Reducing Poverty in Developing Countries: Some Lessons from Latin America

Samuel A. Morley
International Food Policy Research Institute

November 2006

This paper was prepared for delivery at the Vanderbilt 50th Anniversary Conference of the Vanderbilt Graduate Program for Economic Development. It brings together work that I have done for the World Bank, the Economic Commission for Latin America, USAID, IFPRI and the Inter-American Development Bank.
The countries of Latin America for the last 25 years have attempted more or less unsuccessfully to find a sustainable method to grow faster and to reduce poverty and inequality in the region. This paper summarizes the recent evidence on poverty reduction both at the macro level and then across a number of different micro programs and targeting systems which were designed in the region to reduce poverty. We start with a review of what has happened to poverty in the region since 1980. We then discuss a general approach to poverty reduction for a market economy. Finally we report on the results from some significant programs such as workfare, safety nets, social investment funds, and conditioned cash transfers all of which were designed in Latin America to reduce the incidence of poverty. The paper concludes with some thoughts on the implications of Latin America’s experience for the design of a successful poverty reduction strategy.

I: Trends in Poverty in Latin America since 1990

Latin America is as good a laboratory as any to understand the determinants and the difficulties of reducing poverty in developing countries. Since 1990 its countries have experienced dramatic fluctuations in growth, financial crises, inflation and stabilization, all during a process of democratization and economic liberalization and reform. Until very recently, the results of this period of policy experimentation in terms of either poverty reduction or growth have been uninspiring. Consider first the continent wide record on poverty and growth. (See table 1).

The poverty data shown in the table come from CEPAL which collects and analyzes household surveys and publishes a set of consistent estimates of poverty and indigence for as many countries as possible. Poverty levels are based on reported household income adjusted for underreporting, and the poverty lines themselves are based on the cost of purchasing a basic market basket of commodities. GDP per capita is taken from the World Bank development indicators and is the weighted average of the per capita incomes of the countries with available poverty data. The reader should note that the poverty estimates from the 1980s and the series labeled 1990a in the table come from an early CEPAL estimate. Those estimates are consistent for the 1980s and show what happened in that decade, but they are not consistent with the remaining estimates in the table which show what happened to poverty after 1990.

Poverty rose in almost every country in the region in the 1980s due to debt crises, financial instability, high inflation and stabilization. This unpleasant process peaked between 1989 and 1992. Subsequently there was a fairly rapid recovery in the economies and a reduction in both poverty and indigence. Around year 2000 it was possible to take a cautiously optimistic view of poverty trends, which had been trending downward since their peaks around 1992. But we now have evidence up to 2004, and it makes clear that the poverty reduction is really confined to the period before 1994 and the period starting in 2004. But that means that for ten years, from 1994 to 2004 there was virtually no
reduction in the incidence of poverty at all. Poverty actually went up in the urban sector while falling slightly in the rural.

<table>
<thead>
<tr>
<th>Year</th>
<th>Poverty</th>
<th>Indigence</th>
<th>Poverty</th>
<th>Indigence</th>
<th>Poverty</th>
<th>Indigence</th>
<th>GDP/Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>36</td>
<td>15</td>
<td>25</td>
<td>9</td>
<td>54</td>
<td>28</td>
<td>6767</td>
</tr>
<tr>
<td>1986</td>
<td>37</td>
<td>17</td>
<td>30</td>
<td>11</td>
<td>53</td>
<td>30</td>
<td>6558</td>
</tr>
<tr>
<td>1990a</td>
<td>41</td>
<td>18</td>
<td>36</td>
<td>13</td>
<td>56</td>
<td>33</td>
<td>6287</td>
</tr>
<tr>
<td>1990</td>
<td>48.3</td>
<td>22.5</td>
<td>41.4</td>
<td>15.3</td>
<td>65.4</td>
<td>40.4</td>
<td>6287</td>
</tr>
<tr>
<td>1994</td>
<td>45.7</td>
<td>20.8</td>
<td>38.7</td>
<td>13.6</td>
<td>65.1</td>
<td>40.8</td>
<td>6832</td>
</tr>
<tr>
<td>1997</td>
<td>43.5</td>
<td>19</td>
<td>36.5</td>
<td>12.3</td>
<td>63</td>
<td>37.6</td>
<td>7182</td>
</tr>
<tr>
<td>1999</td>
<td>43.8</td>
<td>18.5</td>
<td>37.1</td>
<td>11.9</td>
<td>63.7</td>
<td>38.3</td>
<td>7178</td>
</tr>
<tr>
<td>2000</td>
<td>42.5</td>
<td>18.1</td>
<td>35.9</td>
<td>11.7</td>
<td>62.5</td>
<td>37.8</td>
<td>7337</td>
</tr>
<tr>
<td>2001</td>
<td>43.2</td>
<td>18.5</td>
<td>37</td>
<td>12.2</td>
<td>62.3</td>
<td>38</td>
<td>7273</td>
</tr>
<tr>
<td>2002</td>
<td>44</td>
<td>19.4</td>
<td>38.4</td>
<td>13.5</td>
<td>61.8</td>
<td>37.9</td>
<td>7184</td>
</tr>
<tr>
<td>2003</td>
<td>44.3</td>
<td>19.2</td>
<td>38.9</td>
<td>13.7</td>
<td>61.6</td>
<td>36.9</td>
<td>7223</td>
</tr>
<tr>
<td>2004</td>
<td>41.7</td>
<td>17.4</td>
<td>36.7</td>
<td>12.5</td>
<td>58.1</td>
<td>34</td>
<td>7497</td>
</tr>
</tbody>
</table>

Source: Cepal, Panorama Social, various years. GDP per capita from World Bank Development Indicators.

There are several reasons for the reductions in poverty in the early 1990s. First this was a recovery period after the debt crisis and the recessions of the 1980s which raised poverty to artificially high levels. The early 1990s were to a large extent a recovery from that period. The progress made, and the growth rates achieved did not continue. But it was not just a resumption of growth that caused poverty to go down. There also was a successful attack on hyperinflation in many countries. (Brazil, Bolivia, Argentina, Peru and Mexico. In every country the recovery from the hyperinflation that in the 1989-1994 period coincided with a big reduction in poverty. But, as it turned out, that was a one-time gain, not the beginning of falling poverty trends.

It is now quite widely accepted that one of the main drivers of poverty reduction is economic growth. Table seven one suggests that one of the main reasons that poverty stagnated in Latin America after the early 1990s is because the region almost stopped growing. The early 1990s as it turned out were a recovery from stabilization recessions required by excessive debt and hyperinflation. They were not the beginning of a new round of rapid sustainable growth except possibly in Chile. The trends in poverty reflect this.

To see just how important growth or the lack of it is for poverty reduction consider Chart 1 where we show the relationship between poverty and income per capita in the 1990s from the data in table 1. Stagnation in the 1990s was disastrous for poverty reduction in the region.

The aggregate data displayed in table 1, hide a great deal of country variability that is useful in attempting to understand both the determinants of poverty and the relationship between poverty and economic growth under different country conditions.
To look more closely at this, we have collected data at the country level from CEPAL and display it for the 1990s and the period after 2000 for two observations during each period. The GDP per capita figures come from the World Bank Development Indicators.

Table 2a: Poverty and Income by country in the 1990s

<table>
<thead>
<tr>
<th>Country</th>
<th>Poverty Incidence earliest</th>
<th>Poverty Incidence latest</th>
<th>GDP/Capita earliest</th>
<th>GDP/Capita latest</th>
<th>Percentage change in poverty income</th>
<th>Poverty elasticity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina Greater BA (1990-99)</td>
<td>21.2</td>
<td>19.7</td>
<td>8958</td>
<td>12400</td>
<td>-0.0708</td>
<td>0.3842</td>
</tr>
<tr>
<td>Bolivia (urban) (89-99)</td>
<td>52.6</td>
<td>48.7</td>
<td>2076</td>
<td>2381</td>
<td>-0.0741</td>
<td>0.1469</td>
</tr>
<tr>
<td>Brazil (1989-99)</td>
<td>48</td>
<td>37.6</td>
<td>6931</td>
<td>7137</td>
<td>-0.2167</td>
<td>0.0297</td>
</tr>
<tr>
<td>Chile (1990-2000)</td>
<td>38.5</td>
<td>19.7</td>
<td>5861</td>
<td>9115</td>
<td>-0.4883</td>
<td>0.5552</td>
</tr>
<tr>
<td>Colombia (1991-99)</td>
<td>56.1</td>
<td>54.9</td>
<td>5988</td>
<td>6107</td>
<td>-0.0214</td>
<td>0.0199</td>
</tr>
<tr>
<td>Costa Rica ((1990-99)</td>
<td>26.3</td>
<td>20.3</td>
<td>6396</td>
<td>9023</td>
<td>-0.2281</td>
<td>0.4107</td>
</tr>
<tr>
<td>Dom Rep. (1992-97)</td>
<td>49.5</td>
<td>31.5</td>
<td>4380</td>
<td>5354</td>
<td>-0.3636</td>
<td>0.2224</td>
</tr>
<tr>
<td>Ecuador (urban) (1990-99)</td>
<td>62.1</td>
<td>63.5</td>
<td>3488</td>
<td>3293</td>
<td>-0.0225</td>
<td>-0.0559</td>
</tr>
<tr>
<td>Honduras (1990-99)</td>
<td>80.8</td>
<td>79.7</td>
<td>2495</td>
<td>2440</td>
<td>-0.0136</td>
<td>-0.0220</td>
</tr>
<tr>
<td>Mexico (1989-1998)</td>
<td>47.7</td>
<td>46.9</td>
<td>7431</td>
<td>8454</td>
<td>-0.0168</td>
<td>0.1377</td>
</tr>
<tr>
<td>Nicaragua (1993-2001)</td>
<td>73.6</td>
<td>69.3</td>
<td>3425</td>
<td>3333</td>
<td>-0.0584</td>
<td>-0.0269</td>
</tr>
<tr>
<td>Panama (urban)(1991-99)</td>
<td>39.9</td>
<td>25.8</td>
<td>5003</td>
<td>6167</td>
<td>-0.3534</td>
<td>0.2327</td>
</tr>
<tr>
<td>Paraguay (urban) (1990-99)</td>
<td>49.9</td>
<td>49</td>
<td>4752</td>
<td>4667</td>
<td>-0.0180</td>
<td>-0.0179</td>
</tr>
<tr>
<td>Peru (1997-2001)</td>
<td>47.6</td>
<td>54.8</td>
<td>4790</td>
<td>4631</td>
<td>0.1513</td>
<td>-0.0332</td>
</tr>
<tr>
<td>Salvador (1995-99)</td>
<td>54.2</td>
<td>49.8</td>
<td>4339</td>
<td>4603</td>
<td>-0.0812</td>
<td>0.0608</td>
</tr>
<tr>
<td>Uruguay (urban) (1990-99)</td>
<td>17.9</td>
<td>9.4</td>
<td>7180</td>
<td>8982</td>
<td>-0.4749</td>
<td>0.2510</td>
</tr>
<tr>
<td>Venezuela (1989–99)</td>
<td>39.8</td>
<td>49.4</td>
<td>5728</td>
<td>5601</td>
<td>0.2412</td>
<td>-0.0222</td>
</tr>
</tbody>
</table>
Table 2b: Changes in poverty and income in the most recent period available

