child education mediated by some developmental milestones that can be measured longitudinally



Note: Panels A and B analyze the trajectories of children in the largest cohort of the Young Lives Study. The graph in panel A presents the proportions of children in that cohort by educational attainment in round 6 and parental educational attainment. Panel B aggregates flows that cross intermediate states, indicated by milestones that may condition the child's development in their life trajectory and that are captured in this longitudinal database. Panel B includes literacy difficulties, less-than-good health status (average, poor or very poor) and whether the children became parents before the age of 23. Educational levels are defined as follows: low, less than complete secondary school; mid, up to complete secondary school; high, more than complete secondary school.

Source: Authors based the Young Lives Study, Rounds 1–6 (https://ninosdelmilenio.org).

When, who and how are the key decisions made to build human capital?

The intergenerational transmission of human capital begins before birth and can be reinforced during the first decades of life. This is due to the fact that both home and parents or guardians' readiness to receive a new family member condition the child's possibilities for development. As for post-birth development, the evidence indicates that early childhood and adolescence are critical stages (Carneiro, López García et al., 2021).

Regarding prenatal conditions, the role of fertility planning is important. This planning implies that having children is a decision that takes into account the availability of the necessary resources for raising a new household member. This decision must also consider the health conditions of the pregnant mother, which should be conducive to carrying out a pregnancy.[9] Data from the Demographic and Health Surveys (DHS) (ICF, 2004–2017) for Latin American and Caribbean countries indicate that about half of pregnancies are unplanned. Moreover, unintended pregnancies reflect a clear socioeconomic gradient. For example, in the case of Bolivia, while 52% of pregnancies in families in the highest wealth quintile are planned, that fraction drops to 22% for families in the lowest quintile.[10] The gradient may be due to various causes, including the costs of fertility planning. These costs, which include contraception, imply greater barriers to desired fertility in the most disadvantaged families, especially in countries where sexual and reproductive health policies are far from ensuring universal coverage and quality services for the entire population. For example, in an analysis of the case of the United States, Seshadri and Zhou (2022) find that lowering this type of family planning costs would considerably increase intergenerational mobility. These authors exemplify their analysis with the differences in planning costs faced by African-American families compared to those of whites, which explain about 20% of the gaps in upward mobility between these two population groups.

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Planned and desired fertility is key to parenting. The socioeconomic gradient of teenage pregnancy affects the possibilities of intergenerational mobility in the region

The importance of planned and desired fertility makes the phenomenon of adolescent pregnancy an issue of particular concern for intergenerational mobility in Latin America and the Caribbean. The region has very high teenage pregnancy rates, without registering any marked decline over time. For example, vital statistics microdata that record the characteristics of births in Colombia indicate that currently about 20% of births are to mothers who are 19 years old or younger. DHS data for several countries in the region also show that approximately one in five births results from an adolescent pregnancy and that there is an important socioeconomic gradient in this phenomenon. For example, in Peru, according to the 2012 DHS, the percentage of women aged 15–19 who were already mothers or pregnant at the time of the survey was

9. This preparation includes physical and mental health aspects, such as the need to prepare the body for the gestation period (e.g., to avoid congenital malformations, such as spina bifida), a good overall nutritional status of the woman, and the absence of mental health conditions that prevent proper care of the newborn.

10. These figures correspond to the 2008 DHS in Bolivia.

26% in the poorest quintile (approximately one in four) and only 3% in the top quintile of the distribution (approximately one in 30).

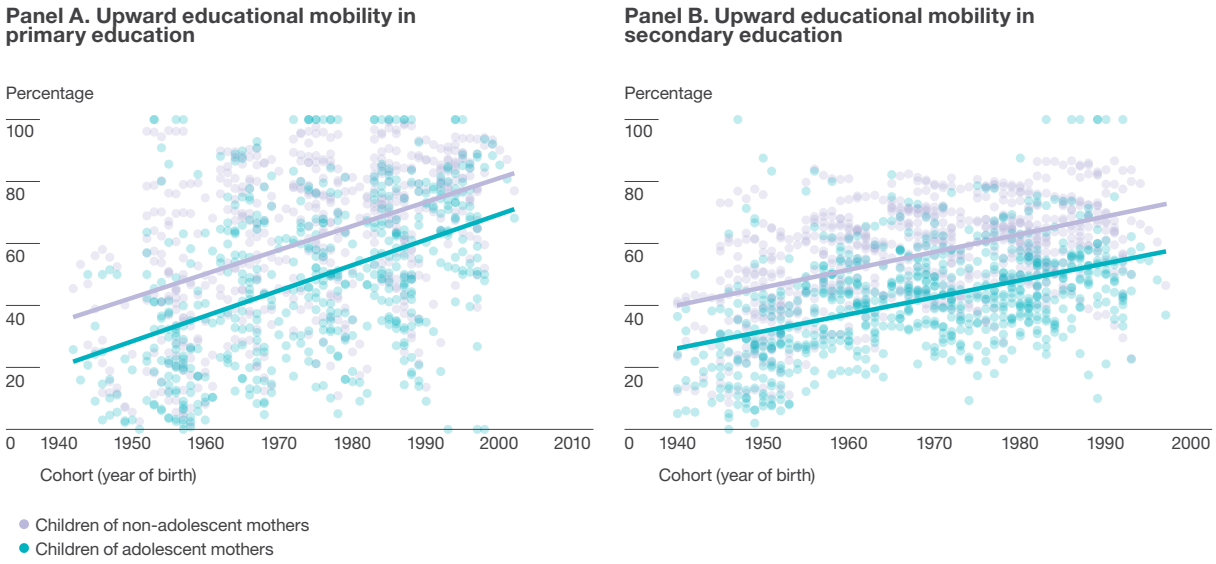
In fact, the link between intergenerational mobility and teenage pregnancy is very strong in Latin America and the Caribbean. Using census data from 22 countries in the region, we have estimated the probability that children of parents who did not complete primary school will complete this level, separating the samples between children of adolescent mothers (up to 18 years of age) and non-adolescents. The results—shown in panel A of Graph 3.3—indicate considerable gaps, which are not closed for the younger cohorts with respect to the older ones. A similar result is shown in panel B of Graph 3.3, which summarizes the measures of upward educational mobility in secondary education, i.e., the probability of completing secondary school for children whose parents did not complete secondary school. For both measures of upward mobility over time, the gap between children of non-adolescent versus adolescent mothers has remained around 25% and 30%.

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The upward mobility gap in primary and secondary school between children of non-adolescent mothers versus children of adolescent mothers has remained at around 25% - 30%

Graph 3.3

Absolute intergenerational mobility in primary and secondary education in Latin America and the Caribbean, broken down by children of adolescent mothers and children of non-adolescent mothers, born between 1930 and 2000



Note: Each point represents, for each country and year of birth of the child, the absolute upward mobility in primary school (panel A) and secondary school (panel B), calculated as the percentage of children born each year to mothers with low education (did not complete, respectively, primary or secondary education) who do manage to complete the respective level. Values are presented for children born to mothers 19 years old or younger (adolescent mother) and for children born to mothers 20 years old or older. The solid lines reflect the linear adjustment. Twenty-two Latin American and Caribbean countries are covered. For more details on these mobility measures, see Chapter 2.

Source: Authors based on IPUMS (2020).

These mobility gaps between children of adolescent and non-adolescent mothers could be partly explained by the intergenerational transmission of adolescent fertility, which is considerable in the region (Box 3.3). In turn, as documented by Machado et al. (2021), the association between adolescent pregnancy of mothers and daughters is also observed in prenatal and postnatal investments in children's health. Given that teenage pregnancy is strongly linked to school dropout (Berniell et al., 2016; Arceo-Gómez and Campos-Vázquez, 2014a), the results of Machado et al. (2021) indicate that this channel may also be behind the low levels of educational mobility observed for children of adolescent mothers. On the other hand, the results in Graph 3.3 may partly explain the result of Benzaquén et al. (2022), who, using DHS data, show that the gradient that relates a mother's health to that of her children is even more pronounced in the case of adolescent mothers. A final channel linking adolescent motherhood with intergenerational immobility is the socioeconomic gradient of early pregnancy itself, which is associated with a greater weight of financial constraints for key investments (prenatal and postnatal) in the development of children's human capital.

Box 3.3
Intergenerational transmission of adolescent fertility

In a paper prepared for this report, Machado et al. (2021) use DHS data from six countries in Latin America and the Caribbean to estimate the effects of a mother's teenage childbearing on the probability of her daughter's teenage childbearing. The work not only estimates this degree of intergenerational association, but also makes methodological contributions to reduce biases in this type of measurement.

Regarding this last point, the results show that restricting the estimation sample to the mother-daughter pairs that are observed in the data implies large selection biases for the effect of interest, because the observed mother-daughter pairs have very different characteristics from the unobserved ones in the data. To deal with this problem, the authors develop a method that uses all available data, including incomplete mother-daughter pairs, and allows missing observations to be endogenous.

Estimates obtained by the authors using this methodology indicate that being the daughter of an adolescent mother increases the odds of being a teenage mother by between 8.7 and 26.2 percentage points (which means percentage increases of between 61% and 172%). This study also shows that being the daughter of an adolescent mother is associated with other negative outcomes for human capital development, such as lower educational achievement, acceptance of risky sexual behaviors, and submissive gender roles in sexual relationships.

Source: Authors based on Machado et al. (2021).

Fertility planning also contributes to prepared and responsible parenthood. It will be the adults in charge of the child who will make the necessary efforts to guarantee the child's wellbeing and rights in their development process. This implies being informed, learning about gestation and upbringing, and reaching a consensus within the household on the changes that will have to be implemented when the baby arrives, so that the allocation of time, material resources, and efforts to set household organization rules can be jointly established to promote the full development of the children (Berniell et al., 2016). In this regard, the family structure (for example, if the household is single-parent) may be important to effectively deploy the necessary investments for a child's development. A similar analysis to that in Graph 3.3, but dividing between single and two-parent households, yields evidence in this regard. For example, absolute upward mobility in secondary education is higher whenever the mother is present in the household and is higher in two-parent households. In this case, the observed gaps do not seem to be closing for the most recent cohorts either. Box 3.4, drawing on Young Lives longitudinal data in Peru, provides evidence in the same direction. Moreover, it indicates that a separation or the death of a parent during childhood has a negative impact on the possibilities of educational mobility, especially in the case of children of less educated parents.

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The separation or death of a parent during childhood has a negative impact on educational mobility, especially if the case of children of parents with a low educational level

Box 3.4

Changes in family structure during childhood and adolescence and their impact on intergenerational educational mobility: an analysis using longitudinal data from Peru

Using the longitudinal structure of the Young Lives Study for Peru, the effect of the separation or death of the father or mother on the coefficient of persistence of years of education between parents and children can be analyzed. The results presented in column (1) of Table 1 show that the coefficient of persistence of years of education in this sample is 0.16, a little lower than that estimated with census data for those born in the 1980s in Peru (see Chapter 2).

Column (2) shows results of a regression similar to that in column (1) but with additional controls: an indicator that takes the value 1 if the parents divorced or one of them died before the child turned 20, along with an interaction of that variable with the years of education attained by the parents at the time of the child's birth. These events (divorce or death of a parent) are associated with a reduction of 1.2 years in the children's education. However, belonging to a household with more educated parents cushions this loss, which is inferred from the interaction coefficient, that is positive and statistically significant. As a result, the coefficient of intergenerational persistence in years of education is relatively higher among those who suffered this type of family shock.

Columns (3) and (4) decompose the shock according to the period in which it occurred: in childhood (up to 8 years of age) or during adolescence (between childhood and 15 years of age, approximately). The results show that the pattern in column (2) is explained by those who suffered this family change in childhood, highlighting the importance of the presence of both parents during this critical period of development.

Table 1
Association between parents' and children's years of education and the effects of divorce, separation, or death of a parent

	Dependent variable: Years of education of the child			
	(1)	(2)	(3)	(4)
Years of education of the parents	0.160***	0.142***	0.146***	0.160***
Death or divorce before the child turns 20		-1.203***		
Death or divorce during childhood			-1.625***	
Death or divorce during adolescence				-0.270
Death or divorce * Years of education of the parents		0.081**		
Death or divorce (childhood) * Years of education of the parents			0.115**	
Death or divorce (adolescence) * Years of education of the parents				0.030
Observations	1,293	1,293	1,290	1,293

Note: The table reports the coefficients of regressions estimated by ordinary least squares, where the dependent variable is the years of education of the children and the independent variables are the variables listed in the rows of the table. The first column shows the beta coefficient of intergenerational persistence (see Chapter 2), while the other columns show results from adding variables that capture shocks (due to divorce, separation or death of a parent) that occurred at different stages of development (childhood and adolescence) and interactions of these traumas with the level of education that the parents had attained at the time of the child's birth. Childhood is defined up to 8 years old (rounds 1–3 for the younger cohort in the Young Lives Study and round 1 for the older cohort). Adolescence spans from childhood to age 15 (rounds 4–5 for the younger cohort and rounds 2–3 for the older cohort). Asterisks indicate the statistical significance of the coefficient in question: *** values significant at 1%, ** values significant at 5%, and * values significant at 10%.

Source: Authors based the Young Lives Study, Rounds 1–5 (https://ninosdelmilenio.org).

The importance of the mother in human capital mobility

The above evidence shows that different members of the family can affect the possibilities of accumulating human capital of children, but the role of mothers is certainly central in this process and is so from before conception. For example, the health of the mother can have a direct effect on the health of the children during the gestation period. The literature has shown that the health conditions of the mother during pregnancy (suffering major episodes of stress, smoking, drinking alcohol, being exposed to nutritional problems) can strongly affect the health of the offspring (Aizer and Currie, 2014). Epidemiological evidence shows, moreover, that mothers' health stock accumulated before pregnancy, especially in their first years of life, can also affect their children's health. Women exposed to adverse conditions in their childhood tend, for example, to develop hypertension during pregnancy, among other factors that predispose them to have low birth weight babies (Bhalotra and Rawlings, 2013; Currie and Moretti, 2007). Also, having suffered from infections early in life tends to cause women to not reach the height predicted by their genetic potential (Deaton, 2007; Bhalotra, 2010; Bozzoli et al., 2009), which increases

the chances of having a reduced uterine and ovarian size, which in turn predicts lower birth weight (Ibáñez et al., 2000), lower height-for-age and lower chances of survival of their offspring (Thomas et al., 1990; Venkataramani, 2011). Box 3.5 shows evidence for Latin America and the Caribbean consistent with this direct mechanism explaining intergenerational persistence in the health of mothers and children.[11]

The effect of mothers' health on the health of their children during the gestational period is a direct mechanism explaining the intergenerational persistence of health

There are two main reasons to emphasize the channel of maternal health in the perpetuation of inequalities and the consequent low intergenerational mobility of human capital. First, there are large inequalities in our region in the coverage and quality of health services accessed by people from advantaged and disadvantaged households (Berniell et al., 2016; Alvarez et al., 2020). Second, there are many low-cost technological advances that can significantly improve health outcomes in newborns and in the first years of life.

The role of mothers in intergenerational mobility is not only large, but in Latin America and the Caribbean it also appears to be growing in dimensions others than health. This conclusion emerges from the work of Ciaschi, Marchionni et al. (2021), who find that mothers' education and occupation increasingly explain the influence that family origin has on children's educational mobility outcomes. In particular, these authors show that since the 1980s these characteristics of mothers are at least as important as those of fathers.

Box 3.5
Health persistence between generations using Demographic and Health Survey data from nine countries in the region

To understand the degree of intergenerational persistence between the health *stock* of mothers (proxied by their height)[a] and the health of their children, as well as to investigate to which degree t this persistence is associated with other variables the analysis below uses harmonized data for nine countries in Latin America and the Caribbean. The data come from Demographic and Health Surveys (DHS) conducted between 2000 and 2015 in Bolivia, Colombia, Dominican Republic, Guatemala, Guyana, Haiti, Honduras, Nicaragua, and Peru. This analysis builds on the work of Bhalotra and Rawlings (2011, 2013) for the period prior to 2000.

11. The work of Balhotra and Rawlings (2011a) was one of the first to obtain comparable cross-country estimates of intergenerational persistence in health and its trends in different regions of the developing world (Africa, Asia, and Latin America). These authors find a positive and quantitatively significant relationship between maternal health (measured by height, body mass index, and anemia status) and offspring health (measured by mortality risk and anthropometric measures). The results suggest that both the current and childhood health of the mother (proxied by her height) are important and that the benefits of good maternal health are likely to persist into the next generation. Averaged across the entire sample of countries, persistence shows a considerable decline across cohorts born between 1970 and 2000, but a regional breakdown shows that the decline over this period has only been significant in Latin America.

The results, presented in Table 1, arise from ordinary least squares regressions performed separately for each indicator of the health of the child (dependent variable) and the mother (independent variable). In addition, the analysis discounts systematic differences between countries, years of birth of the children, and time trends in each country. All regressions control for various characteristics of the child (gender and month of birth), parents and household (education, presence of the father, and wealth) that may also be associated with child and maternal health.

Panel A of Table 1 shows that the mother's health is significantly associated with the health of her children. The values of the estimated coefficients imply that an increase of one standard deviation (sd) in maternal height is associated with a reduction in the probability of infant mortality between birth and five years of 7% relative to the average mortality in the sample, and an increase of 8% in the probabilities of mortality in the first month and in the first year after birth. The association of maternal health with low birth weight and chronic malnutrition is even stronger: the value of the coefficients implies that a one standard deviation increase in maternal height is associated with a reduction of 19% in the probability of having low birth weight and of 42% of suffering chronic malnutrition, with respect to the average of these variables in the sample. From these estimates, and taking into account that the difference between the average height of mothers in the richest and poorest percentile is approximately 60% of a standard deviation, it follows that maternal health explains a substantial part of the inequality in health in early childhood. For this reason, it may be an important channel behind intergenerational persistence in health in particular and in socioeconomic status in general.

Panels B and C show the association between mothers' health and that of their children—for more and less advantaged mothers—according to a household wealth indicator and the mother's educational level. The base category is a household among the poorest 25% according to the wealth indicator in panel B and mother's low educational level in panel C. The association of indicators of child poor health is negative and significant for the most disadvantaged mothers (better health of the mother, lower probability of poor health of the child). This association is strongly reduced in the case of low birth weight and chronic malnutrition as household wealth and mother's education increase. For example, the interaction coefficients between mother's wealth or education and children's health are generally positive and significant, indicating that the higher the level of mother's education or household wealth, the lower the association between children's and mothers' health. There are some exceptions where this attenuation effect is not observed. For example, the association between maternal health and that of mortality measures does not change in a statistically significant manner between households of different levels of wealth (even though the coefficients are positive). The same is true for the correlation between maternal health and neonatal mortality or the probability of low birth weight when comparing mothers of different educational levels.

These results show that the mother's own health as a mechanism for the transmission of health inequalities is, in general, more relevant in unfavorable socioeconomic contexts, in which there are no other forms of compensation (such as access to savings, insurance instruments or social protection mechanisms) to counteract the consequences of poor maternal health on child health. In other words, intergenerational persistence in health would appear to be higher in the lower tail of this dimension's of distribution of wellbeing.

Table 1
Correlation coefficients between mothers' and children's health, in total population and according to wealth quintile and mothers' educational level

	Infant mortality (0–5 years old)	Infant mortality (<1 year old)	Neonatal mortality (<1 month old)	Underweight at birth	Chronic malnutrition
Panel A. Correlation between mothers' and children's health					
Mother's height	-0.040**	-0.037***	-0.021**	-0.269***	-1.563***
Average dependent variable	0.04	0.03	0.02	0.10	0.25
Marginal effect of 1 sd increase (1 sd = 0.67) in mother's height with respect to the mean.	-7 %	-8 %	-8 %	-19 %	-42 %
Panel B. Correlation between mothers' and children's health, by wealth quintile					
Mother's height	-0.043*	-0.041*	-0.028	-0.369***	-2.124***
Mother's height * Q2	-0.010	-0.011	0.004	0.032	0.311**
Mother's height * Q3	0.007	0.015	0.024	0.128*	0.783***
Mother's height * Q4	0.002	0.002	0.006	0.176**	1.193***
Mother's height * Q5	0.035	0.030	0.006	0.246**	1.613***
Panel C. Correlation between mothers' and children's health based on mothers' education					
Mother's height	-0.054***	-0.048***	-0.028**	-0.316***	-1.981***
Mother's height * Completed high school education	0.033***	0.028***	0.015	0.080	0.860***
Mother's height * Complete higher education	0.032	0.016	0.018	0.090	1.334***
Observations	164,688	164,688	164,688	114,869	148,835

Note: Each column reports the coefficients of separate regressions estimated by ordinary least squares, where the dependent variable is the health of the children approximated by the variable indicated in each column. In panel A, the independent variable is the mother's height. In panel B, the mother's height, household income quintile (the omitted category is quintile 1, Q1) and the interactions of the mother's height with household income quintiles are considered as independent variables. In panel C the independent variables include the mother's educational level (the omitted category is less than secondary school completed) and the interactions of the mother's height with her education level. In all regressions, the child's gender, child's month and year of birth, father's presence in the household, parents' education, household wealth, country fixed effects, and time trends in each country are controlled for. Asterisks indicate the statistical significance of the coefficient in question: *** values significant at 1%, ** values significant at 5% and * values significant at 10%.

Source: Authors based on DHS data available for Bolivia, Colombia, Dominican Republic, Guatemala, Guyana, Haiti, Honduras, Nicaragua, and Peru for the period between 2000 and 2015.

a. The mother's height is often used as an indicator of her health stock, as it confers information on health accumulation during childhood.

There are multiple reasons behind the importance of mothers' presence in the home. For example, given the strong gender division in caregiving roles in the region, it is possible that the absence of the mother in the home also implies the absence of a caregiver who systematically employs the same strategies for accompanying the child or young person. Instability or inconsistency in these rules has consequences for human capital formation. On the other hand, the evidence indicates that not only does the health of mothers affect that of their children, but that the level of education attained by mothers also has an influence in various ways. For example, Currie and Moretti (2003) analyze

four types of channels that connect mothers' education with their children's health. First, more educated mothers invest more in prenatal care, possibly because they have higher incomes and better access to health services. Second, more educated mothers mate with people with similar levels of education, also bringing more income to the household for the formation of the children's health. Third, the education of mothers implies better health habits and behaviors, some of which will also affect their children. Fourth, the education of mothers modifies family planning in a way that is consistent with better possibilities of investing in children.

This evidence suggests that a greater targeting of policies to promote human capital formation in women would offer advantages not only for the generation that benefits from them at the time of their adoption, but that these impacts would be passed on to a certain extent to future generations. Also according to this evidence, both policies that promote better health and education for women could result in greater intergenerational mobility.

The importance of other family members in the mobility of human capital

Beyond the mother and father, other family members can play an important role in the intergenerational transmission of human capital. For example, the estimates presented in Chapter 2 for different countries in Latin America and the Caribbean speak of an important role for grandparents, in line with what has been observed in other parts of the world. However, contrary to the developed world, the absence of formal childcare mechanisms in Latin America and the Caribbean may exacerbate the intergenerational persistence of human capital mediated by the influence of grandparents. The reason is that, in the absence of other care options, families make informal arrangements with close relatives, like grandparents. The time, resources, and parenting rules used in these arrangements represent an additional pathway that can perpetuate the conditions for human capital formation of children in the region.

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The weaknesses of formal child care mechanisms in the region could exacerbate the intergenerational persistence of human capital mediated by the influence of the grandparents

However, mothers, fathers, grandparents and other members of the extended family are not the only ones who influence the formation of this capital. The presence of siblings, and in particular the number of siblings, can also be important. The economic literature has extensively analyzed the so-called quantity-quality trade-off (Becker, 1960). This literature postulates that, in family formation decisions, the quantity of children is weighed against the possibilities of providing a quality education for all of them. This hypothesis suggests a possible relationship between the quantity-quality of children and the socioeconomic level of families. In its original formulation, and under the assumption of a low (high) income elasticity of the quantity (quality) of children, this relationship implies that wealthier families tend to have fewer children and invest more in them. This theoretical relationship is supported by the data because, for example, richer countries have households with fewer children and something similar is found when comparing rich and poor households within the same country. It is worth mentioning that Becker's original approach already took into account that fertility control is more within

the reach of advantaged families, implying that desired and planned fertility tend to coincide better in such households than in more disadvantaged ones.

The census data from IPUMS (2020) allows further study of the relationship between family size, measured by the number of children, and investments in quality (education) of children in Latin America and the Caribbean. The study of this relationship requires the implementation of a technique that can establish causality between the quantity and quality of children in families. To this end, we follow a strategy widely used in the literature, known as twin instruments,[12] to quantify the impact of having an additional sibling on the possibilities of educational mobility. The results are summarized in Table 3.1 and were constructed for nine countries in the region that have census data that allow the identification of twin siblings (coincidence of year and month of birth). The results indicate that, on average for these countries, effectively one more sibling in the family limits the possibilities of the first children to accumulate human capital, reducing by 0.17 the years of education attained. Moreover, it also reduces the probability of absolute upward mobility in both primary and secondary education by around 2 percentage points. These results are robust when controlling for a set of attributes available in the censuses. Additionally, Table 3.2 shows that this tension between the number of children and the possibilities of investing in education appears more strongly in families with parents of low educational attainment and, in fact, disappears for families where at least one parent completed a university degree.

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Having an extra sibling in the family reduces the probability of absolute mobility in secondary school of the first child by 2 percentage points

Table 3.1
Effect of having an additional sibling on years of education and on the probability of experiencing upward educational mobility in primary and secondary school

	Years of education attained		Upward educational mobility (primary)		Upward educational mobility (secondary)	
	OLS	**IV (twins)**	**OLS**	**IV (twins)**	**OLS**	**IV (twins)**
Total siblings	-0.322***	-0.167***	-0.043***	-0.022*	-0.036***	-0.015**
Observations	601,940		65,821		219,977	

Note: The table shows the results of ordinary least squares (OLS) and instrumental variables (IV) regressions with the birth of twins as instrument, where the dependent variable (labeled in each column) is measured for the first children in the family and the independent variable is the family size measured by the number of siblings. The latter is instrumented by a variable that takes the value 1 if there was a birth of twins. The variable "upward educational mobility" takes the value 1 if the child completed primary or secondary school while their parents did not complete the same level. The estimation considers cohorts born between the 1930s and 2000s in Argentina, Colombia, Dominican Republic, Ecuador, El Salvador, Honduras, Jamaica, Nicaragua, and Uruguay. Asterisks indicate the statistical significance of the coefficient in question: *** significant values at 1%, ** significant values at 5% and * significant values at 10%.

Source: Authors based on IPUMS (2020).

12. This technique for the identification of causal effects is based on the fact that, generally, the birth of twins is not perfectly controllable by the parents. Thus, the birth of twins represents a random increase in family size, which allows us to estimate the causal effect of the number of siblings on other variables of interest, such as in this case education and the intergenerational educational mobility of previously born children.

Table 3.2
Effect of having an additional sibling on years of education completed according to parents' educational level

	Educational level of parents			
	Incomplete primary school	Completed elementary school	Completed secondary school	Completed university
Total number of siblings	-0.149***	-0.178***	-0.107*	-0.007
Observations	133,656	260,499	147,899	59,886

Note: The table shows the results of regressions by the instrumental variables method (with the birth of twins as an instrument for the number of siblings), where the dependent variable is the years of education completed by the older siblings and the independent variable is family size measured by the number of siblings. Results are reported for samples separated according to the educational level attained by the parents (the maximum level between the father and the mother). The estimation considers cohorts born between the 1930s and 2000s in Argentina, Colombia, Dominican Republic, Ecuador, El Salvador, Honduras, Jamaica, Nicaragua, and Uruguay. Asterisks indicate the statistical significance of the coefficient in question: *** significant values at 1%, ** significant values at 5% and * significant values at 10%.

Source: Authors based on IPUMS (2020).

Intergenerational mobility and assortative mating

The literature analyzing family formation has studied in depth how often people pair up with others who are similar in individual attributes such as the level of education attained (educational homogamy), how this homogamy can affect inequality (Greenwood et al. 2014, among others) and also the possibilities of intergenerational mobility (Eika et al., 2019, among others). The evidence presented in Chapter 2 on the high correlation observed in the educational levels achieved in Latin America and the Caribbean by members of the extended family (including, for example, uncles/aunts, brothers/sisters-in-law, siblings of brothers/sisters-in-laws, parent-in-laws, etc.) is indicative that in the region, patterns of homogamy in the formation of couples (assortative mating) play an important role in the intergenerational persistence of human capital (Collado et al., 2022).

The IPUMS census data allow us to describe the current panorama and the evolution in recent decades of assortative mating in education in 22 countries of Latin America and the Caribbean. First, it is worth mentioning that the expansion of education in the region, which was strongest among women (see Chapter 2), implies that in many countries, among the youngest cohorts of parents, it is currently the mothers who have the most years of education within the couple.[13] The differential advancement of men and women to higher levels of education imposes strong challenges to the measurement of the educational

13. The countries where this is true for people in a couple (married or cohabiting) and born after the 1980s are: Argentina, Brazil, Colombia, Dominican Republic, Jamaica, Panama, Puerto Rico, Trinidad and Tobago, Uruguay, and Venezuela.

homogamy. [14] A simple way to evaluate the evolution of this phenomenon over time is through two correlation coefficients (Pearson's and Spearman's, for years of education) of the educational attainment of fathers and mothers within couples, presented in Graph 3.4. There it can be seen that there is no single pattern for the 22 countries of the region analyzed. However, in general terms, it can be said that while the correlation between the education of mothers and fathers has fallen somewhat in several countries, in others it has remained stable and even increased, despite the phenomenon of expansion in primary and secondary education documented in Chapter 2.

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Educational homogamy exacerbates inequality in financing, insurance and knowledge constraints that families face

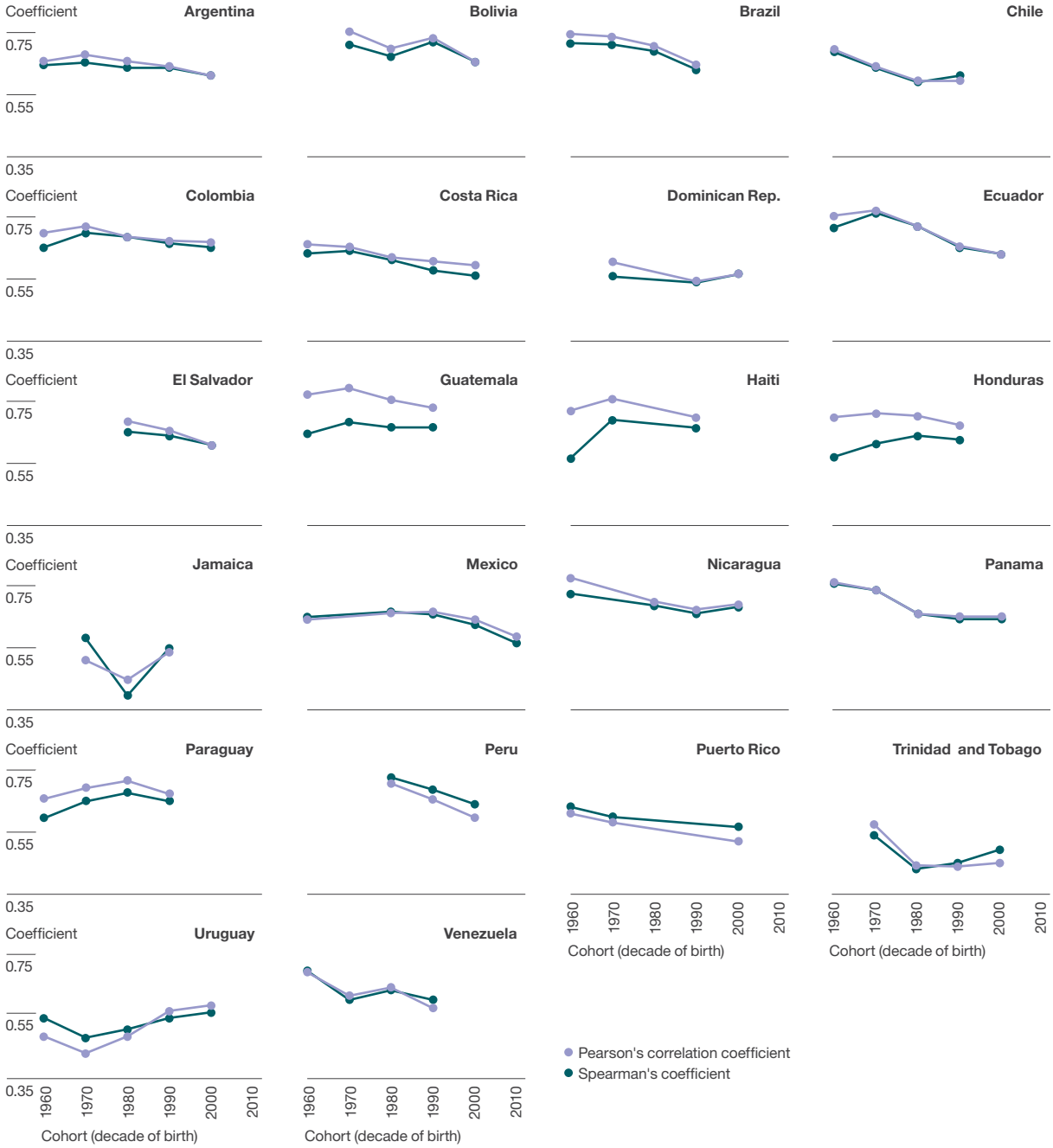
To analyze the extent to which the patterns of intergenerational mobility in education documented in Chapter 2 are associated with changes in the degree of assortative mating, a regression analysis was performed using again IPUMS census data (2020) for small geographic units (equivalent to municipalities or departments) and for many birth cohorts (decades). This analysis takes as dependent variable a measure of relative intergenerational educational mobility, estimated by the Pearson correlation coefficient, which associates the years of education of parents and children of a cohort in a specific geographic unit, and as independent variable the degree of assortative mating in the same geographic unit in the generation of parents of that cohort (measured by the Pearson coefficient, which associates the years of education of the couples). Thus, it was found that moving from non-assortative mating to a perfect positive match is associated with an increase of 0.35 in the index capturing intergenerational educational persistence. These results indicate that lower intergenerational educational mobility in Latin America and the Caribbean is strongly linked to educational homogamy.

There are several reasons behind this result. On the one hand, educational homogamy implies that there are many couples where both parents are poorly educated and, therefore, are very likely to have fewer financial possibilities to invest in their children and, conversely, highly educated couples who have greater possibilities of investing in their offspring. As will be seen below, financial restrictions operate strongly in the region, preventing the children of vulnerable families from receiving investments that could significantly increase their human capital, for example, access to higher education opportunities. In turn, similar levels of human capital may make both parents more vulnerable to the same type of economic shocks, limiting the possibilities of private insurance. Thus, educational homogamy may imply that both parents, if they share low levels of education, face strong restrictions in terms of financing and insurance, but also in terms of knowledge or information on the technology needed to develop their children's human capital or on the ways in which they could support their children in accessing better educational and employment opportunities. In addition, given that the social capital of families can significantly condition this type of opportunities, as discussed in Chapter 4, assortative mating in social capital can also condition the quality of the labor market opportunities that their children will be able to access.

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14. 14. See Albina (2022) for a detailed description of these challenges. This paper also provides novel evidence constructed from census data, which allows us to quantify the magnitude and changes over time of this phenomenon that characterizes family formation in Latin America and the Caribbean.

Graph 3.4
Correlation coefficients in years of completed education of couples (mothers and fathers) in 22 countries in Latin America and the Caribbean by cohort of birth of the couple's first child



Note: Each point represents, for each country and birth cohort (decade) of the first child, the value of the assortative mating measure (Pearson correlation coefficient for years of education and Spearman rank correlation coefficient also for years of education). Couples considered have at least one of the spouses between 18 and 65 years old and the year of birth of the first child is defined as the year in which the oldest child of the couple was born, as long as the child lives in the same household and is between 0 and 10 years old.

Source: Albina (2022) based on IPUMS (2020).

It is not easy to think of policies that reduce the educational homogamy observed in the region. Possibly, policies that tend to reduce social segregation, for example, at the residential level or in educational institutions (discussed later in this chapter), could have a medium- or long-term impact on the levels of assortative mating. However, although it is not a social dimension that can be directly affected by public policy, it is important to understand that the degree of assortative mating observed in a society at a given moment can have long-term implications on the human capital formation opportunities of new generations. This is because the channels that link the human capital of parents and children, which, as described in the initial conceptual framework, are strongly influenced by financial, cognitive-behavioral and insurance constraints, can be exacerbated when both parents share characteristics (such as educational level) that make these types of constraints more important.

Decisions under financial, cognitive-behavioral and insurance constraints

Financial restrictions

Investment in human capital involves committing economic resources to purchase different goods and services necessary for raising children. For example, it is necessary to ensure conditions of nutrition, health and healthy home environments that are determining factors for the proper physical, cognitive, and socio-emotional development of children. Among these conditions are the adoption of balanced diets, food supplementation and complementation, vaccination, household sanitation conditions, access to the education and health system, preventive health practices and physical exercise (Berniell et al., 2016). These financing needs, paired with the impossibility of borrowing to meet them (see Chapter 5), mean that many families without sufficient resources encounter limitations in terms of the quantity or quality of the investments they make in their children. Moreover, the presence of dynamic complementarities in human capital formation implies that temporary barriers to investment in this type of capital will lead to amplified inequalities in the future (Attanasio et al., 2020).

The evidence showing the importance of financial constraints on the intergenerational mobility of human capital is varied. On the one hand, there are studies that show the extent to which providing additional income to disadvantaged families during key stages of their children's development results in greater educational mobility. This group includes, for example, long-term impact evaluations of income transfer programs. Most of this evidence comes from conditional cash transfers (CCT) programs, which typically include a cash transfer received by parents or primary caregivers as long as the children and youth in their care attend school regularly or receive certain basic health care. A pioneer program of this type was PROGRESA, implemented in the 1990s in Mexico.

Given that most of these programs were implemented in the region less than 20 years ago and that the measurement of their long-term impacts imposes methodological challenges, there is only short or medium-term evidence on the role of these income transfer programs in the region. To understand their contribution to the intergenerational mobility of human capital, it is crucial to look at longer time horizons. Molina Millán et al. (2019) summarize recent evidence on the longer-term effects of CCT programs, which, in general, do not go beyond looking at outcomes in the ten years following their implementation. The authors divide the evidence collected into two groups: studies of impacts of CCT programs that were implemented for very young children or even the unborn (in utero), for whom the long term spans up to school age, and studies that analyze CCT programs that were implemented for children already of school age, for whom the long term spans the transition to adulthood. Molina Millán et al. (2019) conclude that most impact evaluations of CCT programs find positive long-term effects on access to education, but few find positive impacts on cognitive skills, learning (measured, for example, by standardized tests), or socioemotional skills. The authors point out that the impacts on employment and income at entry into adulthood are mixed and recommend strengthening studies on these types of long-term effects. This would allow for a better understanding of the power of CCT programs as tools to promote intergenerational mobility.[15]

This evidence is consistent with previous results that found positive shorter-term effects of these transfer programs (Schady et al., 2015), for example, on measures of nutrition, health and educational enrollment. However, studies of short-term impacts already showed that, while income supplementation to the poorest households alleviates the important financial constraints they face in investing in their children's human capital, it does not address the multiple barriers that parents of these families face. In particular, the absence of quality provision of public services in education and health that families need to complement their investments may reduce the impact of the financial relief provided by the CCT program. On the other hand, if knowledge constraints are severe, the impact of conditional cash transfers on families may be limited. Recent evidence indicates that unconditional transfer programs focused on children enhance their positive impact if they are accompanied by the provision of information to mothers and fathers on practices related to pregnancy and infant nutrition (Carneiro, Kraftman, et al., 2021). On the other hand, transfers focused on child and youth education can help the most disadvantaged families cope with the negative impacts of

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Poor quality education and health services needed by families to complement their investments may reduce the impact of the financial relief from CCT programs

15. Of the set of evaluations that analyze long-term impacts of CCT programs, it is worth highlighting the recent work of Molina Millán et al. (2020), which analyzes the effects of the second phase of a program in Honduras (Programa de Asignación Familiar, Fase II) after 13 years of implementation, and that of Attanasio et al. (2021), which studies the effects of the urban version of the CCT Familias en Acción in Colombia 8-10 years after its implementation. The work of Molina Millán et al. finds that exposure to the CCT program at primary school age significantly increases the probability of completing secondary school—greatly improving upward mobility at that level—and of reaching university. In turn, children who were exposed to the benefits of the program at younger ages improve their school performance (higher enrollment and better grades). However, the findings indicate that these positive impacts are much more limited among the indigenous population, which reflects the additional barriers that these groups face for educational progression in countries like Honduras. In the Colombia paper, the authors find that the program reduced secondary school dropout rates (by 5.8 percentage points) and increased university enrollment (by 1.7 percentage points) for males. In addition, positive long-term impacts were found in other dimensions, such as a lower crime rate among men and a reduction in teenage pregnancy among women.

different types of shocks, like climate shocks (droughts or floods), that affect their productive activities or other daily household activities, especially if these events occur at the most critical moments of early development (Duque et al., 2021). In other words, alleviating financial constraints at key moments can be of vital importance to reduce the barriers imposed by the absence of insurance options.

There is also abundant evidence of the importance of financial constraints via the effects that macroeconomic or more idiosyncratic shocks on the income of certain families have on investment decisions in the human capital of their children. For example, there is work showing how the unanticipated loss of parental employment worsens the accumulation of children's human capital. There is rigorous evidence indicating that children of parents who lose their jobs are born with lower birth weight (Lindo, 2011) or that, if the event occurs when the child is school age, they are more likely to repeat a year in school (Stevens and Schaller, 2011).[16] Moreover, this evidence indicates that the impacts are more negative for the children of families that were already more disadvantaged before the unemployment shock. On the other hand, several studies have shown that parental job loss has effects that are projected several years later on the educational and labor trajectories of children. Based on data for Canada, Oreopoulos et al. (2008) conclude that children of parents who lost their jobs due to the closure of the company where they worked during their childhood have 9% lower annual incomes in adulthood than children with similar characteristics but whose parents did not lose their jobs, as well as higher probabilities of receiving unemployment insurance and benefiting from social assistance programs. Again, this evidence indicates that those most adversely affected by the negative effects of parental unemployment are the children of families at the bottom of the income distribution.

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Alleviating financial constraints at key points in children's development is of vital importance to address the lack of insurance options

All this literature does not rule out that job loss has effects on children through mechanisms other than the effect of income loss, which, in fact, may be more difficult to "insure" than the mere reduction in income. Job loss may, for example, cause high exposure to sources of stress in the household, lead to family dissolution or migration, which, in turn, may have impacts on the human capital of the children. At the same time, children's labor outcomes may be affected by channels other than human capital; for example, the set of labor opportunities may vary when parents change their jobs and networks. These mechanisms will be discussed in more detail in Chapter 4 of this report.

16. For example, Lindo (2011) shows that when fathers lose their jobs due to the closure of the company where they worked, the birth weight of their children is negatively affected and that these effects are more negative for children in more disadvantaged situations. The author concludes that the main mechanism that mediates this relationship is the reduction in household income (despite being partly mitigated by the mother's greater labor supply) and the consequent reduction in food expenses, which can affect the mothers' nutrition. In turn, Stevens and Schaller (2011) find that the loss of parental employment also has a short-term impact on children attending school. In particular, job loss generates a 15% increase in the repetition rate of children in school, and these effects are concentrated among parents with lower educational levels.

Beliefs, knowledge and behaviors that affect the formation of children's human capital

Beliefs, knowledge or information, as well as attitudes or behaviors about how to operate the technology to build human capital can also be important constraints to the development potential of children and youth. These constraints can be grouped under the label of cognitive-behavioral barriers and range from aspects that are relatively simple to correct through public policy (such as providing key information for parents' investments in their children when it is in short supply) to more fundamental aspects of parents' emotional and behavioral traits.

Regarding the importance of informational barriers, abundant evidence indicates that lack of knowledge about the return on investments that increase human capital can lead to underinvestment (see, for example, Jensen, 2010; Dinkelman and Martinez, 2014; Attanasio and Kaufmann, 2014; Busso et al., 2017; Carneiro, Kraftman et al., 2021). For their part, beliefs can operate in a similar manner, for example, when they are erroneous regarding the developmental potential that a child or young person can achieve if properly invested in them (Carlana, 2019). These types of beliefs that limit the intergenerational mobility of human capital can also come from cultural factors comprised in the social norms shared by parents. For example, Acemoglu (2022) shows that if wealthy parents more strongly transmit values that help their children focus their efforts on more profitable work careers, they are more likely to choose career and work paths that also lead to higher earnings. Box 3.6 summarizes evidence in this regard, comparing the parenting values prioritized by parents of different socioeconomic levels in Latin America and the Caribbean with those of North American countries.

There are three key moments in which information or knowledge restrictions can operate as barriers to human capital formation, especially for the children of the most vulnerable families. These moments are: before pregnancy and during early childhood, when completing basic education and moving on to tertiary or higher education, and in the transition between the educational system and the labor market.

Box 3.6
Parenting values and intergenerational mobility

The transmission of cultural factors, such as values or social norms, can affect the intergenerational transmission of human capital. For example, Nollenberger et al. (2016) find that a significant fraction of gender gaps in mathematics (measured in standardized tests) is explained by the transmission of cultural values from parents to children. Although values formation is nourished by different sources, the literature specialized in the study of the formation of cultural identities suggests that the family is a preponderant actor in this process (Kranton, 2016; Bisin and Verdier, 2011).

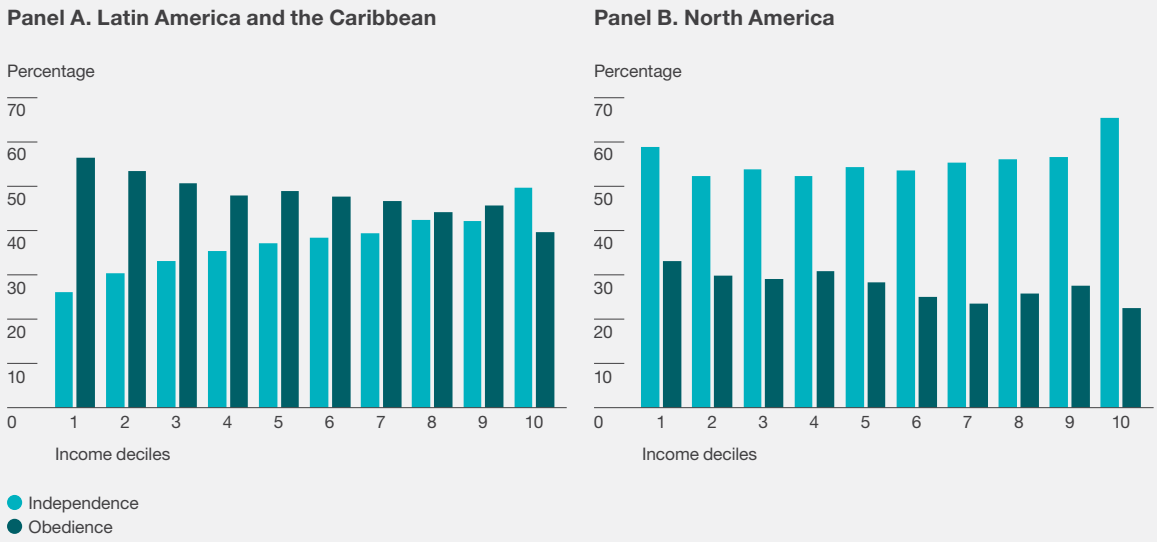
The set of values that parents prioritize in the upbringing of their children depends on many factors. For example, parents choose to transmit certain values for altruistic reasons (as in the case of immigrant parents who encourage their children to assimilate into the local culture) or for more paternalistic reasons. In turn, the formation of values in children can occur through intentional efforts by parents or through exposure to the parenting style in the home, which developmental psychology classifies into three main groups: permissive, authoritarian or authoritative styles, the latter referring to parents that do not impose their decisions, but form their children with values that will lead them to make decisions with which the parents will agree. According to the work of Doepke and Zilibotti (2017), the choice of parenting style depends both on the parents' own preferences (e.g., whether they are more or less paternalistic) and on socioeconomic conditioning factors. Thus, in economies where the wages of the highly educated are not much higher than those of the less educated (more egalitarian economies), parents who are not very paternalistic will choose more permissive parenting styles, giving their children greater independence to explore different training and career options, without necessarily investing too much in formal education. In contrast, more paternalistic parents, who also have high levels of human capital and can shield their children against negative outcomes of their choices, will opt for more authoritative styles. On the other hand, parents with lower skills will opt for more authoritarian parenting styles. Conversely, in economies with high returns to human capital, there will be fewer permissive parents and more authoritative parents. In fact, a related paper (Doepke et al., 2019) shows that, in economies with high inequality, socioeconomic gaps in parenting styles are exacerbated, reinforcing previous levels of inequality for the next generation, i.e., limiting the possibilities of intergenerational mobility of human capital.

Acemoglu (2022) also posits a mechanism by which conditioning factors in the functioning of the labor market affect the choice of values that parents transmit to their children, which in turn impact the possibilities of intergenerational mobility of human capital and income. The author argues that, in economies where wages are low, worker obedience is a useful feature for employers, because in some ways it substitutes for the incentives to work that high wages can give (e.g., by making it easier for employers to monitor tasks). In such economies, parents from disadvantaged families will impart values of obedience to their children so that they can find a job and keep it. On the other hand, independence may be more useful in entrepreneurial activities, which also have greater prospects for income growth, but require access to financing or equity for initial investments. Privileged parents, who can support their children's entrepreneurial careers, are more likely to impart values related to independence because they expect their children to take career and work paths that require more of these values.

Graph 1 presents information on the values that parents participating in the World Values Survey (Haerpfer et al. 2022) report as the most relevant for raising their children. Panel A presents data for Latin America and the Caribbean, while panel B presents data for North America. Both panels show, for each income decile, the percentages of parents who say that independence or obedience are central parenting values in their households. The comparison between the two subcontinents of the Americas is relevant because of the differences in cultural norms between the two regions, which in turn tend to be related to differences in the possibilities for individual and aggregate progress. The comparison of Latin America and the Caribbean with North America yields two results of interest for the connection between parenting values and intergenerational mobility. First, in Latin America parents are more likely to impart with greater intensity the values of obedience and with less intensity those of independence. Second, the importance of independence as a key parenting value increases as socioeconomic status by family income rises, and this trend is much more marked in Latin America and the Caribbean, while the opposite is true for obedience.

These patterns are consistent with the mechanisms of Doepke et al. (2019) and Acemoglu (2022), as the high levels of inequality observed in Latin America may be both behind the greater incidence of obedience as a central value in parenting and the greater relative emphasis on obedience (over independence) for poorer parents.

Graph 1.
Percentage of parents who consider the values of independence and obedience as central to parenting in Latin America and the Caribbean and in North America



Note: The graphs present the percentage of parents, by self-reported income decile, who include the values of independence and obedience among the most important values to teach within the home. Panel A presents the simple average for all Latin American and Caribbean countries that participated in the seventh wave of the World Values Survey, and panel B the simple average for participating North American countries.

Source: Authors based on data from the seventh wave of the World Values Survey (Haerpfer et al. 2022).

Although cultural norms are not easily affected by public policy measures, there is evidence of the existence of some room for intervention in this area, so that the values shared by the most disadvantaged change in the direction necessary to make them more consistent with the possibilities of intergenerational mobility of human capital. For example, Dhar et al. (2022) evaluate an intervention implemented in schools in India, which consisted of classroom discussions on gender equality. The intervention was successful in reducing gender bias against women, and these impacts were long-lasting, enduring for at least two years after the intervention ended. This type of evidence is encouraging for thinking about policy alternatives to mitigate the effect that unassertive parenting styles may have on values formation and, thus, on the possibilities of intergenerational mobility in human capital.

On the importance of information from before birth and in early childhood, Carneiro, Kraftman et al. (2021) analyze the impacts of a comprehensive program for early human capital formation during the first 1,000 days of life in Nigeria. The program combines an extra income endowment to families who are about to have a child with the provision of information on pregnancy care and child nutrition, whereby the intervention alleviates both financial and information/knowledge constraints on child-rearing technology. This intervention generated very significant improvements in indicators related to child nutrition, such as height-for-age (HFA). An important part of the improvements achieved is due to the information channel, which resulted in mothers not only becoming more aware of the best health and nutrition practices, but also putting them into practice. In addition, this study identified important complementarities between informational and financial constraints, thus alleviating both led to better outcomes.

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Informational restrictions operate as barriers to mobility, especially at key moments such as the transition between basic and higher education or between the educational system and the labor market

The second key moment in which these restrictions may imply barriers to mobility is the completion of basic education and the transition to higher education or to the world of work. Regarding completion of secondary education, the work of Jensen (2010) showed, in an experiment with eighth graders in the Dominican Republic, that perceptions about the wage returns of completing secondary education underestimated the actual data and that the provision of information to correct them significantly increased the years of schooling completed (between 0.20-0.35 additional years) by students who received such news. In a closely related work funded by CAF, Lopez (2022) documents the serious problem of the "graduation gap" resulting from the fact that, although a significant portion of secondary school-age students are enrolled in secondary school, only a small fraction actually graduate. In the case studied by López, in the province of Salta, Argentina, the gap is 90% gross enrollment versus 50% who actually graduate from secondary school. Based on this diagnosis, the author implemented two informative interventions, one communicating the returns of completing secondary school and the other providing information on the probability of graduating (conditional on the student's academic situation) and on the intermediate steps to translate school effort during the last year of secondary school into the achievement of a diploma. Both informational treatments had a very noticeable impact on high school graduation and even university enrollment. The effects were seen especially among the most disadvantaged students.[17] This evidence supports the idea that inaccurate beliefs about one's future performance and misinformation about graduation technology account for a significant part of the graduation gap and that this problem is most pronounced among the most academically and socioeconomically disadvantaged students.

Other work of a similar nature also demonstrates the importance that adequate expectations about wage returns at different educational levels have on investments to graduate from those levels (Hastings et al., 2015; Wiswall

17. The group that received information to correct for perceptions about the returns to high school education increased graduation rates by 10 percentage points. The treatment that reported on the likelihood of graduating and the steps needed to achieve a diploma improved graduation by 5 percentage points, 10 percent relative to the control group. Both treatments increased the probability of entering university by more than 30 percent relative to the control group.

and Zafar, 2015; Busso et al., 2017; Rapoport and Thibout, 2018). Likewise, a related literature shows that not only information on wage benefits matters, but also information indicating the costs of those investments in education or alerting about the sources of funding available to afford them (e.g., Dinkelman and Martinez, 2014).

Regarding knowledge about the returns to higher education, recent evidence for the region indicates that, indeed, those who attribute greater benefits to higher education are more likely to incur in investments to attain that level of education at the end of secondary school. Favara et al. (2022) show this in a study on Peru, in which they also find that boys have higher wage expectations than girls and that the socioeconomic environment plays an important role in the formation of these expectations. For example, children from more disadvantaged families place less value on pursuing higher education, probably guided by the recognition that such an investment is costly and that they do not have the means to finance it. A paper specially prepared for this report (Novella and Repetto, 2022) gathers similar evidence for seven countries in the region.[18] While this paper does not find important differences in expectations about educational returns to higher education among youth from different socioeconomic strata (and neither by gender or measures of cognitive or non-cognitive skills), it does find that expectations are more strongly associated with educational decisions for the children of wealthier families. This, again, points to the role of considering not only informational aspects or expectations about returns in educational investments, but also the real possibilities of financing this type of investment.

Finally, another crucial moment in which informational gaps may determine suboptimal investments in human capital has to do with occupational decisions. Although these are closely linked to educational decisions (Berniell, 2021), expectations about the performance of different occupations can alter the trajectory of human capital accumulation during work (on-the-job learning). Thus, underestimating the learning possibilities offered by certain occupations becomes an additional informational barrier to optimally choosing investments in human capital that allow for greater mobility.

In addition to the influence of informational and knowledge constraints, recent literature recognizes that mental health or stress induced, for example, by living in severe poverty, may prevent parents from making adequate investments in their children or plunge parents in vulnerable families into a spiral that reinforces their poverty status (Ridley et al., 2020). For example, Baranov et al. (2020) study the relationship between mothers' depression and children's developmental outcomes. This paper analyzes the results of a randomized controlled experiment that implemented a psychotherapeutic intervention to reduce depression in a group of Pakistani mothers. The results show very notable short-term effects on the mothers (reduction of depression). The mothers treated not only had better mental health indicators (17% lower incidence of depression), but were also more economically empowered

18. The countries included in the study are: Brazil, Chile, Colombia, El Salvador, Haiti, Mexico, and Paraguay.

and had invested, seven years after the end of the intervention, more in the development of their children's human capital, both in terms of material resources and time-sharing.

The importance of insuring against different types of shocks

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Given the existence of critical periods for investments in human capital, insurance mechanisms are key to cushion the impacts of shocks during such periods, particularly early childhood and adolescence

All households are exposed to various risks and circumstances that can fundamentally affect their income, thereby altering the investments in their children's human capital. But the impossibility of cushioning the fall in income or implementing mitigation strategies can lead families to reduce these investments in their children, which is especially serious if it occurs during critical periods of childhood and adolescence, thus generating permanent scars. For example, Carneiro, López García et al. (2021) show that, in order to achieve higher levels of human capital accumulation, a certain balance in family income levels is required between particular periods of childhood and adolescence. The authors find, comparing households with the same level of permanent income, that the human capital of children and the level of income they reach at age 30 is higher when that income is balanced between early childhood (0-5 years old) and adolescence (12–17 years old) than when the income profile is more unbalanced between these two periods. On the other hand, income productivity in the middle periods of childhood (6–11 years old) is lower when compared to the extreme periods. This demonstrates the impossibility of perfectly substituting investments between different stages of the skill formation process and the important role of insurance mechanisms in smoothing them at key moments in people's development.

There are many sources of shocks suffered by families in Latin America and the Caribbean. Some reduce family income directly, such as when a member of the household loses their job in times of economic contraction, or indirectly, for example, when a family member becomes ill and has to pay unforeseen health expenses. A shock of this type can also have direct consequences on the health of the person who suffers it and be a cause of subsequent loss of employment and income. Poorer households are generally more vulnerable to loss of labor income and health-related shocks (Alvarez et al., 2020). During the COVID-19 crisis, for example, people with more precarious, lower-skilled jobs and in the poorest quintiles suffered the greatest impact on both their health and employment, and this was in high-income countries (Chetty et al., 2020; Crossley et al., 2021) and in Latin American and Caribbean countries (Alves et al., 2021). Box 3.7 summarizes the main effects of the pandemic on health systems in the region, with consequences that further compromise the health care of the most vulnerable in the short, medium and long term.

Box 3.7
The effects of the Covid-19 pandemic on health systems

The COVID-19 pandemic generated important disruptions in the health system and in the provision of critical services in the first years of life. On the one hand, the need to divert resources to contain the pandemic and, on the other, the reduced demand for medical services due to restrictions on mobility and fear of contagion led to interruptions in primary health care.

