

### Abstract

After a decade of economic reforms 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. In this paper we ask the question whether some 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 economy-wide ("macro" and employment and other structural) policies that affect poverty and social justice in foreseeable ways, as well as social investment programs such as health and education and social protection programs including cash and other transfers targeted to the poor and others vulnerable to economic and other shocks.

Section 1 contains 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 low income growth of the poor. In Section 2 we focus on the effects of the market reforms of the last 10-15 years on poverty and inequality in the region, based on empirical studies using household data. We emphasize the finding that the reforms have not contributed to reducing poverty and inequality. Though reforms have not particularly worsened the situation of the poor, they have not addressed the underlying structural causes of high poverty, i.e. the poor's lack of access to credit and to productivity-enhancing assets. In Section 3 we describe briefly four stages of social policy in the region over the last four decades. In Section 4 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 address the underlying causes and not just the symptoms of the region's unhappy combination of high poverty and inequality with low growth.

Bootstraps Not Band-Aids:  
Poverty, Equity and Social Policy in Latin America\*

Nancy Birdsall and Miguel Szekely\*

Center for Global Development

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\*Respectively President, Center for Global Development ([nbirdsall@cgdev.org](mailto:nbirdsall@cgdev.org)) and  
Secretary, Ministry of Social Affairs, Government of Mexico ([mszekely@sedesol.gob.mx](mailto:mszekely@sedesol.gob.mx)).  
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## *Introduction*

After a decade of economic reforms 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.<sup>1</sup> But the proportion of the poor, in most countries 40 percent or higher, failed to decline much if at all -- Chile, with a reduction from an estimated 32 to 16 percent between 1990 and 1998, and Uruguay from an estimated 23 to 13 percent were the only exceptions. Not surprisingly the proportion of poor 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.<sup>2</sup>

What's 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 last few years. And 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 paper we ask the question whether some 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 economy-wide (“macro” and employment and other structural) policies that affect poverty and social justice in foreseeable ways, as well as social investment programs such as health and education and social protection programs including cash and other transfers targeted to the poor and others vulnerable to economic and other shocks. We begin in Section 1 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 low income growth of the poor. In Section 2 we focus on the effects of the market reforms of the last 10-15 years on poverty and inequality in the region, based on empirical studies using household data. We emphasize the finding that

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<sup>1</sup> 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 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 was 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 and of a longer period of import substitution policy with its protection of local industry, and in Latin America’s deeply rooted inequality, with its political as well as economic implications.

<sup>2</sup> The data on poverty and inequality to which we refer are set out in Behrman, Birdsall and Szekely, 2001a. The data are from household surveys in the late 1980s and 1990s.

the reforms have not contributed to reducing poverty and inequality.<sup>3</sup> Though reforms have not particularly worsened the situation of the poor, they have not addressed the underlying structural causes of high poverty, i.e. the poor's lack of access to credit and to productivity-enhancing assets. In Section 3 we describe briefly four stages of social policy in the region over the last four decades. In Section 4 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 address the underlying causes and not just the symptoms of the region's unhappy combination of high poverty and inequality with low growth.

### Section 1. 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.<sup>4</sup>

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 over the last several decades, GDP growth per capita has been necessary for reducing the number of poor.<sup>5</sup> The most obvious example is China, where growth has been high and the number of poor 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 in the 1990s was not employment-intensive, exacerbating the problem.<sup>6</sup> 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 the poor and reduce inequality in the long run.

Compounding the problem, low growth in Latin America has been combined with unstable growth. The rich 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.<sup>7</sup> Downturns in the 1980s and 1990s probably exacerbated inequality, too, as some poor people had to sell their land or other assets and withdraw their children from school—undermining future income-earning ability.

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<sup>3</sup> In Behrman, Birdsall, and Szekely (2001 b), 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 to primary education).

<sup>4</sup> This section is based on Birdsall and de la Torre, 2001 and for the data in Table 1, on Attanasio and Szekely, 2001.

<sup>5</sup> Dollar and Kraay, 2000, show that on average across countries the income of the poor (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 Szekely (2000) criticize their approach and discuss some of the limitations of their interpretations.

<sup>6</sup> Stallings and Peres, 2000 provide evidence on this point.

<sup>7</sup> Morley, 1994, provides extensive evidence on this point.

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 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.<sup>8</sup> Between 1996 and 1998, GDP per capita increased in Mexico by 9.7 percent in real terms, a spectacular gain compared to 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.<sup>9</sup>

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 (headcount ratio) declined by 20 percent. But income inequality increased (the Gini index increased by 7 percentage points). Had the income distribution remained as in 1992, the proportion of poor would have actually declined much more, by 50 percent.<sup>10</sup>

Table 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 through 1990s. The three components are a growth effect, a redistribution effect, and a residual.<sup>11</sup> For these years for the most part, distribution undermined and in some cases reversed the small positive effect of growth. In the case of Brazil (for extreme poverty), Bolivia, Colombia, and Costa Rica, the changes in poverty registered in each period were due exclusively to growth. Income distribution deteriorated in these cases, and without growth, poverty would have increased. In the case of Chile, inequality had a slight poverty-reducing effect; most of the poverty reduction is attributable to growth. Peru is the only country where an improvement in income distribution played an important role in poverty reduction, but even here the growth effect was larger (and negative -- low growth increased poverty).

Growth in Latin America in the 1990s made little difference for poverty because it was modest to start with in most countries of the region and because it provided less than proportionate gains for the poor, certainly failing to offset the poor's disproportionate losses in the 1980s and in some cases increasing those losses.

