Fair Progress?
Economic Mobility across Generations around the World

OVERVIEW

Ambar Narayan
Roy Van der Weide
Alexandru Cojocaru
Christoph Lakner
Silvia Redaelli
Daniel Gerszon Mahler
Rakesh Gupta N. Ramasubbaiah
Stefan Thewissen
Fair Progress?
Economic Mobility across Generations around the World

OVERVIEW

Ambar Narayan, Roy Van der Weide, Alexandru Cojocaru, Christoph Lakner, Silvia Redaelli, Daniel Gerson Mahler, Rakesh Gupta N. Ramasubbaiah, and Stefan Thewissen

WORLD BANK GROUP

© 2018 International Bank for Reconstruction and Development / The World Bank
1818 H Street NW, Washington, DC 20433
Telephone: 202-473-1000; Internet: www.worldbank.org

Some rights reserved

This work is a product of the staff of The World Bank with external contributions. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank, its Board of Executive Directors, or the governments they represent. The World Bank does not guarantee the accuracy of the data included in this work. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries. Nothing herein shall constitute or be considered to be a limitation upon or waiver of the privileges and immunities of The World Bank, all of which are specifically reserved.

Rights and Permissions

This work is available under the Creative Commons Attribution 3.0 IGO license (CC BY 3.0 IGO) http://creativecommons.org/licenses/by/3.0/igo. Under the Creative Commons Attribution license, you are free to copy, distribute, transmit, and adapt this work, including for commercial purposes, under the following conditions:


**Translations**—If you create a translation of this work, please add the following disclaimer along with the attribution: *This translation was not created by The World Bank and should not be considered an official World Bank translation. The World Bank shall not be liable for any content or error in this translation.*

**Adaptations**—If you create an adaptation of this work, please add the following disclaimer along with the attribution: *This is an adaptation of an original work by The World Bank. Views and opinions expressed in the adaptation are the sole responsibility of the author or authors of the adaptation and are not endorsed by The World Bank.*

**Third-party content**—The World Bank does not necessarily own each component of the content contained within the work. The World Bank therefore does not warrant that the use of any third-party-owned individual component or part contained in the work will not infringe on the rights of those third parties. The risk of claims resulting from such infringement rests solely with you. If you wish to reuse a component of the work, it is your responsibility to determine whether permission is needed for that reuse and to obtain permission from the copyright owner. Examples of components can include, but are not limited to, tables, figures, or images.

All queries on rights and licenses should be addressed to World Bank Publications, The World Bank Group, 1818 H Street NW, Washington, DC 20433, USA; e-mail: pubrights@worldbank.org.

*Cover art and design: Bill Pragluski, Critical Stages, LLC.*
CONTENTS

Acknowledgments
Abbreviations

Overview
  Introduction
  Intergenerational Mobility in Education around the World
  Pathways to Intergenerational Mobility in Education and Income
  Why Does Intergenerational Mobility Matter?
  Policy Drivers to Improve Intergenerational Mobility
  Conclusion: A Few Principles for IGM-Enhancing Policies
  Notes
  References
ACKNOWLEDGMENTS

This study was written by a team led by Ambar Narayan and Roy Van der Weide with core team members Alexandru Cojocaru, Christoph Lakner, Daniel Gerszon Mahler, Rakesh Gupta N. Ramasubbaiah, Silvia Redaelli, and Stefan Thewissen. David Newhouse, Fedja Pivodic, and Patrizio Piraino contributed key inputs. The study was prepared under the supervision of Francisco Ferreira and Carolina Sanchez-Paramo and under the overall guidance of Jan Walliser. The team is also grateful for guidance and advice from Asli Demirgüç-Kunt, Shanta Devarajan, Roberta Gatti, Ana Revenga, and Carlos Silva-Jauregui.

Miles Corak and Luis-Felipe Lopez-Calva peer-reviewed the report, and Andrea Brandolini and Roberta Gatti served as additional peer reviewers at the concept stage. The team also appreciates the many helpful comments and suggestions received from colleagues in and outside the World Bank. In particular, the team would like to thank Kathleen Beegle, Maurizio Bussolo, Andrew Dabalen, Maria Davalos, Gabriela Inchauste, Vito Peragine, Martin Rama, Paul Roemer, and Albert Zeufack.

Robert Zimmermann edited the volume, and Paul McClure edited the Preview published in October 2017. The production of the full study was led by Rumit Pancholi (production editor), Michael Harrup (production editor), Patricia Katayama (acquisitions editor), and Deborah Appel-Barker (print coordinator). Maura Leary, supported by Venkat Gopalakrishnan, led the communication and messaging during the launch of the Preview. David Sharrock, Venkat Gopalakrishnan, Yanina Budkin, and Indira Chand led the communication and messaging efforts for the report’s launch and dissemination. Messaging and communication support were also provided by Paul Gallagher, Phillip Jeremy Hay, Victoria Smith, Mikael Reventar, and other colleagues. Additional support was provided by Anna Regina Rillo Bonfield, Pamela Gaye Gunio, Karem Nathalia Edwards de
Izquierdo, and Estella Malayiki. Mary Donaldson Lewis provided support on graphics. All cartographic maps were produced by Bruno Bonansea.

For their advice and support in creating the Global Database on Intergenerational Mobility, the team thanks the following World Bank colleagues: Frank Adoho, Raul Andres Castaneda Aguilar, Saniya Ansar, Sam Asher, Aziz Atamanov, Joao Pedro Wagner de Azevedo, Reena Badiani-Magnusson, Kathleen Beegle, Tom Bundervoet, Jean-Pierre Chauffour, Andrew Dabalen, Carolina Diaz-Bonilla, Olivier Dupriez, Freeha Fatima, Samuel Freije-Rodriguez, Isis Gaddis, Emanuela Galasso, John Giles, Nadia Belhaj Hassine, Jake Hess, Yang Huang, Jonathan Kastelic, Leora Klapper, Aart Kraay, Ghazala Mansuri, Federica Marzo, Kris Mcdonall, Maria Ignacia Contreras Mediano, Claudio Montenegro, Jose Montes, Rose Mungai, Tu Chi Nguyen, Minh Cong Nguyen, Theresa Osborne, Gbemisola Oseni, Truman Packard, Paul Andres Corral Rodas, Prem Sangraula, Kinnon Scott, Dorothe Singer, Diane Steele, Hiroki Uematsu, Rashiel Velarde, Ayago Esmubancha Wambile, and Judy Yang. Acknowledgements are also due to the following external colleagues: Paolo Brunori, Daniele Checchi, Philippe de Vreyer, Muhammed Abdul Khalid, Sylvie Lambert, Paolo Mauro, Guido Neidhöfer, Paul Novosad, Vito Peragine, and Eleni Yitbarek.

Estimates of income mobility for many of the countries included in the global database were obtained through the Equal Chances project hosted at the University of Bari, for which the team is most grateful. The Equal Chances project also kindly agreed to make the global database available on its website, allowing public users to visualize the global trends and patterns in intergenerational mobility.

# ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECD</td>
<td>early childhood development</td>
</tr>
<tr>
<td>FCV</td>
<td>fragility, conflict, and violence</td>
</tr>
<tr>
<td>GDIM</td>
<td>Global Database of Intergenerational Mobility</td>
</tr>
<tr>
<td>GDP</td>
<td>gross domestic product</td>
</tr>
<tr>
<td>IEO</td>
<td>inequality of economic opportunity</td>
</tr>
<tr>
<td>IGM</td>
<td>intergenerational mobility</td>
</tr>
<tr>
<td>LFP</td>
<td>labor force participation</td>
</tr>
<tr>
<td>MLD</td>
<td>mean log deviation</td>
</tr>
</tbody>
</table>
Overview

Introduction

Economic mobility across generations, also known as intergenerational mobility (IGM) in the economic literature, is a key element of human progress. In most countries, parents would like to see their children have a higher living standard—and with it a better life—than they have had themselves. And most individuals would like the opportunity to move up to a higher place on the economic ladder than the point on it where they happened to be born. For sustainable and inclusive growth, public policy must help give scope to such aspirations. But evidence suggests that, in too many parts of the world, mobility poses a challenge. This concern is especially acute for developing countries: in most of them, it is harder than in wealthier countries to move from the bottom to the top of the economic ladder.

This study measures the extent of IGM in economies across the world, how it has evolved over time and across generations, and the factors that might be associated with higher mobility, to draw implications for policy. By reporting findings on a global scale, it fills an important gap in the empirical evidence on IGM. For its global analysis, this study focuses primarily on mobility in education, which is important in its own right and is an essential element of economic mobility. A newly created database—the Global Database of Intergenerational Mobility (GDIM)—covering more than 95 percent of the global population—forms the basis for most of the primary data analysis. To complement the global story of educational mobility, IGM in income is measured or compiled from existing studies for a smaller set of economies to shed some light on the patterns and drivers of income mobility and its relationship with educational mobility.

Higher mobility across generations is interpreted here in two distinct but related ways. *Absolute upward IGM* is the extent to which living standards of a generation are higher than those of their parents. This type of mobility
reflects a universal human aspiration of parents hoping for a better life for their children. Higher absolute upward mobility is closely associated with income growth and a rise in shared prosperity or income growth of the bottom 40 percent, when these improvements are sustained over an extended period. The focus on upward mobility is crucial because mobility can also mean downward movement, driven, for example, by uncertainty and vulnerability to uninsured risks.

Relative IGM is the extent to which an individual’s position on the economic scale is independent of the position of his or her parents. Higher relative mobility across generations is associated with lower inequality of opportunity, which is the extent to which people’s life achievements are affected by circumstances they are born into, such as parental education and income, race, gender, and birthplace. Such circumstances remain crucial: children born every day around the world face starkly different life prospects because of the circumstances they inherit.

Both types of mobility are important for economic progress and for sustaining a social contract that addresses the aspirations of society. Without absolute mobility, living standards cannot improve, and social cohesion may be at risk as the different groups in society compete for slices of a fixed or shrinking economic pie. Meanwhile, a lack of relative mobility is not only deeply unfair and perpetuates inequality across generations, but it is also harmful to economic growth because of wasted human potential, which leads to misallocation of resources. A lack of relative mobility over time, therefore, may constrain absolute upward mobility.