Although data are still limited, some indicators of health systems performance do account for these effects of the pandemic. For example, data on vaccine coverage in children aged 0-5 years that are available for a broad set of countries show the magnitude of disruptions in the provision of this important preventive health service in both 2020 and 2021. This information indicates that coverage in two key vaccines (first and third doses to combat diphtheria, tetanus, and pertussis) fell during 2020 in Latin America and the Caribbean more than in any other region of the world relative to the average observed between 2017 and 2019. In 2021, coverage declines were also very large in the region, exceeded only by the decline observed in Southeast Asia. The situation in this regard was heterogeneous within the region, with some countries seeing vaccination reductions of more than 20% and others virtually unaffected. Given the high fragmentation of health systems in the countries of the region and the quality gaps between contributory and non-contributory systems, significant heterogeneity is also to be expected within countries, where the most vulnerable groups (covered by non-contributory systems) would have encountered greater barriers to effective access to this type of preventive and essential health services.

At the same time, the loss of jobs and income generated in many countries a drop in health insurance coverage, which is a central instrument for improving access to services and insuring families against health shocks. An analysis of household surveys in ten countries, conducted by CEDLAS in the framework of this report, finds that in seven of them declines ranging from 1% (in Costa Rica) to 10% (Ecuador) and up to 15% (in Mexico) were observed in health insurance coverage in 2020 with respect to the 2015-2019 average, while in two countries these changes were close to zero (in Colombia and Peru) and only one (Bolivia) recorded increases.

On the other hand, climate shocks and other nature-related shocks are frequent in the region and have important economic consequences by reducing household income and, thus, impacting the development of children's human capital (Jensen 2000; Maccini and Yang 2009; Caruso 2017; Benzaquén et al., 2022). Evidence suggests that disadvantaged households are much more exposed to this type of shocks and, moreover, do not have public or private mechanisms that could counteract their consequences on income.

The most emblematic public insurance is provided by social protection systems (unemployment insurance, transfer programs, health insurance, disability compensation and old-age pensions). Savings and borrowing (with the formal or informal financial system) are the key private insurance options, but these options also include intra-family transfers or transfers between close social contacts. The more informal forms of insurance tend to take the form of both cash and in-kind insurance. In Latin America and the Caribbean, the

availability, quality and effective use of the different insurance mechanisms to address income shocks differ among countries, but a common pattern is the limited capacity of formal mechanisms to provide adequate insurance, especially to the most vulnerable population.

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Formal insurance mechanisms in the region are very limited in providing protection against income shocks, especially for the most vulnerable population

As documented by RED 2020 (Alvarez et al., 2020), Latin American and Caribbean countries have built social protection systems with complex and fragmented architectures that provide only partial protection against risks. RED 2020 shows, for example, that as a consequence of the limited financial protection offered by the region's health systems, on average 9% of households are exposed to "catastrophic" health expenditures and 8% to "impoverishing" expenditures.[19] These values are substantially higher than those observed in OECD countries and even higher than the average for lower-middle and upper-middle income countries in other regions of the world, where out-of-pocket health expenditures do not represent such a high proportion of household income.

Another example of "failed" protection is that of income transfer programs for vulnerable populations. Alves et al. (2021) analyze 23 non-contributory transfer programs in 15 countries in the region that target the most socially vulnerable populations. There is a wide difference between countries in the degree of coverage and the amounts of benefits offered. Many programs focus exclusively on the population living in structural poverty. This makes them inflexible instruments for assisting the circumstantial poor, such as, for example, those who suddenly become poor due to a shock, as happened during the COVID-19 crisis (Busso et al., 2020; Lustig et al., 2020).

In most Latin American and Caribbean countries, there is a significant fragmentation of social protection systems into contributory and non-contributory. These systems, which offer differentiated coverage against risks to people with and without links to the formal labor market, are an example of how the architecture of social protection potentially amplifies, rather than reduces, inequalities between households with different income levels when faced with similar *shocks* and, therefore, unequally shields the level and consistency of investments in the human capital of the youngest members of the population. Again, health systems serve to illustrate this. RED 2020 showed the large gaps in the probability that people with similar characteristics but that differ in their access to the contributory health system have of not going do not go to the doctor after feeling sick due to lack of money. Using data from the 2019 CAF Survey, the report shows that people without contributory coverage are much more likely (10 percentage points more) to not go to the doctor because of lack of money. There is also a difference in access to various types of medical services, both curative and preventive, among those who have coverage under the different subsystems.

19. Catastrophic health spending is defined as spending that exceeds 10% of household income, while impoverishing spending is spending that causes household per capita disposable income, discounting health spending, to be below the baseline poverty line (in this case, USD 3.20 per day, adjusted for purchasing power parity or PPP) (Wagstaff et al., 2018).

The availability of private insurance mechanisms against *shocks* is also essential in critical periods of human capital investment. If credit markets functioned perfectly, the level of family income at one point in time should not be so important in decisions to invest in children. However, when families face credit or savings constraints, family income levels at a particular period do matter. In Latin America, as discussed in greater depth in Chapter 5, access to credit is very restricted and households have limited private savings capacity, especially the most vulnerable.

Recessions

Recessions and their relationship with human capital mobility deserve a special focus because of their importance in the history of Latin America and the Caribbean, a region marked by a past of macroeconomic instability. Several studies have analyzed how macroeconomic shocks can affect families' investments in their children's human capital. Several of them focus on analyzing the impact of these *shocks* during gestation, a critical period of human capital formation, and study their consequences on child health at birth and in the first years of life. The mechanisms that mediate between recessions and health at birth and in the first years of life are linked to the difficulties of households in maintaining the level of expenditures on goods and services that protect the health of the mother and the child, including nutritious food and medical services. But this literature has also emphasized other mechanisms, such as the level of stress that recessions generate in the most vulnerable mothers.[20]

Baird et al. (2011) show that, in developing countries, infant mortality has a countercyclical behavior, i.e., higher mortality is observed during recessionary periods, a result consistent with the negative effect of falling incomes on the health of children.[21] The results are also consistent with a situation of financial restrictions that affects lower-income families: the effects of crises are greater among less educated mothers, those living in rural areas and adolescent mothers. A related paper (Bozzoli and Quintana-Domeque, 2014) analyzes the effect on children's health at birth during a major macroeconomic crisis in Argentina in the early 2000s. The authors find that this crisis had a negative and significant impact on the birth weight of children, which was especially severe in those born to mothers of low socioeconomic status. To add to this evidence, Box 3.8 describes the correlation between recessions and children's health in a set of countries in the region (Colombia, Honduras, Peru and the Dominican Republic), using Demographic and Health Surveys.

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20. It is worth mentioning that economic contractions can also reduce the opportunity cost of time in the production of children's health and promote changes in habits related to maternal health, with the potential to counteract the income effect of recessions. On the other hand, economic downturns may alter fertility decisions, modifying the composition of households that decide to have children during these periods and thereby altering the characteristics of the children born during these periods.

21. There is evidence that this result is different for developed countries (Dehejia and Lleras-Muney, 2004).

Box 3.8
Recessions and child health in Latin America and the Caribbean

Using data from the Demographic and Health Survey for Latin American and Caribbean countries (Colombia, Honduras, Peru and the Dominican Republic), Table 1 shows how children's health changes in the face of exposure to economic shocks (recessions) during the year of their birth, as well as the differential effects of these events according to the highest educational level of the parents. These results arise from estimating the following regression:

$$S_{ict} = \alpha + \beta_1 \, edu_{it}^{P} + \beta_2 \, recession_{ct} + \beta_3 \, edu_{it}^{P} \, recession_{ct} + X\lambda + \epsilon_{itc}, \quad (1)$$

where S_{ict} is the health of child i born in year t in country c, edu_{it}^{P} is the maximum years of education of the mother and father, $recession_{ct}$ is a dichotomous variable that takes the value 1 if the country's period t c is a recessive period and X is a set of control variables including sex, month and birth order of the child, mother's height (as a *proxy* for her general health status), mother's age at childbirth, urban or rural residence and wealth quintile, plus fixed effects of country and year. The coefficient β_1 indicates how much the probability of the child's poor health (mortality, low birth weight, and chronic malnutrition) changes (in percentage points) for each additional year of education of the parents. The coefficient β_2 indicates how much that same probability changes if in the year of the child's birth the economy was in a recession. The coefficient β_3 shows how the effect of recessions on children's health changes for each additional year of parental education. A negative value of this coefficient would indicate that recessions have less effect for children of more educated parents.

In all cases, the coefficients β_1 and β_2 have the expected sign: there is a negative association between parental years of education and poor health outcomes of children. In line with the results found by Bozzoli and Quintana Domeque (2014) for Argentina and by Baird et al. (2011) for a set of 59 developing countries, being born during contractionary periods is further associated with worse health outcomes. Less clear is the result of the interaction of recessions with parents' years of education: while for birth weight and undernutrition outcomes the sign is as expected (more educated parents are more able to protect their children's health during recessions), the opposite is obtained for mortality indicators.

Table 1
Recessions and early health outcomes

	Infant mortality (0–5 years old)	Infant mortality before one years old	Neonatal mortality (before one month since birth)	Low birth weight	Chronic malnutrition
Parents' education (β_1)	-0.0004*	-0.0003	-0.00003	-0.0003	-0.0046*
Recession (β_2)	0.0076**	0.0057	0.0024	0.0141	0.0667**
Parents' education x recession (β_3)	0.0002	0.0003**	0.0003	-0.0015	-0.0054**
Observations	93,880	93,880	93,880	70,292	85,096

Note: The low birth weight variable takes the value 1 for infants born at less than 2,500 grams. Chronic malnutrition is a variable that is defined according to the value of a standardized index (z-score) of height-for-age (HPA) and takes the value 1 when it is below -2. Recession takes the value 1 in all years with negative real GDP per capita growth. Years of parental education refers to the years of education attained by the parent who achieved the highest level of education. Asterisks indicate the statistical significance of the coefficient in question: *** significant values at 1%, ** significant values at 5% and * significant values at 10%.

Source: Authors based on data from Demographic and Health Surveys (ICF 2004–2017).

On the other hand, using data from past CAF Surveys (from 2012 to 2019), Box 3.9 shows evidence that recessions may also reinforce intergenerational persistence in human capital by favoring the graduation from the secondary cycle only for the children of more educated families.

Box 3.9
The effect of recessions on the intergenerational transmission of skills in Latin America and the Caribbean

The moment of completion of basic education and connection with higher education or the labor market can be critical for the process of human capital accumulation. This is demonstrated by several studies on the effect of experiencing an economic recession at ages 16 to 18, which could extend to approximately 25 years of age. For example, Arellano-Bover (2020) analyzes a sample of 19 OECD countries and finds that people who spent that period of their lives under economic recessions have fewer cognitive skills as adults. Furthermore, this work shows that it is the children of parents with a low level of education who see their skills reduced the most. Thus, having the "bad luck" to go through this critical period of life under a bad general economic situation has long-term effects that manifest in terms of a lower human capital accumulation. Moreover, these effects reinforce the intergenerational human capital links between parents and children.

Arellano-Bover (2020) tests different mechanisms that could explain these results and finds that, on the one hand, recessions in these developed countries increase the probability of completing formal education cycles, and on the other, connect young people with companies that offer very poor possibilities of on-the-job learning.

Two related papers that were produced in the context of this report provide evidence for Latin American and Caribbean countries. On the one hand, Berniell and de la Mata (2022) use data from the CAF Surveys produced between 2012 and 2019 for ten countries in the region and show that, when children go through economic recessions in the life span between the ages of 16 and 25, the probability of completing the secondary cycle is higher (by about 3 percentage points) among people whose parents have a high educational level than among children of parents with a low educational level. Thus, recessions in Latin America exacerbate intergenerational persistence in educational attainment levels. On the other hand, Alves and Varvasino (2022), using data for 18 countries from the Latinobarometer survey, find higher unemployment rates in the transition to adulthood for the children of parents with low educational attainment who were unlucky enough to start their working careers during that recession. This higher unemployment is likely to translate into a depreciation of skills that are valued in the labor market. Since this result is not observed for the children of highly educated parents, recessions in Latin America generate medium-term effects that deepen the persistence between generations in labor market outcomes and, by that route, probably also in the skills needed to perform successfully in the labor markets (see Chapter 4 for more details).

Climatic and other nature-related shocks

Nature-related shocks are increasingly frequent, with intensities and durations that are difficult to predict and, in the absence of appropriate measures, to mitigate. The challenges posed by climate change and human-induced degradation of nature are also linked to the intergenerational persistence of human capital. For example, some nature-related shocks greatly reduce household incomes, restricting the possibilities to optimally invest in the human capital of children and youth. Such events can also damage crucial infrastructures for the education and health of the youngest and thus affect the possibilities for intergenerational mobility.

With regard to the impact on income, it should be noted that in many countries of the region, especially in rural areas, a significant part of household income depends on agriculture. Climate shocks (droughts, excessive rainfall, high temperatures, etc.) become sources of unexpected reductions in income. There is compelling evidence for different developing countries showing how the impact of these events translates into lower household investments on their children's health and education (Jensen 2000; Maccini and Yang 2009).[22] This evidence also shows that early childhood is a critical stage in which suffering a climate shock leaves long-term scars. A key channel is the effect of this type of phenomenon on children's health, which subsequently affects their educational performance and, by that route, socioeconomic outcomes in adulthood.

In a related paper, Caruso (2017) analyzes the consequences on human capital formation of different climatic episodes and other nature-related phenomena (such as earthquakes and volcanic eruptions) in Latin American and Caribbean countries during the 20th century. Comparing people born in the same geographic areas (i.e., keeping the institutional context invariant), but with different exposure to natural shocks that occur fortuitously, this paper finds that people who were exposed at specific stages of their lives to these types of events have, on average, a lower number of years of education completed, a higher probability of suffering a disability and a lower probability of having accumulated assets in adulthood. These effects occur especially among those who were exposed *in utero* and during the first years of life (before the age of 15). The impacts of these shocks transcend a single generation: the grandchildren of those exposed also show lower levels of human capital. Following the work of Caruso (2017), but with more disaggregated data for the case of Colombia, Table 3.3 shows that the effects of climate shocks on education are so large that they reduce the probability of an individual surpassing the educational level of their parents (i.e., they reduce upward educational mobility). The two columns of the table show the change in the probability of having a higher level of education than the parents as a function of whether the shock occurred early in life (between 0–2, 3–5, or 6–9 years old) or slightly later (10–14 years old) in the district of birth (equivalent to the

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Evidence suggests that climate shocks affect families' investments in their children's human capital and reduce prospects for upward mobility

22. Jensen (2000) analyzes the impact of rainfall shocks in Côte d'Ivoire, a country where 70% of households' income derives from agriculture. Heavy rains in that country had dramatic effects, reducing school attendance rates by 33% to 50% and doubling child malnutrition rates. Maccini and Yang (2009) focus on Indonesia to analyze the effects of climatic shocks around birth on subsequent health outcomes, education and other socioeconomic indicators of children. The authors find that having been exposed to better climatic conditions (associated with higher agricultural productivity) during early life increases the probability of having good health in adulthood, higher height, more education, and living in households with better wealth indicators. However, the results are only positive for women and no significant effects are observed for men.

municipality) and by type of event (climatic or other, such as earthquake or volcanic eruption). The results indicate that both types of shocks, when they occur early in life (up to age 9), reduce very significantly (2 and 10 percentage points) the probability that individuals will surpass their parents' educational level.

Table 3.3
Effect of climate disasters and other natural events on the probability of attaining a higher educational level than that of parents for cohorts born between 1949 and 1993 in Colombia

	Weather shocks	Other nature-related shocks
Exposed at age 0–2 years	-0.034**	-0.098***
Exposed at age 3–5 years	-0.030	-0.031***
Exposed at age 6–9 years	-0.024***	-0.061***
Exposed at age 10–14 years	0.029	0.004
Observations	788,487	788,487

Note: All regressions include district (equivalent to municipal level) and cohort fixed effects. We control for gender, parental age, highest parental education level and household size (number of cohabiting children). Standard errors are robust, clustered at the district level and presented in parentheses. Weather shocks include landslides, storms and floods; "other nature-related shocks" consider volcanic eruptions and earthquakes. The IPUMS sample is restricted to persons aged 18-23 years living with their parents. Asterisks indicate the statistical significance of the coefficient in question: *** values significant at 1%, ** values significant at 5% and * values significant at 10%.

Source: Authors based on IPUMS (2020) and EM-DAT (CRED / UCLouvain, 2021).

Also studying the Colombian case, a study financed by CAF (Duque et al. 2021) finds that climate shocks suffered early in life have important negative consequences on the accumulation of human capital of children in conditions of greater socioeconomic vulnerability. In turn, this work shows that conditional income transfers that include a health care component, when implemented in an opportune manner during early childhood, are able to mitigate the long-term negative effects that events such as floods or droughts can have on young children.

Within the home: material resources, time sharing and parenting rules

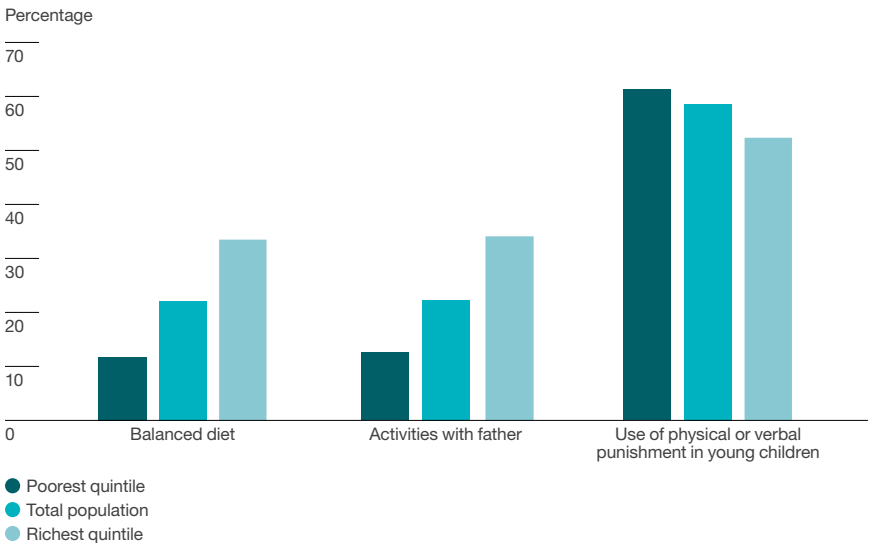
As discussed in the conceptual framework of this chapter, there are three key areas in which parents must invest to ensure the full development of their children: material resources to purchase key goods and services (food, educational services, clothing, etc.), productive time shared with the adults in the household, and a structure of rules that organize life in the home and make it a

safe and stimulating environment for development. Graph 3.5 shows, on average for a group of Latin American and Caribbean countries, a clear socioeconomic gradient in indicators of these three spheres.

The gradient in Graph 3.5 is due to a combination of the weight of the three types of constraints discussed above: financial, cognitive-behavioral and insurance constraints. Certainly, these constraints often appear together, given that they are closely associated with the socioeconomic disadvantages faced by families. However, as Attanasio et al. (2022) argue, this perspective that the gradient in investments is not only due to financial restrictions is of vital importance for public policies aimed at supporting and accompanying the most vulnerable families in the child-rearing process. These policies should take into account comprehensive support options, including some low-cost components. Moreover, they need to go beyond only transferring monetary resources to families, especially if these transfers are given only temporarily.

Socioeconomic gaps in human capital investments are not only the result of financial constraints

Graph 3.5
Socioeconomic gradients in key investments for development of children's human capital in selected countries of Latin America and the Caribbean



Note: For the balanced diets indicator, from the DHS, values are averaged for five countries in Latin America and the Caribbean: Bolivia (2008), Colombia (2010), Honduras (2011), Peru (2012) and Dominican Republic (2013). For the indicator of the use of physical or verbal punishment and the percentage of children who carry out daily activities with their father, taken from the Multiple Indicator Cluster Survey (MICS), average values are presented for four countries that participated in the study: Argentina (2012), Costa Rica (2011), Panama (2013) and Trinidad and Tobago (2006). Balanced diet is defined as the percentage of children under 5 years of age who ingested food from all food groups (grains, vegetables, fruits, dairy, meats and other products) in the 24 hours prior to the survey. Activities with father represents the percentage of children between 36 and 59 months with whom their father performed at least four activities aimed at promoting learning (reading or looking at pictures, telling stories, singing, taking a walk outside the house, playing or naming, telling or drawing things to the child) in the three days prior to the survey. Use of physical or verbal punishment in young children corresponds to the percentage of children between 2 and 14 years of age whose parents report that they frequently yell at them, call them "silly" or something similar, shake them, hit them with a belt or other object, slap them, hit them on the head, beat them, or pull their ears.

Source: Authors based on data from Demographic and Health Surveys (ICF, 2004-2017) and Multiple Indicator Cluster Surveys (Unicef, 2006-2013).

One issue that requires special attention in the region is parenting practices. RED 2016 (Berniell et al., 2016) has already documented the need to support families in the region to improve not only the nurturing environment within the home, but also for parents to implement sooner rather than later simple but effective practices for adequate nutrition and early stimulation. Indeed, recent evidence on the importance of improving parenting practices points to the potential of such interventions to promote the human capital of children from disadvantaged households. The work of Attanasio et al. (2022) shows the remarkable positive impacts of an intervention mounted on a large-scale program in Colombia (Programa Familia, Mujer e Infancia [FAMI], of the Instituto Colombiano de Bienestar Familiar [ICBF]), which combined structured classes on early stimulation practices with the provision of nutritional supplements and advice on child nutrition given to participating mothers.

Outside the home: educational institutions and neighborhoods

Can educational institutions promote human capital mobility?

Formal education institutions, from early education to university, can help to break or, on the contrary, reinforce the intergenerational transmission links of human capital described above. In Latin America and the Caribbean, as documented in Chapter 2, the expansion of education in the second half of the 20th century generalized coverage at the primary level and made some progress at the secondary level, with disparities between countries. Something similar, but with less force, happened with higher education. However, education systems are still far from closing socioeconomic gaps and from being infallible allies of intergenerational mobility, particularly in view of the low levels of quality of educational services received by children and young people from the most disadvantaged families and the high levels of school segregation observed in the region.

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The low quality of the educational services received by children and youngsters from low-income backgrounds disadvantaged and high school segregation limit the ability of education systems to promote increased mobility

Educational expansion and equal opportunity

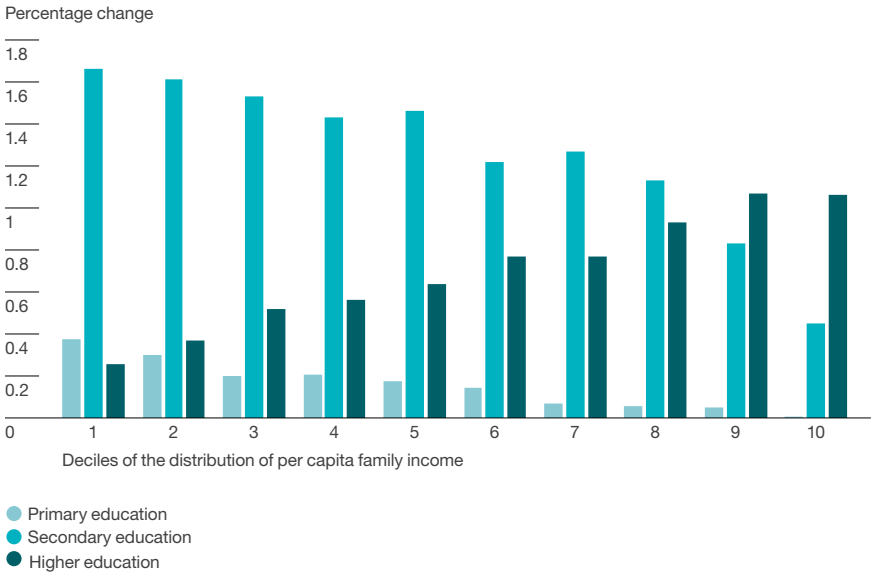
The expansion in educational coverage, which was documented in Chapter 2, did not occur equally at all levels, nor was it even among people of different socioeconomic levels. The evidence collected in a document prepared for this report (Gasparini, Bracco, et al., 2021) based on household surveys for 18 countries in the region also points in this direction: in the last three decades, the evolution of educational enrollment of people residing in poor households (lower deciles) or rich households (higher deciles) was very different for primary education compared to higher levels of education. While socioeconomic

enrollment gaps have clearly been closing for primary education, this closure has been more modest in secondary education and, in the case of higher education, enrollment grew more in the higher deciles, especially during the 1990s, and then expanded, albeit more moderately, toward the middle sectors. As a result, in the data period from 1992 to 2019, the (annual) percentage changes by income decile in each of these three educational levels take the form shown in Graph 3.6. It is worth noting that the values for primary enrollment rates were already very high in the early 1990s, so the margins for improvement, although decreasing with income level, are clearly smaller than those obtained at the other two educational levels. These results are consistent with a related measure, presented in Box 3.10, which shows the evolution of equality of opportunity in enrollment at different levels of education in the region.

But the analysis of enrollment is only part of the story that connects educational institutions with the mobility of human capital. Two key mechanisms that contribute crucially to this connection are discussed below: educational quality and school segregation.

The socioeconomic enrollment gap has been closing sharply in primary education and modestly in secondary school, but widened in higher education

Graph 3.6
Annualized growth rate of enrollment in each educational level by income decile for the period 1992–2019 in 15 countries of Latin America and the Caribbean



Note: The graph presents average values for 15 countries based on household survey data processed by SEDLAC (a joint project of CEDLAS and the World Bank). The schooling rate for each level is defined as the average for all individuals in the sample in each country of a dichotomous variable that takes the value 1 if the child or young person of primary, secondary or higher education age is enrolled in the level corresponding to their age. The countries included in the averages are: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Honduras, Mexico, Panama, Paraguay, Peru, and Uruguay.

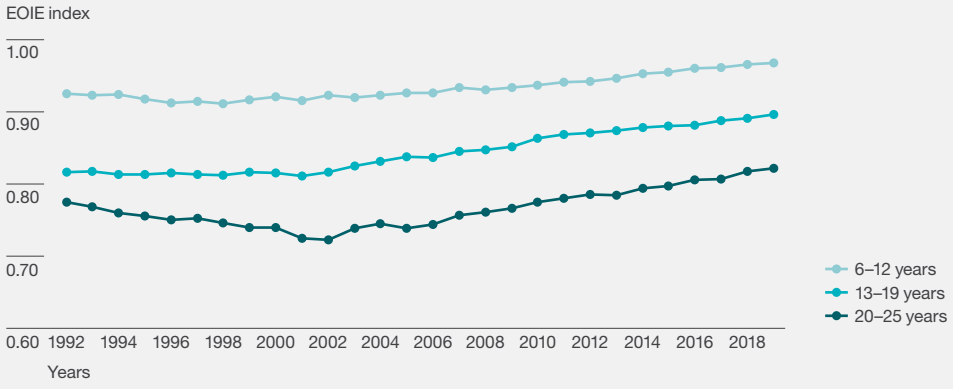
Source: Authors based on Gasparini, Bracco et al. (2021).

Box 3.10
Equal opportunity in educational enrollment

A paper prepared for this report (Gasparini, Laguinge et al., 2021) presents a summary indicator of inequality of educational opportunities in Latin America and the Caribbean between 1992 and 2019 using household surveys for 17 countries in the region. The indicator captures the relationship between the educational gap (difference between the years of education attained and the theoretical years of education according to age) of a child or young person and family variables, in particular, the income and education of their parents. The less close this link is, the less dependent educational progress is on the family's socioeconomic context and, therefore, the greater the degree of equality of educational opportunities. The Equality of Opportunity in Education Index (EOEI) is defined as 1 minus the proportion of the variance of the schooling gap that is explained by the variables of the family socioeconomic context. The indicator, based on Andersen (2001), is simple, so it has some limitations, like the impossibility of controlling for all the factors that determine educational performance, many of which may be correlated with family context variables. Another limitation comes from the cohabitation bias introduced by the type of data used (see Chapter 2), which may be important in the estimates for older age groups.

Graph 1 shows the average evolution of the EOEI calculated for three age ranges, which coincide approximately with the ages of the primary (6–12 years old), secondary (13–19 years old) and higher (20–25 years old) educational levels. Equality of opportunity is systematically higher for the primary education age group, consistent with the degree of universality of coverage at that level. In the case of the indicator associated with secondary education, the equality of opportunity is lower, although it has improved since 2002. Finally, this equality of opportunity indicator—substantially lower for higher education—declined in the 1990s. It began to recover in the present century.

Graph 1.
The Equality of Opportunity in Education Index (EOEI) by age group in selected Latin American and Caribbean countries



Note: The graph presents average EOEI values, following the methodology of Andersen (2001), calculated based on household survey data processed by SEDLAC. The countries included in the averages are: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela.

Source: Gasparini, Laguinge et al. (2021) based on microdata from SEDLAC household surveys (CEDLAS and World Bank, 2021).

Quality of education and mobility

In the region, the achievements in coverage and years of education attained are far from those observed in terms of quality. According to the results of international standardized tests, such as the OECD's Programme for International Student Assessment (PISA), Latin American and Caribbean countries are among the worst performers. On the other hand, in the last two decades, very few countries in the region have shown considerable or sustained improvements in this indicator of educational quality. But not only is the average quality low, but there are also high disparities, with results that are considerably better for the children of families with a high socioeconomic level.

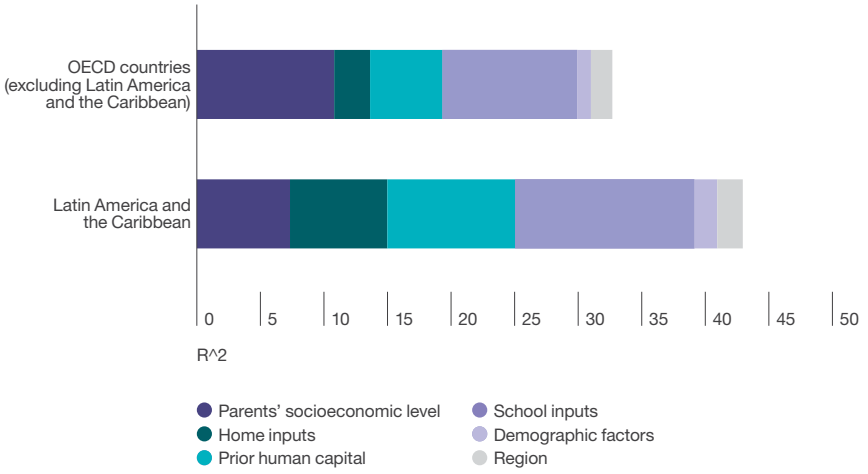
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Achievements in educational coverage in the region are far from those observed in terms of quality, which is not only low but has not steadily improved over time and maintains a strong socioeconomic gradient

These socioeconomic gaps in quality may, in part, result from the limited room for maneuver of schools to influence the accumulation of human capital resulting from investments made by parents within the home or that which is affected by environmental factors, such as, for example, place of residence. Graph 3.7 shows the results of a decomposition exercise that attempts to quantify the relative contribution of school-based inputs versus other factors that are also associated with performance on standardized tests. A first conclusion from this decomposition is that in Latin America and the Caribbean, compared to OECD countries, the set of inputs considered explains a higher percentage (43% versus 33%) of the variation in PISA scores (mathematics).[23] In other words, student performance in Latin America is more predictable from a set of observable educational inputs that, in addition, are strongly influenced by the family of origin and by the accumulation of human capital prior to taking the PISA test (15 years of age). A second point to note is that school input measures only explain 14% of the variation in scores in Latin America and the Caribbean, which represents approximately one third of the variability explained by the inputs included, a fraction similar to that observed in OECD countries.

23. The results in Graphs 3.7 and 3.8 remain unchanged when considering PISA scores in subjects other than mathematics.

Graph 3.7
Contributing factors to variability in 2018 PISA test scores



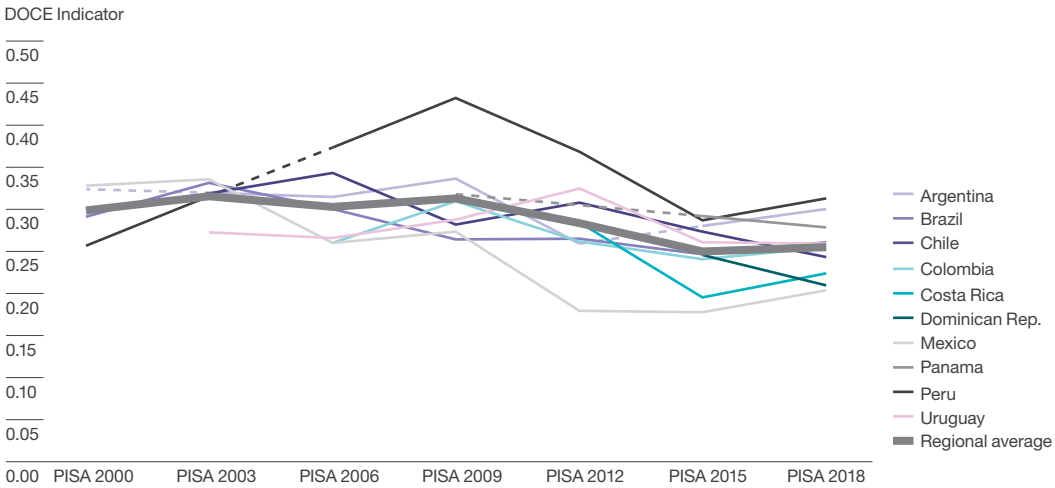
Note: The graph presents the percentage contribution of six inputs in explaining the variability observed in PISA 2018 mathematics scores. The inputs considered are: demographic factors (age and gender), region of residence (population size), previously accumulated human capital (having repeated a year or having attended early education), home inputs (measures of different inputs dedicated within the household to complement the education received at school), socioeconomic status of parents (measured by parents' education and occupation) and finally a group that includes the characteristics of school inputs (teaching resources, materials or infrastructure). To measure such contribution, an ordinary least squares estimation is performed, having as dependent variable the PISA 2018 test scores (mathematics) and as independent the defined input measures. From these regressions, the contribution of each regressor in the R2 of the model is averaged, contemplating all possible combinations resulting from introducing or removing the defined input variables. The comparison is made between OECD member countries (excluding Latin American and Caribbean countries) and Latin American and Caribbean countries that participated in PISA 2018.

Source: Authors based on data from PISA 2018 (OECD, 2018a).

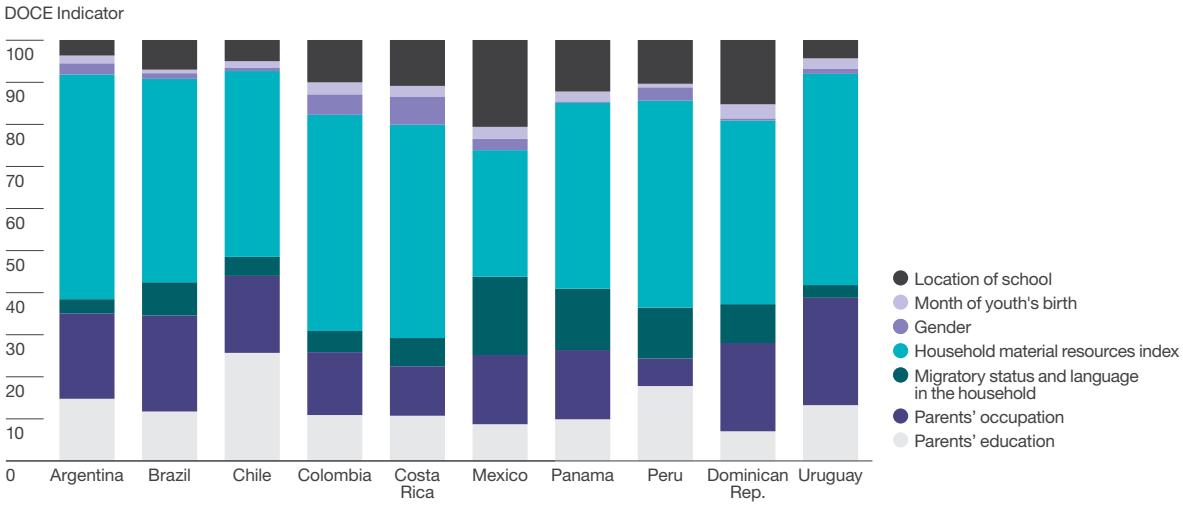
On the other hand, the results of Graph 3.7 also denote the great importance that factors beyond the student's control have in determining their school performance, that is, they speak of the weight of circumstances. Graph 3.8 shows a measure of inequality of opportunity in PISA test performance, which attempts to capture the importance of these circumstances and was calculated following the methodology of Ferreira and Gignoux (2014). This indicator—the inequality of opportunities in educational quality (DOCE, for its acronym in Spanish)—shows the portion of the variability in PISA scores that can be explained by variables that capture the circumstances faced by students to achieve high levels of performance in the tests. A value of 1 in this index indicates that circumstances fully determine PISA scores, while a value of 0 indicates that they have no influence. The circumstances included are: gender, parents' education and occupation, immigration status and language spoken at home, an index of household material resources, month of birth of the child, and location of the school (size of the city where it is located).

Graph 3.8
Inequality of opportunities in educational quality (DOCE) in Latin American and Caribbean countries

Panel A. DOCE indicator's evolution over time



Panel B. Contributing circumstances to the DOCE indicator



Note: Panel A reports evolution in time of the inequality of opportunities in educational quality index (DOCE) for Latin American and Caribbean countries that participated in at least one edition of the PISA tests (mathematics). The DOCE indicator presented follows the methodology proposed by Ferreira and Gignoux (2014) and calculates R2 for an ordinary least squares regression, where the independent variables are indicators of seven types of circumstances: gender, parents' education, parents' occupation, migration status and language spoken at home, a household asset index, the month of birth of the child, school district (the size of the city where it is located). The dotted lines represent estimates based on a linear interpolation of a series of countries, given that not every country participated in PISA testing in intermediate years. Panel B shows a breakdown (Shapley method) of the relative contribution of each circumstance to the explanation of the DOCE indicator value calculated for each country using the PISA 2018 test.

Source: Authors based on data from PISA tests 2000–2018 (OECD, 2000, 2003, 2006, 2006, 2009, 2012, 2012, 2015a, 2018a).

Panel A of Graph 3.8 shows that this indicator of inequality of opportunities in educational quality has not changed much in the last two decades: it goes from a value just below 0.30 in 2000 to 0.26 in 2018. The change is due, in part, to a composition effect resulting from including for the last few years countries with a low level of inequality of opportunity, such as the Dominican Republic and Costa Rica. In addition, no country in the region shows consistent improvements over time, alternating periods of ups and downs in inequality of educational opportunities in terms of quality. As highlighted by Ferreira and Gignoux (2014), given that the PISA test is taken at age 15 and that dropout rates in Latin America and the Caribbean are very high, many young people are already out of the education system at the time of the assessment. Since dropout is considerably higher among youth from disadvantaged backgrounds, the inequality of opportunity indicator presented in Graph 3.8 is biased downward from its true value. In an international perspective, and in line with the findings of Ferreira and Gignoux (2014) using the PISA 2006 tests, Latin America and the Caribbean present values of inequality of opportunities that exceed those obtained for Asian, Scandinavian or North American countries (not including Mexico). These authors also studied which characteristics of the educational systems could explain the levels of inequality of opportunity observed for a broad sample of countries and found that these are negatively associated with spending on primary education and positively associated with the presence of systems that separate students by ability (tracking) in secondary education.

Panel B of Graph 3.8 shows a breakdown of the contributions of each type of circumstance to the total value of this indicator. The circumstances that contribute most to inequality of opportunity are the household wealth indicator, followed by the two circumstances that also define the socioeconomic level of the parents (their education and occupation).

Of course, an important part of this inequality of opportunities is generated before students turn 15. In fact, not only are there important socioeconomic gaps in indicators of very early cognitive development (see, for example, panel B of Graph 3.1), but these gaps are also of considerable size when measured with standardized tests taken during primary education. For the region, the results from the Second and Third Regional Comparative and Explanatory Tests (SERCE and TERCE, for their acronyms in Spanish) are best source for this type of analysis. The tests were given to third and sixth-grade primary school students in several Latin American and Caribbean countries. UNESCO's Latin American Laboratory for the Assessment of Quality in Education (LLECE) coordinate the tests. Box 3.11 discusses, based on the results of the work of Carneiro and Toppeta (2022) prepared for this report, the socioeconomic gaps observed in these tests at the primary level. In addition to considerable differences, the authors find that their magnitude is strongly associated with the current school segregation at this educational level in each country, which will be analyzed in greater detail later in this chapter.

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Among the most important contributing circumstances to inequality of opportunity in educational quality are household wealth, parental education and occupation

On the other hand, although there are certain problems for comparability both between countries and between the different cohorts present in the LLECE tests, which are described in Carneiro and Toppeta (2022), there are countries where the socioeconomic gradients are systematically greater in both mathematics and reading (Peru, Guatemala, and Uruguay) or less acute (Cuba, Nicaragua, and the Dominican Republic). From this ordering emerges an observation that may be counter-intuitive: a country with high levels of equality in income distribution, such as Uruguay, is among the countries with the largest socioeconomic gap in primary school performance, while the opposite is true for a country with high income inequality (Nicaragua). In other words, at this early stage of life (8 to 10 years of age), income inequality among adults does not seem to be directly related to educational immobility or inequality of opportunities in academic performance.

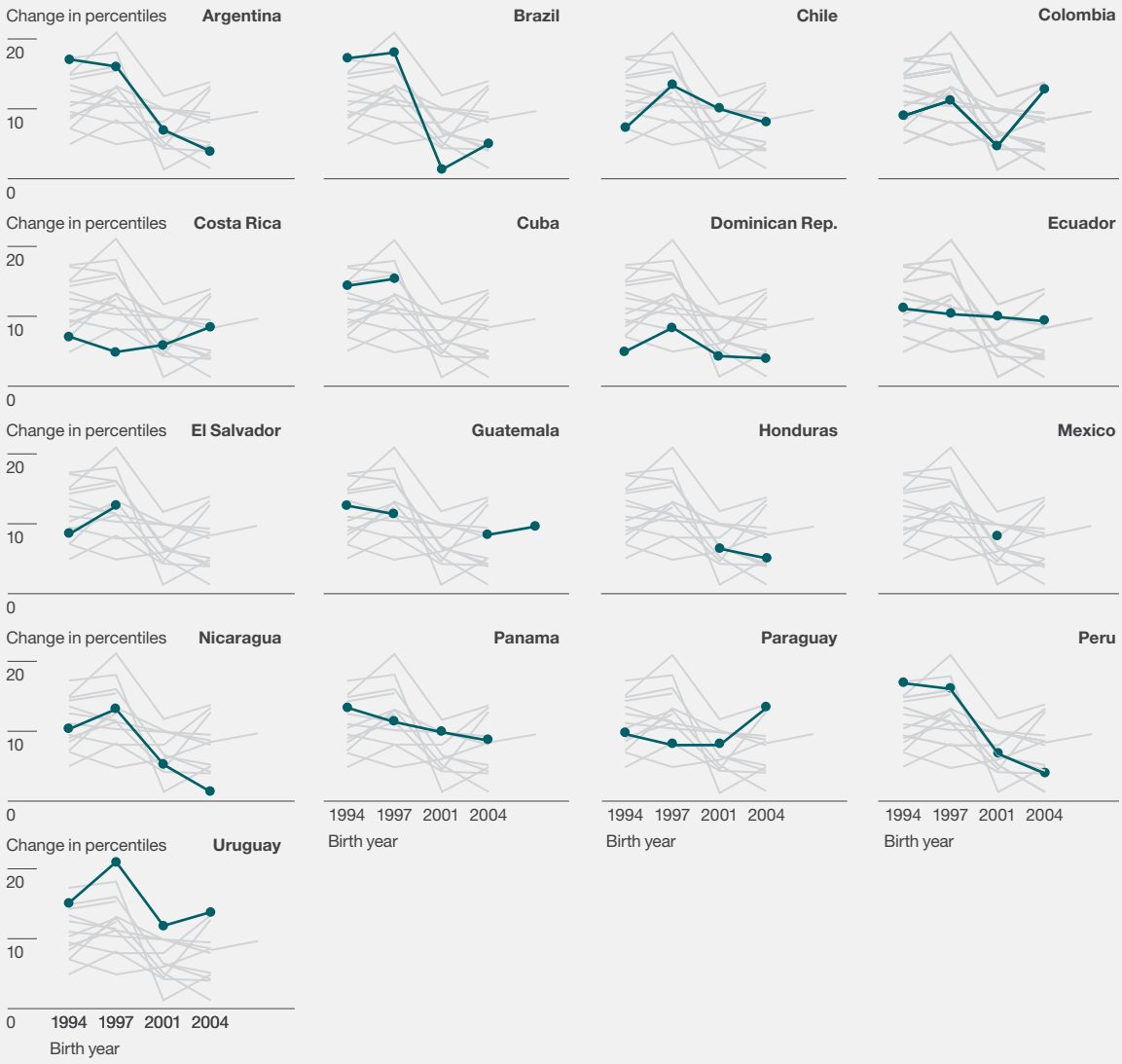
Box 3.11
Socioeconomic gradients in school performance in primary school: evidence from LLECE

Socioeconomic gaps in education have been widely documented, and those that exist in Latin America are no exception. The work of Carneiro and Toppeta (2022) quantifies the association between children's performance in primary school (third and sixth grades) and the maximum educational level attained by their parents. In particular, they estimate the coefficient β of this regression:

$$R(Y_{itc}^{k}) = \alpha_{tc} + \beta_{tc} HS_{itc}^{P} + \epsilon_{itc}, \quad (1)$$

where $R(Y_{itc}^{k})$ is the position (percentile) in the intra-country-cohort *ranking* of the distribution of grades in the SERCE and TERCE mathematics (or reading) test of child i in year t in country c, and the variable HS_{itc}^{P} is a binary variable that takes the value 1 if at least one of the parents completed at least secondary school and 0 otherwise. Graph 1 shows, for different cohorts (years of birth of the participating students), the results of these estimates for the case of mathematics in the countries available in these LLECE tests. In particular, the graph shows the specific improvement in the *ranking* (in percentiles) of the distribution of mathematics scores when the maximum educational level of the parents goes from less than secondary to at least complete secondary school. High values of these coefficients mean that the socioeconomic gradient is sharper, i.e., the children of parents who completed secondary school perform considerably better than their peers whose parents did not complete secondary school. This graph also shows a remarkable stability in the socioeconomic gaps on average for the region, with some exceptions of countries that seem to have improved while others worsened.

Graph 1.
Positional change in the *ranking* (in percentiles) of the distribution of mathematics scores for children of parents with completed high school compared to children of parents with lower educational levels



Note: The graph reports the beta coefficients of equation (1) estimated by ordinary least squares, for each country and cohort (approximate year of birth of participating students) in all Latin American and Caribbean countries where the LLECE SERCE and TERCE tests were taken. The data correspond to the 1994 and 1997 cohorts (SERCE for sixth and third grade, respectively) and the 2001 and 2004 cohorts (TERCE for sixth and third grade, respectively).

Source: Authors based on Carneiro and Toppeta (2022) and data from SERCE (Unesco, 2006) and TERCE (Unesco, 2013).

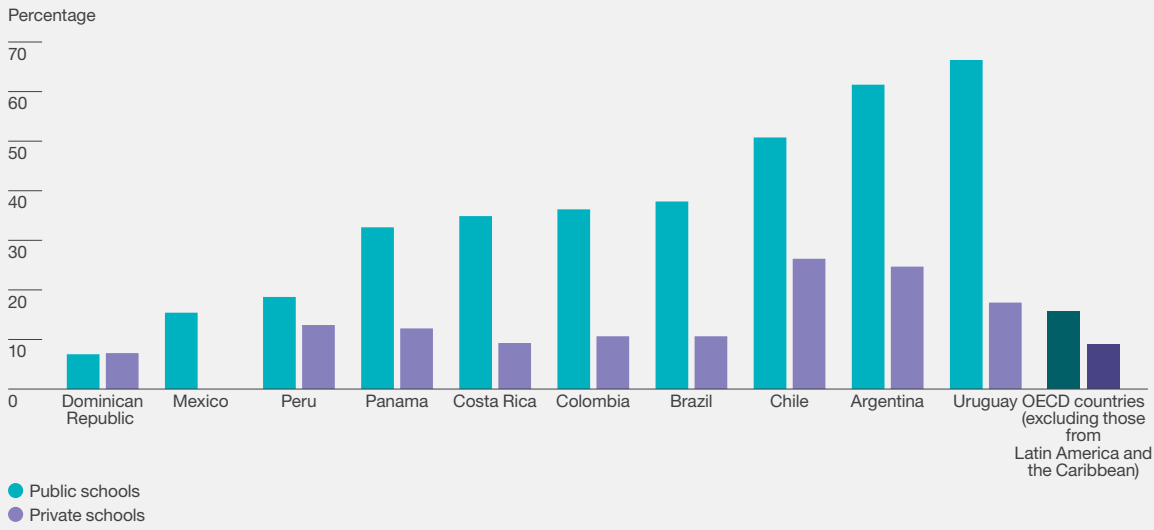
Another way of rationalizing this result consists of attributing to the school a role in equalizing opportunities. That is, without the action of schools, the inequalities of the home of origin would have been replicated more closely. This is consistent with the drop, from the age of entry to elementary school onwards, in the intergenerational *rank-rank* persistence coefficient shown in panel B of Graph 3.1. The equalizing force of opportunities offered by basic education is also evident in studies that show the effects on socioeconomic gaps in learning caused by different episodes in which students have not attended classes or have attended fewer days than normal. A recent example of great concern for the region was the massive closure of schools during the confinement measures imposed by governments in the context of the COVID-19 crisis. Box 3.12 summarizes the evidence pointing to the harmful effects of school closures on equal educational opportunities.

Box 3.12
Closed schools widen educational gaps by socioeconomic status

School learning time is a key educational resource. There is much evidence showing that school closures imply greater socioeconomic gaps in school performance. Agostinelli et al. (2022) suggest that there are at least three reasons for this. On the one hand, more advantaged parents respond by substituting more effectively at home for educational services that are not provided in schools (Berniell and Estrada, 2020). This response depends critically on the differences in the constraints faced by wealthier and poorer parents that were discussed earlier in this chapter. Second, when schools close or teachers are absent, the alternatives provided to replace those educational resources are imperfect. For example, substitute teachers or distance education (such as that provided through the Internet) provide imperfect alternatives to substitute those resources. Third, in non-segregated educational systems, peer effects can help disadvantaged children and youth to be exposed to realities different from those they experience at home, and school closures negate that possibility.

Various statistics prior to the COVID-19 pandemic already showed that disruptions in school attendance, even when of short duration, have very large negative effects on learning. For example, this is evidenced by teacher absenteeism, which is very high in the region. Not having a teacher in the classroom can have a very negative impact on learning, altering the educational and work trajectories in adulthood of those who are affected by fewer days of classes, due, for example, to teacher stoppages. This evidence shows that the impacts of the absence of teachers and professors come t o extend intergenerationally (Jaume and Willén, 2019). The major problem of teacher absenteeism in the region is also evident in the responses of school principals to the question in the PISA 2018 study about how harmful this absenteeism is to student learning. Graph 1 shows that this is a first-order problem in the region, especially in the public system, where most students of low socioeconomic level attend.

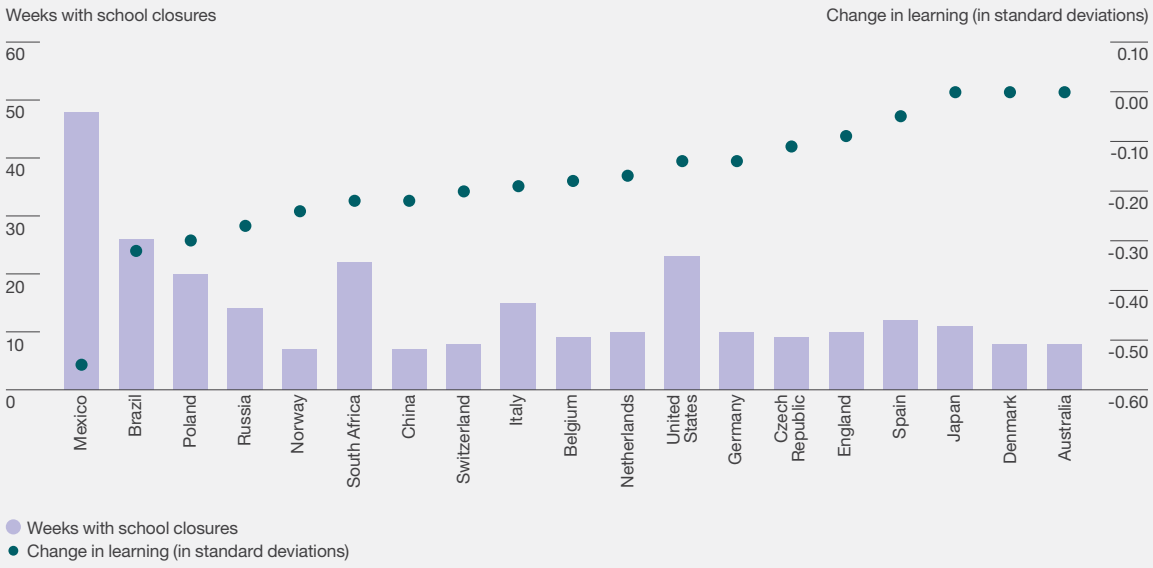
Graph 1.
Percentage of public and private school principals who consider that learning is somewhat or very much hindered by teacher absenteeism in Latin American and Caribbean countries and OECD averages



Source: Authors based on data from PISA 2018 (OECD 2018a).

The COVID-19 pandemic affected education systems in an unprecedented way: social distancing measures forced the prolonged closure of schools and the substitution of face-to-face education by alternative modes of distance education over a long period of time. According to data compiled by Unesco, the countries of Latin America and the Caribbean are among those that experienced the longest closures worldwide, with educational consequences that were estimated at the time to be very serious (Lustig et al., 2020). Figures on learning losses occurring in the aftermath of the pandemic are beginning to materialize these estimates. At the time of publication of this report, there were already several studies that implemented rigorous methodologies to quantify the causal effect of the pandemic on learning in schools. Patrinos et al. (2022) systematized the results of 36 studies analyzing these effects between 2020 and 2022 in 20 countries, two of which are Latin American. These studies are Lichand et al. (2021) analyzing the case of Brazil and Hevia et al. (2022) that of Mexico. The findings are certainly alarming and are summarized in Graph 2. The two countries in the region are among those that recorded the longest closures and are the two with the greatest learning losses. The negative impacts are equivalent to the loss of one school year in Brazil (-0.32 standard deviations) and just over a year and a half in Mexico (-0.55 standard deviations). Lichand et al. (2021) also show that the pandemic dramatically increased (by 365%) the risk of dropping out of school in Brazil.

Graph 2.
Weeks of school closures during 2020–2021 and learning losses measured in comparable units (standard deviations of the distribution of grades in each country)



Source: Authors based on Patrinos et al. (2022).

In addition, the available evidence also shows that school closures have generated very unequal impacts, much more negative for the most disadvantaged socioeconomic groups and those students who already had greater learning difficulties before the pandemic. In Mexico, for example, the negative impacts on lower socioeconomic groups were double those experienced by higher socioeconomic groups, while in Brazil the difference was 2.5 times greater. Along the same lines, a recent report (World Bank et al., 2022) points out that the projected learning losses in all the countries of the region are very high and more severe for the early grades, younger students and the population in the most disadvantaged socioeconomic condition. There are also projected drops in literacy and mathematics achievement at the primary level, which would bring the average values back to those observed more than ten years ago. It is estimated that, in the next few years, nearly 4 out of every 5 sixth grade students will not be able to adequately understand and interpret a text of moderate length.

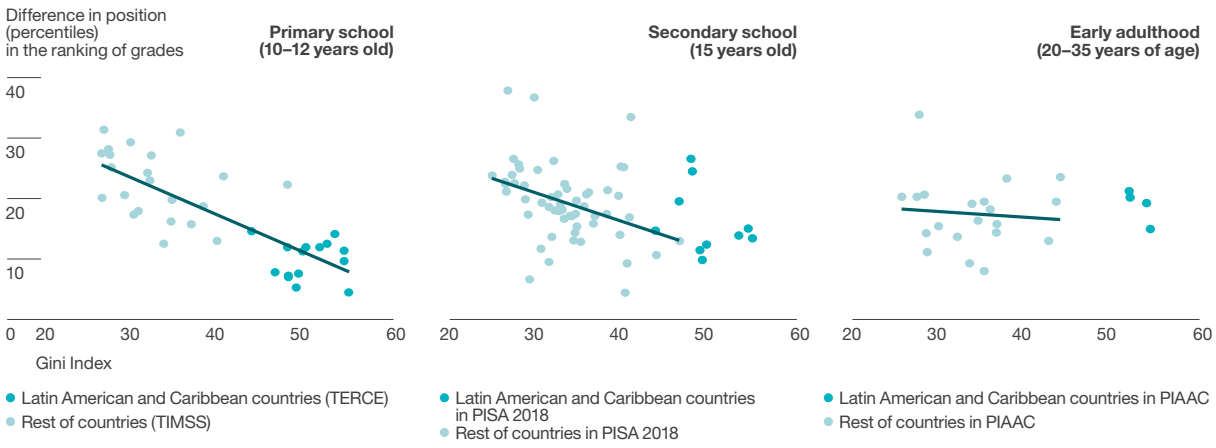
Thus, the differential effects of the pandemic on human capital formation have increased pre-existing learning inequalities. These effects constitute a key channel through which the pandemic may have persistent long-term impacts and, if timely mitigation strategies are not implemented, affect the mobility of the next generations.

The equalizing role of schools has a limit. In the educational outcomes achieved in adulthood, there is a strong connection between income inequality and persistence in years of education completed, as shown in Chapter 1. Indeed, Graph 3.9 illustrates, for a broad sample of countries, the relationship between income inequality (Gini index) and the performance gaps in different standardized tests, covering childhood through adulthood, which were calculated following the methodology presented in Box 3.11. This graph suggests that, despite their earlier origins, the forces of inequality manifest themselves during secondary education and are reinforced at post-secondary ages, as the slope of the relationship between income inequality (Gini index) and performance gaps in standardized tests changes from negative to positive.[24] Panel A of Graph 3.9 shows the coefficients of change in the *ranking* (percentiles) in the intracountry distribution of mathematics (LLECE, TIMSS and PISA) or numerical skills (PIAAC) scores associated with having parents with completed secondary school compared to having parents with lower levels of education. Panel B shows similar coefficients, but reflecting the change in *ranking* associated with having parents who completed at least a university degree. The change in the slope between inequality and persistence in these measures of skills is stronger in Panel B.