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<sup>8</sup> These are from Attanasio and Szekely 2001.

<sup>9</sup> See Székely and Hilgert (2001).

<sup>10</sup> This result is obtained by using the CASEN household survey 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 two years. Obviously, this is only a simulation for illustration purposes, since 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 1 below 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 1.

<sup>11</sup> To perform the decomposition the authors (Attanasio and Szekely, 2001) used the methodology of Datt and Ravallion (1992). The decomposition simulates the change in poverty that would have been observed had average income 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, had average income remained constant, but the distribution shifted as it actually did.

Let us turn to the latter part of the statement of a 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 tradeoff 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.<sup>12</sup> The obvious examples include the inability of the landless poor, without collateral, to borrow against the future human capital of their children in order to keep 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 creditors can seize that collateral. Moreover, were the relatively poor able to invest, they would be likely to achieve higher returns than those with greater wealth, since the latter move farther down their list of potential investments; the outcome for the economy as a whole is lower average returns to investment.<sup>13</sup>

Empirical evidence from cross-country studies supports the general proposition for the case of 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 were the cause of low growth. More recent studies including developed as well as developing countries and controlling for country effects tend to come to the opposite conclusion (Forbes, 2000). But Barro (2000) shows that the distinction between developed and developing countries is important. In developing but not developed countries, inequality does seem to reduce growth. Inequality of income, not surprisingly, matters where capital and other markets do not work well and probably where government does not work well either. Market and policy failures combine with high inequality to undermine growth.

A second series of cross-country studies clarify that the fundamental problem is not necessarily inequality of income itself, but the underlying inequality of such assets as land and human capital.<sup>14</sup> Figure 1 illustrates Latin America’s high inequality of land and human capital relative to other regions. Once 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

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<sup>12</sup> Aghion et al, 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 the note that region’s experience seems to belie the assumption, for example, of Kaldor, that high savings are related to high income inequality.

<sup>13</sup> Aghion et al, 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 to own-investment, for example among small farmers in East Asia.

<sup>14</sup> For example Birdsall and Londono, 1997; Deininger and Olinto, 2000.

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 incomes of the landless poor.

Country studies provide evidence of what can be a vicious circle in which low income constrains the ability to acquire assets. In Brazil, Chile, Colombia, and Costa Rica, children in low income households acquire relatively little education.<sup>15</sup> The point is obvious but important in magnitude. For example were Brazil to have had Malaysia's distribution of income in the 1980s (when per capita income in the two countries was similar), and given empirical estimates of the income effect on children's enrollment in school, it would have had an estimated doubling of secondary enrollment (from 20 to 40 percent).<sup>16</sup> In Brazil, because the poor have few assets, they are not able to insure against income risk, compounding the effect of low income on further acquisition of assets (Attanasio and Szekely, 2001). Uncertainty combined with the absence of adequate insurance mechanisms becomes a restriction to acquiring assets. Even when uncertainty induces precautionary savings, the savings go to liquid but relatively unproductive (but liquid) assets, such as cash holdings instead of human and physical capital.

Country studies also indicate the benefits to the poor 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. They also show systematic differences in returns to assets between the rich and poor, possibly reflecting differences in quality but also a greater likelihood that the poor suffer ethnic or racial discrimination, e.g. in the form of lower return to their human capital or a greater difficulty in obtaining access to jobs or to 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 distribution is not that large at young ages, but children from poorer families attend schools with the lowest scores in terms of student achievement, while the rich mostly attend the best scoring schools. In Costa Rica, the differential return to assets is an important determinant of poverty. Were the poor to receive the returns that the rich obtain for the same asset, poverty would decline rapidly. Understanding the causes of differential returns – be it systematically lower quality of education received by the poor, or discrimination in the labor market, would provide insight to critical policy levers.

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 to the assets they do have. Finally, given that the region's unusually high inequality compared to countries elsewhere is

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<sup>15</sup> Country studies reported in Attanasio and Szekely (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.

<sup>16</sup> Birdsall, Ross, and Sabot, 1995, provide this estimate and the calculations that underlie it.

largely due to the extremely high concentration of income in the top decile<sup>17</sup>, 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 for testing this latter proposition.

## Section 2. The Effects of Market Reforms on Poverty and Inequality

Beginning in the 1980s in some countries and spreading to others and deepening everywhere in the 1990s, has come a series of market reforms. Estimates of the effects of the reforms on growth (e.g. Inter-American Development Bank, 1997<sup>18</sup>) suggest that they had a strong positive effect on the order of an annual increase of 1.9 percentage points for the period 1986-1995. More recent analyses covering the period through 2002 would however be less positive, given that growth rates in the last few years have declined.

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 Szekely (2001a and 2001b). These estimates are based on household data over 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 reform..

In these two papers, we used reform indices developed by Lora (2001) and modified and extended by Morley *et al.* (1999). These indices summarize information on trade reform, financial liberalization, tax reform, liberalization of external capital transactions, and privatization for the period 1970-1999, comparable across time and countries.<sup>19</sup>

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 different "proxies."<sup>20</sup> This approach is problematic because the proxies often include information that has little to do with the actual decisions of governments, and instead reflect reaction to markets, international prices, or of the domestic private sector. The Lora and Morley variables are based on direct indicators of governmental policies, so they have the advantage of – to the greatest extent possible – representing policy "effort."