<table>
<thead>
<tr>
<th>Country</th>
<th>Poverty Percentage</th>
<th>GDP per Capita</th>
<th>Percentage Change in Poverty</th>
<th>Poverty Elasticity</th>
<th>Income Elasticity</th>
<th>GDP Per Capita Percentage Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina (1999-2004)</td>
<td>23.7</td>
<td>29.4</td>
<td>12400</td>
<td>12221</td>
<td>0.2405</td>
<td>-0.0144</td>
</tr>
<tr>
<td>Bolivia (1999-2002)</td>
<td>60.6</td>
<td>62.4</td>
<td>2381</td>
<td>2396</td>
<td>0.0297</td>
<td>0.0063</td>
</tr>
<tr>
<td>Brazil (1999-2003)</td>
<td>37.5</td>
<td>38.7</td>
<td>7137</td>
<td>7305</td>
<td>0.0320</td>
<td>0.0235</td>
</tr>
<tr>
<td>Chile (2000-2003)</td>
<td>20.2</td>
<td>18.7</td>
<td>9115</td>
<td>9727</td>
<td>-0.0743</td>
<td>0.0671</td>
</tr>
<tr>
<td>Colombia (1999-2002)</td>
<td>54.9</td>
<td>50.6</td>
<td>6106</td>
<td>6293</td>
<td>-0.0783</td>
<td>0.0306</td>
</tr>
<tr>
<td>Costa Rica (1999-2002)</td>
<td>20.3</td>
<td>20.3</td>
<td>9025</td>
<td>8183</td>
<td>0.0000</td>
<td>-0.0933</td>
</tr>
<tr>
<td>Ecuador (1999-2002)</td>
<td>63.5</td>
<td>49</td>
<td>3293</td>
<td>3431</td>
<td>-0.2283</td>
<td>0.0419</td>
</tr>
<tr>
<td>El Salvador (1999-2001)</td>
<td>49.8</td>
<td>48.9</td>
<td>4603</td>
<td>4583</td>
<td>-0.0181</td>
<td>-0.0043</td>
</tr>
<tr>
<td>Guatemala (1998-2002)</td>
<td>61.1</td>
<td>60.2</td>
<td>3859</td>
<td>3976</td>
<td>-0.0147</td>
<td>0.0303</td>
</tr>
<tr>
<td>Honduras (1999-2002)</td>
<td>79.7</td>
<td>77.3</td>
<td>2440</td>
<td>2530</td>
<td>-0.0301</td>
<td>0.0369</td>
</tr>
<tr>
<td>Mexico (2000-2004)</td>
<td>39.4</td>
<td>37</td>
<td>9046</td>
<td>9009</td>
<td>-0.0609</td>
<td>-0.0041</td>
</tr>
<tr>
<td>Nicaragua (1998-2001)</td>
<td>69.9</td>
<td>69.4</td>
<td>3063</td>
<td>3333</td>
<td>-0.0072</td>
<td>0.0881</td>
</tr>
<tr>
<td>Panama (1999-2002)</td>
<td>25.7</td>
<td>25.3</td>
<td>6167</td>
<td>5902</td>
<td>-0.0156</td>
<td>-0.0430</td>
</tr>
<tr>
<td>Paraguay (1999-2001)</td>
<td>60.6</td>
<td>61</td>
<td>4669</td>
<td>4552</td>
<td>0.0066</td>
<td>-0.0251</td>
</tr>
<tr>
<td>Peru (1999-2003)</td>
<td>48.6</td>
<td>54.7</td>
<td>4660</td>
<td>4976</td>
<td>0.1255</td>
<td>0.0678</td>
</tr>
<tr>
<td>Dom Republic (2000-2002)</td>
<td>46.9</td>
<td>44.9</td>
<td>6410</td>
<td>6754</td>
<td>-0.0426</td>
<td>0.0537</td>
</tr>
<tr>
<td>Uruguay (1999-2002)</td>
<td>9.4</td>
<td>15.4</td>
<td>8982</td>
<td>7408</td>
<td>0.6383</td>
<td>-0.1752</td>
</tr>
<tr>
<td>Venezuela (1999-2002)</td>
<td>49.4</td>
<td>48.6</td>
<td>5602</td>
<td>5259</td>
<td>-0.0162</td>
<td>-0.0612</td>
</tr>
</tbody>
</table>

Source: CEPAL, Panorama Social, various years. GDP per capita is in PPP adjusted dollars taken from World Bank, Development Indicators database.
What do these country experiences tell us about poverty reduction and growth in Latin America. First of all, there clearly was some poverty reduction in the 1990s, with poverty falling in 14 of the 17 countries in the sample. The success stories are Chile, Brazil, Uruguay, Costa Rica, Panama and the Dominican Republic. These are countries that all reduced poverty by a significant amount, more than one would have expected based on their income growth. Conversely poverty went up more than one would have expected in Venezuela and Peru. In the other countries, poverty reduction or the lack thereof is fairly well explained by differences in the growth rate of income.

While it is good news that poverty was declining in the 1990s, the chart clearly shows that are many countries where the poverty reductions are very small or where it actually increased over the decade. What is more, when one extends the observation period to year 2000 and beyond, most of 1990s success stories disappear. The most glaring case in Uruguay, but Panama, Brazil and Costa Rica also do badly in poverty reduction mainly because they stopped growing. Just looking at the two charts, what seems clear is that the amount of poverty reduction per unit of growth has fallen considerably. Some countries such as Costa Rica and Panama continued to make some progress in poverty reduction, but it was necessarily modest that both countries had declining per capita income. Uruguay and Argentina were both convulsed by the financial crisis at the end of the decade. Mexico had its crisis earlier and was in recovery by the end of the decade when our measures were taken, but that obviously affects the total amount of poverty reduction that was possible in that country.
In the final analysis only Chile managed to have both steady moderate growth throughout the period and significant poverty reduction at the same time. Its poverty elasticity was around -1 in both periods, suggesting that its growth strategy as not particularly pro-poor. Nonetheless, what Chile’s experience shows is that steady per capita income growth over periods as long as 15 years will cut the poverty rate in half. No other country came anywhere close to that performance, either because its growth did not favor the poor, or because it was unable to reach an adequate, steady growth rate.

II: The Growth Strategy:

Fundamental to the goal of increasing earning opportunities for the poor is an enabling environment of economic growth. The evidence in Latin America is overwhelming that economic growth is a necessary condition for poverty reduction. Growth almost always increases employment, hours of work and the take-home pay of unskilled labor. Since the bulk of the poor are unskilled and earn their income from labor, growth can be a powerful economic lever for lifting people out of poverty.

If growth is a key anti-poverty strategy, it follows that many policies which are not specifically targeted toward the poor may in fact be important components of the poverty strategy simply because they raise the growth rate. Policies that raise the rate of saving and investment, increase exports or modernize the industrial base are not generally considered poverty strategies because they are not targeted to the poor. Yet if they raise the overall growth rate in a labor-intensive way they may do more for the poor than targeted interventions.

Recent evidence suggests that on average countries can expect poverty to fall by between one and two percent for each one percent growth in per capita income. A country growing at 2% per year for a decade would be able to reduce poverty by about one third. This demonstrates vividly the central role that growth has to play in any successful strategy of poverty reduction. Any country which is able to develop a sustained growth trajectory will have implemented the most important element of its anti-poverty strategy.

The evidence is equally clear that the style of growth matters too. In the open economy a goal for policymakers should be to make sure that, while maintaining internal and external balance, the growth strategy they adopt maximizes the benefits that go to the poor. Job creation is crucial for poverty reduction. If growth is labor intensive and creates jobs faster than the rate of growth of the labor force, then not only will new employment opportunities keep pace with new entrants, but real wages for the unskilled are likely to rise as well. Between the early sixties and the late seventies Costa Rica reduced its poverty level by two-thirds in response to a 70% increase in per capita income. Brazil over the same period grew twice as fast, but only reduced its poverty level by 45%. Brazil's growth was skill-intensive and inequitable. Costa Rica's invested heavily in the social sectors and its growth was labor intensive. But even in Brazil, growth was a potent force for poverty reduction.
Even if a country does nothing to increase the number of jobs available to the poor, it is still likely to make some progress in reducing poverty, provided that its per capita income grows. For even if growth is not led by the sectors in which the poor work, still it will increase the demand for unskilled labor. People whose earnings go up hire more domestic help and use more personal services. Domestic industry will expand, creating new job opportunities for the unskilled. Over time, provided that the rate of increases of jobs exceeds the rate of growth of the labor force, wages will begin to rise for the unskilled, even for those who continue to do the same jobs, simply because of the rise in the demand for unskilled labor relative to its supply. This is what could be called the trickle-down poverty reduction strategy, one in which growth is almost sure to be accompanied by rising inequality. Trickle-down style growth comes from the inability or unwillingness to find any other way to increase the productivity of the unskilled except by letting growth indirectly increase the demand for their services.

A. Increasing Earning Opportunities for the Poor

There is a general conviction that employment creation should be a key element in any growth strategy targeted toward increasing earning opportunities for the poor. However since open unemployment is small in most poor countries, unemployment by itself is not a very important source of poverty. Unemployment is a luxury that most poor people cannot afford. Therefore when one speaks about job creation as a poverty strategy, what one really must mean is the substitution of good jobs for bad jobs. Growth which simply expands the number of low paying jobs may be labor intensive, but it will not do much to alleviate poverty except perhaps in the very long run.

How does a country substitute good jobs for bad jobs? Leaving aside education and training for the moment, there are two ways to do this: create new and more productive work that can be performed by the unskilled or increase the assets owned by the poor thus raising their productivity and the wages they can earn.

Agriculture: Many of Latin America's poor work in agriculture. Making agriculture a leading sector in a country's growth strategy as Costa Rica did should increase the demand for unskilled labor. To do that governments should assist the sector to develop new products and export markets. In addition the government needs to eliminate any artificial barriers and costs imposed on agriculture by sector-specific taxes or pricing policies for agricultural commodities. All of this will help the sector and the poor who work there.

The other way to help the poor who work in agriculture is to increase their productivity by giving them the complementary inputs they need to produce more. That could mean access to land or credit, improved transportation and marketing facilities, better irrigation, improved seeds and technical assistance.
The Urban Poor: For the poor that work in urban sector the employment problem is more complex because the poor are not concentrated in any particular sector except for construction. The urban labor force produces a range of goods and services determined both by domestic demand, domestic capacity and the export market. Relative incomes are determined mainly by the relative supply and demand of different sorts of labor. Countries with a large amount of poverty relative to their income have a large body of unskilled labor relative to the number of jobs earning above poverty wages. There are only two ways to change that. One is to develop or expand some activity that uses unskilled labor. The other is to increase the productivity of the poor by providing complementary inputs and training.

Exports: Since national demand for goods and services producible by the unskilled is unlikely to be very changeable, there are few ways to make the demand by consumers in the economy more labor-intensive. But that is not true for exports. Exports are one of the most promising avenues to raising the demand for urban unskilled labor. Poor countries have a comparative advantage in labor-intensive products. Developing external markets for such products, reducing export taxes and assisting domestic entrepreneurs to expand their export sales is a way to increase the demand for domestic unskilled labor. It changes the demand mix in the economy in favor of unskilled labor. If such policies are accompanied by labor training and upgrading, export promotion should also lead to rising wages for the unskilled. Unfortunately, at the moment, unskilled labor in Latin America is in direct competition with lower cost labor in China, India and other developing countries.

