Crises and the Poor:

Socially Responsible Macroeconomics

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Foreword

Economic insecurity is one of the most urgent concerns for both the poor and non-poor in Latin America and the Caribbean. Economic insecurity is caused by a variety of adverse shocks, including idiosyncratic shocks such as unemployment and illness, and aggregate shocks like natural disasters. This study focuses on one particularly important aggregate shock: macroeconomic crises. Macroeconomic crises, which have been all too common in the region's recent history, are the single most important cause of rapid increases in poverty and are often accompanied by increasing inequality.

Crisis prevention and response policies have in general not paid adequate attention to the impact on poverty of crises and policy decisions. When policies have considered the needs of the poor, all too often they have been hampered by weak institutional capacity.

This paper analyzes the components of a "pro-poor" response to macroeconomic crises. In particular, it outlines the appropriate policy instruments to respond to crises when they do occur. Highlighted in the study is the need for pre-existing and adequately funded safety nets.

This study is a component of the Poverty and Inequality Advisory Unit's research agenda to assess the impact of shocks on poverty and design appropriate and effective policies to safeguard the poor against these shocks. It is hoped that this will be a valuable contribution to the region's efforts to design economic polices that protect the most vulnerable from adverse economic shocks.

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Abstract

Macroeconomic crises not only affect the current living standards of the poor, but their ability to grow out of poverty. This paper presents evidence on the impact of economic crisis on poverty and inequality in Latin America. Crises not only result in higher poverty rates but also may cause irreversible damage to the human capital of the poor. In light of this evidence, the author concludes that crisis avoidance and a pro-poor response to crisis should be a major component of a poverty reduction strategy. As a result, the paper analyses the role of exchange rate policy, capital controls and countercyclical fiscal policy in generating or avoiding crisis. Responses to macroeconomic crisis are assessed by considering the effects of different policy combinations, the use of safety nets and the composition of fiscal adjustment to protect the income of the poor in the face of macroeconomic adjustment. The main lesson is that socially responsible macroeconomic policy can protect the poor during times of crisis and simultaneously contribute to lower chronic poverty.

Contents

Crises and the Poor

Economic insecurity is a concern for everyone, the poor and the non-poor alike. In a recent survey, unemployment was ranked as the number one problem facing people in Latin America and the Caribbean and low salaries were ranked third (*Latinobarometro*, 1998). Another survey finds that 61 percent of respondents feel that their parents have lived "better" lives than their own and less than half believe that their children will live better lives than they have.[1] The survey also found that nearly three quarters of the respondents desired more government spending on unemployment insurance. This response cut across social groups.

A review of World Bank participatory poverty assessments carried out in 23 countries around the globe found that economic insecurity ranks high among the concerns of the poor.[2] In Latin America and the Caribbean, unemployment and the variability of employment and wages were found to be severe problems. In addition to the income-poverty caused by economic insecurity, the poor mentioned that lack of employment, particularly in urban areas, leads to problems of alcohol abuse, domestic violence and associated family problems, as well as a rising rate of drug addiction and drug trafficking among unemployed youth living in poor areas. Natural disasters were also mentioned as an important source of economic and physical insecurity.

Economic insecurity arises from a variety of shocks. Unemployment, illness, disability or death of the breadwinner are common examples of idiosyncratic shocks. Macroeconomic crises and natural disasters are leading examples of aggregate (covariate) shocks. The poor are particularly vulnerable to negative shocks for a variety of reasons. They have little or no access to public social insurance schemes because they are largely self-employed or work as unremunerated family workers. In Latin America, between 28 percent (Chile) and 76 percent (Honduras) of workers in the bottom quintile are in this group. Even when they are wage-earners, the poor often work for employers that have difficulties in complying – as in the case of microenterprises – or are unwilling to pay their share in a contributory system. Since enforcement mechanisms tend to be weak for smaller and micro firms, noncompliance can be large. Also, the poor may be precluded from access to social insurance because of legal restrictions, such as is the case with domestic workers. Access to social insurance on the part of the poor is not likely to expand very quickly given the characteristics of the region's labor market and job opportunities.

The poor are unlikely to save, either individually or as a group, in adequate amounts to rely fully on self-insurance or informal insurance to smooth consumption. It has been shown that the poor do engage in sophisticated (ex-ante) risk-mitigating and (ex-post) risk-coping strategies. The former include combining income-generating activities with low positive covariance and taking up low risk activities even at the cost of low returns. Risk-coping strategies include precautionary savings (often in the form of physical assets such as land and bullock) and informal group-based risk-sharing through family and community networks.[3] However, despite these mechanisms income and consumption variability remains high.

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[1] Survey undertaken by the *Wall Street Journal* and mentioned in Rodrik (1999), p. 1 and Table 1.

[2] World Bank (1999) and synthesis prepared by the poverty group in the Latin America and Caribbean region of the World Bank.

[3] See, for example, the work by Alderman and Paxson (1994), Coate and Ravallion (1993), Deaton (1991), Morduch (1990), Rosenzweig and Binswanger (1993), Rosenzweig and Wolpin (1993), Townsend (1994), to name a few.

A number of studies have suggested that risk-sharing and consumption smoothing remains imperfect for the poor.[4] The poorest households are typically those least insured against shocks. Using data for India, Ravallion and Jalan (1997) found that for the poorest decile 40 percent of a shock is transmitted to current consumption, while for the richest third just over 10 percent of an income shock is passed on.

Furthermore, asymmetric information and high transaction costs restrict the access of the poor to private market insurance or credit mechanisms to smooth their income because these markets are underdeveloped or nonexistent for them. Likewise, because of their limited assets, the poor may not be able to use these markets effectively even when they do exist.

Finally, the poor have little or no voice to demand the protection of pro-poor programs and the implementation of safety nets in times of fiscal retrenchment. For example, during the 1980s the programs that were cut the most in the Mexican social spending budget were those targeted to poor areas. On closer look, the Social Investment Funds, considered by many to be the archetypal safety net in Latin America during adjustment programs, were not really consumption-smoothing interventions for the poor, although they did create social infrastructure for them.

This presentation will focus on one particular type of shock; namely, macroeconomic crises.[5] One important characteristic of macroeconomic crises from the social risk management perspective is that as with most covariate shocks, self-insurance, informal insurance and market-based smoothing mechanisms such as credit are likely to be less effective. With covariate shocks, the value of assets held by the poor and the incomes of their associates in informal insurance arrangements will fall, precluding the use of either as a safety net. Furthermore, formal credit is not likely to be available to the poor particularly when times are bleak. Based on a numerical simulation Dercon (1999) shows how covariance between asset value and income when people are liquidity constrained reduces the effectiveness of assets as a buffer for consumption.[6] With a correlation of 0.5, the risk premium that is recovered by savings equals only 16 percent.[7]

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[4] Paxson (1993), Rosenzweig (1988), Townsend (1995) and some of the writings included in the previous footnote.