The trade reform index is the average level of tariffs and the dispersion of those tariffs. The index for international financial liberalization 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 of domestic financial reform is the average of an index that controls for borrowing rates at banks, an index of lending rates at banks, and an index of the reserves to deposit ratio. The tax reform index averages four components: the maximum marginal tax rate on corporate incomes, the maximum marginal

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<sup>17</sup> See IDB, 1999, for detailed assessment of this point. Karl (2001), elaborates on the corrosive interaction of economic and political privilege in the region.

<sup>18</sup> Pp. 50-53 and Appendix 1.

<sup>19</sup> The index on external capita transactions liberaliation was included in Morely (1999).

<sup>20</sup> 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.

tax rate on personal incomes, the value added tax rate, and the efficiency of the value-added tax;<sup>21</sup> the higher the tax reform index, the lower the average of the marginal tax rates. The privatization index is calculated as one minus the ratio of value-added in state owned enterprises to non-agricultural GDP.

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 (including those that do not appear in our data on wage differentials), and 1 is the maximum registered in the whole sample.<sup>22</sup> Figure 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.

With these indices in hand, it is possible to assess the effects of the reforms on the relative gains or losses in income of different groups over the periods covered by the various country surveys. Behrman, Birdsall and Szekely (2001a) 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 to the bottom three deciles(P).<sup>23</sup> Table 2 shows the correlation (.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 (PPP 1985 dollars) compared to all those above that threshold who are not rich (M).<sup>24</sup> Table 2 shows the correlation (-.815) between the resulting poverty variable (in logs) and more standard measures of poverty.

Tables 3 and 4 present their results for inequality and poverty respectively.<sup>25</sup> Financial sector liberalization has had a significant positive impact on inequality (Table 3); trade liberalization has not affected inequality. (The coefficient of trade liberalization is negative, reducing income inequality, but insignificant.) There is no evidence of the widespread belief that trade openness is the principal reason why the distribution of income

<sup>21</sup> Efficiency of the value added tax is defined as the revenue collected under the tax as a percentage of GDP, given the tax rate.

<sup>22</sup> Thus, the indices are comparable across countries in the region, which is critical for making comparisons among countries, including in our econometric estimates.

<sup>23</sup> See Appendix. 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 Szekely 2001b.

<sup>24</sup> This is not necessarily a measure of change in absolute poverty; it measures the change in the average income of the “poor” compared to others. Using a variable that measures change in the income difference has econometric advantages explained in the Appendix.

<sup>25</sup> The results focus on trade and financial sector liberalization, and combine the other three reforms into a single index (the simple average). The estimations refer to OLS first-differences regressions, where the standard errors are robust and where 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 four years to take into account that the reforms have a lagged effect on income distribution. This lag structure is tested, explored, and justified in BBS 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.

has worsened in Latin America.<sup>26</sup> Other reforms 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 (an 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 (our preferred) column 1 estimation.

The last two columns of Table 3 show results using Gini coefficient as the dependent variable, and using the bottom decile for  $P$  (instead of the bottom 30%). Using the Gini does not allow us to control the many missing variable at the country level that are controlled in column1. In this estimation, trade openness actually has a significant negative effect, reducing inequality, and financial liberalization and the other reforms a significant positive effect. However, we cannot be sure if these results are genuine or are simply representing problems of omitted variables.

Table 4 presents the results for the relationship between liberalizing reforms and our proxy for poverty, the income of the absolute poor relative to others. Again the results indicate that trade openness has no effect on poverty. (The coefficient is negative but insignificant.) Financial liberalization, on the other hand, 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. The poor have less capability to weather shocks and have fewer mechanisms to protect their liquid assets from depreciation. The terms of trade does not have any effect on poverty and appreciation in the real exchange rate appears to reduce poverty.

As in Table 3, we present in Table 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.<sup>27</sup>

In summary, our preferred estimates (columns 1 of tables 3 and 4) suggest that except for financial sector reform, the economic reforms of the last two decades have not contributed to increased poverty and inequality. On the other hand, it is also the case that these reforms have not made much contribution to reducing poverty and inequality. In a sense, it is not particularly surprising that increasing reliance on market mechanisms apparently has not in itself created new income opportunities for the poor. The constraint may be the poor's limited assets, including human capital, a constraint that market reforms alone cannot change. Financial sector liberalization in particular appears to have made the poor worse off, at least relative to the rich and the middle groups. This is also not surprising; without collateral the poor 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

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<sup>26</sup> This result is consistent with that of other studies, in particular, BBS and Spilimbergo, et.al., 1999, who obtain a similar result using panel data for countries from various regions of the world.

<sup>27</sup> The differences with the first regression in the table are: first, the effect of financial liberalization in 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 does seem to significantly reduce poverty.

addition, new higher-yield financial instruments will help mostly those with special and diverse investment needs.<sup>28</sup>

That market reforms in themselves do not help the poor 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 in themselves failed to address the underlying structural problems that continue to inhibit growth in the productivity and incomes of the poor.

### Section 3. Poverty and the Evolution of Social Policy in Latin America<sup>29</sup>

Social policy in the region today is a healthy combination of reasonable spending on basic investments in health and education; an emphasis on reaching the poor, 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 institutional innovations such as cash subsidies to poor households that keep their children in school.

Today's social policy evolved over what might be considered four phases or periods. The first covers the period between the Second World War 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 was expanding<sup>30</sup>. 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 - like 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. For the most part, however, the needs of the structurally poor were neglected, though of course many households that began the period poor benefited from the overall growth in incomes. Indeed, there were healthy declines in poverty and inequality in this period.<sup>31</sup> 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.<sup>32</sup>

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<sup>28</sup> Szekely (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.

<sup>29</sup> This section is based largely on Szekely, 2001.