Construction: Another promising way to increase the labor intensity of demand in the economy is by increasing the construction of infrastructure. Construction, like agriculture, is a big user of unskilled labor. Social investment funds are an example of this sort of approach to increasing employment of low wage workers, but on a fairly small scale. But the scope for poverty alleviating infrastructure construction activity is far larger than social investment funds. The government, through its power to tax and to finance large scale projects, is the one unit in the economy large enough to change the sectoral composition of domestic demand so that it is more labor intensive. One of the ways it can do this is by investing in the construction of infrastructure. The projects chosen should not be make work projects. Rather they should be investments such as water or sewer systems that improve living conditions and health of the poor, or productive investments such as roads, irrigation systems or reforestation and land reclamation that increase the earning power of the poor. All of these are all win-win projects that increase the income of the poor while they are being built, and which increase social welfare and/or worker productivity when they are completed.

Obviously there is an inflationary and balance of payments danger in this sort of program that has to be confronted directly. In the usual conditions prevailing in developing countries construction projects have to be financed by tax increases. They cannot be financed by printing money. Essentially the government would be changing the composition of demand in favor of labor-intensive construction projects by transferring enough purchasing power from the private sector through taxes to offset
inflationary and balance of payments pressure arising from the projects themselves. It should be noted that if the projects support productive activity, they may be an inducement to both exports and increased domestic production.

**B: Unfavorable Structural Conditions** There are two structural conditions present in many developing countries which particularly impede the process by which growth helps the poor. One is the problem of lagging regions within countries and the other is countries whose leading sector is an extractive or mineral export such as oil.

**B.1: Lagging Regions** In many countries that have successfully transformed from low- to middle-income status, there are large lagging regions or indigenous populations that are only marginally connected to the modern, dynamic sector. The Northeast and North of Brazil, the Andean region of Peru, the indigenous areas of Southern Mexico, the Northwest and Southwest of China, and Northern Vietnam are examples. In these (and other) areas, there is a significant proportion of the nation’s population, posing serious problems for overall levels of poverty and inequality.

We define a lagging region as a geographic area in a country with a large population and a per capita income significantly lower than the national average. Growth in a country with a lagging region takes place mainly in the high income regions and there is no convergence, often resulting in widening regional gaps (see for example Kanbur and Zhang, 2005; Luo, 2005; Wang and Hu, 1999). Almost by definition, the region lags behind because it has weak links with the more rapidly growing areas. In most cases, the main linkages between the backward and the advanced regions are migration and income transfers. Regions may fall behind because of civil wars, climatic or geographic handicaps or because of ethnic differences between the population in the region and in the rest of the country. Backwardness could also stem from discriminatory policy, such as a skewed regional distribution of public investments (Zhang and Fan, 2004) or from industrial homogeneity (Lall, Koo and Charavorty, 2003). The point here is that the region lags because some other region has responded to a positive growth shock, but the linkages between the two regions are too weak to generate much growth in the lagging region.

Backward regions pose difficult political and development problems. Generally, a high percentage of the nation’s poor and very poor are concentrated in these regions. If there is pressure to reduce poverty or if the backward region is stronger politically than economically, it can force the national government to tax the advanced region to finance regional transfers. Desmet (2002) found that certain types of inter-regional transfers (i.e. unemployment benefits and public employment) have a negative effect on the growth potential of lagging regions and contribute to the underdevelopment of these regions in the long-term. Unless those transfers are used productively to increase growth in the backward region, their impact is often to slow down growth in the dynamic region. This was the case for many years in Brazil where the national government taxed the fast growing Southeast and invested heavily, but generally not very successfully, in development projects in the Northeast. Industrialists in Sao Paulo complained that they could not continue to be the locomotive that pulled the entire country forward.
If the backward region were a separate country, then there would be many things that it could do in an attempt to speed up growth, such as offsetting the region’s competitive disadvantage through exchange rate policies. Yet, such activities are outside the powers of a region within a country. As a part of a country, the region cannot make its relative prices and wages reflect differences in productivity or high transportation costs. Nor can it impose capital controls or regional tariffs as a way of either protecting local industries or impeding outflows of regional savings to better investment opportunities in the fast growing region.

The strategy in these circumstances is to attempt to change the structural conditions that perpetuate this source of poverty. Where the pockets of poverty are regional the government should review macro policies that discriminate among regions. For example, in some cases the region produces an agricultural commodity for export. That makes its income highly sensitive to the real exchange rate. It will lose when there are large capital inflows to the modern sector which cause an appreciation of the real exchange rate. In other cases high tariffs that protect domestic manufactures discriminate against backward, natural resource producing regions. In still other cases the net impact of central government finances and expenditure is biased against the region in question.

Investments in infrastructure and education targeted to the lagging region are likely to be part of any solution to the problem. Both are examples of poverty targeted investments which will be discussed further in a moment. They help in several ways. Construction projects increase the demand for unskilled labor and therefore raise the income of the poor in the short run while the projects are being built. And if there is a significant transportation problem which prevents the region from capitalizing on its export potential, these investments will raise the farmgate prices received by poor farmers in the long run. Investment in education helps in two ways. It helps to make local activities more profitable and productive, and it prepares the local population to migrate to the growing areas. Either way the regional income disparities and poverty in the backward region should decline, other things being equal.

B.2: Mineral Rich Economies:

General equilibrium theory tells us that the structure of production depends among other things on natural resource endowments. Mineral-rich countries have big mining and non-traded goods sector and a small non-mining traded goods sector. Whether or not that sort of productive structure leads to higher or lower growth will depend on the rate of productivity growth in the various sectors and other intertemporal factors. This issue does not particularly concern us here. Our concern is the predicament faced by unskilled labor particularly in agriculture in this sort of economy. Baldwin argued that the mineral development has often undercut agriculture in those economies (Baldwin, 1966).

Essentially, in mineral rich economies all non-mineral traded goods including agriculture have to compete against highly efficient mineral producers. If the exchange rate is free to float and foreign capital inflows do not increase, the real exchange rate for non-mineral tradable sectors such as agriculture and manufacturing will rise. Over time, labor will
leave the non-mineral tradable sectors and be absorbed by either mining or the services sectors. The problem is that the agricultural sector uses more unskilled labor than mining which is relatively capital intensive. The implication is that either wages for the unskilled labor in both rural and urban will decline or there will be an expansion of low wage urban employment in the informal sector and an increase in open unemployment.

Nigeria is an example of how this can play out. Between 1965 and 2000, oil revenue per capita went from $33 to around $325 in the country. Yet per capita income did not grow at all, and the poverty rose from 36 percent to almost 70 percent. From 1965 to 1981, the share of agriculture in GDP fell from 68 percent to 35 percent and tradable cash crop production fell by 75 percent (Sala-i-Martin and Subramanian, 2003).

What policy options are available and feasible to minimize the harmful effects of the mineral “curse” on agriculture. How should government react to a windfall in terms of agriculture and rural development? The choices will be different depending on whether the windfall is due to an improvement in the terms of trade that is expected to be temporary or whether it is from the discovery of a new resource or a technical innovation that makes a known resource more valuable. We are particularly interested in windfalls of resource availability rather than price effects. For this situation, one option used by many countries is to initiate a big transfer or subsidy program financed by the revenues generated from the mineral sector. That will raise consumption and reduce poverty in the short run, but it will not be sustainable unless the mineral endowment is very large relative to the size of the subsidies. Another alternative is to artificially expand the size of the government in order to create employment. In both of these cases, the government either directly or indirectly encourages a level of consumption that may be beyond the long run income of the country (Rodriquez and Sachs, 1999).

III: Human Capital Formation

The second component of the poverty strategy to increase the productivity or earning capacity of the poor is a massive commitment to upgrade education and health conditions in the region. Education helps in at least three ways. First it gives tomorrow's workers the skills they need to escape the low wage-unskilled labor trap. That should reduce the oversupply of unskilled labor and raise the average wage. Second, a more skilled labor force improves competitiveness and the prospects for both exports and higher rates of growth. Third, improving the basic education level of the labor force will improve the distribution of income because it will reduce the very large skill differentials now earned by the better educated. Education is a win-win policy for any government interested in poverty reduction. It helps to increase the growth rate by increasing the stock of human capital. At the same time it improves the distribution of income by equalizing the distribution of human capital and earnings.

Good education has always been a major factor in the economic success of individuals and in the development performance of nations. Individuals without a good
foundation of basic education are likely to be confined to a life of low productivity work outside the sphere of modern production. That work does not generate enough income to keep them and their families out of poverty. This situation will if anything be exacerbated in the future by rapid technological change and the entry of China into world export markets. The low quality education opportunities typically available to the children of poor households is a major gear in the intergenerational transmission of poverty that plagues many of our countries. The gulf between the education available to the poor and to higher income families is at the root of the wide and persistent disparities in income and social opportunities.

Raising the education level of the children of the poor has two components: keeping children in school longer and teaching them more while they are there. Raising the quality of schools available to the poor should be a high priority for the countries of the region and for the Bank. But the problem of delivering quality education is compounded by the high current repetition and drop out rates. In Latin America for example According to 1988 data, one in every two first graders failed to pass the first grade, and every year, almost one-third of all primary school students repeat a grade. Between 10% and 15% of all children enter the system late, and by age 15, more than half the students (55%) have dropped out. Because of successive repetition and attrition, an average student remains in the school system for seven years, yet completes only four grades.

In Latin America only 54% of those entering primary school ever reach grade four. No other developing area has so low a survival rate. Its effect is significant: it means that in Latin America almost half of those who enter school do not stay long enough to acquire literacy and other basic skills. There is little data on completion rates for secondary education, but so far as we know, in 1989 only one country had secondary gross enrolment rates above 75%. These figures imply a tragic waste of human potential. Even the best high schools in the world won't do much good if less than 30% of each age cohort attend them.

Why do so many poor children drop out? Research suggests two main reasons: low family incomes and the low education level of their parents. Undereducated parents tend to permit their children to drop out of school too early which is one of the main reasons for the high intergenerational transmission of poverty. But that fact has a more positive implication as well. If countries succeed in significantly raising the education level of just one generation of children, the premature drop-out rate will permanently decline. For when they become parents, that generation will strongly encourage their children to take advantage of the opportunities that education provides. In this way, a big-push investment in education will pay permanent dividends in higher skills and lower poverty.

The other main reason for high drop-out rates is low family income. Poor families need the income that can be earned by working age children. But when children are removed from school both they and society are being deprived of the opportunity to develop long term earning potential in order to help families survive in the short run.
Recently several attempts have been made to confront this problem. Several governments have begun to experiment with schemes which essentially pay poor families to keep their children in school. These programs serve two purposes at once. They get money to poor families which need it, and they provide an incentive for increased investment in human capital formation.

**Health:** Good health is both an end and a means. It is a key component of well being and therefore providing health services to the poor is one way that the government can improve their situation even if it cannot generate better income earning opportunities. But health investment does more—it also raises people's productivity and capacity to learn. Health expenditures for the poor can therefore be justified both because they make the poor better off and because they raise earning power.

