
Bootstraps, not Band-Aids: Poverty, Equity, and Social Policy

NANCY BIRDSALL AND MIGUEL SZÉKELY

After a decade of economic reform that dramatically altered the structure of economies in Latin America, making them more open and more competitive, and a decade of substantial increases in public spending on education, health, and other social programs in virtually all countries, poverty and high inequality remain deeply entrenched. By the 1990s, most countries of the region had adopted in some form the recipe that seemed to produce dramatic rates of growth in East Asia: a combination of open markets and substantial commitment of public resources to investment in human capital.¹

Yet the proportion of poor people, in most countries 40 percent or higher, failed to decline much if at all—the only exceptions were Chile,

Nancy Birdsall is president of the Center for Global Development in Washington, DC. Miguel Székely is the undersecretary for planning at Mexico's Ministry for Social Development.

1. Of course not everything was the same. But in the 1990s, the differences (see the essays in Birdsall and Jasperson 1997) in macroeconomic and in social policy were subtle, and probably no greater between, say, Peru and Malaysia than between South Korea and Malaysia. In particular, spending on social programs as a percentage of GDP was as great in Latin America in the 1990s as it had been and is in the tigers of East Asia. The differences may well have been in pre-1990s policies and economic characteristics, in particular the unhappy history of inflation in much of Latin America; the longer period of import-substitution policy, with its protection of local industry; and Latin America's greater inequality, with its political as well as economic implications.

with a reduction from an estimated 32 to 16 percent between 1990 and 1998, and Uruguay, from 23 to 13 percent. Not surprisingly, the proportion of poor people actually increased in countries that had low rates of growth, such as Venezuela. But the proportion also increased in countries such as Mexico and Peru where there was growth, at about 2 percent per capita annually. In no country was there any obvious improvement in what are generally very high rates of income inequality.²

What is wrong, and what can be done to alter this bleak picture? Obviously, higher rates of growth would help. But they continue to elude most countries, even Chile in the past few years. Moreover, it may be that the problems of poverty and inequality help explain the persistently low rates of growth, rather than only or primarily slow growth explaining persistent poverty.

In this chapter, we ask the question whether a fundamentally different approach to what we call “social policy” in Latin America could make a difference—both in increasing growth and in directly reducing poverty. We define social policy broadly to include economywide (macroeconomic and employment and other structural) policies that affect poverty and social justice in foreseeable ways, as well as social investment programs, such as health, education, and social protection programs, including cash and other transfers targeted to poor people and others vulnerable to economic and other shocks.

We begin with a brief review of what is known about the links among poverty, inequality, and growth in the region and elsewhere. We emphasize the relevance of empirical work, showing that income poverty, combined with inequality in access to credit and to such assets as land and education, contributes to low growth and directly to the low income growth of poor people. Then we focus on the effects of the market reforms of the past 10 to 15 years on poverty and inequality in the region, on the basis of empirical studies using household data. We emphasize our finding that the reforms have not contributed to reducing poverty and inequality.³ Though reforms have not particularly worsened the situation of poor people, they have not addressed the underlying structural causes of high poverty: the lack of access of the poor to credit and to productivity-enhancing assets.

We then go on to briefly describe four stages of social policy in the region during the past four decades. Finally, we propose a more explicitly “bootstraps”-style social policy, focused on enhancing productivity via better distribution of assets. We set out how this broader social policy could ad-

2. The data on poverty and inequality to which we refer are set out in Behrman, Birdsall, and Székely (2001b). The data are from household surveys in the late 1980s and 1990s.

3. In Behrman, Birdsall, and Székely (2001a), we show that reforms as a group, especially financial-sector liberalization and the opening of the capital market, have tended to increase wage inequality (between those with higher or secondary education compared with primary education).

dress the underlying causes and not just the symptoms of the region's unhappy combination of high poverty and inequality with low growth.

Poverty, Inequality, and Growth in Latin America

Latin America suffers from a vicious circle in which low growth contributes to the persistence of poverty, particularly given high inequality, and high poverty and inequality contribute to low growth.⁴ Consider first the former part of the statement: that low growth contributes to poverty, especially combined with initially high income inequality. Across all developing countries during the past several decades, GDP growth per capita has been necessary for reducing the number of poor people.⁵ The most obvious example is China, where growth has been high and the number of poor people has been reduced dramatically.

Economic growth reduces poverty mainly through its effect on employment. Low GDP growth in Latin America has meant limited creation of new jobs in the modern sector—in contrast to East Asia in the 1960s through the 1980s, where employment increased rapidly and, as the labor market tightened, so did wages. In Latin America, the limited growth of the 1990s was not employment intensive, exacerbating the problem.⁶ Of course, low growth implied fewer public resources in an absolute sense for the kind of public spending—on basic education and health—most likely to reach poor people and reduce inequality in the long run.

Compounding the problem, low growth in Latin America has been combined with unstable growth. Rich people seem better able to protect their incomes during downturns, at least in relative terms; this may be more the case where the initial distribution of income (and as we shall suggest, of assets and thus of economic as well as political power) favors the rich. The 1980s recession in Latin America led to more than proportionate increases in poverty.⁷ Downturns in the 1980s and 1990s also probably exacerbated inequality, because some poor people had to sell their land or other assets and withdraw their children from school—undermining their future income-earning ability (Lustig 1995 and World Bank 2001, chap. 9).

In addition, high inequality meant that whatever the rate of growth, the growth effect on poverty was less than it might have been with a more

4. This section is based on Birdsall and de la Torre (2001).

5. Dollar and Kraay (2000) show that on average across countries the income of poor people (defined as the bottom fifth of the population) rises about one for one with growth in per capita GDP. This has not been necessarily true of course in every country. Foster and Székely (2001) criticize their approach and discuss some of the limitations of their interpretations.

6. Stallings and Peres (2000) provide evidence on this point.

7. Morley (1994) provides extensive evidence on this point.

Table 3.1 Change in the poverty rate and decomposition of the change into growth and redistribution effects, selected Latin American countries, various years (percent)

Country	Period	Poverty line	Initial poverty rate	Final poverty rate	Total change	Percent of total change due to		
						Growth	Redistribution	Residual
Brazil	1985-95	Extreme	10.0	11.1	10.2	-40	145	-5
		Moderate	30.4	28.0	-7.9	-40	-70	10
Bolivia	1990-95	Moderate	52.4	47.1	-10.1	-147	44	3
Chile	1987-96	Moderate	45.1	23.2	-48.6	-85	-7	-8
Colombia	1991-95	Moderate	58.5	58.5	-0.1	-103	6	-3
Costa Rica	1986-95	Moderate	29.4	25.6	-12.9	-117	17	0
Peru	1985-96	Moderate	43.1	50.5	17.2	99	-27	28

Source: Attanasio and Székely (2001).

equal distribution of income to start with, and a better distribution of the gains from growth. Even in countries that benefited from higher rates of growth, growth alone failed to translate into proportionate reductions in poverty. Consider the following two examples from Attanasio and Székely (2001). Between 1996 and 1998, GDP per capita increased in Mexico by 9.7 percent in real terms, a spectacular gain compared with the previous 16 years. However, poverty hardly declined. In fact, the incomes of the poorest 30 percent of the population contracted during this period. The huge increase in mean income was due entirely to income gains among the richest 30 percent—particularly the richest 10 percent—of the population (Székely 2001b).