<sup>30</sup> See for instance Székely (1998) for a description of the case of Mexico.

<sup>31</sup> See Londoño and Székely (2000) for evidence on poverty and inequality trends for Latin America during the 1970s.

<sup>32</sup> 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 and the cost of borrowing rose.

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 as a proportion of the budget in most countries, as the political pressure to sustain civil service jobs and wages, which take up the bulk of social spending, was considerable. However, spending in absolute terms per child and per health client declined since 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 the rural and urban poor. By the end of the 1980s, there was increasing evidence of growing inequality, and most worrying, of substantial increases in poverty.<sup>33</sup>

The third period began in the mid- to late-1980s with the acknowledgement that structural adjustment programs and economic reform were not addressing the needs of the large number of poor – about 40 percent of the region’s population. Social policy became focused on protecting the poor in the unfavorable macroeconomic environment, and in the face of increasingly global competition. It was recognized that the poor generally have fewer means of protecting their incomes from unexpected shocks and from the erosion of liquid assets that high inflation brings. The poor were also seen as the most disadvantaged in terms of 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 banks). In the face of continuing fiscal pressures the approach became one of targeting resources to the poor, that is allocating limited budget resources in order to obtain the largest possible poverty reduction 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.<sup>34</sup> Social policy and overall development and growth strategies of countries became totally disconnected. As in the second period, emphasis remained on the fiscal tradeoff 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

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<sup>33</sup> See Morley (1995), and for the effect of adjustment programs on social problems, Cornia, Jolly and Stewart (1987).

<sup>34</sup> Social policy became focused on the problem of balancing between the administrative (and political) costs of finding the poor and avoiding leakage of benefits to the non-poor, on the one hand, and undercoverage of the poor on the other hand.

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% between 1990 and 1996<sup>35</sup>. 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 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 the poor 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 (for example in Brazil and Mexico; this change and other reforms began in the 1980s in Chile and was reinforced in the 1990s).<sup>36</sup> New programs such as *Progresa*, recently renamed *Oportunidad*, in Mexico, *Bolsa Escola* in Brasilia, the capital of Brazil, and *Chile Joven* in Chile<sup>37</sup>, though targeted to the poor, were designed not only as safety nets protecting consumption capacity, but as investments in the poor’s human capital. 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 emphasis on decentralization and on greater parent and community control of schools (for example in Minas Gerais, Brazil, in El Salvador, and in Bolivia).

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 the currently poor. That makes good sense in a region where at least 30 percent of the population is poor, and where reduced poverty and future growth rely heavily on harnessing the potential for increasing the poor’s productive engagement in the economies. 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.

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<sup>35</sup> Birdsall and Londono (1997).

<sup>36</sup> 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, since 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 Szekely, 2000; and Birdsall, forthcoming.)

<sup>37</sup> *Progresa* is the Spanish acronym for the Programa de Educacion, Salud y Alimentacion (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%, 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 which 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 to incentive training. A detailed description and evaluation of the *Progresa* program can be found at [www.ifpri.org/country/mexico.htm](http://www.ifpri.org/country/mexico.htm). A description of the *Bolsa Escola* program can be found at <http://www.mec.gov.br/home/bolsaesc/default.shtm>. See De Janvry and Sadoulet (2002) for a discussion about *Progresa*’s targeting.

But there are drawbacks of this approach. First, it is highly vulnerable politically; social programs have to compete fiercely for public resources and have not been institutionalized in any country so far. 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 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 poverty and stubborn inequality. For instance, increased spending on education has increased schooling levels among poor children, but (as we will try to show below) has not raised their expected future income much, because low growth and high real interest rates continue to limit job creation; because the average return to 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 to some poor low. Nor will social investments raise incomes if the poor 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.

#### Section 4. 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 the poor. We emphasized in Section 2 the failure of the economy-wide, efficiency enhancing economic reforms to reduce poverty, and in Section 3 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 the poor acquire the assets and have real access to the economic opportunities that would allow them to raise their own productivity, and pull up their own bootstraps. This implies policies that support the poor in a way that enables the poor 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 the poor.<sup>38</sup>

We see this approach as constituting three parts: mainstreaming the equity objective into traditional macroeconomic and economy-wide policies in order to protect the poor's assets; policies and programs to increase the assets of the poor; and policies to raise the

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<sup>38</sup> Birdsall, 2002, proposes an open-economy social contract for Latin America, that would emphasize fiscal soundness and labor market reform as the necessary foundation of a social contract.

poor's return on those assets. We outline these only briefly here, referring the reader to other studies for detail.

Mainstreaming poverty reduction into economy-wide policy. The cost of economic instability has been high for the poor in Latin America (IDB, 1997), largely because the busts that follow booms reduce returns to the poor's 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 in Table 4)– including via lower inflation and, to protect exchange rates and minimize capital flight, fiscal discipline rather than recourse to high interest rates. As outlined in Birdsall and de la Torre (2001), that implies fiscal regimes that are more rule-based, and more emphasis in monetary policy on tough prudential norms in 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 increasing the ability of the poor to acquire human capital by increasing public spending on health and education programs. We have already referred to the importance of programs such as Progresa in Mexico, that enhance household demand for schooling through cash transfers to mothers (in this case) tied to children's school attendance.<sup>39</sup> But social policy should also embrace more explicit efforts to ensure access of the poor to land and financial markets. Market-friendly land reform programs in Brazil and Colombia provide models for what can be done, but remain small and under-funded. In other countries even less is being done. The liberalization of the financial sector has not helped the poor (Section 2); 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 the poor 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 micro loans is one step – but to date these institutions account for not even one percent of the credits provided by commercial banks. Legal changes that make moveable assets collateralizable and that allow leasing and factoring; 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 to the poor. Emphasis on competition in the banking sector and, as noted above, on macro policy to minimize recourse to high real interest rates should also be seen as fundamental to sensible social policy.