The burden of disease and ill health is most severe for the poor. They suffer the greatest incidence of disease, they have the smallest amount of insurance protection when disease strikes a breadwinner, and their children are most likely to have their learning potential reduced by malnutrition and sickness.

In the health sector therefore the paramount task is to expand the network of primary care and assure universal access to that care. That will mean increasing allocations of scarce government funds to the sector and it will also mean changing the priorities within the sector. This will not only improve the welfare of the poor, it will also pay for itself in increased earnings for the poor and in reductions in the dead weight burden of working time lost to disease.

In the final analysis the most valuable resource that any country has is the potential of its people. The shortcomings in the delivery of education and health in developing countries imply a tragic waste of human talent. There is no structural reason for allowing this waste of human lives and its high economic costs to society to continue. It is not that the task of providing children with basic health care and teaching them to read, write, and compute is that difficult, nor in most cases, that the needed resources are unavailable. Several low income countries, such as Sri Lanka, Korea, and Cuba, have shown it can be done. What is missing is the political will to get the job done, starting with the organization of efficient delivery systems in these two crucial areas.

**IV: Case studies in poverty reduction in Latin America**

Despite the rather mediocre overall record on poverty reduction in Latin America, a number of programs have been developed from which a good deal can be learned about what works and what does not and about how to target poverty spending. The first case is the control of high inflation. We look at Brazil in particular because the evidence is so strong and the impact on poverty so clear. But there is supporting evidence in virtually every country that went through a period of high or hyperinflation. In every case,
stopping the inflation reduced the poverty rate, even if the stabilization that lowered the inflation rate caused a temporary recession.

A. Inflation Control: Macroeconomics since 1980 in Brazil has been dominated by three features all of which are relevant to efforts to reduce poverty. The first is the long and ultimately successful effort to control inflation, the second is the rise in government spending financed to a large extent by borrowing, and the third was fiscal decentralization under the new constitution of 1988.

Source: Getulio Vargas Foundation data series.

Figure 3: Yearly Inflation 1976-99

Inflation had never been entirely controlled during the 1970s but it only became a serious policy problem after 1980 when the country was forced into a structural adjustment by the first of a series of debt crises. (See figure 3) The next twelve years were dominated by a six separate of plans to stop inflation, each temporarily successful, and all but the last, the Plano Real in 1994 ultimately a failure. The first of the plans was the Cruzado plan in 1986. It combined a temporary price freeze, a rise in real wages and an increase in government spending and produced the sharpest decline in poverty in the entire period since 1970. But the plan exploded after only a year. Inflation accelerated and the search for a method to bring inflation under control continued. The government tried three other
programs in the late 1980s, the last after inflation had reached a peak of 80% per month under President Collor in 1990. In each case the government tried unsuccessfully to accompany its inflation plan with contractionary demand side restrictions. But in each case it they failed. It was only with the Plano Real implemented in July 1994 that inflation was finally brought under control. Among other features, the Plano Real deindexed the economy and imposed a crawling peg exchange rate regime. That removed two important inertial elements which had made inflation-control so difficult during the 1980s. But another factor was the favorable external conditions facing Brazil, in particular the access to external borrowing. Essentially external borrowing made it possible to avoid any fiscal contraction and kept the exchange rate from contributing to inflationary pressure. Government spending and government deficits both rose sharply, financed by borrowing, both domestic and foreign. But the cost was an explosion of government debt and a rising burden of interest costs. The external debt grew from $121 billion in 1990 to $237 billion between 1991 and 2000. Debt service rose from $8.3 billion per year in 1991 to over $53 billion in 2000. (World Bank, 2002, p. 17.) The current account went from being just about in balance in 1991 to a $24 billion deficit in 2000.

To look at all this from a national accounts perspective, in the 1980s the government financed a significant fraction of its expenditures by the inflation tax. With the elimination of inflation after 1995, the government replaced forced domestic saving through the inflation tax with foreign saving or external borrowing. (Cysne, pp. 35, 44.) The government gambled that it could increase spending and control inflation at the same time by using foreign saving and an increasingly overvalued exchange rate. The government deficit that had to be financed rose to over 4% of GDP in 1995-97. (Cysne, p. 35) It was a risky strategy since it meant that the country was increasingly vulnerable to any foreign shocks which might jeopardize its continued access to foreign borrowing. Unfortunately there was not just one but rather a number of foreign shocks—the tequila crisis in 1996, the Russian and E. Asian crisis in 1998 and finally the Argentine crisis. Since Brazil was essentially betting that it could ride out the adjustment by external borrowing and paying higher real interest rates on outstanding debt, this was disastrous. It meant a very big jump in the carrying costs of the debt, and when the country was forced to abandon the crawling peg and devalue in January 1999, a rise in the burden of dollar denominated debt.

This history of inflation, inflation control and fiscal policy is relevant to the lessons to be drawn for poverty reduction strategies in at least two ways. First there is the direct relationship between government spending on social services and safety nets and poverty. To the extent that this spending grew in the 1990s it helps explain the fall in poverty that occurred over the decade. But at the same time, if the increase was financed by foreign borrowing instead of taxes, one cannot view the poverty reduction as permanent. It could be eroded by renewed inflation or by additional taxes in the future. Or the additional spending itself may have to be curtailed because of the fiscal imbalance. We will look further at these questions in a moment.
The second lessons have to do with the relationship of inflation to poverty through either the government control of the minimum wage, the link between the minimum and the average wage, the tax on money and contractionary demand management as a necessary component of inflation control. A casual examination of the historical data on inflation and poverty seems to suggest that inflation hurts the poor. Looking back at figure one, we find that there are two periods of sharply falling poverty -1986 when the Plano Cruzado temporarily reduced the inflation rate from almost 20% per month to less than 5%, and then between 1993 and 1995 when the Plano Real finally brought inflation under control. There are also several periods when rising inflation coincided with quite rapid increases in poverty-eg. 1981-4 and 1986-88. But the evidence is actually more ambiguous. For poverty also fell between 1988 and 1993 which was a period of accelerating inflation.

Theoretically inflation could affect the distribution of income and poverty through either the inflation tax on money or other assets or through its effect on real wages. Since the poor have very few financial assets subject to the inflation tax, the main channel by which inflation affects poverty must be through wages and employment. In the formal sector where workers are under some sort of contract, wages are set and fixed between adjustment periods. If there is an inflation, the average value of the wage over the life of the contract will be negatively related to the inflation rate, even if there is a full adjustment for past inflation each time the wage is readjusted. This factor is not quantitatively important when the inflation rate is low, but it is when inflation reaches 20-80% per month as it did in Brazil in the early 1990s. There is no theoretical reason why unskilled workers would be more affected by this than skilled workers, but since we are looking at poverty and not distribution, this feature of contracts is relevant.

It is difficult to get a more precise estimate of the effect of inflation on poverty using yearly data partly because of the small number of yearly observations, and partly because there were very large fluctuations in the inflation rates over the course of many of the years. That makes the time of the annual survey on which the poverty estimates are based and when wages are adjusted a critical element. To avoid these problems Amadeo and Neri (2000) used a monthly survey in the main metropolitan areas for the period 1980 to December 1996. Theis survey is valuable because it links earnings with family income per capita and most important permits a far more exact connection between wage adjustments, monthly inflation rates and the poverty rate. First they ran regressions of per capita income by decile on the monthly inflation rate, the unemployment rate and the minimum wage, Amadeo and Neri. They found that the negative effect of inflation on incomes was significantly bigger for low than high income households. That is, inflation widened income differentials and income inequality. The minimum wage had exactly the opposite effect. Rising minimum wages tended to increase average incomes in all deciles, but the effect was almost twice as big in the bottom deciles as it was in the top.(Amadeo and Neri, 1998, p. 225).

To directly estimate the effect of these variables on poverty, Amadeo and Neri established three different poverty lines, and calculated the monthly poverty levels corresponding to each over the period between 1980 and 1996. Results of their
did a regression to estimate the impact of inflation, unemployment and the minimum wage on the monthly level of poverty defined in each of these three ways. Their results are displayed in Table 3.

<table>
<thead>
<tr>
<th>Poverty line</th>
<th>low</th>
<th>medium</th>
<th>high</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate of inflation</td>
<td>0.018</td>
<td>0.017</td>
<td>0.013</td>
</tr>
<tr>
<td></td>
<td>(3.32)</td>
<td>(4.15)</td>
<td>(4.34)</td>
</tr>
<tr>
<td>Unemployment</td>
<td>0.377</td>
<td>0.262</td>
<td>0.176</td>
</tr>
<tr>
<td></td>
<td>(8.55)</td>
<td>(7.95)</td>
<td>(7.59)</td>
</tr>
<tr>
<td>Minimum Wage</td>
<td>-0.434</td>
<td>-0.305</td>
<td>-0.219</td>
</tr>
<tr>
<td></td>
<td>(-11.45)</td>
<td>(-10.74)</td>
<td>(-11.02)</td>
</tr>
</tbody>
</table>

Source: Amadeo and Neri (1998), p. 226. Note That figures in parentheses are t statistics. Constants and dummy variables were omitted.

All levels of both severe and moderate poverty are positively (and highly significantly) related to inflation and negatively related to the minimum wage, with both effects being highly significant. Furthermore, both of these effects are bigger the lower the poverty line. That means that the poorer a family is, the more it is affected by changes in either the inflation rate, the unemployment rate or the minimum wage. These are important results that persuasively demonstrate that inflation was a very severe tax on the poor and that its successfully controlling inflation in the mid 1990s must have been an important factor in the reduction in poverty that occurred during that same period.

When thinking about the relationship between inflation or the minimum wage and poverty and when evaluating historical evidence, it is important to distinguish between anticipated and unanticipated inflation and between the short and the long run. Both of these distinctions are relevant when evaluating historical evidence. Suppose for example that there is a sudden, unanticipated acceleration of inflation. In the short run this is likely to reduce the real wage across the board and possibly cause an increase in production and employment. Poverty will either rise or fall depending on whether the increase in employment is more or less than the reduction in real wages for poverty households. But this is only the short run response to unexpected inflation. If workers respond to the rise in inflation by raising their wage demands to offset the inflation, real wages and employment will return to their previous levels and the apparent relationship between inflation, the minimum wage and poverty will disappear.
There are two points are relevant here. First, if there is an observed relationship between inflation and any real variable such as employment or poverty, it is probably because the inflation was unexpected. Second, using historical evidence to establish the relationship is inherently ambiguous because one can never be sure whether the observed inflation rates were expected or unexpected.

The same argument about the use of historical data can be made for the minimum wage. Here the distinction is not between expected or unexpected. Rather it is between the short and the long run. If the government raises the nominal value of the minimum wage in the hope of raising living standards for the poor, one may observe a short run reduction in the level of poverty because wages do in fact increase. But that increase may not be sustainable. Suppose that the increase in labor costs causes a subsequent increase in wage demands by the rest of the labor force as econometric results in a recent Camargo-Neri paper (Camargo-Neri, (1999) suggest that it does. Firms may then be forced to increase their prices. If that happens real wages return to their initial level and the real income gains by the poor disappear. Thus, to establish that an increase in the minimum wage has a positive effect on poverty that is relevant for policy, it is not enough to observe a fall in poverty after the wage is increased. Rather, the changes have to be sustainable. That is, the change in the real wage and in poverty that follow from the change in the minimum wage have to be sustained over a significant period of time.