The second example is Chile. Between 1992 and 1996, Chilean GDP per capita expanded by more than 30 percent in real terms, and moderate poverty (head count ratio) declined by 20 percent. But income inequality increased (the Gini index rose 7 percentage points). Had income distribution remained as it had been in 1992, the proportion of poor people would actually have declined much more—by 50 percent.⁸

Table 3.1 presents the result from a decomposition of the change in poverty in various countries into three components for selected years (based on household survey data) in the late 1980s and 1990s. The three

8. This result is obtained by using household surveys of the government of Chile for 1992, and multiplying all incomes by 1.3 to simulate the growth rate registered between 1992 and 1996. The poverty rate computed after this adjustment can be interpreted as the poverty that would have been observed had the distribution remained unchanged between the 2 years. Obviously, this is only a simulation for illustrative purposes, because there is no guarantee that growth would have been the same under a static distribution. The levels and the change in poverty head count differ from that in table 3.1 because of differences in the dates and in the definition of poverty in the CASEN data from the standardized (across countries) definition applied to all surveys covered in table 3.1.

components are a growth effect, a redistribution effect, and a residual.⁹ During these years for the most part, distribution undermined and in some cases reversed the small positive effect of growth. In Bolivia, Colombia, and Costa Rica, the reductions in poverty registered in each period were due exclusively to growth. Income distribution deteriorated in these countries, and without growth, poverty would have increased. In Chile, inequality had a slight poverty-reducing effect; most of the poverty reduction was attributable to growth. Peru is the only country where an improvement in income distribution played a potentially important role in poverty reduction, although there it was outweighed by the negative growth effect.

Growth in Latin America in the 1990s made little difference for poverty reduction, for two reasons. First, growth was modest to start with in most countries of the region. Second, growth provided less than proportionate gains for poor people, certainly failing to offset their disproportionate losses in the 1980s, and in some cases increasing those losses.

Let us turn to the latter part of the statement about the vicious circle made above: that high poverty and inequality contribute to low growth. This is pertinent to social policy because it suggests there is no necessary trade-off between “economic” policies—for example, to maintain macroeconomic stability and enhance growth—and “social” policies to reduce poverty and inequality.

Theory suggests that poverty accompanied by an unequal distribution of such assets as land and human capital can inhibit growth by magnifying the adverse effects of imperfect markets and weak government institutions on savings and investment.¹⁰ The obvious examples include the inability of landless poor people, without collateral, to borrow against the future human capital of their children so as to keep the children in school; and the inability of even small business owners with movable collateral to borrow where the legal and regulatory framework does not guarantee that creditors can seize that collateral. Moreover, if relatively poor people were able to invest, they would be likely to achieve higher returns than

9. To perform the decomposition, the researchers (Attanasio and Székely 2001) used the methodology developed by Datt and Ravallion (1992). The decomposition simulates the change in poverty that would have been observed if average income had changed as it actually did but the distribution had remained constant (the growth effect). The redistribution component is obtained by simulating the change in poverty that would have occurred if average income had remained constant but the distribution had shifted as it actually did.

10. Aghion, Caroli, and Garcia-Penalosa (1999) summarize the economic literature. Particularly relevant to our discussion of social policy is Benabou (1996). Birdsall, Ross, and Sabot (1995), in their analysis of inequality and growth in East Asia, emphasize that region’s experience seems to belie the assumption, e.g., of Kaldor, that high savings are related to high income inequality.

those with greater wealth, because the latter move farther down their list of potentially good investments; the outcome for the economy as a whole is lower average returns on investment.¹¹

Empirical evidence from cross-country studies supports the general proposition for developing countries that those with higher levels of income inequality have experienced lower levels of growth. Best known but problematic are the early studies of Persson and Tabellini (1994) and Alesina and Rodrik (1994). These relied on cross-sectional estimates without controlling for fixed country effects; they were therefore showing that unequal countries tended to grow more slowly, but not necessarily that inequality and not other characteristics associated with inequality was a cause of low growth.

More recent studies—including those on industrial as well as developing countries and those controlling for country effects—tend to come to the opposite conclusion (Forbes 2000). But Barro (2000) shows that the distinction between industrial and developing countries is important. In developing but not industrial countries, inequality does seem to reduce growth. Inequality of income, not surprisingly, matters where capital and other markets do not work well and also probably where government does not work well. Market and policy failures combine with high inequality to undermine growth.

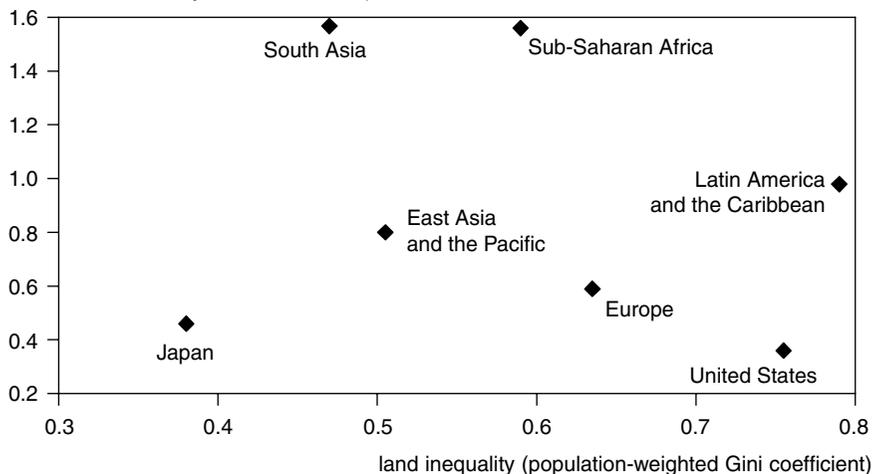
A second series of cross-country studies clarifies that the fundamental problem is not inequality of income itself, but the underlying inequality of such assets as land and human capital (Birdsall and Londoño 1997; Deininger and Olinto 2000). Figure 3.1 illustrates Latin America's high inequality of land and human capital relative to other regions. Once the inequality of the latter two "assets" is taken into account, the "Latin America" effect (of lower growth than elsewhere) disappears (Birdsall and Londoño 1997); moreover, across countries, the effect of inequality of land and education is twice as great in reducing the income growth of the poorest 20 percent of households as in reducing average growth. De Janvry and Sadoulet (2000) present compelling evidence that in Latin America, where land inequality is high, growth in agricultural production and productivity has *worsened* rural income inequality because it has failed to raise employment and income levels of landless poor people.

Country studies provide evidence of what can be a vicious circle in which low income constrains the ability to acquire assets. In Brazil and Honduras, children in low-income households acquire relatively little edu-

11. Aghion, Caroli, and Garcia-Penalosa (1999) model this point. See also Birdsall, Pinckney, and Sabot (1999), who develop a household model in which income and work effort are endogenous to investment opportunities for liquidity-constrained households; one outcome is high returns on own investment, e.g., among small farmers in East Asia.

Figure 3.1 Asset inequality in various regions, about 1990

human capital inequality (population-weighted standard deviation / mean of years of education)



Note: Human capital inequality was calculated using data reported in Barro and Lee (2000a, b).
Source: Birdsall and Londoño (1997).

cation.¹² The point is obvious but important in magnitude. For example, if Brazil had had Malaysia's distribution of income in the 1980s (when the per capita income of the two countries was similar), and given empirical estimates of the income effect on children's enrollment in school, Brazil would have had an estimated doubling of secondary school enrollment (from 20 to 40 percent).¹³ In Brazil, because poor people have few assets, they are not able to insure against income risk, compounding the effect of low income on the further acquisition of assets (Attanasio and Székely 2001). Uncertainty combined with the absence of adequate insurance mechanisms becomes a restriction on acquiring assets. Even when uncertainty induces precautionary savings, the savings go to relatively unproductive assets, such as cash holdings, instead of to human and physical capital.