This book finds both absolute and relative mobility in education to be significantly higher, on average, in high-income economies than in developing economies, for cohorts born between the 1940s and 1980s. Although absolute IGM has been converging between the two groups of economies over time, progress in the developing world has stalled since the 1960s, at a relatively low level of educational attainment compared with high-income economies. On relative IGM, high-income economies have improved more than developing economies have; today, all 15 economies that rank in the bottom 10 percent by relative IGM are developing economies.

Among developing economies, educational IGM—both absolute and relative—varies significantly for the current generation. For example, about 12 percent of adults born in the 1980s in some low-income or fragile economies of Sub-Saharan Africa (referred to as Africa hereafter) have more education than their parents, compared with more than 80 percent of the same generation in parts of the East Asia and Pacific region (referred to as East Asia hereafter). Average relative mobility for economies in South Asia and Africa is significantly lower than that for the other developing regions.

Relative IGM in income, for a subset of 75 economies, combining the book’s own estimates with those compiled from existing studies, exhibits a pattern that has some similarities with that of relative IGM in education. Income IGM tends to be lower in the developing regions than in the high-income economies; 24 out of the 25 economies in the bottom third by
income mobility are developing economies. In the developing world, most of the economies with low relative IGM are in the Africa, South Asia, and Latin America and Caribbean regions (referred to as Latin America hereafter). In several developing economies, mostly in Africa, the Middle East and North Africa (referred to as Middle East hereafter), and Latin America, income mobility trails behind educational mobility; labor market deficiencies may be contributing significantly to this gap.

Gender gaps in educational mobility are closing fast. In advanced economies, the gaps for tertiary education and absolute mobility, which used to favor boys, reversed for individuals born in the 1960s and have widened, with girls acquiring more education than boys, in recent decades. Girls are catching up with boys in developing economies as well. However, achieving similar improvements in income mobility among girls will also require reducing the widespread gender disparities in labor market outcomes.

Mobility from the bottom half of the education ladder to the top quartile has fallen over time in developing economies, whereas persistence at the bottom has increased. In the median developing economy for the 1980s generation, less than 15 percent born into the bottom half make it to the top quarter, while more than two-thirds stay in the bottom half. High persistence, both at the top and at the bottom, is a concern not just in developing economies but in most economies around the world.

The patterns observed in the global database suggest that economies with higher IGM in education are better placed to generate future growth, as well as reduce poverty and inequality. Stalled progress in absolute mobility, low relative mobility, and high persistence at the bottom of the education ladder in large parts of the developing world thus add up to concern about future progress. These concerns are heightened for Africa and South Asia, where the prospects of children are still tied to the socioeconomic status of their parents more closely than in any other developing region, which suggests that relative mobility in these two regions will continue to be low in the near future.

At the same time, the rise in educational mobility observed in many high-income economies and in parts of East Asia, Latin America, and the Middle East for individuals born between the 1950s and the 1980s provides cause for optimism, suggesting that changing the status quo is possible with policy action. There is some cause for optimism in Africa and South Asia as well. According to rough predictions, rising enrollments in the past two decades may have increased absolute mobility in both regions among those born in the 1990s.

**Intergenerational Mobility in Education around the World**

The existing empirical evidence on IGM is primarily on relative (and not absolute) mobility, and skewed toward high-income economies and toward men (from father to son). A recent review of the existing literature finds that
comparable estimates of relative IGM in income can be compiled for just 42 economies, of which only 12 are low- or middle-income economies; and the most comprehensive global study to date on relative IGM in education similarly covers 42 economies.2 In contrast, this book includes estimates of absolute and relative mobility in education for economies that are home to more than 95 percent of the world’s population. Such a comprehensive coverage allows for an analysis of global trends and patterns in absolute and relative mobility in education for men and women alike. Estimates of relative IGM in income are compiled for a subset of economies, using own estimations to complement comparable estimates compiled from the existing literature.

Educational Mobility Is a Key Element of Economic Mobility across Generations

Because education is a key dimension of human progress, educational mobility is important in its own right and is an essential element of economic mobility, when economic mobility is understood in terms of well-being rather than income alone. Moreover, because education tends to be a strong predictor of lifetime earnings, mobility in education is a key factor influencing income mobility, but with two important limitations. First, education mobility is measured here without considering the quality of learning, which makes the outcome an unreliable indicator of the skills that will influence an individual’s earnings as an adult. Second, the relationship between mobility in education and mobility in income depends on several factors, such as how labor markets reward skills and how parental connections affect economic opportunities—all of which can vary across economies and over time.

Economic theories predict that IGM in education and IGM in income are positively correlated, given that persistence of income across generations occurs as a result of inherited endowments and parental preferences to invest for the benefit of their children.2 Empirically, the correlation is observed to be strong among economies for which estimates for relative mobility in both education and income are available for comparable cohorts (figure O.1).4 However, the association is also imperfect, which means that the relative rankings of economies can change depending on which measure is used. In general, mobility in education and income will be more closely associated, the more similar economies are in terms of returns to education and the better education predicts income in both generations.

Intergenerational mobility in Education: Trends and Patterns

To assess the evolution of IGM in education across space and over time, absolute upward mobility in an economy is measured by the share of respondents in a nationally representative survey who have higher education levels than the maximum level of education among the parents of the respondent (excluding individuals whose parents have tertiary education).5
Relative mobility is measured by the extent to which the educational attainment of individuals is independent of the education of their parents, using the coefficient from regressions of children’s years of education on the education of their parents. Higher values of this regression coefficient indicate greater persistence, and hence lower relative mobility. IGM is estimated among adults for 10-year cohorts born between 1940 and 1989. For example, a “child” of the “1980s cohort” refers to the generation born between 1980 and 1989, and “parents” refers to the parents of this generation. The 1980s cohort is the latest whose members are likely to have completed their education and therefore represents the latest generation of adults, which also implies that the IGM trends shown here do not reflect any changes in educational attainment that may have occurred in the last decade or so.

Absolute and relative IGMs in education are estimated for the 1980s cohort in 148 economies, which are home to 96 percent of the world’s population. These include 111 developing economies covering 96 percent of the population in the developing world. In all regions but the Middle East, the population coverage is greater than 90 percent. For 111 of 148 economies, with 87 percent of the world’s population, IGM is estimated for multiple cohorts. All mobility measures reported for groups of economies are simple averages unweighted by population. Thus, they should be interpreted as the average IGM of all economies in a group, and not as IGM of the average individual in that group.

![Figure 0.1: Relative IGMs in education and income are correlated, but imperfectly](image-url)

Source: Estimates based on GDIM 2018 (World Bank); Equalchances 2018; compiled from multiple studies. Note: Higher elasticity (persistence) indicates lower IGM. Income elasticity estimates are for the 1960s or 1970s cohort approximately; education persistence estimates are for the 1980s cohort. IGM = intergenerational mobility.
**Absolute mobility and relative mobility are lower in developing economies than in high-income economies**

The rate of absolute IGM in education has historically been greater in high-income economies than in developing economies and continues to be so among the 1980s cohort (figure O.2, panel a). Among the 1980s generation, the average relative IGM in developing economies is also significantly lower than the average in high-income economies (figure O.2, panel b). Seven of the 15 economies in the top decile of relative IGM among the 1980s generation are high-income economies, whereas all economies ranked in the bottom decile are developing economies. The gap is consistent with the pattern of relative IGM in income being low in developing economies, using available estimates that have a much narrower global coverage.

**Whereas the gap in absolute mobility between high-income and developing economies has been closing, absolute mobility in developing economies has stopped rising since the 1960s**

Absolute mobility has converged to some extent between high-income and developing economies (see figure O.2, panel a). The underlying trends are less positive, however; the gap is closing because absolute IGM has been falling in advanced economies since the 1950s cohort, while staying on a flat trajectory in developing economies since the 1960s cohort. Some 47 percent of the 1980s generation in an average developing economy have more education than their parents, which is almost unchanged from the 1960s generation. Among the 1980s generation in the average high-income economy, 57 percent have more education than their parents, which is lower than the rate among the 1950s generation.

Progress in absolute mobility stalled in the average developing economy at a much lower level of educational attainment compared with the average high-income economy. Convergence in absolute IGM does not imply convergence in average educational attainment between high-income and developing economies; that gap is as large today as it was 40 years ago (figure O.3). Sons and daughters are on average better educated than their parents almost everywhere. However, the developing world today is roughly where the high-income world was 40 years ago.

**Developing economies have increasingly fallen behind high-income economies in relative mobility**

Relative IGM improved at a more rapid rate among high-income economies than among developing economies between the 1940s cohort and the 1980s cohort. This has widened the gap between the two groups of economies over time (see figure O.2, panel b). This is particularly true of the period between the 1970s cohort and the 1980s cohort, when relative IGM in the average developing economy showed no improvement, but was rising in the average high-income economy. Relative IGM among the 1980s generation in the average developing economy is close to that of the 1940s generation in the average high-income economy.
FIGURE O.2  Changes in absolute and relative mobility over time, developing and high-income economies

a. Share of adults with more education than their parents (*absolute upward mobility*)
(excluding adults whose parents have tertiary education)

b. Intergenerational persistence in education (*relative mobility*)
(higher persistence indicates lower mobility)

Source: Calculations based on data in GDIM 2018 (World Bank).
Note: Absolute upward mobility is the share of individuals with more education than the maximum educational attainment of their parents (excluding adults whose parents have tertiary education), where education is defined in terms of five categories based on UIS (2012). Intergenerational persistence is measured by the coefficient from a regression of children’s years of schooling on the years of schooling of their parents. Higher persistence indicates lower relative mobility. The averages for developing and high-income groups are simple averages (unweighted by population) across economies in each group.
Absolute mobility and relative mobility in education among the 1980s generation are correlated, but imperfectly

On average, economies with a higher share of adults who are more educated than their parents are also economies in which the educational attainment of individuals is less dependent on the educational attainment of their parents (figure O.4). This is consistent with the view that absolute and relative mobility complement and reinforce each other. A lack of relative mobility leads to lower and less-inclusive growth, which, in turn, limits absolute mobility over time. However, the relationship is imperfect with significant outliers, such as some economies in East Asia that have very high absolute mobility (for example, Republic of Korea and Malaysia) because of a rapid rise in education levels from a lower starting point, compared with economies that developed earlier (for example, Denmark and Japan) that have similar levels of relative mobility.