The distinction between a temporary and a sustainable or permanent increase in the minimum wage is particularly relevant in Brazil. The monthly data used by Amadeo and Neri allow one to track the changes in the minimum wage and poverty month by month. Up to the Plano Real which went into effect in July 1994, a graph of the real value of the minimum wage looks like the teeth on a saw, with the real value rising each time there is an adjustment, and which is then being eroded away by subsequent inflation. But the 1994-95 stabilization was different. Inflation dropped sharply, from about 45% per month in July to 2.4% in September. The government then raised the minimum wage in two steps-10% in September 1994 and a further 43% in May 1995. (Amadeo and Neri, 2000, p. 231) There was an immediate sharp decline in poverty. According to their estimates, severe poverty fell 23% and moderate poverty fell 9% between September 1994 and September 1995. What is equally relevant is that the increase in the real value of the minimum wage was sustained and so were the reductions in poverty. They were not eroded away by subsequent inflation as had been the case in all the prior attempts to control inflation.

In a recent paper Foguel, Ramos and Carneiro (2001) examine econometrically the link between the minimum wage, formal and informal sector employment and poverty using monthly data for the period 1982-99. They find that wages in both the formal and informal sector are positively related to the minimum wage, with the elasticity of average informal sector wages being higher than formal sector wages. But they also find that increasing the minimum wage shifts employment from the formal to the informal sector which tends to offset the gains in income of those workers who retain their formal sector jobs.
In Brazil there is another important reason why poverty could be related to the real value of the minimum wage and that is that the Constitution of 1988 mandated that government pension and disability payments be equal to the minimum wage. In 1992 when Brazil finally implemented these new legal obligations there was a very significant expansion of its pension system, including for the first time non-contributory workers in the rural sector. Each worker over 60 years of age received a basic pension of one minimum wage per month. That reform alone had a large impact on poverty in the early 1990s particularly in the rural area as we shall see below. But the fact that the pension was linked to the minimum wage also meant that the real value of the minimum pension jumped between September 1994 and May 1995 when the minimum wage was raised by over 50% in real terms. That could well be the main reason why Amadeo and Neri found such a clear negative relationship between the minimum wage and the poverty rate in their study.

We conclude first that inflation hurts the poor, and that raising the minimum wage can help the poor. But that is only the case when the increase in the wage is sustainable without causing a subsequent increase in the inflation rate.

B: Safety Net Programs: By a safety net we mean here a program that gives a temporary or permanent support to an individual or family who is poor. An effective safety net puts a floor under income so that anyone falling below that floor receives the minimum income from the program. The need for the protection comes about either because of temporary fluctuations which raise the unemployment rate, because of natural disasters or because of personal disabilities such as age or physical handicaps which make it impossible to earn an income above the income floor. For the able bodied, the safety net may take the form of cash transfers, food for work or workfare. The objective of this type of safety net is to help people who are temporarily poor.

Unemployment insurance is sometimes thought of as a safety net, but it falls outside the definition we are using here because most of the participants in such programs are not poor. They tend to come from formal sector firms, and their eligibility for the program depends on their participation rather than whether or not their income is below the poverty line. We are not going to analyze the advisability of expanding this sort of program from a poverty reduction perspective.

An entirely different sort of safety net is required for those who are permanently poor, in particular the aged, the disabled or widows who have lost rights to a husband's pension and divorcees. All of these groups need a safety net, but one that is likely to be permanent not temporary. Furthermore, it is not one that can be coupled with a work requirement as many of the temporary safety net programs are.

B1: Workfare Programs: Most of the countercyclical programs in Latin America offer temporary jobs at a low wage to those who are unemployed. The jobs themselves may be in construction as in the emergency phase of the Social Investment Funds, or in clean up and maintenance as in many of the projects in the
emergency programs in Northeast Brazil or a combination of the two as in the Trabajar Program in Argentina. While hopefully the work performed or the projects built have a positive benefit, the main objective of this sort of program is to provide income supplements to temporarily unemployed workers.

There are several important things to note about the workfare type safety net programs. First they are an alternative to formal unemployment compensation systems. Those systems do exist in the region but their coverage is limited to only a small fraction of the workers in the formal sector. According to our definition unemployment insurance is not a true safety net because most of the recipients are not poor and benefits are not targeted according to the income level of the recipient. The workfare programs do not give beneficiaries cash, but rather a wage in exchange for work on projects designed and chosen by public authorities. There are a number of issues regarding these programs. The main ones are cost, targeting, timing, and macroeconomic side effects. With respect to targeting and cost, Ravallhon (1998) has proposed a useful decomposition of the benefits of workfare projects that allow one to estimate what share goes to the poor. Programs have direct and indirect benefits. The direct benefit is the wage payments that go to the poor less the opportunity cost of the time spent working in the project. (i.e. the income they would have earned in the absence of the project). The indirect benefit for the poor is the present value of the increase in welfare or the income of the poor that result from the project.

In workfare projects the main objective and benefit of the project is employment creation for the poor. By contrast, in the typical social investment fund project, the main objective is the indirect benefit coming from the operation of the project. That has clear implications for how the projects are targeted. In the workfare project the wage is set at a level which is so low that only the poor will participate. Thus targeting is by self-selection of the workers in the projects. In the social investment fund projects, targeting is by the level of poverty in the community that gets the project. Social fund projects are considered well targeted if what Ravallion calls the indirect benefits of the project go to the poor—that is, if the projects are built in areas of high poverty. Whether or not the workers who build the project are poor is not an important consideration. Workfare programs need not be as concerned with this sort of locational targeting because their main objective is to create temporary jobs for the poor. While the share of total benefits that go to the poor will be higher if the projects themselves are built in poor communities, there is nothing inconsistent in workfare projects whose indirect benefits go to the rich, provided their construction is sufficiently labor intensive.

The problem with workfare projects from the perspective of the poor is leakages and opportunity costs. Leakages include the non-wage cost of projects and the wages that go to the non-poor. Most calculations of project benefits assume that the opportunity cost of work on the project is zero. But Ravallion (1998) in a comparative study of Trabajar in Argentina found that the opportunity cost was actually close to 40% of the project wage. That means that simply calculating the wages in the project significantly overstates the net benefit to the poor. After accounting for these non-wage and opportunity costs Ravallion estimated that the direct benefit to the poor of workfare projects was only one fifth of the total project cost in the middle income country and only 28% in the typical...
poor country. (Ravallion, p. 12) In a general survey of workfare programs around the world, Subbarao found that the share of wages to total costs varied between .3 and .6. (Subbarao, p. 681). Even when one added in the indirect benefits of the projects themselves, Ravallion estimated that only 40% of the total benefits went to the poor. All of this has made the total cost of increasing the income or welfare of the poor through workfare quite expensive in most programs. Costs per day of employment created varied between 8 dollars in Bolivia, $4 dollars in Costa Rica to only $.50 in Chile. 22 If budget constrained governments want to mount a significant countercyclical workfare program to alleviate poverty they will have to keep down the leakages into non-wage costs.

Another problem with workfare projects is time. Projects involving construction require time to plan, acquire property and to get approval of local authorities or local communities. All that makes this instrument hard to use in response to short run crises. It also raises the probability that the projects will be chosen on the basis of how quickly they can be started and how easily they can be built rather than on how useful they are. 23

Given all these observed problems with workfare one might well ask, why not give all the beneficiaries who qualify money instead? After all, Ravallion has shown that in lowincome countries with widespread poverty, (> 50%) the proportion of total benefits reaching the poor from even well targeted workfare is likely to be less than an across the board transfer of cash, simply because it is difficult to design any projects in which more than 50% of the benefits go to the poor. (Ravallion 1998). Nonetheless there is fairly widespread agreement that cash transfers are unworkable for countercyclical safety net programs mainly because of the problem of verification. Even in the best targeting systems (Chile, Colombia and Mexico) there is no way to verify reported family income, to correct for income from the informal sector, or to purge the eligibility rolls for those who have found another job.

**General equilbrium side effects of workfare programs:** The benefit and targeting analysis of workfare programs has all been carried out at the micro level with little thought given to the impact of the programs on the economy and through that channel, back on the poor. That may be a reasonable approach for permanent programs or for the long run where it is reasonable to assume full employment, but it is not reasonable for countercyclical workfare programs. That point is particularly relevant for most of the countries in Latin America because they are now in the second, third or even fifth year of recession. Workfare programs, just like any other expansionary government spending program is likely to have a multiplier effect on total demand whose size will depend on how it is financed. This should be incorporated into the benefit calculation.

Most of the discussion of workfare programs has centered on how well targeted they are or how wasteful. But a much more important question is how big the program should be, given fiscal and macroeconomic constraints and the degree of underutilization of production capacity. How much can countries afford of counter-cyclical workfare spending and what will be the impact on output, the balance of payments and inflation? To answer such question a general equilibrium macro model is needed. This is the
question that those interested in poverty reduction should be focusing on. As pointed out earlier, most countries in the region are faced with rising unemployment and falling per capita income. They appear to be suffering from extended stagnation. What would happen if they were to attempt to reactivate their economies through workfare programs?

At present it appears that social protection expenditures are actually procyclical at least in Argentina and Mexico. (See Hicks and Wodon, 2000) That is, social protection spending falls faster than GDP in recession and rises faster in recovery. The reason for this unfortunate pattern is the fiscal constraint imposed by external capital markets and the international financial institutions. They call for budget balance or fiscal constraint. But if one insists on budget balance during recessions, and the government has high fixed salary costs, there will be no way to expand workfare when it is needed. This is an issue that needs urgently to be addressed. The general equilibrium impacts of workfare programs or the extent to which a truly countercyclical workfare system can be designed consistent with balance of payments equilibrium and low inflation are the central issues in poverty reduction at this moment in Latin America. These are far more important questions than the targeting of these programs. The general equilibrium analysis is likely to show that the total benefits of the program far exceed its costs because of its indirect impact on aggregate demand in countries in extended recessions.

**B2: Food Stamps and Nutrition Programs:** Food stamps have been used as an alternative to general food subsidies or to cash transfers in several countries (Honduras and Jamaica). Recent studies in the case of Jamaica show that the program was quite effective in reducing severe poverty by had little effect on either food or total consumption. Recipients treated the food stamps like cash which they used either to cut back on work or to save. If the purpose of the program was to ensure better nutrition the program was not very effective. If it was to reduce the poverty gap or raise the income of the poor, it was effective. (See Ezemenari and Subbarao, 1998).

In addition to food stamps, most countries in the region have nutrition programs for poor pregnant or lactating mother and/or child lunch programs in schools in high poverty school districts. These are all part of the safety net, and they target by means either location or by the condition of the mother and child. In several cases such as PROGRESA in Mexico or SUF in Chile the transfer is conditional—that is the mother has to bring her child to a public health clinic for a checkup in order to receive the food assistance which may be in the form of a cash transfer or nutrition supplements.

