

## Comments

**Nancy Birdsall:** Analyzing a society's social mobility can answer a fundamental distributional question typically posed by economists: are economic opportunities broadly shared in that society, independent of an individual's luck in the parents he or she has? The authors' analysis of intergenerational schooling mobility in Latin America adds to a small literature assessing equality of opportunity in Latin America. Their paper contributes to our understanding of the link between income inequality and social mobility, and it begins what should be a deeper assessment of the effects of market reforms and other policy changes on equality of opportunity in the region.

### **Inequality, Mobility, and Growth**

Income inequality has traditionally been viewed as a regrettable byproduct of a process of growth and structural change, which might better be accepted than addressed by distributional efforts that would introduce distortions and undermine the dynamic of growth itself. An alternative view is that income inequality signals deeply entrenched inequality of opportunities, particularly when it occurs at the high levels found in Latin America and when it is accompanied by widespread absolute poverty. Given the weak capital and other markets and the inadequate educational and regulatory institutions typical of many developing countries, income inequality reinforces the likelihood that the poor will be crowded out of jobs, credit, and other productive opportunities, which ultimately undermines their productive potential and the economy's overall efficiency and growth.

In principle, social mobility could be high even in countries with high income inequality, as long as the high inequality of income in one generation is not replicated in the next generation. Evidence on social mobility across generations thus provides more convincing evidence about equality of opportunity than a typical cross-section-based measure of

inequality itself.<sup>1</sup> Furthermore, information on social mobility provides evidence on whether inequality is good or bad for growth. Inequality may be detrimental to growth, for example, by combining with credit market failures to reduce investment in schooling. On the other hand, as some might argue about inequality in the United States, it may enhance growth by providing incentives for hard work, for innovation, or indeed for parents to invest in their children's schooling.<sup>2</sup> Where social mobility is high, high inequality is more likely to be growth enhancing.

For Latin America, the authors' analysis indicates that social mobility is not offsetting high measured inequality. Schooling mobility is much lower across Latin America than in the United States, and the differences among countries in Latin America are sufficient to suggest that country characteristics, history, and social and economic policies matter. The authors also refer to limited evidence from Asia showing that by comparison Latin America is less mobile (in terms of schooling).

Their analysis is only a beginning, however. Several puzzles and problems remain. First, the ranking of countries within Latin America shifts depending on the measure of schooling mobility. The authors provide a healthy reminder that the profession is still short of a definitive, trustworthy measure that is clearly independent of correlated unobserved factors over time and across countries or other units.

Second, the authors' measures of immobility may simply reflect inequality of schooling in each country. Across countries, schooling immobility is closely related to a measure of schooling inequality (see figure 7 herein and the authors' table 4). Also, schooling inequality, like measures of immobility, is closely associated with mean levels of schooling (see figure 8). High inequality of schooling in Latin America, which is even higher in some countries than others, seems to be all too good a predictor of immobility—and a good proxy for unequal opportunity. That result is underlined by the authors' troubling finding that within countries over time, the increasing mean level of education has not been associated with increasing mobility (see table 6).<sup>3</sup> In other words, in Latin America,

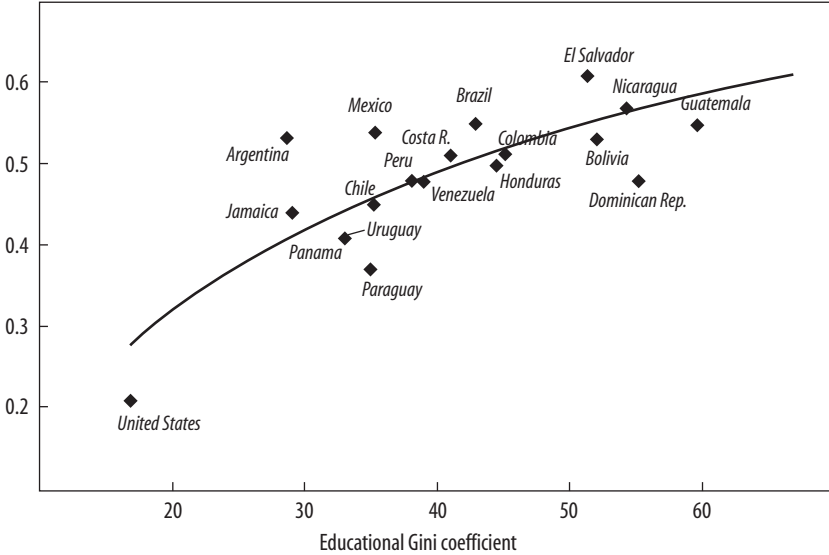
1. Birdsall and Graham (2000).

2. Welch (1999).

3. The fixed effects result of column 2 in table 6 is notably weaker than the results across countries shown in the other columns, one of the authors' more noteworthy and troubling results.