Graph 3.9

Relationship between income inequality and socioeconomic gaps in the results of standardized tests taken during childhood, adolescence and early adulthood in Latin American and Caribbean countries and the rest of the world

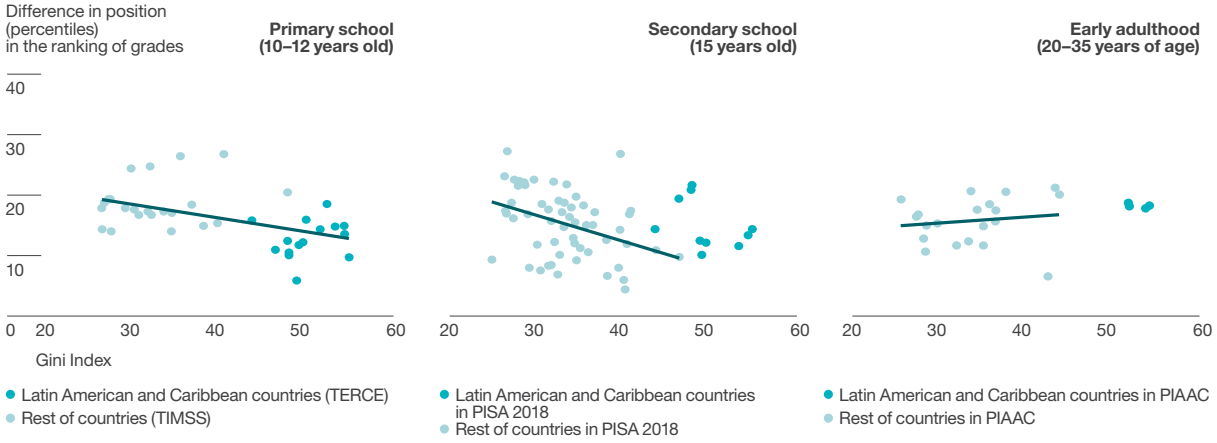
Panel A. Differences in grade rankings between children of parents with completed high school versus children of parents with lower levels of education



Continued on next page →

24. To construct performance gaps, proxies of learning or cognitive skills, data from the LLECE tests for Latin America and the Caribbean and the Trends in International Mathematics and Science Study (TIMSS) for countries in other regions were used for primary school ages; for ages associated with secondary school, PISA was used; and for ages between 20 and 35, the results of the OECD's Programme for the International Assessment of Adult Competencies (PIAAC) was used.

Panel B. Differences in position in grade rankings between children of parents with completed university versus children of parents with lower levels of education



Note: Differences in the position in the distribution of scores are calculated following equation (3) in box 3.11. Panel A relates the income inequality index (Gini index averaged for the period 2000–2015, from the World Bank's WDI database) to socioeconomic gaps in scores on standardized mathematics tests taken in childhood (Unesco's TERCE and TIMSS 2019 for countries outside Latin America and the Caribbean), adolescence (OECD's PISA 2018) or early adulthood (ages 20–35, using OECD's PIAAC).

Source: Authors based on data from TERCE (Unesco, 2013), TIMSS (IEA, 2019), PISA 2018 (OECD, 2018a) and PIAAC (OECD, 2018b).

School segregation and mobility

School segregation results from the choices parents make about the best school to send their children to, taking into account budgetary, informational and cognitive-behavioral constraints, to which must be added geographic or residence constraints. These choices are also conditioned by the options offered by the educational system and, crucially, by the differences in quality between public and private alternatives. In places with high socioeconomic inequality and spatial segregation, where transportation costs within cities are high, it is natural that certain levels of school segregation arise in the socioeconomic dimension. Advantaged parents are more likely to pay more to send their children to schools that offer a higher quality or more diverse set of educational services, while poorer parents usually cannot choose beyond the public option that is close to their place of residence.

School segregation by parental income or wealth is thus the most typical and, when it reaches a considerable size, it can affect the intergenerational persistence of human capital. This is due to different types of "*peer effects*" operating in schools. On the one hand, skill formation in school can benefit from having in the classroom students with higher entry skills. With very homogeneous classrooms or schools, in which students have similar skill levels, the possibility of exploiting the advantages of peer effects is reduced, whereas these possibilities are expanded when schools have students with more varied profiles. Given that the skill level of students before they enter school correlates strongly with the income or wealth of their parents, the socioeconomic segregation mechanism may also imply that potential positive

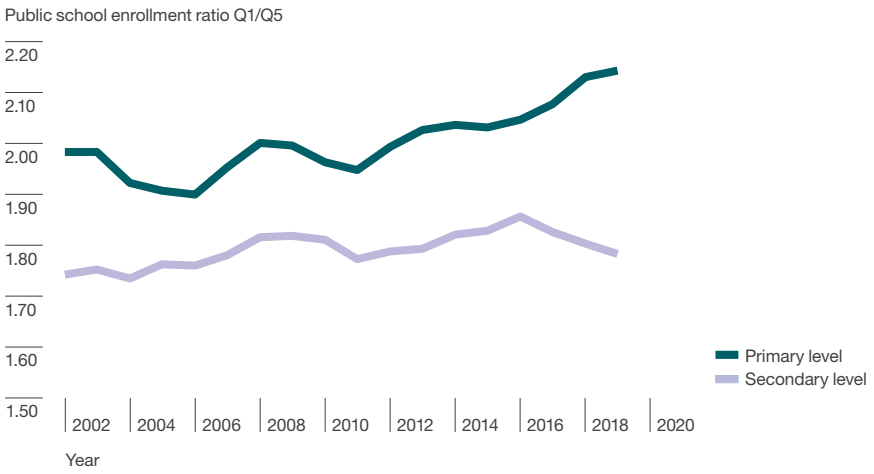
"spillovers" from high-achieving students do not reach low achievers, who in practice attend other schools.[25] That is, children of wealthy parents will share schools with peers of similar status and the same occurs with children of poor parents. However, correctly measuring the size of peer effects is very difficult (Angrist, 2014) and rigorous evidence on how beneficial it may be to have richer or more skilled peers is inconclusive (Paloyo, 2020).

On the other hand, the evidence of high school segregation by socioeconomic level is very conclusive in the region. The difference by family income levels in enrollment in public education, both at the primary and secondary levels, is notable. Graph 3.10 shows that the enrollment rate in public education is substantially higher (nearly double) among students in the poorest quintile (Q1) than among those in the richest quintile (Q5). In addition, this graph shows that the differences are greater in primary than in secondary school and that in primary school there is an increasing trend over time in this first indicator of school segregation.

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The high level of school segregation by socioeconomic level is manifested in the rates of enrollment in public education

Graph 3.10
Ratio of enrollment rates in public schools of poorer families (quintile 1) vs. richer families (quintile 5)



Note: The graph shows the evolution of the public school enrollment ratio between students in the lowest quintile of the family income distribution (quintile 1, Q1) and students in the richest quintile (quintile 5, Q5). Increasing values of this ratio indicate that poorer families are increasingly choosing public schools relative to the choices of wealthier families. Enrollment rates by educational level were obtained from the SEDLAC database, which standardizes this type of indicators based on household surveys conducted in 18 countries in the region. The ratios are presented as three-year moving averages for the period from 2000 to 2019.

Source: Authors based on data from SEDLAC (CEDLAS and World Bank, 2021).

25. 25. School segregation by ability can also occur in systems where the composition of schools or classrooms is intentionally stratified according to the ability level of students, regardless of their socioeconomic level (*tracking* systems). For example, this is the case of schools that select their students with tests that enable enrollment as long as certain performance thresholds are exceeded.

ECAF 2021 collected novel information that demonstrates that income segregation between the public and private systems also has an intergenerational correlate. According to Graph 3.11, the probability of going to a private school increases greatly (33 percentage points on average) for children of parents who also went to a private school (without controls). In some cities this increase in probability is more pronounced, as in the case of Montevideo or Bogota (38 and 37 percentage points more than the children of parents who did not attend private schools). After controlling for the characteristics of the respondent and their son or daughter, persistence in attending private schools drops slightly, but remains high and significant (22 percentage points on average).

Graph 3.11
Intergenerational persistence in private education in cities surveyed in ECAF 2021



Note: The graph shows the estimated coefficient in an ordinary least squares regression and its confidence interval, where the independent variable takes the value 1 if the child ever attended private schools and the independent variable is also 1 if the respondent ever received private education. Panel B adds to this regression controls for characteristics of the respondent's child (age and gender) and the respondent (age, gender, level of education attained, occupation, a wealth index, and a variable indicating whether the respondent lives in a home that is owned). Cities are ordered according to the value obtained for the regression without controls.

Source: Authors based on data from ECAF 2021 (CAF, 2022).

Socioeconomic segregation among schools can also be analyzed with data from the PISA study, which collects a variable indicative of the socioeconomic level of the parents of the students included in the study. This variable (highest

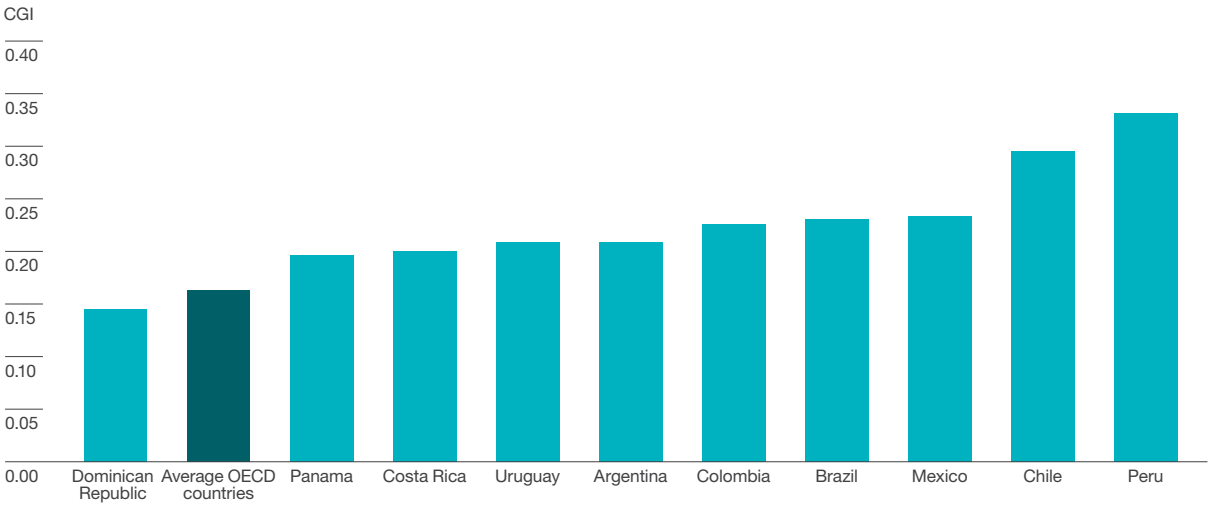
parents' socioeconomic index [HISEI]) ranks parents' occupations according to their potential to generate income. From this indicator of family socioeconomic level it is possible to construct different segregation measures; for example, the one presented in Graph 3.12, which is based on the work of Vázquez (2016). Panel A of that graph shows the levels of an index of socioeconomic segregation denoted as the Centile Gap Index (CGI), which would take a value equal to 1 in a country where schools are perfectly segregated (if all students in each school belonged to the same percentile of the income distribution in society) or a value equal to 0 if segregation were zero (that is, if all percentiles of the income distribution were equally represented among the student body of the schools). As can be seen in this panel, the countries of Latin America and the Caribbean present values of this index considerably higher than the average of the OECD countries, with the sole exception of the Dominican Republic. In fact, the two countries with the highest values in this segregation index among the 78 countries participating in PISA 2018 are Latin American (Peru and Chile). Moreover, as shown in panel B of Graph 3.12, segregation in the region is not only higher than in developed countries, but, unlike the stability observed in the OECD average, it has increased in the last two decades.

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School segregation by socioeconomic level is higher in Latin America and the Caribbean than in OECD countries and has increased in the last two decades

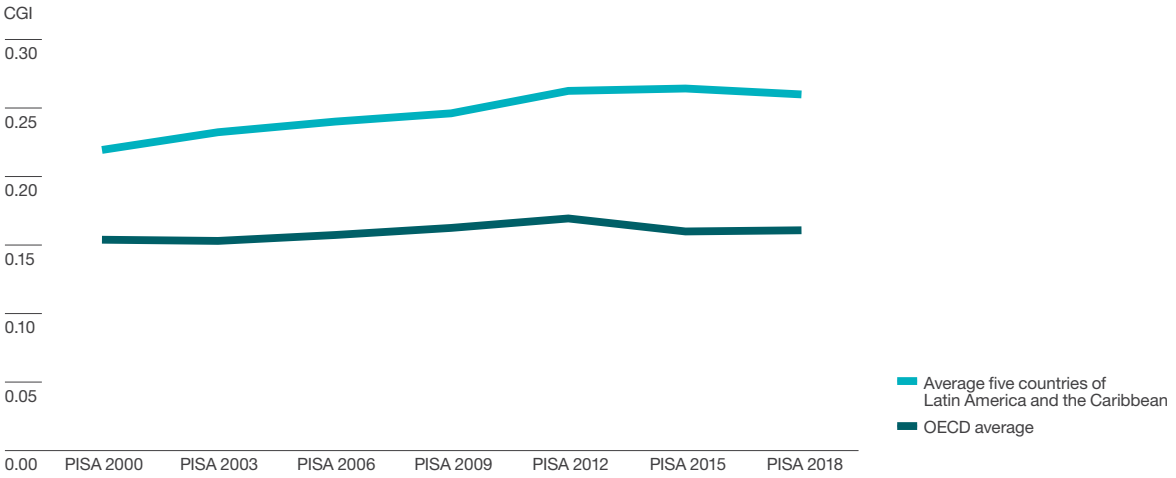
Graph 3.12
School segregation by socioeconomic level according to the Centile Gap Index (CGI) in Latin America and the Caribbean and OECD countries

Panel A. Segregation index (CGI) computed based on PISA 2018 data



Continued on next page →

Panel B. Evolution of the segregation index (CGI) between PISA 2000 and PISA 2018



Note: The values of the socioeconomic segregation indicator, called the Centile Gap Index (CGI), are computed following Vázquez (2016) and with data from an indicator of household socioeconomic status of students participating in the PISA tests (HISEI indicator). Panel A shows the CGI values computed with PISA 2018 for the Latin American and Caribbean countries that participated in that edition of the tests and for the average of OECD countries. Panel B compares the evolution of the average CGI for OECD countries with that computed for the five Latin American and Caribbean countries that participated in several editions of PISA since 2000: Argentina, Chile, Colombia, Brazil, Mexico and Peru (values in editions in which some country did not participate were imputed with a linear projection).

Source: Authors based on PISA 2000–2018 (OECD, 2000, 2003, 2006, 2009, 2012, 2015a, 2018a).

Socioeconomic segregation implies that the rich primarily have a network of contacts consisting of other wealthy individuals, while the poor mostly have a network of contacts consisting of others in their same economic situation. Furthermore, although peer effects do not necessarily mediate the formation of cognitive skills in school (Paloyo, 2020), they can affect other dimensions of human capital (such as socioemotional skills or health[26]) and even operate through other channels that will also affect social mobility. For example, segregation can activate the social transmission of certain attributes related to identity or preferences, which, in turn, can impact investments in human capital or the returns on these investments (Berniell et al., 2016). In other words, peer effects in schools condition the social capital that students can build during their school years.

A recent study for the United States (Chetty et al., 2022a) quantifies the large effect of social capital on intergenerational income mobility. In particular, the authors highlight the significant positive effect for poor people of having rich friends in their network. Using data on billions of Facebook friends, the authors estimate that the adult earnings of children with parents of lower socioeconomic status are higher than those of poor parents.

26. 26. For example, Carrell et al. (2011) find that sharing a group of friends who do not have healthy habits has strong negative effects on health. On the other hand, List et al. (2020) show that peers at very early ages are important for the formation of socioemotional skills, and other studies also highlight this importance at another critical stage of non-cognitive development: adolescence (Berniell et al., 2016).

The results of this study show that the income in adulthood of low-income children would be 20% higher if they grew up in areas with *economic connectedness*[27] comparable to that of the average child with parents of high socioeconomic status. In fact, this work shows that having rich friends is the strongest predictor of upward income mobility in the United States. A related paper (Chetty et al., 2022b) describes the forces that generate these types of social networks and concludes that, while social exposure in educational or religious institutions contributes with half of the explanation, the other half is explained by biases in the way in which, given a certain level of exposure to other socioeconomic groups, the rich tend to form friendships also with the rich or the poor with the poor (*friending bias*). That is, this second force is related to peer preference (homophily). The authors also find that when this form of homophily is not very strong, increased exposure to people of higher socioeconomic status helps those of lower socioeconomic status to improve their social capital in economic terms, and conclude that socioeconomic desegregation in such cases would improve intergenerational income mobility.

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Social capital, especially the degree of contact that people of lower socioeconomic status have with those of higher socioeconomic status, is an important predictor of upward mobility

There is another type of school segregation that is worrying in the region: segregation by race or ethnicity. This has been reflected in the results of an experiment conducted in the framework of the CAF 2021 Survey, where respondents with school-age children were asked whether they would be willing to send them to schools with different proportions of students from specific ethnic groups. The experiment was conducted in five cities by randomly varying the fraction of Afrodescendant students (Bogota, Montevideo, Panama, Quito and Sao Paulo) and in another five by modifying the fraction of indigenous students (Asuncion, Buenos Aires, La Paz, Lima and Mexico City). The experiment showed that parents who do not identify themselves as indigenous or mestizo are less likely to send their children to schools with a high proportion of students from these ethnic groups. These results are just the opposite for parents who do self-identify as indigenous or mestizo, indicating homophily and, potentially, discrimination in school choice. The results were not statistically significant in the cities where the experiment randomly varied the fraction of students of African descent.

Opportunities and barriers after basic education

While basic education provides training in the most elementary and basic skills, technical-vocational and university education allow for the development of more sophisticated competencies that are valued in the labor market and facilitate the productive and social integration of individuals. This is possible as long as these educational systems have a quality and diverse offer, which in turn allows equitable access to students coming from more disadvantaged backgrounds. As will be seen below, there is still a long way to go in the region to comply with these characteristics that would help promote equal opportunities at the highest educational levels.

27. The work of Chetty et al. (2022a) defines economic connectedness as a measure of social capital that shows the proportion of friends of high socioeconomic status that people of low socioeconomic status have.

Technical-vocational- education as an opportunity for educational and occupational mobility

Technical education has proven to have a high return,[28] as well as an interesting potential to adapt to the changing demands of the labor market, many of which are induced by the accelerated technological change faced by some productive sectors in Latin America and the Caribbean. However, enrollment in this level of education continues to be relatively low in most countries, indicating a generalized restriction in the supply of technical education services, despite some efforts to expand this supply, both in terms of enrollment and diversification of the qualifications offered.

The analysis of the potential of technical-vocational education to facilitate the labor market integration of graduates from these education paths has not yet received the attention in the region that it has in countries with a longer tradition of this type of education (Fiszbein et al., 2018; OECD, 2022a). For example, it is not known how persistent technical education is in intergenerational terms and how, through this persistence, it can contribute to occupational and income mobility.

To address the first concern, Table 3.4 shows the association between the probability that children have completed a technical-vocational education (secondary or post-secondary) and the highest educational level attained by their parents in six Latin American and Caribbean countries (Bolivia, Chile, Colombia, Costa Rica, Mexico, and Nicaragua). The information comes from IPUMS census data (2020) and corresponds to children born in the 1980s (except in Chile, where those born in the 1970s are considered). The reported coefficients show the differences in this probability with respect to children whose parents completed, at most, primary education (base category). They show that children of more educated parents (secondary level or more) are more likely to have completed a technical-vocational education than children of parents with primary education or less. The differences are much more marked for children whose parents completed a technical-vocational educational level. Column (1) shows that the children of parents with technical-vocational secondary education are almost 68% more likely to have a vocational-technical degree than the children of parents who completed secondary education in a general path (coefficient 0.092 for the former versus 0.055 for the latter). The differences are even greater among the children of parents who attained post-secondary technical degrees. For example, the children of parents with post-secondary technical-vocational degrees have a probability of completing some technical level that is much higher than that of children of parents with university degrees (coefficient of 0.145 for the former versus 0.034 for the latter). This evidence indicates that the level of intergenerational persistence in technical education is high and the controls incorporated in columns (2)

28. Espinoza and Urzúa (2015) analyze for Chile the case of degrees granted by technical training centers (two-year duration) and professional institutes (four-year degrees) and estimate returns of 66% and 59%, respectively. These authors find that in many cases university degrees (five years) have lower returns than these other two degrees, which are also of considerably shorter duration. However, a related paper (González-Velosa et al., 2015) indicates that a significant portion of those who invested in technical tracks would have obtained negative net returns in Chile (51%) and Colombia (59%) and the reasons for this are related to quality issues.

and (3) of Table 3.4 provide some evidence on the possible causes. On the one hand, the coefficients fall when considering the sector of activity of the parents, which may be influenced by some effect of sectoral composition of the place of residence or intergenerational transmission of occupations (see Chapter 4). On the other hand, regional controls try to capture educational supply factors of this type of educational pathways, which also seem to play a role in explaining persistence in technical education between parents and children. However, the effects of the additional controls are not large, so that other reasons (such as family preferences or knowledge of the educational supply available) are contributing considerably to this persistence of technical-vocational paths.

Table 3.4
Intergenerational persistence in technical-vocational education (secondary or higher)

	Basic controls	Basic controls + industry fixed effects	Basic controls + industry fixed effects + regional fixed effects
	(1)	(2)	(3)
Parent with completed high school (general background)	0.055***	0.0456***	0.0429***
Father or mother with completed high school (technical-vocational background)	0.092***	0.0816***	0.0759***
Father or mother with a professional technical degree (higher)	0.145***	0.129***	0.125***
Parent with university degree	0.034***	0.017***	0.014***
Observations	316,365	316,365	316,365
Percentage of people (children in the sample) with a technical-professional degree	5.9%	5.9%	5.9%

Note: The coefficients of an OLS regression are presented where the dependent variable takes the value 1 if the child has attained a technical degree (secondary or higher) and 0 otherwise; the independent variable of interest is listed in each row of the table referring to the parent with the highest level of education attained. Basic controls (column 1) include age and gender of the child and age of the highest educated parent. Industry fixed effects (column 2) include the sector of activity of the most educated parent at the maximum disaggregation level available in IPUMS (2020). Regional fixed effects (added in the results in column 3) are equivalent at the province or state level. The estimates consider all countries that have detailed and standardized information in IPUMS (2020) on technical-vocational educational paths (Bolivia, Chile, Colombia, Costa Rica, Mexico and Nicaragua). The sample consists of people born in the 1980s (1970 in the case of Chile), who at the time of each census were between 24 and 25 years old and resided with their parents. Asterisks indicate the statistical significance of the coefficient in question: *** significant values at 1%, ** significant values at 5% and * significant values at 10%.

Source: Authors based on IPUMS (2020).

University education and social mobility: the equity and quality challenge

As documented in Chapter 2, the rate of university graduates is very low in Latin America and the Caribbean relative to the developed world. Upward mobility at this educational level is also very low, with very little change in recent decades. The shortage of university graduates determines, in part, that on average they earn 104% more than secondary school graduates

with similar characteristics (Ferreyra et al., 2017).[29] These returns speak to the attractiveness of investing in higher education, but, as Graph 3.6 demonstrates, the annual growth rate of university enrollments in recent decades in the region is not even across income groups, being considerably higher among the wealthier population groups.

Several studies show that financial restrictions explain a large part of this inequality in higher education enrollment and the consequent low upward mobility in university education (see, for example, Solis, 2017 and Card and Solis, 2022).[30] There is also evidence on the effect of informational and cognitive-behavioral barriers, which tend to reduce both the aspirations and effective enrollment in higher education of people from more disadvantaged backgrounds, for example, due to problems of information about available funding sources (Dinkelman and Martinez, 2014). Finally, the supply of university education, usually centered in the large cities of the region, also implies strong spatial disparities in the rate of higher education graduates, as shown by a study focused on Uruguay and prepared in the context of this report (Katzkowicz et al., 2021).

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Financial and cognitive-behavioral constraints, together with the spatial concentration of supply, contribute to inequality in access to higher education

Beyond all these constraints, inequalities in skill accumulation during the first two decades of life, which were documented in the previous sections, condition the aspirations and real possibilities of individuals to complete a university degree. Panel A of Graph 3.13 indicates that the skill gaps between children of university and non-university parents are among the highest in the countries that participated in the PIAAC study. In particular, these gaps in Peru exceed 0.9 standard deviations of the distribution of scores on a measure of numeracy skills. For other skills measured in PIAAC, such as those related to literacy and problem solving, the results are similar. Panel B shows the difference in the probability of having ever attended university between children of university and non-university parents. Again, the countries of the region show high gaps, which in Mexico and Ecuador exceed 40 percentage points. Finally, panel C presents estimates of these differences in the probability of going to university, but discounting the effect of the differences in the skills of the respondents in the PIAAC. There it can be seen that the probability gaps fall in all countries relative to the results of panel B. For example, while countries such as Spain, France and Italy show high socioeconomic gaps in the probability of attending university (panel B), these differences between children of university and non-university parents

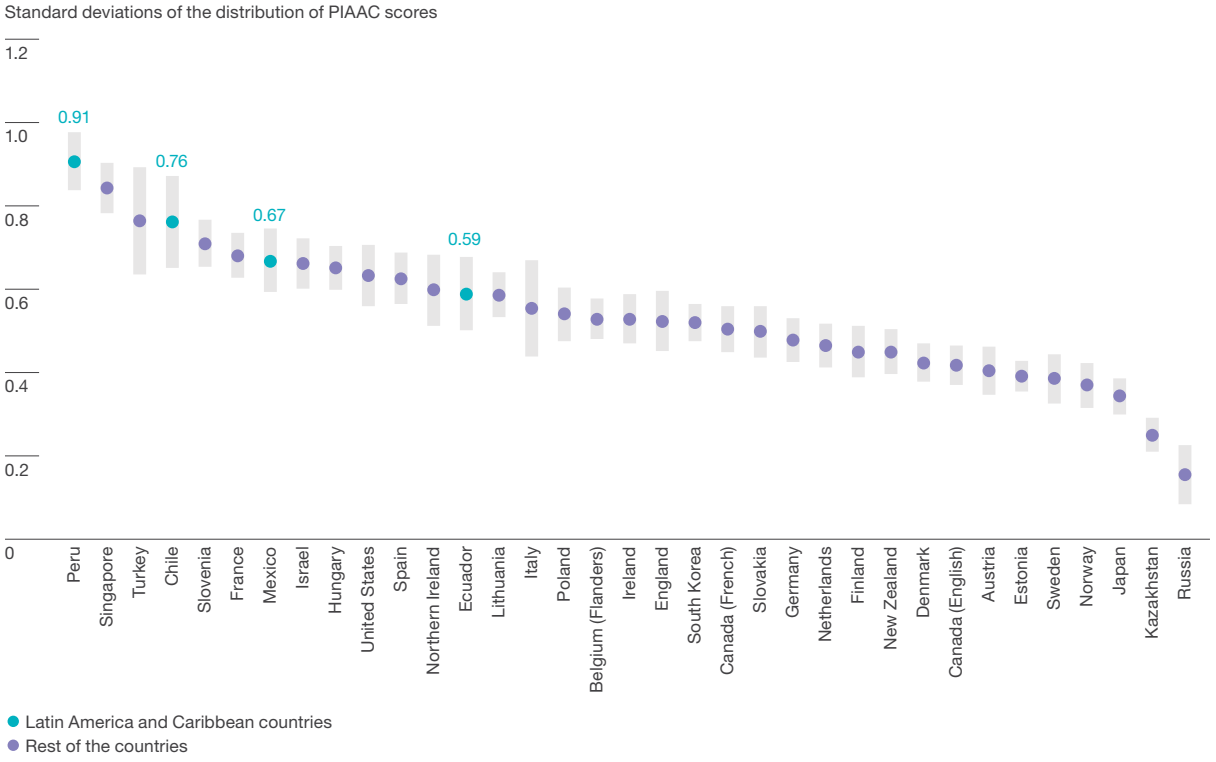
29. As discussed in Chapter 5, these returns to education are not directly explained by differences in the skills of university completers versus non-completers. For example, financial constraints may mean that talented people cannot go to university, or the wage premium to university graduates may in part be composed of contributions from their network of contacts, without being a reflection of their skills or the level of their labor productivity. Moreover, while still high in the region, wage returns to higher education (relative to high school) have fallen since 2000, when they were as high as 115% (Ferreyra et al., 2017). Behind this drop there are both supply factors (more places in university careers and more high school graduates continuing higher education) and demand factors (change in labor demand for skilled versus unskilled labor), but also others related to changes in labor market regulations, such as increases in minimum wages (Messina and Silva, 2018).

30. Solis (2017) and Card and Solis (2022) study the case of a reform in Chile that significantly expanded access to higher education. Solis (2017) concludes that access to credit doubled, in the short term, university enrollment and in the medium term this increase was 50%. The impacts were of such magnitude that they closed the income gap in university enrollment and in the number of years of education completed. In a related paper, Card and Solis (2022) also find that increased access to financing for higher education reduced the university dropout rate, mainly by redirecting enrollment from technical-professional education centers.

disappear after controlling for skills (panel C). In contrast, the countries of the region continue to be among those with the largest socioeconomic gaps in access to higher education, with the exception of Peru, which falls significantly with respect to the gaps without controlling for skills. That is, in countries such as Chile or Mexico, individuals with similar skills, but who differ in terms of having or not having parents who graduated from university, have very different probabilities (about 25 percentage points difference) of attending this higher education level.

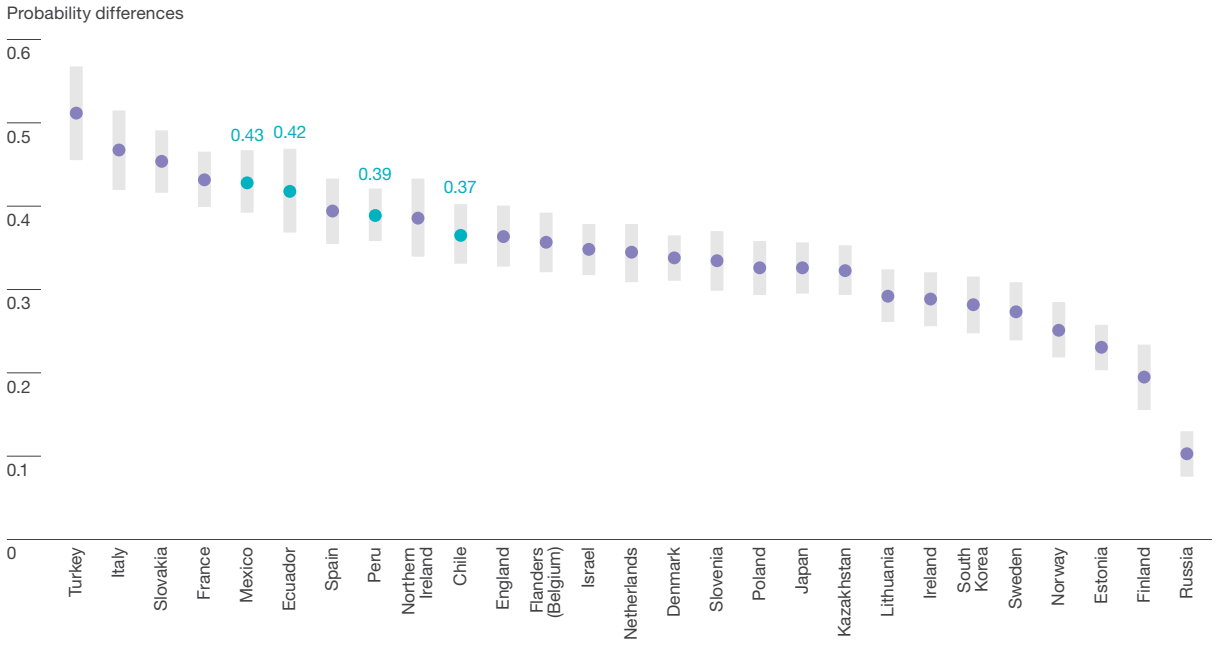
Graph 3.13
PIAAC skill gaps for young adults (20–35 years old) and probability of having attended university according to parents' educational level in selected Latin American and OECD countries

Panel A. Skill gaps (differences in standard deviations) between children of university and non-university parents



Continued on next page →

Panel B. Differences in the probability of having gone to university (children of university-educated parents vs. children of non-university-educated parents)



Panel C. Differences in the probability of having gone to university (children of university-educated parents versus children of non-university-educated parents), controlling for skills



Note: Panel A presents the coefficients and their 95% confidence intervals, which result from an OLS regression where the dependent variable is the (standardized) numerical skills score and the independent variable takes the value 1 if the respondent's parent achieved a higher education degree and 0 otherwise. Panel B reports the differences in the probability and their 95% confidence intervals of ever having been enrolled in higher education for respondents with parents who attained that level, minus the probability of respondents with parents who attained lower levels of education. Panel C also reports these differences in probability of having attended higher education, but controlling for respondent skill levels (language, numerical, and problem-solving skills). The PIAAC base is used for all OECD and Latin American and Caribbean countries participating in this study, restricting the sample to people between 20 and 35 years of age.

Source: Authors based on PIAAC data (OECD, 2018b).

In addition to this evidence that points not only to skills gaps, but also to the importance of other barriers that condition access to higher education for the most disadvantaged groups, the region faces another serious challenge regarding the expansion of its higher education systems: How can coverage be increased without compromising the quality of the educational services provided? The experience of recent decades in countries where university enrollment has increased significantly provides interesting lessons. For example, this is the case of Chile and Colombia, countries that between the early 1990s and the late 2000s saw a significant increase in gross enrollment in universities. This expansion went hand in hand with a greater private offer and an increase in public efforts to financially support new students (Chile) or to expand the geographic offer (Colombia). As discussed in González-Velosa et al. (2015), not all of this expansion resulted in options with positive net educational returns; that is, in many cases the costs of private investments exceeded wage gains. This paper documents the great heterogeneity of returns, which implies that for 30% of Colombian graduates and 22% of Chilean graduates not having obtained a university degree would have been a better decision. The authors point to problems of quality differences as the key behind the high dispersion in the wage returns of university degrees.

For these reasons, it is very important to pay special attention to compliance with quality standards in new higher education offerings. It is also essential to establish regulatory mechanisms to avoid excessive pricing by new educational institutions that emerge as the only affordable options for groups that were previously excluded from the higher education system for economic or geographic reasons. Information policies that communicate to the target population, in a clear and timely manner, the costs and benefits of investing in university education can also contribute to the objective of providing quality higher education with greater equity.

While both increased funding and geographic expansion of university offerings are associated with quality dilemmas, both entail significant budgetary efforts and may indirectly impact other skill formation efforts, especially among people of lower socioeconomic status. For example, a CAF-funded paper (Cáceres-Delpiano et al., 2018) shows that the expansion of higher education financing opportunities in Chile had positive effects on human capital formation at ages earlier than university entry, especially for groups that prior to this policy faced financial constraints. These benefits implied that secondary students from these groups improved their scores in standardized tests prior to university entrance and increased the probability of completing secondary school.

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The region faces the serious challenge of achieving a more equitable expansion of its higher education systems without compromising the quality of educational services provided.

The role of the neighborhood in the mobility of human capital

The physical and social environment can condition the formation of cognitive, socioemotional and physical skills, especially in the first two decades of life (Berniell et al., 2016). As this environment is often shared with parents, children are exposed to factors of a similar nature to those experienced by their parents and, by this mechanism, are likely to share with them the level or type of skills. While the conditioning factors of the social environment operate through social capital (Chetty et al., 2022a, 2022b), which include peer effects, the physical environment can limit or promote opportunities for human capital accumulation through the quality of the habitat and access to opportunities provided by the infrastructure and supply of basic goods and services in the neighborhood. In turn, the physical and social environment can complement each other in a positive or negative way for skill formation. For instance, regularly visiting plazas, parks, or sports centers promotes healthy habits and overall physical development. Utilizing libraries and cultural centers in the community can also contribute to learning. Engaging socially within these secure environments, especially if they are equipped with suitable infrastructure, ensures productive interactions. This, in turn, encourages social integration dynamics and facilitates the reception of stimuli, such as information about educational opportunities, which aid in the development of cognitive and socioemotional skills (Berniell et al., 2016).

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The physical and social environment complements skill formation. High residential segregation in the region means that children from disadvantaged families share lower quality environments

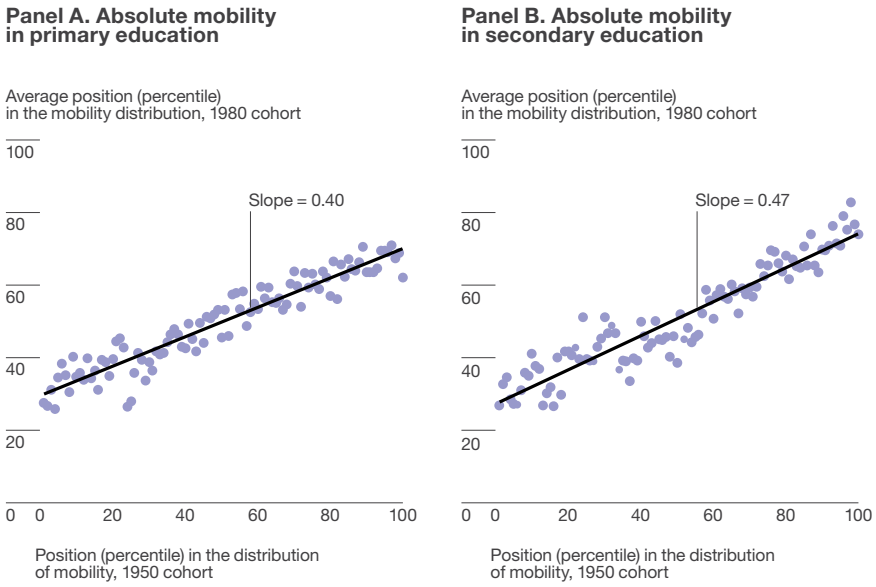
However, the residential segregation characteristic of Latin America and the Caribbean (Daude et al., 2017) is associated with situations where the poorest families not only share their place of residence with other families of similar socioeconomic condition, but also live in more marginalized areas. These areas often lack the basic conditions that characterize a healthy habitat and are also distant from the opportunities that cities offer to enable the comprehensive development of people (Hernández and Hansz, 2021).

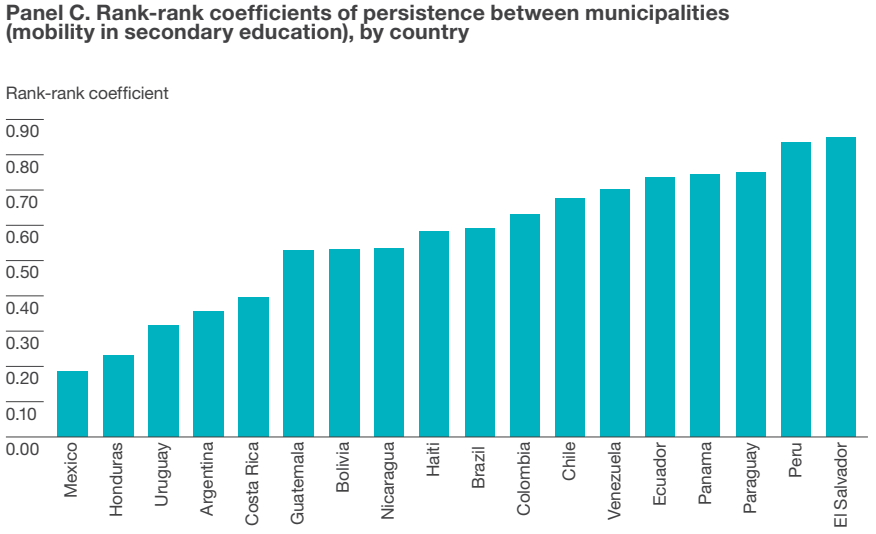
Three pieces of evidence support the idea that the neighborhood or city of residence are key to human capital mobility in Latin America and the Caribbean. On the one hand, Graph 3.14 shows that the municipalities that offered the greatest possibilities of absolute upward mobility, both in primary (panel A) and secondary (panel B) for people born in the 1950s, continue to be those that offer the greatest mobility in the most recent cohorts (born in the 1980s). Moreover, as shown in panel C, there are some countries in the region with *rank-rank* coefficients that imply a less positive relationship between these two sets of metrics (Mexico, Honduras, Uruguay, Argentina and Costa Rica), suggesting smaller disparities and less persistence over time of the municipalities that offer better mobility possibilities. At the other extreme are countries where the ranking of municipalities that offered low or high mobility for those born in the 1950s has practically not changed for those born three decades later. The cases of El Salvador and Peru are the most extreme, but other countries, such as Paraguay, Panama and Ecuador, also show a high persistence in municipalities that offer greater or lesser mobility.[31]

31. The *rank-rank* coefficient reported in panel C of Graph 3.14 is a slope that results from a linear fit, so it does not allow us to evaluate the presence of nonlinearities in this measure of persistence of spatial inequalities. When analyzing particular cases, some countries show nonlinearities that are important, such as Bolivia, Chile and Nicaragua, in which a few municipalities have persistently offered the greatest opportunities for absolute mobility over time.

Graph 3.14

Rank-rank correlation of municipalities ordered by their absolute upward mobility measures (primary and secondary) for the 1950 cohort versus the 1980 cohort





Note: The graphs in panels A and B present a measure of statistical association (*rank-rank* coefficient) between the ordering of municipalities according to absolute mobility levels for those born in the 1950s (horizontal axis) and the average position of those municipalities, but ordered according to absolute mobility for those born in 1980 (vertical axis). Panel A presents this upward absolute mobility measure in primary and panel B in secondary, following the methodology explained in Chapter 2 and based on IPUMS data at the district or municipality level (geolevel2 in IPUMS). Panel C presents, by country, the *rank-rank* coefficients of panel B (slopes for each country).

Source: Authors based on data from IPUMS (2020).

Indeed, the educational mobility possibilities of Latin Americans are marked by the place where they were born and raised, as quantified in a paper produced in the context of this report (Muñoz, 2021), following the methodology of the work for Africa by Alesina et al. (2021). Muñoz's work decomposes these differences in the mobility opportunities offered by micro-regions in Latin America and the Caribbean in terms of two reasons: those that have to do with the self-selection of families migrating to different locations and those that capture the effects of the city itself on the opportunities to accumulate more human capital than the parents. To this end, it uses IPUMS census data and studies the cases of families migrating from one city to another in eleven countries in the region. Its results indicate that, although the effect of self-selection is important (the families most likely to provide mobility opportunities are those that choose destinations that also provide this type of opportunity), the effect of exposure to the new environment at the destination is large and, moreover, is greater the earlier in life it begins to be received. In particular, a child who moves at one year of age to a city with greater mobility will by the age of eleven acquire about 35% of the increased mobility probabilities offered by the destination.

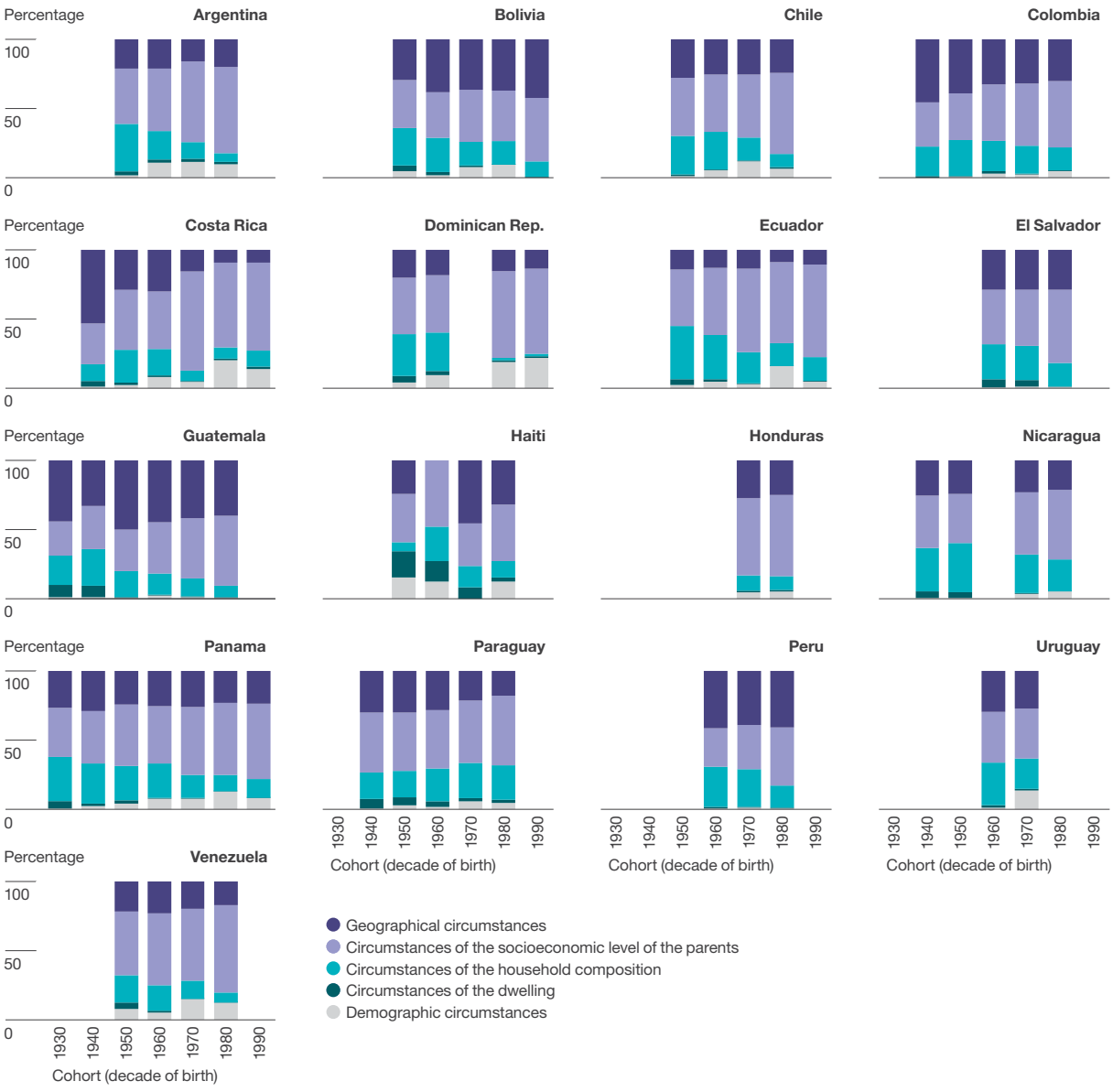
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A decomposition exercise shows the great importance that the place of birth or residence has in the configuration of the unequal educational opportunities

The contribution of spatial differences to educational mobility is also present in the inequality of opportunity indicators. Graph 3.15 decomposes the values of a measure of inequality of opportunity reported in Chapter 2 (Graph 2.25), where the dependent variable is years of education completed and the circumstances considered are grouped into: demographic (age and gender); the socioeconomic level of the parents (their education, employment status, occupation, sector of activity and type of employment of the parent with the highest level of education); housing (deprivation of access to water and sanitation services and home ownership); household composition (single-parent households and cohabitation of multiple family groups in the same dwelling); and geographic circumstances, which include variables at the level of department or municipality of residence. The decomposition of the contribution of the different groups of circumstances shows the great importance that, especially in some countries, the place of birth or residence has in the configuration of inequality of opportunities. For example, this is the case in Bolivia, Colombia, Guatemala, Haiti and Peru. On the other hand, although the importance of geography has declined over time in some countries, in others it continues to play a major role in explaining the lack of opportunities to accumulate human capital.

Graph 3.15

Decomposition of the contribution of different circumstances to inequality of educational opportunity by birth cohort and country



Note: Shapley decomposition of the contribution of each group of circumstances to a measure of inequality of educational opportunities. For the group of characteristics of the individual, age and gender were considered. Within the group of circumstances related to the parents, education, employment status, occupation, industry and type of employment of the most educated parent were considered. The circumstances related to housing conditions included a binary variable indicating deprivation of access to water and sanitation services and a variable indicating home ownership. The circumstances referring to household composition include a variable indicating whether the household is single-parent and another indicating the cohabitation of multiple family groups in the same dwelling. Finally, the geographic circumstance includes variables at the level of department or municipality of residence. The sample is composed of all individuals who are between 18 and 25 years old at the time of each census and who live with their mother, father or both. As in Graph 2.25, the inequality of opportunity index is estimated using ordinary least squares regression where the dependent variable is the years of education completed and the independent variables are the measures of circumstances. From this estimation, the R-squared of this regression results as an indicator of inequality of opportunities. This value is then decomposed into the relative contributions of each group of circumstances presented in this graph.

Source: Authors based on data from IPUMS (2020).

Leveling opportunities for human capital formation

This chapter reviews evidence on a wide range of policies and smaller-scale interventions that can contribute to reducing inequalities in the process of skill formation. This menu includes interventions that alleviate the constraints that families face in raising children at home, as well as those that enable access to educational centers and places of residence that provide safe and stimulating environments for the region's children and youth.

Alleviating financial constraints includes both greater financial inclusion (see Chapter 5) and ensuring an income floor for the most vulnerable families with school-age children. The evidence indicates that these income transfers, while necessary, are not sufficient to ensure the investments required for adequate skills training for children and youth in the region. The most vulnerable families face a host of restrictions that add informational and cognitive-behavioral barriers to the financial ones, in addition to those of insurance against risks of various kinds. Interventions that alleviate the weight of several of these restrictions at the same time have a greater potential to lead to greater investments in the human capital of the children of the most vulnerable families. In addition, lifting several constraints simultaneously can improve synergies between efforts made within the household and those provided from outside, for example, those related to educational offerings.

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Interventions that alleviate the burden of financial and informational constraints and that provide insurance can lead to greater investments in the human capital of the children of the most vulnerable families

The view that the gradient in the investments that parents make in their children to form their human capital is not only due to financial restrictions is very important for the design of public policies in this area. For example, this vision makes it possible to incorporate into policy options some low-cost components, such as those that promote better child-rearing practices, including practices to improve maternal and child health, early stimulation and child nutrition. Given the limited fiscal space that many countries in the region face when seeking to expand their social benefits, these types of interventions offer opportunities for scalable and cost-effective implementation.

The range of educational policies that can be implemented to improve educational mobility is enormous and exceeds the scope of this report. However, it is worth noting from the evidence presented here that the region must continue to improve the supply of formal education both in terms of coverage (especially in initial, technical-vocational and higher education) and in terms of the quality and relevance of the entire formal education system. The dimensions of improvement must crucially encompass quality and the reduction of segregation in basic education, and better access to financing, geographic accessibility and greater alignment of technical and higher education offerings with labor market demands.

Given the importance of the environment in the formation of human capital and the high levels of spatial segregation in the region, policies that promote social mobility should also aim at greater spatial integration and strengthening the conditions of the physical and social environment in which children and young people live from day to day. These policies include those that improve

the accessibility of residents in the most segregated and disadvantaged neighborhoods to the various urban facilities that are key to the accumulation of human capital, as well as policies that reduce the risks associated with shocks due to insecurity, violence and catastrophic events related to nature.

In addition, the region must also continue its efforts to ensure the universality of basic health services, with a focus on women's and maternal and child health. An essential set of interventions includes sexual and reproductive health, in addition to prenatal and pediatric check-ups and vaccination and child nutrition policies.

Key messages

1 Human capital is crucial for people's wellbeing. However, in Latin America and the Caribbean, its distribution is not only highly unequal, but also shows high intergenerational persistence.

2 Unlike other forms of capital, whoever accumulates human capital does not have complete agency over the necessary investments, which fall especially on parents or guardians. Thus, family circumstances have a great influence on the formation of children's human capital.

3 The intergenerational link in human capital is forged through two channels: the decisions of parents that affect the upbringing of their children within the home and those that affect them outside. The evidence shows that, for both types of decisions, disadvantaged families in the region face greater constraints (financial, informational, cognitive-behavioral, and other related to insurance mechanisms).

4 Within the home, parents invest time, money, and efforts that translates into positive parenting environment and rules. These three investments have a clear socioeconomic gradient in the region. Wealthier parents invest more—in terms of quality and amount— in their children's human capital.

5 The two most important out-of-home investments are the choice of the school and the neighborhood of residence, where, once again, the same restrictions apply and determine lower quality investments (worse schools and neighborhoods) for children of poorer families.

6 While parental investments could be complemented by publicly provided goods and services, access to these is more limited (in quantity and quality) for disadvantaged families mainly due to lack of provision in highly segregated areas.

7 Inequality in investments begins before birth and implies that children from disadvantaged families, especially those of mothers with poor health, start their lives with worse physical development indicators and notable early gaps in cognitive and non-cognitive development.

8 The evidence presented indicates that the socioeconomic gaps in cognitive skills appear to close somewhat with primary schooling, but during secondary school and adulthood, the Latin American and Caribbean region is once again among the most unequal regions in the world in this domain.

9 Indicators of inequality of educational opportunities (both in terms of years of education completed and quality of education received) are very high in the region and have not fallen substantially over time. Educational inequality is closely linked to family and geographic circumstances, and points to serious school quality problems and school segregation.

10 School segregation, both public-private and by socioeconomic level, is very high in the region and tends to worsen. Segregation results from several factors, such as income inequality or spatial segregation coupled with transportation costs, as well as parents' preferences for schools with a similar ethnic or cultural composition to their own.

11 While primary education seems to play a leveling role in equalizing opportunities, in secondary education this role diminishes and seems to disappear in higher education. The supply of technical-professional education has the potential to break with this general panorama of a limited contribution of the educational systems to the mobility of human capital in the region.

12 Certain aspects of family formation worsen the burden of restrictions on investing in children. Adolescent pregnancy and separation or death of parents during critical stages of life (early childhood and adolescence) imply lower investments and worse mobility of human capital. Patterns of high assortative mating in the region also contribute to this.

13 Adolescent pregnancy continues to be a major problem in the region and is itself a phenomenon with high intergenerational persistence. This pattern of young fertility is associated with high educational mobility gaps between children of adolescent and non-adolescent mothers, which remain at around 25% and 30% since 1950.

14 In the region, the number of siblings in a family also limits the years of education completed by children, but only in families with less educated parents. In other words, family size matters for mobility because the larger the family size, the lower the investments that the most disadvantaged families make in their children.

15 The financial constraints faced by the children of the most vulnerable families operate throughout their lives, but their effect is especially harmful to the mobility of their human capital during economic or nature-related shocks, to which these families are particularly exposed in the region.

16 The lack of public and private insurance prevents the poorest from cushioning the effects of shocks on investments in children and youth. For example, during the recurrent macroeconomic crises experienced by the region, the possibilities for upward educational mobility were reduced among the children of the poorest families.

17 Lessons learned from past economic shocks warn about the consequences of the COVID-19 crisis on future mobility. This crisis had additional characteristics (closure of schools and interruption of preventive health practices) that foretell a worsening of their impact on the human capital mobility of today's children and youth in the region.

18 Policies for increased human capital mobility include: 1) easing restrictions that limit intra-household investments in children and adolescents; 2) improvements in the supply (access, quality and relevance) of basic, technical-vocational and higher education; and 3) attention to habitat and accessibility to key facilities for the development of children and young people in the most segregated and disadvantaged neighborhoods.

The functioning of labor markets and opportunities for intergenerational mobility

4

The functioning of labor markets and opportunities for intergenerational mobility[1]

Introduction

Labor markets define a series of fundamental aspects of people's wellbeing, such as employment, hours worked, wages, and social protection benefits associated with formal employment. If people's performance in these aspects is conditioned by the socioeconomic status of their families, labor markets will reproduce inequalities in wellbeing across generations. This chapter assesses whether this conditioning does indeed exist, analyzing the labor market mechanisms that feed it, and what labor market policies can be implemented to reduce it.

The interaction of three elements determines the relationship between individuals' labor outcomes and the socioeconomic status of their families. The first is how the families' socioeconomic status determines particular characteristics of individuals that are critical for their labor outcomes, mainly education, ethnicity and race, and geographical location. A common aspect of all these characteristics is that they are already largely determined by the time a person enters the labor market. The second element is how different labor markets treat people according to these characteristics. For example, wage differences among workers from families of higher and lower socioeconomic status will be larger if the labor market exhibits wider wage gaps according to education level, ethnicity, race, or geographical

1. This chapter was written by Guillermo Alves, with the research assistance of Joaquín Varvasino

location. The third element is the extent to which workers' labor decisions are conditioned by their family and social environment. These include whether or not to look for a job, whether to do so in the formal or informal market, and in which city and industry.

Given that the first element—family's influence on workers' education, ethnicity and race, and geographic location—is determined before they reach the labor stage, the analysis in this chapter focuses primarily on the mechanisms of intergenerational reproduction of inequality that underlie the second and third elements of the relationship between labor outcomes and family socioeconomic status described in the previous paragraph. The chapter groups these mechanisms into four sets, which are listed below.

The first set pertains to how the social connections of workers' families condition their chances of obtaining job referrals that are critical for finding a job. This set of mechanisms also includes how the family conditions the decisions that young workers make using the information available to them and the expectations that parents have about their offspring's employment destiny. The second set of mechanisms comprises discrimination based on ethnicity and race in the region's labor markets. These mechanisms are particularly detrimental to the labor market outcomes of Afro-descendant and indigenous workers. The third set of mechanisms comprises employment limitations when the workers' family of origin lives in a region of low productivity and economic dynamism, or a neighborhood far from formal jobs. The fourth and last set of mechanisms has to do with the availability of material resources and social connections in the family of origin. Moreover, it considers their influence on the worker's ability to cope with frequent negative labor market shocks, such as job loss. These shocks may be caused by changing industry dynamics, macroeconomic shocks, or the ongoing technological change that replaces jobs with machines and algorithms. In a region where social protection policies addressing unemployment are underdeveloped (F. Álvarez et al., 2020), the impact of job loss on workers' present and future wellbeing can be highly contingent upon the family's capacity to provide them with financial support while they look for a new job, as well as referrals and contacts.

The chapter first compares multiple dimensions of labor market outcomes among workers from families of different socioeconomic status. The following sections show how the four abovementioned sets of mechanisms affect the conditioning imposed by the socioeconomic status of the worker's family and their labor outcomes. In conclusion, the chapter presents public policies for Latin American and Caribbean labor markets to help improve social mobility.

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This chapter examines how the family's socioeconomic status conditions a worker's employment opportunities

Labor market outcomes and families' socioeconomic status in Latin America and the Caribbean

Many studies have documented the significant inequalities in Latin American and Caribbean labor market outcomes.[2] The novelty of the work presented in this chapter is the assessment of the extent to which labor inequalities are linked to the socioeconomic status of an individual's family. This section will analyze three labor market outcomes: looking for a job, finding one, and the quality of the job obtained. Employment quality is assessed in terms of the tasks involved, wages, and whether it is a formal or informal job. Due to data availability limitations, the socioeconomic status of the worker's family is measured using the level of formal education attained by the parents. This information restriction implies the impossibility of analyzing the relationship between the labor income of parents and that of their offspring.

Given that the chapter focuses on labor market mechanisms that are relevant for intergenerational mobility, this section will examine the extent to which differences in labor market outcomes based on the socioeconomic status of the families persist among workers with the same education level. Differences in labor market outcomes, even among workers with the same level of education, show that the role of labor markets transcends the intergenerational transmission of human capital documented in Chapter 3.

Labor participation

The first outcome analyzed concerns the most elementary condition required to receive the benefits of employment: labor market participation. Participation levels differ strongly by gender. This is especially marked in Latin America and the Caribbean. According to Berniell et al. (2022), the average labor participation gap between men and women in the region is about 30 percentage points. This gap contrasts with 13 percentage points for OECD countries on average (Álvarez et al., 2018). Given this marked gender-based pattern, the relationship between the socioeconomic status of the family and the labor participation of men and women will be reviewed separately.

2. See, for example, Sanguinetti et al. (2013), Berniell et al. (2016), Gavin et al. (2012), and Messina and Silva (2018).

Using data from the 18 Latin American and Caribbean countries included in the Latinobarometer Survey (2018),[3] Graph 4.1 presents average labor participation differences between women and men aged 25-65 whose parents attained mid- and high-level education compared to women and men with low-educated parents.[4] The graph indicates that the activity rate of women is substantially higher and that of men is slightly lower as the education level attained by the parents increases. While men with highly educated parents have a 3 percentage points lower activity rate than those with low educated parents, the activity rate of women is almost 17 points higher when their parent's level of education is high rather than low. In the region, the lower the family's socioeconomic status, the stronger traditional gender-based labor participation roles become, with women taking care of the household chores and men participating in the labor market.[5] This is the first fundamental dimension in which the socioeconomic status of one generation conditions the labor performance of the next.