[5] Macroeconomic crises here includes the array of crises that affect the entire economy such as financial crises, liquidity crises, currency crises, debt crises, terms of trade shocks, and so on.

[6] Based on a study using data for Ethiopia, Dercon (1999) suggests that there is some evidence that poor people resist using assets to smooth consumption during aggregate shocks. The poor cut consumption to dangerously low levels rather than sell their assets when prices have collapsed.

[7] The benchmark is given by the income risk (no assets) only.

Macroeconomic Crises: A Common Feature of Latin America

Macroeconomic crises have been a recurrent phenomenon in Latin America and the Caribbean for the last twenty years. The 1980s were marked by the debt crisis. The impact on economic and social development was so great that the 1980s came to be known as the "lost decade." Although the 1990s have been better in comparison, twenty- four countries have experienced at least one year when income per head fell. Altogether there have been over 40 episodes where GDP per capita fell by 4 percent or more between 1980 and 1998.

Macroeconomic crises, with the exception of wars, are the single most important cause of large increases in income (or consumption) poverty. They are frequently accompanied by rising income inequality as well. Social indicators such as infant mortality rates and average years of schooling continue to improve but at a much slower pace. Fiscal austerity measures in response to macroeconomic crises have tended to ignore the impact on poverty. Even when governments try to limit the impact on the poor, their efforts are frustrated by the lack of institutional capacity to implement specific programs in the heat of a crisis and by severe information problems. Although macroeconomic crises have been a recurring hazard in the region, income-smoothing safety nets have not been institutionalized in most countries.

Poverty, Inequality and Social Indicators

There is a strong link between macroeconomic downturns and rising poverty. It has been estimated that for every percentage point decline in growth, poverty rises by 2 percent.[8] Others find that had Latin America reached the levels of macroeconomic stability achieved by industrial economies, roughly 25 percent of poor people in the region would have been lifted out of poverty (IDB, 1995). Because crises in Latin America and the Caribbean tend to be accompanied by increases in inequality, the impact of economic contraction tends to disproportionately reverse previous gains in poverty reduction.   Each one percent decline in per capita income during a recession episode in the 1980s reversed the reduction in poverty achieved by an increase of 3.7 percent in income per head for urban areas and 2 percent for rural areas during the 1970s (De Janvry and Sadoulet, 1999). Also, crises ratchet up inequality: since subsequent growth does not tend to eliminate the higher level of inequality generated during a severe economic downturn.

Table 1 shows the evolution of poverty (measured by the headcount ratio) during periods of crises in a number of countries in Latin America. In all cases, the incidence of poverty increased at the onset of the crisis and poverty was higher than before the recession several years later (between one and five years, depending on the country). In Costa Rica, the Dominican Republic, Guatemala, Mexico, Panama and Venezuela, poverty and inequality increased during the 1980s, as it did in the urban areas of Argentina, Chile and Peru. Urban

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[8] Fields (1991). A similar result has been found by Morley (1994).

poverty in Argentina[9] and national levels of poverty in Mexico rose sharply during the 1995 crisis.

Table 2 shows that inequality (measured by the Gini coefficient) rose at the onset of the crisis in 5 out of 8 episodes, and in 15 out of 20 it was higher after the onset of the crisis than before.[10] The poorest quintile of the population was not always hurt disproportionately. In general it was the share of the middle ranges which fell the most. In contrast, in the majority of countries the income share of the top 10 percent increased, sometimes substantially.[11]

Table 3 summarizes the social impact of economic crises for a selected number of countries. Although social indicators such as infant mortality rates continued to improve in Latin America during the 1980s, they did so at a slower pace than in the previous decade. Health indicators that are more sensitive to consumption or income downturns, however, worsened. In Chile, the data on low birth weight infants and undernourished children follow the trends in economic conditions, after a systematic improvement in both indicators in the 1970s. In Mexico, infant and preschool mortality caused by nutritional deficiency rose in the 1980s, reversing the trend from the previous decade. In Argentina, daily per capita intake of protein declined by 3.8 percent in 1995 and in Venezuela it decreased by 2.9 percent in 1994 (Lustig, 1995).

School attendance and literacy also took a hit. In Mexico, after 1982 the proportion of each graduating class who entered the subsequent educational level declined, particularly after junior high or high school. The percentage of children entering primary school as a ratio of the total number of children in the relevant age cohort declined. Although dropout rates from primary school continued to decline, further disaggregation shows that dropout rates improved for urban children only; in rural areas the dropout rate rose by 40 percent. In Venezuela, the literacy rate for people aged 15 to 19 fell in the 1980s. Gross primary enrollment slowed down in Argentina and Mexico in 1995.

In Mexico, the labor force participation of 12-14 year olds in households in the bottom quintile increased by 4.2 percentage points, reaching 19.8 percent between 1994 and 1996, whereas the rate of participation of children of non-poor households remained constant, at around 6 percent. (INEGI, 1994 and 1996). These trends also imply that investment in human capital probably became more skewed, making the observed increase in inequality more entrenched.

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[9] Data for Argentina refers to the Greater Buenos Aires area. There is no data available for other urban centers or rural areas.

[10] However, some of the Gini's refer to urban areas only.

[11] See Lustig (1995, Introduction, pp. 4-5).

Transient and Persistent Poverty

A well-known fact is that fluctuations in consumption result in relatively high levels of transient poverty.[12] However, high-income risk can also be a cause of persistent or chronic poverty because of the irreversible impact that income downturns may have on the human capital owned by the poor.

Recent research has found a link between macroeconomic downturns and education indicators. For example, the average increase in years of schooling for 18 Latin American countries slowed from 1.9 years in the 1950s through the 1970s to 1.2 in the 1970s and 1980s (Behrman, Duryea and Szekely, 1999). More specifically, improvements in schooling attainment start to decline for cohorts born between 1960 and 1970, those who entered the school system between 1975 and 1986, the period that roughly coincides with the debt crisis in the region. Worsening macroeconomic conditions (short-term GDP shocks, volatility and adverse trade shocks) explain 80 percent of the decline in the rate of improvement of schooling attainment.[13] Evidence from Mexico shows the pervasive effects of volatility and macroeconomic downturns on schooling attainment. The negative income effect of falling income tends to outweigh the positive price effect of lower opportunity cost, resulting in worsening schooling indicators in times of economic downturns (Binder, 1996). Simulation results find that (gross) secondary enrollment in Mexico would have been 11 percentage points higher in 1991 if the economy had grown during the 1980s at half the rate of the 1970s, instead of stagnating.[14]

Shocks also have adverse effects on investments in health and nutrition by poor households. Using evidence from rural India, Rose (1994) reports that negative rainfall shocks are associated with higher child mortality rates in households that do not own land, but not in landowning households. Another study finds that in Bangladesh, body size is notably lower in households that are unable to borrow or insure against income fluctuations (Foster, 1995). And in South India, Behrman (1988) reveals that the health of children, especially girls, suffers during the time leading up to a major harvest because of the inability of households to smooth consumption.[15]

Because shocks to household income affect investment in schooling, nutrition and health, potentially reducing the human capital of the poor, they can hinder the ability of the poor to grow out of poverty. Furthermore, an irreversible impact on the human capital of the poor is not just bad for the poor but can affect the overall performance of the economy in the medium run. This is particularly the case when nutrition and educational attainments suffer during recessions. This is an important part of the economic rationale for publicly funded safety nets, a topic that will be discussed below.