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<sup>39</sup> For an analysis of this and other cash-for –education programs, see Morley and Coady (forthcoming,2003). A new proposal in Mexico would build on Progresa's (now named Oportunidad) emphasis on using cash transfers to help the poor 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.

Raising the return to the poor's assets. The poor'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 men, for men. The objective was to generate formal employment with benefits, and with guarantees for stable jobs. But the resulting rules end up hurting women, on the one hand because they discourage hiring of women by imposing higher costs for women on employers (due to maternity leave and allowances), and on the other because by restricting employment to full time and limiting flexibility in hours. These efforts at protection result in much lower participation rates among poor uneducated women.

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

But apart from the differences in labor force participation between rich and poor individuals, the poor also face the strong disadvantage of receiving lower remuneration to the precarious human capital that they own. In Latin America, the returns to primary and secondary schooling are relatively low, compared to returns to higher education that are high and have been rising (Figure 4). In an era of globalization it is difficult to think of policies that promote higher wages and employment for the poor, without referring to trade policy. Our analysis in Section 2 showed that trade liberalization has not hurt the poor and may have helped them. More steps could be taken. According to the IDB (1999), flat and moderated tariff structures that protect all sectors alike, and that do not privilege imports of capital industrial activities that are normally complementary to skilled labor, would make sense. Tariff structures that favor intermediate inputs or factors of production that are complementary to relatively unskilled labor (for Latin America standards) would increase the demand for the labor of the poor.

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Our review of the outlines of a broader approach to social policy illustrates a simple point: when we focus on assets and opportunities for the poor, 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 increasingly obvious that social policy needs to be thought of and implemented in a new way. A focus solely on the traditional bandaids of narrowly defined social programs will increase welfare levels temporarily, but will not bring the sustained increases in the poor's

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They could have earlier access to the funds under certain schemes that assure that the funds are used to scale-up their own assets or acquire new ones (based on information of Sedesol, Government of Mexico).

productivity that would raise their own incomes and make them an engine of overall growth. What is needed instead is a bootstraps approach, one that focuses on increasing the assets of the poor and their opportunities for high returns to those assets, putting their economic future in their own hands.