**FIGURE 7. Schooling Immobility and Inequality in Latin America, 1990s<sup>a</sup>**

Intergenerational schooling immobility



Source: Authors' calculations.

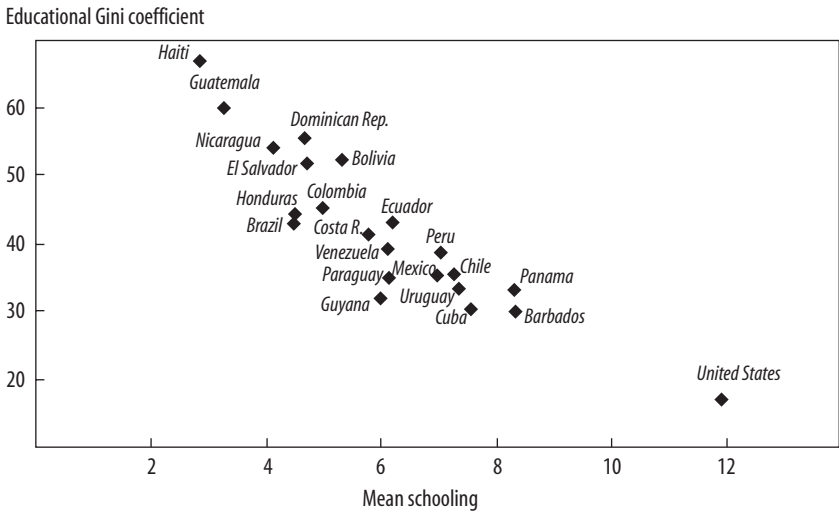
a.  $y = 0.241 \ln(x) - 0.4; R^2 = 0.63$ . The vertical axis is the measure of schooling immobility used in Behrman, Gaviria, and Székely (in this volume). See Birdsall and Pettinato (2001) (available on request from the authors) for an explanation of how the Gini coefficient of education was measured.

at least compared with other regions, current inequality across adults of schooling is replicating itself, even as overall means rise. But is the close association of schooling inequality and immobility an empirical finding or an outcome of the relative imprecision of the available measures of one or both?

Finally, the authors focus on relative, as opposed to absolute, mobility. (The distinction is hard to capture where means are rising, short of the transition matrices the authors present, but these are harder to incorporate into any analysis of determinants.) Perhaps absolute upward mobility would provide a better signal of equality of opportunity.<sup>4</sup> The United States is seen as a mobile society of equal opportunity because of absolute upward mobility—despite a level of relative mobility similar to that of Europe—thanks to faster average growth over the last two centuries and

4. See Behrman (2000); Fields (2000).

**FIGURE 8. Schooling Level and Inequality in Latin America, 1990s**



Source: Birdsall and Pettinato (2001).

constant infusions of immigrants with initially low levels of education. What is the social welfare function? If it places a premium on equality of opportunity, and if that is what mobility measures aim to signal, should absolute (upward) schooling mobility be given precedence over relative mobility? Does absolute mobility matter more the lower the initial level of education or income? In the end, the authors wisely avoid defining any specific standard. Perfect mobility, like perfect equality, is not necessarily the right objective.

### The Effects of Economic and Other Policies on Mobility

More than a decade of market reforms in Latin America has been associated with little, if any, reduction in inequality. Indeed, some aspects of the reform process are apparently reinforcing the high and still increasing returns to education, which are widening wage gaps and probably further increasing income inequality.<sup>5</sup> Poverty has remained high in Latin

5. Behrman, Birdsall, and Székely (2000a) show that a set of five economic reforms in Latin America have together tended to increase wage gaps in the short run.

America despite (or some might say because of) the market reforms of the last ten to fifteen years, and inequality has stayed at high levels or increased, with some exceptions.

Inequality indices are famously sticky, however.<sup>6</sup> High income inequality could persist even as reforms contribute to new opportunities and increased social mobility. The market reforms may well have contributed to a more dynamic economy, with more competition-driven creative destruction (reducing jobs in some sectors) and more efficiency-generating flexibility (with trade liberalization and privatization undoing longstanding rents).<sup>7</sup> Along with the destruction, a new set of opportunities may be generating more upward and downward mobility of individuals over their lifetimes and changing children's position in the income distribution relative to that of their parents. Market reforms could thus be creating new, more equally shared opportunities and planting the seeds of higher future growth.