Peru spends a lot of money both public and private on nutrition programs. All use geographic targeting. There are five separate programs. (See Saavedra with Sasaki) USAID finances PRODESA (Programa de Desarrollo para la Seguridad Alimentaria) and Programa de Nutricion Infantil the two together reaching around 100,000 children and 8000 pregnant women. PANFAR is a financed and run by non-profit organizations and feeds 270,000 children. The main government programs are Vaso de Leche which is run by the Ministry of Finance and was budgeted to spend $98 million, and PRONAA budgeted at $67 million, both in 1998. (Saavedra with Sasaki, p. 15). In addition the social investment fund FONDOCES has a feeding program. In all Peru must be
spending over $200 million per year, on nutrition programs alone. Just the two
government programs on which we have information (PRONAA and Vaso de Leche)
comprise about one half of all social assistance spending and .25% of GDP. There is no
information on the cost per meal in the two government programs, but if one assumes
the total cost is between 25 and fifty cents per meal, this implies that Peru is spending
$50-$100 per child per year. To put that amount of expenditure in perspective, Saavedra
estimates that it would only cost $336 million to eliminate extreme rural poverty
altogether if it were perfectly targeted. (Saavedra with Sasaki, p. 18). Granted that
perfect targeting is not feasible, still if the country is spending on food programs alone
more than half of what it would take to get rid of extreme rural poverty altogether, one
has to ask if this is the best use of those resources or could some better system for
targeting those expenditures be found.

B3. Permanent Safety Nets: In a previous section we examined emergency or
temporary safety nets. These are for people in the labor force who have temporarily lost
their jobs or earning capacity and have fallen into poverty (hopefully) temporarily
because of that. An additional requirement of a safety net is that it provide a minimum
income or consumption level for the retired or the disabled who cannot work One might
argue that improving the contributory retirement system is preferable to providing a
noncontributory minimum benefit to those who are aged and poor. Yet as Estelle James
argues, it is not at all obvious that it is in the interest of the poor to be part of a
contributory program. (James, 2001). The first reason is because the poor do not live as
long as the rich, so in a self-financing universal scheme, the poor will subsidize the rich.
The second reason is that the poor have a higher rate of time discount than the rich.
Living closer to the poverty line, they may be better off having higher income today
even that the expense of lower income in retirement. Indeed they may be better off
investing in the education of their children rather than putting money into a government
retirement program. Furthermore, if the retirement scheme is financed out of taxes on
wages, labor costs will be driven up which will reduce employment opportunities for the
poor in the formal sector. Still another problem with formal retirement schemes is that of
widows and divorcees. Many programs do not have survivor benefit provisions and that
leaves widows without any support. Furthermore, the rights to retirement benefits are not
well defined in the case of divorce.

For all the above reasons and the more practical one that the coverage of any formal,
contribution-based system is limited to formal sector employees, there is going to be
a need for some sort of permanent safety net program for the aged. What should such
a system look like? In particular, should it be means tested? It might seem obvious
that the answer is yes, and in fact most of the countries in Latin America that have
such a system do use some sort of means test. However one should note that a means
test is a significant disincentive to save.

One should also note also the inherent ambiguity of the targeting question here. If the
state takes over the function of providing the minimum safety net for the aged, who is
the real beneficiary of the program? The direct beneficiary is the aged participant. But
one has to ask—would a relative have provided this support in the absence of the program? If so, the true beneficiary is that relative, someone who may not be poor at all. (See Cox and Jimenez). This complicates any targeting system based on a means test.

The impact of social assistance pensions on poverty can be large, particularly in the rural sector. Brazil is a good example of this because we can date the extension of minimum pension benefits to rural workers, most of whom were outside the formal contributory system, and can compare poverty rates before and after the increase in coverage. In 1988 the Federal Constitution established a universal right to social security in Brazil. However it was not until 1991 that the benefits were effectively extended to the rural area. The system established both an old age pension and a social assistance pension. Rural workers over 60 years of age with at least 5 years of contributions to the social security system are eligible for the old age pension and any worker who is either disabled or 70 years of age is now eligible for the social assistance pension. 24 The old age pension pays 70% of a worker’s last three years earning or the minimum wage whichever is greater. The social assistance pension pays the minimum wage. In practice over 95% of the recipients of the two pensions receive the minimum wage.

Two recent study of the Brazilian system documented its large impact both on the number of rural beneficiaries and on rural poverty levels. (David, 1999 and Delgado, 1999). Between 1992 and 1994 the rural retirement system grew by 50% or almost two million beneficiaries, the majority of them women. (Delgado, p. 8). Between 1992 and 1995 David, using the household surveys, estimated that had there been no expansion in the pension system poverty would have fallen from 60% to 53.6% in the rural Northeast and from 34% to 28% in the Southeast. With the new rural pensions, poverty actually fell to 41% in the Northeast and 20% in the South. In other words, the effect of the pensions, holding all other factors constant was to reduce rural poverty in the Northeast by 12.5 percentage points or 23% and by 7.2 percentage points or 26% in the Southeast. Zs The reductions are similar in the other areas of the country. (David, tables 7-8). In all this program must have reduced the number of poor in Brazil by around four million people, the majority in the Northeast, the poorest area of the country.

The Brazil example shows the large impact on gets from implementing a permanent cash benefit safety net for the aged and disabled. Note that the program has no specific means test, but it is effectively self targeted since those in the formal sector who have made contributions for 102 months are eligible for the old age pension and get to retire at 60, ten years earlier than those in the social assistance pension scheme. Those who have contributed for 30 years are eligible for the time of service pension which has a much higher benefit than either of the other two pensions.

In addition to the rural social security system, Brazil has implemented a means-tested system of social assistance for the aged and disabled. These programs are means tested and are intended for the aged and disabled living in both the rural and urban sectors. The first such program, of this type was the Renda Mensal Vitalícia (RMV) implemented by the military regime in the mid 1970s. It was limited to those over 70 years of age without income or any other means of support who had made at least 12 contributions to
Like the rural social security system, the coverage of this program and its benefits were both expanded in the 1990s. In that year the government implemented the LOAS (Lei Orgânica de Assistência Social) and it defined the BPC (Benefício de Prestação Continuada) which was intended as a replacement for the RMV for new beneficiaries. The benefit level was raised from one-half to a full minimum wage per month, and the requirement of prior contributions to the social security system was dropped. Beneficiaries are required to have a per capita family income of less than one-fourth the minimum wage, and in addition no member of the family can be receiving payments from the social security system. By December 2001, the RMV system had contracted to 740,000 beneficiaries while the BPC had grown to 1.4 million. About 20% of those beneficiaries are rural and two-thirds are disabled. (IPEA, (2002a), p. 96). This component of the social assistance system cost R$4.5 billion ($1.5 billion) or around 0.4% of GDP in 2001. (IPEA, (2002a), p. 36).

C. Social Investment Funds: The third type of poverty-reducing special programs is the social investment fund. Started as a response to the adverse effects of adjustment in the 1980s, the funds have become an increasingly important part of IFI poverty-targeted lending. At the outset these funds were seen as a temporary response to a macroeconomic shock. Indeed some of them specifically contained the word "emergency" in their title (Bolivia, Ecuador, Panama, and Nicaragua). They were similar in their goals to the emergency work programs PET and POJH in Chile in the early 1980s or to Argentina's present Trabajar program. In poor countries like Bolivia or Peru they mainly built social and economic infrastructure in poor communities. In richer countries like Argentina and Chile they cleaned parks and did urban maintenance in addition to building things. The purpose was quite clearly short run employment generation in economies in a recession that was expected to be temporary.

Most of the social funds in the region have now been transformed into permanent units of government. This means that they can no longer be thought of solely as a response to macroeconomic shocks. Whereas the emergency funds were part of a safety net offering low wage temporary employment to the unemployed during a recession, the permanent programs are not really part of the safety net, and should not be thought of that way. The objective of these permanent programs is to reduce poverty. But they don't expect to do this through the salaries they pay, but rather through the things that they build in poor communities-schools, health posts and water systems that are expected to improve the living conditions of the people who live there. Because the projects rather than employment is the point, the Funds now pay a great deal of attention to targeting where the projects are built. But they pay little or no attention to the poverty level of the workers who build the projects. Income is still generated during construction of these projects, but the amount is not large and it is not the main objective. Indeed in most
projects workers from poor communities are required to donate a significant share of the unskilled labor required during construction for free. That requirement is justified as a way of self-targeting. If the main purpose of the Funds was short run poverty alleviation during a recession, it would be somewhat illogical to force poor workers to donate their time. In any case, the requirement makes it quite clear that the main objective of these new funds is to improve the welfare of poor communities through the projects that are built. Salaries paid to poor workers during construction are an additional minor benefit. From this perspective it is not surprising that these new funds have not had an appreciable effect on either total employment or the poverty rate. At their best, what these funds have done is build things like schools, health posts and water systems that either did not exist before or which were destroyed during civil wars or natural disasters. They have been surprisingly effective at doing this. They also have a fairly good record of targeting and low costs relative to other government construction.

It is important not to lose sight of the primary objective of the funds. If the objective is to improve the well being of the poor or to reduce poverty in the long run, then the funds should be evaluated on how well they reach that goal or equivalently should be compared with alternative ways of reaching that goal. Most fund projects in Latin America are social infrastructure. But there is only so much social infrastructure that can be built in poor communities. If they have not already, the funds will reach a point of diminishing returns to further projects in this area and they should either close their door at that point or move on to different sorts of activity as FOSIS has done in Chile. But the funds tend not to do this, defending themselves by pointing out that they are good at targeting poor communities which while true is irrelevant. Just like any other long run poverty reduction program they should be evaluated on the improvements their projects make in the welfare of the poor—that is the improvements in health because of the new health posts, improvements in education indicators because of the new schools, or reductions in disease and death because of cleaner water or better sanitation.

D. Systems for targeting: One of the key problems in designing a temporary (or permanent) safety net scheme is how to target the program so that its benefits go to the intended recipients without making the requirements so strict than many poor people are not covered or so lenient than many non-poor people receive the benefits. There are three targeting methods currently in use in the region. The first is self-targeting through low wages in workfare programs. That method appears to be the only feasible way of targeting countercyclical safety net expenditures given the inherent difficulty and expense of verifying employment status and total family income in economies with large informal sectors. The second method is geographical targeting through poverty maps based either on NBI's and census tract information or questionnaires applied to individuals. Geographical targeting is used to allocate social investment fund projects and other government social spending to poor areas. It is also used to target some other government social spending such as school lunches or public health programs as for example in Colombia's SISBEN. The third method is the direct identification of poor individuals by means of a questionnaire. This is a form of means test although the criterion in most countries includes factors other than income. This method is mainly
used to target direct cash transfers to poor individuals or families. In practice the 
information on poverty obtained through the questionnaires can also be used to locate the 
poor for geographic targeting of government social programs.

There are now individual targeting programs in place in Argentine, Chile, Colombia, 
Costa Rica, Mexico, Honduras and Brazil. The pioneer program is Chile's Ficha CAS. 
All the other programs in the region are based roughly on the methodology developed 
in the Chilean model, but with one important difference, some are demand driven or 
voluntary and while others (SISBEN and PROGRESA) are universal and mandatory, 
although not necessarily at the national level.

Chile's program was started in 1979 when the military government in an attempt to 
decentralize government social spending created Comites de Asistencia Social (CAS) at 
the local level. Finding that not very much social spending actually reached the poor, 
the government created the first questionnaire - CAS-1, to help identify the poor and 
improve the targeting of social spending. The original questionnaire gathered 
information on housing, education, age and occupation from which a weighting scheme 
and a point score was derived for each household. Households with the lowest point 
score were eligible for various cash transfer programs. But since there was no 
information on income in the survey it was unclear whether the weighting of the 
variables was appropriate. To correct this the government in 1985 developed a national 
household survey (CASEN) with information on the same variables as CAS-1 plus many 
others, including income. That permitted an evaluation of the CAS-1 method for 
identifying the poor, and a refinement of the questions and the weighting system used in 
the CAS survey.