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Female labor force participation is 17 points higher for women whose family of origin has a high socioeconomic status versus low

Graph 4.1 also shows that labor participation differences based on the level of education attained by the parents slightly decline among men and are strongly reduced in women when comparing of the same level of education. Among women whose parents attained mid-level and high-level education, the differences in the activity rate are just 1.9 and 3.3 points, respectively, compared to women who have low-educated parents. Therefore, the education of daughters is a strong factor that mediates the relationship between the education of parents and female labor force participation.[6]

The Appendix of this chapter compares these activity rate differences based on the socioeconomic status of families broken down by men and women in each country in the region (Table A 4.1). Chile, Costa Rica, Dominican Republic, and Panama show the strongest differences: the activity rate of women with low-educated parents is at least 20 percentage points lower than that of women whose parents attained high-level education. In the case of men, the inverse relationship observed for the region's average between labor participation and the family socioeconomic status is more pronounced in the countries with lower GDP per capita.

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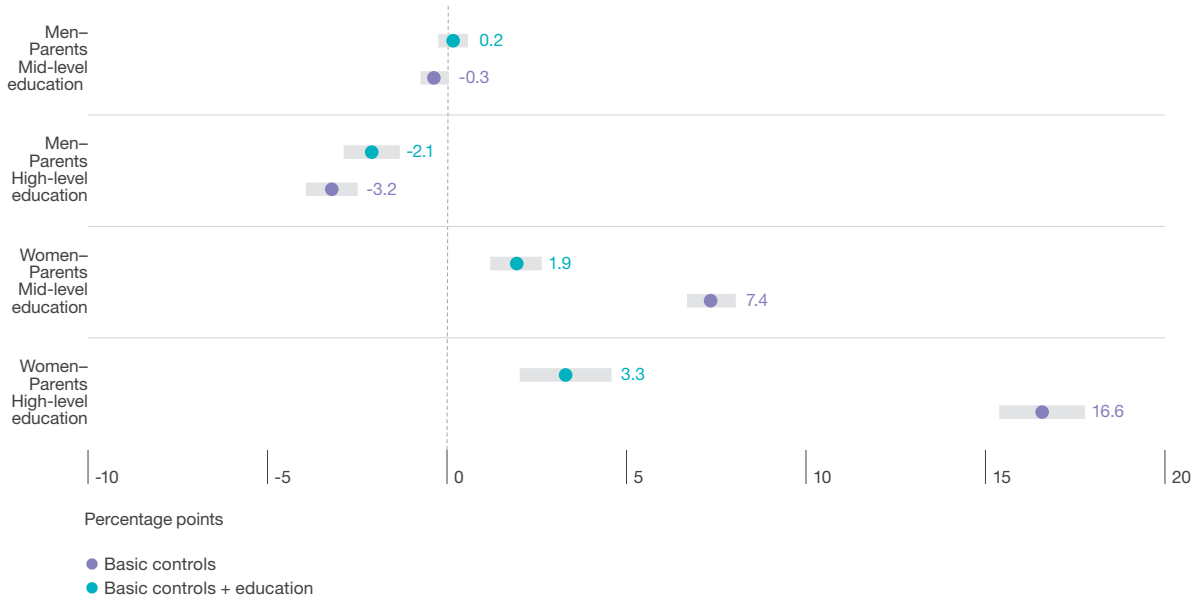
3. This survey is conducted each year by Latinobarometer. The results are available on the company website (https://www.latinobarometro.org/latContents). For practical reasons, the survey will only be referred to using the survey name and the data year or period.

4. The Latinobarometer survey aims to collect political opinions. However, it also contains information on labor market outcomes. Its use presents certain advantages for the analysis presented in this section compared to other available sources. For example, it includes a large number of countries for a long period. The results obtained using Latinobarometer data are very similar to those from the 2021 CAF Survey or the World Value Survey.

5. World Value Survey data (Haerpfer et al., 2022) show that the pattern of a higher activity rate among women with higher socioeconomic status of the family also holds for the rest of the developing world and high-income countries, though it is less marked in the latter.

6. Klasen and Pieters (2015) present an excellent discussion about the relationship between education and labor opportunities among women in India.

Graph 4.1
Activity rate differences among individuals whose parents attained mid-level and high-level education compared to those who have low-educated parents, by gender, 1998-2018



Note: The reported coefficients reflect the activity rate differentials between workers whose parents attained mid-level and high-level education compared to those who have low-educated parents, by gender. These coefficients and their 95% confidence intervals are the result of ordinary least squares regression, where the dependent variable is the condition of activity. The independent variables are binary variables of parents' education (where low-level education is the omitted variable) and a series of controls. The parents' education variable measures the highest level of education attained by the father or mother. "Low-educated parents" means that the highest education level attained is incomplete primary school; "Parents who attained mid-level education" means that the highest education level attained is complete secondary school; "Highly educated parents" means at least incomplete tertiary education. The first set of controls (basic controls) comprises binary variables of age, country, and survey year. The second set of controls (basic controls + education) adds the worker's education to the first set. The worker's education is represented by a set of binary variables identifying the level of education attained: illiterate, incomplete primary school, complete primary school, incomplete secondary school, complete secondary school, incomplete higher education, and complete higher education. Respondents were 25-65 years old. The countries included in the sample are Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela.

Source: Authors based on data from Latinobarometer.

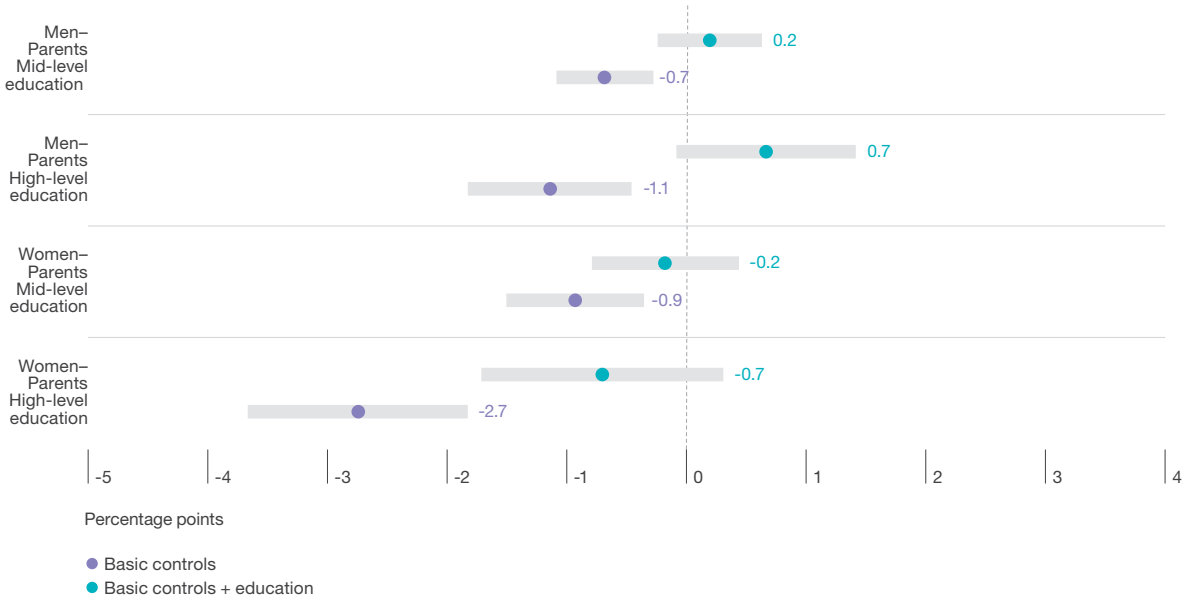
Unemployment

After labor participation, the next relevant data set to look at in the relation between the socioeconomic status of families and labor market outcomes is whether those seeking a job can actually find it. Graph 4.2 clearly shows that the higher the socioeconomic status of the family of origin, the lower the unemployment rate in Latin America and the Caribbean.[7] This pattern applies to men and women alike, but it is especially marked among women. The unemployment rate among men whose parents attained mid-level and

7. World Value Survey data (Haerpfer et al, 2022) show that the pattern identified in Latin America and the Caribbean that the lower the unemployment rate, the higher the education level attained by the parents also holds for the average of high-income countries and other developing world countries. In both regions, however, differences are less marked than in Latin America and the Caribbean.

high-level education is approximately 1 percentage point lower than that of men who have low-educated parents. Conversely, unemployment among women whose parents attained mid-level and high-level education is 2.7 and 0.9 percentage points lower, respectively, than among women who have low-educated parents. As with the activity rate, unemployment rate differences based on the education of parents are strongly reduced when workers who attained the same level of education are compared, but lose statistical significance.

Graph 4.2
Unemployment rate differences among individuals whose parents attained mid-level and high-level education compared to those who have low-educated parents, by gender, for the 1998-2018 period



Note: The reported coefficients reflect the unemployment rate differentials between workers whose parents attained mid-level and high-level education compared to those who have low-educated parents, by gender. These coefficients and their 95% confidence intervals are the result of ordinary least squares regression, where the dependent variable is the condition of unemployment. The independent variables are binary variables of parents' education (where low-level education is the omitted variable) and a series of controls. The parents' education variable measures the highest level of education attained by the father or mother. "Low-educated parents" means that the highest education level attained is incomplete primary school; "Parents who attained mid-level education" means that the highest education level attained is complete secondary school; "Highly educated parents" means at least incomplete tertiary education. The first set of controls (basic controls) is formed by binary variables of age, country, and survey year. The second set of controls (basic controls + education) adds the worker's education to the first set. The worker's education is represented by a set of binary variables identifying the level of education attained: illiterate, incomplete primary school, complete primary school, incomplete secondary school, complete secondary school, incomplete higher education, and complete higher education. Respondents were 25-65 years old. The countries included in the sample are Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela.

Source: Authors based on data from Latinobarometer.

When comparing the relationship between unemployment and the socioeconomic status of families in Latin America and the Caribbean, the unemployment disadvantage faced by women with low-educated parents is particularly severe, showing a difference above 5 percentage points compared to women whose parents attained a high level of education in Argentina, Brazil, Chile, Colombia, Costa Rica, Paraguay, and Uruguay (Table A 4.1 in the Appendix). In the case of men, unemployment differences considering the socioeconomic status of the family are particularly pronounced in Argentina and Uruguay.

Job quality

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Unemployment is lower among men and women from families of higher socioeconomic status

As seen so far, the socioeconomic status of families conditions female labor force participation. In addition, unemployment is higher among men and women from families of low socioeconomic status. The combination of these activity and unemployment patterns means that the low socioeconomic status of the families of origin is also associated with a low employment rate, particularly among women. It will be seen below that this status is also related to strong differences in the quality of jobs obtained by workers.

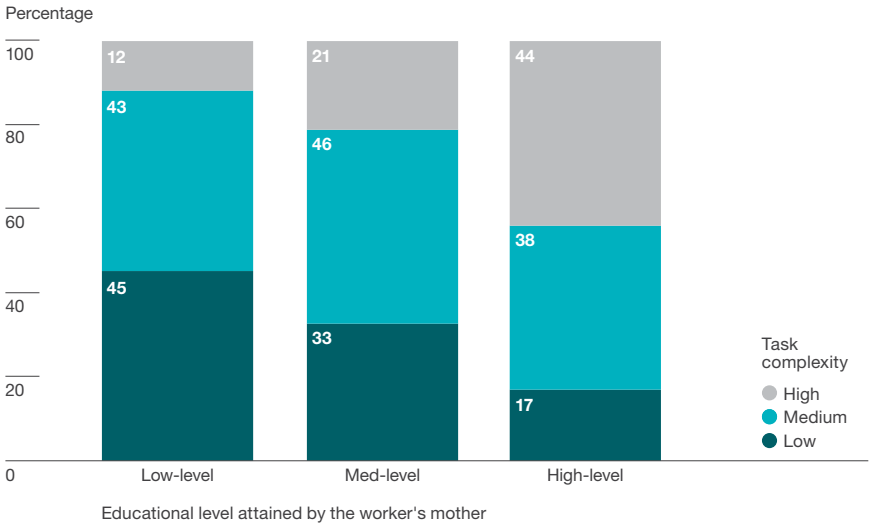
Based on data from several recent CAF surveys (ECAF) conducted in large cities in 11 countries in the region, Graph 4.3 shows the distribution of workers across three employment categories for each level of education attained by the mother. Jobs are classified as high complexity for workers in managerial, professional, or technical occupations, medium complexity for service workers and shop and market sales workers, and low complexity for workers in manufacturing and elementary occupations. The proportion of workers with high-complexity occupations more than doubles if their mothers have a high level of education versus mid-level. In addition, it increases almost fourfold when comparing high versus low-educated mothers.

Due to the fundamental role played by formal education in the potential for people to find professional or technical jobs, labor participation differences in high-complexity occupations based on the mother's educational attainment decrease strongly when workers with the same level of education are compared. However, these differences do not disappear and remain significant even among workers with the same level of skills (Table A 4.2 in the Appendix). The probability for workers whose mothers attained high-level education to participate in high-complexity jobs is 9 percentage points higher than that of workers with the same level of education and skills with low-educated mothers.

The flip side to a stronger presence of more complex occupations as the education level of the mother increases is that lower-skilled work is particularly high among workers with low-educated mothers. Graph 4.3 shows a difference of almost 30 percentage points in the proportion of workers in low-complexity jobs when the mother's education level is low rather than high. While the probability of workers attaining a low-complexity job is strongly mediated by their level of education, family background still plays an important role, even among workers with the same level of education and skills. The labor

participation gap in low-complexity jobs among workers with the same level of education and skills, but whose mothers attained high-level education instead of low, is 7.5 percentage points (Table A 4.2 in the Appendix).

Graph 4.3
Distribution of occupations by the level of task complexity based on the mother's education



Note: The mother's educational attainment is defined as "low-level" if she did not complete primary school, and "mid-level" if she completed primary and secondary school, while "high-level" applies to incomplete tertiary or university education, or above. The "complexity" variable has three values: low level includes craft and related trade workers, plant and machine operators, assemblers and elementary occupations; the medium level includes members of the Armed Forces, administrative employees or administrative support staff, service workers and shop and market sales workers, and skilled agricultural, forestry and fishery workers; the high level includes corporate managers, general managers and senior government officials, professionals, and technicians and associate professionals. The cities included in the sample are Asuncion, Bogota, Buenos Aires, Caracas, La Paz, Lima, Mexico, Montevideo, Panama, Quito, Santiago, and São Paulo.

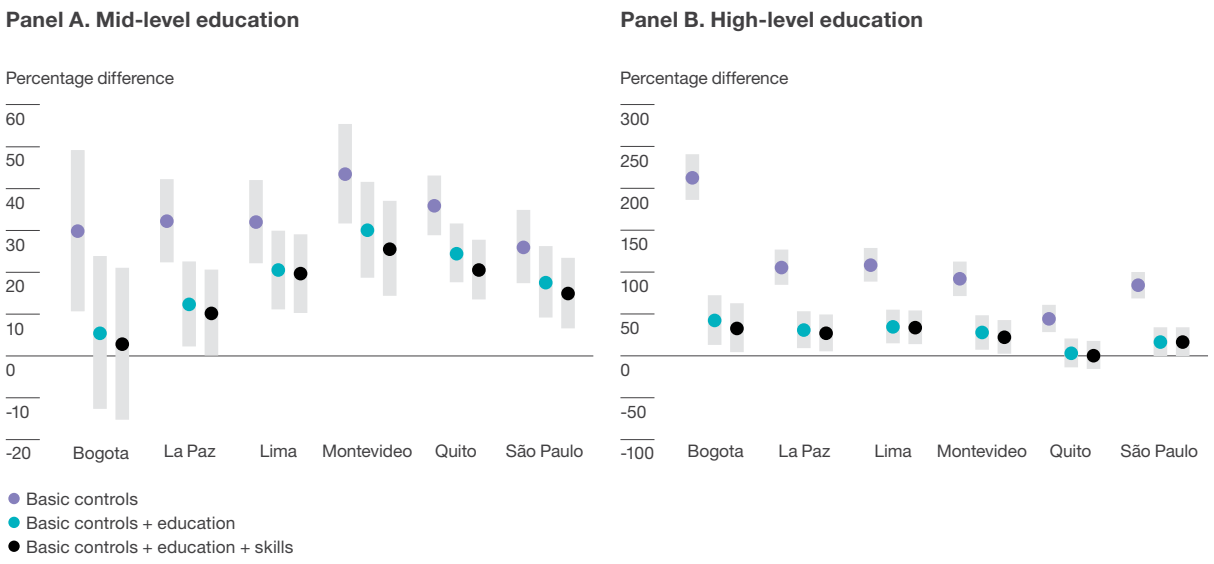
Source: Authors based on data from ECAF surveys (CAF, 2016, 2017, 2018, 2022).

Workers' wages also differ widely according to the socioeconomic status of their families, even within workers with the same levels of formal education and skills. Graph 4.4 shows wage differences between workers in six ECAF cities based on the educational attainment of their mothers. The wage differential among workers whose mothers attained mid-level education compared to those who have low-educated mothers is quite similar across cities, ranging from 30% to 40%. This differential decreases when workers with the same level of education and skills are compared, although it remains between 10% and 20% in most cities.

In Graph 4.4, the wage advantage of those whose mothers attained high-level of education differs in two ways compared to the one enjoyed by those

whose mothers attained mid-level. On the one hand, the high-level education differentials are much larger and heterogeneous across cities. Quito has the lowest value, with 50%. La Paz, Lima, Montevideo, and São Paulo show intermediate values, close to 100%. Bogota registers the highest differential at over 200%. On the other hand, that high-level differential drops more sharply than the mid-level differential when workers with the same level of education are compared. In Quito, the differential is zero. In La Paz, Lima, Montevideo, and São Paulo, it decreases by more than 60 percentage points, ranging from 30% to 40%. In Bogota, it is close to 50%, with a marked decrease of over 150 points. One possible interpretation of this strong reduction in wage differentials when comparing workers with the same level of education is that the intergenerational transmission of human capital plays a more important role in accounting for labor market outcomes among individuals from families of high socioeconomic status. This could clearly be the case in Bogota, where tertiary education is characterized by strong quality differences and high segregation by socioeconomic status (Álvarez Rivadulla et al., 2017).

Graph 4.4
Wage differentials among workers whose mothers attained mid-level and high-level education compared to those who have low-educated mothers



Note: The reported coefficients reflect the wage differentials between workers whose mothers attained mid-level and high-level education compared to those who have low-educated mothers. These coefficients and their 95% confidence intervals are estimated with ordinary least squares regressions in which the dependent variable is income from work. The independent variables are binary variables of the mothers' educational attainment, where "low-level education" is the omitted variable. "Mid-level education" means that the education level attained by the worker's mother is between complete primary and secondary school, while "high-level education" means at least incomplete tertiary or university education. Basic controls are binary variables of gender, age, and city-year. A second set of controls includes the basic controls plus binary variables of the individual's education. Finally, a third set of controls added a worker's skill indicator to the second set. Skill is measured as a percentage of right answers to a set of logical-mathematical questions.

Source: Authors based on data from ECAF surveys (CAF, 2016, 2018, 2019).

Box 4.1
Family socioeconomic status and wages for men and women: a glass ceiling for upward mobility

Along with labor participation rates, the wage gap is another key area with significant labor market disparities between men and women (Marchionni et al., 2019; Ñopo, 2012). According to Marchionni et al. (2019), the gender pay gap in Latin America and the Caribbean ranges from a low of 5% in Central American countries to highs of 30% in Brazil, Peru, and the Dominican Republic. Using ECAF data, Table 1 assesses whether the pay disadvantage of women is associated with their family background. The table shows the proportion of men and women who reach the highest quintile of the wage distribution in each city when their mothers attained low and high-level education.

Overall, when comparing men and women with low-educated mothers, the proportion of men in the highest quintile of wage distribution is double that of women. These differences are large in Lima, Montevideo, and, particularly, Santiago de Chile. A complementary analysis, that is not included in the table, suggests that these differences between men and women from families of low socioeconomic status hold when comparing workers with the same level of education.

Therefore, women from families of low socioeconomic status seem to face a double barrier when it comes to using the labor market as a means to climb the social ladder: wider labor participation gaps and lower wages. The disadvantage pattern for women is also found among those with families of high socioeconomic status, but differences are less marked in most cities.

Table 1
Proportion of workers in the highest wage quintile by gender and their mothers' education

	Men (%)		Women (%)	
Mother's education level	**Low-level**	**High-level**	**Low-level**	**High-level**
Bogota	19.8	38.4	10.9	39.6
Buenos Aires	28.9	38.8	9.5	21.2
Chile	27.2	33.2	3.9	26.1
La Paz	25.5	37.0	13.2	19.0
Lima	26.5	30.6	7.9	16.9
Mexico	23.5	40.3	14.3	13.6
Montevideo	25.3	32.9	13.9	23.8
Panama	26.4	27.6	13.2	10.4
Quito	28.1	37.6	12.0	18.5
São Paulo	26.5	34.0	12.1	30.2

Note: "Low-level education" means that the highest level attained by the worker's mother is incomplete primary school, while "high-level education" means incomplete tertiary or more advanced education. Bogota does not include 2015 data. Santiago de Chile only has data for 2017.

Source: Authors based on data from ECAF surveys (CAF, 2016, 2018, 2019).

The limited presence of women in jobs paying wages at the top of income distribution is typically illustrated using the “glass ceiling” metaphor and has been documented in multiple studies of the region. For example, Pagés and Pirás (2010) show that women hold just 1% to 3% of CEO positions at the largest corporations in six Latin American countries. Similarly, using data from household surveys in 12 Latin American countries, Carrillo et al. (2014) conclude that the gender pay gap is wider at top income distribution levels than at intermediate layers.

The third and last aspect to be analyzed regarding the quality of the jobs held by workers from families of different socioeconomic status is informal employment. Informal employment comprises jobs that—by law or in practice—are not subject to contributions or taxes. Moreover, they are not covered by the social protection benefits associated with employment (OECD and ILO, 2019). RED 2020 highlighted that informal employment is a critical feature of the region's labor markets, with an impact on 6 out of 10 workers (Álvarez et al., 2020).

The opacity of informal jobs limits the accumulation of referrals and documentation of work experience. This, in turn, may hinder prospects for job progression from informal to formal employment. These prospects can also be frustrated by the fact that informal employment offers fewer learning opportunities (Álvarez et al., 2018). Therefore, it is helpful to assess the relationship between informal employment and the background of the family of origin regarding the worker’s current job and first work experience.

Graph 4.5 shows the workers’ formal employment pathway from the first to the last job for individuals who have had more than one job when they were interviewed for the 2015, 2017, and 2021 ECAF surveys. According to the graph, the higher the level of education attained by the worker's mother, the higher the likelihood that the first and last jobs are formal. The first job of half the workers with low-educated mothers was in the informal sector, while this proportion drops to 39% for workers whose mothers attained high-level education. When comparing workers of the same level of education, sex, city, and age, mid-level and high-level education attained by the mother is associated with 4 and 7 percentage points higher formality in the first job compared to individuals who have low-educated mothers.

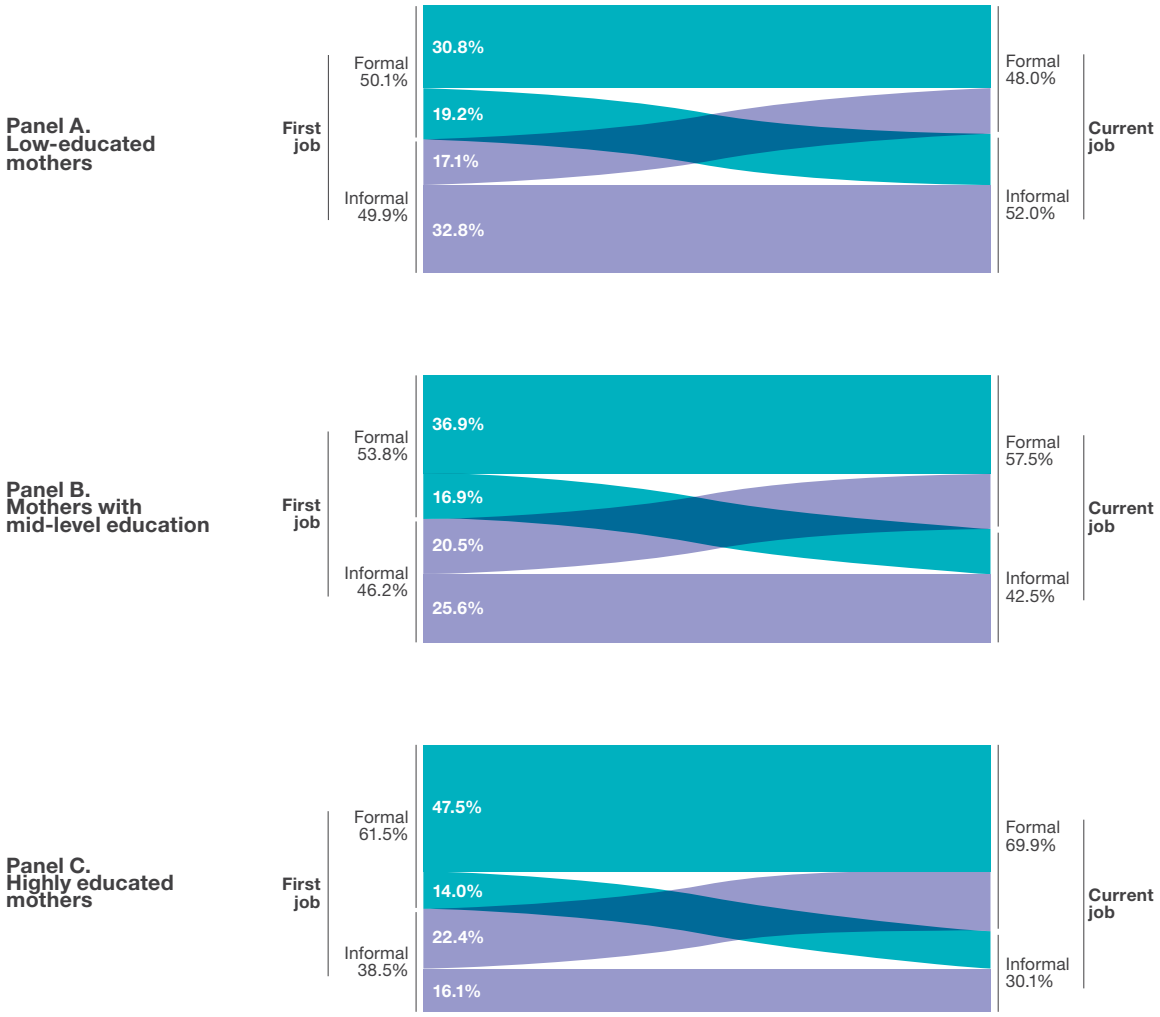
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Job formality rates are 20 points higher for workers whose family of origin’s socioeconomic status is high versus low

These initial differences in formal jobs according to the workers’ family background hold true and even widen for the last job held by ECAF respondents. Graph 4.5 reveals an almost 10-percentage point difference in the formality of the first job among workers whose mothers attained high vs. low-level education. This difference rises to almost 20 percentage points if the last job is considered. The reason is that just one-third of workers with low-educated mothers who started their working lives in an informal job and then changed jobs had successfully transitioned to formal employment at the time of the survey. Conversely, this proportion increases to 44% among workers whose mothers attained mid-level education, and to 58% for workers with highly

educated mothers. Therefore, the socioeconomic status of the workers' families of origin not only conditions their labor formality at the start of their working lives but also extends to subsequent jobs.

Graph 4.5
Formality transition from the first to the current job based on the mother's education level



Note: "Low-educated mothers" in the mother's educational attainment variable means that the highest education level attained by the mother is incomplete primary school; "Mothers with mid-level education" means that the highest education level attained by the mother is between complete primary and secondary school; "Highly educated mothers" means that the mother attained incomplete tertiary or university education, or a more advanced level. Proportions are calculated based on the total number of employed individuals. The status of a job as formal or informal is derived from the answer to the question "Does your employer or you make social security or pension fund payments for your retirement?" The cities included in the sample are Asuncion, Bogota, Caracas, La Paz, Lima, Montevideo, Mexico, Panama, Quito, São Paulo, and Santiago de Chile. Data for Santiago de Chile are available only for 2017. Asuncion only has data for 2021, while Caracas does not have data for 2021.

Source: Authors based on data from ECAF surveys (CAF, 2016, 2018, 2022).

A summary of labor market outcomes and families' socioeconomic status

The analysis of the different sources of data in this section reveals a strong association between the labor market outcomes of workers and the socioeconomic status of their family of origin in Latin America and the Caribbean. This association is particularly severe for women and supposes a sharp contrast with their relative performance in terms of educational results (see Chapter 3). Although part of the association between labor market outcomes and family background is mediated by the workers' education level, the majority of the analyzed labor market outcomes show significant differences between workers with the same level of formal education but different family socioeconomic status. This points to the existence of labor market mechanisms that transcend the role of human capital as causes of intergenerational persistence.

This section also reflects that, for some labor performance dimensions, such as occupational category and income level, workers from families of higher socioeconomic status have remarkably better advantages than those from middle socioeconomic-level families, compared to more disadvantaged backgrounds. This has already been documented in intergenerational mobility studies and could be particularly relevant in a region historically characterized by high levels of inequality. [8]

The role of the family in job referrals and labor decisions

Job referrals

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Using family referrals to find a job reproduces opportunity inequalities across generations

There is ample evidence for different countries and contexts that job referrals from acquaintances play a key role in matching workers with jobs. The job search and the matching process are characterized by huge information asymmetries and social connections can alleviate these asymmetries. Social connections can inform workers of the existence and quality of a job opening. They can also inform companies of workers who are looking for a job and their productive potential. In addition, referred workers may perform better at work so as not to disappoint the person who referred them.

The link between job referrals and intergenerational mobility means that if the group of individuals who have better jobs refers individuals in the same group, the advantage of these groups compared to the rest will consolidate

8. This type of non-linear relation is commonly found in the literature. Corak and Heisz (1999) is a classic study for Canada. Torche (2015) presents a review of this and other aspects from an interdisciplinary perspective.

or even increase.[9] Families are a particularly relevant example to show that job referrals by the network of contacts contribute to the reproduction of inequality. If parents who have good jobs refer their children for a position, these descendants will also have better jobs. On the contrary, if parents have precarious jobs and are frequently hit by unemployment, they will have fewer possibilities of helping their children with their job referral process.

In addition to "direct" referrals between parents and their offspring, families influence the possibility for new generations to get "indirect" referrals by forming social relationships in key settings, such as formal education institutions and their neighborhoods. Based on existing evidence, "direct" family referrals are the most helpful to find a new job, next to referrals by former coworkers and, last, by schoolmates and neighbors (Hensvik and Skans, 2016; Eliason et al., 2019; San, 2022).

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More than 1 out of 5 salaried employees in large cities in the region found their job with the help of their families

According to the 2016 ECAF survey, roughly 1 out of 3 wage earners in large Latin American cities agreed with the statement "To find your current job, you asked your contact network, relatives or neighbors to refer you for a job or tell you about any job vacancy." This proportion is similar to the highest European values reported by Pellizzari (2010), reached in Spain, Greece, Luxembourg, and Portugal.[10] The 2021 ECAF survey included a more direct question about the role of family job referrals. In the survey, 22% of salaried employees agreed with the statement "A relative helped me find my current job."[11] Even though the two proportions from the 2016 and 2021 surveys are not strictly comparable because of the different years and wording of both statements, these data lead to two major conclusions. First, social connections play a widespread role as a mechanism for obtaining employment in the region. Second, in line with previous literature, the family seems to be the fundamental actor in an individual's formation of social connections.

In the 2016 and 2021 ECAF surveys, the importance of job referrals decreases as the formal level of education attained by job seekers increases. Measurements in the 2021 ECAF survey, which focuses more directly on the role of the family, reveal that one-third of wage earners whose highest educational attainment was complete primary school found their jobs through the job referral process, compared to 11% in the case of those who completed tertiary education.[12]

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9. Some of the ideas presented below are based on Jackson (2021). Bolte et al. (2020) provide a formal approach to this phenomenon.

10. Pellizzari (2010) extracted the information from the European Community Household Panel (ECHP). The panel asked, "What means did the worker use to find their current job?" Mutually exclusive options were presented as a response, one of them being "With the help of the family, friends, or other contact networks."

11. Based on a comparison of the same ECAF set of cities in both years—excluding Caracas and Fortaleza in 2016, and Asuncion in 2021—, the proportion of wage earners or salaried employees who responded "yes" to the question under analysis was 37% in 2016, and 21.9% in 2021. Added to their different wording, both questions are difficult to compare because in 2021 the region's labor markets were still recovering from the effects of the COVID-19 pandemic.

12. This negative correlation between the relevance of referrals and education has been documented in the United States in multiple studies (Ioannides and Datcher Loury, 2004). The 2016 and 2021 ECAF surveys show that this pattern is robust to controlling for city, sex, ten types of occupation, formal employment, and respondent's age.

As a worker's experience grows, the relevance of referrals slightly decreases. The proportion of jobs found with the help of the family is 25.6% for the first job and 21.6% for the most recent job among those who have had more than one job. This difference seems of lesser magnitude when considering that, at the beginning of the working life, workers do not have any previous employment history and, therefore, the role of the family could be greater. The family appears then as a relevant actor in obtaining employment not only at the beginning of the working life but throughout the career.

The pattern of decreasing relevance for job referrals regarding the workers' experience and formal education may be due to two reasons. On the one hand, education and experience may replace referrals as a mechanism to provide labor market information. This interpretation is reinforced by the 2021 ECAF survey, reflecting that job referrals become particularly significant among workers who did not complete their highest level of education attained, regardless of the level. Among workers of the same city, sex, age, the same type of occupation, and attaining the same high education level, the proportion of those who received help from their families to find their current job is 13 percentage points higher among those who did not complete that level than among those who did.

A second force at play that can explain the decreasing role of job referrals relative to the levels of education and experience refers to recruiting and job posting costs. Paying for these costs is only possible when a certain level of work productivity has been reached. This is consistent with the decreasing significance of job referrals according to the 2021 ECAF survey for the types of occupation showing the highest productivity and income levels, such as managers and professionals. The incidence of family help for these jobs is 9%, while for elementary and service jobs, this percentage rises to 31% and 24%, respectively. The difficulty of covering hiring costs in low-productivity contexts is coupled with extensive informal employment across the region. This may cause companies to dodge public job recruitment mechanisms to avoid potential inspection costs and penalties associated with informal employment. In fact, for formal wage earners, the relevance of referrals is 10 percentage points lower than their informal counterparts. Moreover, this difference remains statistically significant when comparing workers of the same city, age, sex and education level.

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Workers from families of low socioeconomic status are more dependent on family job referrals to find a job

According to 2021 ECAF survey data, there is no relationship between the relevance of family referrals to find a job and the socioeconomic status of the worker's family when comparing workers with the same level of education. As noted at the beginning of this section, the potential of job referrals is likely to differ widely because of the largely unequal resources of families based on their socioeconomic status. Therefore, job referrals are a strong mechanism for the reproduction of inequalities across generations.

An extreme indicator of the influence of families on their offspring's labor market outcomes occurs when employees work at the same companies where their

parents work or used to work.[13] The parents' network of contacts and job referrals could be the main mechanism behind the intergenerational persistence of working in the same company but there could also be alternative mechanisms at play, such as the transmission of skills that are specific to the company and the role of the family's employment expectations on their children. These will be discussed below.

According to the 2021 ECAF survey, 7.5% of wage earners or salaried employees in the private sector said that they worked for the same employer as their parents. This indicator decreases according to the worker's education level and whether they completed the highest education level attained. This suggests that, when offspring veer off the formal education pathway without completing their highest level of education attained, their parents could make a special effort and use their network of contacts in their workplace to find their offspring a job. The proportion of wage earners or salaried employees who are employed by the same company as their parents does not change with the socioeconomic status of the family or between respondents' first and most recent jobs.

Thus, there seems to be no relationship between the socioeconomic status of the family of origin and the relevance of family referrals when wage earners are hired by the same employer as their parents. However, the intergenerational dependence and the influence of social status is strong among business owners. Graph 4.1 shows that 13% of the self-employed and 22% of business owners are engaged in a business venture that was owned by a relative. The relevance of business inheritance according to the level of education attained by the mother is very different between the self-employed and business owners. For the former group, business inheritance is relatively even between different levels of education attained by the mother, whereas for the latter, the proportion of owners who inherited their business is 20 percentage points higher if their mother attained high-level education instead of low.

Table 4.1
Inherited businesses based on the mother's level of education

	Mother's level of education			Total
	Low-level	Mid-level	High-level	
Self-employed (%)	12.5	13.9	10	13.1
Business owner (%)	14	22	34	21.8

Note: The table reflects the proportion of the self-employed and business owners who reported inheriting the company where they work, by their mother's educational attainment. This measure is based on the question: Was your activity performed or did your business belong to a relative of yours? "Low-level education" means that the mother did not complete primary school; "Mid-level education" means that the education level attained by the mother is between complete primary and secondary school; "High-level education" means that the mother attained at least incomplete advanced education. The table includes all the cities covered by the ECAF survey.

Source: Authors based on data from the ECAF survey (CAF, 2022).

13. Corak and Piraino (2011) found that 40% of a cohort of young men in Canada worked at some point for the same employer as their parents. Staiger (2021) showed that 29% of US workers aged 18-30 work at some point for companies that employed their parents in the past.

Expectations

In addition to job referrals, families can play a role in forming expectations that influence their children's employment decisions. Unequal distribution of information about the quality of different types of jobs and the future potential of occupations can also be a mechanism for the intergenerational transmission of inequality. The unequal distribution of information about the most promising higher education decisions and jobs can originate in the parents' employment history, or that of their network of contacts. Their geographical area of influence can also play a role. The significance of the geographical aspects is explored in depth in the section titled "The intergenerational persistence of geographical location and labor market outcomes."

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Parents' expectations about their offspring's employment differ by socioeconomic status and contribute to the persistence of inequality

There is ample evidence that information availability influences young people's education decisions (Jensen, 2010), particularly regarding career choice among tertiary education graduates (Porter and Serra, 2020; Altmejd et al., 2021). There is no direct evidence about the influence of family expectations on the work decisions individuals make when they complete their education. However, evidence showing the family influence on tertiary education decisions that are closely linked to labor market opportunities may suggest that, in fact, family expectations do play a role in work decisions (Dahl et al., 2020; Altmejd et al., 2021).

Data from the 2013 Latinobarometer survey suggests a significant persistence of parents' expectations for their own and their offspring's labor market outcomes. This survey asked whether respondents preferred working as wage earners in the private sector or the public sector, or having their own business, for themselves and their offspring. Seventy-seven percent of respondents selected the same occupational category for themselves and their offspring. The highest persistence—83%—of these expectations is observed among those who prefer to have their own business. No differences are observed in terms of the socioeconomic status of the family regarding the persistence of job expectations across generations. Similarly to job referrals, this lack of relation does not at all mean that this aspect is not relevant for intergenerational mobility. Quite the opposite, the existence of strong persistence of expectations at every socioeconomic level could contribute to the solidification of differences across generations.

Ethnic and racial discrimination in labor markets

Ethnicity and race are attributes transmitted across generations. Therefore, employment discrimination based on these characteristics is one of the labor market mechanisms that affect intergenerational mobility. Employment discrimination occurs when there are differences in labor market outcomes that are not due to disparities in workers' productivity. Box 4.2 presents the

classic distinction between preference-based and statistical discrimination in labor markets.

Although this section focuses on discrimination in the labor market based on ethnicity or race, workers from different ethnicities or races can have different productive potentials as a result of discrimination suffered at earlier stages of life, such as during formal education. This aspect will be taken into account throughout this section. As stated at the end of Box 4.2, individuals may not have enough incentive to improve their productive skills during formal education because the labor market will not value their efforts later in life due to labor market discrimination.

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Labor market inequalities based on ethnicity and race contribute to the intergenerational reproduction of inequality

Box 4.2
Sources of employment discrimination

Traditionally, labor market discrimination has been conceptualized as "preference-based discrimination" or "statistical discrimination." The former may be due to discriminatory preferences of the employer, coworkers, or customers. This type of discrimination can be conscious or intentional, but it can also arise from an implicit bias that people do not recognize (Bertrand et al., 2005). The latter, conversely, is rooted in misinformation. This can happen, for example, when workers of a certain ethnicity are less productive for reasons linked to historical disadvantages: in the absence of better information, an employer assumes that low productivity is a characteristic of all workers of the same group.

In addition to these two types of discrimination, there is a third mechanism that can lead to different labor market outcomes between workers who have the same productivity potential but different ethnicities: job referrals. This was discussed above. This mechanism can create labor market outcome differences due to discrimination (either preference-based or statistical) by those making the job referral. However, at the same time, in the absence of discrimination, social segregation by ethnicity and race can also play a role.

Last but not least, another relevant conceptual facet of employment discrimination is that discrimination can reinforce itself, having an impact on the educational decisions that the discriminated groups make (Coate and Loury, 1993; Piketty, 2000). Workers from a discriminated ethnic group will have fewer incentives to invest in training if they know that their education will not be valued in the labor market. In turn, this behavior could reinforce employers' statistical discrimination practices.

Inequalities based on ethnicity and race in Latin America and the Caribbean are rooted in the history of indigenous and Afro-descendant populations on the continent (Telles y PERLA, 2014). Disease and violence during the conquest and colonization processes decimated the indigenous population. Survivors were subject to different forms of slavery, servitude, and forced labor. In the case of Afro-descendants, the relative shortage of

labor market supply led the Europeans to enslave and transport millions of Africans to the Americas. The number of people forcefully brought to Latin America and the Caribbean was 15 times greater than in the US (Telles and PERLA, 2014).

All the region's countries have indigenous and Afro-descendant populations.[14] There is a group of countries where Afrodescendants exceed 10%. In descending order, these countries are Trinidad and Tobago, Brazil, Dominican Republic, Panama, Costa Rica, and Colombia. In a second set of countries, comprising Bolivia, Peru, Mexico, and Panama, at least 10% of the population identifies as indigenous.[15] In the remaining countries, the sum of the share of each ethnic group is less than 10%. However, in all cases, it reaches at least 3.5% of the population.[16]

Several authors have emphasized the difficulties of empirical studying labor market discrimination in Latin America and the Caribbean. The main obstacle is the scarcity of data. For example, several official country household surveys lack ethnic identification data (Ñopo, 2012; Telles and PERLA, 2014). Second, as a result of the historical mestizaje of different racial groups, a large portion of the region's population does not identify as Afro-descendants, indigenous or white, but rather as mestizo or mulatto (Ñopo, Saavedra, et al., 2007).[17]

Based on existing studies and evidence especially gathered for this report, four main conclusions can be drawn about ethnic and racial inequalities in Latin American and Caribbean labor markets. The first one is that, in general, the magnitude of these inequalities is quite significant. Wage gaps are the most widely studied topic. By 2000, in Brazil, the hourly wage paid to Afro-descendants was about half the amount paid to white workers (Arcand and d'Hombres, 2004; Chong and Ñopo, 2008). In Bolivia, Chile, Guatemala, and Paraguay, in the early 2000s, the pay gap between indigenous and white workers was estimated to be 28%, 34%, 50%, and 46%, respectively (Chong and Ñopo, 2008). These wage differences based on ethnicity and race seem to have decreased during that decade, in line with an overall reduction in income inequality (Ñopo, 2012; Derenoncourt and Montialoux, 2021). In Brazil, raising the minimum wage helped narrow the gap between low-income Afro-descendant and white workers (Derenoncourt et al., 2021).

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14. Ethnicity classification involves multiple methodological and normative challenges. For a detailed discussion about these challenges in the region, see, for example, chapter 1 in Telles and PERLA (2014).

15. The census information in Telles and PERLA (2014) presented in Table 1.1 was used to assess whether the indigenous population reaches 10%. According to census data, 40.6% of the population in Bolivia is of indigenous origin (2012 Census); in Peru, 27.0% (2007 Census); in Mexico, 14.0% (2010 Census); and in Panama, 12.1% (2010 Census). In Chile, the figures from earlier censuses were reviewed in 2017, revealing 9% of indigenous people (IWGIA, n.d.).

16. This minimum 3.5% value is reached in Argentina. As this proportion is very small, labor statistics based on ethnicity in Argentina cannot be calculated by LAPOP because of the few observations in the survey.

17. The LAPOP survey showed that at least 30% of the people identify themselves as mestizo in 12 out of 15 countries in the region.

Table 4.2 shows the unemployment situation and the type of employment of the Afro-descendant and indigenous population compared to whites, based on self-reported ethnicity in the AmericasBarometer survey, conducted by the Latin American Public Opinion Project (LAPOP). The largest disadvantages in terms of unemployment are found among indigenous peoples in Bolivia and Peru, and Afro-descendants in Paraguay. Regarding the type of employment, the proportion of workers who are employed as professionals or managers shows a remarkable gap, considering that less than 10% of the region's workers hold these positions.

Table 4.2
Labor statistics based on self-reported ethnicity

	Unemployment (%)		Professional or manager (%)		Self-employed (%)	
	Indigenous	**White**	**Indigenous**	**White**	**Indigenous**	**White**
Bolivia	5.6	0.9	4.2	3.6	61.9	48.9
Ecuador	16.5	14.0	6.4	7.6	74.6	54.6
Guatemala	12.3	12.0	4.7	9.3	80.3	64.3
Guyana	11.6	15.0	6.3	9.5	70.7	58.8
Mexico	9.1	8.0	5.2	8.9	79.2	66.9
Peru	13.7	9.6	3.0	2.9	91.2	73.3
	Afro-descendants	**White**	**Afro-descendants**	**White**	**Afro-descendants**	**White**
Brazil	15.0	12.4	4.3	10.5	58.1	49.7
Colombia	12.7	12.3	2.8	2.9	70.9	67.9
Costa Rica	11.2	7.8	10.1	9.0	67.1	61.4
Ecuador	14.7	14.0	6.8	7.6	63.5	54.6
Guyana	18.4	15.0	6.7	9.5	60.8	58.8
Paraguay	14.1	10.1	5.1	5.7	92.9	81.6
Peru	11.9	9.6	2.6	2.9	73.9	73.3
Uruguay	12.1	8.5	7.0	9.1	41.0	36.2

Note: The table shows the unemployment rate based on ethnicity, the proportion of workers who are professionals or managers, and the proportion of the self-employed (excluding professionals). The years included in the calculations range from 2004 to 2019 and vary according to country. The most frequent years used are the even ones comprised between 2004 and 2014. We only show the ethnicity/race and country combinations with a sufficient number of observations to allow for comparisons. The white ethnic group is used as a benchmark for comparisons, except for Guatemala and Guyana, where the indigenous people are compared to the mestizo population.

Source: Authors based on data from LAPOP's AmericasBarometer (www.LapopSurveys.org).

Another approach to measuring labor market outcome differences based on ethnicity and race consists in using the skin color of respondents to the LAPOP survey. Graph 4.6 shows that, on average, the unemployment rate increases with darker skin colors in 21 Latin American and Caribbean countries. On one end, the unemployment rate disadvantage of persons with the darkest skin color is 7 percentage points higher compared to the ones with lightest skin color. In terms of differences in the type of employment, the aggregate analysis for the average of 21 countries can be broken down into professionals, on the one hand, and managers or business owners, on the other. In both cases, differences are highly significant. The probability of reaching management positions or becoming business owners for workers with the darkest skin color is from 8 to 12 percentage points lower. A similar magnitude gap is observed when their likelihood of finding professional or technical jobs is analyzed.

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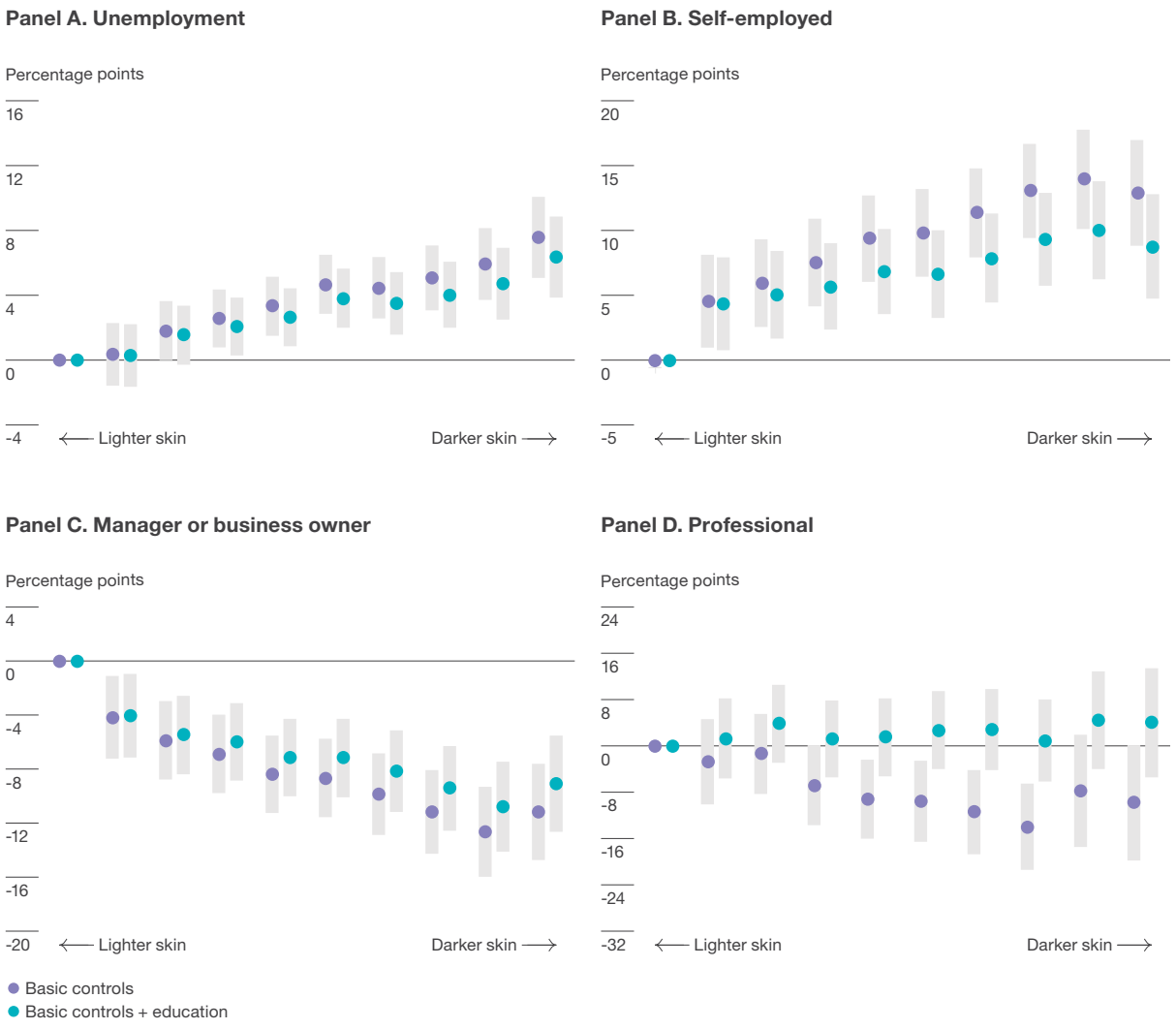
Unemployment among darker-skinned persons is 7 points higher than among lighter-skinned persons

The second conclusion is that a significant portion of the labor market outcome gaps based on ethnicity and race are due to the educational gaps originating in these identity traits, which were documented in Chapter 3. In Brazil, approximately half the pay gap of Afro-descendants was shown to originate in their lower formal education level and job experience (Arcand and d'Hombres, 2004; Chong and Ñopo, 2008). In Uruguay, differences by education level and region account for 50% and 70% of the pay gap with respect to whites for male and female Afro-descendants, respectively (Bucheli y Porzecanski, 2011). Gaps between indigenous and white peoples estimated by Chong and Ñopo (2008) for Bolivia, Chile, Guatemala, and Paraguay are reduced significantly, ranging from as low as one-third in Paraguay to as high as three-fifths in Chile, when comparing workers with the same education level, age, and gender.

Graph 4.6 shows that the role played by educational gaps in labor market outcome gaps based on skin color varies according to the labor market outcome under analysis. On the one hand, when comparing workers with the same education level, gaps in unemployment and participation in jobs as managers or owners decrease only very slightly and continue to be robust. On the other, gaps in participation in jobs as professionals or technicians disappear completely when comparing workers with the same level of formal education.

The third conclusion is that another portion of the gaps can be explained by the fact that workers of different ethnicities and races are employed in sectors and companies that have lower productivity. In general, the portion of the gap explained by these differences is smaller than the portion arising from educational differences. However, it remains significant. According to Arcand and d'Hombres (2004), 8% of the pay gap among Afro-Brazilians is due to them working in sectors paying lower average wages. Furthermore, Card et al. (2021) conclude that white workers in Brazil get jobs in better-paying companies compared to Afro-Brazilians. This explains about one-fifth of the pay gap between the two groups.

Graph 4.6
Gaps in labor market outcomes by skin color



Note: The reported coefficients result from ordinary least squares regression, where the dependent variable is a binary variable that indicates, according to the panel, if the individual is unemployed, self-employed (excluding professionals), a manager or business owner, or a professional. Independent variables are a set of binary variables named from 1 to 10 and identify the individual's skin color. Lighter skin color is the variable omitted in the regression. A 95% confidence interval is used. The basic controls are binary variables of gender, age, country, and year, while the second set of controls adds binary variables of the individual's education to the first set. The years included in the sample are 2010, 2012, 2014, 2016, 2017, 2018, and 2019. The countries are Bahamas, Barbados, Belize, Brazil, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Nicaragua, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, and Uruguay.

Source: Authors based on data from LAPOP's AmericasBarometer (www.LapopSurveys.org). http://www.LapopSurveys.org

A particularly relevant and extreme aspect of the association between type of firm and productivity in the region is the high incidence of self-employment (Álvarez et al., 2018). Table 4.2 shows that the frequency of non-professional or technical self-employment is much higher among indigenous people and only slightly higher among Afro-descendants, compared to white people.[18] This difference between self-employed Afro-descendants and indigenous people could be linked to the specific characteristics of the historical process of disadvantages suffered by these two groups. While African Americans were denied property ownership under slavery, a portion of the indigenous peoples managed to keep smallholdings that were mainly used for rural production. Graph 4.6 shows a higher incidence of non-professional self-employment among those with darker skin color, which only decreases slightly when workers with the same education level are compared.

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Labor market outcome inequalities by ethnicity and race are partly due to the existence of labor discrimination

The fourth and last conclusion is that labor market outcome gaps do not originate solely in productivity differences among workers: there is a significant component of labor discrimination. This conclusion is supported by three types of studies. The first type has been mentioned above and comprises studies that seek to explain the pay gap by looking at workers' characteristics, leaving a significant portion of the gap unexplained. Arcand and d'Hombres (2004) show that 36% of the pay gap among Afro-descendants in Brazil cannot be explained by observable characteristics. Card et al. (2021) find that, even controlling for differences in productivity among companies and workers, white people who work at the same company as Afro-descendants are better paid, which explains 5% of the total pay gap.

The second type of study assesses discrimination at the recruitment stage using the technique of sending resumes (CVs) to real job openings, with the candidate's ethnicity or race changed at random.[19] Even though these studies have the limitation of focusing on just one stage of the hiring process and pertain to very specific contexts, using randomized experiments supposes an advantage in terms of identification of discrimination by ethnicity and race in labor markets. One of these studies, conducted in Lima by Galarza and Yamada (2014), found that the rate of response to white candidates (looking at their photo on their CV) was 7% higher than the response received by indigenous candidates. A subsequent study, in the same city and by the same authors, revealed that the response rate to white candidates was 19% higher than to Afro-descendants (Galarza and Yamada, 2019). Arceo-Gómez and Campos-Vázquez (2014b) did a similar experiment in Mexico City to assess discrimination among indigenous peoples. They found a lower response rate for indigenous women and no differences among men.

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18. In Table 4.2 this holds for the comparison of indigenous people and Afro-descendants between countries, but also in the three countries for which the table shows data for both groups (Ecuador, Guyana, and Peru).

19. This technique follows the seminal work of Bertrand and Mullianathan (2004). These authors documented that, in an experiment conducted in the United States, applicants with white names received up to 50% more callbacks than candidates with Afro-American names.

The third way of documenting employment discrimination consists in surveying the self-perception of discrimination among indigenous and Afro-descendant workers. In the 2021 ECAF survey, those who were employed at the time of the survey or had been employed in the past were asked: "Have you ever received unequal treatment at any job based on, for example, gender, nationality, skin color, sexual orientation, or neighborhood of origin?" Data in Table 4.3 indicate that, in general, the proportion of indigenous, Afro-descendant, and mestizo workers who report suffering employment discrimination experiences is higher than among the population that self-identifies as white. These differences are particularly severe among indigenous populations in La Paz and Lima, and Afro-descendants in Lima, Panama, Quito, and São Paulo. In these cases, the differences with whites remain statistically significant when comparing workers with the same education level, age, and sex.

Table 4.3
Employment discrimination based on self-reported ethnicity

	Self-perception of ethnicity			
	Indigenous (%)	**Afro-descendant (%)**	**White (%)**	**Mestizo (%)**
Asuncion	29.5		9.3	12.9
Bogotá	11.2	0.0	17.8	12.6
Buenos Aires	18.5		22.3	16.3
La Paz	19.0			17.8
Lima	25.9	26.9	22.5	13.3
Mexico City	45.8		24.1	21.0
Montevideo	27.7	26.8	17.6	36.2
Panama	19.8	37.0	31.4	14.4
Quito	11.9	19.5	65.9	10.6
São Paulo	24.1	16.8	14.2	

Note: The table reports the proportion of individuals who stated that they received unequal treatment based on the question: "Have you ever received unequal treatment at any job based on, for example, gender, nationality, skin color, sexual orientation, or neighborhood of origin?" Respondents to the 2021 ECAF survey had the option to report multiple ethnicities with which they identified themselves, according to these categories: 1) indigenous, 2) Afro-descendant, 3) mulatto, 4) white, 5) mestizo, and 6) other. Those reporting more than one ethnicity were considered under "other." The table includes all countries covered by the ECAF survey. Blank cells mean that the number of observations is insufficient to make an inference.

Source: Authors based on data from the ECAF survey (CAF, 2022).

Intergenerational persistence of geographical location and labor market outcomes

In a world with enormous productivity and employment differences between neighborhoods, cities, and regions, parents' geographical location conditions the employment opportunities of their offspring. For geography to effectively play a role in the persistence of employment opportunities across generations, two elements need to be present at the same time. The first one is a certain degree of persistence in location between parents and their offspring. This means that there is an association between the place where the parents worked and where their offspring now work. The second factor is the existence of differences in economic opportunities between locations. Next, documentation for these two factors will be presented regarding two geographical levels. First, differences between rural and urban areas, and between cities, will be analyzed. Second, the location of neighborhoods within the same city will be examined.

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Workers from families living in locations of dissimilar productivity have unequal employment opportunities

Intergenerational persistence of employment opportunities between rural and urban areas, and between cities

The analysis of the intergenerational persistence of opportunities starts by documenting its first element: the persistence of location between parents and their offspring. Based on data from official censuses in six countries, the first column of Table 4.4 shows that, on average, more than half of the adults aged 18-65 live in the same municipality, department, or location where they were born. Hence, most adults in these countries are located in the same labor market as the one their parents lived in when they were born.