So assessing the effects of economic and social reforms on intergenerational schooling mobility can shed light on the larger question of the effects of policy change on equality of opportunity. The authors' data suggest, in fact, that mobility improved in the so-called lost decade of the 1980s, especially in the first few years after the 1982 debt crisis, and then deteriorated in the 1990s, as economic reforms presumably took hold and growth recovered, albeit modestly (see figure 6, in which an increase in value signals a reduction in mobility). In the last two decades, the presumably low absolute mobility of the 1980s and the higher absolute mobility of the 1990s seem to have been associated with the opposite trends in relative mobility. The authors do not speculate about why; perhaps regression to the mean becomes less likely as opportunities are reduced across-the-board. They do test the effects of GDP growth on relative mobility, along with the effects of education spending (table 7). They find that a doubling of education spending is equivalent to a seven-fold increase in GDP in increasing social mobility. GDP growth is not a very powerful generator of relative mobility, which may provide a clue to the trends shown in figure 6.

6. Bruno, Ravallion, and Squire (1996).

7. Behrman, Birdsall, and Székely (2000a) present evidence that privatization has actually reduced the wage gap between the skilled and less skilled in Latin America and that trade liberalization has had no clear effect, that is, it has not, as if often assumed, increased the wage gap.

But many fundamental questions about the effects of policy on mobility and equality of opportunity remain unanswered. What lies behind the effects of education spending in table 7? Did economic signals change in the 1990s, raising expected returns to schooling for poor children and leading to higher private (household) investment in schooling on the part of relatively poor households? Did education reform efforts in the late 1980s and 1990s, together with increases in public spending for education, improve the quality of schooling and thereby raise expected returns to schooling, especially for the poor?<sup>8</sup> Did financial sector reforms increase access to credit, raising enrollment of children in households that were formerly credit-constrained?<sup>9</sup> Did fiscal rectitude in the form of reducing inflation increase the real incomes of poor households, making schooling more affordable or child labor less necessary? Did trade liberalization and privatization increase the demand for unskilled labor, increase job opportunities, and raise incomes in poor households? What were the effects of the import substitution policies common prior to the 1980s on mobility in the decades before the 1980s? The authors' measures suggest that mobility rose for several decades prior to the 1980s before declining in the early 1980s, reaching an all-time low in about 1987, and then continuing at low levels throughout the 1990s (see figures 4 and 6). In the high-growth years of the 1960s and the 1970s, did intergenerational schooling mobility rise primarily because of growth itself or because of the secular increases in the mean level of education throughout the region, which are so closely tied to declining educational inequality and increasing schooling mobility? It should be possible to generate the time series of country-based economic and social information that, combined with the authors' new measures of social mobility over several decades, would allow a much more complete assessment of these issues.<sup>10</sup>

The authors have contributed to what should be a growing literature on inequality of opportunity in Latin America. They help shape a new approach that exploits measures of social mobility to assess equality of opportunity across countries and to analyze how various policies and

8. See Birdsall and Londoño (1998).

9. These questions are also pertinent to a fuller understanding of the effects of the Progres program discussed by Skoufias and Parker (in this volume).

10. The authors use the Dahan and Gaviria (2001) index as their dependent variable. Behrman, Birdsall, and Székely (2000b) use a different measure, which has some disadvantages, but they are able to do a more complete analysis.

economic changes affect that fundamental objective of most societies in the region.

**Sebastián Galiani:** The authors aim to estimate the degree of intergenerational mobility in Latin America. The contribution of the paper is thus empirical. It is among the first studies to gather comprehensive evidence on intergenerational mobility in Latin America that is comparable to the evidence available for United States. This, certainly, is an important contribution to the literature.

Careful cross-country comparisons of mobility patterns are still in their infancy, and most previous research has studied intergenerational mobility in developed countries. Preliminary results show that intergenerational correlation coefficients for both total income and labor earnings are very similar across developed countries.<sup>1</sup> Nevertheless, a relative consensus on the level of mobility in developed countries does not imply a consensus on the causes of intergenerational mobility. Different theoretical models are consistent with a given level of mobility.

Before moving ahead, it is necessary to clearly identify the meaning of intergenerational mobility (with respect to a certain variable).<sup>2</sup> I understand intergenerational mobility to describe the prevalent relationship between the locations of a socioeconomic variable in the distribution of a certain generation among members of a family dynasty. Thus the determinants of intergenerational mobility become more important the higher the dispersion (or inequality) of the variable considered is. Latin America clearly displays a considerable amount of inequality among the main socioeconomic variables, such as earnings, wealth, and education. Thus the paper under review addresses an important matter.

Over the last decade, economists have made considerable progress in measuring the intergenerational association of socioeconomic variables and the overall impact of family and community origins on them. For example, the intergenerational earnings correlation for men in the United States is somewhere around 0.4, which is twice the level that used to be viewed as an upper bound for this parameter.<sup>3</sup>

1. See, for example, Bjorklund and Jänti (1997).

2. Excellent theoretical and empirical discussions of the literature are found in Behrman (1997), Mulligan (1997), and Solon (2000).