Intergenerational mobility has improved in some developing regions, but declined or stagnated in other regions

Although IGM on average has improved across the developing world since the 1950s cohort, the improvements are highly uneven. Between the 1950s cohort and the 1980s cohort, positive changes are largely concentrated in East Asia, Latin America, and the Middle East. In contrast, absolute IGM and relative IGM have declined in Eastern Europe and Central Asia and stagnated in Africa. In South Asia, there have been improvements in
absolute mobility, but not in relative mobility. The findings on Africa are broadly consistent with estimates available from earlier research for a smaller number of countries.11

Because of such uneven progress, IGM in education varies widely within the developing world. Average absolute mobility in East Asia, Latin America and the Middle East is at or above the high-income average (figure O.5). In relative mobility, East Asia is ahead of the other developing regions but still below the high-income average. At the other end of the spectrum is Africa, where absolute and relative mobility are well below the average in developing economies. In the average economy of Africa, 35 percent of people born in the 1980s exhibit higher educational attainment than their parents, compared with roughly 60 percent of the same generation in the average economy of East Asia, Latin America, or the Middle East.

Mobility among the current generation varies significantly among developing economies, with the lowest mobility seen in some of the poorest or most fragile economies

The gap between the well- and low-performing developing economies in terms of IGM is vast (map O.1). Looking at absolute mobility, for example, only 12 percent of the individuals born in the 1980s in the Central African Republic, Guinea, and South Sudan have achieved higher education levels than their parents have, compared with more than 80 percent of residents of Malaysia and Thailand born in the same decade. Economies affected by fragility, conflict, and violence (FCV) are found to have lower average absolute and relative mobility compared with the developing economy averages.
for all cohorts. Of the 15 economies in the bottom decile of absolute mobility for the 1980s cohort, 12 are in Africa, and 5 of these 12 are FCV. In relative mobility, 10 of the 15 economies in the bottom decile are in Africa, including four that are FCV.

**Educational Mobility from the Bottom to the Top across the World**

The relative mobility measure used so far does not distinguish between upward and downward mobility, and the measure of absolute mobility does not capture the influence of parental background on one’s educational attainment relative to individuals in the same generation. To complement these measures, it is useful to also look at the share of individuals who make it to the top quartile of education in their generation out of those who were born to parents with education in the bottom half of their generation.

**Mobility from the bottom to the top is low almost everywhere, but the lowest rates occur mostly in developing economies**

In a large majority of economies across the world, one’s chances of reaching the top quarter of the ladder of educational attainment depend largely on where one’s parents stood on that ladder (figure O.6). This share would be 0.25 if one’s ability to obtain an education did not depend on how well educated one’s parents are. However, there are very few economies in which the share exceeds 0.20. Among the bottom 50 economies by this share among the 1980s generation, 46 are developing, whereas only 4 are high
MAP 0.1 IGM across the world: the 1980s generation

a. Share of adults with more education than their parents: Absolute upward mobility

Source: Calculations based on data in the GDIM 2018 (World Bank).

Note: Absolute upward intergenerational mobility (IGM) is the share of individuals with higher educational attainment than their parents (excluding adults whose parents have tertiary education). Intergenerational persistence is the coefficient from the regression of children’s years of schooling on parents’ years of schooling. Greater persistence indicates lower relative IGM. The darker shade indicates higher relative or absolute IGM.
income, including the United States. In the median developing economy, less than 15 percent of individuals born in the bottom half make it to the top quarter, whereas more than two-thirds stay in the bottom half.

**Upward mobility is declining in the developing world, whereas persistence at the bottom is rising**

The rate of upward mobility from the bottom half to the top quartile was higher in developing economies than in high-income economies for the
1940s cohort. It has since moved in the opposite direction so that, for the 1980s cohort, the share of individuals born in the bottom half who reach the top is slightly higher in high-income economies than in developing economies. As upward mobility from the bottom has declined, persistence at the bottom has increased in developing economies to exceed the persistence rate in high-income economies for the recent cohorts. Thus, the opportunity for individuals born in poorer households to climb the ladder is narrowing in many economies in which average living standards are still low compared with high-income economies.

**Girls have moved ahead of boys in absolute IGM in high-income economies and are rapidly closing the gap in developing economies**

Girls in high-income economies now exhibit higher rates of tertiary education and absolute IGM than boys (see figure O.2, panel a, and figure O.3). The reversal of the gender gap occurred for the 1960s cohort, and the advantage of girls has since grown in high-income economies. Since the 1960s cohort, girls also have higher rates of mobility from the bottom to the top and lower rates of persistence at the bottom than boys.

In the developing world, the trend is in the same direction. Women have already caught up with men in tertiary education, and the gender gap is narrowing rapidly in absolute mobility (figure O.2, panel a). These trends suggest a not-too-distant future when upward mobility relative to parents will be greater among girls than among boys in the developing world. The likelihood of climbing from the bottom to the top has also been rising among girls relative to boys in the developing world.

**Many of the global patterns identified above carry over to six large developing economies**

Looking closely at six large developing economies, namely Brazil, China, the Arab Republic of Egypt, India, Indonesia, and Nigeria, absolute mobility rose in all of them from the 1940s cohort to the 1980s cohort. Relative mobility increased in Brazil, Egypt, India, and Indonesia, whereas it fell in China and Nigeria. In the case of India, even though relative mobility has been improving, it is still low by international standards and the lowest among the six large developing economies observed in this book. Provinces with greater absolute IGM tend to also show greater relative IGM in most of these economies, but the correlation is imperfect, and there are several outliers.

**What Do Today's Enrollment Patterns Suggest about IGM in the Next Generation?**

Standard estimates of IGM discussed so far are reflections of what has happened in the past, whereas current patterns of child educational outcomes and the ways these are associated with parental socioeconomic status can offer a window into future mobility. Recent school enrollment patterns show that poverty and low parental education continue to reinforce each other in creating vast inequalities in access to education for
children and entrenching low IGM. In low- and low-middle-income economies, the likelihood of enrollment among different age groups is significantly lower when household income and parental education are lower.14 Moreover, given the well-documented problems in learning outcomes among children in poorer households, inequality in education is likely to be much higher than suggested by enrollment profiles once the quality of learning is considered.

**Across regions, the prospects of relative mobility are the lowest among children in Africa and South Asia**

To see the potential mobility of future generations, an alternative measure of educational attainment can be defined for those born after the 1980s, which is the “education shortfall” or the difference between the observed years of schooling completed and the years of schooling that should have been completed on the basis of a child’s age.15

Figure O.7 shows the average persistence between the education shortfall and parental years of schooling among children of ages 6–11 years and 12–17 years in five developing regions.16 Regional averages of relative IGM for the 1980s cohort are included for comparison. Average persistence among the younger cohorts appears to be the highest in Africa and South Asia, similar to the pattern in relative mobility seen for the adults belonging to the 1980s cohort. Among children of ages 6–11 years, the gaps in persistence between Africa and South Asia and the other regions are smaller, but still present. If these trends persist, the prospects of the next generation of adults will continue to be tied to parental educational attainment more closely in Africa and South Asia than in any other region of the world.

**FIGURE O.7 Intergenerational persistence in education among children**

![Intergenerational persistence in education among children](image)

Source: Calculations based on data in the GDIM 2018 (World Bank).
Notes: Intergenerational persistence for children is the regression coefficient of a Tobit regression of children’s “education shortfall” on parental years of schooling. Education Shortfall = Observed Years of Education – (Age of Child – 5).
In absolute mobility, Africa may be catching up with other developing regions among younger cohorts

In Africa, average enrollment in primary school increased from 73 to 98 percent between 1996 and 2014, which may signal an increase in absolute mobility among children born during the 1990s. Rough predictions of what absolute mobility might look like for the 1990s cohort suggest that average absolute IGM in Africa may indeed be improving faster than in the previous two decades and catching up with the developing economy average. Similar predictions also suggest that absolute IGM among the 1990s cohort in South Asia may have already caught up with the developing economy average.

Pathways to Intergenerational Mobility in Education and Income

Absolute Upward Mobility Is Linked to Growth and the Distribution of Growth

Absolute upward IGM is likely to be high in a society in which rising prosperity is broadly shared and sustained. Growth in average incomes, which increases the size of the economic pie, is necessary but not sufficient for a high rate of absolute mobility, which also requires a more equitable distribution of the benefits of growth. For example, the sharp decline in absolute mobility in the United States between individuals born in the 1940s and those born in the 1980s was driven more by the unequal distribution of economic growth than the slowdown in aggregate growth since the 1940s.

But even if absolute upward IGM increases with rising prosperity, relative IGM may not necessarily follow, as seen from the imperfect association between the two (see figure O.4). The average economy in South Asia, for example, experienced rising absolute mobility in education between the 1950s and the 1980s generations but had almost no improvement in relative mobility. Improving relative mobility and, in particular, upward mobility from the bottom of the ladder also requires equalizing opportunities to reduce disadvantages because of circumstances such as parental education or income, gender, or location.

What Matters for Relative IGM in Income, at Different Stages of the Life Cycle

Why incomes persist from one generation to the next

The different channels through which parental income influences income of the next generation can be identified by decomposing the coefficient of intergenerational income persistence, under certain simplifying assumptions, into shares that reflect the effects of (1) parental education on offspring’s income through offspring’s education; (2) parental education on the determinants of offspring’s income that are independent of education; and (3) parental characteristics (other than education) on offspring’s income. The first channel gets stronger as IGM in education declines, and as returns to education of the offspring’s generation rise relative to the parents’ generation. The second channel becomes stronger, for example,
if parents who are more educated help their offspring acquire better non-cognitive skills that increase their earnings for a given level of education. The third channel is strengthened, for example, if the offspring enjoy advantages in factor markets or receive better quality of education because of the social status or wealth of their parents, which translate to higher earnings.

Decompositions for 49 economies suggest that the third channel is typically the strongest, accounting for an average of about 80 percent of the persistence of income. This is not surprising, given that this channel reflects the share of income persistence attributable to all parental characteristics, including unobservable ones, that are associated with income but independent of the quantity of parental education. Three types of effects are likely to be important contributors to the third channel. One is the effect of distorted labor markets, which reward those with parental connections, legacies, or social privilege. The second is the effect of where one lives—richer parents may cluster together in places that allow their children to have better access to information, services, jobs and networks, and positive spillover effects from peer groups and role models. The third is the effect of the offspring of richer parents getting an education of higher quality, which is not accounted for in the first or the second channels. Identifying the drivers of income persistence requires looking closely at these effects.