Country studies also indicate the benefits to poor people of a combination of assets. For example, better access to credit or owning land is much more effective where the poor have more education, and vice versa. These studies also show systematic differences in returns on assets between rich and poor people, possibly reflecting differences in quality but also a

12. Country studies reported in Attanasio and Székely (2001) include assessments, using probit or logit regressions, of the association between ownership or access to human, physical, and social capital and the probability of a household being below the poverty line. In all six countries where the assessments were done, there was a strong inverse relation between years of schooling and the probability of being poor.

13. Birdsall, Ross, and Sabot (1995) provide this estimate and the calculations that underlie it.

greater likelihood that the poor suffer ethnic or racial discrimination—for example, in the form of a lower return on their human capital or greater difficulty in obtaining access to jobs or credit to put their human capital to work. In Chile, the difference between the average years of schooling of children at the top and bottom of the income distribution is not that large at young ages, but children from poor families attend schools with the lowest scores in terms of student achievement, whereas those from rich families mostly attend the best-scoring schools. In Costa Rica, the differential return on assets is an important determinant of poverty. If poor people were to receive the same return that the rich receive on the same asset, poverty would decline rapidly. Understanding the causes of differential returns—whether the systematically lower quality of education received by the poor or discrimination in the labor market—would provide insight into critical policy tools.

The fundamental problem boils down to the reality that inequality in Latin America is a good proxy for the poor having limited access to economic and social assets and thus limited economic opportunities, and limited economic returns on the assets they do have. Finally, given that the region's unusually high inequality compared with countries elsewhere is largely due to the extremely high concentration of income in the top decile,¹⁴ the problem of limited assets at the bottom is probably compounded by the politics of power at the top, but we do not have analytic models to test this latter proposition.

The Effects of Market Reforms on Poverty and Inequality

A series of market reforms began in the 1980s in some Latin American countries and then spread to others, deepening everywhere in the 1990s. Estimates suggest (e.g., IDB 1997, 50-53 and appendix 1) that the reforms had a strong positive effect on growth, on the order of an annual increase of 1.9 percentage points for the period 1986-95. However, more recent analyses covering the period through 2002 would be less positive, given that growth rates have declined in the past few years.

The effects of the reforms on poverty and inequality have been less clear. Here we describe what we believe are the best recent estimates of these effects, based on analyses reported in detail in Behrman, Birdsall and Székely (2001a and 2001b). These estimates are based on household data for more than two decades from 17 countries of the region, covering more than 90 percent of the region's population; and on country- and year-specific measures of the intensity of five different types of economic

14. See IDB (1999) for a detailed assessment of this point. Karl (2001) elaborates on the corrosive interaction of economic and political privilege in the region.

reform. In these two papers, Behrman and we use reform indices developed in a series of papers by Lora (1997 and 2001) and Morley, Machado, and Pettinato (1999). These indices summarize data on trade reform, financial liberalization, tax reform, domestic liberalization of external capital transactions, and privatization for the period 1970-99, and they are comparable across time and countries.

Because it is not easy to compile an indicator to represent the extent of a government's economic liberalization, the literature has traditionally relied on various "proxies."¹⁵ This approach is problematic because the proxies often present outcomes that have little to do with the actual decisions of governments and instead reflect reaction to markets, international prices, or the domestic private sector. In contrast, the Lora and Morley variables are based on direct indicators of governmental policies, and more accurately represent policy "effort."

The trade reform index reflects the average level of tariffs and the dispersion of those tariffs. The index for liberalization of the external capital account averages four components: sectoral controls of foreign investment, limits on profits and interest repatriation, controls on external credits by national borrowers, and capital outflows. The index for domestic financial reform takes into account borrowing and lending rates at banks and the reserves to deposit ratio. The tax reform index takes into account four factors: the maximum marginal tax rate on corporate incomes, the maximum marginal tax rate on personal incomes, the value-added tax rate (higher rates reduce the index), and the efficiency of the value-added tax.¹⁶ The privatization index is calculated as 1 minus the ratio of value added in state-owned enterprises to nonagricultural GDP. The index of labor-market reform reflects legislative mandates affecting the ease of hiring and layoffs (the latter in terms of employer's cost) and of overtime pay.

All the indices are normalized between 0 and 1, where in each case 0 refers to the minimum value of the index across all Latin American countries in the relevant time period, and 1 is the maximum registered in the whole sample.¹⁷ Figure 3.2 shows the average value of the indices for the region and displays the well-known intensification of liberalization at the end of the 1980s, especially after 1987.¹⁸

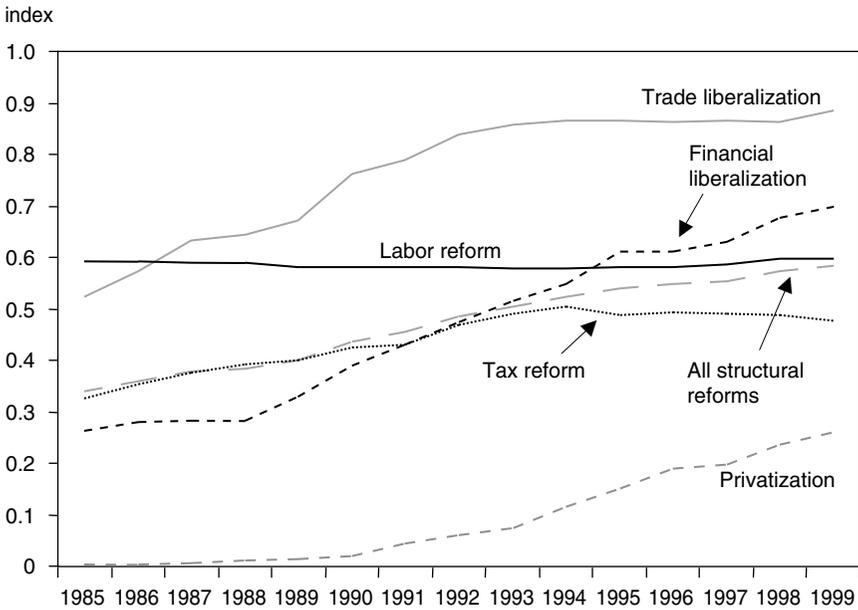
15. Two examples of common proxies used in the literature are exports plus imports over GDP, used as an indicator of trade liberalization, and M2 over GDP, used as an indicator of financial market reform.

16. Efficiency of the value-added tax is defined as the revenue collected under the tax as a percentage of GDP, given the tax rate.

17. Thus, the indices are comparable across countries in the region, which is critical for making comparisons among countries, including in our econometric estimates.

18. Liberalization of the external capital account is not included in figure 3.2. The figure shows the indices as updated by Lora (2001), who did not cover this reform. In figure 3.3, Behrman, Birdsall, and Székely (2001a) show this index as one where the reform has been greatest relative to the other reforms.

Figure 3.2 Evolution of reforms in Latin America, 1985–99
(regional average structural reform indices)



Note: Reform indices range from 0 to 1; 1 indicates a greater depth of reform. The regional average does not include the Dominican Republic, Honduras, or Nicaragua.