Additionally, the table provides wage differences between rural and urban areas as a way to approach the difference in opportunities generated by the spatial persistence of location between parents and their offspring.[20] Taking the unweighted average among the 12 countries, the wages of workers in rural areas in 2019 were 40% lower than in urban areas. The rate of urbanization of each country, presented in the third column, assesses the relevance of these differences in opportunities between the rural and urban areas in terms of the proportion of each country's population that is affected by this pay gap. The least urbanized countries are Bolivia, Ecuador, and Paraguay, with about a third of their population living in rural areas.

20. This comparison does not include differences in the cost of living between locations, but the magnitude of the income differences is such that it could not be offset by differences in the cost of living (Ravallion et al., 2007). On the other hand, there is ample evidence that wage gaps also match gaps in consumption and access to basic services. For the latter, see, for example, Ferré et al. (2012) and Lagakos (2020).

Table 4.4
Persistence of location and the wage gap between rural and urban areas

	Lives where they were born (%)	Pay gap (%)	Urbanization (%)
Argentina	-	-	92.1
Bolivia	56.2	42.5	70.1
Brazil	51.3	45.3	87.1
Chile	39.8	79.1	87.7
Colombia	54.8	50.9	81.4
Costa Rica	-	79.8	80.8
Ecuador	60.1	69	64.2
Mexico	-	52.3	80.7
Panama	-	43.2	68.4
Paraguay	-	57.1	62.2
Peru	52.5	32.4	78.3
Uruguay	60.7	103.2	95.5
Average	**53.6**	**59.5**	**79.0**

Note: Data in the first column were calculated by processing official census data. The census year used vary by country: Bolivia (2001), Brazil (2010), Chile (2002), Colombia (2005), Ecuador (2010), El Salvador (2007), Honduras (2005), Peru (2007), and Uruguay (2011). Regarding the geographical area used to determine whether individuals were not born in the location where they live, Bolivia considers individuals who "were born at another location within Bolivia;" Brazil, the municipality; Chile, the commune; Colombia, the municipality; Peru, the district; and Uruguay, the department. The empty cells in the table correspond to countries whose censuses did not survey information for the corresponding dimension. The pay gap is the ratio between wages in rural and urban areas, based on household surveys processed by the Center of Distributive, Labor, and Social Studies (CEDLAS) for CAF. Data on the urban-rural gap are for 2015, except for Bolivia and Mexico, where data corresponds to 2014. The "urbanization" column reflects the proportion of individuals who live in cities in 2020, based on data from the World Bank.

Source: Authors based on data from the Integrated Public Use Microdata Series (IPUMS, 2020), CEDLAS (2020), and the World Bank (2022b).

In the large cities included in the ECAF survey, the persistence of location between parents and their offspring is even higher than when considering the universe covered by censuses, shown in Table 4.4. Sixty-eight percent of respondents from the most populated cities in each of the nine countries in the 2016 ECAF survey said that they lived in the same city where they were born. Table 4.5 shows the pay gaps for 2019 between the three cities recording the highest and lowest wages for 12 countries. These gaps are calculated based on data from official household surveys. In the 12 countries, wages in the three lowest-paying cities of each country are 35% below those in the three highest-paying cities. Countries with the largest territory, such as Argentina, Brazil, and Mexico, present the broadest wage gaps between cities, while the narrowest gaps are found in the smallest countries, such as Costa Rica and Panama.

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On average, rural residents earn 40% lower wages

In addition, an analysis of the evolution of these gaps over time indicates that there is also a significant persistence of the highest and lowest-paying cities. Two-thirds of the highest and lowest-paying cities in the early 2000s were the same ones fifteen years later (Alves, 2021b). Table 4.5 presents the wage differences between the two groups of cities. Although the gap between the highest and lowest-paying cities decreased by about 8 percentage points during that period, the elevated persistence of the highest and lowest-productivity places means that family location may be a source for the intergenerational persistence of inequality across several generations.

Table 4.5
Wage gaps between the highest and lowest-paying cities

	Three highest and lowest-paying cities		Gap (%)	
	Lowest	**Highest**	**Uncontrolled**	**Controlled**
Argentina	Santiago del Estero, Posadas, Corrientes	Comodoro Rivadavia, CABA, Ushuaia	43.4	51.1
Bolivia	Oropeza, La Paz, Vaca Diez	Oruro, Cercado, Nicolas Suarez	78.5	85.5
Brazil	Natal, Maceio, Teresina	Vitoria, Florianopolis, Brasilia	51.7	66.4
Chile	Rengo, San Antonio, Linares	San Pedro, Calama, Antofagasta	63.5	71.5
Colombia	Sincelejo, Santa Marta, Cúcuta	Tunja, Bocamanga, Bogota	69.5	80.9
Costa Rica	Greater metropolitan area, San Carlos	Puntarenas, Limon	80.3	87.4
Ecuador	Tulcan, Guayaquil, Manta	Azogues, Portoviejo, Quito	73.9	84.1
Mexico	Acapulco, Tlaxcala-Apizaco, Cuernavaca	Queretaro, Tijuana, Saltillo	71.5	76.2
Panama	Veraguas, Los Santos, Herrera	Cocle, La Chorrera, Panama City	70.9	78.0
Paraguay	Caaguazu, San Pedro, Itapúa	Asuncion, Alto Parana, Central	71.1	79.8
Peru	Pasco, Tarma, Utcubamba	Arequipa, Lima, Ilo	55.9	67.4
Uruguay	Rio Branco, Artigas, Rivera	Ciudad de La Costa, Costa de Oro, Montevideo	56.8	67.1
Average			**65.6**	**74.6**

Note: Data are based on household surveys processed by CEDLAS. The reported wage gaps are the result of ordinary least squares regression, where the hourly wage is the dependent variable and the binary variables of each city are the independent variables. The gap reflects the ratio between average hourly wages across the three cities with the lowest wages and average hourly wages across the three cities with the highest wages. The estimation with controls includes binary variables of respondents' education, occupational category, occupational sector, and company size. The reported wage gaps are statistically significant at 1%. Data are for 2019, except for Bolivia and Mexico, where data corresponds to 2014 and 2018, respectively. See Alves (2021b) for more detailed on these data.

Source: Authors based on data from CEDLAS (2020).

Cross-location differences in labor market outcomes may be rooted in the different productive skills of the people who live in those locations, rather than the better work opportunities offered by them. The latter could be the

case, for example, if these locations offer better opportunities for human capital formation. This situation would not reflect a labor market mechanism of intergenerational persistence, but an educational mechanism, as analyzed in Chapter 3. Consistent with a series of studies that indicate that locations do indeed generate differences in economic opportunities for workers (Bryan et al., 2014; Lagakos, 2020; Lagakos et al., 2020),[21] Table 4.5 shows that wage gaps narrow but remain very significant when workers of the same sex, age, education level and even sector of activity are compared. Based on the analyzed countries, the average wage per worked hour paid to workers of the same age, sex, education level, sector of activity, occupational category (employee or self-employed), and company size will be 25% lower in a low-paying city than in a high-paying city.

Intergenerational persistence of work opportunities within cities

Within a city, the persistence across generations of locations that are more or less advantageous considering the work opportunities that they offer can take two forms. On the one hand, similarly to intergenerational persistence across cities, a good portion of the new generations live in the same neighborhoods as their parents. In the 2016 ECAF survey, for example, 45% of respondents stated that they lived in the same neighborhood as their parents, while 34% indicated that they lived in the same home as their parents. On the other hand, even when people do not live exactly in the same neighborhood as their parents, the inheritance of wealth, documented in Chapter 5 of this report, suggests that the chances for new generations to live in areas of the city closer to formal jobs will be fewer among workers from families of low socioeconomic status.

Next, three reasons explaining why the neighborhood of residence involves different work opportunities will be described. The first and main reason is the cost of commuting to the workplace. Formal jobs in the cities are often highly concentrated in one or a few neighborhoods. Therefore, commuting distances to the workplace can vary considerably depending on the place of residence. For example, a study showed that, in Buenos Aires, half of the formal jobs are within a radius of 4 kilometers of the city center (Alves et al., 2018). This occurs in a metropolitan area that extends across tens of kilometers. In addition, the traffic congestion and the deficient public transport systems characteristic of many large cities in the region increase the costs to commute to the workplace (Vargas et al., 2017).

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Workers from families that live in different neighborhoods will have unequal access to job opportunities

21. Even the most skeptical studies on the role of locations in work opportunities show that wage differentials across locations remain significant (Álvarez, 2020; Hamory et al., 2021; Young, 2013).

In the 2016 ECAF survey, 37% of respondents stated that the area where they lived was unfavorable because it was far from the workplace. A similar proportion of individuals reported not having access to public transportation as another reason why the place where they lived was an obstacle to finding a job. In line with the existence of an intergenerational persistence dimension regarding the advantages of access to jobs, both reasons are mostly cited by workers whose mothers attained low-level education. On average, responses by workers whose mothers did not complete primary school and who mentioned both reasons were 8 and 13 percentage points higher, respectively, than those of workers whose mothers attained tertiary education.[22]

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More than 1 out of 3 workers in large cities across the region state that their neighborhood of residence represents an obstacle to finding a job

The opinions shared by respondents to the 2016 ECAF survey are consistent with the findings revealed by Díaz and Salas (2020) in a study commissioned by CAF for the RED 2017 report. Using a methodology comparable to the technique of sending resumes (CVs) implemented by the studies described above, the authors showed that candidates who lived in more distant neighborhoods from Bogota's city center received fewer callbacks from employers. Employers may not want to hire individuals living farther from the workplace for at least three reasons (Gobillon et al., 2007). First, the time and effort involved in commuting may cause fatigue which can lead to lower job productivity. Second, wages being equal, a worker living in a more distant area will be less happy than a worker who lives closer to the workplace. This may increase the likelihood that the worker quits the job. The third reason is statistical discrimination based on the place of residence. This will be discussed in more detail below, as part of the second reason why the neighborhood of residence has a negative impact on work opportunities.

ECAF survey data from 2016 about the relevance of commuting costs to work in large Latin American cities are reinforced with evidence about the effective time to reach formal jobs in different neighborhoods. Pereira et al. (2020) show that, in the São Paulo metropolitan area, the biggest city in Brazil and one of the largest in the region, those who live in areas closest to downtown can access more than half of the formal jobs of the city in less than one hour using public transport. However, in peripheral areas, this figure drops to less than 20%.

Another piece of evidence on the importance of the costs of commuting to work comes from a recent study of the metro expansion in Mexico City by Zárate (2022). The author showed that the metro expansion improved access from peripheral areas to the city center, where formal jobs are concentrated, decreasing informal employment in further-away neighborhoods. This study suggests that those workers living in peripheral areas prefer to have lower-paying and more informal jobs closer to where they live, instead of formal

22. These magnitudes correspond to regression coefficients that are statistically significant at 1%. These coefficients were estimated by ordinary least squares, controlling for binary variables of city, age, and sex of the interviewee.

jobs far from their homes with high commuting costs.[23] This pattern implies higher informality rates among those who have shorter commutes within the periphery of large cities, a pattern that appears clearly in the 2017 ECAF survey. On average, in the cities in the ECAF survey, informality is 51% among those who commute less than 30 minutes and 38% for workers who commute more than 30 minutes. The same pattern was found for the self-employed: 45% for people who commute less than 30 minutes and 30% for those who commute more than 30 minutes to work.[24]

A second reason why the place of residence may affect labor market outcomes is employer discrimination based on the worker's neighborhood of residence. The 2016 ECAF survey revealed that 26% of employed and unemployed individuals alike mentioned that prejudices about their neighborhood lessened their chances of finding a job. Getting back to the types of discrimination presented in Box 4.2, employers engage in statistical discrimination when they assume that the residential neighborhood gives information about the average productive potential of the workers from that neighborhood. The high level of spatial segregation based on socioeconomic status, characteristic of Latin American and Caribbean cities, can be particularly favorable for the development of this type of mechanism.

A third and last reason why the place of residence may affect job prospects is that neighbors are a relevant source of job referrals. A study conducted in the United States for the city of Boston found evidence that referrals among neighbors increase the likelihood that they work at the same place (Bayer et al., 2008). Another study conducted in Argentina for the city of Cordoba also showed that job referrals lead to a higher employment rate among young neighbors (Berniell et al., 2020). Similar to the second reason in the paragraph above, the relevance of this third motive can become stronger in Latin American and Caribbean cities with contexts of high socioeconomic segregation.

Unequal protection against adverse employment shocks

Today's labor markets are highly dynamic. The number of jobs created and destroyed in one year on average in the five largest countries in the region is equivalent to 30% of existing formal jobs, i.e., 5 percentage points above the average in OECD countries (Haltiwanger et al., 2014). Part of this dynamism comes from the normal operation of the search and matching process.

23. This pattern is also consistent with evidence found by Franklin (2018) showing that subsidized transport in Addis Ababa, Ethiopia, helped young people in remote areas increase the intensity of their job searches and quit temporary jobs in favor of higher quality and more permanent occupations.

24. Even though informal employment and self-employment are closely related, the correlation between these two and the cost of commuting to the workplace holds when both variables are taken together, including when workers of the same city, sex, and age are compared (see Table A 4.3 in the Appendix).

Workers and companies leave less efficient matches behind and use new ones to improve their levels of production and income. However, another portion of this dynamism is associated with shocks suffered by specific companies, sectors, or even economies as a whole, that modify the demand for labor. There is excellent evidence in the region that labor demand shocks can be highly costly for workers, especially the less-educated and women (Dix-Carneiro, 2014; Dix-Carneiro and Kovak, 2017).

There are two mechanisms by which these labor demand shocks can have a very different impact based on the socioeconomic status of workers' families. The first one is that the socioeconomic status of the family of origin determines certain productive characteristics of workers, such as their human capital, which allow them to face labor demand shocks differently. The second mechanism refers to the dissimilar economic resources and networks of contacts that workers of different socioeconomic status have to face negative shocks. This second mechanism is particularly relevant given the lack of social protection in the region, especially regarding job loss protection (Álvarez et al., 2020).[25]

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The impact of negative economic shocks depends on the material and social reSources of the worker's family of origin

The spectrum of potential labor demand shocks that could impact intergenerational mobility is broad. For reasons of space, and to prioritize the most relevant topics for the region, the following analysis focus on two shocks. One concerns the impacts of technological change on labor demand. The other refers to the impact of macroeconomic fluctuations, which have a particularly strong effect on youth unemployment rates. This analysis is complemented by boxes on two recent shocks that impacted the region recently. Box 4.3 analyzes the impact of the changes in labor demand and labor market institutions that narrowed wage differentials by education level in the 2000s. Box 4.4, in turn, examines the potential effects of the economic consequences of the COVID-19 pandemic.

25. In a study using data from Finland, Kaila et al. (2021) found evidence that both mechanisms are relevant to explain the reason why the lower the income of the unemployed worker's parents, the stronger the effects of job loss.

Box 4.3
The fall in educational returns and its role in intergenerational mobility

Reduced wage differentials by workers' education level are one of the main explanations for the fall in income inequality experienced by the region in the first decade of the 21st century (Gasparini and Lustig, 2011). Assessing the impact of this reduction on intergenerational mobility is hindered by the lack of systematic regional databases containing information about the income of parents and their offspring. However, given the strong intergenerational persistence of education documented in Chapter 2, it is reasonable to expect that reduced wage differentials by education improved intergenerational mobility in terms of income.

This potential relation between reduced wage differentials by education level and intergenerational mobility in terms of income can be illustrated by an example. If two workers attained the same education level as their parents, one being complete primary school and the other complete tertiary education, and the wage differential between both education levels is 100%, in both generations the salary of the workers with a higher education level will double that of lower-educated workers. On the contrary, if the wage differential for the new generation decreases by half, the salary of the new generation worker attaining a high education level will be 50% more than that of a low-educated new generation worker. This reduced income difference between generations means that intergenerational mobility in terms of income has improved.

The importance of wage differentials by education level to explain intergenerational mobility in income has been examined to understand why the United Kingdom has less income mobility than Sweden (Björklund et al., 2017). Additionally, Corak (2013a) showed that countries with higher wage differentials by education level have reduced income mobility. In Latin America and the Caribbean, this topic is of particular importance because of the region's high levels of income inequality. Moreover, wage differentials by education have historically been high compared to other regions (Psacharopoulos and Patrinos, 2018).

Three potential causes can account for the reduction in wage differentials based on education level occurred during the early 2000s. The first two relate to the role played by the supply and demand of skills in the labor market. A higher supply of skills resulting from the expansion of education documented in Chapter 3, coupled with a lower relative demand as a result of the commodity boom, could have decreased wage differentials by education level. The third potential cause refers to labor policies and regulations that favored unskilled work to a greater degree, such as increases in minimum wages. Although, in general, it is recognized that all three forces played a role, evidence suggests that the change in labor demand was dominant (Ciaschi, Galeano, et al., 2021; Acosta et al., 2019). During the commodity boom in the early 2000s, the shift in the productive structure that favored agricultural exports could have improved the wage prospects for workers from less favored families and regions.

Technological shocks

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Technological change is impacting routine jobs, which are more prevalent among workers from families of middle socioeconomic strata

Phenomena such as artificial intelligence, robotics, and digitalization are impacting the forms of production, with heterogeneous effects on different types of jobs. High routine-intensive occupations could be the most adversely affected by technological change because they involve tasks that are more easily replaced with machines and algorithms (Autor et al., 2003). Traditionally, compensation for these jobs has ranked at the midpoint of salary distribution, including jobs such as office clerks and factory workers. Therefore, technological change "polarizes" labor demand. It increases the demand for both low-paying jobs, mainly in personal services, and high-paying jobs, including intellectual and abstract activities (Goos et al., 2014). Recent studies suggest that these jobs with a high manual component have typically been ways of climbing the social ladder for workers from families of low socioeconomic status. Thus, technological change could reduce their opportunities for upward mobility (Berger and Engzell, 2022; Guo, 2022).

RED 2020 showed a higher proportion of workers performing routine tasks in large Latin American cities compared to the US.[26] While this points to a greater risk for the region's workers in the face of technological change, the reviews of studies conducted for RED 2016 and 2020 showed that this change had not yet increased job polarization or reduced routine activities in the region's labor markets. Therefore, it is an aspect that should be monitored moving forward but its impact has not yet been strongly felt.

As seen in the section "Labor market outcomes and families' socioeconomic status in Latin America and the Caribbean", the types of occupation differ widely across the region according to the socioeconomic status of the family of origin. This has implications for the potential impacts of technological change on intergenerational mobility. Table 4.6 takes up the analysis in RED 2020 based on the 2019 ECAF survey. It presents the relationship between the type of occupation and the family background, including a classification of types of occupation into predominantly abstract, routine, or non-routine manual jobs.

The table shows that each of the three types of occupation can be associated with one of the three education levels attained by the mother. The proportion of individuals in occupations with a predominance of abstract tasks is 29 percentage points higher among workers whose mothers attained high-level education than among those with low-educated mothers. The presence of workers in jobs involving routine tasks is 3 and 9 percentage points higher than workers with mothers who attained low and high-education levels, respectively. Non-routine manual jobs are predominately held by workers with low-educated mothers.

The pattern of mid-level education being associated with routine tasks, low levels with manual tasks, and high levels with abstract tasks, has been extensively documented in relation to wages. The data in Table 4.6 shows that this pattern applies to the education of the mother and that it holds when comparing workers with the same education level. This association implies

26. See RED 2020 for details on methodology and results (Álvarez et al., 2020), pages 124-131.

that the erosion of routine-type jobs typical of modern technological change could lead to polarization not only in terms of income inequality but also social mobility. Therefore, the relative wages of workers of middle socioeconomic status would fall, while the prospects for social ascent via the labor market for those of workers of low socioeconomic background would become more limited.

Table 4.6
Occupational task content by the educational attainment of the mother

	Abstract		Routine		Non-routine manual	
Mid-level	6.5***	-0.71	2.6*	4.2***	-9.1***	-3.5**
High-level	28.6***	6.5***	6.2***	0.32	-22.3***	-6.8***
Worker's education	No	Yes	No	Yes	No	Yes

Note: The table exhibits regression coefficients estimated using least ordinary squares, where the dependent variable is a binary variable that indicates the type of task performed by the worker according to the classification in each column: abstract, routine, or non-routine manual tasks. Independent variables are binary variables that indicate the education level attained by the mother. "Low-educated mother" is the omitted variable. "Mid-level education" means complete primary and secondary school, while "High-level education" means incomplete tertiary or university education, or more advanced education. The coefficients show the difference stated in percentage points between the different education levels attained by the mother regarding the probability for the worker to perform each type of task, according to each column heading. Regression is controlled for binary variables of city and gender, and age is a continuous variable. Stars indicate the statistical significance of the coefficient under analysis: *** at 1%, ** at 5%, and * at 10%. The classification of occupations and the generation of indicators are based on Acemoglu and Autor (2011), and Hardy (2016). The cities included in the analysis are Asuncion, Bogota, Buenos Aires, Caracas, La Paz, Lima, Montevideo, Mexico, Panama, Quito, and Santiago de Chile.

Source: Authors based on O*NET Database 24.2 (O*NET Resource Center, 2020), ECAF 2019 (CAF, 2020), and Occupational Employment Statistics (US Bureau of Labor Statistics, 2018).

Macroeconomic shocks

●●
Youth unemployment increases long-term unemployment for workers from socioeconomically disadvantaged families

Evidence in developed countries shows that adverse employment conditions at the moment of entry to the labor market have lasting negative effects on workers' labor market outcomes (Oreopoulos et al., 2008; von Wachter, 2020). This could be particularly relevant in Latin America and the Caribbean, where macroeconomic shocks are often stronger and more frequent than in developed countries. Research by Leites et al. (2022) commissioned by CAF for this report shows that the 2002 macroeconomic crisis in Uruguay hindered the future labor market income of children whose parents suffered episodes of unemployment in the context of this crisis.[27]

In the 1991-2018 period, taking into account 18 countries in Latin America and the Caribbean, the maximum peaks in youth unemployment rates were observed in Argentina, Colombia, and Uruguay, with values exceeding 30% for both men and women. The minimums rates observed were around 3%, corresponding to

27. Using data from 15 Latin American and Caribbean countries, Berniell et al. (2022) show that macroeconomic crises have a negative impact on future employment for men, but a positive one on women's employment and income.

men in Bolivia and Mexico (see Table A 4.4 in the Appendix). For the average of the 18 countries, their lowest rate of youth unemployment in the period was 8.3% for men and 5.5% for women and their highest rates were 21% for men and 13.7% for women. This shows that countries experienced strong unemployment shocks in this period that impacted several generations of the region's workers at the beginning of their working lives.

Using Latinobarometer data for these same 18 countries, Alves and Varvasino (2022) assessed the extent to which unemployment shocks had differential impacts according to the socioeconomic status of the workers' families of origin.[28] Table 4.7 presents the main results of this exercise. It shows that in the case of a worker with low-educated parents, an additional percentage point of unemployment in the year in which that worker completes their formal education generates an additional 0.2 points of unemployment between year one and year ten of their working lives and an additional 0.1 points after the tenth year. However, initial unemployment conditions do not have a significant impact on workers with highly educated parents. These estimated values mean that a recession that increases the rate of youth unemployment by 5 points would raise the unemployment rate by 1 point during the 10 first years in the labor market for individuals with low-educated parents who entered the labor market during that recession.

Table 4.7
The effect of initial unemployment conditions on short, medium, and long-term unemployment

		Parents' education	
		Low-level	**High-level**
Years since completing formal education	1 to 5	0.19**	-0.03
	6 to 10	0.18***	0.00
	Over 10	0.10*	-0.04

Note: The table presents the coefficients of a regression estimated using least ordinary squares, where the dependent variable of the regression indicates whether the person is unemployed. Independent variables originate from the interaction between three binary variables that measure the years elapsed from the time when workers completed their education, the unemployment rate in the year when workers enter the labor market, and the education level of the respondent's parents. The regression is estimated using data from Latinobarometer 1998-2017. The coefficients show the increased probability of being unemployed resulting from one additional point in the unemployment rate when the individual completes formal education. Regression controls include country binary variables interacted with the survey year, and the respondent's sex, years of work experience, parents' education, and worker's education. "Low-educated parents" means incomplete secondary school or less, and "highly educated parents" means complete secondary school or higher. Stars indicate the statistical significance of the coefficient under analysis: *** at 1%, ** at 5%, and * at 10%. The countries included in the sample are Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela.

Source: Authors based on data from Latinobarometer and the World Bank (2022).

28. The empirical strategy consists in estimating a regression with fixed effects of country interacted with the survey year, in addition to controlling for sex, years of work experience, the individual's education level, and the parent's education level. The key independent variable in the regression is the interaction between the rate of youth unemployment in the country and the year in which the worker completed formal education with the parent's education level. The identification is based on the different initial unemployment conditions faced by different worker cohorts within the country. For further details on this exercise, see Alves and Varvasino (2022).

Box 4.4
The COVID-19 shock in labor markets and its potential impact on intergenerational mobility

The economic contraction caused by the COVID-19 pandemic had tremendous consequences for Latin America and Caribbean labor markets. At the lowest point of the decline in economic activity generated by the pandemic, drops in employment rates in the order of 20% were recorded in Argentina, Chile, and Colombia (Alves et al., 2021). These decreases were particularly severe among low-paid workers, young people, women, and less-educated workers, which could have negative consequences for the upward mobility prospects of the new generations of workers from low socioeconomic families.

Berniell and Fernández (2021) point to two reasons that explain the unequal impact of the COVID-19 shock on workers with different skills and dissimilar socioeconomic statuses. On the one hand, workers with lower skills are more numerous in occupations that are not suitable for remote work, such as domestic work and construction. On the other, these workers have limited access to the material resources necessary to work remotely, such as a computer, Internet connection, and sufficient space in their homes.

Public policies that favor intergenerational mobility

●●
Public policies can act in different areas of labor markets to improve intergenerational mobility

Policies can promote intergenerational mobility in labor markets through the three elements, mentioned in the Introduction, that configure the relationship between the socioeconomic status of the family of origin and labor market outcomes. First, policies that level the workers' productive potential. Second, policies that enable more equitable treatment in the labor market of individuals with different productive potential or certain characteristics that lead to labor discrimination. Third, policies that help people born into socioeconomically disadvantaged families to make better employment decisions. This section reviews policies that can remove mobility barriers regarding each of these three elements, particularly emphasizing those for which evidence has shown favorable effects among workers from lower socioeconomic levels.

The analysis below groups these policies into six sets: job training policies that improve the worker's productive potential; policies that help people search for a job and find one; policies that mitigate the effect of spatial disparities; policies against employment discrimination based on ethnicity and race; social protection policies; and labor regulations that foster greater equality. Table 4.8 summarizes how these six policy sets interrelate with the three elements mentioned in the above paragraph.

Even though the six policy sets are analyzed separately, many of these policies complement one another. For example, social protection policies that enable income transfers in situations of poverty or unemployment help workers participate in training and job search programs. In addition, they can also help them make risky migration decisions to overcome deep spatial inequalities. Moreover, training and job search programs can decrease labor market outcome inequalities based on ethnicity and race. Finally, these inequalities can also be reduced by labor regulations, such as minimum wages, that set wage *floors* for disadvantaged workers.

Table 4.8
Labor policies for greater mobility

	Policies					
	Training	**Job search**	**Ethnicity and race**	**Spatial**	**Social protection**	**Regulations**
Leveled productive potential	x	x	x	x	x	
Labor market operation	x	x	x	x	x	x
Better decisions	x	x		x	x	

Source: Authors.

Continuing education and training

Even though the fundamental human capital differences among workers develop before they enter the labor market, there are also learning opportunities during their work life. These are dissimilar for workers according to their family socioeconomic background, given the differences in labor participation, unemployment, types of occupation, and formal employment, which are documented in the section "Labor market outcomes and families' socioeconomic status in Latin America and the Caribbean." An unemployed worker, by definition, loses on-the-job training opportunities. Likewise, there are fewer training opportunities in low-complexity jobs and informal jobs, which, as shown, are more prevalent among workers from lower socioeconomic status families. In this context, on-the-job training policies play a fundamental role to offset these differences and improve intergenerational mobility.

On-the-job training policies throughout an individual's working life, paired with the policies that help people look for a job (analyzed in the second set of policies), are often grouped together as active labor market policies. In a systematization of available evidence, Escudero et al. (2019) show the

implementation of these policies in the region has had favorable effects on employment and informality, especially when targeting young people and women. Although active labor market policies have been viewed with pessimism in developing countries in the past (McKenzie, 2017), a series of recent important research works has found evidence in favor of their effectiveness (Abebe et al., 2021; Attanasio et al., 2017; Le Barbanchon et al., 2022).

On-the-job training and internship policies can be highly effective in improving career paths

In their review of 51 employment programs in the region, Escudero et al. (2019) report that more than 90% of the training programs included a component of education in the classroom, while more than 80% of these programs also had an on-the-job training component. Therefore, job training policies, in general, include educational content and practical on-the-job training.

Educational contents can include training in general productive skills, such as math and reading; specific productive skills for certain productive activities, such as welders or programmers, and soft skills, such as communication, time management, and teamwork. There is evidence that including sexual and reproductive health components in training programs for young women reinforces the positive educational effects (Bandiera et al., 2020). Recent data from a training program in Colombia suggests that the productive skills component is key to achieving short-term results, while soft skills training sustains results over time (Barrera-Osorio et al., 2020). Training duration can last from a few months to more than one year. Evidence seems to indicate that longer programs are more cost-effective (Alfonsi et al., 2020; Escudero et al., 2019).

The on-the-job training component plays a role both providing information about the worker's production capacity and as a form of human capital accumulation. On-the-job training provided by companies alone will not be enough, because the high employee turnover across companies means that those offering on-the-job training opportunities or investing in workers' training will not capture all the gains resulting from this effort (Acemoglu and Pischke, 1999). This justifies that public policies promote on-the-job training experiences and internship policies.

Evidence suggests that on-the-job training policies have been highly effective in the region to increase employment and formality, with a more limited improvement in income (Escudero et al., 2019). This potential to raise employment and the number of formal jobs is particularly valuable, given the high incidence of informal jobs in the region and the medium and long-term effects of unemployment among young people, documented in the section "Unequal protection against adverse employment shocks." In the region, some proven cases of successful programs are "Jóvenes en acción" (Young people in action) in Colombia (Attanasio et al., 2017), "Primer paso" (First step) in Argentina (Berniell and de la Mata, 2017), "Juventud y empleo" (Young people and employment) in the Dominican Republic (Ibarrarán et al., 2019), "Projoven" (Pro-young) in Perú (Ñopo, Saavedra-Chanduví, et al., 2007), and "Yo estudio y trabajo" (I study and work) in Uruguay (Le Barbanchon et al., 2022).

Training policies are particularly helpful for young people because they generate skills and information that will be useful throughout their career paths. However, these policies can also be beneficial for workers to better adjust to labor demand changes throughout their labor careers. This becomes especially relevant in the context of the contemporary discussion on the impacts of technological change, mentioned in the section "Unequal protection against adverse employment shocks."

Looking for and finding better jobs

The process by which workers look for a job and companies look for workers is characterized by huge asymmetries of information. Job search and matching costs are also very high. The main information asymmetry refers to companies lack of knowledge on workers' productive potential. Certificates of formal education completion and job referrals play a fundamental role in attenuating that asymmetry. Regarding job search and matching costs, workers have to read job ads, send applications, and go to interviews. Companies, in turn, have to read CVs, collect referrals, and dedicate staff time to interviews.

●●
Helping young people from low socioeconomic backgrounds look for a job can improve their future employment prospects

As described in previous sections, in the absence of information, the labor market can develop mechanisms that further contribute to intergenerational persistence. For example, job referrals among the worker's network of contacts replace the lack of information, as seen in the section "The role of the family in job referrals and labor decisions." That section also showed that the intergenerational transmission of information and the formation of expectations can influence workers' decisions. The sections "Ethnic and racial discrimination in labor markets" and "Intergenerational persistence of geographical location and labor market outcomes", in turn, reviewed how information problems can cause statistical discrimination based on ethnicity and race traits and the worker's residential neighborhood. In all these situations, firms may not recognize the productive potential of young people from disadvantaged backgrounds. As a result, policies that improve information have a role to play in order to improve intergenerational mobility (Abebe et al., 2021). As mentioned in the discussion about ethnic and racial discrimination, disadvantaged youth may have fewer incentives to invest in their own training due to information problems, which reinforces labor market outcome differences.

There are three specific policies that help the most disadvantaged young people look for and find better jobs. All these policies intervene in the job search and matching process, by reducing either the fundamental information asymmetry or job searching costs. Although each of these policies will be presented separately, they are often found together in practice.

The first of these policies, and, probably, the most traditional one, is the creation of job centers and labor exchanges that provide information to workers about vacancies and to companies about workers. As this policy decreases job search and matching costs for both parties, companies' demand for workers can increase, along with the effectiveness of the workers' job search. Evidence about these policies suggests positive impacts in OECD and Latin America

and Caribbean countries. However, in the latter, assessment efforts remain limited, partly because these policies have a lower incidence than in OECD countries (Escudero et al., 2019).

Even though, in principle, job centers and labor exchanges can be and are actually provided—many times, in practice—by private companies, the same strong information asymmetries that characterize the labor intermediation process can lead to labor exploitation against the least skilled workers by the companies that supply those intermediation services (Autor, 2009). Therefore, a typical solution is the direct intervention of the State with public employment offices. This does not mean that private actors should not operate, but the competition between these and a public sector player can help the former be more efficient and fairer. Moreover, as discussed in the section about "The role of the family in job referrals and labor decisions," many companies cannot afford to pay the cost of these private intermediation services due to the low productivity in the region. Therefore, the provision of these services by the state may be the only intermediation service available in low-productivity contexts.

Technological change may be a useful source to improve information and intermediation services. On the one hand, widespread Internet use, reduced data storage and processing costs, and the development of algorithms, all decrease the cost of providing these services. On the other, at present, cell phones allow most young people to access Internet-based intermediation services.

The second policy provides training and support to workers while they look for a job. This includes help with their resumes (CV) and training in general skills for job interviews, along with preparing for specific interviews. Abebe et al. (2021) have reported favorable evidence in support of these policies in a study conducted in an African city.

The third policy comprises skill certification. In this case, a public policy earmarks funds to assess the productive skills of workers in exchange for a certificate that will validate these skills. Due to the difficulties in formal education in many countries documented in Chapter 3, and given the inadequacy of information about workers' skills rooted in informal employment, this tool may be particularly helpful in the region.

Dealing with spatial inequalities

Section "Intergenerational persistence of geographical location and labor market outcomes" presented an analysis of two spatial dimensions where inequalities can restrict intergenerational mobility: on the one hand, the differences between cities, and between rural and urban areas, and on the other, differences among neighborhoods within the same city. Starting with the first of these two dimensions, two public policy paths emerge. Under the first one, the regions' productivity tends to equalize. Under the second one, people migrate from less productive to more productive areas.

Dissimilarities in productivity among regions result from differences in natural resources, transport costs, and agglomeration economies. These determinants of spatial differences in productivities can be very costly to change with public policies. Implementing differential productive policies aimed at leveling productivity across the areas is very costly, such as subsidizing large production projects in less productive zones. Therefore, it could not be profitable from the whole country's perspective. As an alternative, public policies can foster a homogeneous provision of basic public services, such as education, health care, urban infrastructure, public security, and social transfers, in all areas (World Bank, 2008). This approach presents two advantages vis-à-vis the development of large productive projects in zones that are lagging. On the one hand, it guarantees minimum wellbeing standards for the whole population in dimensions related to these infrastructures. On the other, the spatially equitable provision of basic infrastructure levels the conditions for each region to take better advantage of its productive potential, contributing to higher national productivity (Alves and López, 2021).

●●
Investments in urban transportation are key to reducing differences in job opportunities between neighborhoods

The migration of people from less to more productive areas is a force that has played a major role in the region's history. For example, at the beginning of this century, the São Paulo metropolitan area, one of the wealthiest in Brazil, had 4 million inhabitants who were born in the Northeast region, the poorest and one of the most populated in Brazil (World Bank, 2008). There are at least three ways public policy can improve the conditions for individuals to make autonomous migration decisions. The first one, and, maybe, the most important, is associated with the recommendation in the above paragraph to promote basic levels in the quality of life across cities and regions in a country. Mass household migrations to more productive areas can undermine living conditions in these locations and, thus, limit the possibility of additional waves of migration (Alves, 2021a; Imbert and Papp, 2020; Lagakos et al., 2022). Two other ways to favor migration, albeit quantitatively less than the first, are the provision of infrastructure that reduce transport costs for people to move between regions (Asher and Novosad, 2020; Morten and Oliveira, 2016), and the lowering of information barriers regarding job opportunities in the most productive areas (Baseler, 2019).

In terms of differences in opportunities within cities, policies can also, in principle, reduce productivity dissimilarities or facilitate greater movement between areas. As with differences among cities and regions, modifying the distribution of economic activity across space—in this case, within the same city—can be very costly and hard to implement. On the contrary, cities should have infrastructure policies and urban regulations in place that enable each city area to boost its productive potential.

Given the restrictions on public policies to modify the distribution of economic activity within a city, the key to equalizing opportunities in urban areas is bringing workers closer to jobs, especially for workers from low socioeconomic status. Direct and indirect actions can be implemented to achieve this goal. Direct actions include infrastructure investments and regulations on the financing and operation of urban transportation (see Box 4.5). Indirect actions, in turn, involve a broader set of policies that influence

workers' place of residence. These include housing supply and demand-side policies, generally implemented at the national level, and land-use policies, most often defined at the local level.[29] Finally, another way to bring workers of lower socioeconomic status residing in outlying neighborhoods closer to jobs in centric areas is through the policies mentioned in the previous subsection, focusing them on the residents of peripheral areas.

Box 4.5
Transportation infrastructure for mobility

Latin America and the Caribbean is a highly urbanized region. As such, urban policies are key to improving opportunity equality (Vargas et al., 2017). The accelerated urbanization of the region in the second half of the 20th century created large cities with inadequate infrastructure. Some of the largest cities, such as Panama City, Lima, Quito, or Santo Domingo, did not inaugurate their subway systems until well into the 21st century. (ECLAC, 2013).

The recent opening and expansion of mass transportation systems in different cities, along with improved availability of data, has led to the generation of evidence about the impact of these interventions. Zarate (2022) has shown the positive effects of constructing the Mexico City metro B Line regarding formal employment for the workers who live in areas close to the line. Similarly, Tsivanidis (2022) quantified a 0.5% increase in wellbeing in Bogota with the inauguration of the Transmilenio system.

Investments in mass urban mobility infrastructure are enormous due to size and complex geography of the main Latin American cities. However, evidence suggests that the magnitude of the benefits largely offsets investment and operation costs (Tsivanidis, 2022; Zárate, 2022). Tsivanidis (2022) has also shown that mobility interventions should be accompanied by consistent land use regulations and by policies to capture the surplus generated by infrastructure investments.

Reducing labor market outcome differences based on ethnicity and race

●●
Active labor market and public hiring policies should prioritize workers from disadvantaged ethnicities and races

As discussed in the section "Ethnic and racial discrimination in labor markets", a large portion of labor market outcome differences based on ethnicity and race do not respond to discrimination in the labor market, but rather to differences in the workers' productive skills. Along these lines, equity policies addressing human capital formation before individuals enter the labor market, analyzed in Chapter 3, along with active labor market policies, reviewed in this section, play a role in reducing the inequalities based on race and ethnicity observed in the region's labor markets.

29. RED 2017 presents a more detailed discussion of these policies (Vargas et al., 2017).

"Ethnic and racial discrimination in labor markets" also presents evidence about the existence of an employment discrimination component that explains part of the labor market outcome inequalities originating in these traits. Within this discrimination component, Box 4.2 introduced the concepts of statistical discrimination and preference-based discrimination. As statistical discrimination stems from an information problem, the policies mentioned in the section "Looking for and finding better jobs" can be useful. In addition to reducing the statistical discrimination by employers, these tools can decrease the potential inequality effect of job referrals within a person's network of contacts as a job search and matching mechanism.

The fact that on-the-job training and labor intermediation policies, described in "Continuing education and training" and "Looking for and finding better jobs", have a particularly favorable benefit for Afro-descendant and indigenous workers, warrants the use of affirmative action criteria in implementing these policies to help these worker groups.

Actions that have the power to change the preference-based discrimination component largely transcend labor market policies and comprise broad educational and cultural aspects. In terms of gender discrimination, there is evidence that interventions including education (Dhar et al., 2022), and cultural content in movies and television can effectively change preferences (La Ferrara et al., 2012; Riley, 2022). This suggests that interventions could be explored in these areas to fight against expressions of discrimination based on ethnicity and race that are deeply rooted in the culture of the countries in the region.

Regarding specific policies to reduce preference-based discrimination in the labor market, two alternatives can be considered. First, adopting measures that make ethnicity and race irrelevant in the job application process. For example, eliminating candidate photographs from CVs, or ensuring that the individuals screening job candidates do not have access to candidates' first and last names to avoid any ethnic or racial bias. These practices can be implemented as mandatory rules in the public sector and their use encouraged in the private sector.

The second alternative is to implement affirmative action or positive discrimination policies in hiring. In the public sector, these policies can take the form of minimum employment quotas for disadvantaged ethnic groups, already in place for Afro-descendants applying for government job openings in Brazil and Uruguay (ECLAC and UNFPA, 2021). These policies can adopt more flexible forms and operate as a guideline for the public sector. Their adoption by large private sector companies can also be encouraged.[30] Evidence about the impact of affirmative action programs on hiring is limited but suggests that these programs are effective in increasing employment among disadvantaged groups without incurring significant productivity costs (Holzer and Neumark, 2000).

30. See, for example, information published in BQ Prime by Wolf and Bhasin (2020).

Social protection

Social protection policies seek to reduce poverty and vulnerability through income transfers and the provision of health services (ILO, 2021). The main policies in this group are income transfers to poor families, unemployment and sickness insurance, pensions, and disability transfers.

Social protection policies play a significant role to promote the intergenerational mobility of wellbeing throughout people's lives. As such, they are addressed throughout the report. Focusing on labor markets, social protection policies can be said to have two fundamental functions in contributing to intergenerational mobility. First, having a basic income while unemployed allows workers to devote more time to training and the job search, along with making risky business and migration decisions. In fact, the successful active labor market policies reviewed at the beginning of this section often include an income transfer component as a critical success element. Second, income transfers and health services avoid and mitigate human capital losses caused by negative labor demand shocks, as discussed in the previous section.

It is known that labor markets in Latin America and the Caribbean are characterized by a high number of informal jobs. This means that a large portion of workers is not protected by contributory social security systems (F. Álvarez et al., 2020). Along these lines, each country should develop universal income transfer and healthcare protection programs. Their design must take into account two fundamental limitations that, in general, will limit the generosity of their coverage: the general fiscal restrictions in force in each country and work and formal employment incentives. In regard to the latter, they should ensure that income transfer is not sharply discontinued when the worker finds a formal job, so as not to discourage formal employment (Bergolo and Cruces, 2021).

Labor regulations

Basic labor regulations establish wages and what is known as employment protection. Wage regulations include minimum wage policies and more general wage-setting regimes, such as collective bargaining policies. The latter—employment protection—covers the regulation of dismissal procedures and severance pay, hiring modalities, probationary periods, and subcontracting.

In regard to minimum wage policies, evidence suggests that their impact on employment tends to be small or non-existent. Conversely, they do have a great potential for improving the wages of lower-paid workers (Broecke et al., 2017; Dube, 2019; Manning, 2021; Saltiel and Urzúa, 2017). Even though, in principle, the minimum wage legally applies only to formal workers, there is ample evidence that in the region its effects also extend to the informal sector (Neri et al., 2021; Pérez, 2020). This body of evidence means that minimum wage policies have the potential to favor intergenerational mobility by improving the income of workers from low-income backgrounds. Particularly, raising the floor of wage distribution can narrow wage gaps based on ethnicity and race (Derenoncourt et al., 2021; Derenoncourt and Montialoux, 2021).

●●

Minimum wages with adequate amounts based on the productivity of each country can promote mobility

Designing minimum wage policies in the region requires paying special attention to each country's context, especially in hard-hit post-pandemic labor markets, with a special focus on two essential elements. First, a major portion of the available evidence about minimum wage policy impacts comes from developed countries and reflects relatively modest wage increases. Historically, minimum wage levels in several Latin American and Caribbean countries have remained quite high compared to average country wages, well above the ratio observed in OECD countries (Álvarez et al., 2018). In the context of high minimum wages and low coverage in the informal sector, a minimum wage policy loses power as a tool to raise the salary of workers who are at the bottom of the wage distribution, distorting its purpose. Second, minimum wage policies should take into account the very pronounced differences in productivity between regions and cities within countries, documented above. Establishing a single minimum wage for all regions may hinder production and employment in lagging regions.

In terms of employment protection, on average, the region has slightly less stringent layoff protection policies than the OECD average, but much stricter hiring regulations. For example, the region has more restrictions in place for the type of tasks that can be performed under temporary employment agreements. This also applies to the number of times a limited-term employment contract can be renewed. Given the importance of the first job experience as a mechanism to accumulate training and generate information about the worker' productivity potential, it could be expected that more flexible job hiring conditions would favor the upward mobility of less experienced workers. However, little evidence exists to prove it. It would be beneficial to have rigorous evaluations on more flexible hiring processes.

Key messages

1 The socioeconomic status of the family of origin strongly conditions labor participation, unemployment, wages, and informality for Latin American and Caribbean workers. Different labor market outcomes according to the socioeconomic status of families are observed even among workers with the same education level and skills. These differences are particularly sharp among women.

2 One in five workers in the region found their current job with the help of their family. Among workers with the same education level, that proportion does not vary with the family's socioeconomic status. This represents a barrier to intergenerational mobility because families of higher socioeconomic status can access better referrals.

3 The influence of the family of origin on employment is particularly relevant among business owners: more than one out of five manages an inherited business. This proportion exceeds one in three among individuals with highly educated parents.

4 Labor markets contribute to the intergenerational reproduction of the historical disadvantages suffered by Afro-descendant and indigenous groups in the region. Labor discrimination and a higher presence of Afro-descendants and indigenous people in less productive sectors and companies help explain this fact.

5 Wages in rural areas are 40% lower than in urban areas. A similar gap exists between lower and higher-productivity cities. This means that employment opportunities are very different for workers from rural families or low-productivity cities.

6 Urban mobility and housing deficits mean that workers from peripheral neighborhoods in large cities have fewer opportunities to access quality jobs.

7 The lack of effective social protection policies to face unemployment means that the socioeconomic status of families conditions the ability of workers to cope with adverse labor market shocks.

8 Workers from families of low socioeconomic status are more exposed to the negative effects of technological change. They were also hit harder by the economic consequences of COVID-19 and the multiple macroeconomic crises in recent decades.

9 Public policies can act in four general areas to create labor markets that promote greater intergenerational mobility. In each, there are both low-cost opportunities and structural requirements that require a larger allocation of funds.

10 Active labor policies include training, internships, and job search assistance. Evidence on the success of these policies suggest that they should receive more public funding and focus on disadvantaged populations, such as Afro-descendants, indigenous people, and residents of peripheral neighborhoods.

11 Reducing inequalities between rural and urban areas requires providing basic infrastructure across regions for maximum productive development. Information interventions, internships, and affordable housing can support migration to more productive areas.

12 Given the very high rate of urbanization in the region, there is great potential for policies that equalize job opportunities between city neighborhoods. This includes investments in mass public transportation to reduce commute times, but urban planning and housing policies also have a role to play.

13 Universal social protection against unemployment provides coverage for workers and their families against adverse shocks: people can devote more time to training and job searches. Regulations on wages and employment protection are powerful tools to improve the labor market outcomes of disadvantaged populations.

Appendix

Table A 4.1

Activity and unemployment differentials between individuals with low-educated parents and those whose parents attained mid-level or high-level education, by gender, 1998-201

Country	Parents' education	Activity				Unemployment			
		Man		Woman		Man		Woman	
		Basic	+Education	Basic	+Education	Basic	+Education	Basic	+Education
Argentina	Mid-level	1.7*	1.5	6.9***	0.7	-2.5**	0.3	-2.5*	-0.5
	High-level	-1.1	-0.9	19.3***	3.8	-4.7***	0.4	-5.6***	-0.7
Bolivia	Mid-level	-2.8***	-1.2	3.9**	0	0.4	0.1	2.6**	2.5**
	High-level	-5.3***	-3.4**	6.6***	-2.7	2.6**	2.5**	5.5***	5.2***
Brazil	Mid-level	0.8	0.8	4.0***	-2.3	0	1.2	-1.4	0.2
	High-level	-1.5	-1.3	10.0***	-2	-0.6	1.9	-6.3***	-2.7
Chile	Mid-level	0.5	0.2	11.8***	4.6***	-2.2***	-1	-2.2*	-1
	High-level	-2.4*	-2.2	22.9***	2.9	-2.4**	-0.5	-5.3***	-3.2*
Colombia	Mid-level	-2.5***	-1.7**	8.8***	3.2**	-0.4	0.7	-0.3	0
	High-level	-5.4***	-5.1***	17.7***	2	-2	0.5	-7.5***	-6.2***
Costa Rica	Mid-level	1.5	1.8*	3.1**	-1.1	-2.2**	-0.7	-2.9*	-1
	High-level	-2.2	-0.5	21.8***	5.8**	-0.7	2.2	-6.0**	-2.7
Dominican Republic	Mid-level	0	-0.3	5.1**	-0.1	-0.1	0.5	-0.5	0.8
	High-level	-0.4	-0.4	22.7***	13.8***	1.8	2.7	-1.3	1.4
Ecuador	Mid-level	-0.6	-0.7	5.9***	0.6	-0.1	0.3	-0.4	-0.1
	High-level	-5.6***	-5.4***	11.7***	-1.3	1	1.8	-0.4	0.4
El Salvador	Mid-level	-3.2***	-1.7	7.6***	0.2	0.7	1.8	-0.2	1.2
	High-level	-6.1***	-4.7**	11.8***	-0.5	-3.8**	-0.2	1.3	3.5
Guatemala	Mid-level	-0.2	-0.2	7.5***	1	2.1**	2.7***	2.6**	2.4
	High-level	-3.9	-3.7	10.8***	-3.4	-1.3	0.4	-2	-2
Honduras	Mid-level	-1.4	-0.7	8.5***	2.6	-1	-0.2	0.7	2.2
	High-level	-3.7	-2.5	15.1***	-0.3	2.1	4.2	4.9	8.0*
Mexico	Mid-level	0.2	1.1*	8.8***	5.0***	-1.3**	--1.4**	-1.6*	-2.4**
	High-level	-1.4	0.6	18.4***	7.8***	-2.8***	-2.6**	-2.9**	-4.5***
Nicaragua	Mid-level	-1.1	-0.4	8.5***	2.8*	0.9	0.4	-0.8	-0.8
	High-level	-4.6***	-3.6*	11.9***	-0.9	-0.2	-0.4	1.9	2.7
Panama	Mid-level	2.0**	1.7*	11.4***	5.0***	-0.7	1	-1.2	0.3
	High-level	1.7	1.6	23.4***	10.2***	-1.8	0.5	1.3	4.6
Paraguay	Mid-level	0	1	11.7***	4.1**	0.3	1	-3.6***	-2.2*
	High-level	-0.5	1.4	14.1***	-2	-1.3	1.3	-7.1***	-3.9*
Peru	Mid-level	-2.7***	-1.3*	4.3***	-1.3	-1.4**	-0.9	-1.5	-2.5**
	High-level	-6.1***	-3.8***	16.2***	2.1	-0.9	-0.1	-1.8	-2.2
Uruguay	Mid-level	4.1***	3.8***	9.4***	4.6***	-2.7**	0.4	-2.9*	-0.3
	High-level	1.8	1.5	21.3***	9.2***	-5.0***	0.5	-9.6***	-3.1
Venezuela	Mid-level	-2.3**	-1.8*	4.2***	0	-1	0.2	-1.4	-1.2
	High-level	-5.4***	-4.3***	15.8***	6.0**	-0.9	1.4	-2.4	-1.7

Note: The reported coefficients result from ordinary least squares regression, where the dependent variable is stated in the column and the independent variables are a group of controls and the education level attained by the mother. The results apply to individuals aged 25-65. The first group of controls, in the "Basic" column, comprises sex, age, respondent's country, and year of the survey. The second group of controls, in the "+Education" column, additionally includes the respondent's education. The "parents' educational attainment" variable measures the highest level of education attained by the father or mother. "Low-educated parents" means that the highest education level attained is incomplete primary school; "Parents who attained mid-level education" means that the highest education level attained by the parents is complete secondary school. Stars indicate the statistical significance of the coefficient under analysis: *** 1%, ** 5%, * 10%.

Source: Authors based on data from Latinobarometer.

Table A 4.2
Differentials regarding the complexity of occupations by the mother's education level

	Low complexity			High complexity		
Mother's education level						
Mid-level education	-10.2***	-5.6***	-4.8***	9.2***	3.1***	2.7**
High-level education	-25.6***	-8.6***	-7.5***	34.6***	9.5***	8.8***
Number observed	8.207	8.205	8.205	8.207	8.205	8205
Controls	Basic	+Education	+Skill	Basic	+Education	+Skill

Note: The reported coefficients result from ordinary least squares regression where the dependent variable, in the first two columns, is a binary variable that indicates whether the individual has a low-complexity job and, in the last two columns, a binary variable that indicates whether the individual has a high-complexity job. Independent variables are binary variables that measure the mother's educational attainment. Basic controls are binary variables of gender, age, year, and country, while "+education" controls add the individual's education level. The binary variables of the mother's educational attainment indicate "mid-level education" for a level between complete primary and secondary school, "high-level education" to reflect incomplete tertiary or university education, or above. The variable "low-level education" is the omitted variable. The complexity variable has three values and embeds the worker's occupational category: "low-complexity occupations" include craft and related trades workers, plant and machine operators, assemblers and elementary occupations; "medium-complexity occupations" include members of the Armed Forces, administrative employees or administrative support staff, service workers and shop and market sales workers, and skilled agricultural, forestry and fishery workers; "high-complexity occupations" include corporate managers, general managers and senior government officials, professionals, and technicians and associate professionals. The cities included in the sample are Asuncion (only 2021), Bogota, Buenos Aires, Caracas (except for 2021), La Paz, Lima, Montevideo, Mexico, Panama, Quito, and Santiago de Chile (only 2017). Skill is measured as a percentage of right answers to a set of logical and math questions. Stars indicate the statistical significance of the coefficient under analysis: *** 1%, ** 5%, * 10%.

Source: Authors based on data from ECAF surveys (CAF, 2016, 2017, 2018, 2022).

Table A 4.3
Commute time to the workplace by city, occupational category, and informal employment

	Commute more than 30 minutes			Commute in minutes		
Bogota	15.9***	17.0***	17.1***	8.4***	9.7***	9.5***
La Paz	8.6***	7.5**	10.1***	5.8***	5.8***	7.0***
Lima	12.6***	10.9***	13.1***	5.6***	5.1**	6.1***
Mexico	38.9***	37.8***	38.6***	24.8***	24.8***	24.7***
Montevideo	-4.4	-3.7	-4.6	-4.3**	-4.1**	-4.4**
Panama	17.3***	17.4***	17.9***	16.3***	16.3***	16.8***
Quito	10.6***	12.1***	12.9***	5.6**	7.4***	7.8***
São Paulo	3.3	4.6	4.1	-1.0	-0.0	-0.1
Santiago de Chile	17.5***	16.6***	16.6***	7.7***	6.9***	7.0***
Formal employment	15.9***		9.8***	9.5***		4.1***
Male	0.9	-1.7	-0.7	0.6	-1.3	-0.8
Owner		-2.4	-5.1		-5.1**	-5.9***
Private sector wage earner		20.4***	15.9***		15.3***	13.5***
Public sector wage earner		12.5***	7.6**		9.5***	7.4***
Observations	4,542	4,584	4,542	4,542	4,584	4,542

Note: The reported coefficients result from ordinary least squares regression. All regressions include controls by binary variables of sex and age. Buenos Aires is the binary variable of city that is omitted in all regressions. The omitted variable in the occupational category is "self-employed." "Longer than 30 minutes" is a binary variable. "Formal employment" is a binary variable of 1 if the individual or the employer contributes to the retirement system. Stars indicate the statistical significance of the coefficient under analysis: *** 1%, ** 5%, * 10%.

Source: Authors based on data from ECAF surveys (CAF, 2018).

Table A 4.4
Youth Unemployment in Latin America and the Caribbean, 1991-2018

	Men (%)			Women (%)		
	Lowest	**Average**	**Highest**	**Lowest**	**Average**	**Highest**
Argentina	14.2	22.9	40.1	14.9	29.3	45.9
Bolivia	2.5	4.8	6.7	4.5	7.3	8.6
Brazil	9.9	14.7	25.7	14.0	22.0	33.2
Chile	9.2	16.5	23.5	11.5	22.8	31.5
Colombia	10.3	17.6	31.0	20.9	28.5	44.5
Costa Rica	6.9	13.9	28.4	9.5	20.1	36.8
Dominican Republic	6.9	9.3	12.2	15.8	20.6	27.2
Ecuador	6.4	7.9	10.7	7.9	11.7	14.1
El Salvador	7.7	11.9	18.0	7.2	10.3	12.9
Guatemala	3.6	4.2	5.4	5.0	6.4	10.1
Honduras	4.2	6.3	9.3	6.1	11.6	21.2
Mexico	3.1	6.7	9.5	5.9	9.1	15.7
Nicaragua	5.4	9.3	11.2	9.2	13.4	16.8
Panama	4.9	6.5	10.4	8.4	11.0	17.5
Paraguay	7.2	10.7	13.2	11.6	17.9	22.6
Peru	5.4	8.1	9.7	6.1	8.1	9.6
Uruguay	14.9	21.1	34.1	22.0	30.3	46.0
Venezuela	11.4	15.2	23.4	11.2	21.4	35.8
Average	**7.4**	**11.5**	**17.9**	**10.7**	**16.8**	**25.0**

Note: The unemployment rate corresponds to young people 14 to 25 years old.
Source: World Bank data (2022).

The intergenerational persistence of wealth and its mechanisms

5

The intergenerational persistence of wealth and its mechanisms[1]

Introduction

Under equality of opportunity, two individuals with similar skills making a similar effort are expected to reach comparable levels of accumulated wealth and welfare in their lifetime. Reality is quite the opposite. Paternal and maternal wealth has a very important influence on their descendants' wealth and wellbeing.

Housing is a good example. In 2021, the probability of anyone becoming a homeowner in the main Latin American and Caribbean cities was around 12 percentage points for people whose parents owned a home, than for those whose parents did not. The same can be said of ownership of other assets and wealth. In short, the offspring of the rich are more likely to be rich and the offspring of the poor are more likely to be poor: wealth distribution has an intergenerational component. Moreover, this persistence of wealth across generations is larger at both ends of the distribution spectrum which favors the formation of élites and of intergenerational poverty traps.

Why does this matter? Throughout the report, it has been argued that high levels of equality, mobility and social inclusion are desirable by themselves but also because they favor economic growth, social cohesion and institutional quality. (Chapter 1). If inequality is to be reduced, its deep roots must be understood, which necessarily requires tackling the intergenerational nature of the problem of inequality in the distribution of wealth.

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1. This chapter was written by Fernando Álvarez, with research assistance from Victoria Carbonari.