The relative size of the third channel increases, whereas that of the first channel declines with per capita gross domestic product (GDP). Accordingly, the association between IGM of income and IGM of education tends to be stronger among developing economies than among high-income economies. This probably occurs because, when GDP is higher, relative mobility of education tends to be higher and education tends to be a weaker predictor of income. As that happens, the third channel becomes more important for income persistence across generations.

**Relative IGM of income—how does it compare with IGM in education?**
The map of income IGM (map O.2) should primarily be used for comparisons with education IGM (map O.1) rather than as a definitive picture of mobility, given the strong assumptions that underlie most of the income IGM estimates, the varied sources of these estimates, and the widespread gaps in geographic coverage. Relative IGM in income tends to be lower in the developing regions than in the high-income economies, like what is seen for relative IGM in education. In the developing world, low IGM in income is seen primarily in parts of Africa, Latin America, and South Asia. The United States appears to be less income mobile than are most high-income economies.

Income and education IGMs line up well with each other in most of East Asia, Eastern Europe and Central Asia, Latin America, and South Asia, and in high-income economies (comparing maps O.1 and O.2). Income mobility in Africa tends to be low for the economies with available estimates, even compared with their low levels of relative mobility of education. Income mobility lags education mobility in other countries as well, mostly in the Middle East and Latin America. In all these cases, the previously
mentioned third channel of income persistence is important, where labor markets and location-specific factors may be playing key roles in driving a wedge between education mobility and income mobility.

Understanding the drivers of inequality of opportunity, which is the inequality attributable to predetermined circumstances, such as parental education, geographical location of residence or birth, gender, and race, can help uncover the true impediments to higher relative mobility. This is because advantages passed on from generation to generation, even if they are correlated with parental education or income, may be attributable at least in part to the other circumstances that are included in the inequality of opportunity framework. In the decompositions above, where one lives, or one’s gender, ethnicity, or other markers of social status, for example, could affect the size of the third channel, through direct and indirect routes, or the first channel, through their effect on returns to education.

**Inequality of opportunity emerges at various stages of the life cycle**

Circumstances of an individual at birth interact with policies, markets, and institutions to shape opportunities at various stages, which, in turn, influence the individual’s adult earnings and thus IGM in income. Circumstances influence the opportunities available to an individual in two ways: direct effects, at every stage of the life cycle, and indirect effects, given that opportunities at each stage of life influence outcomes in subsequent stages.

For example, parental incomes influence investments in children’s human capital that will, in turn, affect their incomes later in life, which is the first
channel of income persistence mentioned earlier. Because monetary investments in children and parental human capital often complement each other in influencing human capital formation among children, parents with more education, who are also likely to be richer, are likely to invest more in their children relative to less-educated parents. In the presence of credit constraints, the link between parental incomes and parental investments in children becomes stronger because parental investments are constrained by the resources available to the parents. Parental status can also exert a direct influence on adult incomes, through networks and connections in labor and other factor markets, as in the third channel mentioned earlier. Other circumstances, such as geographic location, gender, and race, can affect the earnings of the next generation through a similar combination of direct and indirect pathways.

Circumstances begin affecting opportunities early in a child’s life. Children’s endowments at birth are affected by maternal nutrition and health during gestation, as well as by nonmonetary endowments or traits inherited from parents, all of which may be associated with circumstances such as parental education, income, and geographic location. Circumstances then affect the critical inputs into human capital development throughout childhood, including nutrition, access to health care, basic services such as safe water and sanitation, and access to quality education. The schooling and noncognitive skills attained by children affect incomes later in life through the returns the children obtain for their human capital in the labor market and interactions with other factor markets.

At each stage of the life cycle, a few external actors are key to mediating the process of equalizing opportunities. These include, for example, the systems of maternal and early childhood care at the first stage; the school system at the second stage; and the institutional structure of factor markets—labor, capital, and land—at the third stage. The private sector plays a key role not only in generating demand for labor, but also in the provision of services. Governments can influence these external actors in crucial ways, for example, through regulations and policies that affect markets and the provision of services, and through public investments that seek to equalize opportunities, as mentioned earlier.

**Economies with greater inequality of opportunity tend to have lower relative IGM**

Education mobility estimates in GDIM confirm the pattern found by earlier studies: economies with greater inequality of opportunity, measured by the inequality of economic opportunity (IEO) index, are likely to show lower relative IGM (figure O.8). IEO, which measures the share of total income inequality that is attributable to circumstances, is distant enough from relative IGM in education for the correlation between the two to be meaningful rather than inevitable. The correlation is consistent with the idea that the path to a more mobile society goes through lower inequality of opportunity.
Higher Public Spending Contributes to Greater Relative IGM in Richer Economies

Even though relative IGM in education is found to be higher in richer economies, this association should not be seen as an automatic consequence of growth. Existing theory suggests that the relationship can go either way because of opposing effects. On the one hand, as economies become richer and credit markets become more efficient, the effect of credit constraints may decline, which would tend to reduce intergenerational persistence in education. On the other hand, as economies become richer and average education levels increase, parental investments in their children’s education are likely to become more “efficient” in terms of producing outcomes, which raises intergenerational persistence unless inequality in parental education were to decline significantly.

Given these opposing effects, relative IGM is more likely to improve with income levels if richer economies invest, on average, more public resources on equalizing opportunities, which appears to be the case. The data show that public spending on education as a share of GDP, which is an imperfect but useful proxy for investments to equalize opportunities, rises with per capita GDP and is associated with higher relative IGM (figure O.9). Regressions show that higher public spending (on education or on aggregate) is associated with higher relative IGM in education, after controlling for an economy’s per capita GDP. This is consistent with the theory that public spending helps equalize opportunities through investments that compensate for the gap in private investments between children of rich and poor parents.
But just higher levels of spending are not enough. To improve relative IGM, public investments need to be effective, and “progressive,” so that the relatively poor benefit more than those who are more well-off.

**Why Does Intergenerational Mobility Matter?**

**The “Virtuous Cycle” of Greater IGM and Better Economic Outcomes**

There is a strong positive association between IGM in education, both relative and absolute, and the level of economic development, across and within economies. Economic literature theorizes that, in economies with credit constraints that disproportionately affect the poor, IGM and economic growth may reinforce each other in a virtuous cycle. Greater relative mobility is also associated with a more inclusive pattern of development—low relative IGM is both a cause and a consequence of higher inequality, and has adverse consequences for social stability.

**Greater IGM in education is associated with higher growth and poverty reduction in subsequent years**

Greater absolute IGM and relative IGM in education among a generation are both associated with higher economic growth and less poverty when the generation reaches adulthood, according to cross-country regressions using GDIM. In the case of poverty, the relationship is largely driven by a strong association between the poverty rate and upward mobility among individuals born to parents with low education levels. These results do not necessarily mean that higher IGM causes higher growth and poverty reduction,
but rather that economies with higher IGM in education are also likely to have higher growth and poverty reduction subsequently. A simple calculation based on the same regressions illustrates the strength of the association: the rise of an economy from the bottom quartile of economies (sorted by relative IGM) to the top quartile is associated with an increase in GDP per capita of about 10 percent when the generation reaches adulthood.

**IGM in education tends to be greater in richer economies and in richer areas within economies**

Greater educational mobility is associated with higher levels of GDP. A similar association is also found within five of the six large developing economies mentioned earlier, where provinces with greater mobility among the 1980s generation are likely to exhibit higher GDP per capita. China is the only exception—provinces with greater relative mobility in China tend to be poorer. The relationships are nonlinear. Relative IGM increases with per capita GDP if the latter exceeds a certain level (figure O.10, panel a). Absolute mobility also increases with national income but is unchanged for per capita GDP above a certain level (1990 purchasing power parity) (figure O.10, panel b). Raising educational attainment probably becomes more difficult once an economy crosses an income level at which a certain threshold of education attainment is also reached.

**Raising relative IGM can set in motion a virtuous cycle of higher mobility and higher growth**

Higher relative mobility in education and income promotes economic growth because it leads to more efficient allocation of resources: individuals with higher innate abilities—rather than individuals with wealthier or more-educated parents—are more likely to obtain more education and

---

**FIGURE O.10  Intergenerational mobility versus GDP per capita**

![Graph](image)

*Source: Calculations based on data in the GDIM 2018 and the Maddison Project. The shaded areas indicate 95 percent confidence intervals. Note: GDP = gross domestic product.*
more productive jobs. Economic growth may, in turn, help increase relative mobility, primarily by weakening the credit constraints that limit investment in education among the poor, although there can also be opposite forces that work toward reducing relative mobility as economies get richer. If the net effect of growth on relative mobility is positive, the virtuous cycle is set in motion: as countries grow, mobility rises more, which, in turn, stimulates growth further.

Policies to raise relative mobility are likely to promote long-run growth as well, by harnessing human potential more effectively and reducing the inefficiencies caused by misallocation of human and financial capital, the costs of which accumulate systematically over generations in an economy with low relative mobility. And the virtuous cycle between mobility and growth is likely to be stronger if the resources generated by higher growth are used to finance more progressive public spending that expands opportunities and helps level the playing field between the have-nots.

Empirical evidence exists to support the view that inequality of opportunity that leads to lower relative IGM is damaging to a country’s long-term growth prospects. Recent research from the United States suggests that improving opportunities for upward mobility could enhance economic growth by increasing the rate of innovation in a society. Inequality of opportunity may be particularly harmful for long-term growth by discouraging innovation and human capital investments. There is some evidence for the pernicious effects of inequality of opportunity on growth in Brazil and the United States, but the cross-country evidence is more mixed.

Greater relative mobility is associated with lower inequality

Lower relative IGM in income is associated with higher income inequality, as illustrated by the Great Gatsby curve found by various researchers and shown here with available estimates for 75 economies (figure O.11). Similar patterns are obtained for relative mobility in education. Higher education inequality during the schooling years of a cohort is associated with lower relative mobility, which is akin to a Gatsby curve in education. Lower relative mobility in education among a generation is also associated with higher income inequality during the peak earning years of that generation. Both correlations are much stronger in developing economies than in high-income economies.