Source: Lora (2001).

With these indices in hand, it is possible to assess the effects of reform on the relative gains or losses in income of different groups during the periods covered by the various country surveys. Behrman, Birdsall, and Székely (2001b) do such estimates, grouping individuals (at the beginning and end of each period) as poor (*P*), rich (*R*), or in the middle (*M*). They assess the effects of the reforms on inequality by looking at the relative changes in the average income of the top decile (*R*) compared with the bottom three deciles (*P*).¹⁹ Table 3.2 shows the correlation (0.925) between the resulting inequality variable (in logs) and the Gini coefficient. Similarly, they assess the effects of reforms on poverty by looking at relative changes in the average income of all those with per capita income below \$2 a day (in 1985 purchasing power parity dollars) compared with all those above that threshold who are not rich (*M*).²⁰ Table 3.2 shows the cor-

19. See the appendix to this chapter. They proceed in this manner, i.e., comparing relative gains and losses across income groups, to minimize econometric problems. They adapt the approach from Behrman, Birdsall, and Székely (2001a).

20. This is not a measure of change in absolute poverty; it measures the change in the average income of poor people compared with others. Using a variable that measures change in the income difference has econometric advantages, which are explained in the appendix.

Table 3.2 Correlation between inequality and poverty indicators

Variable	Poverty and inequality indicator			
	Gini index	Poverty head count	Poverty gap ^a	Poverty intensity ^a
Variables correlated with inequality				
Log <i>R</i> – log <i>P</i> (poorest 10 percent)	0.726	0.569	0.633	0.673
Log <i>R</i> – log <i>P</i> (poorest 30 percent)	0.925	0.645	0.682	0.700
Variables correlated with poverty				
Log <i>R</i> – log <i>P</i>	0.576	–0.094	–0.004	0.046
Log <i>M</i> – log <i>P</i>	–0.219	–0.815	–0.785	–0.754

a. On these alternative measures of poverty, see Foster, Greer, and Thorbecke (1984).

Source: Behrman, Birdsall, and Székely (2001b).

relation (–0.815) between the resulting poverty variable (in logs) and more standard measures of poverty.

Table 3.3 presents their results for inequality.²¹ Financial-sector liberalization has had a significant positive impact on inequality (table 3.3); trade liberalization has not affected inequality. (The coefficient of trade liberalization is negative, reducing income inequality, but insignificant.) There is no evidence to support the widespread belief that trade openness is the principal reason why the distribution of income has worsened in Latin America.²² The other reforms (combined here to simplify presentation)²³ do not appear to have had any impact on inequality. Volatility and inflation, not surprisingly, show a significant positive effect (worsening inequality). An improvement in the terms of trade and an increase in the real exchange rate (a real appreciation of the local currency) seem to make the distribution of income more equal, though the coefficient of the former variable is not significant in the first-column estimation of table 3.3 (which is our preferred estimation).

21. The estimations refer to ordinary-least-squares first-differences regressions, in which the standard errors are robust and they are corrected to eliminate biases introduced by correlation between observations of the dependent variable. The technique used is the Huber correction. The reform variables are lagged 4 years to take into account that the reforms have a lagged effect on income distribution. This lag structure is tested, explored, and justified in Behrman, Birdsall, and Székely (2001a) for wage differentials. Lagging the reform variables increases the number of observations in the regression and allows for the incorporation of changes in poverty and inequality until 1999. The lag increases observations because the reform variables are available until 1995 and the household data analyzed for the dependent variables cover the period up until 2000.

22. This result is consistent with that of other studies, in particular, Behrman, Birdsall, and Székely (2001a) and Spilimbergo, Londoño, and Székely (1999), who obtain a similar result using panel data for countries from various regions of the world.

23. The “other reform” variable here refers to an index (the simple average) of privatization, the external capital account, and tax reform. Labor-market reform is not used here; it had not changed much in any country in the period covered.

Table 3.3 Effects of reforms and macroeconomic changes on wage inequality

Independent variable	Variable		
	Preferred estimation	Other estimations	
	Log $R - \log P$ ($P =$ poorest 30 percent)	Log $R - \log P$ ($P =$ poorest 10 percent)	Gini index
Trade liberalization	-0.39 <i>-1.32</i>	-0.60 <i>-0.91</i>	-0.43 <i>-2.40</i>
Financial liberalization	0.16 <i>2.33</i>	0.18 <i>1.60</i>	0.06 <i>2.91</i>
Other reforms	-0.09 <i>-0.41</i>	-0.12 <i>-0.41</i>	0.40 <i>2.06</i>
Macroeconomic volatility	0.13 <i>2.65</i>	0.14 <i>1.66</i>	0.04 <i>3.47</i>
Inflation	0.09 <i>2.43</i>	0.12 <i>1.52</i>	0.02 <i>3.24</i>
Terms of trade	-0.35 <i>-1.47</i>	-0.31 <i>-0.86</i>	-0.14 <i>-2.38</i>
Real exchange rate (local currency to dollar)	-0.30 <i>-6.17</i>	-0.40 <i>-4.27</i>	-0.10 <i>-7.58</i>
Constant	2.16 <i>6.95</i>	2.57 <i>4.25</i>	1.34 <i>15.01</i>
Number of observations	75	75	75
$F(7,46)$	15.22	8.53	20.31
Probability > F	0.000	0.000	0.000
R^2	0.297	0.141	0.485

Note: t statistics are in italics.

Source: Behrman, Birdsall, and Székely (2001b).

The last two columns of table 3.3 show results using the Gini coefficient as the dependent variable, and using solely the bottom decile for P (instead of the bottom three deciles). Using the Gini does not allow us to control the many missing variables at the country level that are controlled for in the first column. In this estimation, trade openness actually has a significant negative effect, reducing inequality, and financial liberalization and the other reforms have a significant positive effect. However, we cannot be sure if these results are genuine or simply represent problems of omitted variables.

Table 3.4 presents the results for the relationship between liberalizing reforms and our proxy for poverty, the income of absolutely poor people relative to others. Again, the results indicate that trade openness has no effect on poverty. (The coefficient is negative but insignificant.) Financial liberalization, conversely, has a significant positive effect on our measure of poverty. Again, not surprisingly, inflation and volatility in per capita GDP have significant positive effects on poverty. Poor people have less capability to weather shocks. The terms of trade do not have any effect on poverty, and appreciation in the real exchange rate appears to reduce poverty.