The evidence presented above should suffice to establish that crisis avoidance and adequate crisis response should be high priorities in a social risk management agenda.

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[12] See, for example, the studies by Jalan and Ravallion, op. cit. and Gaiha and Deolalikar (1993) for India.

[13] Author's calculations based on table 11 of Berhman, Duryea, and Székely (1999).

[14] The economy's average growth rate for the 1982-1988 period was around zero. Jacoby and Skoufias (1997) find that in South India, children are often taken out of school in response to adverse shocks.

[15] See also Morduch (1995).

Crisis Avoidance

Crisis avoidance should be a top priority in any anti-poverty strategy. There is wide agreement on the kind of macroeconomic and financial policies governments need to follow to reduce the vulnerability of countries to either policy-induced crises or adverse external shocks.[16] Governments should avoid profligate fiscal and monetary policies, seriously overvalued exchange rates and unsustainable current account deficits – problems that prevailed in the region in the 1970s and, particularly, in the 1980s.

The 1990s have seen a different type of crises. Irresponsible fiscal and monetary policy is no longer widespread in the region. Rather, the most important cause of recent crises was weak banking systems and weak financial regulation in a world of large and volatile international capital flows. In this new wave of crises, restoring balance of payments equilibrium is more closely linked to restoring equilibrium in the capital account by restoring investor confidence. In order to prevent repeated crises in the future, governments need to substantially improve the prudential regulation and supervision of financial intermediaries, to introduce new standards for data dissemination and to implement corporate bankruptcy reform.[17]

The two areas in which the most controversy remains are the choice of exchange rate regime and the use of capital controls. Another important area subject to debate is the use of stabilization funds to make fiscal policy countercyclical (or less procyclical).

EXCHANGE RATE REGIME

There is a great deal of discussion among economists and policymakers about which exchange rate regime makes emerging markets least vulnerable to external shocks.[18] Fixed but adjustable exchange rate pegs became fully discredited following the crises in Latin America, Asia and Russia. The debate on exchange rate regimes has now shifted to the question of whether a country should adopt a truly fixed exchange rate, such as a currency board (or even full dollarization), or a flexible exchange rate. From a pro-poor perspective, the question is not only which regime reduces the vulnerability of countries to shocks but also which system minimizes output contractions when a country faces a shock.[19]

The argument in favor of flexible exchange rates is that the necessary adjustments following a shock can take place more quickly and at a lower cost in terms of foregone output and unemployment than under a currency board. To illustrate the point, let us compare the cases of Argentina and Mexico in 1995. Calvo (1997) shows that while Mexico may have experienced a sharper fall in GDP, Argentina had to suffer a larger reduction in growth per percentage point of adjustment in the current account.[20] Since, as we have seen, poverty is highly correlated with overall economic performance, the fact that under a currency board output contraction is likely to be higher than under

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[16] See Eichengreen (1999) and IDB (1995).

[17] These are not simply matters for emerging markets. Banks and other creditors in developed countries have acted irresponsibly. In 1998, the US Federal Reserve was forced to orchestrate a bailout of Long-term Capital Management, a hedge fund based in Connecticut.

[18] See, for example, Edwards and Savastano (1999) and Larrain and Velasco (1999).

[19] A third issue, of course, is what exchange rate regime is most beneficial for the poor in "normal" times. However, the latter will not be discussed here.

[20] Even if poverty can be shown to be more likely to rise under a currency board than a flexible exchange rate regime in the face of adverse shocks, there can be large economic and social costs associated with scrapping it. The negative impact on investor confidence and the likely withdrawal of capital may lead to a collapse in growth far worse than the recession endured during the defense of a currency board.

a flexible exchange rate makes the latter apparently more desirable from a pro-poor perspective. This is true unless one can show that countries under a currency board are significantly less likely to face shocks (stemming from speculative attacks or contagion), something that has not been established.[21]

Hard pegs and flexible exchange rates are likely to result in different adjustments in the labor market, and hence have different effects on income distribution and poverty.[22] Under a currency board we are likely to see labor markets adjust more through quantities (that is, unemployment) rather than through prices (i.e., real wages).[23] Rodrik (1999) has shown that where wages are rigid downwards, flexible exchange rates that are targeted on the trade balance perform a social insurance function. Fixed exchange rates (of the adjustable or hard peg kind) when combined with wage rigidity result not only in unemployment (an inefficient outcome) but accentuate the distributional implications of a shock. That is, real wages in the sector that faced (benefited from) the shock in competitiveness fall (rise) by more than they would under a flexible exchange rate.[24]

The impact on poverty, however, will depend on what group is hit the most by the rise in unemployment or the fall in real wages. If the rise in unemployment (fall in wages) is concentrated on the young who live with well-off families, poverty will not be affected. If, on the other hand, the rise in unemployment (fall in wages) is concentrated on prime working age males with low education, poverty will increase. In the case of Argentina during the 1995 crisis, unemployment rose the fastest (51 percent) for males with low education

(no or primary education) and in the prime working age group (25-64), reaching 16.2 percent.[25] For males with secondary education, it rose by 24 percent, reaching 10.8 percent. For males with higher education, the figures were 28 percent and 5.5 percent, respectively. Average wages, in contrast, changed very little, falling by 1 percent in 1995. To have a complete picture, it would be necessary to know to which families the affected people belonged. However, given the observed pattern in unemployment one would expect poverty to rise, which is what Table 1 shows.[26]

The different labor market effects of hard pegs and flexible exchange rate regimes have to be taken into account in the design of social safety nets for poor workers. In countries where the adjustment to an external shock takes place primarily through higher unemployment, employment programs (such as public works) should be the central part of the safety net. In countries where adjustment takes place through a change in real wages, transfer programs such as the Targeted Human Development Programs discussed below will be more important.