These relationships are likely to be the consequence of a two-way relationship noted by other studies: higher inequality tends to limit relative mobility, which worsens inequality over time. This happens because higher inequality leads to more unequal parental investments in children and affects the policies, institutions, and balance of power in society that shape opportunities. Unequal opportunities, in turn, lead to lower relative mobility and more inequality in the next generation, which is consistent with the strong association between relative mobility and inequality of opportunity shown earlier (figure O.8). Breaking the cycle of low relative mobility and
high inequality will require equalizing opportunities to reduce the disadvantages faced by individuals because of circumstances outside their control.

**Promoting Relative IGM Can Be Good for Social Stability**

Higher absolute mobility is critical in meeting the aspirations of people. Nonetheless, in many societies, this may not be sufficient to induce the sense of fairness that is the bedrock of social cohesion and stability. The lack of relative mobility and pervasive inequality of opportunity can erode the perceptions of a population about fairness and trust in their society, which affects the social contract that supports growth and social stability. Behavioral experiments show that people are highly averse to inequality perceived as unfair. Expectations of future mobility are important as well. If perceptions of higher mobility induce more tolerance for inequality, higher relative IGM could lead to greater acceptance for policies that increase growth and prosperity in the long run, but with some trade-off in inequality today.

Low mobility, if perceived as such, can also lower one’s aspirations, hopes, and ambitions for the future and thus reduce investments in human capital, reinforcing the cycle of low IGM and low levels of economic development. Perceptions of mobility are important building blocks of the process by which individuals form aspirations, both for themselves and for their children. When taken to the extreme, the vicious cycle of low perceived mobility and low aspirations can push individuals to opt out of socioeconomic processes, leading to marginalization and conflict.
Evidence on direct links between social cohesion and perceptions of mobility, fairness, and inequality is difficult to find. However, it seems relevant that strong perceptions of downward mobility and lower tolerance for inequality were noted in at least three countries in the Middle East and North Africa region in 2012 relative to a decade earlier. For social stability, it is the perceptions of the population regarding mobility—which are associated with actual mobility only imperfectly—that seem to matter. Perceptions of mobility can even diverge from actual mobility, particularly if comparisons are made across countries. Some evidence from the Europe and Central Asia region also suggests that perceptions of absolute mobility are associated with actual relative mobility, but not with actual absolute mobility.

**Policy Drivers to Improve Intergenerational Mobility**

Evidence from the economic literature and cross-country patterns obtained using the GDIM can help identify the key drivers of long-term outcomes that are likely to improve mobility. This exercise is not intended to generate a definitive ranking of policy priorities, which must be guided by individual country contexts and societal preferences. Rather, it is an attempt to provide a broad range of candidate policies, which countries can assess to identify the package of priorities that are suitable for their own contexts. The implicit selection of policy drivers that are highlighted below is guided not only by the strength of the evidence, but also by the mobility-enhancing potential of interventions based on their underlying theories of change. Even when evidence is inadequate, it is important to consider the potential effects on IGM of policies that have been less studied, either because they are less amenable to rigorous evaluations or because they are designed with other, more proximate development objectives in mind.

The focus will be primarily on relative mobility. In the developing world, absolute IGM and relative IGM often complement each other as policy objectives—better opportunities for individuals from socially disadvantaged backgrounds would raise relative mobility and generate greater absolute mobility for the society as a whole. But even when the two objectives diverge, the case for prioritizing relative mobility is compelling, given its importance for long-term growth, inequality, and social cohesion. Relative mobility may even influence perceptions of absolute mobility, as mentioned earlier.

To promote relative mobility, the state can play a proactive role in “compensating” for differences in individual and family starting points to level the playing field in opportunities. Policies should also aim to equalize opportunities across space, given the contribution of location to inequalities in most countries. The state also has a prominent role to play in making markets work more efficiently and equitably, given that discrimination, anticompetitive behavior, and market concentration are likely to constrain IGM. Fiscal policy is the most effective public policy tool for realizing
many of these objectives, by raising resources for investments in public goods and reducing inequality through redistribution.

Reducing Inequality of Opportunities Attributable to Individual Circumstances

Leveling the playing field can take several forms, depending on a country’s context and stage of development. In most developing economies, where relative mobility in education tends to be low, building ladders to opportunities at the early stages of an individual’s life is critical for promoting IGM. Such interventions can seek to influence behavior and decisions of households in ways that lead to improvements in children’s long-term outcomes that matter for mobility.

Equalizing opportunities in utero and early childhood

Improving the early life environment is critical because gaps that emerge early in life are difficult to offset through interventions later in life. Child malnutrition, for example, can generate learning difficulties, poor health, and lower productivity and earnings over a lifetime. Consistent with this, economies with lower rates of stunted growth among children at age 5 are also likely to have higher relative and absolute IGM in education (figure O.12).

Interventions to equalize opportunities must begin even before a child is born because maternal health is a key determinant of a child’s health at birth, and the deprivations suffered in utero can reduce the effectiveness of postnatal investments. Policy measures aimed at disadvantaged women of childbearing age can have a positive effect on infant health and longer-term outcomes of children. These include food supplementation programs that

\[\text{FIGURE O.12} \quad \text{Higher mobility is associated with lower rates of stunting}\]

\[\text{a. Relative mobility and stunting rate} \quad \text{b. Absolute mobility and stunting rate}\]

\[\text{Correlation: 0.41} \quad \text{Correlation: -0.30}\]


Note: The figure shows intergenerational mobility estimates for cohorts born in the 1980s. The rates of stunting, height for age (percentage of children under 5 years of age), refer to averages in 1986-95, including economies with at least one observation during this period. The period is chosen roughly to match the early childhood years of the 1980s cohorts.
might involve relatively inexpensive nutritional supplements for mothers and programs to build awareness among mothers, for example through visits by health workers.

Intervening in the postnatal period is also effective, particularly if this is accomplished early in a child’s life. Programs targeting nutritional and health improvements in early childhood can yield long-term benefits in education outcomes and wages; nutritional supplements seem to have the strongest effects when they are given to children of age 2 years or younger. Universal preschool programs can play an important equalizing role because skill formation is a dynamic process in which early inputs strongly affect the productivity of later inputs (Heckman 2006). Reviews of the evidence indicate that intervening during preschool years is more effective than later interventions, and only programs that start before children reach the age of 3 years seem to have long-lasting effects on cognitive abilities.

Cognitive skills are not the only determinants of long-term outcomes. Intensive preschool programs such as the Perry Preschool and Abecedarian projects in the United States had large long-term effects also because they improved noncognitive skills among children, starting around age three. Although most of the research on the long-term effects of early childhood programs has been conducted in high-income countries, one important example in a developing country setting finds that interventions to improve children’s socioemotional skills during the first three years of life can have a positive and significant effect on labor earnings in adulthood.

Although small, intensive, model programs such as Perry demonstrate the frontier of possibilities with early childhood development (ECD) programs, research on the long-term effects of the Head Start Program in the United States—one of the longest-running and largest preschool programs in the world targeting low-income children—suggests what is possible with large-scale ECD programs. Despite the challenges of implementation and the inefficiencies associated with scaling up, the benefits can still be substantial.

The evidence on the long-term benefits of other programs and policies that could potentially equalize opportunities in childhood is somewhat thin. On subsidized childcare, a key policy instrument whose effects on long-term outcomes are not well documented, the experience of Norway is illuminating. In the four years after a reform in 1975 in Norway, childcare coverage almost tripled among three- to six-year-olds. The program led to an increase in life-cycle labor income and educational attainment, with the largest effects occurring among girls and the children of less-educated mothers. And although school meal programs have been widely adopted by governments to improve nutrition and educational outcomes, evidence on their long-term effects is available only in two high-income countries, and these effects are quite small.

Reducing opportunity gaps in education—access and quality
The GDIM database shows that economies with higher absolute and relative IGM in education among cohorts of the 1980s are likely to have
smaller shares of children who were out of school and higher average test scores in primary education during the school years of these cohorts. Within economies, the gaps in learning outcomes across children of parents at different levels of income and education tend to be even larger than the gaps in access, and these gaps are particularly wide in the developing world.46

**Investing in public education.** As shown earlier, economies with more public investments in education are also likely to have greater relative mobility in education. This relationship is found to be particularly strong for developing economies, and stronger for spending on primary education than other levels of education. That said, developing economies showing greater relative and absolute mobility seem to invest more public resources in all levels of education. The relationship between public education spending and absolute mobility is much weaker. This is consistent with public education spending having an equalizing effect, given that equality of opportunity is more closely related to relative IGM than to absolute IGM.

However, higher public spending on education is likely to promote economic mobility only if the spending translates to better access to and quality of education for disadvantaged groups. The level of public spending in education is found to be weakly correlated with average learning outcomes across countries and statistically insignificant after controlling for the country’s income level;47 however, there is evidence that more public spending is associated with lower inequality in learning achievement.48 It seems intuitive that just spending more is not enough to improve the quality of learning and equity in access to education. What also matters is how efficient the spending is in producing the key inputs into education and how equitable the allocation of spending is across groups and across space.

According to the GDIM database, both absolute IGM and relative IGM tend to be greater in economies with a higher teacher–student ratio in primary education, which is a broad measure of one of the inputs that are crucial to the quality of education. Other key inputs that influence the quality of education, such as the quality of teachers, curricula, facilities, and so on, are likely to matter as well for whether more education spending in an economy translates to better learning outcomes among disadvantaged children.

**Education reforms.** Relative mobility benefits from policy changes that improve the accessibility of education among disadvantaged students. Existing research suggests that reforms that weaken the practice of tracking students by academic ability or postpone it until students are older promote equality of opportunity, as seen from examples of such reforms in three Nordic countries.49 Other policy changes can affect the implicit or explicit costs of education. The instruments are varied, such as reducing the duration of education for tertiary degrees (as was done in Italy), and increasing the years of compulsory schooling (as in Norway).
Improving the accessibility of secondary schooling is likely to become a priority in many developing economies as primary school enrollments approach 100 percent. A recent policy experiment in rural Ghana found large effects of secondary school scholarships on the education and labor market outcomes of low-income students. This highlights the potential benefits of free secondary schooling, as well as the need for developing economies to consider such policy experiments to build the evidence that informs future education reforms.

Improving the quality of learning and reducing vast inequalities in learning outcomes require education policies that address the proximate and systemic causes of the “learning crisis” described by the 2018 World Development Report (World Bank 2018a). The same report organizes the policy actions to address proximate causes—such as children arriving to school unprepared to learn, teachers lacking the skills or motivation to teach, inputs that are unavailable or of inferior quality, and poor management and governance of schools—and the deeper systemic causes into three broad categories. These are assessing learning through better measurement and tracking, acting on evidence to make schools work for all learners, and aligning actors to make the entire education system work for learning.