The report has already explored the mechanisms behind the intergenerational persistence of wellbeing based on human capital accumulation (Chapter 3) and the labor markets (Chapter 4). Why, then, should a whole chapter be dedicated to the intergenerational persistence of wealth? First, wealth may be the best proxy for household wellbeing. Assets enable a flow of consumption and income, and offer protection against situations such as retirement, unemployment, and health problems. Second, wealth distribution is highly unequal, even more so than income distribution.[2] Indeed, the concentration of wealth seems to have been growing in recent decades (Alvaredo et al., 2018). Finally, although part of the persistence of wealth originates in persistence of educational levels and labor outcomes, there are channels beyond formal education and the labor market that explain the persistence of wealth across generations.

If inequality is to be reduced, its deep roots must be understood which necessarily requires tackling the intergenerational nature of the problem of inequality in the distribution of wealth

This chapter will explore the mechanisms behind the intergenerational persistence of asset ownership and accumulation in Latin America and the Caribbean, beyond those related to educational and work performance.

Information availability makes the above a challenging goal. As described in Chapter 2, an ideal scenario to examine intergenerational mobility requires information about the assets and wealth of individuals, their parents, and even earlier generations. Unfortunately, comprehensive asset and liability databases are very few in the region, even more so when considering information about the family's socioeconomic background.

Despite this limitation, this chapter will provide regional evidence about the degree of concentration of wealth and the composition of assets according to the household socioeconomic status. In addition, it will produce new evidence on intergenerational mobility measures in real asset ownership, such as housing, business assets, and others. Moreover, it will provide information on some of the main channels that can explain this phenomenon. Finally, from an intergenerational perspective, it will discuss public policies that can improve asset accumulation to promote equal opportunities, increase equality in household wellbeing levels, and enhance economic productivity and growth.

These policies face major challenges. They must strengthen the information available on people's wealth, among other prerequisites. In addition, this type of policy must provide an appropriate balance between promoting equality and maintaining incentives for exerting high levels of effort and for skills accumulation. Admittedly, a significant part of wealth levels is merit-based, and the possibility of increasing net wealth is a strong incentive for individual effort, with the implications this has for economic development. However, part of inequality and low social mobility originates in circumstances unrelated to merit. As a result, there is room for policy.

2. For example, according to the 2022 World Inequality Report, the richest 10% currently takes 52% of global income, but owns 76% of all wealth. (Chancel et al., 2022).

An assessment of household wealth in Latin America and the Caribbean

This section highlights some stylized facts for the region about the concentration of wealth, the portfolio composition, and asset ownership by socioeconomic status, along with the intergenerational persistence of asset ownership.[3]

Concentration of wealth

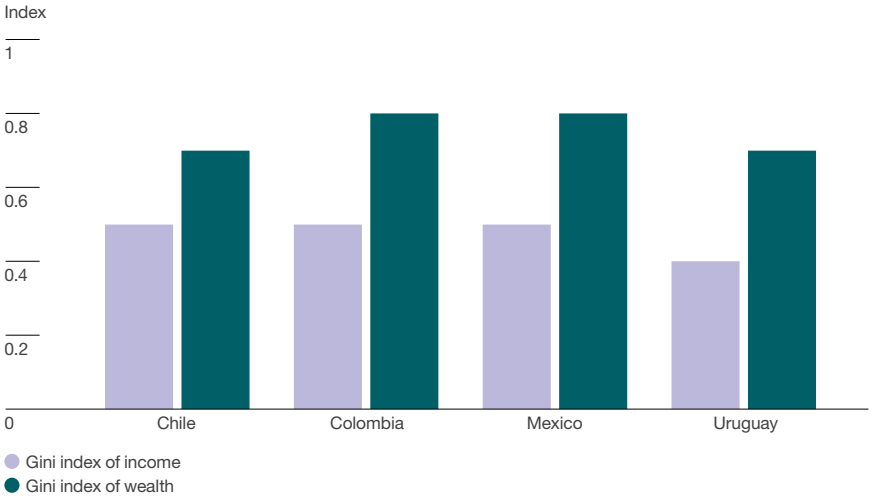
Fact No. 1: Wealth is highly concentrated, even more so than income.

Chapter 1 presents income and concentration of wealth metrics for a broad sample of countries that confirm this circumstance. However, for a large portion of countries, including those in Latin America and the Caribbean, concentration of wealth measures is not obtained directly from national statistics sources. They are the result of an imputation process.

This chapter uses direct measures of concentration of wealth in the region based on household surveys from four countries: Chile, Colombia, Mexico, and Uruguay. Evidence is based on research developed for this report by Gandelman and Lluberas (2022). According to their research, as shown in Graph 5.1, the Gini index for total assets in Chile is close to 0.70, which contrasts with its 0.48 Gini index for the distribution of current household income. In Uruguay, these values are 0.74 and 0.42, respectively, while in Colombia the figures rise to 0.79 and 0.48.

3. The lack of information availability posed significant challenges for this assessment (see Chapter 2). Given the lack of data on individual wealth and intergenerational linkages in Latin America and the Caribbean, this assessment is limited to just a few countries in the region.

Graph 5.1
Income inequality vs. wealth inequality



Note: The graph presents the Gini index of income and wealth. Estimates are based on research by Gandelman and Lluberas (2022), who used financial household surveys.

Source: Authors based on Gandelman y Lluberas (2022).

The concentration of wealth is not only high, but has increased since the mid-80s, at least in the countries surveyed by Alvaredo et al. (2018), where the wealth in the hands of 1% of the richest population rose, on average, from 28% in 1980 to 33% at the end of the second decade of 21st century.[4] Several phenomena give rise to these changes in wealth distribution over time, including political aspects, income concentration, and savings pattern changes, along with asset price adjustments.[5]

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The concentration of wealth is not only high but has been growing since the mid-80s

Fact No. 2: Some assets are more concentrated than others.

In the countries studied by Gandelman and Lluberas (2020), financial assets are more concentrated than real assets (see Panel A in Graph 5.2). However, within real assets, the wealth linked to business ownership is the most concentrated in the countries of the region, with a Gini coefficient between

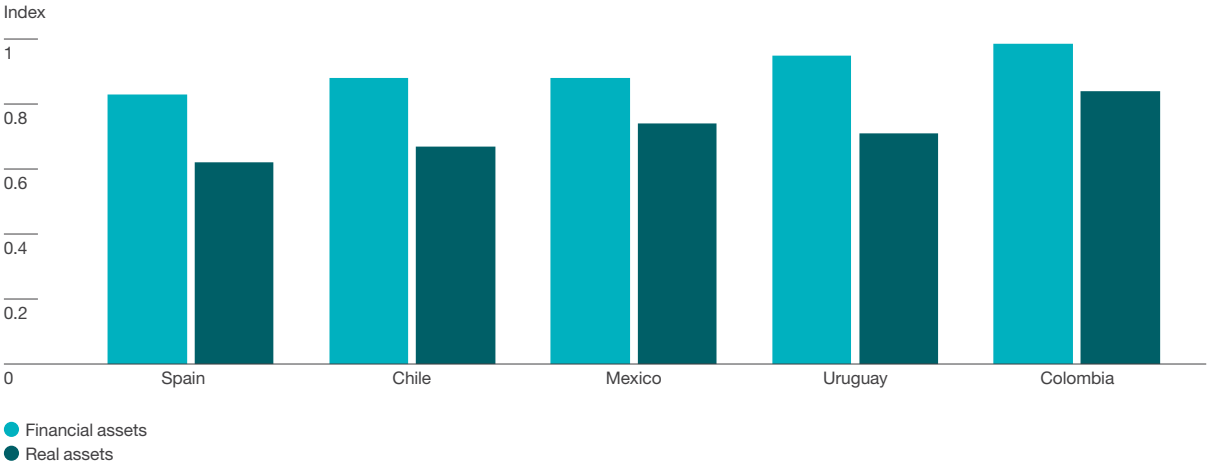
4. The countries included in the concentration of wealth analysis are China, France, Russia, Spain, the US, and the UK. The trend applies to the five countries studied.

5. Recent evidence has shown that asset price adjustments are very important drivers of change in the value of people's wealth. For example, focusing on the US, Kuhn et al. (2020) point out that from 1971 to 2007 the gains from asset appreciation of the poorest 50% of the population accounted for almost 100% of their wealth gains. For the middle wealth group, this percentage decreased to 40%, while it dropped to slightly below 50% for the wealthiest 10% of the population. This research highlights the differential role played by housing and financial asset appreciation according to socioeconomic status. For the poorest half of the population, nearly USD 9 out of USD 10 gained from appreciation originated in fluctuations in house prices. For the middle wealth group, this figure dropped to USD 3 out of USD 4, while for the wealthiest 10% of the population, it fell to approximately USD 1 out of USD 5.

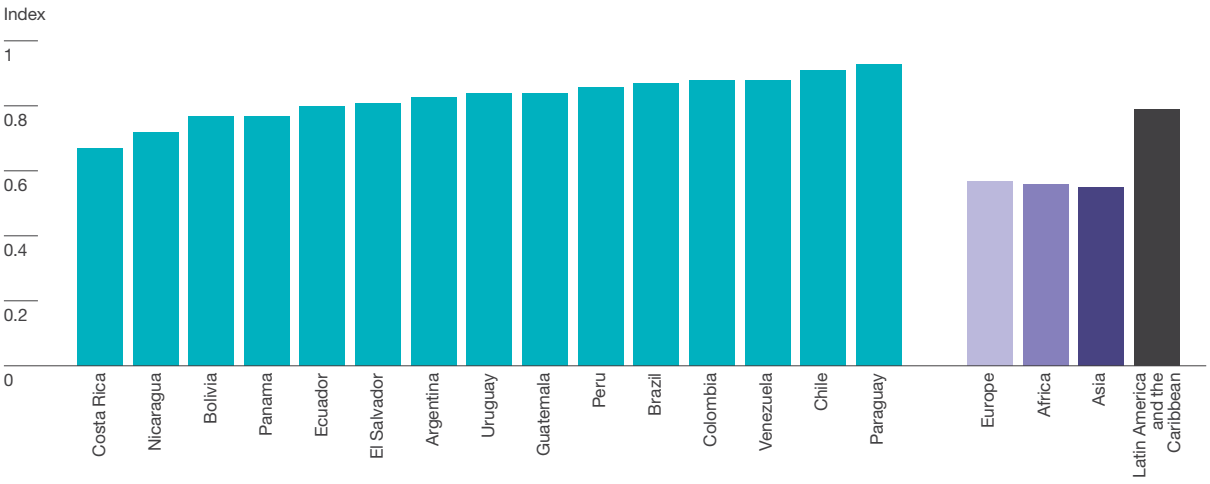
0.98 and 0.99. Concentration of land ownership presents the highest levels in Latin America and the Caribbean, with a Gini coefficient of 0.79, well above Europe (0.57), Africa (0.56), and Asia (0.55) (see Panel B in Graph 5.2).

Graph 5.2
Concentration of wealth by type of asset

Panel A. Gini indices of the distribution of financial assets and real assets



Panel B. Gini index for land distribution



Note: The graph reports the Gini coefficients of the distribution of different assets. Panel A shows the Gini indices of financial and real assets estimated by Gandelman and Lluberas (2022) for Chile (2017), Colombia (2018), Mexico (2019), Spain (2017), and Uruguay (2013/14). Panel B presents the Gini index of land distribution estimated by Guereña (2016) for Argentina (1998), Bolivia (1984), Brazil (2006), Chile (1997), Colombia (2009), Costa Rica (2001), Nicaragua (2001), Ecuador (2000), El Salvador (2001), Guatemala (2003), Panama (2001), Paraguay (2008), Peru (1994), Uruguay (2000), and Venezuela (1997). The bar for Latin America and the Caribbean includes more countries than those reported in the bars to the left.

Source: Authors based on data from Guereña (2016), and Gandelman and Lluberas (2022).

Composition of wealth and ownership of assets by socioeconomic status

Fact No. 3: The composition of household portfolios changes with the level of wealth. Housing is the main asset for most of the households

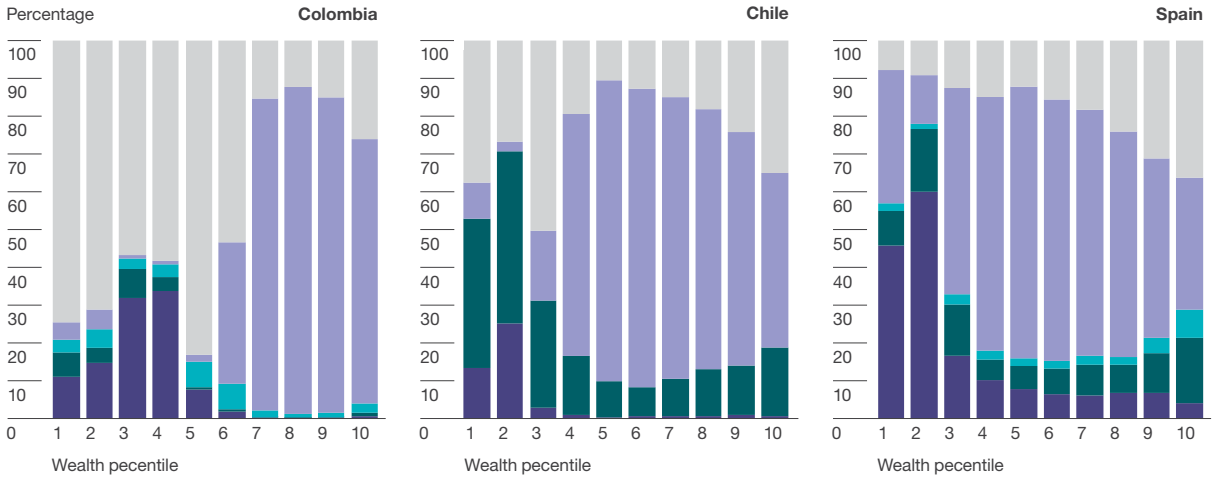
Graph 5.3 shows that the overall bulk of the poorest population's wealth falls into the "other real assets" category, mostly including durable goods, and "liquid financial assets," particularly cash. For most of the population—excluding the poorest—, the home is by far the most important asset. Housing wealth is also the major component among the wealthiest 10% of the population, although with a smaller incidence. A moderate increase in the importance of total financial wealth is also observed (liquid assets plus other financial assets) in the wealthiest deciles. The share of total financial wealth in some countries presents a sort of U-shape, i.e., it is relatively elevated for the bottom and top deciles, but lower for intermediate deciles. However, among the wealthiest deciles, the relative importance of non-liquid financial assets (different from deposits and cash) stands out.[6] Assets related to owning a "business" are not only important for the wealthiest. In countries such as Mexico, and, to a lesser extent, Colombia, they are also present among the poorest, possibly because of the importance of microenterprises in those countries.

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For most of the population, housing is by far the most important asset

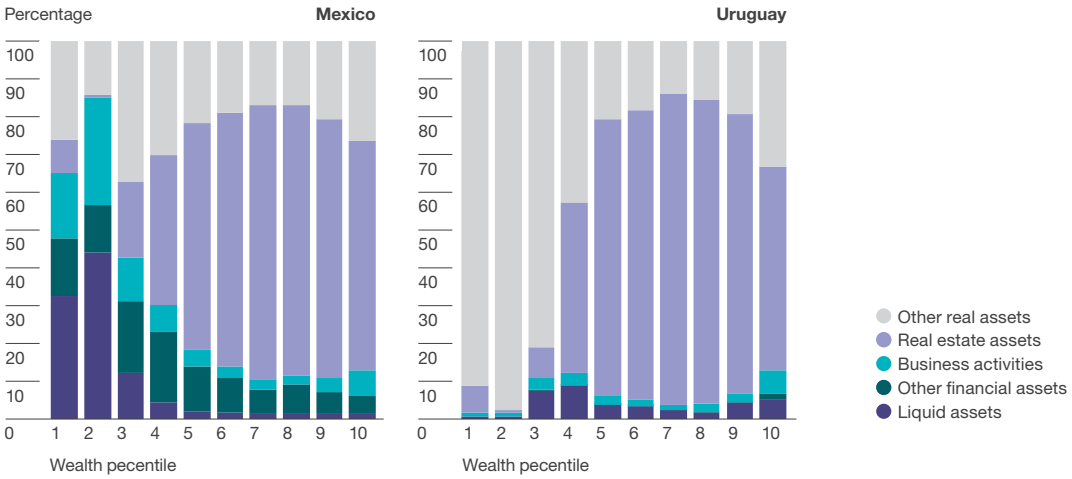
Graph 5.3

Wealth composition by socioeconomic status



Continued on next page →

6. Alvaredo et al. (2018) examined these patterns for developed countries using administrative records. In their study, this U shape shows more clearly, especially regarding the strong growth of other financial assets for the top income group.



Note: The graph shows the percentage of wealth represented by each type of asset (real, real estate, financial, business, or liquid), according to the wealth distribution decile in which individuals are grouped. The countries included in the analysis are Chile (2017), Colombia (2018), Mexico (2019), Spain (2017), and Uruguay (2013/14). For more information about the composition of the different assets, see the source.

Source: Authors based on data from Gandelman y Lluberas (2022).

Homeownership and housing quality

Fact No. 4: Homeownership rates are high in the region, but a gap in homeownership between the rich and the poor has emerged in recent decades.

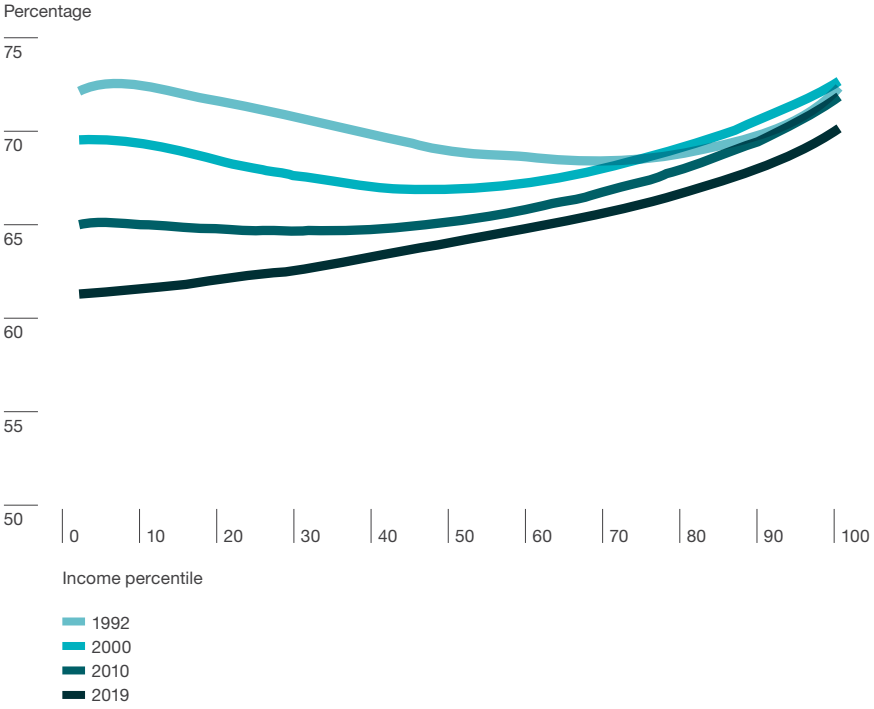
According to Gasparini, Bracco et al. (2021), nearly 65% of Latin Americans own the home where they live. This figure is comparable with those in developed economies.[7] However, this percentage has been declining in recent decades: 69.7% in 1992, 68.3% in 2000, and 66.2% in 2010. While this decline holds across all income levels, it is more marked in low-income deciles. Graph 5.4 shows that the lighter-colored line (1992 values) is above the darker line (2019 values). In addition, the gap between both lines is wider to the left side of the horizontal axis, which represents the poorest families. In 1992, the average percentage of homeowners was similar in income deciles 1 and 10 (around 71.8%). In contrast, in 2019, the gap between these deciles had increased by almost 8 percentage points. This resulted mainly from a strong decline in the ownership rate of the bottom income decile. In fact, the average homeownership rate fell 19% from 1990 to 2019, with a 39% drop in the poorest decile but less than 10% in the wealthiest.

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The average homeownership rate fell 19% from 1990 to 2019, dropping 39% in the poorest decile but less than 10% in the wealthiest

7. The homeownership rate reported for the United Kingdom was close to 68% in 2015 (Blanden et al., 2021), while for the United States it was 65.5% in 2021 (U.S. Census Bureau, 2021).

Graph 5.4
Homeownership rate by income percentile



Note: The graph shows the proportion of homeowners by income percentile in 1992, 2000, 2010, and 2019. Household survey data from Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Honduras, Mexico, Panama, Paraguay, Peru, and Uruguay were used. These surveys were processed using the Socio-Economic Database for Latin America and the Caribbean (SEDLAC) protocol, a joint project between CEDLAS, from the National University of La Plata, and the World Bank.

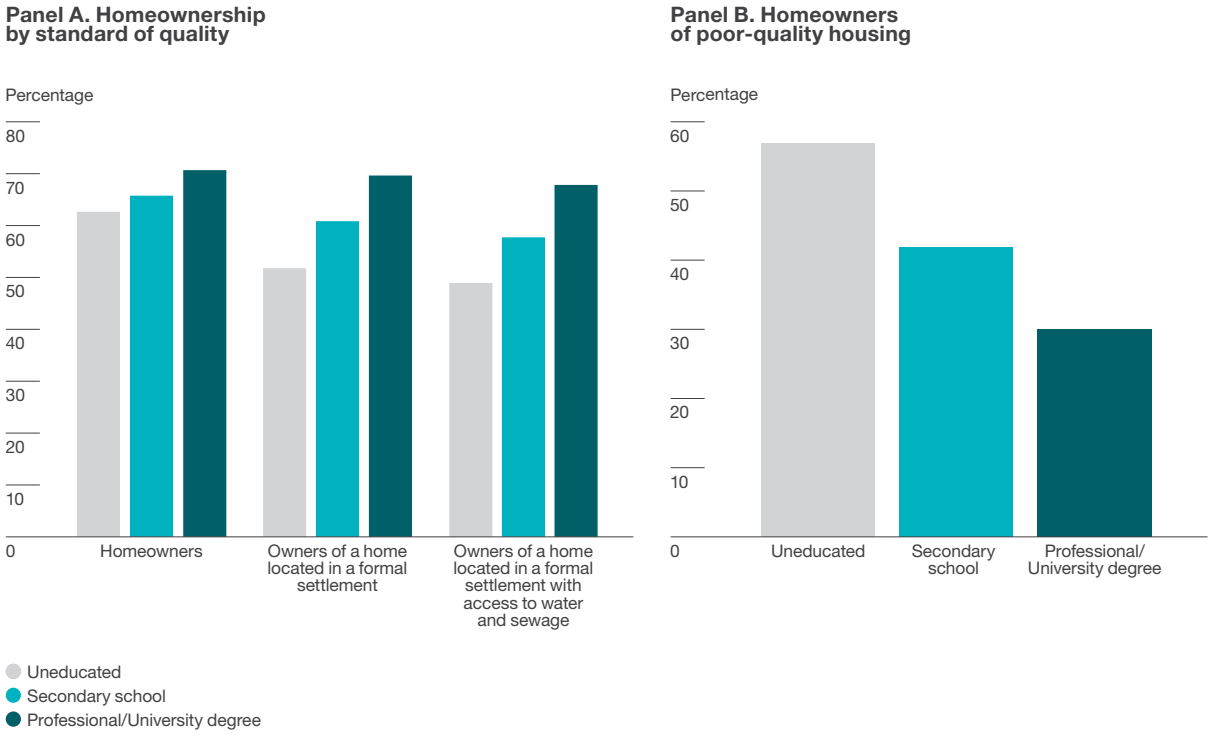
Source: Ciaschi et al. (2022).

Fact. No. 5: Housing quality and formal housing ownership display a strong socioeconomic gradient.

Graph 5.5 clearly shows the socioeconomic gradient of housing quality. It presents homeownership that meets standards such as the home not being in an informal settlement and having access to water and sanitation services (Panel A).[8] The graph also includes the percentage of people whose home ranks among the bottom 25% of a self-reported quality index (Panel B). In both cases, information is presented by individual educational attainment, as a measure of socioeconomic status.

8. In the past 40 years, the number of households with access to some basic services such as electricity, water, and sanitation has largely increased. This improvement has been more significant in the poorest deciles (Gasparini, Bracco et al., 2021). However, a gap persists, as suggested by the graph for the specific case of homeowners.

Graph 5.5
Quality of housing by educational attainment



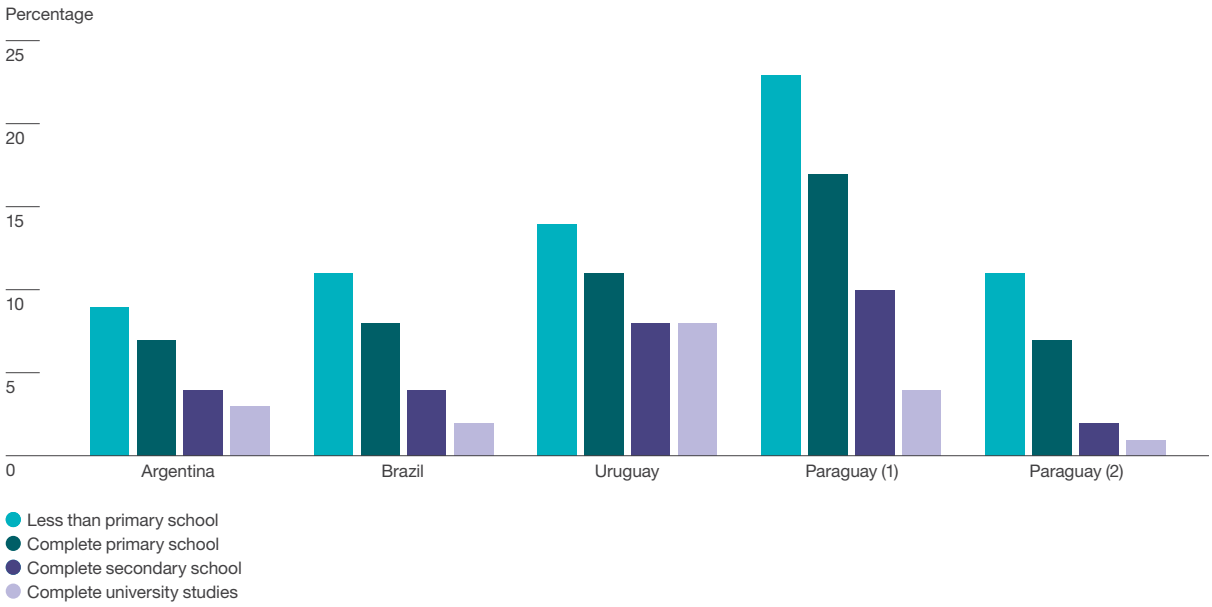
Note: The graph presents the variation in housing quality based on educational attainment. Panel A uses data from the 2016 ECAF survey, covering Bogota, Buenos Aires, Caracas, Fortaleza, La Paz, Lima, Mexico City, Montevideo, Panama, Quito, and São Paulo. First, the proportion of individuals who self-report as homeowners is presented, followed by the proportion of individuals who self-report as homeowners and state that their home is not located in an informal settlement. Finally, the graph shows the proportion of individuals who, in addition, have access to water and sewage services. Panel B uses data from the 2021 ECAF survey for the cities of Asuncion, Bogota, Buenos Aires, Lima, Mexico City, Montevideo, Panama, Quito, and São Paulo. This panel shows the percentage of individuals who reported their housing quality is within the 25% lowest values of the city where they live.

Source: Authors based on data from ECAF surveys (CAF, 2017, 2022).

Different sources suggest that informal housing ownership is a significant problem in Latin America and the Caribbean, with an important socioeconomic gradient. For example, the 2016 ECAF survey (CAF, 2017), which covered some of the main cities in the region, asked the following questions, “To the best of your knowledge, what percentage of your neighbors have a deed/title to their property/home?” The response ranges from 73% when the respondent’s educational attainment is less than complete secondary school to 91% for those people who completed higher education (tertiary or university level). Specific housing surveys, such as Mexico’s national housing survey conducted in 2020 (INEGI, 2021), show more accurate metrics: just 73% of the people who said they were homeowners have a property deed, ranging from 69% for the least educated to 83% for those who attained high-level education. Likewise, data from the City of Buenos Aires (CABA,

for its acronym in Spanish) reveal 81% of formal homeownership in CABA,[9] ranging from 94% in neighborhoods of high socioeconomic status to almost 80% in neighborhoods of low socioeconomic status (EAH, 2015). Finally, using the IPUMS[10] harmonized population and housing census databases, the percentage of households whose occupants self-report as homeowners but not having the title or deed to the land where the home is built[11] can be estimated for several Latin American and Caribbean countries. This is another relevant perspective to review informal housing ownership. Graph 5.6 shows this information for Argentina, Brazil, Paraguay, and Uruguay. In all cases, a marked gradient by the educational attainment of the head of the household is observed.

Graph 5.6
Proportion of homeowners who do not own the land where their home is built, by educational attainment



Note: The graph presents the percentage of households whose occupants are informal homeowners. This category includes all households whose occupants own their home, but not the land. In the case of Paraguay, the second definition did not include in informal homeownership people whose homes were located on "communal land." This category explains the differences between Paraguay and other Latin American and Caribbean countries. Educational attainment considers that of the head of the household. Data were collected from censuses conducted in Argentina (2010), Brazil (2000), Paraguay (2002), and Uruguay (2011).

Source: Authors based on data from IPUMS (2020).

9. In this database, informal housing ownership includes homeowners who do not own the land, tenants or assignees, and de facto occupants.

10. Originally, IPUMS was the acronym for the Integrated Public Use Microdata Series. In 2016, when its databases were diversified, IPUMS became the name of an organization that is a part of the Institute for Social Research and Data Innovation at the University of Minnesota. In this capacity, IPUMS democratizes access to the world's social and economic data.

11. In general, these census sources do not show the proportion of households whose occupants self-report as homeowners who do not have a deed/title to their property.

Ownership of productive assets

Fact No. 6. Ownership of a business and other productive assets (business premises, land) has also a socioeconomic gradient.

Table 5.1 shows relevant information based on the 2017 social mobility survey conducted in Mexico (EMOVI, for its acronym in Spanish) (CEEY, 2017), and, in the main cities in Latin America, based on the 2012 (CAF, 2013) and 2021 (CAF, 2022) surveys. The information is presented for the whole population and according to educational attainment. According to the 2012 ECAF survey, 9% of the population in the main Latin American cities owned a business; for 5% of these people, their business was their principal activity. These figures are comparable to those in the United States, where 4% of the labor force are employers (Sanguinetti et al., 2013). In the 2021 ECAF survey, 4% of the population said that their principal activity was their own business, and up to 13% stated that they had at least one additional real asset different from their main home (including a second home, business premises, or land). Based on the 2017 EMOVI survey, 8% of respondents owned a business, while the percentage of interviewees who had business premises, land, and a second house was 5%, 7%, and 5% respectively.

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In ECAF 2021, 4% of the population reported having a business as their principal activity, and up to 13% reported having at least one additional real asset different from their main home

These patterns of ownership vary by socioeconomic status. Having a business as a principal activity or having business premises increases by educational attainment. The pattern is less clear regarding land ownership, an asset showing relatively high tenure among the least educated population in Mexico. Probably, this is due to a higher incidence of low-level education in rural areas, coupled with high land tenure in these areas. Although we cannot explore the values of the assets with the available data; it is expected that the higher the socioeconomic status, the higher the value of these assets.

Table 5.1
Proportion of individuals who own productive assets by educational attainment

	2017 EMOVI survey				2012 ECAF survey		2021 ECAF survey	
	Business (%)	Business premises (%)	Land (%)	Additional residence (%)	Business (%)	Business as principal activity (%)	Business (%)	Assets (%)
Uneducated	6	3	10	2	6	3	3	7
Secondary school	10	5	6	5	8	6	4	12
Professional/University degree	13	8	8	11	16	8	6	20
Total	8	5	7	5	9	5	4	13

Note: The table presents the percentage of individuals who self-report as owners of different productive assets (a business, business premises, land, a dwelling to let out) according to these surveys. Data from the EMOVI survey are representative of Mexico for 2017. Data from the ECAF surveys apply to different Latin American cities. The 2012 edition of the ECAF survey is representative of the cities of Arequipa, Bogota, Buenos Aires, Caracas, Cordoba, Guayaquil, La Paz, Lima, Maracaibo, Medellin, Montevideo, Panama City, Quito, Rio de Janeiro, Salto, São Paulo, and Santa Cruz. The 2021 ECAF survey covered the cities of Asuncion, Bogota, Buenos Aires, Lima, Mexico City, Montevideo, Panama City, Quito, and São Paulo. In the 2017 EMOVI survey, ownership of business premises, land, a second home, and a business was determined by the answer to direct questions about whether individuals own these assets. In the 2012 ECAF survey, business ownership was determined by the answer to the question about current employment status (the response to "I own/am a partner in my own business.") Business was considered to be the principal activity if respondents did not report engaging any other parallel activity. Finally, in the 2021 ECAF survey, ownership of other assets was determined by the answer to the question about whether respondents own business premises, land, or a second home, while business ownership was determined by the answer to the question about the respondent's principal activity (the response to "employer or owner of a business (with at least one employee.)")

Source: Authors based on data from the 2017 EMOVI survey (CEEY, 2017), and ECAF surveys (CAF, 2013, 2022).

Financial assets

Fact No. 7. There is a socioeconomic gradient in the use of financial instruments and savings levels and rates. The use of financial instruments is relatively low compared to developed economies.

The Graph 5.7 shows information from a set of surveys conducted by CAF[12] to measure financial skills. The surveys are available for seven Latin American and Caribbean countries: Argentina, Bolivia, Chile, Colombia, Ecuador, Paraguay, and Peru. The graph presents only average values for the region. The Appendix includes more details about ownership of assets by country and educational attainment (Table A 5.3), and a brief description of these surveys and the financial instruments included in each asset category (Table 5.1).

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Among the population who completed primary education, just 15% of individuals stated that that they have savings for three months if they lose their main income.

Panel A in Graph 5.7 reflects the percentage of assets that people know from a list of assets included in the survey. This can be interpreted as a basic level of financial knowledge; a topic discussed in more detail later. The number of instruments the population is aware of is significantly higher among highly educated people.

Regarding the use of financial instruments, Panel B presents (indirect) information about savings levels. This measure reflects high vulnerability to shocks, especially in poor households. Among the population who completed primary education, just 15% of individuals stated that they have savings for three months if they lose their main income, slightly less than half the percentage among individuals who completed higher education.

Panel C presents information about asset ownership (bank accounts, sophisticated savings instruments, and pension funds), insurance, and liabilities (personal loans and mortgages). Bank accounts are the most widely held financial asset. However, levels are far from universal, especially among the least educated people. In contrast, more sophisticated assets (such as shares, bonds, and mutual funds) show low-level of ownership overall. Private pension funds stand in mid-position in the countries where they are available. Insurance also has mid-level popularity. Very probably, this is linked to health insurance coverage provided by the contributory social security.

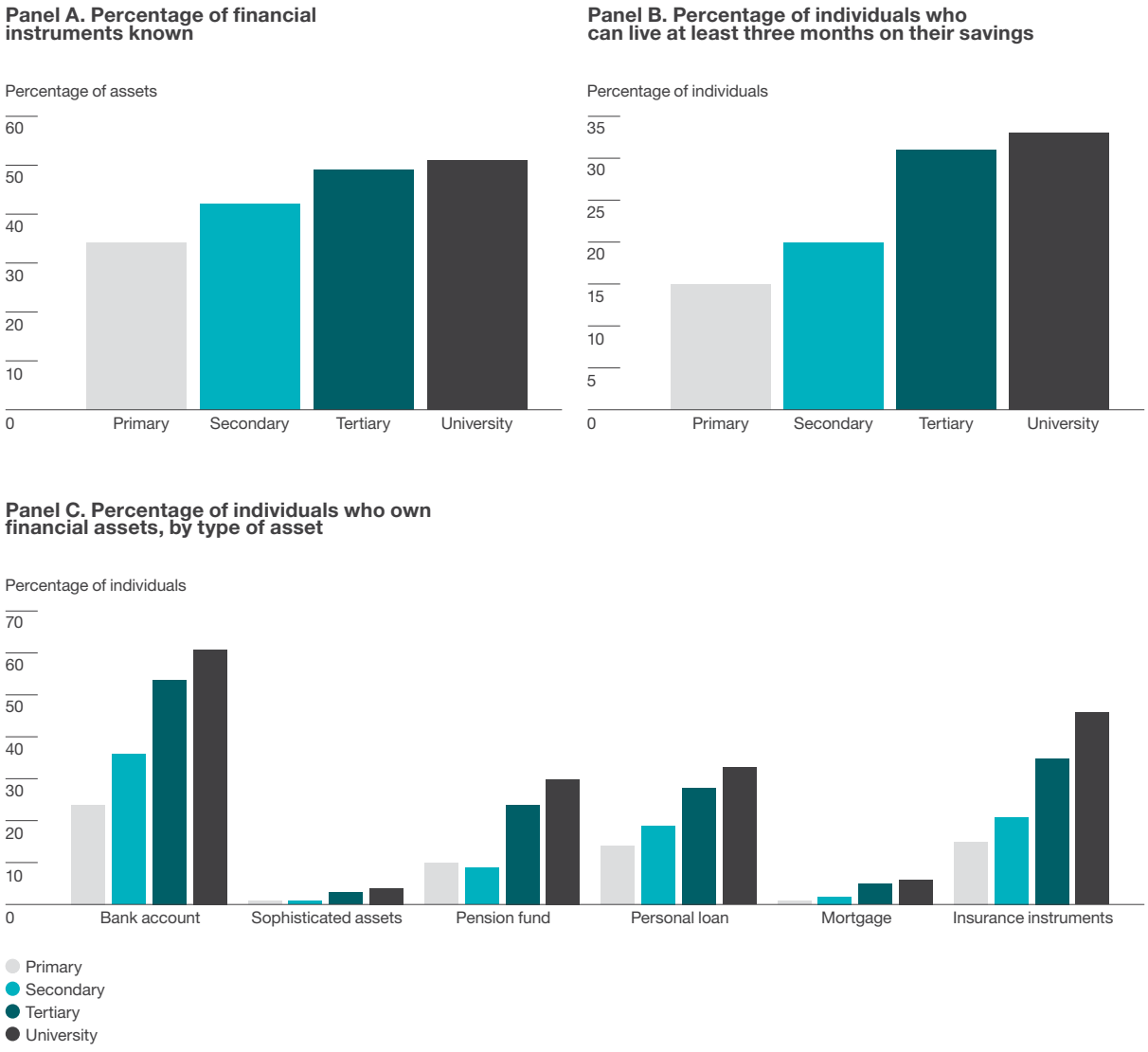
Within the spectrum of liabilities, personal loans are the most popular while the fraction of people with mortgages is remarkably low. The importance of developing this segment as a key factor for families to increase their assets will be later discussed in more detail.

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12. The World Bank is an alternative source of some of these measures, such as the proportion of households whose occupants have a bank account or a mortgage. However, this source does not present significant measures for this chapter, such as financial literacy, insurance coverage (included only in the 2011 World Bank edition and not in its most recent edition, from 2017), private pension funds, or savings levels, estimated here by families' possibilities of using their savings for household spending for a specific time period. Tables A 5.2 and A 5.4 in the Appendix present information about the ownership of some financial instruments based on World Bank figures. Naturally, the patterns indicated in Fact No. 7 is also found in this source.

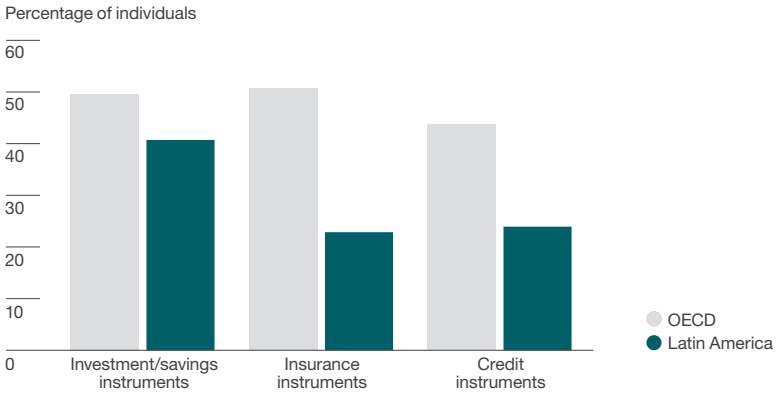
Finally, Panel D compares the values of Latin America and the Caribbean with OECD figures. In this case, assets and liabilities have been regrouped to favor comparability. In all cases, Latin America and the Caribbean lags behind.

Graph 5.7
Knowledge about and ownership of financial instruments and savings levels by educational attainment or regions



Continued on next page →

Panel D. Percentage of individuals who own financial assets, per type and region



Note: The graph examines differences in financial literacy and ownership of assets, along with household savings levels, by educational attainment. Panel A shows the average percentage of assets listed in the survey known by each individual. Panel B presents the proportion of individuals who reported that they can use their savings for household spending for at least three months. Panel C represents the percentage of people who own each asset (for more details on the assets considered and survey characteristics, see the Appendix). Finally, Panel D reflects the proportion of individuals who hold instruments in the three categories. Data pertain to Argentina (2017), Bolivia (2013), Chile (2016), Colombia (2019), Ecuador (2013), Paraguay (2017), and Peru (2019). The average 2019 OECD result has also been included.

Source: Authors based on data from CAF financial skill measurement surveys (CAF, 2019a) and from the OECD (2020).

Finally, evidence seems to show that the wealthiest population not only has more savings but also save a larger portion of their income. For example, Gandelman (2017) found that the savings rate increases with the level of household income in nine out of 12 countries studied (Brazil, Chile, Costa Rica, Ecuador, Honduras, Mexico, Panama, Paraguay, and Peru).[13]

The intergenerational persistence of real asset ownership

Recent evidence has found intergenerational persistence of wealth in developed economies; that is, people's wealth is closely correlated with the wealth of their parents and other relatives, especially grandparents (see Chapter 2). What can be said about Latin America and the Caribbean?

13. The other countries are Uruguay, where no differences in the savings rate were found by socioeconomic group, and Argentina and Colombia, where results are not robust.

Fact No. 8. The ownership of real assets (a home, a business, business premises, and land) shows a strong intergenerational persistence. Ownership of a business and other real assets seems to be more persistent than homeownership, at least in relative terms.

Research conducted in the context of this report (Álvarez-Parra and Carbonari, 2022) exploring available surveys for Latin America and the Caribbean has found that the coefficients of intergenerational persistence of homeownership are about 0.12. This means that the probability for someone to be a homeowner is 12 percentage points larger if their parents were homeowners as well (see Table 5.2).[14]

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The probability of someone being a homeowner is 12 percentage points more if their parents were homeowners

Findings indicate even higher persistence in the case of the ownership of other real assets. For example, the coefficient of persistence estimated for business ownership is 0.115, close to the coefficient of homeownership. However, its magnitude is relatively more significant given the smaller proportion of families that own a business, compared to those that are homeowners (see Table 5.2). The coefficient of intergenerational persistence in the ownership of "other real assets", in turn, is 0.19, higher than the coefficient of intergenerational persistence in homeownership in absolute terms, but even more significant in relative terms.

Table 5.2
Intergenerational persistence of asset ownership

Ownership of	Coefficient of persistence		Proportion of offspring who are homeowners if their		Observations
	Basic controls	Basic, education, and work activity controls	Parents did not own	Parents owned	
Home	0.120***	0.117***	51	66	4,598
Business	0.115***	0.103***	3	16	4,675
Other assets	0.190***	0.170***	10	30	4,651

Note: The table presents the coefficient of persistence of ownership of a home, a business, and other assets (a second home, business premises, or land). The coefficient is estimated by regressing the person's asset ownership on that of the parent. For detailed information about data calculation and interpretation, see Chapter 2. The table also shows the mean ownership of each asset according to whether the parents owned the asset or not when the person was 14 years old.. "Ownership of a Home" indicates whether the individual answered 'yes' or 'no' when asked whether they were homeowners; "Ownership of a Business" is a variable that indicates whether they answered that they were owners or employers when asked about work activity; "Ownership of Other assets" answers the question about whether they owned a second residential property, business premises, or land. Basic controls are gender, age group (below 40, from 40 to 50, over 50), country, and marital status. Education controls reflect the highest level of education attained by the parent and the interviewed adult, and whether the interviewee pays social security contributions (i.e., if formally employed). Moreover, only individuals over 30 years of age were considered. Estimates were calculated using data from the 2021 ECAF survey, covering Asuncion, Bogota, Buenos Aires, Lima, Mexico City, Montevideo, Panama City, Quito, and São Paulo (for more specific information about the survey, see Chapter 2).

Source: Authors based on data from Álvarez-Parra and Carbonari (2022).

14. These data result from the analysis of the 2021 ECAF survey. Álvarez Parra and Carbonari (2022) show that results are similar using other surveys, such as the 2012 ECAF survey, and different EMOVI editions in Mexico. For a greater description of intergenerational persistence metrics, see Chapter 2.

A remarkable finding in Table 5.2 is that the coefficients of intergenerational persistence in homeownership change only slightly when education and labor controls are included. Making this comparison is relevant because more educated parents invest more in their children's education. They may also have a social network that can help their offspring find good jobs. Therefore, wealthier parents are expected to have descendants who attain higher educational levels and have better jobs. More educated people who have better jobs can, in turn, accumulate more assets. Thus, the omission of education and labor controls can "inflate" the estimated coefficient of intergenerational persistence. As can be expected, including these controls reduces the size of coefficients, although moderately. This suggests that a parent's asset ownership strongly influences offspring´s asset ownership, beyond its effect on offspring's educational and labor outcomes.

Why does wealth persist across generations?

Different mechanisms explain why the parents' wealth (and the wealth of grandparents and other relatives) influence offspring's wealth. One is associated with the accumulation of human capital. The offspring of wealthier families benefit from higher investment in human capital. This gives them access to higher income and, therefore, a better capacity to accumulate assets (this channel has been explored in Chapter 3).

In addition, beyond the level of human capital, wealthier families can have more social capital, live in better locations within cities, and, therefore, access better jobs and wages. This intergenerational persistence in income translates into an intergenerational persistence in savings and, hence, the levels of wealth (Chapter 4 explores channels linked with the labor market).

However, the persistence of wealth across generations cannot be explained solely by mechanisms associated with education or the labor market. The objective of this section is to explore these additional mechanisms. The most obvious of these has to do with inheritance.

Inheritance

Inheritance is a common phenomenon. According to the 2021 ECAF survey, 35% of homeowners stated that their home was inherited. This also applies to business: 21% of respondents who owned a business (employers) stated that it was inherited. On average, the fraction of people reporting that they inherited the asses they own does not show striking differences either by socioeconomic status or gender (see Graph 5.8)

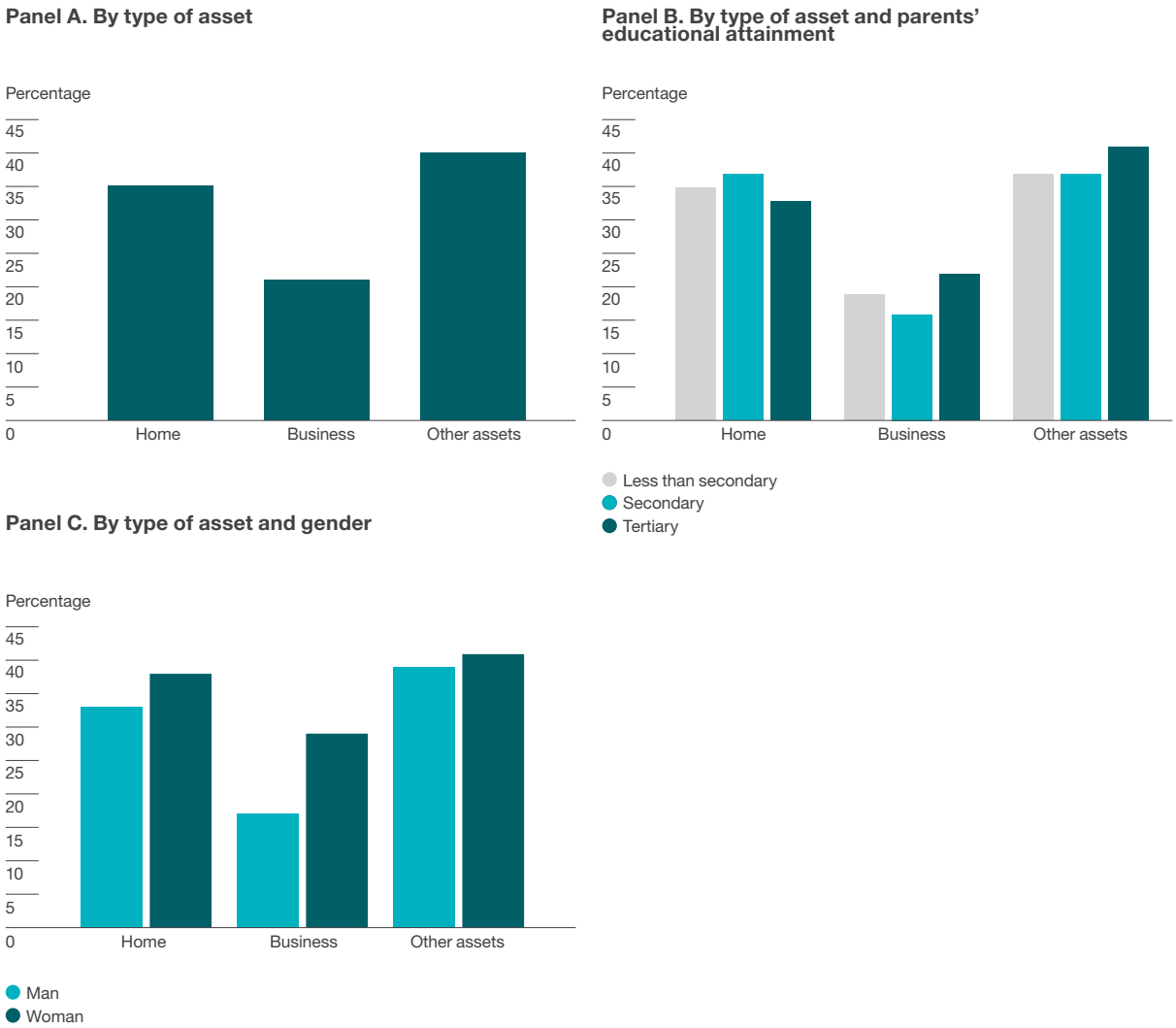
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Inheritance is a common phenomenon. According to the 2021 ECAF survey, 35% of homeowners stated that they had inherited their home

There are many motives for leaving a bequest; they may vary by country. For example, a study found that in China and Japan selfish preferences predominate (being cared for and nursed in old age by the descendants),

while in the United States and India, altruist preferences prevail (valorization of the wellbeing of descendants) (Horioka, 2014). These cultural differences driving motivations for bequest have implications regarding the way structural changes—such as the quality of social protection plans for the elderly—impact inheritance flows. Perceptions of social mobility can also affect the incentives to leave an inheritance, as described in Chapter 1.

Graph 5.8
Percentage of owners who inherited their assets



Note: The graph shows the proportion of individuals who inherited the different assets that they own (a private home, a business, business premises, land, and a second home). Panel A presents the results for the overall population and Panel B shows findings by educational attainment. In Panel C, data were broken down by gender. Data from the 2021 ECAF survey were used, representative of Asuncion, Bogota, Buenos Aires, Lima, Mexico City, Montevideo, Panama City, Quito, and São Paulo. In this survey, "assets" is a variable that refers to the ownership of business premises, land, or a second home.

Source: Authors based on data from the ECAF survey (CAF, 2022).

Several studies have explored how inheritance impacts the concentration and intergenerational persistence of wealth, especially in developed countries. In theory, inheritance can be more or less concentrated than pre-inheritance wealth. This will determine their effect on the final concentration of wealth. Evidence in developed countries suggests that inheritance is highly concentrated among the rich, although less so than pre-inheritance wealth (see Box 5.1).

In Latin America, evidence about the role of inheritance in wealth distribution is quite limited. One exception is the study by Agustoni and Lasarga (2019) based on the financial household survey from Uruguay. The authors show that inherited wealth is very concentrated: the wealthiest decile owns 72.27% of inheritance and 59.19% of wealth. Additionally, the richest 1% and 5% hold 41.50% and 62.99% of inherited wealth, respectively, and 22.42% and 42.24% of the total wealth. However, they found evidence that inherited wealth is more concentrated than pre-inheritance wealth only at the upper tail of the distribution. The first five deciles do not seem to show significant differences between both measures.

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Inheritance plays a very important role in the intergenerational persistence of asset ownership in Latin America

Gandelman and Lluberas (2022), in turn, have explored the association between the heirs of a home and the net worth (the value of assets minus the value of debt) in Chile, Mexico, Spain, and Uruguay. The general pattern is that net worth represents a higher proportion of income for heirs than for non-heirs. In fact, the net worth of non-heirs of a house is 3.4 times their income in Chile, 4.8 times in Mexico, and 4 times in Uruguay. In contrast, among heirs, net worth as a proportion of income is 7.2, 7.5, and 6.9 times, respectively (see Graph 5.9).[15]

In Latin America, Álvarez-Parra and Carbonari (2022) studied the role of inheritance in the intergenerational persistence of asset ownership. In the same vein as research by Adermon et al. (2018), but using the 2021 ECAF survey, they assessed how the coefficient of intergenerational persistence in asset ownership (not net worth) varies when heir status is included (instead of the value of inheritance).

Table 5.3 shows these results. The first column represents the coefficient of intergenerational persistence in the standard analysis (excluding heir status). The second column shows the value of the coefficient in a regression that includes a binary variable reflecting heir status for the asset under analysis. In each case, the coefficient is substantially reduced. Although the case of homeownership shows the most moderate decline, the coefficient decreases by 32.5%. In other words, inheritance plays a very important role in the intergenerational persistence of asset ownership also in Latin America.

15. Heirs are also less burdened with debt. However, this difference is significantly smaller than the difference in net worth. In other words, the difference in net worth between heirs and non-heirs is strongly associated with a change in asset value and, to a lesser extent, to a change in the value of liabilities.

Box 5.1
Inheritance, inequality, and persistence in wealth distribution: international evidence

Pioneering research has revealed that inheritance improves the relative distribution of wealth in Denmark (Boserup et al., 2016) and Sweden (Elinder et al., 2018). The reason is that, although the rich receive a larger inheritance, the inherited amount is less important for them vis-à-vis their wealth before inheritance than for the poor. In other words, although inheritance is often unequally distributed, it is better distributed than non-inherited wealth. For example, estimates for Denmark suggest that, when inheritance is incorporated, the total wealth of the richest 1% reduces by 6 percentage points compared to their wealth without inheritance, which is 31%.[a] For Elinder et al (2018), the immediate mechanical inheritance effect reduces the Gini index by 6%. However, inheritance declines the Gini index by 4% when the effects of short-term behavior (two years later) are incorporated.

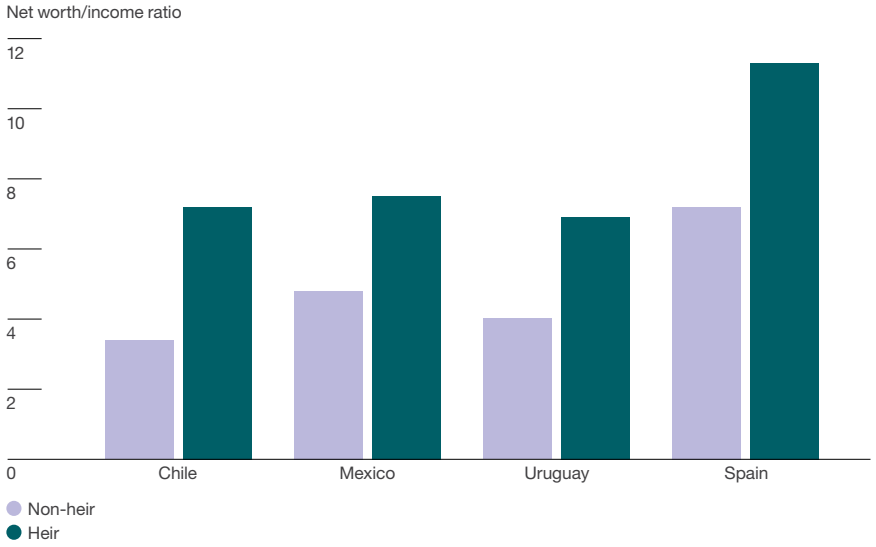
A recent study has challenged this statement by implementing a medium-term perspective (Nekoei and Seim, 2022). Also focusing on Sweden, this research work has revealed that a typical heir uses up the inheritance after ten years, while rich heirs keep it in similar levels. Hence, relative inequality reduces when inheritance is received. However, this effect is reversed a decade later because of the differential rates of asset decumulation between the rich and the poor. Nekoei and Seim found that these differences are not associated with differences in consumption or labor participation patterns, but with different rates of return on wealth.

In any case, the smaller concentration of inheritance relative to the concentration of wealth, does not mean that inheritance is equitably distributed. On the contrary, it is a fact that the rich tend to receive a larger inheritance than the poor. Therefore, Feiveson and Sabelhaus (2018) pointed out that, in the United States, if the distribution of inheritance among the population were equitable, the richest 10% would have only 57% of the wealth and not the 73% they have. This is to say that the unequal distribution of inheritance increases wealth concentration compared to a contrafactual world with equitable distribution of inheritance. Along these lines, Palomino et al. (2021) explored the role of inheritance and lifetime transfers coupled with the role of parents' characteristics (education and occupation). Implementing a decomposition exercise, they found that, in a counterfactual world where the inherited amount is unaffected by wealth, the contribution of inheritance to wealth inequality is 30.5% in France, 26.3% in Spain, 26.6% in the United States, and 21.8% in the United Kingdom. The effects of parents' characteristics, in turn, were substantially lower: 4.1%, 7.2%, 11.7%, and 5.7%, respectively.

Very few studies have focused on the impact of inheritance on the coefficients of intergenerational persistence of wealth. The most emblematic research work was conducted by Adermon et al. (2018) for Sweden. In it, the authors used two methodological approaches. The first one includes inheritance as an explanatory variable in a standard regression of intergenerational persistence in the percentiles of wealth distribution. Their finding is that the coefficient of intergenerational persistence reduces by about half, reaching 0.15, once the inheritance is included in the regression. Under an alternative approach, they first deducted received inheritance (and its capitalization) from wealth. Then, they calculated the coefficient of intergenerational persistence in the adjusted wealth. In this new estimate, the coefficient of intergenerational persistence was no longer statistically different from zero. The authors concluded that wealth transmission through inheritance explains most of the intergenerational correlation in wealth between parents and the offspring in Sweden.

a This same study shows that inheritance increases absolute inequality. In fact, the variation of wealth distribution grows by 33% with inheritance.

Graph 5.9
Net worth as a proportion of income by heir status



Note: The graph shows the number of years of annual income that the net worth of the individual represents according to whether the home was inherited or not. Net worth is defined as real assets plus financial assets, minus debt. Data pertain to Chile (2017), Mexico (2019), Spain (2017), and Uruguay (2013/14).

Source: Gandelman and Lluberas (2022).