The basic idea is to find a small number of variables that can be obtained cheaply, which 
are easy to verify and which are good predictors of poverty. Statistically all the variables 
are run in a factor analysis in which the first principle component is the poverty status 
predictor. The coefficients of each of the remaining variables on the first component are 
the basis of the points or weights used in calculating each family's point total. Families 
with a point total less than some cutoff level are then issued a identification card and are 
eligible for certain cash transfers or other subsidies. Currently in Chile information is 
gathered on housing, consumer durables, education, number of family members, 
dependency ratio, health status, employment status, occupation and income including all 
transfers. Each respondent answers a questionnaire form, and there is also a home visit 
by the local authorities to verify questionnaire answers. The point system and the 
weighting are the responsibility of the Ministry of Planning but the surveys themselves 
are managed and processed at the local level.

An important feature of the Ficha-CAS system in Chile is that it is demand driven. 
Participation is voluntary. That stands in sharp contrast to PROGRESA in Mexico and 
SISBEN in Colombia. In PROGRESA, targeting is in three stages. In the first certain 
communities are selected because of their high level of poverty. Then, within those 
communities all households are interviewed to get their poverty ranking. Participation is 
then issued a identification card and are eligible for certain cash transfers or other
subsidies. Currently in Chile information is gathered on housing, consumer durables, education, number of family members, dependency ratio, health status, employment status, occupation and income including all transfers. Each respondent answers a questionnaire form, and there is also a home visit by the local authorities to verify questionnaire answers. The point system and the weighting are the responsibility of the Ministry of Planning but the surveys themselves are managed and processed at the local level.

The Chileans have included some incentives to minimize the exclusion factor. They do this by tying some local assistance to the number of poor people in the locality. Municipalities therefore have an incentive to advertise the program and urge the poor to take advantage of it. They appear to have been reasonably successful since more than six million people have been interviewed since the program's inception. (MIDE, (1999), p. 3). In 1999 there were 1.3 million valid Ficha cards outstanding covering a 5.56 million people, 36.5% of the population of Chile. (MIDE, (2000a), p. 29).

The alternative approach of combining geographic targeting with a census in selected communities in Mexico and Colombia is only feasible because it is limited to these communities. If these systems were to have a national coverage they would be unnecessarily costly. In addition to that, if the government takes what amounts to a national census to identify the poor, it is assuming the responsibility of identifying the poor. The Chilean approach implies that it is up to the individual to come forward and prove that he is poor and that he deserves whatever subsidies are offered to the poor.

In this regard it is important to remember that one not only has to identify the poor at a point in time, but from time to time one has to verify that those in the program continue to be eligible. Identifying the poor is not a one-time problem, which means that in designing any system, one must consider the problem of verification and the inclusion of people who become poor after an initial survey. In Chile each person with a Ficha CAS card has to prove continued eligibility every two years. If a country has a universal system, it will have to reinterview every person originally included in the program to verify continued eligibility, and it will need some sort of voluntary system by which the newly poor can request an interview in order to qualify for benefits.

Peru is a good example of why it is important to develop a system for targeting poverty spending. At present all targeting in Peru is geographic. There is no proxy means test or questionnaire based targeting at the family level. FONCODES in Peru was a leader in the development of poverty maps as a basis for geographic targeting using NBIs and census information. Their own allocation across districts is roughly proportional to the percentage of the country's poor that reside there, where the families are ranked as poor or non-poor according to their score on an NBI-based index. The system is relatively simple and effective according to a recent targeting evaluation. (Schady (2000)) But other than FONCODES and PRONAA, the other poverty related programs of the government do not come out so well. None of them do a particularly good job of targeting within districts. (Saavedra with Sasaki, p. 20-1). As a result, too much of the expenditure intended to reduce poverty leaks out to the non-poor. We do not have a
direct estimate of the size of this leakage, but one can get a sense of how big it must be by looking at the data in the Saavedra-Sasaski paper. Altogether, according to those authors, the government of Peru spends about US$1 billion or 1.7% of GDP on poverty reducing programs of all sorts. That is about one fourth of government social expenditure and 15% of total expenditure. There are altogether around 3.4 million extremely poor people in Peru, which implies that the government is spending about $300 per person on poverty reduction. That is almost twice what Saavedra estimates that it would take to eliminate extreme poverty altogether in the country, if it were perfectly targeted. No one would claim that perfect targeting is possible, but the comparison helps to show how big the impact would be of designing a better system for targeting than the one being used now. Just the money being spent by the government on PRONAA and Vaso de Leche ($165 million) would be enough to reduce extreme rural poverty by one-half.

**Uses of direct targeting information:** In most countries the information obtained by the targeting interview procedures we have been discussing is used mainly to identify those eligible for some sort of cash subsidy. In Chile there were originally only two of these subsidies—a social assistance retirement pension (PASIS or Pension Asistencial) and a family assistance subsidy (the SUF or Subsidio Unitario Familiar) which itself is composed of a cash payment for children of poor families who attend school and get regular health check ups, a cash payment to pregnant women and lactating mothers, and a cash payment for the disabled. In 1990 the SUF system was extended to include subsidies for potable water and cash transfers to help with the purchase of low cost housing. In Mexico, as we have seen, PROGRESA gives money to poor families with children who attend school and get medical check ups.

In Colombia the information obtained by SISBEN is mainly used to channel government spending, particularly in health, to poor communities, rather than to identify poor individuals eligible to receive cash transfers. The public health system has been decentralized and is now run by local municipalities. Central government subsidizes the system in poor communities by making a transfer based on the number of poor people who live there as determined by the SISBEN. As well, the SISBEN information was used to allocate or target spending in the Colombian social investment fund, Solidaridad. Individuals with a SISBEN card are also eligible for free health insurance at public facilities. To a lesser extent, the SISBEN information is also used to direct housing subsidies and nutrition programs to the poor.

PROGRESA in Mexico is similar to SISBEN. In the first stage of the targeting process, poor rural communities are identified by some sort of general poverty map. Then within those poor communities, all individuals are interviewed to identify those eligible for the two main cash transfers in the program—the school attendance subsidy and a cash transfer to the poor or aged who do not have qualifying children.

The information obtained in the individual targeting interviews is valuable for the accurate targeting of government spending of all sorts, and is increasingly being used in that way in Chile. In most other countries in the region poverty maps based on NBIs are used to direct spending toward the poor. But these poverty maps are based on census
information that cannot be easily updated and which depends on a quite small number of variables. The Ficha CAS-SISBEN-PROGRESA system permits frequent updating and a better indicator of welfare than is possible with census information. It also makes permits one to very precisely locate and keep track of where the poor are so as to more accurately target government spending. If the system is demand driven or voluntary as it is in Chile, a significant number of the poor may be excluded which will reduce the share of government targeted expenditure in the communities they live in. But if the system is compulsory, it is not obvious that the extra cost is worth the improvement in poverty map accuracy over the NBI system.

To summarize this discussion, if the main objective of the targeting system is to develop a safety net using direct cash transfers, the voluntary system is preferable. The individual is getting the benefits. Let him or her take the responsibility for proving that he/she is eligible. But if the main purpose of the information is to target government investment or social spending to poor areas than a universal compulsory system may be more appropriate. However the community-wide questionnaire need not be applied more than one time provided that those who qualify as poor are reinterviewed periodically and a voluntary system is used to update the poverty map.

**Results- Chile:** Chile has the best developed and best targeted safety net programs in the region. In 1998 Chile spent almost $700 million on the subsidy programs that were targeted with the Ficha CAS, 81% more than was spent in 1990. (MIDE (2000a), p. 105) That sum represents 13.7% of all government non-retirement social spending, and just under 1% of GDP. That shows clearly how important the Ficha is as an instrument for targeting poverty-reduction spending. The main monetary subsidies using the Ficha are the social assistance pension, the various family subsidies, the subsidy to potable water and the subsidy to housing.

To be eligible for the social assistance pension a recipient had to have a CAS card, and have an income less than 50% of the minimum wage. In that year 345,420 individuals received the pension, which was worth about $50 per month. this implies that the government was spending about $180 million per year on this component of the permanent safety net. (MIDE, (1998), p. 36) An equivalent amount is paid per month to the disabled. (MIDE (nd), p. 10-13) In the subsidy to poor families (SUF), a pregnant woman from a family with less than a total income of $2400 per year gets a one time payment of around $60. In families with CAS cards mothers of infants receive $6.00 per month per child for three years. The family also receives about $6.00 per month for any child over six who attends school and goes regularly to a health clinic. Altogether in 1998 these payments for the children of poor families were going to 954,000 children and costing the state around $70 million per year (MIDE (1998, p. 39) The CAS card is also used to pay a small subsidy to cover the cost of water or the connection of the poor household to a public potable water source. Altogether 462,000 families received this subsidy in 1990. There is also significant houseing subsidies for families with the CAS card.
The targeting results obtained with all of these safety net programs are impressive. 73% of all the monetary subsidies now go to the bottom 40% of the population, and altogether the government estimates that these subsidies increased the income of the poorest 20% by 83.6% and reduced the ratio of the income of the top to the bottom quintile from 15.5 times to only 8.5 times. (CAS (1998), p. 2). While one cannot directly measure the impact of these subsidies on the poverty rate or the poverty gap, the successful targeting of this large quantity of resources to the bottom two quintiles, must be at least partially responsible for Chile's success in cutting the poverty rate almost in half since 1990.

E. Conditioned Cash Transfer Programs for Education and Health

A new instrument for poverty reduction developed largely in Latin America is the use of conditioned cash transfers targeted to the poor. There are now a great many programs that give money to poor families who satisfy several socially desirable conditions. First they have to be identified as poor as measured by some indicator. If they are poor and have children, and if those children stay in school and make regular visits to health facilities, the family gets a cash benefit. If the family is poor and has a nursing or pregnant mother, the family may also receive a cash payment. In effect society is claiming an interest in the human capital potential of the children of poor families. Society is willing to invest resources in these poor families to ensure that the potential of their children is developed. This is an investment every bit as productive as roads or irrigation systems. But it also has the very attractive characteristic that the family gains income in the short run from the cash transfer and the better education and health status of the children reduces poverty in the long run. In fact it is unclear which aspect of the program is its main objective, the short run cash transfers to the poor, or the increased attendance at the school or health post. We want to return to this point in a moment. First consider the record of these rapidly expanding programs.

Morley and Coady (2003) recently reviewed the main conditioned cash transfer programs in Latin America and Bangladesh. What we found in our review is encouraging. The programs for which we have empirical evidence and that we reviewed are all effective at reducing poverty among today’s poor families and at the same time have significantly increased school enrollments. The most carefully studied of the CTE programs is PROGRESA. Studies comparing poverty before and after the program in PROGRESA and control communities estimated that the program directly reduced poverty in PROGRESA communities by around 17% and the poverty gap by 36% relative to what it would have been in the absence of the program. PROGRESA is one of the biggest of the CTE programs. We estimate that it raised the income of the rural poor overall by 10-15%. That is a big effect for a single program. Our information base is less complete in the other countries with CTE programs. But judging by the information we have, the impact on poverty seems equally positive. In Bangladesh there was an 11% increase in food consumption in the FFE communities while in Nicaragua total consumption was estimated to have increased by 17% in the RPS communities relative to what it would have been without the program.
A good deal of the success of these programs in reducing poverty is due to their systems of targeting. Compared to a number of other safety net programs recently reviewed by IFPRI and the World Bank, these programs are very well targeted. On average 81% of CTE program benefits go to the bottom 40% of families and three of the four CTE programs in the World Bank study fall in the top third of all the safety net programs that were reviewed.