Recent evidence from Latin America reveals that monetary authorities in countries that faced large negative terms-of-trade shocks, such as Chile, Peru and Venezuela in 1998, relied on exchange rate adjustments to a very limited extent. Rather than letting the exchange rate do the adjustment, these countries raised domestic interest rates, and they raised them by even more than countries that were under fixed exchange rates (Gavin, 1999). Two reasons might explain this reluctance to rely on the exchange rate: first, the fear that a depreciation could have seriously hurt banks and firms whose net liabilities were in dollars; second, the concern that a depreciation would lead to higher inflation and thereby damage the monetary authorities' reputation. In both cases, the fear was that a depreciation would trigger a downturn in investor confidence and result in even sharper re-

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[21] As the rise in credit spreads in Argentina and Hong Kong in recent years shows, currency boards are not a shield against speculation.

[22] This, in addition to the more standard distributional implications resulting from the pure relative gains accruing to the tradeable sector and to capital versus labor.

[23] See the comparisons presented in Larrain and Velasco (1999).

[24] Rodrik (1999). See, also, Bourguignon, Lambert, and Suwa-Eisenmann (1996).

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[25] See IDB, forthcoming, Chapter 3.

[26] All these results refer to the Greater Buenos Aires area only. Unfortunately, existing surveys for those years do not have national coverage.

versals in net capital inflows. Hence, *de facto*, flexible exchange rate regimes could not perform the social insurance function referred to above. With the exception of Mexico, high unemployment rates now are as prevalent in countries with flexible regimes as they are in Argentina with its currency board.

The observation that even countries under a flexible exchange rate regime are not really free, or choose not, to follow an independent monetary policy has led Calvo (1999) and others to propose full dollarization.[27] A dollarized economy would be better shielded from the volatility of overseas capital flows. Countries would also be "permanently" protected from the follies of populist governments, since inflationary deficit financing would no longer be an option. That explains why countries with traumatic hyperinflationary experiences, such as Argentina, are more open to the idea of dollarizing their economy. However, the fact that countries have used the exchange rate to a limited extent to cope with adverse shocks in the recent period does not necessarily mean that it is in the country's best interest to give up an independent monetary policy forever.

A dollarized economy would still yield a higher contraction in output when faced with an adverse shock, as would be the case in countries with a currency board. If wages are sticky downwards a dollarized economy will face the same difficulties in adjusting to a "real" shock.[28] With a dollarized economy, unemployment and excess capacity are likely to be more prevalent in the face of competitiveness shocks such as worsening of terms of trade and devaluation or a recession in a major partner. However, such costs will have to be weighed against the benefits that dollarization would bring in the form of fewer shocks to the capital account.

The downside of flexible exchange rate regimes for the poor is that they are usually associated with higher rates of inflation.[29] While a flexible exchange rate regime does not protect a country from lack of discipline in monetary and fiscal policy with the efficacy of a currency board (or full dollarization), there are other institutional forms to deal with such a risk. For discipline in monetary policy, a strong independent central bank is needed that can resist political pressures to monetize budget deficits and be a watchdog for inflation. There have also been proposals to implement parallel independent institutions to manage fiscal policy, for example, an independent national council to set ceilings on fiscal deficits. Proposals for independent fiscal authorities have met with greater political resistance. Less ambitious suggestions (which would take some of the rent-seeking out of the budget process in Latin American and Caribbean countries and enforce fiscal discipline), include budgetary processes that reduce the power of legislatures and, by giving the power to set the fiscal agenda to the prime minister or the finance minister, reduce the power of autonomous spending entities. Greater transparency in the fiscal process also makes it easier for voters to detect irresponsible politicians.[30] Some countries are beginning to experiment with new legal frameworks that would imply a "contract" between government (executive and legislative) and society to follow prudent fiscal policy.[31]

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[27] See Calvo (1999); Fernandez-Arias and Hausman (1999) and Hausman et al. (1999).

[28] Although part of the problem could be removed by eliminating some anti-employment labor regulation, this will not solve it entirely as has been shown in countries where the labor market is fairly deregulated as in Chile.

[29] The negative implications of inflation for the poor have been shown by, for example, Cardoso (1992), Easterly and Fischer (1999) and Romer and Romer (1998). Some studies, however, find evidence that inflation has a lower impact on poverty than declines in GDP. See Lustig and McLeod (1997).

[30] Eichengreen (1999) Eichengreen, Hausman and von Hagen (1996).

[31] Peru is in the process of approving such a law, for example.

CAPITAL CONTROLS

Recent empirical work by Easterly, Islam and Stiglitz (1999) finds that "countries with more open capital accounts are more likely to go into recession. Indeed, not only do larger capital flows (relative to GDP) enhance the likelihood of a recession, but also capital restrictions reduce the likelihood…"[32] Controls on the inflow of short-term capital, thus, should be considered by governments that want to reduce the likelihood of crises.

In a world of perfect markets, controls on short-term capital inflows can only be welfare reducing. But capital markets are not perfect. Bubbles and herd behavior are just two examples of capital market inefficiencies. Where financial systems are weak, completely free short-term capital inflows can lead to over-lending by poorly informed foreign lenders, over-borrowing by domestic banks and over-leveraging practices which make financial intermediaries vulnerable to systemic crises. This can happen even if fiscal policy is sound. For example, Chile experienced a financial crisis in the early 1980s and Mexico in the mid-1990s.[33] The irony is that while the banking crisis was unfolding, Mexico was hailed as a "model reformer" by policymakers and investors alike. As Barry Eichengreen (1999) puts it, "recent experience has demonstrated too well that badly managed banks and open international accounts are a combustible mix."

Controls on short-term capital inflows can reduce the probability of financial crises in emerging markets, without causing great inefficiencies in the allocation of capital. Research shows that controls can play a role in crisis prevention primarily because they lengthen the average maturities of capital inflows.[34] Avoiding economy-wide macroeconomic crises will prevent the associated

increase in poverty. Moreover, in Latin America and the Caribbean, the resolution costs of banking crises (in terms of taking over bad loans and recapitalizing insolvent banks) have been as high as 10 percent to 20 percent of GDP in the past. The cost of the bailout from the 1994-1995 crisis in Mexico has been estimated at around 19 percent of GDP (*Financial Times*, September 16, 1999). In Ecuador the cost of the rescue of the financial sector in 1998 has been estimated at approximately 8 percent of GDP (*Latin American Daily Comment*, July 1999). These costs are borne by the public sector, and so use up scarce fiscal resources that could be used for reducing poverty and enhancing equity. Moreover, tax systems in the region tend to be regressive, while the investors that receive the direct benefits of banking resolution tend to be better off. However, controls on short-term capital inflows should not be seen as a panacea for financial market reform, supervision and regulation. Indeed, they should be seen as an instrument that can help by providing a more stable environment in which financial sector reform can take place.