Table 5.3
Inheritance and the coefficient of intergenerational persistence

Ownership of	Coefficient of persistence		Variation (%)
	Basic controls	Basic controls and heir status	
Home	0.117***	0.079***	-32.5
Business	0.103***	0.046	-55.3
Other assets	0.170***	0.074***	-56.5

Note: The table presents the coefficient of persistence of ownership of a home, a business, and other assets (a second home, business premises, or land). The coefficient is estimated by regressing ownership by the child on ownership by the parent. For detailed information about data calculation and interpretation, see Chapter 2. The difference between columns 1 and 2 is that the latter controls for property inheritance. The third column shows the coefficient of variation after the addition of this control. "Ownership of Home" indicates whether the individual answered 'yes' or 'no' when asked whether they were homeowners; "Ownership of Business" is a variable that indicates whether they answered that they were owners or employers when asked about work activity; "Ownership of Other assets" answers the question about whether they owned a second home, business premises, or land. Inheritance variables stem from direct questions about whether asset ownership was inherited. Basic controls are gender, age group (below 40, from 40 to 50, over 50), country, marital status, the highest level of education attained by the parent and the child, and whether the child pays social security contributions (i.e., if formally employed). Only individuals over 30 years of age were considered for the estimates. Data from the 2021 ECAF survey were used for Asuncion, Bogota, Buenos Aires, Lima, Mexico City, Montevideo, Panama City, Quito, and São Paulo (for details about the survey, see Chapter 2).

Source: Álvarez-Parra and Carbonari (2022).

Factors associated with family formation

Factors like fertility, marital unions and separations, and the marriage between individuals of similar wealth may affect the intergenerational persistence of wealth.

Fertility

The relationship between the level of income and the fertility rate is a well-known fact. For example, Jones et al. (2008) calculated the change in fertility versus the change in household income for the United States. They found a 0.38% decrease in fertility as a result of an increase of 1% in the level of income. This also holds true in Latin American countries. The number of children below 16 per household is about two for families in the population in the poorest quintile, and about 1.5 in the richest quintile.[16]

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Fertility affects the amount of inheritance received, with implications for wealth inequality and persistence

This has several implications for social mobility across generations. The first one is associated with education: a fewer number of children will favor increased investment in human capital per child. This is known as quality-quantity trade-off (see Chapter 3). A second mechanism relates to the effects of fertility on the income-consumption trajectory. Fertility is associated with lower labor force participation of women. This has an impact on family income.[17] By the same token, a larger family size affects consumption levels as a result of a mechanical effect: another child increases total family spending.

Less income and more consumption as a result of a larger number of offspring reduce savings and, therefore, potential inheritance. Moreover, with a larger number of heirs, mean inheritance dilutes. In other words, fertility affects the amount of inheritance received, having implications for wealth inequality and persistence. Research by Cooke et al. (2022) has revealed that the differences in fertility between the rich and the poor magnify the effect of inheritance on wealth inequality. Specifically, their research simulations for the United States showed that differences in fertility between the rich and the poor increase the Gini coefficient of wealth by about 10% (from 0.73 to 0.8).

16. See Badaracco et al. (2017). The countries include Argentina, Brazil, Chile, El Salvador, Mexico, Peru, and Uruguay. According to UN population data, the gap is substantially broader when considering only Colombia, Bolivia, Peru, and El Salvador. In this sample of countries, women in the top quintile had 1.7 offspring, while those in the bottom quintile had 4.4.

17. Evidence of this channel in Latin America is presented in Badaracco et al. (2017). In China, a relationship between fertility and the intergenerational persistence of income and inequality is found after the government retreated from its one-child rule for rural couples. As results, fertility between rural and urban families differed. According to Yu et al. (2020), this explains a decline in intergenerational mobility by at least 30%.

Marital unions and separations

According to several studies, marriage is associated with increased wealth, while divorce is related to less affluence (Goda and Streeter, 2021; Kapelle, 2022; Wilmoth and Koso, 2002). Others have found a positive link between asset ownership, marriage, and marital stability (Eads and Tach, 2016; Lafortune and Low, 2017; Schmidt et al., 2011). This socioeconomic gradient in the rates of unions and separations, added to the costs of divorce and the benefits of marriage, make marital unions and separations a channel that can affect the intergenerational persistence of wealth.

Marriage entails less spending per person (economies of scale), which favors savings (Waite, 1995). In addition, it involves increased joint capital. This enables access to those investments with high fixed participation costs, improving investing possibilities. Moreover, marriage diversifies household income flows, generating reassurance with risk-taking implications for the married couple (Christiansen et al., 2015).

Conversely, not only does divorce nullify these economies of scale and diversification opportunities, but it also has costs. On the one hand, there are administrative costs (e.g., attorney's fees), which normally increase with case complexity and the value being disputed over. On the other hand, divorce entails dividing marital property. While some assets can be easily divided, others can be indivisible and require liquidation. This is particularly true in the case of the family home, which is normally co-owned and the major portion of the equity portfolio of the family. In this regard, Lersch and Vidal (2014) found that divorces are associated with a decline in homeownership in Germany and England.

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Marital unions and separations are a channel that can affect the intergenerational persistence of wealth

Marital stability also impacts the decisions made within the household, including labor market participation, investing in the children's human capital, and asset accumulation. For example, Stevenson (2007) found that newlywed couples in states that allow unilateral divorce, compared to states that do not offer this possibility, are about 8% more likely to have both spouses employed full time, 10% less likely to economically support the spouse education, and 6% less likely to have a child. Fischer and Khorunzhina (2019) also study how the behavior of married couples changes vis-ˆ-vis variations in divorce probability. To this end, they build a life-cycle model to review housing decisions under divorce risk. The model predicts that an increase in divorce rates leads to reduced homeownership rates. This prediction is consistent with data. In addition, considering savings decisions, Zagorsky (2005) found that divorcees o unmarried individuals have lower yearly savings rates compared to married respondents (14% and 16%, respectively), and that savings start to decrease even before the divorce.

As can be expected from the above evidence, studies show that children of divorced parents have less wealth (Lersch and Baxter, 2020), receive fewer transfers by their parents (Furstenberg et al., 1995), and have less parental support to become homeowners (Mulder and Smits, 2013). Finally, Hubers et al. (2018) found that the intergenerational persistence of homeownership is stronger when focusing on divorced parents.

Marriage between equally wealthy individuals

Of particular interest in the context of marital unions is the trend that individuals marry people who have similar wealth (assortative mating). For example, Charles et al. (2013) found that the correlation of pre-marriage wealth among spouses was about 0.4 after controlling for race and age. There is also evidence of assortative mating in rural Ethiopia (Fafchamps and Quisumbing, 2005).

This phenomenon has a mechanical effect on the concentration of wealth. For example, Lersch and Schunk (2017) found that, if marital unions were not associated with wealth, the Gini index of wealth would decline from 0.83 to 0.79 in Germany, and from 0.89 to 0.80 in the United States.

Not only is there a correlation in pre-marriage wealth, but also in the return on assets. This was shown by Fagereng et al. (2022) for Norway. In fact, the authors highlight that the spouse with the highest pre-marriage return carries a larger weight on post-marriage return. This suggests that family wealth is managed by the spouse who is most likely to increase it. The authors conclude that this assortative mating in wealth and the allocation of family asset management responsibilities play a dominant role in wealth inequality among households.

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If marital unions were not associated with wealth, the Gini index of wealth would decline

From a more general perspective, the social networks of the rich, often develop through marriage, are relevant, not only to maintain the social status within one generation, but also to recover the wealth status of families after important shocks. The experience of the Civil War in the United States is an interesting example (Ager et al., 2021).[18]

18. With the end of the war and the abolition of slavery, people who had a larger share of their wealth associated with the value of slaves lost more than their counterparts who had similar original wealth. However, the study found that this loss was not sustained by the following generation. In fact, the offspring of parents whose wealth was determined by the number of slaves they had maintained a similar social status as the offspring of rich parents who owned other assets in the Southern states. According to the authors, this rapid recovery of the offspring of parents whose wealth was associated with slavery seems to be linked to the strengthening of social ties between enslaver families. Among other findings, the study revealed that the offspring of parents who owned more slaves were more likely to interconnect by marriage, generating social ties that supported their quick recovery.

For Latin America, no studies are known about the phenomenon of assortative mating in assets ownership, and how it impacts the intergenerational persistence of asset ownership. Based on the 2006 EMOVI survey in Mexico, Álvarez-Parra and Carbonari (2022) explore the issue from the point of view of homeownership (see Table A.5.5).

First, the study identifies the existence of assortative mating in homeownership. In particular, relative to random mating, the offspring of homeowners are more likely to interconnect by marriage. Specifically, in comparing individuals of a similar age and with a similar educational attainment within the same country, findings show that if their parents-in-law are homeowners, the probability that their parents are also homeowners is 25 percentage points higher.

Second, the authors found that the probability of being a homeowner depends on both the parents and the parents-in-law's homeowner status. The probability for a household to be homeowners is 15 percentage points higher if only one spouse lived in their own house at age 14, compared to households where none of the spouses fulfilled that condition. However, this probability is 23 percentage points greater if both spouses lived in their own house, at age 14, compared to households where none of the spouses met this condition.[19]

Over one-fourth of the coefficient of intergenerational persistence in homeownership is associated with the effect linked to the parents-in-law's homeowner status

These findings have implications for the interpretation of the coefficient of intergenerational persistence in typical regressions. If the parents were homeowners when the child was 14, the child is more likely to be a homeowner as an adult because of the direct effect that the homeowner status of the parents can have. However, the spouse's parents are more likely to have been homeowners, which can also influence the couple's homeowner status.

In other words, the typical coefficient of persistence reflects a direct effect associated with the parents being homeowners and an effect related to the increased probability that the parents-in-law are also homeowners. The analysis by Álvarez-Parra and Carbonari (2022) suggests that more than one-fourth of the coefficient of intergenerational persistence in homeownership is associated with the effect linked to the parents-in-law's homeowner status (the assortative mating effect).[20]

Transfer of financial knowledge, values, and skills

Certain characteristics of parents can impact their offspring's financial behavior and skills (e.g., their savings propensity, their level of financial knowledge and sophistication), and the attributes of their investment portfolios (e.g., return, liquidity, risk). This becomes a channel for the intergenerational transmission

19. Results are controlled for age, region, education, and employment status.

20. To break down these effects, the authors present the coefficient of standard intergenerational persistence, not including homeownership by the spouse's parents. They then contrast it with the value of the coefficient when controlled for homeownership by the spouse's parents. The coefficient drops from nearly 12% to slightly below 9%.

of wealth. Likewise, the transmission of personality traits may also influence asset accumulation and the intergenerational persistence in assets holding. This section explores these topics.

Financial practices and literacy

Recent evidence from developed countries highlights the role of financial practices and literacy in the inequality and intergenerational persistence of wealth (see Box 5.2). For example, Lusardi et al. (2017) estimate that from 30% to 40% of wealth inequality upon retirement in the United States originates from differences in financial literacy.

Box 5.2
International evidence of the role of financial practices and literacy on the intergenerational persistence of wealth

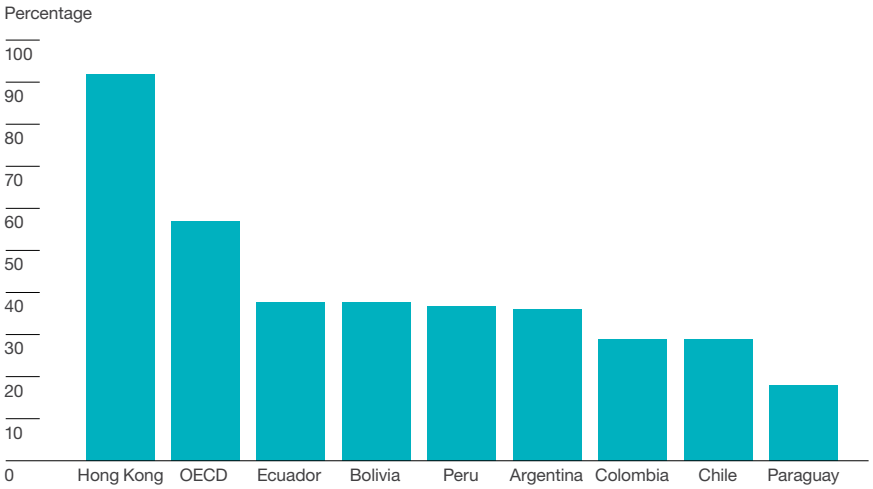
Black et al. (2019) found evidence that parental wealth is associated with the type of investments their offspring make. They point out that people with wealthier parents tend to invest in more risky assets that have a higher average return. Along these same lines, Charles and Hurst (2003) show that the correlation between offspring and parental wealth in the United States can be largely explained by the fact that offspring tend to mimic their parents' financial investments. This was the second strongest reason (next to having similar income) beyond factors such as formal education and parental transfers. In fact, when controlling for investment portfolio characteristics, the intergenerational persistence of wealth coefficient declines from 0.36 to 0.232.

Fagereng et al. (2020), in turn, using data from Norway's administrative tax records, found that returns on wealth vary strongly among individuals, persist over time and across generations, and are higher for the wealthier. In fact, from 2005 to 2015, the actual average return on wealth was 3.8%, but the gap between the wealthiest and poorest deciles was 18 percentage points. The authors conclude that individual traits, such as financial sophistication or information processing skills, explain most wealth return differences. Finally, they argue that the intergenerational correlation in wealth returns continues to be positive and statistically significant even when comparing individuals having similar wealth and achieving comparable levels of education.

Finally, Boserup et al. (2018) explored Danish administrative data. They found evidence suggesting that exposure to savings and investment instruments since childhood, and the transmission of financial knowledge that this entails, can be key drivers of wealth in adulthood. The authors show that 91% of 15-year-olds hold assets, mainly financial instruments received as transfers from their parents and relatives. In addition, they demonstrate that wealth at age 18 is a better predictor of future wealth than parental wealth. What is the explanation for this strong relation between childhood wealth and future wealth? The study finds evidence that asset transmission during childhood involves the transmission of a variety of behaviors, such as propensity to saving, financial literacy, and investment patterns.

What level of financial literacy is there in the region? Graph 5.10 presents financial literacy measures for different Latin American and Caribbean countries and their value in some developed economies. It clearly shows that the region lags behind more developed countries. In addition, the analysis highlights that higher socioeconomic statuses—estimated here by educational attainment—show higher levels of financial literacy.[21] Graph 5.11 also reveals that, in general, women have less financial knowledge than men. From the perspective of intergenerational persistence, the lag of women is relevant given the incidence of single-parent homes where a woman is the head of the household.[22]

Graph 5.10
Percentage of people with good financial knowledge



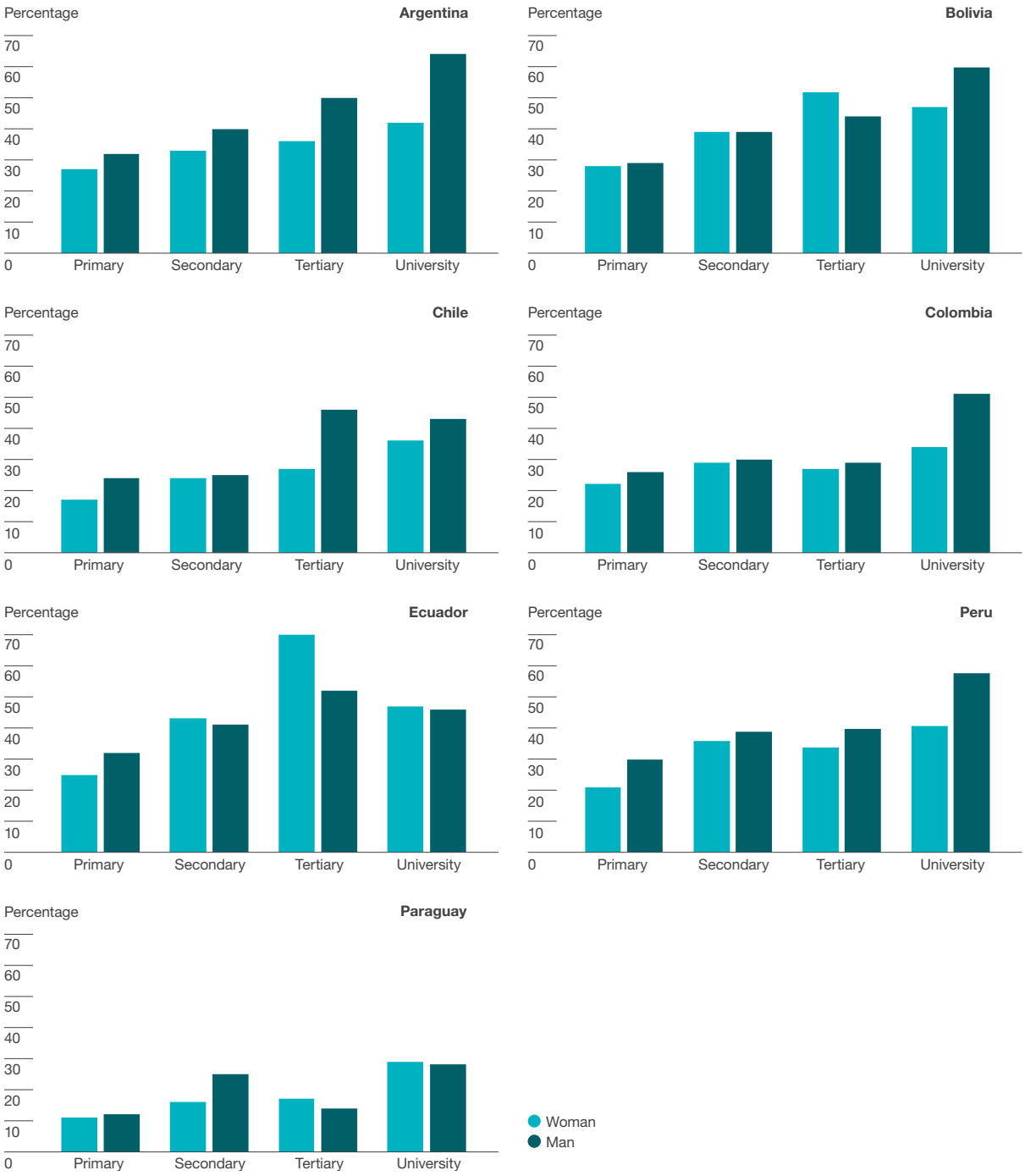
Note: This graph presents the proportion of individuals who answered correctly at least five of the seven questions asked to measure their knowledge about the concepts of inflation (two questions), diversification (two questions), and interest rates (three questions). Information for Argentina (2017), Bolivia (2013), Chile (2016), Colombia (2019), Ecuador (2013), Paraguay (2017), and Peru (2019) was gathered from CAF financial skill measurement survey. For more detailed information about survey characteristics, see the Appendix. OECD and Hong Kong data are for 2019.

Source: Authors based on data from CAF financial skill measurement survey (2019) and OECD (2020).

21. Educational levels in Latin America lag behind developed regions, especially tertiary education. However, these differences in education do not fully account for the financial literacy lag in the Latin American and Caribbean countries presented in Graph 5.10. Actually in all these countries, the indicator for people with university education does not exceed the value for the average individual in OECD countries.

22. It may be argued that gender differences regarding financial literacy may be due to gender differences in educational levels. When comparing people from the same country within the same age group who achieved the same educational level, the proportion of men who have high knowledge is more than 6 percentage points higher than that of women. The difference is statistically and quantitatively significant, accounting for more than 19% of the variable mean in Latin American and Caribbean countries.

Graph 5.11
Percentage of people with good financial knowledge by gender and level of education



Note: This graph presents the proportion of individuals who answered correctly at least five of the seven questions asked to measure their knowledge about the concepts of inflation (two questions), diversification (two questions), and interest rates (three questions), controlling for education and gender. Information for Argentina (2017), Bolivia (2013), Chile (2016), Colombia (2019), Ecuador (2013), Paraguay (2017), and Peru (2019) was gathered from CAF financial skill measurement survey. For more detailed information about survey characteristics, see the Appendix..

Source: Authors based on data from CAF financial skill measurement survey (CAF, 2019a).

Although higher educational levels tend to have better financial literacy, these can be thought of as two different attributes. Within each educational category, the level of financial literacy is widely dispersed (Graph A 5.1 in the Appendix). Considering the seven countries included in the financial skill measurement survey, educational level barely accounts for 5% (in the case of Chile) to 9% (in the case of Paraguay) of the dispersion in the financial literacy indicator.

It is worth highlighting that financial literacy levels are associated with the holding of financial instruments and savings levels, even when comparing people of the same gender who achieved the same educational level within each country. A statistical exercise based on the financial skill measurement surveys conducted by CAF confirms this. Data are presented in Table 5.4.

Table 5.4
Differences in financial instrument holding and savings rates between people with high and low financial knowledge

Having…	Benchmark population		
	Total population	Complete secondary school or less	Complete university education or higher
Savings for 6 months	0.01	0.01	0.02
Savings for 3 months	0.02***	0.02**	0.03
Savings for 15 days	0.04***	0.04***	0.05**
Bank account	0.07***	0.06***	0.10***
Sophisticated assets	0.00	0.00	0.01
Private pension fund	0.05***	0.04***	0.10***
Insurance	0.04***	0.04***	0.05**
Investment loan	0.01***	0.01***	0.01
Personal loans	0.06***	0.05***	0.09***
Mortgages	0.005	0.00	0.01

Note: This graph presents the difference in asset holding and savings variables according to the financial knowledge of individuals conditional on education, geographic area, country, age, and gender. A dichotomous variable for financial knowledge was considered with a value of 1 if the respondent gave five or more correct answers. This result originates from different linear regressions, with holding and savings as dependent variables (savings for six months, three months, and 15 days; bank account; sophisticated assets; private pension funds; insurance; investment loan; personal loans; and mortgages). The explanatory variable is a dichotomous variable of 1 if the respondent gave five or more correct answers to questions asking about their knowledge. Each regression was first estimated for the full sample, then only for individuals who had completed secondary school or less, and finally for people who had completed university education or a higher level. For more information about the assets included and the characteristics of the survey, see the Appendix. Data are for Argentina (2017), Bolivia (2013), Chile (2016), Colombia (2019), Ecuador (2013), Paraguay (2017), and Peru (2019).

Source: Authors based on data from CAF financial skill measurement survey (2019).

The exercise correlates the level of financial knowledge with measures related to savings levels or the use of different financial instruments (represented in the table rows). The analysis applies to the bulk of the population (first column), the least educated population (second column), and the population

that completed university education (third column). In each case, the coefficient reflects the difference in the probability of having a certain level of savings or holding a given financial instrument among those who have high and low financial knowledge (here defined by giving a correct answer to five of the seven relevant questions). A positive coefficient indicates that those who have higher financial knowledge are more likely to have a larger amount of savings or to hold the indicated financial instruments. It is worth highlighting that these differences are conditional on education, age, and gender, factor that are used as control in the regression analysis.

For example, in the total population, high financial knowledge increases the probability of having savings for more than 3 months by 2.4 percentage points, a bank account by 7.2 percentage points, insurance by 4.2 percentage points, and a personal credit by nearly 6 percentage points, when compared to people with low financial knowledge. As the last column in the table shows, the positive association between financial the use of financial instruments also holds among people with a university degree. This reinforces the idea that financial literacy and educational attainment are two attributes that interrelate, although not perfectly.

●●
High financial literacy increases an individual's probability of having more than three-months of savings by 2.4 percentage points

Two general comments. First, the results of the above exercise show just an association of financial literacy with savings levels and asset holding. No causal relationship can be established between the analyzed variables. In fact, the relationship between financial literacy, and the use of financial instruments is bidirectional; given that the exposure to these instruments becomes a learning source in itself. Second, lack of knowledge is not the only barrier against the use of financial instruments; hence, financial training policies should be supplemented by supply size policies.

Personality traits

Just like some financial skills, behaviors, and knowledge can be linked to the family history, other personality skills and traits, that may significantly impact asset accumulation, can also be associated with family transmission. This topic will be addressed based on the 2015 EMOVI survey.

The 2015 EMOVI survey measures personality traits such as the Big Five personality traits,[23] locus of control, self-control, and determination. It is interesting to point out that this survey has information on both parents and their teenage and young-adult children (who live with their parents). This makes it possible to explore the intergenerational persistence of these traits. Table 5.5 shows that there is a strong and statistically significant positive correlation between parental and child positions in the distribution of these personality traits.

23. The Big Five personality traits are extraversion, agreeableness, openness, conscientiousness, and neuroticism. For more detailed information about the development of these indexes, see Campos Vázquez (2016).

Table 5.5
Intergenerational persistence in personality traits

Trait	Coefficient of persistence
Extraversion	0.102***
Openness	0.096***
Conscientiousness	-0.016
Agreeableness	0.022
Emotional stability	0.032
Locus of control	0.206***
Self-control	0.125***
Patience	0.092***
Determination	0.107*
Risk propensity	0.104***

Note: The table presents the coefficients estimated by least ordinary squares, where the dependent variable is the ranking (percentile) position occupied by the offspring in the distribution of the personality trait variable under consideration. The independent variable is the ranking position occupied by the parent in the distribution of the same personality trait variable ian the parental generation. Regressions are controlled for region, education, and gender. For more detailed information about the development of personality indices, see Campos Vázquez (2016). Estimates are for Mexico in 2015. Only families with children aged 12-18 were included.

Source: Authors based on data from the 2015 EMOVI survey (CEE, 2015).

Evidence suggests that some of these attributes, such as risk propensity, are associated with entrepreneurship (Sanguinetti et al., 2013) and asset accumulation practices. For example, for the United States, Letkiewicz and Fox (2014) found that a one-standard-deviation increase in conscientiousness is correlated with a 40% increase in net worth, a 53% increase in illiquid asset holdings, and a 33% increase in liquid asset holdings. For the United Kingdom, Brown and Taylor (2014) conclude that extraversion and openness are largely associated with household finances in terms of the levels of debt and assets held.

●●
Some of these attributes are associated with entrepreneurship and asset accumulation practices

Lack of access to credit

Access to financing is essential for making certain investments. In particular, access to credit is relevant to purchase assets such as a home, the value of which tends to represent a significant multiple of current income for households. Difficulties in accessing credit increase people's dependence on parental wealth for asset accumulation, particularly, homeownership.

Therefore, failures in the mortgage market can increase the coefficient of intergenerational persistence in homeownership.[24]

To address the hypothesis about the importance of access to credit for the intergenerational persistence of wealth, Álvarez-Parra and Carbonari (2022) compared the coefficient of intergenerational persistence in homeownership focusing on high and low credit penetration regions. Information about the importance of credit is not homogeneous across the sources or even across the years. Therefore, the authors identified these regions based on the proportion of persons who finance their home purchase with a bank loan (for the case of EMOVI 2011, and ECAF 2012 and 2021) or the proportion of families that hold financial institution credits (for the case of EMOVI 2017). Table 5.6 shows these findings.

Table 5.6
Intergenerational persistence in homeownership by credit penetration

	Coefficient of persistence	Holding rate (%)
2011 EMOVI survey		
High credit penetration	0.115*	63
Low credit penetration	0.229***	71
2017 EMOVI survey		
High credit penetration	0.076*	68
Low credit penetration	0.140***	66
2012 ECAF survey		
High credit penetration	0.156***	60
Low credit penetration	0.161***	69
2021 ECAF survey		
High credit penetration	0.106***	60
Low credit penetration	0.148***	63

Note: This table presents the coefficient of intergenerational persistence and the average rate of homeownership. The information was taken from the 2011 and 2017 EMOVI surveys in Mexico, and the 2012 and 2021 ECAF surveys. The ECAF survey (2012) is representative of the cities of Arequipa, Bogota, Buenos Aires, Caracas, Cordoba, Guayaquil, La Paz, Lima, Maracaibo, Medellin, Montevideo, Panama City, Quito, Rio de Janeiro, Salto, São Paulo, and Santa Cruz. The 2021 ECAF survey covered Asuncion, Bogota, Buenos Aires, Lima, Mexico City, Montevideo, Panama City, Quito, and São Paulo (for more detailed information, see Chapter 2). For more information about which countries and states belong to each credit penetration group, see Table A 5.7 in the Appendix.

Source: Álvarez-Parra and Carbonari (2022)

24. Beyond having an impact on the intergenerational persistence of wealth, which is the focus of this chapter, credit access problems can affect resource allocation, productivity, and growth. Lack of access to credit ties productive entrepreneurship and human capital accumulation financing to family wealth and not solely to the quality of the productive project or the talent of the person investing in human capital. In fact, recent research for Mexico estimates that eliminating borrowing constraints would reduce by 28% the correlation between household assets and schooling (Mestieri et al., 2017). In the case of Brazil, Allub and Erosa (2019) found that access to credit difficulties tie entrepreneurship decisions largely to wealth. In addition, they argue that to the extent financial frictions are removed, the quality of productive projects such as entrepreneurial ventures can improve, thus increasing the productivity of the economy at large. The authors also found that the removal of financial frictions reduces the persistence of wealth.

In all cases, the coefficient of persistence is higher in cities or states with limited access to credit. Although limited credit access could trigger more persistence in homeownership between parents and offspring, coefficient differences are not necessarily attributable to credit access problems. For example, lower prevalence of mortgages for homeownership financing could result from low demand for this type of financing. However, coefficient changes in the expected direction when confronting low and high-access-to-credit regions suggest that credit problems may be linked to persistence in homeownership.

●●
The coefficient of persistence is higher in cities or states with limited access to credit

Vulnerabilities and lack of insurance

Exposure to shocks as a result of natural disasters, illness, and macroeconomic instability can impact asset accumulation and, in some cases, lead to poverty. Poor families are more vulnerable to these shocks not only because their exposure is higher but also because they have limited access to mechanisms to cope with these shocks.

Moreover, these phenomena have an intergenerational dimension. First, these shocks can affect transfers between parents and offspring, reducing, for example, the amount of assets and, hence, inheritance.[25] They can even change the direction and volume of lifetime transfers, with implications for the people's savings capacity. Second, there may be intergenerational persistence in vulnerabilities to these shocks (such as persistence in health conditions stemming from both genetic factors and habits) or lack of access to health insurance.

Migration is a related phenomenon. It is a decision triggered by multiple factors, including natural, economic, political, social, and even family shocks (both aggregate and idiosyncratic). It can also impact the intergenerational transmission of wealth, addressed in Box 5.3.

25. Theses shocks bring about different effects, not all of them in the same direction. For example, health status deterioration can change preferences for certain goods and services. In addition, it can increase demand for caregiving by the offspring and trigger inheritance by reciprocity.

Box 5.3
Migration, wealth, and intergenerational mobility

It is expensive to migrate. In addition to the costs of moving and covering living expenses until getting a job, it often involves liquidating physical assets owned in the country of origin, especially for the poorest. Moreover, it entails adapting to a new society and job market, sometimes under informal employment and migration conditions, and suffering from discrimination and loss of access to the financial system.

This has an impact on people's wealth. Several studies have documented that migrants have: 1) less net worth (Ferrari, 2020; Mathä et al., 2011); 2) fewer possibilities of holding risky assets, housing, and businesses (Agius Vallejo and Keister, 2020; Bertocchi et al., 2022; Borjas, 2002; Osili et al., 2014); 3) an increased likelihood of incurring informal debts (Bertocchi et al., 2022), and 4) a lower degree of portfolio diversification (Sinning, 2007). The question is do these disadvantages persist across generations?

Abramitzky et al. (2019) studied father-son pairs from three immigrant cohorts in the United States for the period 1880-1980. They found that intergenerational income mobility for the offspring of immigrants is higher than for the offspring of the US-born parents. According to the authors, there are two major reasons for this: 1) immigrant fathers are more likely to move to areas with better prospects for their children than US-born fathers are; 2) the income of immigrant fathers may not fully reflect their skills due to language, professional networking, or education restrictions, but their offspring catch up quickly when they acquire the specific qualifications to enter the US job market, which their fathers lacked.

However, wealth does not reflect income mobility (Agius Vallejo and Keister, 2020). This is to be expected, as wealth is more persistent across generations. In addition, the status of being the descendant of immigrants can aggravate even more some of the channels that have already been examined. For example, the assortative mating channel can strengthen when considering the discrimination and territorial segregation sustained by immigrants (Furtado, 2012; Kantarevic, 2004; Meng and Gregory, 2005; Meng and Meurs, 2009). Another channel that can be particularly negative for the offspring of immigrants is "reverse transfers" (Agius Vallejo and Keister, 2020). Offspring need to transfer money to their parents because they are less likely to have ties to a social safety net (extended family or friends), access to social security, and savings. Moreover, remittances are frequently sent to other family members who remain in the country of origin. Therefore, providing financial support to relatives is an additional barrier to savings and asset accumulation.

Finally, it is important to take into account that the status of migrant has heterogeneous effects according to national origin (Bauer et al., 2007; Borjas, 2002; Keister et al., 2015), resources held (Ferrari, 2020; Keister et al., 2015), and immigration country or location (Bauer et al., 2007; Borjas, 2002; Pérez, 2019).

Natural disasters

Latin America and the Caribbean is one of the most natural disaster-prone regions in the world. From 2000 to 2019, there were 152 million Latin Americans and Caribbeans affected by 1,205 disasters of this kind. Of all the different types of natural disasters over the past 20 years, drought has affected the highest number of people in the region overall (OCHA, 2020), followed by floods, which are also very common occurrences.

These phenomena can generate very high economic and social costs. The risk of natural disaster occurrences has increased over the past 100 years, especially floods and hurricanes (Caruso, 2017). Moreover, they may continue to rise as a consequence of global warming.

A significant portion of this damage is associated with housing (Bello, 2017). Damage can be extensive and leave families homeless. From 1992 to 2021, nearly 4.3 million people lost their homes as a result of a natural disasters, and over 43% of these losses were caused by floods (see Table 5.7).

Table 5.7
Home destruction or extensive damage by natural disaster

Phenomenon	Number of disaster victims			
	1991-2000	2001-2010	2011-2021	1991-2021
Earthquakes	570,082	927,630	9,340	1,507,052
Extreme temperatures	16,000		5,247	21,247
Floods	1,225,791	337,178	311,916	1,874,885
Landslides	169,081	5,823	5,530	180,434
Mass movements	125			125
Tornados	321,280	363,738	16,663	701,681
Volcanoes	4,800			4,800
Fires	3,800	585	2,267	6,652
Total	**2,310,959**	**1,634,954**	**350,963**	**4,296,876**

Note: The table shows the number of people who had their homes destroyed or extensively damaged by natural disasters from 1992 to 2021, broken down by type of event. The number of people for the countries without available data on these figures was estimated by the number of households destroyed times the size of the average family in the country (CRED, 2021). Included countries are Argentina, Barbados, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Jamaica, Panama, Paraguay, Peru, Trinidad and Tobago, Uruguay, and Venezuela.

Source: Authors based on data from the Emergency Events Database (CRED, 2021).

Evidence seems to suggest that poor people are the most severely affected by natural disasters (Hallegatte et al., 2017). Therefore, these phenomena aggravate inequality (Baez et al., 2010; Howell and Elliott, 2018; Rentschler, 2013). On the one hand, the poor are more exposed to these shocks compared to the rest of the population, partly because they live in more risky areas. A study combining information on droughts and floods with socioeconomic status for 52 countries found that people in the lowest-wealth quintile are more likely to suffer an event of this type than the average person (Winsemius et al.,

2018). On the other hand, the poorest are the most vulnerable people, i.e., in case of a disaster event, they are more likely to suffer severe and persistent negative effects. In part, this increased vulnerability originates in the level and composition of their assets. If they are limited, they may need to sell off productive assets, and compromise their future income-generating capacity (Rentschler, 2013). In addition, their portfolio tends to be more vulnerable to natural hazards, focusing on durable goods, (poor quality) housing, and, in rural areas, agricultural assets (Hallegatte et al., 2020).

Research also shows an important and persistent effect of these shocks on human capital accumulation (see Chapter 3), employment outcomes, and assets ownership. Consequences go even beyond the generation directly affected by the event due to the mechanisms of intergenerational persistence reviewed in this chapter.

A relevant example for Latin America and the Caribbean is the study by Caruso (2017) who explores the consequences of the natural disasters that occurred in the region during the 20th century for 15 countries. The results are contingent upon the type of event and the age of individuals when the phenomenon took place (including individuals in-utero), but, in general, the effects are significant.

For example, according to Caruso's research, individuals exposed to a flood while they are in utero have 0.472 fewer years of education, an increase of 10% in the probability of being unemployed, and nearly 12% less income. These effects also impact the second generation: having a mother who was exposed to a flood while she was in utero, reduces the schooling years by 0.48 compared to children of the same age with non-exposed mothers.

There are also impacts on asset accumulation; Caruso (2017) confirms it by using an index including homeownership, rooms per person, and access to water. As with the results for education and employment, he studies the effects of the impact of a natural disaster in the first stage of the human life cycle (from conception to adolescence) on the asset index during adulthood. The most significant effects are found for volcanic eruptions and earthquakes for almost all ages. Hurricanes and landslides also show large effects across different ages, as well as floods, especially during school age. The effects on assets are important. For example, being exposed to a volcanic episode in utero is associated with a 0.98 asset index reduction, equivalent to 1.4 times the mean.

●●
The number of schooling years drop by 0.48 for children of a mother exposed to a flood while she was in utero

Given these significant effects, which persist across generations and affect more intensively people from the most disadvantaged socioeconomic statuses, natural disasters are a mechanism reproducing poverty from parents to their offspring that favors intergenerational poverty traps.

Health shocks

In Latin America and the Caribbean, over 40% of older adults are beneficiaries of public healthcare coverage systems (also called non-contributory health or social protection systems). This distribution changes dramatically by socioeconomic status. For the bottom quintile of the population, the fraction that is covered solely by the public healthcare system exceeds 70% (Álvarez et al., 2020). Unfortunately, the quality of public healthcare systems compared to contributory health systems (or social security) is remarkably different. In general, the public system offers more limited protection. In brief, Latin American families, especially the poorest, have less coverage against health contingencies.

In the event of illness, uninsured families need to use their own resources to tackle their health problems.[26] These resources can involve significant amounts of money. On average in Latin American and Caribbean, more than 9% of households have out of pocket health expenditures that exceed 10% of their income, while nearly 2% of have out of pocket health expenditures that exceed 25% of their income.[27] These figures are significantly higher than those found in developed countries (see Graph 5.12).

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More than 9% of Latin American and Caribbean households have out-of-pocket health expenditures that exceed 10% of their income

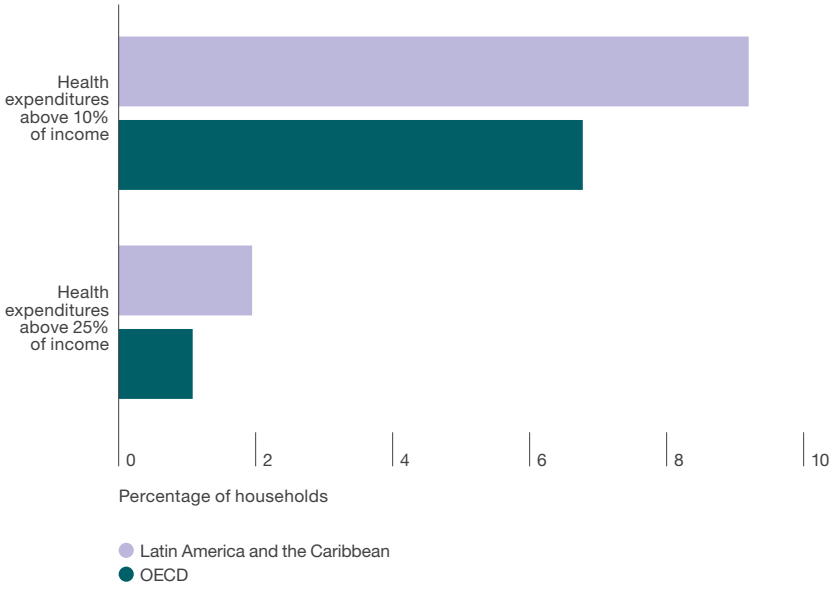
The likelihood of catastrophic health expenditure varies with household characteristics. A study that explored impoverishing health expenditure in 12 Latin American countries found that, in general, rural residence, low income, the presence of older adults at home, and the lack of health insurance in the household are associated with higher propensity for catastrophic health expenditures (Knaul et al., 2011). Álvarez et al. (2020) also showed that the presence of older adults in the home is associated with a propensity for catastrophic health spending. Conversely, the authors did not find conclusive evidence about the role played by access to the contributory health systems: in some countries, these offer more financial protection to households and decrease the risk of catastrophic health expenditure (Argentina and Mexico), while, in others, the opposite is true (Peru, Bolivia, Colombia, and Chile).

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26. The lack of medical insurance not only deprives families of healthcare coverage but can also be a source of health problems in itself. For example, Haushofer et al. (2017) produced evidence about the effect of access to health insurance on stress levels in Kenya. In the study, families were assigned to one of three groups: one group of individuals received free healthcare insurance for themselves and their families for one year; the second group was transferred cash for an amount equivalent to the price of the insurance offered to the first group; the third group was the control group and did not benefit from any intervention. Findings show that the people who received the insurance had lower levels of cortisol and self-reported stress and slept a larger number of hours than those who received the cash transfer and the subjects in the control group. This effect was even observed in individuals who did not need to use the insurance and was stronger in poorer households with children with a worse health status at the start of the study

27. Health expenditures in excess of 10% of the family income are normally considered catastrophic for the household (Wagstaff et al., 2018).

Graph 5.12
Proportion of households that incur catastrophic health expenditures in Latin America and the Caribbean, and OECD countries



Note: The graph shows the percentage of families that incur health expenditures exceeding 10% and 25% of their income. The OECD countries included in the analysis are Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Slovenia, South Korea, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. For Latin America, the countries are Argentina, Barbados, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, and Uruguay.

Source: Authors based on data from the World Health Organization (WHO, 2019).

The long-term effects of health shocks on wealth accumulation have been relatively well studied in developed countries. Evidence supports the idea that health shocks have a large impact on wealth; not only associated with direct health expenditures (out-of-pocket spending), but also the detrimental effects to the income trajectories of affected individuals. There exists also evidence about the intergenerational transmission of health shocks, especially regarding lifetime transfers between parents and offspring. Box 5.4 presents some of the findings.

Box 5.4
International evidence of the impact of health shocks

Based on data on older adults in the United States taken from the Health and Retirement Study (HRS), Wallace et al. (2017) found that health shocks in this population are frequent and permanent (recovery to the preshock level of health is rare). According to their long-run estimates, the impact on wealth is significant: a one-standard deviation decrease in the composite health index leads to a 12% to 20% reduction in wealth by the tenth year. Using the same database, Poterba et al. (2017) compared individuals with similar assets in 1994 and showed that, those in the top third of the health index averaged 50% more accumulated wealth in 2010 than those in the worst health tercile. The authors also found that at least between 20% and 40% of the asset cost of poor health is attributable to lower income and lower social security annuities linked to lower contributions to the social security system.

In addition, evidence suggests that the immediate effects of a health shock are just the tip of the iceberg. For example, Smith (2004), also using HRS data, concluded that a severe health shock increases out-of-pocket medical expenses by USD 1,720 around two years after shock occurrence. He also found that this same health event progressively raises health costs (although in smaller amounts) reaching nearly USD 4,000 up to ten years later. Similarly, the health shock reduces labor participation by almost 15 percentage points after two years, which continues to decrease in subsequent two-year intervals by a total of about 27 percentage points. In terms of income, it decreases by little over USD 4,000 nearly two years after the health shock, and it does not recover; on the contrary, it continues to decline, and, by the end of the ten-year period, the household income is about USD 6,300 lower. This means that the accumulated reduction in wealth caused by a major health event about ten years later is approximately USD 50,000, mostly due to the resulting income loss.

Literature has also discussed the impoverishment caused by wealth shocks in less developed countries. A review of 105 studies that focused on low and middle-income countries confirmed the burden of out-of-pocket spending caused by these shocks, especially for the poorest families, accounting for a higher proportion of their income and wealth. Different mechanisms were identified, such as borrowing, many times from informal and costly lenders, and selling assets to meet health spending. Evidence also shows reductions in labor supply that add to out-of-pocket expenses and can push vulnerable workers into a poverty trap (Alam and Mahal, 2014).

The intergenerational effects of health shocks have been given less attention. An example is the study by Schaller and Eck (2019), who used an event study approach and data for the United States[a] to examine changes in parent-offspring transfer patterns following a significant health shock suffered by a parent. The analysis confirmed that descendants play an insurance role under this circumstance. In particular, the study found that between two and four years after the onset of the parents' poor health, there is a 64% (2.9 percentage points) increase in the probability of receiving financial assistance from their descendants, and a 148% (5.6 percentage points) increase in the likelihood of receiving assistance in their activities of daily living.

a The study explored the ten waves of the Health Retirement Study, spanning from 1993 to 2012. The research focuses on adults between 50 and 85 years old with at least one child. The analysis examined the intensive margin: the probability of receiving a financial transfer over USD 500 and of supporting the parents in their activities of daily living. In terms of health, three shocks were defined: hospitalization, disability, and self-reported health decline.

Up to now, the way parental health shocks affect parent-descendants transfers and descendant's asset accumulation has not been studied in depth for the case of Latin America. Based on the 2019 and 2021 ECAF surveys, Álvarez-Parra and Carbonari (2022) ran empirical exercises to review the relationship between parental health status and the likelihood of descendants making financial and caregiving transfers to their parents. The authors also associated parental health status with the probability of inheritance and homeownership, the self-reported quality of their home, and a self-reported wealth index. The results are presented in Table 5.8. The first column shows the mean values of each variable for people who self-report that their parents have poor health. The two last columns present the result of the statistical exercise (one for each variable), showing the differences in the mean value of each variable between children whose parents have poor health and those who report that their parents have regular and good health.

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Good parental health is also associated with a higher possibility of receiving an inheritance

Table 5.8
Child-parent transfers, caregiving, and asset ownership by descendant according to parental health status

		Mean value for the group with parents in poor health	Conditional difference against regular parental health	Conditional difference against good parental health
2019 ECAF survey	Reverse transfers (from people to parents)	0.12	-0.11***	-0.28***
	Care for their parents	0.02	-0.13***	-0.16***
	Time spent caregiving (in hours)	0.19	-1.57***	-1.92***
2021 ECAF survey	Inheritance	0.22	0.01	0.060**
	Homeownership	0.47	0.02*	0.05**
	Self-reported home quality	6.03	0.05	0.213***
	Self-reported wealth	3.91	0.08	0.300***

Note: The table presents averaged values for children whose parents have poor health in different editions of the ECAF survey and for different variables of interest. The conditional difference between parental poor health and regular and good health is calculated. The values in these columns are the result of ordinary least squares regression to which age, gender, child's health, parental educational attainment, child educational attainment, number of siblings, and fixed effects by country controls were added. Regressions for 2021 were further controlled for parental homeowner status. descendant's health is a self-reported variable and parental health is reported by the child. The 2019 ECAF survey is representative of Asuncion, Bogota, Buenos Aires, La Paz, Lima, Mexico City, Montevideo, Panama City, Quito, Santiago de Chile, and São Paulo. The 2021 ECAF survey covered the cities of Asuncion, Bogota, Buenos Aires, Lima, Mexico City, Montevideo, Panama City, Quito, and São Paulo.

Source: Authors based on the 2019 and 2021 ECAF surveys (CAF, 2020, 2022).

The results show that good parental health decreases the likelihood of people making a transfer to their parents by 28 percentage points compared to those whose parents have poor health. Similarly, the probability that children take

care of their parents is 16.6 percentage points less. The number of caregiving hours also presents a statistically significant difference. The analysis points out that the largest burden of caregiving is reported by female respondents (see Table A.5.6 in the Appendix) when asked about time spent caregiving, although caregiving is provided by descendants regardless of gender. Good parental health is also associated with a higher possibility of receiving an inheritance (6 percentage points) and being a homeowner (5 percentage points) compared to children whose parents have poor health.

Macroeconomic instability

Macroeconomic volatility—especially large devaluations and high inflation rates—also drives the concentration of wealth in Latin America and the Caribbean. This is due to the greater concentration of cash and other assets in local currency in the portfolios of the poor. In this respect, Drenik (2018) explored the case of Uruguay. According to his calculations, a devaluation of 18% (which is the average devaluation for the period under analysis) increases the net liquid wealth[28] by 1.21% on average (in local currency). However, gains are highly concentrated, being ten times higher for the top income tercile than for the bottom-income tercile. In addition, Easterly and Fischer (2001) found that the poor mention that inflation hurts them more strongly, while Erosa and Ventura (2002) show that inflation affects people according to their income level because of differences in the use of credit cards, which is more common foramong the richwealthy. This is because inflation raises the cost of cash purchases, particularly big ones, for which money should be accumulated for a long time. In addition, debtors benefit from inflation and access to credit has a socioeconomic gradient.

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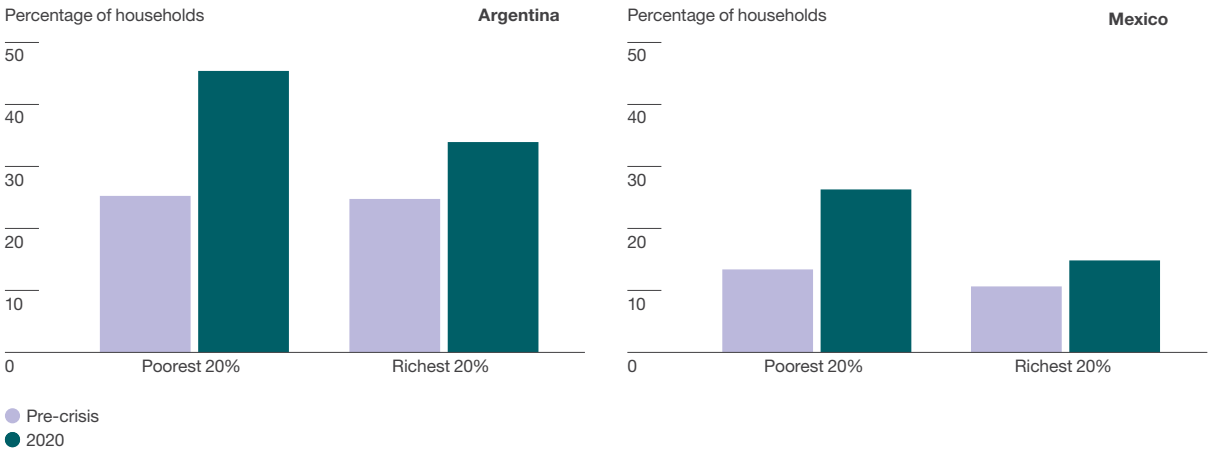
Strong recessions and the consequent loss of income can also compromise asset accumulation among families, especially the poorest. The recent COVID-19 experience made this clear

Strong recessions and the consequent loss of income can also compromise asset accumulation among families, especially the poorest. The recent COVID-19 experience made this clear. For example, Graph 5.13 presents the proportion of families that stated selling off a portion of their assets or using part of their savings, both for the poorest 20% and the richest 20%, in Argentina and Mexico. The graph compares the pre-crisis situation to the situation in 2020.

Certainly, a higher increase in asset liquidation is observed for both countries and groups in 2020. However, this growth is considerably stronger for the poorest quintile. For example, in Argentina, the fraction of families that liquidated assets in pre-crisis years was comparable between the top and bottom quintiles (nearly 25%). Despite this, the fraction rose by 20 percentage points among the poorest quintile and by 10 percentage points among the richest quintile, in 2020.

28. The average effects on the overall net worth would be milder because of the weight of homeownership in total assets. However, financial assets are a major component of wealth for those at the top of the distribution. Moreover, these assets in foreign currency are highly likely to be underestimated in household surveys. Therefore, devaluations can trigger a remarkable increase in total wealth for these wealthier groups.

Graph 5.13
Percentage of households that dissaved during the Covid-19 pandemic by household income



Note: To identify these households, families were asked whether they sold their assets or spent some or all of their savings. Pre-crisis values represent the average for the available years before 2019. For Argentina, these include 2010 and 2015, while for Mexico, the years are 2010, 2014, 2016, and 2018.

Source: Authors based on data from CEDLAS (2022).

Policies

Previous analysis highlights potential intervention areas that can improve intergenerational mobility in wealth and asset accumulation opportunities, especially for the poorest people. Four clear areas of action are: 1) taxation on the intergenerational transfer of assets, in particular, inheritance tax; 2) financial inclusion, especially the fostering of financial literacy; 3) policies favoring formalization in homeownership; and 4) policies to protect and mitigate health and natural disaster risks.

Inheritance tax

The strongest argument favoring this tax has to do with equity, given that inheritance and lifetime transfers alter the principle of equal opportunities. Therefore, from the point of view of merit, it is argued that inheritance tax rates should be higher than income tax rates. In practice, in many countries, this does not seem to be always the case.

From the point of view of efficiency, although the inheritance tax can disincentivize saving, it is less distortive than the net wealth tax, because it is only levied on the portion of the wealth planned to be left as inheritance (Advani and Tarrant, 2021; OECD, 2018c). Moreover, evidence shows that inheritance taxation increases the heirs' labor supply and savings, partly countering the adverse effect on the testator (OECD, 2021).

Table 5.9 summarizes some key aspects of the inheritance tax design in selected countries from Latin America and the Caribbean, and more developed regions. One of the highlights of these taxation schemes across countries is the fraction of assets that by law is reserved for "forced" heirs (called the "legitime"). These values range from 0% in the United States and Mexico up to above 75% in Ecuador.

Table 5.9
Inheritance taxation characteristics

Country	Legitime (%)	Inheritance tax			
		Levied	Progressive rates	Top rate (%)	Tax exemption/ reduction applicable to family
Argentina	67	Yes (only Bs. As. Province)	Yes	64	Yes
Brasil	50	Yes	Yes	8	Yes
Chile	75	Yes	Yes	25	Yes
Colombia	67	No	-	-	-
Ecuador	75	Yes	Yes	35	Yes
Mexico	0	No	-	-	-
Peru	67	No	-	-	-
Uruguay	75	No	-	-	-
Venezuela	50	Yes	Yes	55	Yes
Denmark	25	Estate tax[a]	Yes	25	Yes
the United States	0	Estate tax[a]	Yes	40	Yes
France	75	Yes	Yes	60	Yes
Norway	67	No	-	0	-

Note: The table presents some basic characteristics of inheritance taxation in selected Latin American and OECD countries. In many, although inheritance taxation is not a direct tax. It is part of income tax (e.g, in Mexico or Peru), or property tax (e.g., in Uruguay).

a. "Estate tax" is an inheritance tax levied on a deceased person's assets and not on the heirs of the deceased.

Source: Authors based on data from EY (2021), PWC (2022), Global Property Guide (GPG, 2019), OECD (2021), and country legislations.

In general, these are progressive taxation schemes, i.e., the tax rate increases with the amount of the inheritance. Low amounts are often tax-free. The highest tax rates vary from one country to another. In the region, these rates are relatively low. In addition, tax rates can differ depending on the relationship of the deceased person with the heir. In general, they are more favorable for the closest heirs (children and spouses). The tax may also change by estate type. For example, in many OECD countries, preferential treatment is granted when the inheritance involves the main residence and/or family business (OECD, 2021). In addition, in some cases, the tax varies across regions. For example, in Argentina, the inheritance tax is only levied in the Province of Buenos Aires, not in the rest of the provinces. This spatial differentiation can incentivize tax-base-related migration and reduce effectiveness of the instrument. The limited evidence found suggests that migratory effects tend to be weak, except for the wealthiest families (OECD, 2021).

How high are inheritance taxes in Latin America compared to other regions? Graph 5.14 shows information in this regard. Specifically, it presents inheritance tax and lifetime transfers tax as a proportion of GDP and total government revenues. In many countries in the region, these taxes do not exist, and, where they exist, they rank below the level in more developed countries. In Chile and Brazil, values are substantially closer to the OECD average. The level of these taxes is very heterogeneous also in developed countries. For example, in France and Denmark, they tend to be high, unlike in Norway.

The above suggests that inheritance and lifetime transfer taxation[29] could be improved in Latin America, especially targeting enhanced equal opportunities. However, these tax schemes involve certain aspects that should not be disregarded.

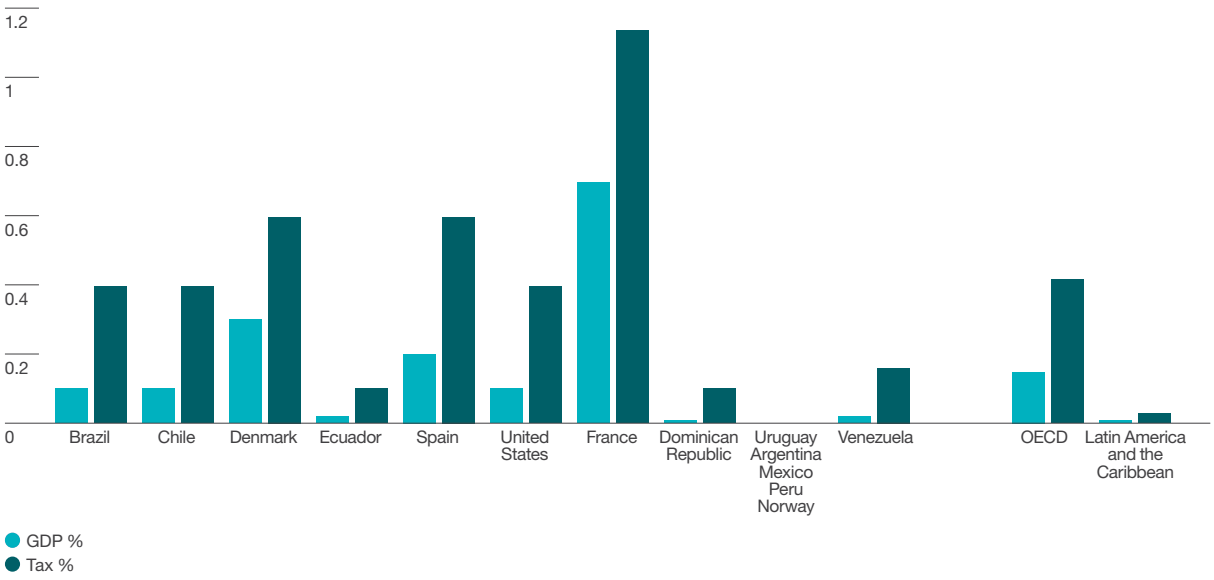
A recent OECD study highlights some principles that should govern inheritance and lifetime transfer taxation (OECD, 2022b). One of these principles is the definition of the tax base, particularly, whether the tax should be levied on the deceased person's total wealth or the amounts inherited by each heir. Inheritance taxation based on amounts inherited by the heir of the deceased enables levying progressive tax rates on the estate received by each beneficiary. In addition, this can incentivize a more equitable division of the estate within families, which is desirable from the point of view of the concentration of wealth. Therefore, the amount of wealth received by each heir is a better tax base than the total amount of wealth left by the testator, if equal opportunities are to be encouraged. This is the dominant practice in OECD countries. Twenty out of the 24 OECD member countries with inheritance taxation levy the transfer received by each heir as a tax base.

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In many countries in the region, these taxes do not exist, and, where they exist, they rank below the level in more developed countries

29. However, using these instruments is no panacea. Some OECD countries have eliminated this type of instrument, partly because they are unpopular, despite their pursuing a popular principle: equal opportunities. Ten of the 26 countries studied by the OECD have eliminated inheritance taxation on the wealth of the deceased person. Austria, the Czech Republic, Norway, the Slovak Republic, and Sweden have eliminated this tax since the 2000s; Israel and New Zealand did it between 1980 and 2000, and, finally, Australia, Canada, and Mexico repealed this tax before 1980 (OECD, 2021).