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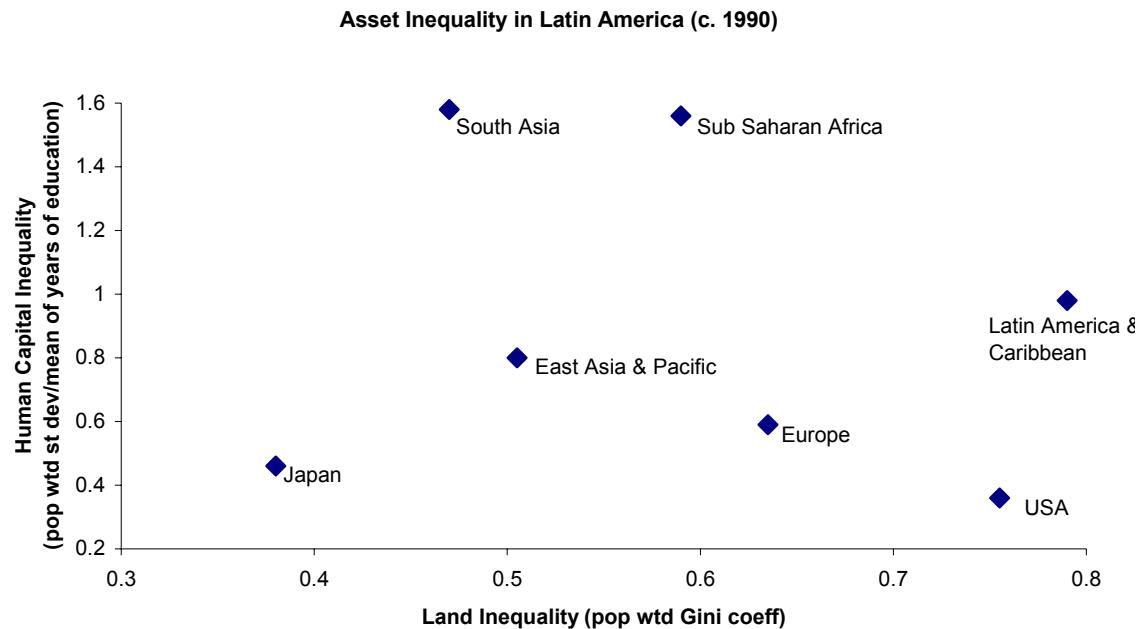
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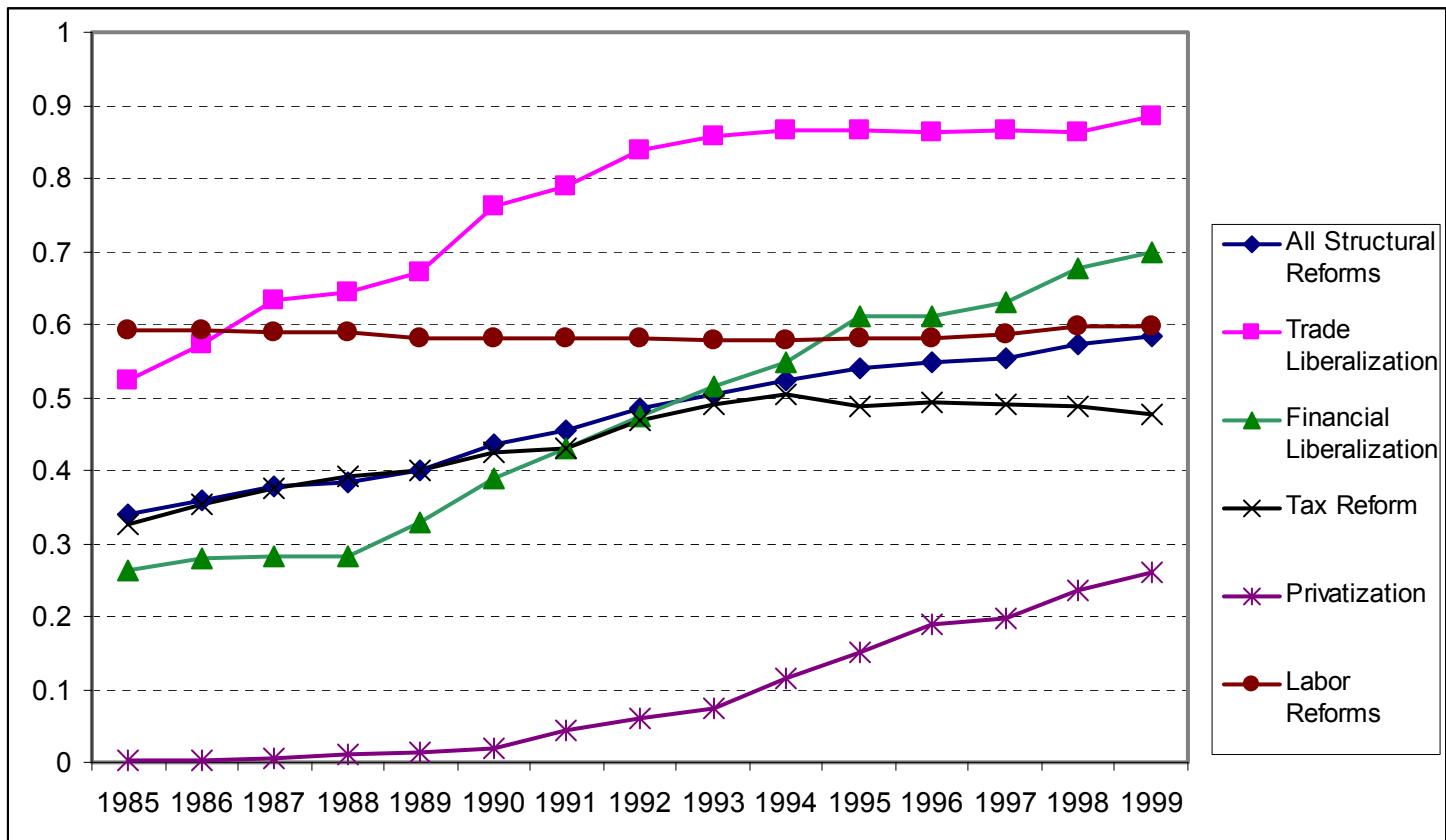
**Figure 1**



Source: Birdsall and Londoño, 1997. Human capital inequality was calculated using data report in Barro and Lee's

**Figure 2:**

**Evolution of Reforms in Latin America. Regional Average\* Structural Reform Indexes (1980-1999)**

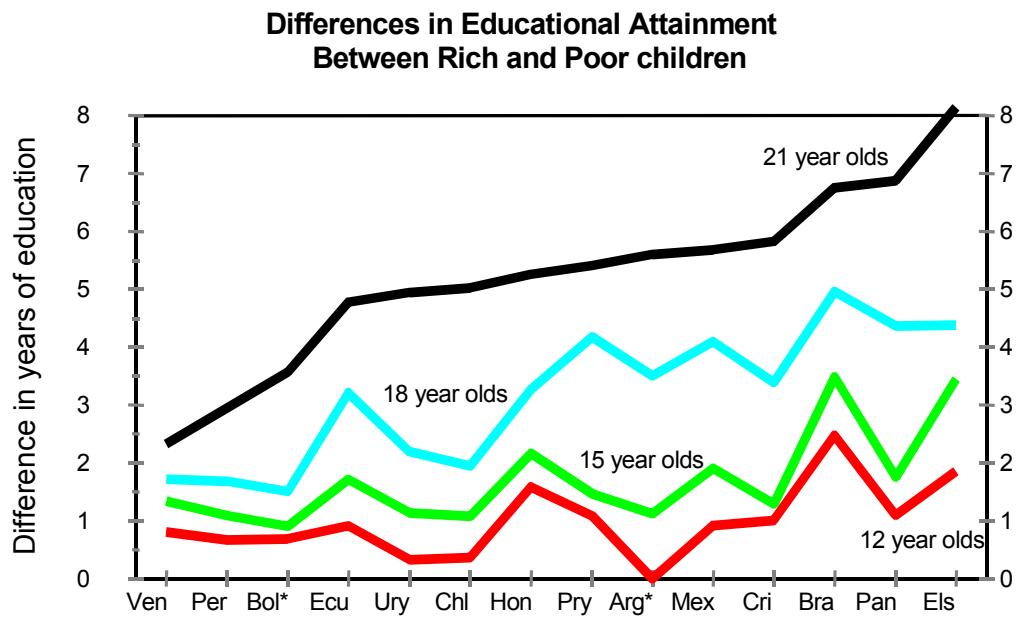


Source: Lora (2001)