**Breaking the cycle of low aspirations and low mobility**

Beliefs about mobility and aspirations influence each other because the behavior of individuals depends on the belief systems impressed upon them by society, and actual mobility contributes to the formation of these belief systems. Evidence suggests that mobility trajectories and long-run beliefs are determined jointly and thus depend on each other. A well-known theory refers to an aspirations window, or the set of similar (or attainable) individuals whose lives and achievements help form one’s future goals, which is broadened by higher (perceived) mobility. The aspirations window of an individual is shaped by multiple reference groups, whose composition is influenced by the individual’s socioeconomic status, as well as social hierarchies and norms.

Aspirations are critical to mobility. For example, in Mexico, poor youth of ages 12–22 years with higher mobility aspirations have been found to stay in school longer, exhibit better health behavior, and engage less in self-destructive behavior. High aspirations of 12-year-olds in Telangana and Andhra Pradesh in India are positively associated with the amount of time devoted to education and, ultimately, with educational outcomes at age 19 years.

The aspiration window of children of low socioeconomic status is likely to be narrow because children in such families are likely to grow up in a social environment that contributes to the narrowing of their aspiration window. Moreover, parental aspirations, which influence the aspirations of children and their own investments in their children, may be lower among families of low socioeconomic status. Rigid social hierarchies may contribute to or compound the effects of low aspirations. For example, an experiment in India shows that providing cues to one’s
place in the caste order influences the ability of low caste boys to learn and the willingness of high caste boys to expend effort.\textsuperscript{55}

**Policies to influence aspirations—indirectly or directly.** Exposing children and parents to information, experiences, and role models that influence the shaping of aspirations may help widen the aspiration window in some settings. For example, providing information on the returns to education to students in the Dominican Republic at the end of compulsory schooling significantly improved their perceptions of the returns to schooling relative to similar schoolchildren in a control group.\textsuperscript{56} Interventions that help the creation of role models can also raise aspirations. For example, a random assignment of female leaders in selected village councils in a state in India led to a significant reduction in the gender aspirations gap among parents and among adolescents.\textsuperscript{57}

Evidence is inadequate so far on whether interventions directly aimed at raising the aspirations of children or parents can improve education outcomes. Interventions to improve aspirations and attitudes among school-age children have shown some positive effects; the evidence is weaker on the effects of interventions to raise parental aspirations.\textsuperscript{58} Thus, more evidence is needed, particularly from behavioral interventions that target aspirations, before policy conclusions can be established.

Given the dynamic ways in which aspirations are formed and sustained, interventions that aim directly at raising aspirations are not the only answer. Some studies have argued that, for many youths from disadvantaged backgrounds, the stalling of aspirations during their formative years is what is salient, rather than a shortage of high aspirations.\textsuperscript{59} This calls for greater support to young people from socially disadvantaged backgrounds in maintaining their aspirations—including better opportunities in education and jobs, better teachers, and better career advice, mentoring, and training.

**Labor market policies and institutions to promote mobility**

As seen earlier, labor markets play a significant role in shaping the persistence of income inequality across generations. In the decompositions, the functioning of the labor market influences the size of the first channel through returns to education, and that of the third channel through the effect of parental circumstances other than education on an individual’s earnings. Both effects can be influenced by circumstances other than parental characteristics, such as an individual’s gender or race.

The labor market can limit income IGM by compounding any preexisting inequality that affects an individual before his or her entry into the labor market. Although the labor market directly affects individuals at their adult stage of life, it has a feedback effect on human capital formation as well. Because investments in human capital are “priced” in the labor market, policies and institutions affecting these prices have feedback effects on investment decisions that parents make for their children’s education, and on the decisions made by the children themselves.
How the labor market affects income IGM and its relationship with education IGM. One of the indicators of a healthy labor market is the labor force participation rate (LFP). For economies with low LFP, the association between relative IGM in education and income is much weaker than for those with high LFP (figure O.13), which is also confirmed by regression analysis. This suggests that, in an economy with low LFP, investments in human capital are harder to monetize, which leads to a larger “wedge” between educational and income IGMs. Once the effect of the LFP is considered, the economy’s per capita GDP does not have a strong effect on the relationship between education IGM and income IGM, which suggests that for this relationship, an economy’s labor market conditions matter more than its level of development.

The labor market is also more likely to be a barrier to IGM in income when the allocation of jobs and differences in earnings are influenced by an individual’s circumstances that are unrelated to his or her productivity. For example, the role of parental social networks can be a key barrier to relative mobility when jobs are rationed and unemployment is high. A study of young adults in a city in South Africa finds that the father’s occupational networks have a strong effect on the son’s labor market outcomes. In the Middle East, personal connections, or the so-called culture of wasta, appear to play a strong role in compounding the effects of weak job creation on IGM.

**FIGURE O.13** When labor force participation is higher, relative IGMs in income and education are more closely associated with one another

Source: GDIM 2018 (World Bank); Equalchances 2018; and ILOSTAT.
Note: Sixty-three percent is the median labor force participation rate for countries with available estimates of income and educational intergenerational mobility (IGM).
The effect of parental networks on labor market outcomes is compounded by discrimination based on characteristics unrelated to productivity, such as gender, race, caste, or religion. Discrimination can also interact with social networks in transmitting disadvantage across generations, contributing to a high degree of “inertia” that can cause discrimination to persist in labor markets long after legislative interventions are put in place.

Around the world, women are found to be less likely to actively participate in the labor market; and for those who choose to work for pay, labor market disparities persist in terms of wages, occupation, and sector of employment. Because of these disparities, although gender gaps in IGM in education have closed or even reversed in much of the world, the same may not have occurred for gender gaps in income IGM. Several factors contribute to gender disparities, including differences in time use, social networks, and gender roles between women and men, and discrimination by employers. Social norms can play a role in reproducing gender disparities in the labor market from one generation to the next.

Policies to level the playing field in the labor market. In general, labor market institutions and policies can support higher IGM by limiting the extent or effect of unemployment spells, easing labor market access of vulnerable categories and youth, improving competitions among employers, and increasing protection of workers who are discriminated against. Policies and regulations that promote competition and market integration are also likely to be good for IGM. The less segmented and more competitive the labor market is, the less likely distortionary practices such as discrimination and network effects are to survive in equilibrium.

A combination of active and passive labor market policies can help reduce the negative and long run consequences of unemployment, particularly in advanced economies. Weak labor market conditions for young entrants to the job market, as seen during the 2008 financial crisis, have long-lasting effects on their productivity, incomes, and prospects for upward mobility. The income effect of job loss can be minimized by unemployment benefits or, in case of informal labor markets, by social assistance measures that may reduce the likelihood of disinvestment in children’s human capital.

Facilitating the integration of youth into the labor market is essential to reduce the chances of lifetime income losses as a result of a poor start. Giving incentives to employers to hire young people, such as through wage subsidies, targeted reductions in the labor tax wedge, or tax credits at the lower end of the wage scale, are potential policy options whose effects may be small or temporary. Programs such as training or subsidized employment can also be beneficial for youth, especially during a recession. In general, however, active labor market policies may be limited in what they can achieve. A recent study finds that the effect of active labor market policies in developing economies is relatively small and tends to be largely offset by their cost.

Labor market and social policies such as parental leave, flexible workplace arrangements, and the provision of affordable and high-quality
childcare have been found to have a positive effect on women’s LFP. Moreover, reserving some part of the parental leave for fathers has been found not only to limit the gendered effect of family-related work interruptions, but also to reduce differences in time use between men and women that contribute to inequality of opportunities between genders.66

Mitigating the effects of capital market imperfections on mobility
Credit constraints and lack of insurance can limit upward mobility of the poor and lead to poverty traps in developing economies, where capital markets tend to be underdeveloped. These imperfections also provide an additional incentive for wealth transfers to the next generation, which increases persistence in earning differentials across generations, given that only those with access to inherited wealth can finance investments that can potentially enhance their earnings. Intergenerational persistence of earnings has been found to vary between different points of the distribution of parental income in some developing economies, which hints at the presence of credit constraints.67 For example, relative mobility of income in Brazil is found to increase, on average, with the father’s wage and is substantially lower for sons of fathers with below-median wages.68

Capital market imperfections strengthen the case for redistributive policies. When capital market imperfections are taken into account, the distribution of wealth among a generation has important effects on the distribution of income as well as on aggregate efficiency and output.69 This implies that redistributive policies can promote IGM by improving both distribution and efficiency, when the dynamic effects of wealth inequality in the presence of credit constraints are considered. These arguments also strengthen the case for taxation of capital income and property.

Moreover, given the role of credit constraints, broadening access to financial services may arguably improve IGM, particularly at the lower end of the income distribution. The same argument applies to targeted transfers to lower-income families, such as conditional or unconditional cash transfers, and tax credits for the working poor. Also, in the presence of credit constraints, lack of collateral among the poor becomes a critical barrier to investments, which suggests that policies that facilitate legalization of existing assets or broader ownership of assets can be mobility enhancing. By a similar argument, ensuring that women and men have equal rights to inherit and own assets in countries where women lack such rights can improve economic mobility of women, and possibly that of their children.70

Reducing the barriers to economic transformation
In most developing economies, the process of economic transformation strongly influences how factor markets work.71 Many of the usual forces of transformation—such as employment shifts toward more productive sectors, rising geographic mobility, and weakening of restrictive social norms—are likely to improve IGM. For example, in India, IGM among
scheduled castes and tribes is found to have increased and converged toward that of other groups as economic transformation has accelerated. Conversely, skill-based technological change that accompanies transformation can reduce relative mobility by raising returns to education and, with that, wages at the top.

The positive effects of transformation can be muted by existing factor market distortions or rigidities. For example, land market distortions can constrain spatial mobility, and distortions in land and labor markets can interact with restrictive social norms to restrict economic transformation processes. For these reasons, as transformation progresses, the trajectories of economic mobility can vary a lot within the same economy. In China, for example, one study finds that relative IGM in both education and earnings has fallen more among women and residents of economically disadvantaged regions since the beginning of the economic transition.