Graph 5.14
Inheritance and lifetime transfer tax revenues as a percentage of GDP and total tax revenues



Note: The graph presents inheritance and lifetime transfer tax revenues as a percentage of GDP and total tax revenues for Argentina (2018), Brazil (2020), Chile (2020), Denmark (2020), Dominican Republic (2020), Ecuador (2020), France (2020), Mexico (2020), Norway (2020), Peru (2020), Spain (2020), the United States (2020), Uruguay (2020), and Venezuela (2013). It also includes the 2019 average for OECD and Latin American and Caribbean countries.

Source: Authors based on data from OECD (2022b).

Conceptually, and driven by the criterion of promoting equal opportunities, the taxable base should be the aggregate sum of transfers and inheritances received during a lifetime. This would ensure that beneficiaries who receive the same amounts of wealth pay similar taxes, no matter if they receive them through multiple small transfers or one large transfer. However, no doubt, a tax levied on wealth transfers accumulated in a lifetime will remarkably increase implementation and compliance costs.

Delving into more specific design issues, enforcing tax exemption thresholds to relieve "small" inheritances from tax payment and enable heirs to receive a certain amount of tax-free wealth seems to be effective. In addition to potentially improving the popularity of these schemes, the measure favors equality. Indeed, exemptions are fairly common. However, a comparison across countries shows large heterogeneity. For example, in many OECD countries, sons and daughters are exempt from paying taxes, or, if they are not exempt, the threshold may be either high or relatively low. For example, the United States has a high threshold (about USD 11.5 million), whereas, in Belgium or Spain, the threshold is relatively low, around USD 17,000-18,000. In some countries, exemptions are generous in the sense that they free a

significant part of the inheritance from taxes. This partly explains the limited weight of these taxes in total revenues.[30]

Maintaining a broad tax base is key, in particular by reducing tax exemptions and allowances for those categories where there is no sound justification and where such concessions tend to be regressive. For example, there are countries that grant preferential treatment to inheritances received from life insurance policies. Tax relief (e.g., for the primary residence) should be governed by strict criteria and eligibility needs to be closely monitored. Tax treatment on productive assets also tends to be preferential and not entirely justified: the transfer of a business from a parent to a descendant does not guarantee an efficient allocation of managerial talent.

Progressive inheritance taxation—higher taxes on larger bequests—is a characteristic of these optimal schemes (Farhi and Werning, 2010). Actually, inheritance taxes tend to be among those with a steeply progressive legal rate.[31] Ideally, the tax rate can increase gradually with the inheritance to avoid sharp changes to the marginal tax rate and can cause strong distortions to inheritance decisions. Very high tax rates for the wealthiest can promote tax planning and evasion: these are implemented more efficiently by the rich, which the facto reduces the progressivity of the effective tax rate (OECD, 2021).

As has been mentioned, these schemes provide for differential treatment according to whether the heir is close family or not. Part of the gap can be efficient, to the extent that tax on more distant relatives is more likely to be linked to unplanned inheritance which, by nature, is less elastic to inheritance taxation. However, highly excessive gaps can incentivize donors to concentrate the planned distribution of inheritance more on the closest family, with ensuing implications for the concentration of wealth.

The fiscal treatment of inheritances and lifetime transfers should be mutually aligned, but that is not always the case. Misalignment favors the richest, who have surplus liquid resources, and therefore can anticipate transfers to offspring before dying. A tax scheme based on the transfers (including bequests) received in a lifetime favors this alignment but faces implementation challenges.

Finally, it is paramount to adopt measures that can reduce tax evasion and avoidance. The rich can include trust funds, foundations, and businesses in their tax planning schemes to dodge higher tax rates. Therefore, taxation on these should be reviewed to disincentivize these practices. As has been said,

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30. An analysis of 8 developed countries showed that 7 of them collected taxes based on less than 13% of the deceased person's wealth. Some cases were surprisingly low, such as the United States, with just 0.2%. In the country using a larger inheritance tax base (Belgium, with information on its capital region) values were close to 50%.

31. Historical conditions can favor the implementation of this progressiveness. Some studies found evidence that the political conditions generated by mass mobilization for war led to progressivity-oriented tax changes. Part of the argument is that, when these mobilizations occur, the major portion of the population demands that the wealthiest citizens bear at least a larger fraction of the financial burden (Scheve and Stasavage, 2012).

a large portion of the assets of the richest is located overseas. International cooperation related to information sharing can improve the identification of this component of the tax base. Systematic and improved information collection mechanisms are key to building these state capacities.

Policies for the financial inclusion of households

Financial inclusion attempts to enhance household wellbeing by improving access to and use of financial instruments. There are many instruments to promote financial inclusion; one of them is to reinforce financial literacy of consumers.

Promoting financial literacy has become a prioritized initiative in many countries. It has been documented that over 70 countries were designing or implementing a national strategy for financial education by 2020 (OECD, 2022b).[32] Most of these strategies target the entire population; however, in practice, the interest tends to focus on specific groups, such as the young, women, and poor families (OECD, 2015b).

These initiatives involve multiple stakeholders. The Central Bank is often a main actor, but other government agents, non-governmental organizations, and the private sector participate as well. An important sphere of action is the formal education system. In fact, 81% of the countries reported having programs in place that target secondary students, while 63% stated using programs geared toward universities and technical training, and 50% addressed primary education (García et al., 2013). Conditional cash transfer programs can also be used to introduce financial education. In fact, they are often used as a vehicle for these programs. In 9 of the 17 countries offering conditional cash transfer programs in Latin America and the Caribbean, financial education programs are available (García et al., 2013).

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Financial education programs impact not only financial knowledge, but also financial behaviors

The most recent evidence supports an optimistic view about these initiatives. For example, Kaiser et al. (2020) conducted a meta-analysis of 76 experiments (all randomized) and concluded that financial education programs impact not only financial knowledge, but also financial behaviors. The effects are sizeable: the average effects on financial knowledge are about 0.2 standard deviation units, while those for financial behaviors are around 0.1.[33] These financial knowledge effects are comparable to those found after educational interventions oriented to improve math and reading skills.

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32. This interest is reflected in the number of members of the International Network on Financial Education (INFE). This network currently groups 51 public entities in the region (central banks; financial authorities; ministries of finance, education, and social protection) in 22 countries. For a full member list of each country, visit the OECD webpage (https://www.oecd.org/daf/fin/financial-education/INFE-member-lists-LAC.pdf).

33. The mean effect on financial behaviors depends on the variable. For credit, effects of 0.04 were found; for insurance, 0.06; for savings, 0.10; and for budgeting behavior, up to 0.15.

Existing evaluations, some of which focus on Latin America and the Caribbean, show critical lessons. First of all, it is important to have a clear targeted population and to adequate the format and contents of the program to the characteristics and needs of this population. For example, Attanasio et al. (2019) assessed a program addressing low-income women from Colombia. They were randomly selected to receive tablets with specifically designed material on financial education. The study showed that when simplified, interactive, targeted, and engaging content is presented, significant positive impacts on financial knowledge and behaviors are achieved. The experience in the Dominican Republic explored by Drexler et al. (2014) also underscores the importance of content nature and its consistency with the characteristics of beneficiaries. Based on a randomized controlled experiment, the authors examined the effects of two types of training programs on microentrepreneurs: the first program focused on standard-accounting-rule-based training, while the second one provided simplified basic training.[34] The authors conclude that the impact of the rule-of-thumb (simplified) training was significantly larger than that of the standard accounting training for low-educated microentrepreneur families.[35]

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It is important to have a clear targeted population and to adequate the format and contents of the program to the characteristics and needs of this population

Other studies point out that schools can be an appropriate instance to implement these programs. Schools represent a space where the problem can be addressed in an early phase of a person's lifecycle, and where positive externalities seem to exist. One of these studies is the work by Bruhn et al. (2013), who studied a program implemented in over 800 schools in six Brazilian states. The program targeted more than 20,000 high-school students and increased financial knowledge measures by 0.25 standard deviation units. In addition, the authors found positive effects on savings and financial planning. Interestingly, positive spillover effects within the home were also found; in particular, the program also improved the financial knowledge, savings, and planning of the parents of trained students. By the same token, the financial knowledge of students and teachers was significantly impacted after an experimental evaluation of a program implemented in Piura, Peru (0.22 of one standard deviation unit and 0.45 standard deviation units, respectively). Students' habits were also impacted, especially budget planning, and those of teachers, in savings terms (Frisancho, 2019).

Successful voluntary participation in these training programs is not easy to achieve. Of course, this jeopardizes program effectiveness. Hence, it is critical to use certain channels, such as the formal education system and conditional cash transfer programs. Evidence also indicates that monetary incentives can encourage participation. For example, Bruhn et al. (2013) conducted an experimental assessment in Mexico offering a financial education course in face-to-face and online modalities to four subgroups: the first one received monetary incentives, the second one was given deferred payments contingent upon completing the course, the third one was granted a transport subsidy,

34. The sample included 1,193 selected clients of a microfinance institution. Of these, 402 received training on accounting principles and 404 were informed of rule-of-thumb principles. The remaining participants were assigned to a control group that received no training. These rule-of-thumb principles focused on the need to separate the participants' personal and business accounts for better oversight and planning.

35. Some variables showing impacts were the level of sales and the likelihood of having savings.

and the fourth group was encouraged with a video showing financial education testimonials from previous participants. Study results indicate that monetary incentives improve training attendance, but with a modest impact. Naturally, these incentives raise training implementation costs, so cost-effectiveness should always be factored in.

Finally, evidence shows that these programs require public support. Certainly, private sector participation is key for program implementation, but the presence and support of the public sector are imperative. In principle, the private sector (banks) has incentives to provide training to the extent that demand for their service is restricted by inadequate financial knowledge. However, training entails one externality: not only does it increase the demand for the financial services provided by the bank that conducts the training, but also for those offered by other banks. Consequently, private training offerings tend to be suboptimal. In this case, the presence of the public sector is necessary to raise the training to optimal levels. Along these lines, Laajaj and Yang (2018), in the context of an experimental study assessing a program that included financial education and monetary incentives to save in Mozambique, found that the program increased the wealth and consumption of the beneficiaries, and the number of savings accounts, not only at the bank that implemented the program, but also at competitor banks.

As with any public policy, success depends on the use of good practices in terms of program design and implementation. Box 5.5 presents some relevant recommendations.

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Lack of knowledge is not the only barrier to the use of financial instruments

Lack of knowledge is not the only barrier to the use of financial instruments. Next to financial education policies, the implementation of additional policies to access financial services is required, targeting the most vulnerable population. These are very diverse policies and include regulatory aspects for microfinance and fintech[36] development, subsides for the acquisition of financial instruments, improved credit bureaus, and supporting the digitalization an innovation in the provision of financial services, among other elements.

In recent decades, the microfinance industry has made significant progress in many countries, including some in Latin America, such as Bolivia and Peru, just to name a few (Sanguinetti et al., 2011). The large number of clients that had traditionally been excluded from the formal financial sector and can now access financial resources proves this quite clearly. However, this is not enough to claim that microfinance has helped users alleviate poverty or improve their living conditions.

36. The term "fintech" is used both for activities involving the provision of financial services by new ICT-based infrastructures and the companies that offer services using these channels (Mejía and Azar, 2021).

Box 5.5
Financial training strategies: key principles

Develop integral, planned, and long-term strategies based on relevant evidence

A mapping of pre-existing programs and the main lessons learned in them should be available. The financial and non-financial resources needed to ensure program permanence should be planned. In addition, it is necessary to establish and periodically revise a tailored roadmap. It is important to identify and monitor measurable and realistic objectives, which should also be challenging. Similarly, it is advisable to conduct harmonized national surveys. This facilitates data collection on financial literacy levels by target segments to identify priority aspects and groups.

Detect stakeholders, cooperation opportunities, and mechanisms

This involves identifying a leading and qualified authority with responsibility for initiating, developing, and monitoring the national strategy. It is also necessary to identify clearly defined strategic responsibilities for key stakeholders. The incorporation of private stakeholders and non-governmental organizations is positive, but impartiality and transparency should be ensured.

Identify target audiences and appropriate content and instruments

The most relevant financial education elements in the country should be identified and approached by order of priorities. Unawareness and lack of knowledge about the different financial products, and their risks, tend to be commonly found gaps. It is important to take into account the specific needs of different target segments and use a differential approach. On top of differential contents, this would entail the use of a variety of channels and instruments. It is also appropriate to combine these programs with pre-existing policies to improve outreach and effectiveness.

With regard to financial education for specific groups, the young should not be overlooked as one of the top priorities. It is helpful to provide access to this knowledge from the earliest possible age, adopting an ongoing and long-term learning approach. The needs of other special target groups (including women, migrants, older adults, microentrepreneurs, and vulnerable families) should also be considered, identifying spaces that can have positive spillover effects (e.g., the school).

Promote learning and strategy revision

It is important to carry out impact evaluation and cost-effectiveness assessments of the programs. A good practice is to set aside a budget for program monitoring, evaluation, and continuous learning. In addition, learning dissemination should be encouraged. Similarly, program piloting before scaling will help identify and revise implementation bottlenecks.

Source: Based on the OECD (2022c).

Multiple study efforts have focused on the extent to which promoting access to microfinance services (microsavings, microcredit, and microinsurance) has impacted different household wellbeing dimensions. Mader and Duvendack (2019) present a joint review of different meta-analyses and systematic reviews. Regarding the economic dimension (labor participation, income, consumption, savings, assets), average overall results tend to be positive, but not robust enough (in some cases losing statistical significance), and highly heterogeneous. This means that they are positive for some individuals, but zero or even negative for others, in some variables. Savings initiatives have shown smalls but more consistent positive effects at least in terms of savings levels.[37] This evidence moderates the initial enthusiasm for microfinance as a solution to tackle poverty, but it does not exclude the implementation of well-designed strategies as allies to enhance the wellbeing of the poorest population.

Recently, fintech companies have aroused expectations as potential instruments to foster financial inclusion. Mejía and Azar (2021) explored this perspective in Latin America. They document the experience of the digitalization of payment channels thanks to digital wallets in Brazil, Mexico, and Peru. They also highlight how this instrument "is an entry door to the financial system and the use of a broad range of products and services, such as saving, credit, insurance, and remittances." In addition, Mejía and Azar contribute to the discussion about policies to improve the use of digital financial services and make them more effective to enhance financial inclusion in Latin America.

The first thing they talk about is the telecommunications and connectivity infrastructure. In this regard, competition should be encouraged to enable the use of mobile data at affordable prices. Promoting coverage in rural areas is also of the essence, along with taking account of the technology available to the target population. To achieve this, it may be appropriate to enable digital services also on non-smartphones, such as the digital wallet in Peru. Policies should promote inclusion while ensuring the sustainability of the financial system and digital security. Regulations based on traditional entities may not work for fintech companies; hence, it is critical to strengthen the capacities of regulatory agencies. The development of fintech companies has also demand-side implications. Along these lines, the authors indicate that for these services to reach the target population, they need to be supplemented with financial and digital education addressing users so that people can make the best decisions with increased confidence on these platforms. Well-regulated protection of data use can also help people trust these resources.

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Promoting coverage in rural areas is also of the essence, along with taking account of the technology available to the target population

37. Access to credit introduces the risk of overindebtedness by the borrower, which can impact consumption, wealth, and wellbeing.

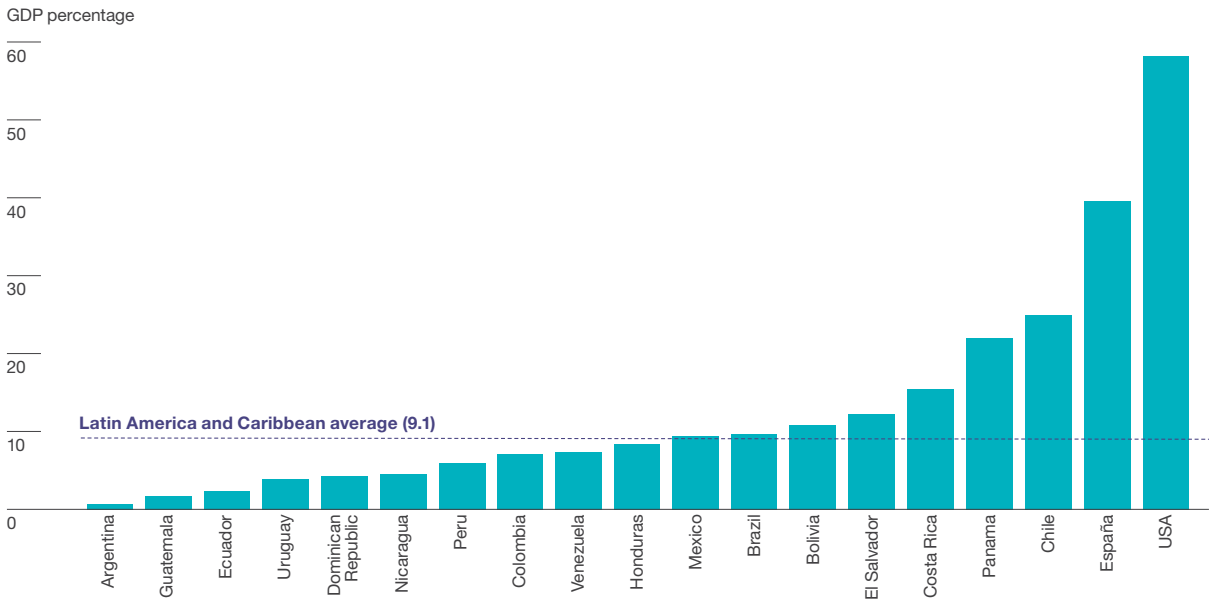
Housing acquisition, titling, and quality policies

Housing acquisition policies

There is a broad spectrum of public policies addressing housing acquisition. They range from highly interventional policies, where governments finance or build and distribute the homes, to market-oriented policies, where the state just enables the conditions for bank lending to flow towards the real estate market. In general, countries use different instruments within this spectrum (Bouillon, 2012), partly, because the different instruments targets different population segments.

With regard to mortgages, the region is clearly lagging. In the United States and Canada, the mortgage credit represents 70% of GDP, while it decreases to nearly 40% in European countries. By contrast, in Latin America, it's less than 8% on average. In the region, Chile ranks at the top, at 20%, slightly higher than the average in Asia. Argentina is on the opposite end, with a very limited mortgage credit market (Graph 5.15).

Graph 5.15
Mortgage indebtedness in Latin America and the Caribbean



Note: The graph presents mortgage indebtedness as a percentage of GDP in Argentina (2017), Bolivia (2015), Brazil (2017), Chile (2017), Colombia (2016), Costa Rica (2015), Dominican Republic (2015), Ecuador (2017), El Salvador (2017), Guatemala (2015), Honduras (2013), Mexico (2018), Nicaragua (2015), Panama (2018), Peru (2018), Spain (2018), the United States (2018), Uruguay (2015), and Venezuela (2015).

Source: Authors based on data from the Housing Finance Information Network (HOFINET, 2022).

The limited availability of mortgages is a multidimensional phenomenon. Macroeconomic stability,[38] sound legal rights, the quality of credit rating systems, and the efficient property registration processes favor the development of this market. Unfortunately, the region lags behind regarding all these factors compared to developed countries. Similarly, again relative to that of more developed economies; the mortgage credit market in Latin America and the Caribbean is more prone to the presence of subsidize loans and constraints, such as "interest ceilings" (see Table 5.10).

Table 5.10
Basic characteristics of the mortgage market in Latin American countries and Spain

	Argentina	Brazil	Chile	Colombia	Mexico	Paraguay	Peru	Spain
Property rights index (IPRI)	4.7	5.2	6.6	5.2	5.7	4.5	4.9	6.7
Days to register property	51.5	-	29	16	42.1	46	7.5	13
Property registration index	8.3	8.9	9.1	9.5	8.7	8.5	9.7	9.6
Property rights protection index	4.5	4.8	7.2	5.1	5.2	5.2	4.2	6.3
Legal restrictions: interest ceilings	No	-	-	Yes	No	-	-	No
Legal restrictions: loan value ceiling	No	-	Yes	Yes	No	-	-	Yes
Legal restrictions: highest payment by income	-	Yes	-	Yes	Yes	-	-	No
Subsidies to mortgage lenders: special government lines of credit	-	Yes	-	Yes	Yes	-	Yes	No
Subsidies to mortgage lenders: government-supported liquidity facility	-	No	-	No	Yes	Yes	-	No
Subsidies to mortgage lenders: tax funds for mortgage lending	-	Yes	-	Yes	Yes	-	-	No
Shared credit risk through public/private mortgage insurance	-	No	-	Yes	Yes	-	Yes	-
Guarantees for mortgages	-	-	-	Yes	Yes	-	Yes	-
Subsidies to households on housing finance	Yes	-	Yes	Yes	Yes	Yes	Yes	Yes
Number of institutions that subsidize mortgages	-	29	13	26	19	21	-	238

Note: The property rights index scores the protection of property rights in different countries. The property registration index takes into consideration the complexity of property registration in terms of the number of required days and formalities to be completed. The property rights protection index measures the system strength of property rights in any one country based on the quality of the legal protection of private property, including financial assets.

Source: Authors based on data from the Housing Finance Information Network (HOFINET, 2022) and the International Property Rights Index (IPR, 2020).

38. Boyd et al. (2001), Smith et al. (2001), and Bittencourt (2007) showed that, above certain thresholds, increases in the rate of inflation reduce the credit market in a non-linear manner. This is due to increased inflation rates being associated with reduced long-run real performance rates. This, in turn, leads to a decline in savings and the number of savers, while rising the demand for credit. Therefore, credit becomes scarce in the economy, and the financial market shrinks. In line with this result, Badev et al. (2014) found that there is a non-linear and negative relation between monetary instability and the depth of the mortgage market.

Box 5.6
Some priority actions to enhance mortgage credit markets

Reforms to strengthen creditors' rights

Legal procedures associated with foreclosures must be reasonable to enhance mortgage lending and at the same time, respect debtors' rights. For example, some countries have considered measures to restrict the number of appeals that can be made.

Promotion of innovative credit instruments

Public policy must promote financial innovation, such as the develop new credit products. Two examples are targeted savings plans ("ahorro previo") and lease purchase agreements. Targeted savings plans aim to drive the savings capacity of families that want to become homeowners to reduce loan incidence and ensuing risks. Lease purchase agreements, in turn, act as a "bridge" to credit access, enabling clients to gauge their own payment capacity and accumulate savings to transform the lease option into a mortgage agreement. This could contribute to risk reduction because the creditor will continue to be the holder of the property deed until full repayment upon expiration of the agreement. Therefore, the problems associated with foreclosures faced by creditors are mitigated.

Reformed property registration

Comprehensive information platforms are needed to identify assets ownership as well as any privation on the use of those assets as collateral. Property registration is critical to use home assets as mortgage collateral. With a good property registry, credit institutions can also assess the history and attachments on the property they could finance. Hence, transparency efficiency of the property registration systems favors the value of the assets that secure the mortgage.

Promoting medium and long-term financing

One channel for this type of financing would be the specific allocation of private resources (e.g., based on the identification and definition of investment objectives of retirement savings funds) and public resources (channeling resources via development banks by first or second-tier operations).

Mortgage securitization

Mortgage securitization links housing loans markets with capital markets; increasing the funds to the house credit market; normally restricted to the banking system. Securitization allows issuing financial instruments with different risk; which investors buy on capital markets. This enables a quicker turnover of the resources handled by financial institutions (FI): assets can be removed from their balance sheets before maturity in exchange for resources to originate new loans (thus enhancing the availability of medium and long-term resources without an impact on the other FI operations). In the region, Chile and Colombia are examples of the development of this market, where housing funds combine with the possibility of securitization.

Crowdfunding

The popularity of real estate crowdfunding in the housing market is increasing worldwide, both for property and mortgages. In the case of property, collective investments to buy and administer real estate are made. Conversely, under mortgage crowdfunding, a natural or legal person borrows money to buy a home and the collateral is the person's present and future net worth, plus the asset pledged for the mortgage.

Source: Authors based on data from Domínguez et al. (2017) and Bouillon et al. (2012).

No doubt, the development of the mortgage credit market will improve access to housing, especially for the middle class. However, it tends to be insufficient to make housing acquisition affordable to the poorest households. Therefore, subsidies and transfers to buy a home are frequent. Some authors suggest that subsidies should adopt the form of money transfers to individuals, rather than the state building and granting the homes (Bouillon, 2012). Some arguments in support of this idea involve information asymmetries about the preferred locations to live. Very frequently, social home construction aims at the spatial deconcentration of the population, but without creating the employment opportunities. Another argument relates to the inflated cost of building by the state as a result of corruption. In any case, these subsidization systems need to be very transparent and auditable. At the same time, they should be constantly revised and accurately targeted, which is not always the case.[39]

Titling policies

Titling programs help fight poverty. Evidence shows that land titling improves: 1) residential investments (Field, 2005; Galiani and Schargrodsky, 2010; Gandelman, 2016); 2) health (Galiani and Schargrodsky, 2004; Gandelman, 2011), and 3) the labor market outcomes (Field, 2007).

For example, Galiani and Schargrodsky (2010) exploit a natural experiment to analyze the causal effects of the allocation of land titles. The authors found that land titling increased the constructed surface by 12%, while the index of housing quality rose by 37%. Therefore, ownership titles represent a savings tool for households. This is particularly relevant in Latin America, where access to savings instruments is still relatively limited, especially for

39. A comparison of three mortgage subsidy programs in the region made this very clear. In Argentina, only 38% of the beneficiaries belong to the poorest 20% of the population, compared to 76% in Colombia and 69% in Chile.. Moreover, in Argentina, 18% of the beneficiaries belong to the top income quintile (Bouillon, 2012).

poor households.[40] Gandelman (2016), in turn, found there is a nearly 10% effect on the likelihood of home reforms being made in Uruguay.

Titling programs should not only aim to grant titles, which is their regular focus, but also to maintain formal ownership during future ownership transactions (such as sales, divorce, and inheritance). Different studies (Galiani and Schargrodsky, 2011, 2016; Gutiérrez and Molina, 2020) show that the high cost of registrations, combined with liquidity problems, may lead to an informal property transfer. For example, Galiani and Schargrodsky (2016) found that from 12 to 21 years after titling, 28.8% of land parcels were occupied under an informal arrangement due to either intra-family transactions that were not registered (inheritance, divorce) or irregular inter-family transactions (informal sales, occupation). The main cause for this phenomenon of ownership informalization is the high transaction costs of formalization, relative to the income of poor families (Galiani and Schargrodsky, 2011).

Social protection and reduced vulnerabilities

This last section will review policies to protect and mitigate vulnerabilities in case of health shocks and natural disasters. As has been said, these events contribute to the perpetuation of poverty across generations. These policies should take care of both prevention and assistance during and after emergency occurrence. This section will present an overview of some of these policies, supplemented by the discussion in Chapter 3.

Health

In terms of health, maybe the most powerful preventive action is **promoting healthy habits** to extend people's time period in good physical and mental condition. As discussed in the section above, a very large portion of the costs associated with a health shock has to do with wage loss. To the extent these health shocks occur near o after retirement, these costs will be reduced.

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The most powerful preventive action is promoting healthy habits to extend people's time period in good physical and mental condition

Among other things, a healthy lifestyle includes regular physical exercise, a healthy diet, no smoking, and low alcohol consumption. The habits of the Latin American citizens are not always aligned with these practices. In the main Latin American cities, 19% of adults aged 45-65 report smoking, 50% do not practice any regular physical exercise, 40% eat fast food at least once a week, 14% drink alcohol at least three times a week, and 35% are obese (Álvarez et al., 2020).

40. Other results are associated with better school performance. In particular, the secondary school completion rate of the children of these entitled families was 53% (vs. 26% in the control group). In contrast, Gandelman (2016) points out that titling could also reduce human capital investment as a result of a "substitution effect" that makes home investment more attractive as the expropriation risk declines.

There are multiple public policy instruments available to promote a healthy lifestyle, such as advertising campaigns or levying taxes on unhealthy products (tobacco, alcohol, sweetened beverages). Public spaces suitability for the practice of sports could also be a public policy target. Another preventive policy is the promotion of regular health checkups for the early detection of some conditions (such as hypertension or diabetes) and timely treatment.

Improving social health insurance programs is also a necessary action. Some Latin American and Caribbean countries have implemented relevant reforms. In general, the health insurance expansion behind these policies had positive effects on health metrics, especially among children, and decreased out-of-pocket expenses. In some cases, the reforms were detrimental to labor participation or formal employment.

One example of these reforms is the implementation of the Seguro Popular program in Mexico in 2002. Some studies found that it decreased child mortality by up to 10% in the poorest municipalities (Conti and Ginja, 2016). Others attribute to Seguro Popular a reduced likelihood of incurring catastrophic out-of-pocket health expenditures by 4.5 percentage points among households (Grogger et al., 2015). One of the downsides of introducing the program is an estimated 2 percentage points reduction in formal employment among low-educated families with children (Conti et al., 2018).

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The Salud Popular program reduced child mortality rates by up to 10% and decreased the likelihood of incurring catastrophic spending by 4.5 pp

Coverage for health shocks may protect people against out-of-pocket spending; but not necessarily against other cost related to health shocks (e.g. forgone income). Hence, other insurance and transfer schemes may be needed, such as **unemployment and disability insurance**, as well as **pension schemes**. Evidence also supports the importance of implementing other active labor market policies such as job search assistance. Obviously, to avoid unintended results, these schemes and policies should be properly designed and implemented.

Finally, it is advisable to **implement long-term care policies**. This report has described that monetary and time transfers by the offspring, especially daughters, is one of the channels that transmits health shocks across generations. The existence of insurance mechanisms previously described can alleviate the monetary component. However, the caregiving time component requires that these long-term care services are affordable to the poorest, which may impact public spending on health.[41]

Extensive health care coverage, including long-term care, may require higher spending under the current levels of efficiency. However, evidence suggests that there are large efficiency gaps in public spending on health in the region. Therefore, improved efficiency can free up resources to expand coverage. Álvarez et al. (2020) discuss some practices to introduce efficiency in public

41. Spending on long term care is higher than 1% of GDP in more than half of the OECD countries. Public spending represents 87% of total spending on care services. In contrast, in the region, the provision of these services still resides in the family (Álvarez et al., 2020).

spending on health, such as copayment, revising payment schemes for health care providers, and introducing digital technology to provide health care services.

Natural disasters

The **development and revision of risk prediction models for risk (micro) zoning** should be one of the first actions associated with a comprehensive prevention and resilience plan to tackle natural disasters. A starting point is to collect data on natural disasters and their losses, as well as data on the quality of public infrastructure and buildings. This information, coupled with the development and combination of natural disaster prediction models, would enable risk mapping and zoning considering hazard, exposure, and vulnerability levels. This, in turn, will lead to territorial organization and help identify the vocation of the different territory areas, locate activities according to specific risk minimization strategies, and establish protection mechanisms.

In Colombia, the city of Manizales is an example of the above (Carrizosa et al., 2019). The risk maps of the Manizales territorial organization plan (Plan de Ordenamiento de Manizales) introduced 29 risk factors in an artificial neural network model.[42] In addition, the cartographic base of land plots was supplemented by images obtained using LIDAR (laser imaging detection and ranging) technology. Therefore, tridimensional images of the city surfaces were scanned and categorized with a high level of detail. The experience in Manizales highlights the role that sophisticated technologies can play in these initiatives.

Zoning may involve actions such as **relocating families that live in non-mitigable high-risk zones** (Vargas, 2002). These must become protected areas, typically restricted to low-density recreational use supported by early warning systems. The relocation of human settlements is a complex process but can become an opportunity for integral improvement in the quality of life of the population (Correa et al., 2011; Hallegatte et al., 2017). However, if not duly planned or conceived as a complementary action integrated into a comprehensive risk management strategy, resettlement may lead to ineffective and unsustainable processes. Moreover, resettlement can be doomed to ineffectiveness if sitting in jobless locations.

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Non-mitigable high-risk zones should become protected areas, typically restricted to low-density recreational use supported by early warning systems

The treatment of riverbanks in Cuenca, Ecuador, is an example of zoning. Instead of using methods such as channels to control floods, the green areas on the Cuenca riverbanks are considered as “safe-to-fail” infrastructure allowing for seasonal flooding with minimum damage to property and vital infrastructure (Ahern, 2011). Santa Fe, in Argentina, is another example. Many families in the western part of Santa Fe city used to live on flood-prone

42. These factors include aspects such as geological classification, soil slope, distance to drainage systems, population density, building density, and socioeconomic stratum, among others.

land under informal settlements, without access to basic services. In 2014, the Urban Planning Secretariat decided to convert parts of this zone into a nature reserve across 142 hectares to restrict city expansion towards the river, increase the absorption capacity of the soil, and improve the quality of life of the inhabitants. The new plan aimed to provide land tenure security to people living in flood risk-free zones and relocate those who lived on land that was not suitable for residential use (Carrizosa et al., 2019).

A second line of work is **the development of public infrastructure for risk mitigation**. The type of infrastructure required depends on the specific risk and includes drainage systems, walls to divert lava flows, dams and dikes, breakwater structures, terraces and water passageways, canalization of water basins, and concrete flood defenses, among others. Investing in infrastructure goes beyond building new infrastructure but requires ongoing quality control and maintenance. Ignoring the condition of infrastructure exacerbates natural risks.

The city of Luján, in Argentina, offers an example of infrastructure development for risk mitigation. In 2014, the city was struck by seven severe flood events. To prevent river flooding, control river flows, and moderate the effect of floods in this river basin, CAF—development bank of Latin America—approved financing to implement the Integrated Management Plan for the Lujan River Basin in 2016. In this specific case, two needs were identified: increasing the river flow capacity by erecting complementary canals and enlarging and profiling the natural river flows and improving the current basin runoff volume by performing works to replace and enlarge bridges, river crossings, and floodgates.

A third type of program has to do with the **cleaning and preventive maintenance of mitigation infrastructure and critical spaces**. For example, floods can be caused, in part, by obstructed river and ravine flows as a consequence of human or natural action. Solid waste management is closely related to risk reduction: improper waste disposal is a contributor to drainage clogging. Therefore, environmental education policies are relevant for the community to become aware of the appropriate management of solid waste and the importance of checking the conditions of these critical spaces on regular basis.

●●
Environmental education policies are relevant for the community to become aware of the appropriate management of solid waste

An example of this program is “Guardianas de las laderas” (Women guardians of the hillsides), again in Colombia (Carrizosa et al., 2019). These women guardians prune and remove canal-clogging vegetal material. Moreover, they have implemented two dissemination and awareness-raising strategies within the community. One is a “door-to-door” strategy: they go home to home when they finish cleaning to explain careful management hillside techniques to the neighbors. The second strategy is a teaching activity targeting children, conducted in educational centers in the city. Women guardians also monitor mountains and informal settlements daily. This is supported by a land plot and housing census performed in high-risk areas that is continuously updated. This detailed population, cartographic, and cadastral census has been critical to locate missing people after natural disasters and prevent undue subsidy collection. Similarly, it has been instrumental in voluntary

resettlement processes (Carrizosa et al., 2019). The program shows how the community can be integrated into risk mitigation strategies.

A fourth line of action is the **control and regulation of constructions** to ensure their quality. This involves revising building regulations and codes to be designed in line with each region's risks. Essential infrastructure, particularly that related to food storage and the supply chain, health, education, water, energy and telecommunications, must be properly designed and constructed to withstand the most common hazards (Bello, 2020). Naturally, regulatory authorities must be in place to supervise code compliance. Chile, Costa Rica and Mexico are examples of countries that strictly enforce their building codes and that have updated those codes after each major earthquake (Bello, 2020). In addition, housing quality should be ensured as well. Very frequently, it is the people who build their own homes, and this represents a challenge. Housing quality adjustment policies may be needed for homes to meet minimum safety requirements to withstand natural disasters.

Finally, it is advisable to explore the implementation of **insurance mechanisms** to tackle these events. International experience shows that insurance against natural disasters has the advantages of stimulating prevention and accelerated and efficient post-disaster reconstruction (Hallegatte et al., 2017; Vargas, 2002). To minimize expenses caused by catastrophes, the insurance industry promotes macro and micro-level prevention. On a macro level, it fosters the development of risk maps, the study of recurrence intervals, the setup of early warning systems, and the design of contingency plans. On a micro level, it provides direct consultancy to insured parties on compliance with prevention rules and codes and promotes the creation of incentives and rewards for the insured who minimize their vulnerability. Insurance markets also favor rapid responses to control major damage and have the capacity to mobilize resources to finance reconstruction in insured areas affected. In many countries, insurance companies get involved in the management of reconstruction processes and pursue minimizing their costs through effective plans; high-efficiency timelines; and the monitoring of contracts and contractors, including fraud attempts (Vargas, 2002).

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Insurance against natural disasters has the advantages of stimulating prevention, and accelerated and efficient post-disaster reconstruction

Public policies can incentivize these markets, mainly by defining policies, codes, and standards to reduce vulnerability. These are the basis of preventive management by insurance companies, which, incidentally, can also drive compliance with the established rules. Actions to reduce adverse selection problems and expand coverage can also be undertaken. In several countries, some insurance policies against natural disasters are mandatory. In addition, premium or partial-damage co-financing, or cross-subsidy mechanisms are also implemented.

Once again, Manizales is an example in the region: it introduced a collective voluntary insurance policy that has been protecting the poorest population against natural disasters (particularly the most devastating ones, earthquakes) since 1999. Payment of the land plot tax includes this insurance policy. This incentivizes the mass insurance of private property while cross-subsidizing land plots that are not required to pay taxes based on their value. Supported

by actuarial calculations, the municipality of Manizales conducted technical studies that estimated that if just 20% of the parcels required to pay the land plot tax contributed to voluntary insurance, all the land plots that were not required to pay the tax would be covered (Gestión del Riesgo Manizales, 2015). Carrizosa et al. (2019) argue that this risk-transfer mechanism is a successful experience for the state to protect the least favored population without the need to mobilize additional resources. They add that the implementation of this practice shows that voluntary microinsurance has the potential to align public and private interests for the benefit of the city without this representing an additional burden on the municipality.

Key messages

1 Assets ownership translates into wellbeing. For the most vulnerable population, it can impact primary issues, such as health or completing basic education. Unfortunately, wealth distribution is highly unequal, even more than income, and has an intergenerational component. This means that the wealth of the parents impacts the wealth of their offspring.

2 A starting point to understanding the intergenerational persistence of wealth is exploring how households save. For most households, the home is the most important asset. In 2019, nearly 65% of Latin American and Caribbean people owned their homes. However, salient aspects, such as housing quality and formal titling, have a strong socioeconomic gradient.

3 Not only do the poor have limited wealth, but wealth is concentrated in low-quality assets in terms of return and price appreciation (e.g., cash instead of shares), risks (e.g., property in vulnerable zones), and liquidity (e.g., untitled property). This reduces the quantity and quality of the wealth that poor parents can bequeath.

4 Inheritance is a crucial channel behind the intergenerational persistence of wealth. According to report estimates, the heir status explains 32% of the intergenerational persistence in housing and nearly 55% of the intergenerational persistence in business and other assets, in the main Latin American and Caribbean cities. The inheritance phenomenon can be enhanced because of the phenomenon of assortative mating, that is, the tendency of individuals with similar wealth to mate with one another.

5 Another channel has to do with the financial literacy gaps between the rich and the poor. This knowledge is associated with the ownership of financial instruments and savings levels, even when comparing people with the same level of education; and can be transmitted between parents and children, as can other traits and attitudes.

6 Lack of access to finance increases dependency on parental wealth to accumulate assets. The report indicates that the coefficient of intergenerational persistence in homeownership is lower in regions with higher credit penetration.

7 Finally, health shocks can also be a channel that propagates intergenerational poverty. Having parents with good health is associated with a higher possibility of receiving an inheritance and being a homeowner, and a lower likelihood of children transferring resources to their parents.

8 Based on the above assessment, this chapter indicates five policy actions to favor intergenerational mobility in wealth and equal opportunities: levying an inheritance tax, developing mortgage credit markets, introducing home titling, promoting financial literacy, and strengthening social protection schemes.

9 The inheritance tax accounts for a relatively small portion of tax revenues in the region. Designing these taxes presents challenges. For example, the tax treatment of inheritances and lifetime transfers should be aligned. Misalignment favors the richest, who have surplus liquid resources; and therefore, can anticipate transfers to offspring before dying.

10 With regard to home loans, the region is clearly lagging. In the United States and Canada, mortgages account for 70% of GDP, while it decreases to nearly 40% in European countries. By contrast, in Latin America, this share does not exceed 8%. Macroeconomic stability, sound legal rights, the quality of credit rating systems, and efficient property registration processes foster mortgage credit markets.

11 Titling programs help improve residential investments, health, and the labor market. Reducing property registration costs is key to fostering and maintaining formal property ownership in future transactions, such as sales, divorce, and inheritance.

12 Studies show that financial knowledge training programs can attain promising results. However, supply policies for financial inclusion are also required.

13 Finally, reducing the impact of health shocks on intergenerational mobility calls for promoting healthy habits, improving the coverage and quality of social health insurance, and developing long-term care policies for older adults.

Appendix

More detail on CAF's financial capabilities survey

The surveys that measure the financial skills of the Latin American population implemented by CAF in the region implemented a methodology developed by the Organisation for Economic Cooperation and Development (OECD). This assessment methodology aims to identify the knowledge, skills, attitudes, and behaviors of individuals regarding financial topics. This report used the surveys conducted in Argentina (2017), Bolivia (2013), Colombia (2019), Chile (2016), Ecuador (2013), Paraguay (2017), and Peru (2019).

The survey has national representativeness. The sample size is about 1,200 people over 18 years of age of all socioeconomic statuses, living in both urban and rural areas. For more detailed information, visit CAF web page (https://www.caf.com/es/actualidad/herramientas/2021/05/visualizador-encuesta-de-capacidades-financiera/).

Table A 5.1
Instruments within asset categories

Bank accounts	Sophisticated assets	Private pension fund	Insurance type	Investment financing	Mortgage	Personal loan
Argentina						
Savings account Current account Term deposits Debit card	Investments in mutual investment funds Investments in government bonds Investments in shares			Leasing Microcredit for production Retail loans		Credit card Retail loans Cooperative association or mutual society loans
Bolivia						
Savings account Current account Term deposit	Investment funds Stock market investments	Pension funds (AFP)	Microinsurance Life microinsurance Health insurance Life, fire insurance, etc. Motor insurance (SOAT)	Business loan, microcredit, and SME loan (to buy machinery, products for sale, etc.)	Mortgage	Credit card Consumer loans (to buy motor vehicles, white goods, furniture; to pay for education, trips, etc.))
Chile						
Checks Current account Savings account Term deposit Debit card Sight account	Stock market investments Mutual funds	Voluntary retirement savings Pension funds (AFP)	Life, fire insurance, etc. Supplemental health insurance Motor insurance (SOAT)	Leasing Factoring	Mortgage	Credit card Credit from cooperative associations Credit from retail chain stores ("Point-of-sale loans")

Continued on next page →

Bank accounts	Sophisticated assets	Private pension fund	Insurance type	Investment financing	Mortgage	Personal loan
Colombia						
Savings account Current account Mobile banking	Investment products (bonds, investment or mutual investment funds, shares, stock market invest-ments, etc.) Cryptocurrency (Bitcoin, Litecoin, Dogecoin, etc.)	Voluntary pension plan	Life insurance Pet insurance Personal accident insurance Education insurance Credit insurance Property insurance Unemployment insurance Health insurance Motor insurance (SOAT)	Credit to buy business equipment, machinery, or supplies Credit to pay for education	Mortgage	Credit card Motor vehicle loan Unrestricted-use consumer credit
Ecuador						
Current account Savings account Time deposit account	Mutual funds Investment funds	Pension fund (FFAA and IESS)	Microinsurance Life microinsurance Health insurance Life insurance Motor insurance (SOAT)	Inventory loan Loans to buy equipment, machinery, etc.	Mortgage	Credit card Personal loan Motor vehicle loan
Paraguay						
Deposits Debit card Electronic transfers and payments Mobile money transfers	Investments in shares, government bonds, mutual investments funds	Contributions to private retirement funds	Insurance policies (home, accident, life, motor)	Business loans (owned business, operating capi-tal, etc.)		Personal loans (for consumption, motor vehicles, land, trips, events, etc.)
Peru						
Current account Savings account Time deposit account	Stock market investments Mutual funds Purchase of financial investment products Cryptocurrency investments	Pension fund (AFP and ONP)	Microinsurance Credit life insurance Life insurance Motor insurance (SOAT) Health insurance (EPS, EsSalud, and SIS)	Inventory loan Loans to buy equipment and machinery	Mortgage	Credit card Personal loan Motor vehicle loan

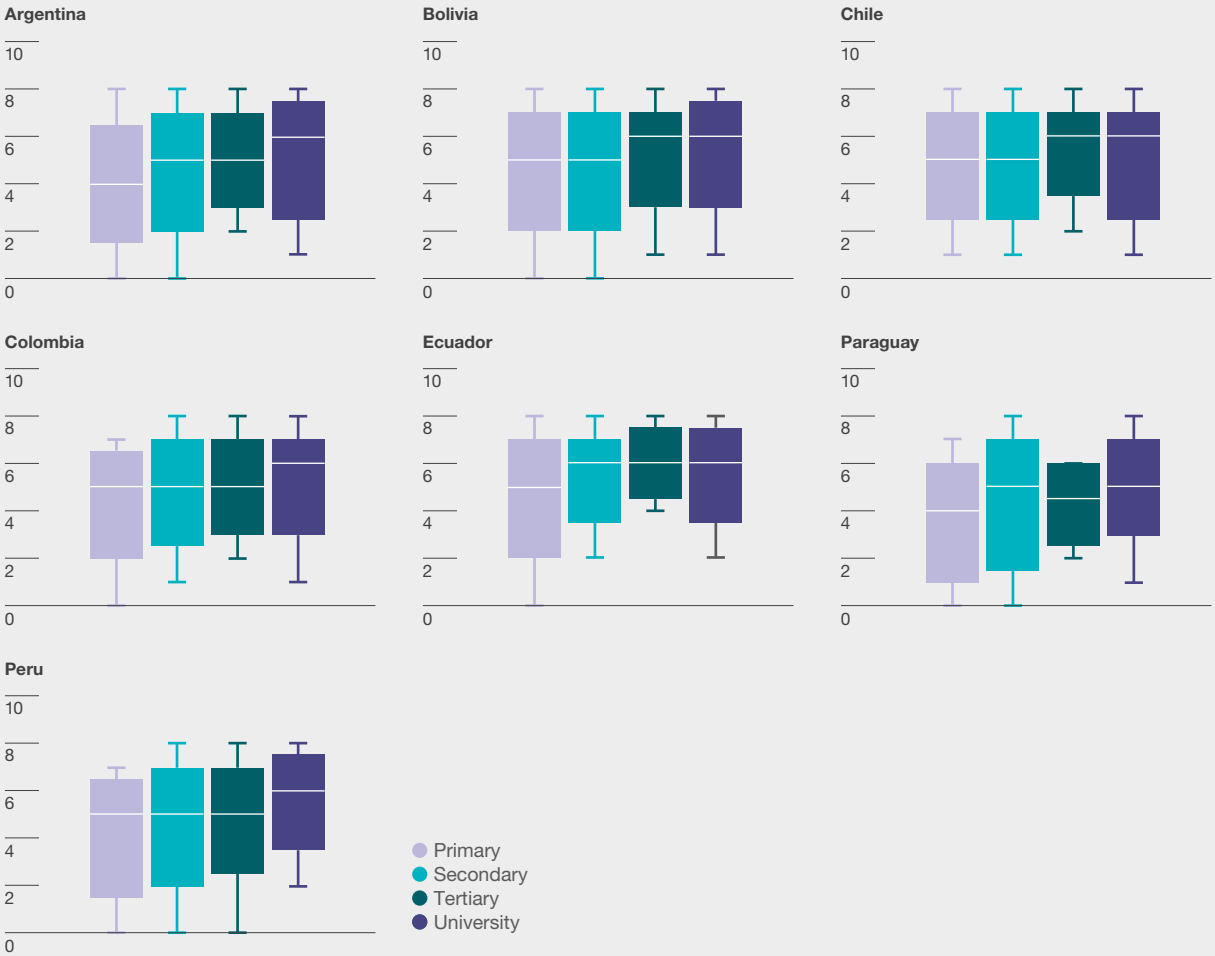
Note: The table presents the assets that were included in each of the surveys to create homogeneous categories. The meaning of the Spanish acronyms and initials used in the table is the following: AFP, Pension fund administrators; EPS, Health provider entities; EsSalud, Social health insurance; FFAA, Armed Forces; IESS, Ecuador social security institute; ONP, Retirement office (Peru); SIS, Integral health insurance; and SOAT, Compulsory traffic accident insurance.

Source: Authors.

Additional graphs and tables

Graph A 5.1

Financial literacy: dispersion in the number of correct answers to questions by educational attainment



Note: The graph shows the median number of correct answers (horizontal line within the bars), the range comprised between percentiles p25 and p75 (rectangle), and the range given by 1.5+/- (p75-p25), represented by the line ends, by country and educational attainment. Data are for Argentina (2017), Bolivia (2013), Chile (2016), Colombia (2019), Ecuador (2013), Paraguay (2017), and Peru (2019).

Source: Authors based on data from the CAF financial skill measurement survey (CAF, 2019a).

Table A 5.2
Asset ownership by country according to different surveys

		Bank account (% of households)			Mortgages (% of households)		
	Year of FSMS (CAF)	FSMS (CAF)	World Bank (2017)	World Bank (2011)	FSMS (CAF)	World Bank (2017)	World Bank (2011)
OECD	-	-	95	87	-	29	22
Latin America and the Caribbean	-	41	52	30	3	6	1
Argentina	2017	33	49	33	-	3	0
Bolivia	2013	40	54	28	5	12	4
Brazil	-	-	70	56	-	5	1
Chile	2016	50	74	42	7	10	4
Colombia	2019	41	46	30	0	7	3
Ecuador	2013	53	51	37	3	7	2
El Salvador	-	-	30	14	-	5	2
Guatemala	-	-	44	22	-	8	2
Honduras	-	-	45	20	-	6	2
Mexico	-	-	37	28	-	4	3
Paraguay	2017	12	49	22	-	7	1
Peru	2019	37	43	21	1	6	1
Uruguay	-	-	64	23	-	7	2
Venezuela	-	-	73	44	-	3	0

Note: The table examines the difference in asset ownership by household and country. The proportion of individuals who have an account with a financial institution and a mortgage is presented. Latin American data are for the countries in the table. OECD countries included are Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Israel, Italy, Japan, Korea, Latvia, Luxembourg, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, the United Kingdom, and the United States. FSMS: financial skill measurement survey.
Source: Authors based on data from the CAF financial skill measurement survey (2019) and the Global Financial Inclusion survey (World Bank, 2012, 2018).

Table A 5.3
Ownership of and knowledge about financial instruments by educational attainment and country (CAF)

	Education	Assets (%)			Insurance (%)	Liabilities (%)			Assets they know about (%)
		Bank accounts	"Sophisticated" instruments	Private pension fund	Insurance	Investment funding	Mortgages	Personal loans	
Argentina 2017	No schooling	19	0	-	-	0	-	9	29
	Secondary	33	0	-	-	0	-	16	45
	Tertiary	53	1	-	-	0	-	30	51
	University	73	4	-	-	0	-	30	63
Bolivia 2013	No schooling	27	0	11	25	6	3	10	37
	Secondary	31	0	7	26	7	5	12	47
	Tertiary	56	0	34	39	5	7	21	48
	University	62	1	33	38	6	4	34	58
Chile 2016	No schooling	34	1	25	6	1	1	31	43
	Secondary	41	1	31	7	2	3	32	56
	Tertiary	53	4	44	20	4	9	44	72
	University	75	8	59	3	8	16	49	75
Colombia 2019	No schooling	11	3	1	23	3	2	3	19
	Secondary	38	2	4	22	3	1	15	28
	Tertiary	53	7	10	32	2	2	30	32
	University	77	13	18	48	2	7	48	49
Ecuador 2013	No schooling	34	1	8	15	1	2	10	28
	Secondary	61	0	8	32	2	3	17	31
	Tertiary	71	0	6	44	0	3	26	38
	University	83	2	20	50	2	5	40	45
Paraguay 2017	No schooling	3	0	0	2	2	-	13	40
	Secondary	14	0	2	3	3	-	19	52
	Tertiary	16	0	0	9	4	-	36	59
	University	42	0	6	16	9	-	57	71
Peru 2019	No schooling	12	1	3	22	0	0	8	27
	Secondary	31	2	10	31	1	1	16	36

Note: The table examines the differences in the ownership of and knowledge about assets in households by educational attainment and country. The proportion of individuals who hold the different assets and the average percentage of the assets listed on the survey that each individual knows about are presented. A detailed enumeration of the assets and survey characteristics can be found at the beginning of this Appendix. The year below each country indicates the data year.

Source: Authors based on data from the CAF financial skill measurement survey (CAF, 2019a).

Table A 5.4
Ownership of and knowledge about financial instruments by educational attainment and country (World Bank)

	Education	Bank accounts (%)	Bank accounts and mobile banking (%)	Mortgages	Business loans
Argentina	No schooling	43	43	3	2
	Secondary	48	49	3	4
	Tertiary/University	82	82	4	3
Bolivia	No schooling	41	43	8	9
	Secondary	52	56	13	13
	Tertiary/University	80	81	19	8
Brazil	No schooling	63	63	1	2
	Secondary	72	72	4	5
	Tertiary/University	92	92	26	-
Chile	No schooling	54	55	4	2
	Secondary	78	78	11	4
	Tertiary/University	90	90	17	5
Colombia	No schooling	32	33	4	9
	Secondary	46	47	6	11
	Tertiary/University	88	88	18	16
Ecuador	No schooling	41	41	6	7
	Secondary	51	51	6	7
	Tertiary/University	89	89	22	8
El Salvador	No schooling	20	20	3	7
	Secondary	33	35	6	8
	Tertiary/University	62	62	13	12
Guatemala	No schooling	33	33	6	7
	Secondary	51	52	8	7
	Tertiary/University	84	86	20	8
Honduras	No schooling	34	37	4	7
	Secondary	46	49	7	8
	Tertiary/University	83	84	17	15
Mexico	No schooling	24	24	3	3
	Secondary	35	38	4	6
	Tertiary/University	62	63	9	9
Paraguay	No schooling	31	44	6	8
	Secondary	28	48	6	6
	Tertiary/University	42	62	12	13
Peru	No schooling	31	31	6	2
	Secondary	40	41	6	9
	Tertiary/University	75	75	9	14
Uruguay	No schooling	51	51	4	3
	Secondary	64	64	6	2
	Tertiary/University	91	91	18	6
Venezuela	No schooling	58	58	0	3
	Secondary	75	75	3	5
	Tertiary/University	91	91	6	12

Note: The table analyzes the difference in assets owned by the household according to educational attainment and country. The fraction of individuals who own accounts with a financial institution, with a financial institution or mobile banking, a mortgage, and business credit is presented. All data are for 2017.
Source: Authors based on data from the Global Financial Inclusion survey (World Bank, 2012, 2018).

Table A 5.5

Impact of homeownership by parents and parents-in-law on homeownership by the descendants

	Basic controls	Basic controls and education	Basic controls, education, and employment
Parents or parents-in-law were homeowners	0.149***	0.151***	0.152***
Parents and parents-in-law were homeowners	0.226***	0.227***	0.229***

Note: The table presents the regression coefficient of homeownership by the respondent's or his or her spouse's parents, and homeownership by both pairs of parents. Homeownership indicates if the individual answered whether he or she is a homeowner or not. Homeownership by the parents or parents-in-law emerges as a retrospective answer to the situation when the respondent or his or her partner were 14 years of age. Each of the three columns shows results by different control sets. Basis controls are gender, age group, country, and marital status. Education controls indicate the highest educational attainment of the parent and the child, and employment controls are the size of the company where the child works. Moreover, only individuals over 30 years of age were considered. Estimates were made using data from the 2012 ECAF survey, representative of Arequipa, Bogota, Buenos Aires, Caracas, Cordoba, Guayaquil, La Paz, Lima, Maracaibo, Medellin, Montevideo, Panama City, Quito, Rio de Janeiro, Salto, São Paulo, and Santa Cruz.

Source: Álvarez-Parra and Carbonari (2022).

Table A 5.6

Differences in offspring-parent transfers and caregiving activities by parental health status and children's gender

	Transfers	Caring for parents	Caregiving time (in hours)
Parents who have poor health	0.0715***	0.0784***	0.426**
Woman	-0.015	0.006	0.072
Woman whose parents have poor health	0.057*	0.008	0.68***

Note: The table presents averaged values for the children whose parents have poor health and their interaction according to the individual's gender, for different editions of the ECAF survey and variables of interest. Values in these columns are obtained from a least ordinary squares regression, where controls for gender, child's health, educational attainment of the parent and the child, number of siblings, and fixed effects by country were added. Child's health is a self-reported variable, and the parent's health is a variable reported by the child. The 2019 ECAF survey is representative of Asuncion, Bogota, Buenos Aires, Mexico City, La Paz, Lima, Montevideo, Panama City, Quito, Santiago de Chile, and São Paulo.

Source: Authors based on data from the 2019 ECAF survey (CAF, 2020).

Table A 5.7
Categories of countries and Mexican states by credit access

	High credit access	Low credit access
2011 EMOVI survey	Aguascalientes, Baja California, Coahuila de Zaragoza, Chihuahua, Guanajuato, Jalisco, Mexico, Michoacan de Ocampo, Nuevo Leon, Puebla, Quintana Roo, San Luis Potosí, Sinaloa, Sonora, Tlaxcala	Campeche, Colima, Chiapas, Federal District, Durango, Guerrero, Hidalgo, Morelos, Nayarit, Oaxaca, Queretaro, Tabasco, Tamaulipas, Veracruz, Yucatan, Zacatecas
2017 EMOVI survey	Aguascalientes, Baja California, Campeche, Coahuila de Zaragoza, Chihuahua, Hidalgo, Michoacan de Ocampo, Morelos, Nuevo Leon, Puebla, Queretaro, Sinaloa, Sonora, Tamaulipas, Veracruz	Colima, Chiapas, Federal District, Durango, Guanajuato, Guerrero, Jalisco, Mexico, Nayarit, Oaxaca, Quintana Roo, San Luis Potosi, Tabasco, Tlaxcala, Yucatan, Zacatecas
2012 ECAF survey	Panama, Uruguay, Colombia, and Bolivia	Argentina, Brazil, Ecuador, Peru, and Venezuela
2021 ECAF survey	Mexico, Colombia, Panama, Paraguay, and Uruguay	Peru, Argentina, Brazil, and Ecuador

Note: The table presents the countries or Mexican states that were included in high and low credit access categories in Table 5.7.

Source: Authors.

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Latin America and the Caribbean is one of the most unequal regions in the world. This high inequality has deep-rooted causes, which have turned it into a persistent phenomenon that is **transmitted from generation to generation**. The flip side of this phenomenon, the low levels of intergenerational mobility, is not only related to equity but also to other central aspects of the region's development, such as growth and political-institutional stability.

This edition of the CAF's **Report on Economic Developmen**t analyzes the problem of persistent inequality from a novel perspective, with a multidimensional diagnosis of the evolution of intergenerational mobility over the last century. RED 2022 identifies the main barriers to social mobility based on inequalities of origin, including family socioeconomic status, ethnicity, gender, and geography. The three central channels through which these barriers operate are human capital formation, access to quality jobs, and the possibilities for asset accumulation. To reduce the weight of **inherited inequalities**, the report proposes a wide range of policies aimed at ensuring access to better **opportunities for the new generations**.

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