Notes: \* The regional average does not include the Dominican Republic, Honduras and Nicaragua

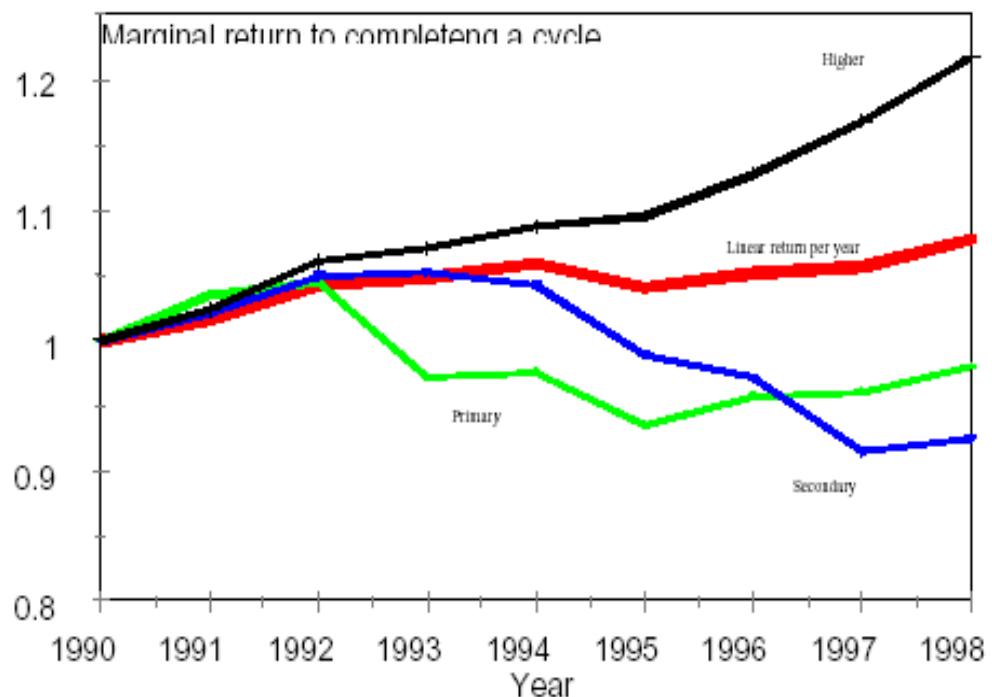
\*\* Reforms Indexes 0-1 (1 higher reform depth)

**Figure 3**



Source: Authors' calculations based on Filmer and Pritchett (1999); Attanasio and Szekely (2001).

**Figure 4 : Changes in the Marginal Return to Education in Latin America in the 1990s (Average and by Cycle)**



Source: Birdsall, Behrman, and Szekely (2001)

**Table 1: Changes in Poverty and Decomposition of the Change into Growth and Redistribution Effects**

Country	Period	Poverty Line	Initial Poverty Rate	Final Poverty Rate	% Change Total	% Change due to Growth	% Change due to Redistribution	% Change Residual
Brazil	1985-1995	Extreme	10.03	11.05	10.2%	-40%	145%	-5%
		Moderate	30.42	28.02	-7.9%	-40%	-70%	10%
Bolivia	1990-1995	Moderate	52.4	47.1	-10.1%	-147%	44%	3%
Chile	1987-1996	Moderate	45.1	23.2	-48.6%	-85%	-7%	-8%
Colombia	1991-1995	Moderate	58.5	58.46	-0.1%	-103%	6%	-3%
Costa Rica	1986-1995	Moderate	29.4	25.6	-12.9%	-117%	17%	0%
Peru	1985-1996	Moderate	43.1	50.5	17.2%	99%	-27%	28%

Source: Attanasio and Szekely, 2001.

**Table 2: Correlation between Inequality and Poverty Indicators**

	Poverty and Inequality Indicators			
	Gini	Poverty Headcount	Poverty Gap	Poverty Intensity
<b>Variables Correlated with Inequality</b>				
Log R - Log P (income poorest 10%)	0.726	0.569	0.633	0.673
Log R - Log P (income poorest 30%)	0.925	0.645	0.682	0.7
<b>Variables Correlated with Poverty</b>				
Log R - Log P	0.576	-0.094	-0.004	0.046
LogM - Log P	-0.219	-0.815	-0.785	-0.754

Source: Behrman, Birdsall, and Szekely, 2001a

**Table 3****Effects of Reforms and Macroeconomic Changes on Wage Inequality**

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

Source: Behrman, Birdsall and Szekely, 2001a.

't' statistics in italics.