Table 3.4 Liberalization, macroeconomic context, and poverty

Independent variable	Dependent variable				
	Preferred estimation	Other estimations			
	Log <i>M</i> – log <i>P</i> (<i>P</i> = \$2 a day)	Log <i>R</i> – log <i>P</i> (<i>P</i> = \$2 a day)	Poor people ratio	Poverty gap ^a	Poverty density ^a
Trade liberalization	-0.03 <i>-1.21</i>	-0.12 <i>-1.68</i>	-0.38 <i>-1.18</i>	-0.43 <i>-1.53</i>	-0.60 <i>-1.66</i>
Financial liberalization	0.27 <i>2.54</i>	0.21 <i>2.02</i>	0.26 <i>1.25</i>	0.26 <i>1.70</i>	0.34 <i>1.75</i>
Other reforms	-0.03 <i>-1.64</i>	-0.04 <i>-0.73</i>	0.46 <i>1.21</i>	0.33 <i>1.03</i>	0.38 <i>0.92</i>
Macroeconomic volatility	0.18 <i>2.10</i>	0.23 <i>1.79</i>	0.26 <i>3.62</i>	0.42 <i>5.42</i>	0.51 <i>4.83</i>
Inflation	0.21 <i>2.99</i>	1.16 <i>3.88</i>	0.05 <i>0.91</i>	0.08 <i>1.83</i>	0.09 <i>1.71</i>
Terms of trade	-0.22 <i>-0.10</i>	-0.38 <i>-0.19</i>	-0.60 <i>-1.98</i>	-0.83 <i>-2.22</i>	-1.05 <i>-2.32</i>
Real exchange rate (local currency to dollar)	-0.37 <i>-2.23</i>	-0.35 <i>-4.38</i>	-0.20 <i>-2.13</i>	-0.25 <i>-3.53</i>	-0.32 <i>-3.57</i>
Constant	1.09 <i>29.90</i>	1.25 <i>12.77</i>	1.39 <i>3.06</i>	1.83 <i>3.45</i>	2.17 <i>3.30</i>
Number of observations	75	75	75	75	75
<i>F</i> (7,46)	4.82	7.65	10.51	13.01	11.49
Probability > <i>F</i>	0.000	0.000	0.000	0.000	0.000
<i>R</i> ²	0.321	0.395	0.363	0.459	0.437

a. On these alternative measures of poverty, see Foster, Greer, and Thorbecke (1984).

Note: *t* statistics are in italics.

Source: Behrman, Birdsall, and Székely (2001b).

As in table 3.3, we present in table 3.4 the results for other dependent variables. But because these three regressions suffer from omitted variable biases, we do not use them in our conclusions.²⁴

In summary, our preferred estimates (the first columns of tables 3.3 and 3.4) suggest that except for financial-sector reform, the economic reforms of the past two decades have not contributed to increased poverty and inequality. On the other hand, it is also the case that the reforms have not contributed to *reducing* poverty and inequality. It should not be particularly surprising that increasing reliance on market mechanisms has not in itself created income opportunities for poor people. The constraint may be poor people’s limited assets, including human capital, a constraint that market reforms alone cannot change. Financial-sector liberalization in particular appears to have made poor people worse off, at least relative to the rich and the middle groups. This is also not surprising; without collateral,

24. There are three differences with the first regression in the table. First, the effect of financial liberalization with regard to these three variables is not significant from a statistical standpoint. Second, inflation seems to increase poverty, but it is also insignificant. Third, improved terms of trade do seem to significantly reduce poverty.

poor people are less able to exploit liberalized financial markets. (Indeed, the end of repressed interest rates alone may make credit more costly in the short run. In addition, new higher-yield financial instruments will mostly help those with special and diverse investment needs.²⁵)

That market reforms in themselves do not help poor people is consistent with our observation that assets matter. Without assets, the poor are not in a position to exploit the potential benefits of less distorted markets. The economic reforms apparently failed to address the underlying structural problems that continue to inhibit growth in the productivity and incomes of poor people.

Poverty and the Evolution of Social Policy in Latin America

Social policy in the region today is a healthy combination of reasonable spending on basic investments in health and education; an emphasis on reaching poor people, which though far from perfectly implemented is a substantial improvement over earlier periods; and an impressive array of administrative reforms, including decentralization to more accountable local governments and such institutional innovations as cash subsidies to poor households that keep their children in school.²⁶

Today's social policy evolved over what might be considered four phases or periods. The first covers the period between World War II and the late 1970s, the "golden years" of Latin America in terms of economic growth. The industrial sector in most countries was growing vigorously, fueled by the import-substitution development strategy that prevailed in those decades. The urban middle-income group also was expanding.²⁷

During this period, social policy was seen as a fundamental part of the overall development strategy. Social policy consisted mainly of the widespread provision of subsidies for goods and services, from which the expanding urban middle-income groups benefited most. Some of the subsidies—such as those to fuel consumption—were justified as supporting higher real industrial-sector wages. Rural areas played the role of providing primary goods and natural resources for industrial production at low prices, as well as low-cost goods for urban consumers. This implied in many cases subsidizing rural production—and in a few cases, land redistribution—to minimize idle resources and the underutilization of land.

25. Székely (1998) analyzes the effect of financial liberalization in increasing inequality in Mexico in the early 1990s. He shows that owners of physical capital were better able to exploit the availability of new higher-yield financial instruments that could be adapted to specific investment needs.

26. This section is based largely on Székely (2001a).

27. See, e.g., Székely (1998) for a description of the case of Mexico.

For the most part, however, the needs of structurally poor people were neglected, though of course many households that began the period as poor benefited from the overall growth in incomes. Indeed, there were healthy declines in poverty and inequality during the period.²⁸ But the industrial growth strategy and the subsidies relied heavily on public borrowing and were ultimately unsustainable. They ended in the early 1980s with the debt crisis.²⁹

In the second period, under the new macroeconomic constraints of the early 1980s, social policy in effect went underground. With escalating inflation rates, devaluation, and GDP declines, the policy priority was to stabilize the economy at all costs. Widespread subsidies and social transfers were seen as an obstacle to growth, rather than a powerful engine of development as in the past. Fiscal pressures and the burden of debt combined with low growth to severely restrict new investments in health and education. Spending did not decline much as a proportion of the budget in most countries, because the political pressure to sustain civil service jobs and limit wage declines, which take up the bulk of social spending, was considerable. However, spending on new investments collapsed, and annual spending in absolute terms per child and per health client declined because overall government spending was declining.

Moreover, uncertainties and the lack of any new investment contributed to overall deterioration in the institutions—health and school systems—as teachers and health workers coped with limited access to complementary inputs—books, medicines, and so on; and as the systems no doubt lost some of their better personnel and suffered from constantly changing leadership. The remnants of the old policy provided limited but insecure job guarantees for that portion of the middle-income group that was lucky enough to hold a civil service or state enterprise job, and few if any services to rural and urban poor people. By the end of the 1980s, there was increasing evidence of growing inequality and, most worrying, of substantial increases in poverty.³⁰

The third period began in the middle to late 1980s with the acknowledgment that structural adjustment programs and economic reform were not addressing the needs of the large number of poor people—about 40 percent of the region's population. Social policy became focused on protecting poor people in the unfavorable macroeconomic environment, and in the face of increasingly global competition. It was recognized that the

28. See Londoño and Székely (2000) for evidence on poverty and inequality trends for Latin America during the 1970s.

29. The public subsidies, including to industry through import protection, relied heavily on foreign and domestic public borrowing, not domestic public savings, and could not be sustained once access to borrowing and the cost of borrowing rose.

30. See Morley (1995) and, for the effect of adjustment programs on social problems, see Cornia, Jolly, and Stewart (1987).

poor generally have fewer means of protecting their incomes from unexpected shocks and from the erosion of liquid assets that high inflation brings. They were also seen as the most disadvantaged in their chances of engaging in high-productivity sectors with the best chances of surviving external competition.

The policy solution was the introduction of compensatory policies through the implementation of safety net programs, including social emergency and social investment funds (which became favored programs for support by the multilateral development banks). In the face of continuing fiscal pressures, the approach became one of targeting resources to poor people, that is, allocating limited budget resources to obtain the most poverty reduction possible per peso spent. Poverty maps and poverty profiles were developed to identify the population with the highest poverty rates. Resulting programs were designed as small, specific, and tightly focused.³¹ Social policy and overall development and growth strategies of countries became totally disconnected. As in the second period, emphasis remained on the fiscal trade-off between macroeconomic policies and social programs, with social programs seen as a potential threat to public deficits and to macroeconomic stability.