One reason why IGM trends vary widely across groups and regions within a country may be the significant adjustment costs workers face in changing locations or industries, which can prevent them from exploiting new opportunities in a transforming economy that is trading more with the rest of the world. A recent World Bank study finds that the effects of exports on labor outcomes in South Asia are localized, most likely because of the presence of significant worker-level adjustment costs. In general terms, reducing barriers to spatial mobility—so that people can freely move or connect to better jobs, services, and opportunities wherever these exist—is likely to benefit IGM.

Equalizing Opportunities across Space

For mobility and opportunity, it matters where one is born in a country, in addition to the social status of the family one is born into. Although much more research is needed, the combined evidence so far underscores the importance of focusing locally—from the level of provinces down to the level of neighborhoods—for improving IGM.

Local drivers of mobility matter

The global data on educational mobility reveal a few patterns suggesting the importance of local drivers of mobility. Globally, economies with lower levels of spatial segregation by education levels are also likely to have higher absolute and relative educational mobility (figure O.14). The same pattern is seen across provinces within the six large developing economies. In economies (or provinces) with lower levels of segregation, children from disadvantaged backgrounds plausibly get more chances to share the same public services as children from richer backgrounds and benefit from positive spillovers.

In the same six economies, in provinces with a higher concentration of “privilege” (the more educated), those at the bottom of the ladder have higher chances of making it to the top, possibly because of more economic dynamism, better services, and other positive spillovers from the highly educated.
But these provinces also have higher inequality in upward mobility between those in the bottom half and others. To ensure that the advantages offered by these “mobility poles” are available more equitably, policies need to focus on narrowing the opportunity gaps between children born with different parental backgrounds living in these areas.

Evidence on the drivers of mobility at the neighborhood or community level is compelling, but limited mostly to high-income economies. The Moving to Opportunity project in the United States has highlighted the important effect of better neighborhoods and local environments on long-term outcomes for children, including their incomes as adults, if the change occurs at an early age.\textsuperscript{77} Neighborhood characteristics such as income segregation and concentrated poverty, inequality, racial segregation, quality of schools, crime rates, and the share of two-parent families have been found to be important determinants of IGM. At least half of the variance in IGM across areas in the United States is attributable to the causal effect of location.\textsuperscript{78}

**Public policies to strengthen the local drivers of IGM**

Although national-level policies are important, social mobility needs to be addressed also at the local level. Several characteristics that influence the key pathways for local effects on mobility can be influenced by policy, such as safety, accessibility, infrastructure, and the quality and availability of childcare, health care, educational institutions, and recreational facilities. Interventions aimed at reducing the concentration of poverty and the socioeconomic segregation of neighborhoods can be particularly beneficial for mobility.
For example, location-specific investments in housing and infrastructure may be able to reduce the economic segregation of communities and improve connectivity to markets. Local incentives and subsidies to promote the creation of jobs in distressed neighborhoods have helped in some cases to reduce concentrated poverty and improve the social environment. Mentoring programs, interventions through social networks, and internships at local companies have been suggested as potential ways to motivate and help children from disadvantaged backgrounds. There is also increasing recognition of the need for more comprehensive approaches to building neighborhood social capital, combining service delivery, housing, and public and private investment, and building resident governance structures.

A Fiscal System to Balance Efficiency with Equity in Developing Economies

A fiscal system that raises sufficient resources to support public investments to promote IGM must balance efficiency and equity objectives for developing economies. There are compelling arguments to suggest that, with imperfect capital markets, redistributive policies can improve efficiency; but trade-offs between equity and efficiency may exist for specific policies. This calls for a comprehensive approach that considers the combined redistributive and efficiency effects of taxes and spending, and that encompasses both design and administration considerations.

Raising resources through progressive taxation

In developing economies, limited levels of taxation and the composition of revenues limit fiscal redistribution relative to advanced economies. Developing economies rely heavily on indirect taxation, which has a limited redistributive effect compared with direct taxes that translates to lower effect on improving IGM. In the GDIM database, economies with lower tax revenues and share of direct taxes in total revenue tend to have lower IGM in education—relative and absolute.

Enhancing redistribution requires that developing economies raise more fiscal resources through taxation. To achieve that, a policy strategy could aim to broaden the income tax base and increase progressivity, strengthening tax compliance as a prerequisite. Other than meeting resource needs, such a strategy can also help moderate inequality of outcomes today, which will help raise relative IGM tomorrow. Property taxes can provide a relatively efficient way of improving the progressivity of taxes and raising revenues, if the necessary investments in administrative capacity are made. Inheritance taxes are another direct way to address persistence and raise resources. These taxes currently contribute little to fiscal revenues despite a rising flow of inheritances in recent years in many economies.

In-kind spending and transfers

To improve IGM, for most developing economies, there is a compelling case for prioritizing investments that equalize opportunities for children and mothers. This includes in-kind spending on systems and programs to
improve maternal and child health, education, nutrition, and ECD, and well-targeted transfer programs that benefit long-term outcomes of children. Transfer programs can mitigate the effects of credit constraints on investments in children. Although conditional and unconditional cash transfers have been widely adopted in the developing world and found to have positive short-term effects, more long-term studies are needed to find robust evidence on their long-term effects. A recent review concludes that cash transfer programs have had positive effects on schooling outcomes, whereas the evidence on employment and income effects is more mixed.

Research from some high-income economies demonstrates what transfer programs can potentially achieve. For example, studies have found that exposure in teenage years to the Earned Income Tax Credit in the United States—a tax benefit targeted to low-income households, which is in effect one of the largest transfer programs in the country—has a positive effect on test scores; the likelihood of completing high school, completing college, and being employed; and earnings as a young adult. As mentioned earlier, a recent policy experiment also suggests that scholarships for secondary school students could be an important policy tool to improve educational mobility in developing economies. In contrast with these priorities, fiscally expensive universal price subsidy schemes, which are found to be an inefficient approach to protect the poor, have limited redistributive effect in the short or long run.

Spending priorities will vary by country context, including the extent to which barriers to income mobility are different from those limiting educational mobility. For example, public spending on infrastructure can be a priority for improving income mobility in economies where barriers to connectivity prevent workers from accessing jobs, or firms from accessing markets. In economies with high unemployment, investments in active labor market programs and social protection systems for workers might help improve relative mobility and prevent downward mobility among workers.

**Adopting the Right Policies Requires Evidence and Better Governance**

Lack of evidence about what works, and how, may sometimes be a reason why policies that promote long-term inclusive growth are not adopted by governments. Even monitoring IGM and inequality of opportunity at the national level has proved to be difficult in some developing countries—a data gap that can be addressed at a reasonably low cost by adding a few questions to existing household surveys, which ask adult respondents about the education, occupation, and birth year of their parents. For setting policy priorities, policy makers also need to know more about the factors that influence mobility, evidence on which can be generated using a variety of possible sources. These include “big data” from administrative records and censuses that are becoming more useable with rapid technological advances, which also help address the security and privacy concerns about the use of such data. For evidence on the impacts of potential interventions,
policy makers need to draw on the findings of academic research and test them in local contexts with carefully evaluated pilots. To help with this process, academic research needs to focus more on filling the gaps in evidence on the drivers of the long-term outcomes that determine IGM, particularly in developing-country settings.

But too often, governments find it hard to adopt or implement many of the policies to achieve fair progress, even when compelling evidence exists to guide these decisions. In explaining why this happens, the 2017 World Development Report (World Bank 2017) notes that the adoption and implementation of effective policies are influenced by who has a place at the bargaining table during the process of designing and implementing policy. That process, which can be termed governance, underlies how institutions in a country function to support policies that promote long-term prosperity and fairness. Persistence of outcomes across generations can often be traced to policies being influenced more by the preferences of the rich than by those of the poor and the disadvantaged. Inequality in a society often reflects power asymmetries; and persistence of outcomes across generations, in turn, reflects the transmission of power asymmetries through the status inherited by a child from his or her parents. Policies that promote the greater good, including mobility, may be difficult to introduce and implement because the groups in society who benefit from the status quo may be powerful enough to resist reforms.

History offers numerous examples in which rules, institutions, and processes have improved in societies, often incrementally, and existing institutions have been adapted to deliver effective policy solutions. World Bank (2017) argues that what matters for policy effectiveness is whether those institutional forms can perform their intended functions in a particular setting, and it identifies commitment, coordination, and cooperation as the three core functions of institutions that determine policy effectiveness.

**Conclusion: A Few Principles for IGM-Enhancing Policies**

For sustainable and inclusive growth, public policy must support a social contract that addresses people’s aspirations. Such a contract, in most countries, is likely to be one where all parents can expect their children to have better lives than themselves (absolute upward IGM) and where an individual’s position on the income scale is less tied to the status of his or her parents (relative IGM). Policies that achieve success on both these fronts can create a positive feedback loop, because citizens’ perceptions of higher mobility can, in turn, lead to a social consensus that improves the environment for policies of the future.

Policies supporting the drivers of economic growth—such as promoting macroeconomic stability, a better investment climate, and greater integration with global markets—are also likely to be good for IGM, absolute and relative. Conversely, higher mobility, both relative and absolute, has a positive feedback on growth in the long run, by increasing the stock of
human capital and innovation, promoting a more efficient allocation of resources, and building support for a social consensus around policies that contribute to the greater good. But higher growth, even when it is distributed such that it improves the living standards of most individuals in a society, may not be enough to ensure greater relative mobility. A society with high inequality is also likely to have greater inequality of opportunity, which leads to lower relative mobility that, in turn, leads to further inequality in outcomes and opportunities, and so on.

To break the cycle of high inequality and low mobility, a government would need to prioritize policies that raise opportunities for the least advantaged groups at various stages of life, as appropriate for a country’s own context. In most developing economies, where relative mobility in education tends to be low, investments and policies aimed at the initial stages of an individual’s life cycle are necessary for promoting IGM in education as well as income.

However, for most economies, promoting educational mobility may not be enough. Labor market inefficiencies and distortions can pose a strong barrier to IGM of income, over and above the factors that limit educational mobility. The capital market can also play a constraining role by affecting the ability of the poor to make optimal investment decisions, which constrains mobility in education and income alike. Barriers to mobility across space and industries can distort labor markets and lead to the benefits of transformation being locally concentrated instead of being shared widely across an economy.