COUNTER-CYCLICAL FISCAL POLICY

One way to cushion the impact of adverse shocks on the economy would be to make fiscal policy more counter-cyclical (or less pro-cyclical). This would apply, of course, to countries that have achieved a relatively good reputation of fiscal responsibility. Governments with badly managed public finances cannot easily respond with expansionary macroeconomic policy during a slowdown. Where fiscal deficits are already large, and when international reserves have been run down, fiscal expansion may create fears of a fiscal crisis and lead to a collapse in investor confidence. This means that fiscal retrenchment during an adverse shock may actually be the best response available to some governments, given the constraints they face.

In Latin America, fiscal revenues are pro-cyclical because they rely heavily on expenditure-based taxes (such as the value-added tax) and commodity prices. It has been estimated that a 1 percent fall in growth translates into a reduction in reve-

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[32] Easterly, Islam, and Stiglitz (1999), p. 43.

[33] Another reason that governments should consider controls on capital inflows is that short-term capital inflows can lead to an overvalued exchange rate, as happened in Mexico in the early 1990s.

[34] See Montiel and Reinhardt (1999) and Edwards (1998).

nues of 5.8 percent in Latin America. In industrialized countries, a 1 percent fall in growth results in a reduction in revenues of just 1.8 percent. It also has been shown that growth in the region is very volatile. The volatility of GDP growth (measured by the standard deviation in growth rates) in Latin America has been 4.7 percent over the last 30 years. The measure for industrialized countries has been 2.2 percent (IDB, 1995). Hence, the fiscal stance will be volatile as well, reducing the ability of governments to smooth the impact of adverse shocks. This wouldn't be true if governments could borrow in international capital markets to weather transitory storms. However, experience shows that capital markets also have a tendency to behave pro-cyclically when it comes to lending to emerging markets. Countries hit by a shock will have to cut public spending or risk higher inflation. The need to introduce cuts in public spending may inhibit the ability of governments to provide social protection when it is needed most.

Stabilization funds are one way to ensure that additional resources generated during a period of high growth are saved, and therefore that public spending is smoothed across the economic cycle. If actual revenues exceed expected revenues, a significant proportion of the extra funds are diverted to the stabilization fund as insurance against a future downturn. If actual revenues fall below expected levels due to an unforeseen shock a portion of the difference is covered by the resources saved in the stabilization fund. The accumulated resources of the stabilization fund should be kept in the form of liquid foreign assets, so they are readily available to act as a stabilizer following a negative shock. The Copper Compensation Fund in Chile and the Oil Stabilization Fund in Colombia establish rules that determine how much of the expected revenues can be incorporated into the budget and how much should go into the stabilization fund. The Chilean budget incorporates a conservative estimate of the price of copper. When the actual price exceeds the estimated price, money is transferred to the stabilization fund, and government revenues are supplemented by the stabilization fund when the copper price dips below the budgeted level. Similarly,

the Colombian stabilization fund smoothes the revenues from oil production over time, to take account of the pattern of exploration and discovery and the volatility of oil prices.

The key to the success of stabilization funds is that the rules must be pre-determined and governed by legislation. The fund should not be left at the discretion of the government of the day. The main policy problem lies in the rule governing the operation of the fund, which is a far simpler matter when the price of a commodity is the major dynamic. Even so, if revenues are volatile then a stabilization fund can help smooth expenditure regardless of the source of the revenue fluctuations. [35]

Stabilization funds are subject to controversy.[36] In particular, in the case of commodity-based stabilization funds critics claim that prices tend to follow a random walk and even if it is not a pure random walk, the process is not quickly mean-reverting.[37] As a result funds could run out of money all too soon. However, if the reversion to the mean does not occur or occurs very slowly, a stabilization fund can be used as a "window of opportunity" to introduce the necessary changes in the tax and expenditure structure more gradually.

In addition to stabilization funds, there are other contingent fiscal rules that may reduce the need to cut expenditures in bad times, when governments have precarious access to financial markets. These contingent fiscal rules can incorporate actions on the revenue as well as the expenditure side. The contingent rule would specify under what condi-

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[35] In the U.S., 38 of the 50 states have established "rainy day funds" to smooth government spending, even though the degree of volatility faced by these states is much smaller than that typically faced by governments in the Latin American and Caribbean region. In some cases, the size of the funds reaches up to 15 percent of annual revenues. Since state governments in the U.S. have balanced budget laws, stabilization funds provide a degree of counter-cyclicality that would otherwise be lacking.
[36] See discussion and citations in Claessens and Varangis (1994).
[37] Deaton and Laroque (1992).

tions the government would be allowed to change the tax rate in reaction to a shock. Some argue that the importance of tax smoothing over the economic cycle means that tax rates should not be used in contingent rules and rather the government should just let the deficit increase. However, this assumes that governments always have access to financial markets. As discussed above, this is not always the case. Given credit constraints, a contingent tax rule may be sensible (Deaton and Laroque, 1992).

In addition, governments could resort to market-based approaches to hedge their fiscal position. For countries where fiscal revenues are heavily dependent on commodities, catastrophe insurance should be considered as an option. More generally, even if changes in the terms of trade do not pose a threat to fiscal stability, dealing with commodity price instability may help economies withstand terms-of-trade shocks.[38] However, the extent to which the government should get involved depends on the circumstances.

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[38] See, for example, Larson, Varangis, and Yabuki (1998) and World Bank (1999).

Pro-poor Crisis Response

Responses to macroeconomic crises, when they do occur, can be more (or less) sensitive to the plight of the poor. A poverty-sensitive response should help the poor to maintain adequate consumption levels, ensure that the poor continue to have access to basic social services, prevent irreversible impacts on human capital and prevent dysfunctional behavioral effects such as engaging in criminal activities, prostitution, the selling of body organs, or the development of abusive child labor practices. The next sections will show that policies can make a difference. In particular, there are three areas that will be discussed: macroeconomic policy mix, the composition of fiscal adjustment and safety nets.

MACROECONOMIC POLICY MIX

The most important aspect of macroeconomic policy during periods of crises both for the poor and the non-poor is to avoid situations of "overkill:" that is, to avoid an overly tight monetary and fiscal policy that results in a larger recession than that needed to restore equilibrium. Although it is very hard to distinguish *ex-ante* when policies are in danger of becoming "overkill," such situations do occur. For example, in the East Asian crisis fiscal targets were revised three times during 1998 as authorities inside and outside the countries realized that the initial targets were going to be self-defeating.[39] An overkill can be transitory, but if the recession is protracted, investment in human and physical capital contracts, and investment in new technologies is put off, the result can be a lower steady-state level of output when the economy recovers.