By the mid-1990s, with the recovery of positive economic growth in most countries of the region, a fourth phase of social policy had emerged. Though growth in the region was still modest, with the exception of Chile, it was sufficient to encourage governments and the policy community to implement real increases in public spending on broad social programs—in a manner seen as fiscally responsible. Public spending on education and health increased in most countries of the region by at least 20 percent between 1990 and 1996 (Birdsall and Londoño 1997).

The opening of Latin America's economies to world markets, which had begun in the mid-1980s in most countries, created more interest in ensuring that economies could compete effectively in the global economy, and thus in ensuring that a larger proportion of the workforce could be more productive. Having an army of unskilled workers with low wages was no longer seen as a basis for global competitiveness. Emphasis on meeting the needs of poor people continued, but with much more attention to increasing their productive capacity, consistent with the view that competitiveness in open economies required much greater investment in human capital.

In many countries, the increases in spending on health and education favored primary and secondary education relative to university spending (e.g., in Brazil and Mexico; this change and other reforms began in the

31. The actual performance of the social funds in reaching the poor was not always good (Lustig 2000b). Poor performance reflected the political difficulty of avoiding use of new funds for patronage, and the technical difficulty of balancing between, on the one hand, the administrative (and political) costs of finding poor people and avoiding leakage of benefits to nonpoor people and, on the other hand, undercoverage of poor people.

1980s in Chile and was reinforced in the 1990s).³² New programs such as Progresá (recently renamed Oportunidad) in Mexico, Bolsa Escola in Brasília, and Chile Joven in Chile,³³ though targeted to poor households, were designed not only as safety nets protecting consumption capacity but also as investments in the human capital of the poor. Increases in social spending were accompanied in some countries by major new efforts to deal with reforms of the structure of health and education systems, particularly through an emphasis on decentralization and on greater parent and community control of schools (e.g., in Bolivia, in El Salvador, and in Minas Gerais, Brazil).

This fourth (and for all practical purposes still current) generation of social policy is thus essentially focused on programs to address the needs and increase the human capital of people who are currently poor. That makes good sense in a region where at least 30 percent of the population is poor, and where reducing poverty and encouraging future growth rely heavily on harnessing the potential for increasing poor people's productive engagement in the economy. Moreover, with its emphasis on building the human capital of the poor, this approach to social policy is more visibly a part of an overall development strategy.

But there are drawbacks to this approach. First, it is highly vulnerable politically; social programs must compete fiercely for public resources and so far have not been institutionalized in any country. Social programs are seen primarily as long-term investments in uncertain future growth, given the demands of the global market. But as growth falters and the sense of unreasonable vulnerability to external markets increases, this approach to social policy, sound as it is, is at risk of unwinding—threatened

32. These efforts probably led to reduced gaps in the 1990s between schooling of children from rich vs. poor households, based on a lower gap in most countries for 15-year-olds than for 21-year-olds—though the evidence is not yet clear or convincing, because there is a natural tendency for the gaps to increase with age (data from Filmer and Pritchett 1999). But the gaps in many countries remained dramatically high—consistent with other evidence that for the most part, differences in education of parents by income group in Latin America are replicated in differences in the education of children in the next generation (Behrman, Birdsall, and Székely 2000b; Birdsall 1999).

33. Progresá is the Spanish acronym for the Programa de Educación, Salud y Alimentación (Education, Health and Nutrition Program). The program provides cash transfers and a nutritional supplement to families in extreme poverty in rural areas. Cash transfers are conditioned on children's school attendance rates of at least 85 percent, and regular attendance to health clinics for checkups and follow-ups. The cash transfer is given to the mother, who also has to attend a series of talks and courses on health practices. Bolsa Escola is a similar program that provides scholarships for disadvantaged children. Part of the cash transfer is held in a special account, which the beneficiary can access after completing a schooling cycle. Chile Joven is also a program of cash transfers, but in this case they are provided to young adults for incentive training. A detailed description and evaluation of Progresá can be found at www.ifpri.org/country/mexico.htm. A description of Bolsa Escola can be found at www.mec.gov.br/home/bolsaes/default.shtm. See De Janvry and Sadoulet (2000) for a discussion of Progresá's targeting.

by another necessary round of fiscal austerity, or by a return to populist-style broad and fiscally irresponsible programs and subsidies.

Fundamentally, this approach to social policy does not effectively address the underlying causes of continued high levels of poverty and stubborn inequality. For instance, increased spending on education has raised schooling levels among poor children, but (as we will refer to below) has not appreciably raised their expected future income, because low growth and high real interest rates continue to limit job creation; because the average return from primary and secondary education has remained low; and because in some countries continuing ethnic, racial, and gender discrimination and its historical effects have kept wage returns low for many unskilled poor households. Nor will social investments raise incomes if poor people cannot accumulate physical and financial capital, or if recurrent economic downturns force periodic “de-cumulating” of their limited assets. Social policy alone, as currently conceived, cannot change the economic environment or the underlying elements in the structure of the economy that are contributing to poverty and slowing overall growth.

Social and Development Policy: One and the Same

Latin America’s high inequality of assets poses a deep structural barrier to raising the productivity and incomes of poor people. In the discussion above, we emphasized both the failure of the economywide, efficiency-enhancing economic reforms to reduce poverty and the still-limited extent to which social policy affects the larger economic environment in which the poor work, save, and invest. In this section, we conclude by outlining briefly the key ingredients of a social policy that would address explicitly the need to ensure that poor people acquire the assets and have real access to the economic opportunities that would allow them to raise their *own* productivity and pull themselves up by their own bootstraps.

This approach implies policies that support the poor in a way that enables them to contribute to growth and to be themselves engines of growth and development. This can only be done if social policy is at the heart of the development strategy of a country, rather than an opponent constantly competing for public resources that may undermine macroeconomic stability. The solution is not compensatory or Band-Aid measures, but policies that promote efficiency in the economic system and that improve the productivity of poor people.³⁴

We see this approach as consisting of three parts: mainstreaming of the equity objective into traditional macroeconomic and economywide poli-

34. Birdsall (2002) proposes an open-economy social contract for Latin America that would emphasize fiscal soundness and labor market reform as the foundation for a social contract.

cies so as to protect poor people's assets; policies and programs to increase their assets; and policies to increase the return on their assets. We outline these only briefly here, referring the reader to other studies for detail.

Mainstreaming Poverty Reduction into Economywide Policy

The cost of economic instability has been high for poor people in Latin America (IDB 1997 and Lustig 2000a)—largely because the busts that follow booms reduce returns on their principal asset, labor, and often force them to withdraw children from school and sell land or small businesses. A central objective of fiscal and monetary policy should be to reduce instability (recall the effects of volatility on poverty shown in table 3.4)—including via lower inflation and, to protect exchange rates and minimize capital flight, through fiscal discipline rather than recourse to high interest rates.

As outlined in Birdsall and de la Torre (2001), and in chapter 4 of this volume, this approach implies both fiscal regimes that are more rules-based and also more emphasis in monetary policy on tough, prudential norms for the banking system. It also implies fiscal policies that are disciplined enough in good times to finance countercyclical social insurance—including unemployment insurance and public works employment programs—in bad times.