3. See Solon (2000).

Unfortunately, the causal processes underlying the intergenerational transmission of earnings are still unknown. The available empirical basis is insufficient for assessing why parental income matters as much as it does. Is it because high-income parents are able to invest more in their children's human capital, or because the genetic or cultural traits that contributed to the parents' high earnings are passed on to the children? For example, a comparison of sibling and intergenerational correlations for the United States suggests that much of the intergenerational influence on earnings is unrelated to parental income. Where it comes from remains a puzzle.<sup>4</sup>

Although the focus of the paper is the measurement of intergenerational mobility and not its explanation, understanding the causal processes that underlie the intergenerational transmission of socioeconomic variables is crucial for basing policy recommendations on reliable empirical evidence. However, while causal evidence is not disposable, the authors offer an interesting cross-country comparison of the degree of intergenerational mobility. Nevertheless, it is worth noting that strictly speaking, a low degree of intergenerational mobility in educational attainment is not direct evidence of inequality of opportunities, although I agree with the authors that it is quite suggestive that this is the case.

The paper tries to provide evidence on both sibling and intergenerational correlations on educational attainment in Latin America. First, a virtue of the paper is that it bases the analysis on samples that reduce the likely presence of selectivity bias in cross-sectional household surveys. To study intergenerational mobility, the authors rely exclusively on a few surveys that have included retrospective questions about parental socioeconomic characteristics for all adults in each household sampled in the survey. To study sibling correlations, the authors restrict their samples to encompass siblings aged sixteen to twenty who are coresiding with their parents. This information is available for a larger set of surveys. The spirit of this latter sampling scheme is the same as the former, although its success is less evident.

Second, the paper mainly analyzes intergenerational mobility in terms of educational attainment. This choice has advantages and disadvantages. On the one hand, education has a clear advantage over current income, which is the variable most widely studied in the literature. The education

4. See Solon (2000).



of prime-aged individuals is not likely to be subject to transitory shocks, as is the case of current earnings. Consequently, the estimated correlations are not biased downward as they are when the correlation among permanent earnings is the parameter of interest and current earnings are used to estimate the sample statistics.<sup>5</sup> On the other hand, we know that education explains around 30 percent of the total variance of earnings. Thus the link between the degree of intergenerational mobility in educational attainment and earnings inequality may be weak. It is possible, for example, for a country to have a low degree of intergenerational mobility in educational attainment but for education to be less important in explaining earnings and, hence, inequality.

Third, the sample correlation among intergenerational levels of education (or earnings) is likely to estimate a mixture of different population intergenerational correlations. The distribution of population intergenerational correlations may thus be severely skewed, and its center may be better represented by its median than by its mean. In that case, equation 1 in the paper could instead be estimated by the 0.5-quantile regression, with the consequent redefinition of the parameter of interest.<sup>6</sup> What is more, the interquartile conditional range could also be reported as a measure of the dispersion of the distribution of the population intergenerational correlations. These two statistics may also represent an efficient alternative to either a single statistic or an entire transition matrix.

Fourth, the authors explore the connection between changes in mean schooling attainment and changes in intergenerational mobility. To study this relationship, the authors divide the sample into four cohorts and estimate the intergenerational correlation in educational attainment for each cohort in the five countries for which they have retrospective data. They find a negative correlation between the intergenerational correlation and the mean level of educational attainment of the cohort. The authors estimate a one-way fixed-effect error component model in which they alternatively model the fixed effect as a cohort effect and as a country effect. The result reported from this exercise is not clearly interpretable, however, without knowing whether the effect of the cohort's mean education is still statistically significant when a two-way fixed-effect error component model is estimated. It may, in fact, be dominated by a particular country-

5. Of course, I am setting aside measurement error problems.

6. See Koenker and Basset (1978).

cohort effect (see figure 4 and the results of the model in differences in table 4).

Fifth, and related to the previous point, the estimates of the intergenerational correlation of educational attainment may reflect a bias induced by basing the estimates on the correlation between the educational attainment of an individual and the educational attainment of the parent with the higher educational level. Suppose instead that an individual's level of education is influenced by (a convex combination of) the levels of education of both parents (if they were present while the child was growing up) and that the correlation between the educational attainment of the parents and that of the children is higher when the mean levels of education of the parents are closer. If that is the case, the methodology adopted in the paper may bias both the cross-country comparisons of intergenerational mobility and the comparisons across time for a given country. This possible bias may not be significant, but an analysis of the robustness of the results reported in the paper to changes in the way the interdynasty correlation in education is defined would be valuable.

Finally, it would have been better to apply the standard regression analysis to estimate the sibling correlations in educational attainment than to use the correlation index adopted in the paper (equation 2).<sup>7</sup> The former would have facilitated a standard comparison of sibling and intergenerational correlations.

7. This would have allowed the authors to measure educational attainment as the deviation to an age-cohort-country mean cell.

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