The optimal combination of policies achieves the necessary balance of payments adjustment with the smallest decline in output. This optimal combination depends on the initial conditions in the economy.[40] Would macroeconomic responses to crises that are optimal for the economy as a whole differ from macroeconomic policies that are optimal for the poor? The answer to this question is: perhaps. Previous work that focused on the impact of alternative stabilization programs on income distribution using computable general equilibrium models found that in some cases the poor are hurt the most while in others that is not the case. The basic conclusion of all these studies is that the impact of adjustment depends largely on the country's initial conditions, on the nature of the shock and on the characteristics of the adjustment program. A second finding was that the "no policy" adjustment option was worse than any of the alternatives. A third finding was that different types of poor persons (rural vs. urban) could fare quite differently during the adjustment process.[41]

Conflicts can emerge between the interests of the poor and the non-poor, and among types of poor persons, when different policy combinations result in different distributive outcomes. In Figure 1 we plotted the results of the computable equilibrium model constructed by De Janvry and Sadoulet (1991) for an "archetype" Latin American economy. The objective here is not to discuss the merits and realism of the model or its results. The purpose is to show how rankings can differ for different income groups. In our example, and assuming a discount factor of around 0.95, the optimal adjustment path (i.e., the one that yields the highest present value) for the entire economy coincides with the optimal path for the rural poor, but not for the urban middle classes and the urban poor. The rural poor prefer the fiscal adjustment which concentrates all the cuts on public consumption, while the latter prefer the "money-

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[39] Global Economic Prospects (1998/9), Table 2-9. P. 86.

[40] See, for example, the discussion by Perry and Lederman (1999).

[41] See, for example, Bourguignon, and Morrisson, eds., (1992); World Bank Economic Review (vol 5, no. 2, May 1991); Thorbecke (1994); de Janvry and Sadoulet (1991); Bruno, Ravallion and Squire (1999) in Tanzi and Chu (eds.).

based" adjustment. Note also that at lower discount factors, the "exchange rate-based stabilization" becomes number one for the economy, while for the rural poor the fiscal/public consumption remains optimal, and it is only if the discount rate falls below 0.9 that both coincide again. The urban middle classes and the urban poor still prefer the "money-based" stabilization. It is only if we assume that the discount factor equals 0.7 or less that everybody's rankings coincide.

Even if everybody's income falls in the same proportion, the poor may still have a different ranking from that of the overall economy. Consider that a country could choose between several adjustment policies, the main trade-off being between a sharper decline in output in the short-run, with a higher level in the medium-run, or a smaller decline in the short-run with a lower level in the medium-term (with everybody's income changing in the same proportion). It can be shown that if we assume a utility function of the form $U = f(c)$, $f'(c) > 0$, $f''(c) < 0$, the ranking for the poor (low consumption levels) and that of the economy as a whole can be different. This is shown in Figure 2.[42] The poor prefer the more gradual adjustment, i.e., the "A" policy package than the "C" policy package which is the optimal one for the economy as a whole (and the non-poor).

The poor may also have different rankings if one abandons some of the standard assumptions such as homogeneous discount rates and the absence of non-convexities. If, for example, the poor cannot afford falling below a minimum consumption level without jeopardizing their survival. Finally, the rankings could also be different if one assumes that the poor follow a *maximin* rule (i.e., they choose to maximize the minimum income during adjustment) or the *safety principle* (i.e, minimize the probability that income falls below a certain level).

The purpose of these examples is not to extract specific policy recommendations.[43] They were

introduced with the objective of showing how different macro-policy combinations can result in paths that may be optimal for the economy but not for the poor (or, at least, not for all of the poor). Furthermore, the implication should not be that whenever there is a discrepancy, pro-poor policymakers should adopt the path that is optimal for the poor (although there may be circumstances where that could be warranted). The most important implication is that if policymakers are worried about the welfare of the poor, they should introduce safety nets to compensate the poor (at least in part) for the "costs" imposed on them by choosing the optimal path for the economy. In fact, this is precisely the use to which resources from multilateral institutions and donors can be put during an adjustment program. The multilateral organizations could induce the countries to choose the optimal adjustment path, but make sure that the compensatory policies are properly undertaken. Safety nets should not be an afterthought.

In fact, the 1990s have witnessed important progress in incorporating social protection in adjustment programs, especially by multilateral institutions. The explicit protection of pro-poor programs was first introduced in the fiscal adjustments in Argentina and Mexico in 1995, and more recently in Argentina, Bolivia, Brazil and Venezuela. For example, in Venezuela in 1998, the government agreed to reverse a budget cut to programs targeted to the poor as a result of the involvement of a multilateral institution.[44] The concern, if not always the effectiveness, of addressing the social dimensions of crises took an even more central role in the wake of the Asian crisis.

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[42] Throughout this discussion we are assuming that the poor are credit-constrained.

[43] There is no optimal tool available to assess the distributive implications. However, there are three approaches that have been followed: the partial-

equilibrium approach (Kanbur, 1986); the Social Accounting Matrix/Computable General Equilibrium Approach (Taylor (1982); Dervis, de Melo and Robinson (1982), Thorbecke (1985), Bourguignon and Morisson (1992)); and, the macro-dynamic models (Rios-Rull (1994)).

[44] The Inter-American Development Bank.

THE COMPOSITION OF FISCAL AD-
JUSTMENT: PROTECTING
PRO-POOR SPENDING

How governments raise revenues and cut public (non-debt) spending has important policy implications in terms of who bears the burden of the adjustment process and whether the poor are protected. One particular concern is that spending on primary education and health care, and spending on programs targeted at the poor tend to be cut back along with other government expenditures. This happens because the fiscal adjustment has to be undertaken with speed. Governments face great pressure from a variety of political interest groups at such times. Proportional cuts are easier to implement quickly both in technical terms and in terms of raw politics. However, since poor people do not tend to form organized groups, and so lack a political voice, spending cuts on social protection and other spending targeted at the poor often tends to be larger, in relative terms.

In order to design a pro-poor fiscal adjustment, policymakers need to assess the distributional effects of spending programs. Programs that are particularly important for the poor – basic education, preventive health, water and sanitation provision, rural infrastructure, and slum upgrading – should be protected from budget cuts. For example, for a set of countries where information is available it has been shown that spending on basic education and health care is progressive; the ratio of benefits of the lowest quintile to the highest quintile is, on average, 3.2 for education and 1.7 for health (Yaqub, 1999). It is equally important to identify the kind of government spending programs that can be cut without leading to big increases in poverty and inequality, so that spending on programs that primarily benefit the non-poor can either be slimmed down or postponed during times of fiscal austerity. The major obstacles here are political rather than economic. Cutting middle class programs and perks to the rich to protect spending on the poor is no easy task. Governments need to win public support for the maintenance and even the expansion of anti-poverty programs following macroeconomic shocks.