Changing the Distribution of Assets

Social policy is already well understood to include strengthening the ability of poor people to acquire human capital by increasing public spending on health and education programs. We have already referred to the importance of programs, such as Progresá in Mexico, that enhance household demand for schooling through cash transfers to mothers (in this case) tied to children's school attendance.³⁵ But social policy should also embrace more explicit efforts to ensure poor people's access to land and financial markets. Market-friendly land reform programs in Brazil and Colombia provide models for what can be done, but they remain small and underfunded. In other countries, even less is being done. As was

35. For an analysis of this and other cash-for-education programs, see Morley and Coady (2003). A new proposal in Mexico would build on Progresá's (now named Oportunidad) emphasis on using cash transfers to help poor people accumulate an asset (human capital). It would make deposits to individual accounts of students from qualified households who stay in secondary and higher education, which could be accessed in the future. They could have earlier access to the funds under certain schemes that ensure that the funds are used to scale up their own assets or acquire new ones. This is based on information from the Secretaría de Desarrollo Social (Sedesol), Government of Mexico.

noted above, the liberalization of the financial sector has not helped poor people; those with other assets, including information, education, and land or physical capital to provide collateral, have been much better able to exploit the liberalized financial markets.

To increase access to credit for poor people requires a long list of arcane, technical fixes in the system. It does not require subsidized loans by state-owned banks. In the past, that approach has mostly generated perverse incentives for rent seeking, waste, and at times, corruption. Promoting institutions that make microloans is one step—but to date these institutions account for not even 1 percent of the credits provided by commercial banks. Legal changes that make movable assets collateralizable and that allow leasing and factoring, the creation of credit bureaus, fiscal incentives that encourage group lending, and more timely bankruptcy procedures all would contribute to increasing the supply of conventional bank credits for poor people. Emphasis on competition in the banking sector and, as noted above, on macroeconomic policy to minimize recourse to high real interest rates should also be seen as fundamental to sensible social policy.

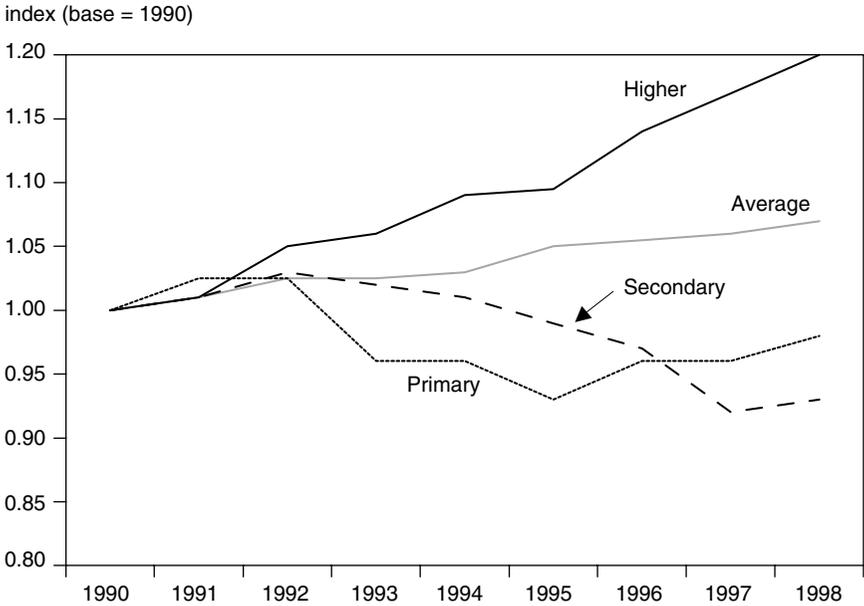
Raising the Return on Poor People's Assets

Poor people's principal asset is their own labor. A striking difference between poor and rich households in Latin America is the lower labor force participation (in the wage sector) of the former, less educated group. One reason for this outcome is that traditional mechanisms for protecting labor in Latin America were designed by males, for males. The objective was to generate formal employment with benefits, and with guarantees for stable jobs. But the resulting rules end up discouraging the hiring of females, on the one hand by imposing higher costs for them on employers (due to maternity leave and allowances) and on the other by restricting their employment to full time and limiting flexibility in hours. These efforts at protection result in much lower labor participation rates for poor, uneducated females.

Again, many incremental (and fiscally cheap) policy changes would help: subsidized child care services (through public subsidies or tax incentives provided to employers); socializing of maternity benefits; labor legislation that allows more flexibility in contracting conditions; and a labor framework that encourages collective bargaining while enforcing the accountability of labor union leaders to their members and reduces the politicization of unions.

But apart from the differences in labor force participation between rich and poor individuals, poor people also face the strong disadvantage of receiving lower remuneration to the precarious human capital that they own. Part of the reason may be ethnic and racial discrimination, which

Figure 3.3 Change in the marginal return to education in Latin America in the 1990s (average and by education level)



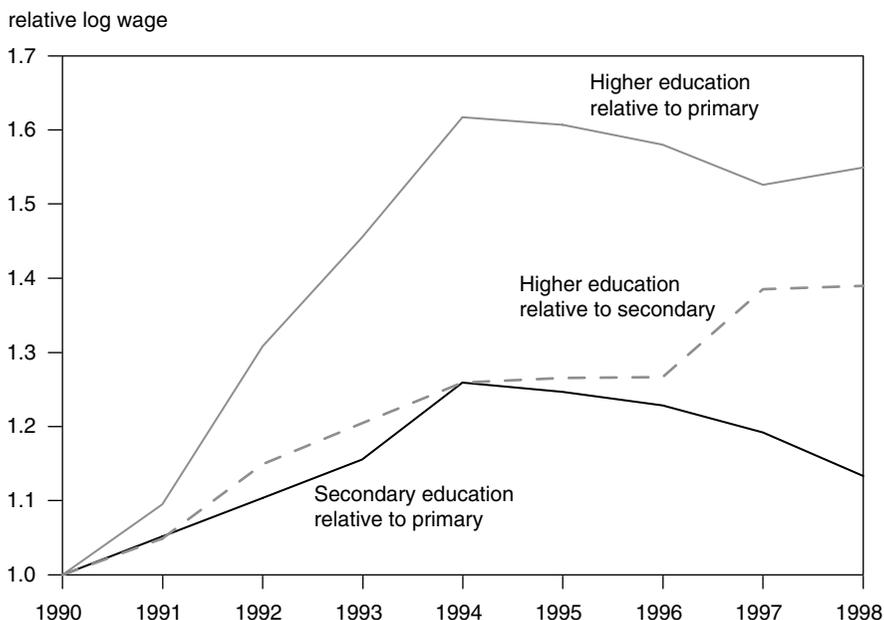
Source: Behrman, Birdsall, and Székely (2001a).

translates into lower wages for nonwhites with the same skills and experience as whites.³⁶ Part of the reason is that the economic benefits of less than university education stagnated in the 1990s. In Latin America, the wage returns on higher education have been high and rising compared with returns on primary and secondary schooling (figure 3.3); the result has been a notable increase in the wages of those with any postsecondary education compared with those with primary and secondary education at most (figure 3.4).