The CTE programs rely on a pragmatic but apparently effective system for identifying the poor. Four of the six programs that we reviewed used a two-stage procedure which relies on geographic targeting to identify the poorest communities which will be eligible for the program. They then use either surveys or local committees to identify the poor within those poor communities. It appears that the initial geographic targeting explains the bulk of the progressivity in countries where the CTE is not a national program. Where there is a high rate of poverty in the eligible communities, it probably is neither necessary nor cost effective to use obligatory surveys of all residents to identify the poor families which will receive the transfer. Local committees seem to do just as well.

We studied two national systems, Brazil and Chile. Each used a different targeting mechanism. It is too early to judge how successful Brazil’s system of local committees is but Chile’s demand-driven system is clearly very effective—the second best of the four for which we have data. The Chilean system would make even more sense in the context of a system in which eligibility for a number of different poverty-targeted program is to be determined by the same system.

We have less evidence on the impact on education of these CTE programs, and even less on the effect of the education on the long-run earnings of the children of the poor. Nevertheless, what evidence we do have is strongly positive. Conditional transfers clearly did increase enrollments in each of the countries for which we have data. In Mexico, average education levels in the PROGRESA communities were estimated to increase by two-thirds of a year. In the RPS communities in Nicaragua enrollment rates increased by 22 percentage points. We estimate that this will increase the average education level by nearly 25% from 3.2 to 4.0 years by the end of the ninth grade. In Bangladesh there was a big jump in enrollments when the FFE was first introduced. While that later fell a bit, researchers estimate that the presence of an FFE school increased by 9% the probability that a child would be in school.

Advantages of CTE type programs: One of the main advantages of CTE programs relative to alternative instruments for poverty reduction lies in their dual nature, something we have stressed throughout this monograph. They reduce poverty in the short run and increase the human capital and earning potential of the children of the poor in the long run thus helping break the intergenerational transmission of poverty. We attempted to quantify this advantage by comparing the total benefit to the poor with safety-net transfers or a workfare program.

To do that we had to estimate the future earnings of the children of the poor. This simulation was only possible in Mexico and Nicaragua. Even in these two programs it
could be argued to be a somewhat heroic exercise but one that is necessary if one wants to quantify the benefits of the investment component of a CTE program. Under the reasonable assumption that the wage structure of the future labor force will be the same as it was in the year of the most recent survey, we estimate that the extra education would add about 8% to the average earnings of the poor in Mexico and about 9% in Nicaragua. Since that increase in earnings applies over the entire working life of the cohort, it is worth significantly more to the poor than the money they receive from the program itself even when the earnings are adjusted through discounting for the fact that they are received in the future. According to our calculations for every dollar received by the poor, the present value of future earnings go up by 1.52 in Mexico and 1.13 in Nicaragua. In other words for these two countries the investment component of the program is worth more to the poor than the transfer. Better yet, the improvement in future earnings is permanent and not dependent on continued safety net spending. To put it another way, these programs are at least twice as effective as a straight transfer, once one takes into account the benefit to the poor of the future earning of their children. The advantage of the programs compared to workfare is even more pronounced partly because of the non-labor and administrative expenses of workfare programs.

There are several other advantages of CTE programs relative to alternative instruments for poverty alleviation. First they have clear objectives and clear mechanisms to reach those objectives. That makes the programs quite easy and cheap to design and to implement and quite straightforward to evaluate. Second, the programs are quite flexible and adaptable to local conditions and can be designed to expand the role of communities if this is deemed to be important for program effectiveness and sustainability. Optimal coverage of a CTE program can and should be designed to reflect the amount of poverty in a country and the enrollment rates of different groups. Benefit structure can also be adjusted to local conditions as has been done in Mexico to increase the incentive to enroll of adolescents who might otherwise drop out of school to go to work.

A third advantage is the complementary actions that could easily be included in the program to increase the quality of education that beneficiaries receive once they enroll. The program can have a voucher component which would be delivered to the school. That would give the school an incentive to improve its education to attract more students. Also the program could have a condition that students have to progress at a minimum rate or pass an exam at certain grade levels or lose their benefits. Schools participating in the CTE program could be subject to inspection as has been done in Bangladesh. All of these actions and conditions are positive incentives to improve the quality of education and they are naturally complements to the CTE program.

Yet another advantage of these programs is less concrete but possibly more important. They represent a statement by a government that poverty reduction is a social objective for which both the family, the child and the society share a responsibility. The society through its government indicates through such a program its willingness to give assistance to the poor, but only if the family and the child do their part. This represents the conviction that the pathway to any real long-run reduction of structural poverty lies
through education and human capital formation not transfers-through social development not social assistance.

**Issues for the future:** We find what evidence we have on performance quite positive. But this success does not imply that CTE programs should be established in countries that don’t have them or that they should be expanded in those countries where they are now limited geographically. These programs, successful as they appear to be, are not a cure all for poverty or for deficiencies in education. Take education first. The CTE approach to increasing enrollments is based on the assumption that low enrollment rates are a demand-side problem. Children don’t go to school because their families cannot afford to send them. But there are many cases where the problem is supply. There aren’t enough schools, classrooms or teachers to give an adequate education to those who want it or who need it. In such cases putting a lot of money into a CTE program would be a mistake, at least considered in light of the education objective. When countries are spending 5% of the entire education budget of the government on the CTE program as several of the countries in our study are, one has to ask whether or not this is the best way to raise the education level of the population. If the objective of the CTE programs is human capital formation, one must ask whether one should spend more education dollars on getting more students into schools or in improving the education they get in the schools once they are there.

One can make the same argument from a poverty perspective. These programs are not a panacea for poverty. They are not a substitute for a more comprehensive safety net, and should not be thought of as such. We have made the argument that the CTE is preferable to a straight transfer safety net payment in reducing structural poverty because it increases the human capital of the children of the poor. But there are many causes of poverty both structural and short run for which this sort of program is no help at all. Some of the poor are retired or disabled. They need a safety net. Others may be the victims of rising unemployment in a recession. They need temporary assistance whether or not they have children. Still others may be working adults with so little human or physical capital that they and their families are in poverty despite whatever income they earn. This group needs adult training programs and other efforts to increase the productivity and earnings of the working members of the families. The point here is that good as these CTE programs are, at best they are a partial solution to the twin problems of poor education and poverty.

Several important design features also have to be addressed by any country thinking about adopting a CTE program. They have to do with what targeting mechanism to use, what benefit level and coverage to choose and how to monitor and evaluate.

There is a trade off between the education and the poverty reduction goal in any CTE program. Policymakers have to define eligibility rules keeping this trade-off in mind. The more inclusive the program, the greater will be its impact on poverty and the smaller the impact on enrollments reflecting possibly lower transfer levels and the inclusion of households with higher human capital to start with. Low income countries with high levels of poverty and high drop out rates from school can achieve significant reductions
in poverty and increase their human capital at the same time. They are ideal candidates for the CTE program, possibly with some sort of graduated payment schedule patterned after PROGRESA. Poor countries cannot afford a comprehensive transfer safety net approach to poverty reduction. They have to grow their way out of poverty by increasing the productivity of their people through investments in human and physical capital. The CTE programs are particularly attractive for poor countries because they are a way to get both effects at the same time. Rich countries with high enrollment rates and low levels of poverty probably do not need a large cash transfer program conditioned on education of their children although a program effectively targeted on the poorest households with the lowest enrollment rates may be warranted.

It is the middle income countries such as Mexico in which there is significant poverty and quite high enrollment rates where the trade-off between poverty reduction and human capital formation is most obvious. If one limits eligibility so as to maximize the investment impact of the program, many poor people will be left out. There will be pressure to ease the eligibility requirements or expand coverage. In Mexico, that has come in the form of a decision to extend the program to the urban area where half of the poor live. But the problem with the urban areas is that the enrollment rates for primary school students are far higher than they are for the rural sector which means that the short run poverty reduction will be a bigger component of the program compared to improvements in education unless some relatively simple and cheap way of identifying the poor is used or unless the structure of transfers is limited to higher grades.

V. Conclusions

For most of the last 12 years Latin America has made almost not progress in Poverty reduction. The main reason for that is a drastic slowdown in the growth rate of income in the region. In most countries economic growth turns out to be the key determinant of how fast poverty can be reduced. Obviously there are things that governments can do to make growth more favorable to the poor. It is critical that growth generate a lot of jobs, particularly for the unskilled which implies that it helps if growth is led by sectors in which the poor work. Two are particularly relevant in this regard-agriculture and construction. Growth in mineral rich economies tends to be especially unfriendly to the poor. Not only does the leading mineral sector not create much employment itself, but it also tends to drive up the exchange rate which hurts other tradables sectors such as agriculture which do employ the unskilled. Poverty also has a geographic dimension. Many of the poor live in lagging regions with weak links to the sectors driving the growth process. Special efforts should be made to overcome this structural problem.

We looked at a number of promising programs which have successfully helped the poor in Latin America. One was the development of a rural retirement safety net scheme in the Northeast of Brazil. Others are conditioned cash transfers for education, first in Mexico and now widely copied in other countries. Safety net programs would seem to be a good tool for poverty reduction. However we argued that it is unlikely that poor countries will be able to solve their poverty problem with this instrument. For most of
the poor in most developing countries, the only way to sustainably reduce poverty is for the poor themselves to become more productive and earn their way out of poverty. Countries should be looking for what we called poverty-targeted investments—that is, projects such as farm to market roads, irrigation systems or conditioned cash transfers in which the poor earn money building the projects which then make the poor or their children more productive in the long run. Such programs should be supplemented by permanent safety nets for those who cannot help themselves. Targeting of these programs is crucial, which is one reason why the self-targeting in workfare programs such as Trabajar in Argentina is instructive. An alternative approach is the voluntary self-targeting system designed and applied in Chile. It is an important part of the government’s effort to make sure that its social spending reaches the poor.
References


Escaith, Hubert and Samuel Morley, (2001), The impact of structural reforms on growth in Latin America and the Caribbean:: an empirical estimation, (Santiago; CEPAL, working paper series Macroeconomia del Desarrollo).


IPEA, (2002a), Politicas sociais: acompanhamento e análise: anexo estatistico, (IPEA, Division of Social Studies, report #5).


MIDEPLAN, (no date), "Programas y Subsidios Sociales de Gobierno Asingnados por la Ficha CAS-2" (Santiago).


(2000), "La Ficha CAS como Instrumento de Focalización de Programas


Wodon, Quentin, Norman Hicks, Bernadette Ryan and Gabriel Gonzalez, "Are Governments Pro-poor but Short-Sighted?: Targeted and Social Spending for the Poor during Booms and Busts," (2000), (Washington: World Bank, mimeo).