One mechanism for protecting pro-poor government programs in the face of macroeconomic crises is the practice of earmarking revenues for specific purposes, such as protecting spending on employment programs and targeted human development programs. The main problem is that too much earmarking makes it difficult for governments to implement a fiscal adjustment following a crisis. If a large share of total revenues is earmarked for specific spending programs this means that only a smaller portion of discretionary expenditures can be cut. Moreover, earmarking can also lead to a misallocation of public resources. For example, if the government carries out the fiscal adjustment by increasing taxes, the extra resources may be automatically channeled into specific spending programs. If the practice of earmarking is widespread, members of the government and the legislature will also be subject to a great deal of pressure from constituents and interest groups for earmarking programs that benefit them. Thus, there is a danger that protected expenditures come to reflect little more than the relative political muscle of different interest groups, rather than programs that are effectively targeted to the poorest sectors of the population. This means that the practice of earmarking revenues must be very limited, and carried out in a transparent way so that it is directed by efficiency and equity considerations, rather than by lobbyists.

Peru is currently considering the practice of earmarking funds for safety nets as part of its public finance reform. Peru's program combines fiscal rules with measures to increase fiscal transparency and accountability, as well as creating a stabilization fund earmarked specifically for safety net programs. Though not necessarily classified as anti-poverty programs, these budget protocols have an important impact on poverty by protecting social spending, especially in times of fiscal retrenchment.

An alternative to earmarking is for the government and legislature to agree, during the budget approval process, on a ranking of existing programs. For example, as part of the budget appropriations process, different government programs

could be placed in different categories, indicating their relative priority. When expenditure cuts are needed, the order in which cuts take place is determined automatically depending on the priority assigned to each program. If such procedures were introduced in Latin American and Caribbean countries, government agencies could be required to provide evaluation reports on different programs, so that part of the criteria would be that the most efficient and effective programs for the poor are protected. The objective would be both to identify social programs with high rates of return in order to protect them during a crisis.

Argentina has recently been hit by a considerable external shock, due to the devaluation of the Brazilian *real,* which has led to recession and a significant reduction in tax revenues. The government announced a series of expenditure cuts, among which were important cuts in the education sector. These cuts generated widespread protests, because they did not have support of the political parties, forcing the government to back down and the education minister to resign. The process would have been much smoother if the programs to be cut in case of fiscal difficulties had been decided, in advance, in concert with the Congress during the process of budget approval.

SAFETY NETS

As discussed above, there are several reasons why safety nets are important. First and foremost, safety nets can play a crucial role in reducing the impact of crises on the poor. Safety nets can help avoid irreversible damage to the human capital of the poor. Safety nets can compensate the poor so that their preferred adjustment path coincides with the one that is the most efficient for the overall economy. Safety nets can facilitate the implementation of stabilization and reforms from a political point of view. Distributive conflicts can provoke stalemates, deepen economic crises, or even cause political collapses. Recent work has shown that the combination of weak institutions, including a lack of adequate safety nets, lies at the heart of many growth collapses experienced in the last 25 years (Rodrik, 1997). Evidence suggests that programs put in place and operating before

crises hit (albeit on a smaller scale) are better equipped to protect the target population than *ad hoc* emergency measures.

At present, most Latin American and Caribbean countries still need to improve their mechanisms to protect the poor from the brunt of economic crises. While there is a widespread perception that social funds were put in place for precisely that purpose, a closer examination reveals that most Social Investment Funds were more effective at building small-scale social infrastructure than they were in creating employment opportunities for those hurt by the emergency (Newman, Jorgensen and Pradham, 1991; Also see Lustig, 1997). In fact, most countries in the region lack effective consumption-smoothing safety nets that could serve to protect the poor from output, employment and price risks associated with systemic adverse shocks.

A recurring problem is that, because the institutional mechanisms to protect the poor from the brunt of the shocks are not in place beforehand, responses have to rely frequently on improvisation, or programs that were designed for purposes and beneficiaries other than those affected by the crisis. Emergency responses to emergency situations often lack the time for the adequate technical analysis that is needed both to clarify the socio-economic profile of groups most vulnerable to the adverse shocks, and to evaluate the cost-effectiveness of different social protection options.

There are examples inside and outside Latin America of good practices in the case of safety nets that can work well. The ideal safety nets are those which provide a consumption floor and, at the same time, protect the human capital accumulation of the poor or contribute to expanding the social and physical infrastructure for the poor.[45] One such example are Targeted Human Development Programs (THDPs) that transfer income in cash or in-kind to poor households with children and condition the transfers on the household investment in the human capital of their children (school attendance and health care visits). The

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[45] See IDB, forthcoming, Chapter 5.

income-support component reduces current poverty, and ensuring the nutritional and health status, as well as the educational attainment of children, augments their future earning capacity.

In the past few years THDPs were introduced in Mexico, Honduras and Brazil and similar programs are currently being implemented in Argentina, Ecuador and Nicaragua. Of these new programs, Mexico's *Progresa* is the most comprehensive in terms of the targeting and evaluation mechanisms it utilizes and the range of education, health and nutrition interventions it provides.[46]

Progresa is currently being thoroughly evaluated, but preliminary results of targeting effectiveness and the impact of the program on school enrollment are encouraging (Schultz, 1999). As of 1998, three-quarters of the 1.9 million rural poor households reached by *Progresa* were in the bottom quintile of the income distribution. As for education, analysis using group comparisons of enrollment rates finds that the poor in *Progresa* communities are more likely to enroll their children in school than the poor in non-beneficiary communities. This is especially true for children in grades seven through nine, where enrollment rates were 4.9 percentage points higher in communities with the program. For grades three through six, enrollment rates were 2.2 percentage points higher with the program. The continuation rate from primary to secondary school also increased significantly under the program, from an enrollment rate of 43 percent for children who had completed the sixth grade in non-beneficiary communities to a rate of 55 percent in beneficiary communities. The increase remains significant even after the difference is adjusted for past variations in enrollment rates. *Progresa* has also had an important impact on educational inequality in beneficiary communities. After only one year of program grants, children from poor families now attend school more frequently than children from relatively better off families in grades one through eight in all but one grade level, reversing the pattern existing before the program was implemented.

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[46] *Progresa* is the Spanish acronym for Education, Health and Feeding Program.

Workfare programs can also function as effective safety nets. Data reveals that open unemployment is highest in the lower income quintiles, implying that unemployment is a cause of poverty. Workfare programs, by offering wages in exchange for work, aim to transfer resources to unemployed and, in most cases, unskilled workers, while at the same time minimizing the perverse incentives to work. An important feature of these programs is that – if the wage rate offered is low compared to market wages for unskilled workers – they will be self-targeted because the program will appeal only to those workers who have few alternative employment opportunities. Because the reservation wage and the opportunity cost are positively related to skills and living standards, workfare programs are a good way to target unskilled workers (Lipton and Ravallion, 1995). These programs can provide unemployment protection for poor workers in response to aggregate, regional and sectoral, and idiosyncratic shocks. These programs can be even more valuable if they are designed to provide training for unskilled and poor workers and contribute to the social and physical infrastructure of poor areas.