In an era of globalization, it is difficult to think of policies that promote higher wages and employment for poor people without referring to trade policy. Our analysis above showed that trade liberalization has not hurt the poor and may have helped them. More steps could be taken. According to the Inter-American Development Bank (IDB 1999), what would make sense are flat and moderate tariff structures that protect all sectors alike and do not privilege imports of capital-intensive activities that normally complement skilled labor. Tariff structures that favor intermediate inputs or factors of production that complement relatively unskilled labor

36. Birdsall and de la Torre (2001) discuss the problems of gender and racial discrimination. For evidence of wage differences associated with differences in skin color, see Saavedra (2003).

Figure 3.4 Differential returns to education in Latin America during the 1990s



Source: Behrman, Birdsall, and Székely (2001a).

(by Latin America standards) would increase the demand for poor people's labor.

A Final Comment

Our review of the outlines of a broader approach to social policy illustrates a simple point: When we focus on assets and opportunities for poor people, we end up talking about the economic system as a whole. Much of what we propose is rarely conceived of as part of social policy. But in Latin America, and in many other parts of the developing world, it is becoming more and more obvious that social policy needs to be thought of and implemented in a new way. A singular focus on achieving growth via market reforms has not hurt poor people, but neither has it helped them. At the same time, a focus solely on the traditional "Band-Aids" of narrowly defined social programs is not the answer either. It will increase welfare levels temporarily but will not bring the sustained increases in poor people's productivity that would raise their incomes and make them an engine of overall growth.

What is needed is what might be called a bootstraps approach, one that focuses on increasing poor people's assets and their opportunities for high returns on those assets, putting their economic future into their own hands.

Appendix 3.1 Assessing the Effects of Reform on Poverty and Inequality

To assess the effects of reform on poverty and inequality, the most rigorous way to proceed would be to use a complete model of the determinants of poverty and inequality, from which the econometric equation for estimation could be identified. But it is, of course, impossible to include all variables that affect poverty and inequality, so we instead use a specification that minimizes the effects of omitted variables.³⁷ We use a specification similar to that in Behrman, Birdsall, and Székely (2001a), in which we extend the traditional Mincer-type semi-log wage regression to include the differential effects of liberalization and other macroeconomic variables, depending on an individual's position in the distribution of income:³⁸

$$\ln y = (\alpha_p + \beta_p L + \gamma_p E)P + (\alpha_m + \beta_m L + \gamma_m E)M + (\alpha_r + \beta_r L + \gamma_r E)R + (\alpha_T + \beta_T L + \gamma_T E) + \delta I + \gamma C + \epsilon \quad (1)$$

where P , M , and R are dichotomous variables that indicate if an individual is poor (P) (bottom of the income distribution), in the middle of the distribution (M), or can be classified as rich (R) (top of the distribution). Our empirical definition of the groups P , M , and R is based on income (see below). Because income is a reflection of the assets that generate income, their rate of utilization and the price paid for them, membership in these three groups can be thought of as a function of assets. For example, belonging to group P indicates low levels of human and physical capital and/or that the price assigned in the market to these assets is relatively low.

The variable y represents an individual's income. The vector L is a combination of variables that represent the policies of economic liberalization

37. The work of Li, Squire, and Zhu (1998) is one of the recent attempts to design a model to guide empirical analyses, but even this type of work suffers from not being able to put forward a complete model of income distribution.

38. This equation is not exactly the same as that in Behrman, Birdsall, and Székely (2001a). The difference is that Behrman et al. concentrate on differences among groups based on their level of schooling, whereas here the focus is on detecting differences having to do with distribution of income. Also, for Behrman et al., the critical variables were only L and y , not E .

(the reform indices), whereas E represents a group of macroeconomic variables that affect each income group differently. I is the vector of individual characteristics (e.g., age, sex); C is a vector of variables that change over time in each country (e.g., capital per worker or technology), and ϵ is stochastic shock. All of these variables could have subscripts for time and country, and the individual variables could also have subscripts for individuals, but these are suppressed to lessen clutter.

In relation (1), the effect of liberalization policies and of macroeconomic variables for individuals below the poverty line is $(\alpha_p + \beta_p L + \gamma_p E)$. The impact for the middle class is $(\alpha_m + \beta_m L + \gamma_m E)$, whereas for rich people it is $(\alpha_r + \beta_r L + \gamma_r E)$. Therefore, as well as taking into account the effect on the entire population $(\alpha_T + \beta_T L + \gamma_T E)$, the specification identifies the differential effect of liberalization and macroeconomic variables on individuals depending on their position in the distribution of income and also controlling for personal and country-specific characteristics. The idea is to obtain estimates for the coefficients β_p , β_m , and β_r , and for γ_p , γ_m , and γ_r .³⁹

As explained in Behrman, Birdsall, and Székely (2001a), there are a number of problems in obtaining good estimates of the coefficient vectors of interest— β_p , β_m , β_r , γ_p , γ_m , and γ_r —from direct estimates of relation (1). The first is the number of parameters. The second is that the (possibly large number of) economywide variables is likely to be fairly highly correlated, leading to further imprecision and possible problems in sorting out the effects of particular variables. The third is omitted-variable bias. If the unobserved variables are correlated with the interaction between the reform indices and income, the result is unobserved variable bias.

The solution proposed in Behrman, Birdsall, and Székely (2001a) is an estimation strategy that consists of obtaining estimates of the relative impact of the economic reform variables on gains or losses in income. To accomplish this, the information in relation (1) is aggregated by groups, and the difference between groups is estimated in the following manner:

$$\ln y_M - \ln y_P = (\alpha_m - \alpha_p) + (\beta_m - \beta_p)L + (\gamma_m - \gamma_p)E + (\epsilon_m - \epsilon_p) \quad (2a)$$

$$\ln y_R - \ln y_M = (\alpha_r - \alpha_m) + (\beta_r - \beta_m)L + (\gamma_r - \gamma_m)E + (\epsilon_r - \epsilon_m) \quad (2b)$$

$$\ln y_R - \ln y_P = (\alpha_r - \alpha_p) + (\beta_r - \beta_p)L + (\gamma_r - \gamma_p)E + (\epsilon_r - \epsilon_p) \quad (2c)$$

where $\ln y_I$ (for $I = P, M, R$) is the average for each of the three groups. Only two of these relations are independent, as can be seen by subtracting (2b) from (2c) to obtain (2a).

Estimation of relations (2a), (2b), and (2c) yields both direct estimates of the parameters of principal interest and direct statistical tests of the sta-

39. Estimates of the impact of personal characteristics and of fixed country-specific variables are of less interest to this investigation.

tistical significance of these differences. These estimates have a number of advantages over efforts to estimate relation (1). First, the number of the parameters is much lower, and there are no restrictions on the degrees of freedom of the coefficients. Second, there are many fewer variables for estimating relations (2a), (2b), and (2c) than relation (1), so the problems of colinearity are reduced. Third, this specification controls for all unobserved country characteristics whether fixed over time or time varying, so there are no problems with omitted variable bias.⁴⁰

40. Furthermore, whether relation (2) is estimated in first-differential or fixed effects, it resolves another problem that has not yet been mentioned. If one of the motives for a country to initiate or intensify structural reforms is precisely the level of inequality or poverty that exists at time 0, then there will be a problem of endogeneity. Nonetheless, as is shown in table 3.1, income inequality did not change dramatically from one year to the next in any country. One could argue that the elevated level of inequality in Latin America is a phenomenon that has characterized the region for many years, and that it could be seen as a historical characteristic of these countries. If high inequality is in some sense a characteristic fixed across time, the first-differential estimation of the relation eliminates the problem.