**Table 4****Liberalization, Macroeconomic Context and Poverty**

Independent variables	Dependent Variable				
	Preferred Estimation		Other Estimations		
	LogM-LogP (P=2 daily dollars)	LogR-LogP (P=2 daily dollars)	Poor people Ratio	Poverty Gap	Index FGT(2)
Trade liberalization	<b>-0.03</b> <i>-1.21</i>	<b>-0.12</b> <i>-1.68</i>	<b>-0.38</b> <i>-1.18</i>	<b>-0.43</b> <i>-1.53</i>	<b>-0.60</b> <i>-1.66</i>
Financial liberalization	<b>0.27</b> <i>2.54</i>	<b>0.21</b> <i>2.02</i>	<b>0.26</b> <i>1.25</i>	<b>0.26</b> <i>1.70</i>	<b>0.34</b> <i>1.75</i>
Other reforms	<b>-0.03</b> <i>-1.64</i>	<b>-0.04</b> <i>-0.73</i>	<b>0.46</b> <i>1.21</i>	<b>0.33</b> <i>1.03</i>	<b>0.38</b> <i>0.92</i>
Macroeconomic volatility	<b>0.18</b> <i>2.10</i>	<b>0.23</b> <i>1.79</i>	<b>0.26</b> <i>3.62</i>	<b>0.42</b> <i>5.42</i>	<b>0.51</b> <i>4.83</i>
Inflation	<b>0.21</b> <i>2.99</i>	<b>1.16</b> <i>3.88</i>	<b>0.05</b> <i>0.91</i>	<b>0.08</b> <i>1.83</i>	<b>0.09</b> <i>1.71</i>
Terms of trade	<b>-0.22</b> <i>-0.10</i>	<b>-0.38</b> <i>-0.19</i>	<b>-0.60</b> <i>-1.98</i>	<b>-0.83</b> <i>-2.22</i>	<b>-1.05</b> <i>-2.32</i>
Real exchange rate (local currency \$)	<b>-0.37</b> <i>-2.23</i>	<b>-0.35</b> <i>-4.38</i>	<b>-0.20</b> <i>-2.13</i>	<b>-0.25</b> <i>-3.53</i>	<b>-0.32</b> <i>-3.57</i>
Constant	<b>1.09</b> <i>29.90</i>	<b>1.25</b> <i>12.77</i>	<b>1.39</b> <i>3.06</i>	<b>1.83</b> <i>3.45</i>	<b>2.17</b> <i>3.30</i>
Number of Observations	75	75	75	75	75
F( 7, 46) =	4.82	7.65	10.51	13.01	11.49
Prob > F =	0.000	0.000	0.000	0.000	0.000
R-squared	0.321	0.395	0.363	0.459	0.437

Source: Behrman, Birdsall &amp; Szekely 2001a.

't' Statistics in italics.

## Appendix

To assess the effects of reforms 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.<sup>40</sup> We use a specification similar to that in Behrman, Birdsall and Székely (2001b, hereafter BBS), 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:<sup>41</sup>

(1)

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

where  $P, M, R$  are dichotomous variables that indicate if an individual is poor (P) (bottom of the distribution), in the middle of the distribution (M), or can be classified as rich (R) (top of the distribution) (based on income). Our empirical definition of the groups P and M, 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 (the reform indices), while  $E$  represents a group of macroeconomic variables that affect each income group differently.  $I$  is the vector of individual characteristics (e.g. age, sex, etc.);  $C$  is a vector of variables that change over time in each country (e.g., capital per worker or technology), and  $\varepsilon$  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 macro variables for individuals below the poverty line is  $(\alpha_p + \beta_p L + \gamma_p E)$ . The impact for the middle class is  $(\alpha_m + \beta_m L + \gamma_m E)$ , while for the rich 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 macro variables on individuals depending on their position in the distribution of income and also controlling for personal and country-

<sup>40</sup> The work of Li, et.al. (1998) Is one of the recent attempts to design a model to guide empirical analices, but even this type of work suffers from not being able to put forward a complete model of income distribution.

<sup>41</sup> This equation is not exactly the same as that in BBS. The difference is that BBS concentrates on difference in groups based on their level of schooling, while here the focus is on detecting differences having to do with distribution of income. Also, in BBS the critical variables were only  $L$  and  $y$ , not  $E$ .

specific characteristics. The idea is to obtain estimates for the coefficients  $\beta_p$ ,  $\beta_m$ , and  $\beta_r$ , and for  $\gamma_p$ ,  $\gamma_m$ , and  $\gamma_r$ .<sup>42</sup>

As explained in BBS, there are a number of problems in obtaining good estimates of the coefficient vectors of interest --  $\beta_p$ ,  $\beta_m$ ,  $\beta_r$ ,  $\gamma_p$ ,  $\gamma_m$ , and  $\gamma_r$  – from direct estimates of relation (1). The first is the number of parameters. The second is that the (possibly large number of) economy-wide 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 BBS is an estimation strategy that consists of obtaining estimates of the relative impact of the economic reform variables on different incomes, 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:

- (2a)  $\ln yM - \ln yP = (\alpha_m - \alpha_p) + (\beta_m - \beta_p)L + (\gamma_m - \gamma_p)E + (\varepsilon_m - \varepsilon_p)$
- (2b)  $\ln yR - \ln yM = (\alpha_r - \alpha_m) + (\beta_r - \beta_m)L + (\gamma_r - \gamma_m)E + (\varepsilon_r - \varepsilon_m)$
- (2c)  $\ln yR - \ln yP = (\alpha_r - \alpha_p) + (\beta_r - \beta_p)L + (\gamma_r - \gamma_p)E + (\varepsilon_r - \varepsilon_p)$

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 relation (2) yields direct estimates of the parameters of principal interest, and direct statistical tests of the statistical 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 (2) than relation (1) so the problems of collinearity are reduced. Third, this specification controls for all unobserved country characteristics whether fixed over time or time-varying so there are not problems with omitted variable bias.<sup>43</sup>

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<sup>42</sup> Estimates of the impact of personal characteristics and of fixed country-specific variables are of less interest to this investigation.

<sup>43</sup> Furthermore, whether relation (2) is estimated in first differential or fixed effects, it resolves another not yet mentioned problem. 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 we see in table 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 could be seen as a historical characteristic of these countries. If high inequality is, in some senses, a characteristic fixed across time, the first differential estimation of the relation eliminates the problem.

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