Evidence from the literature and cross-country patterns provide a few insights on the broad directions for policies to raise IGM. First, the state can play a proactive role in equalizing opportunities attributable to individual circumstances, where the priorities may include (1) interventions targeted to maternal health and to early childhood, because gaps that emerge then are often irreversible; (2) reducing gaps in access to and quality of education between the haves and have-nots; (3) enhancing the effectiveness of interventions by considering the role of aspirations and social norms in influencing the decisions of households and individuals; and (4) making markets work more efficiently and equitably, and reducing barriers to mobility across space and industries.

Second, the state may need to be proactive about equalizing opportunities across space. How policies and investments are applied at the local level matters, from provinces down to individual communities. Interventions to improve neighborhoods and social environments, by reducing socioeconomic segregation, investing in services and infrastructure, and building social capital, are likely to be beneficial for IGM. In making their investment decisions, policy makers must consider not just the short-term effects of investments, but also the potential long-term benefits for the children and youth belonging to those communities, which, in turn, have a positive effect on the next generation, and so on.
Third, fiscal policy can influence IGM in education and income in multiple ways. The goal of a mobility-enhancing fiscal policy would be threefold: mobilize resources to finance public investments that promote higher IGM, boost relative IGM by moderating income inequality, and balance these objectives with the objective of promoting efficiency and growth. A policy strategy could aim to broaden the tax base for income tax, increase progressivity through tools such as property and inheritance taxes, and strengthen tax compliance, while investing in building administrative capacity. On spending to improve IGM, in addition to investments to equalize opportunities for children and mothers, well-targeted transfer programs can mitigate the effects of credit constraints on human capital investments of families. In some countries, these priorities may need to replace universal price subsidy schemes for items like fuel, which are often an inefficient way to protect the poor while consuming a large share of scarce resources.

Last, governance can play a crucial role in mitigating the power asymmetries that prevent the right policies from being adopted even when there is compelling evidence on what needs to be done. Inequities in the policymaking system prevent policies from being more responsive to the needs of the poor and the disadvantaged. This causes inequality to persist across generations, which, in turn, strengthens power asymmetries and perpetuates the cycle. World Bank (2017) suggests that positive change requires shifting the incentives of those with power, reshaping their preferences to support positive outcomes, and increasing the contestability of policy decisions by considering the interests of those who are typically excluded from the policy arena.

Such changes can catalyze reforms that unlock the human potential among the poor and the disadvantaged and set in motion a virtuous cycle. Higher intergenerational mobility can lead to greater efficiency and economic growth and lower inequality, which is likely to promote a more level playing field and reduce asymmetries in power. This, in turn, is likely to boost the mobility of future generations and place a country on a higher, more self-sustaining path of long-term development.

Notes

1. See, for example, Roemer (1998) and Van de Gaer (1993).
3. See, for example, Solon (2004).
4. Figure O.1 combines income IGM estimates from other studies with own estimates, while ensuring some degree of comparability in methodology across estimates (see chapter 2).
5. Excluding individuals with parents who have tertiary education mitigates the “ceiling effect” in educational mobility (that education levels cannot exceed tertiary). An alternative method for mitigating this effect leads to roughly similar results (see chapter 3 of the book).
6. An alternate measure of relative IGM used in the mobility literature, the intergenerational correlation of educational attainment, is also computed to check the robustness of results reported with the regression coefficient.

7. The gap in absolute mobility among the 1980s generation between high-income and developing economies is almost equally large if the measure of absolute IGM includes individuals whose parents have tertiary educational attainment (instead of dropping them) and considers these individuals as upwardly mobile if they have at least as much education as their parents.

8. The gap between developing and high-income economies in relative mobility is also significant if the correlation coefficient between parental and offspring educational attainment, rather than the regression coefficient, is used as the measure of intergenerational persistence (not shown here).

9. See, for example, Corak (2016b) for reviews of the evidence.

10. The widening gap between high-income and developing economies is also observed if the correlation coefficient between parental and offspring educational attainment is used as the measure of intergenerational persistence.

11. Beegle and others (2016); for a more detailed comparison with that study, see chapter 3.

12. The FCV group of economies is based on the World Bank Group’s Harmonized List of Fragile Situations (Fiscal Year 2018): http://www.worldbank.org/en/topic/fragilityconflictviolence/brief/harmonized-list-of-fragile-situations. Of the 36 economies in the list, IGM estimates for all cohorts can be computed for 7 economies and IGM estimates for the 1980s cohort can be estimated for 26 economies (see chapter 3 of the book).

13. This indicator, termed poverty-to-privilege rate in the book, is identical to the indicator referred to as rags to riches in Corak (2016a).

14. These findings are reported from Evans, Newhouse, and Suarez-Becerra (forthcoming).

15. The educational shortfall of a child of age $T = \text{observed years of education} - (T - 5)$. This indicator is used in lieu of educational attainment, because those who are born after the 1980s cohort may not necessarily have completed their education by the time of the survey.

16. Average persistence is measured by the average of regression coefficients from regressions of educational shortfall on parental education for every country. Regional averages include only those economies on which the shortfall variable can be constructed.

17. World Development Indicators (2018).


19. For example, see Becker and others (2015).

OVERVIEW

22. IEO is measured as the share of total income inequality attributed to predetermined circumstances. The estimates of IEO are taken from Brunori, Ferreira, and Peragine (2013), who compiled them from multiple studies. In most cases, the circumstances include parental education, geographical location of residence or birth, and gender, and, in some cases, race, ethnicity, and religion.
23. See, for example, Maoz and Moav (1999), and Owen and Weil (1998).
24. For example, in the model by Becker and others (2015), which assumes perfect credit markets and no government intervention, an increase in average parental education and income is predicted to raise the level of intergenerational persistence unless inequality in parental education were to decline significantly.
25. Based on linear regressions of relative IGM in education on public spending on education or total public spending (as a share of GDP) and (the logarithm of) per capita GDP of an economy, pooling cohorts from the 1960s to the 1980s and including cohort fixed effects (see chapter 4).
26. This observation is supported by regressions of (logarithm of) GDP or headcount poverty rates on measures of absolute or relative mobility, at the time when the cohort was about 15 years old, controlling for lagged (log) GDP levels just before the individuals were born and economy or region-specific effects (see chapter 3).
27. See, for example, Owen and Weil (1998), Galor and Tsiddon (1997), and Hassler and Mora (2000).
30. Ferreira and others (2017).
31. See the discussion in Corak (2013), who also shows an earlier example of the Gatsby curve.
32. See, for example, Fehr and Fischbacher (2003) and Fleib (2015).
33. Benabou and Ok (2001). This seems to be supported by empirical evidence in several countries: see, for example, Alesina, Stantcheva, and Teso (2018) and Gaviria, Graham, and Braido (2007).
35. Krishnan and others (2016).
38. See, for example, Aizer and Currie (2014).
39. See, for example, Hoddinott and others (2008, 2013) and Bharadwaj, Løken, and Neilson (2013).
42. Gertler and others (2014).
44. Havnes and Mogstad (2011).
45. Butikofer, Mølland, and Salvanes (2016); and Alex-Petersen, Lundborg, and Rooth (2017).
46. For example, socioeconomically disadvantaged students across OECD countries are almost three times more likely than advantaged students not to attain the baseline level of proficiency in science (OECD 2016).
47. World Bank (2018b).
49. Tracking refers to the common practice of separating pupils by academic ability and having them follow different curricula within a school or placing them in different schools. For evidence on the effect of tracking, see Brunello and Checchi (2007); Pekkarinen, Uusitalo, and Kerr (2009); Aakvik, Salvanes, and Vaage (2010); and Meghir and Palme (2005).
54. Ross (2016).
58. See, for example, Goodman and Gregg (2010), and Gorard, See, and Davies (2012).
59. Cummings and others (2012); Kintrea, Clair, and Houston (2011).
60. “High” and “low” LFPs refer to those in the upper half and lower half of the distribution of LFPs, respectively, for the 75 countries for which income and education IGM estimates are available. Regression analysis confirms that the relationship between education IGM and income IGM is significantly stronger when LFP is higher.
61. Magruder (2010) finds that intergenerational networks can explain “nearly all employment inequality between son of present, employed fathers and other young adults.”
62. Krishnan and others (2016).
64. Chen and others (2018). See, for example, Katz (1998), Groh and others (2016), and Betcherman, Daysal, and Pages (2010) for the effects of wage subsidies in different economies and settings.
67. See, for example, Solon (1992), Mulligan (1997) and Corak and Heisz (1999).
69. See, for example, Galor and Zeira (1993).
71. See, for example, Beegle and others (2016) for evidence from Africa.
73. For example, in India, labor mobility across generations may be constrained by limited land markets and a cultural obligation that makes abandoning land costly (Fernando 2016).
75. World Bank (2018a).
76. This is similar to the patterns for Canada and the United States found by Corak (2017).
79. See, for example, Kline and Moretti (2014) for evidence from the United States.
80. Bell and others (2017).
83. Fiszbein and others (2009).
84. Molina-Millan and others (2016).
85. Dahl and Lochner (2012); Chetty, Friedman, and Rockoff (2011); and Bastian and Michelmore (2017).
86. del Granado, Coady, and Gillingham (2012).

References


Maddison Historical Statistics (database), Groningen Growth and Development Centre, Faculty of Economics and Business, University


ECO-AUDIT

Environmental Benefits Statement

The World Bank Group is committed to reducing its environmental footprint. In support of this commitment, we leverage electronic publishing options and print-on-demand technology, which is located in regional hubs worldwide. Together, these initiatives enable print runs to be lowered and shipping distances decreased, resulting in reduced paper consumption, chemical use, greenhouse gas emissions, and waste.

We follow the recommended standards for paper use set by the Green Press Initiative. The majority of our books are printed on Forest Stewardship Council (FSC)–certified paper, with nearly all containing 50–100 percent recycled content. The recycled fiber in our book paper is either unbleached or bleached using totally chlorine-free (TCF), processed chlorine-free (PCF), or enhanced elemental chlorine-free (EECF) processes.

More information about the Bank’s environmental philosophy can be found at http://www.worldbank.org/corporateresponsibility.
*Fair Progress? Economic Mobility across Generations around the World* looks at an issue that has gotten much attention in the developed world, but with, for the first time, new data and analysis covering most of the world, including developing economies. The analysis examines whether those born in poverty or in prosperity are destined to remain in the same economic circumstances into which they were born and looks back over a half a century at whether children’s lives are better or worse than their parents’ in different parts of the world. It suggests local, national, and global actions and policies that can help break the cycle of poverty, paving the way for the next generation to realize their potential and improve their lives.