Chile was the first country in Latin America to successfully use workfare programs to target poor unemployed workers and generate employment. The programs were implemented in response to the soaring levels of unemployment following the 1982 recession. At its peak in the 1980s, the various public work programs employed 13 percent of the Chilean labor force (Márquez, 1999). More recently, Argentina introduced intensive workfare programs in response to the 1995 crisis. *Trabajar* and similar programs are funded through payroll taxes that are directed into the *Fondo Nacional de Empleo* (National Employment Fund). The resources are used to build small scale and labor-intensive public works, including social infrastructure, roads and small sanitation works. The programs are funded and supervised at the federal level, but the public works schemes are managed by a variety of agencies, including local and state governments and nongovernmental organizations (Márquez, 1999). In Mexico, public work projects are financed by allocations from general revenues in the federal government budget and are

managed by state and local governments. These programs tend to focus on building rural roads and social infrastructure. In Peru, the social investment fund *Fondo Nacional de Compensación y Desarrollo Social* (National Social Compensation and Development Fund) is used to generate employment that can be quickly adjusted to the situation of local labor markets (Verdera, 1998).

Recent research has shown that workfare programs can be seen as an unemployment insurance contract plus a technology to monitor the working status of the worker (Hopenhayn and Nicolini, 1999). The monitoring technology consists in making unemployed workers show up to work in order to receive the benefits. In this way, employment programs solve the incentive problem that would be created by having the more classical form of unemployment insurance for workers who have jobs in the informal sector of the economy or are self-employed. Decentralization of the monitoring of the employment status will work best if the organizations that hire the workers in the employment programs (local governments or NGOs) finance the other (non-labor) inputs of the program. This decentralizes the monitoring of the employment status of the beneficiary in an incentive compatible way.

It is often argued that during times of austerity governments are not going to be able to maintain, let alone expand, spending on safety nets. However, the costs of safety nets need not be large even if they reach a large number of beneficiaries. For example, the cost of *Progresa* is about 0.2 percent of Mexican GDP and 1 percent of the total federal budget, and the number of beneficiaries is almost 2 million households. The workfare program *Trabajar* in Argentina costs about a quarter of one percent of GDP, reaches 350,000 unskilled unemployed workers and transfers an average of 26 percent of family income and as much as 74 percent of family income in households in the bottom 5 percent of the income distribution. Assuming that the average benefits remain constant, the cost of expanding the program to reach all unemployed workers in the first quintile of income distribution is around 0.7 percent of GDP.[47]

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[47] These estimates refer to *Trabajar II*.

Conclusion

Macroeconomic crises not only affect the current living standards of the poor, but their ability to grow out of poverty. During crises the children of the poor face malnutrition and frequently drop out of school. Poor households often are forced to sell their meager assets at depressed prices. Both help perpetuate chronic poverty and are bad for overall growth. Hence, crisis prevention has to be a top priority of any anti-poverty strategy. Likewise, a pro-poor response to crises should be an integral part of a country's poverty reduction blueprint. A pro-poor crisis response should avoid "overkills" and try to provide the poor with a minimum consumption floor. A pro-poor response should protect programs that benefit the poor from being cut and include consumption-smoothing safety net programs targeted to the poor. Safety nets that provide current transfers and at the same time encourage investment in assets of the poor are the most attractive. Examples are stay-in-school and public workfare programs. Effective pro-poor crisis response requires that the institutional structures to make spending for the poor counter-cyclical be in place beforehand. Likewise, counter-cyclical safety nets should be part of a country's social protection agenda. Experience shows that improvising in the heat of a crisis results in the "too little, too late" response.

Protecting the poor from sharp, short-term income falls with efficient and properly funded safety nets is not only equity-enhancing. It also promotes economic growth. Macroeconomic crises lead to a reduction in the limited human capital of the poor. This frustrates the attempts of poor people, and their children, over time to work their way out of chronic poverty. Permanent reduction in the stock of human capital of the poor, due to malnutrition and deteriorating skills, might also lead to lower economic growth. Socially responsible macroeconomic policy in crisis avoidance and crisis response can contribute simultaneously to lower chronic poverty and higher growth.

Table 1. Poverty and Crisis (poverty headcount ratio)

Country	Year of Crisis	Before the Crisis		Year of Crisis		After the Crisis			After Crisis GDP per Capita vs. yr. of the Crisis	vs. yr. before Crisis
Argentina[a](Greater Buenos Aires)	1985	10.1	(1980)	20.6	+	25.2	(1987)	+	+	-
Argentina[a](Greater Buenos Aires)	1989	25.2	(1987)	34.6	+	35.0	(1990)	+	+	-
Argentina[a](Greater Buenos Aires)	1995	16.9	(1993)	24.8	+	26.3	(1997)	+	+	+
Brazil[b] (All metropolitan areas)	1990	27.9	(1989)	28.9	+					
Chile[c] (Metropolitan areas) §/	1982	40.3	(1980)			48.60	(1987)	+	+	-
Costa Rica[d] */	1982	29.6	(1981)	32.3	+	29.7	(1983)	+	+	-
Dominican Republic[d] */	1985	37.3	(1984)			38.2	(1986)	+	+	+
Dominican Republic[d] */	1990	35.7	(1989)			39.5	(1992)	+	+	-
Guatemala[e] §/	1982	65.0	(1980)			68.0	(1986)	+	-	-
Mexico[f]	1986	28.5	(1984)			32.6	(1989)	+	+	+
Mexico[g] §/	1995	36.0	(1994)			43.0	(1996)	+	+	-
Panama[d] */	1983	40.6	(1980)			44.0	(1986)	+	-	-
Panama[d] */	1988	44.0	(1986)			50.0	(1989)	+	-	-
Peru[h] §/	1983	46.0	(1979)			52.0	(1986)	+	+	-
Peru[i] (Urban) */	1988	32.2	(1985)			50.0	(1991)	+	-	-
Uruguay[e] §/	1982	11.0	(1981)			15.0	(1986)	+	-	-
Venezuela[j] §/	1983	25.7	(1982)	32.7	+	34.8	(1985)	+	-	-
Venezuela[j] §/	1989	40.0	(1988)	44.4	+	41.5	(1990)	+	+	-
Venezuela[j] §/	1994	41.4	(1993)	53.6	+	48.2	(1996)	+	-	-

Note: Headcount based on individual per capita household income unless otherwise noted
§/ based on household, */ based on consumption
Real GDP per capita data from WDI, World Bank.

Source:
a. Instituto Nacional de Estadistica y Censos, Argentina
b. Barros, Mendoca, and Rocha (1995). "Brazil: Welfare, Inequality, Poverty, Social Indicators, and Social Programs in the 1980s" in Lustig ed. Coping With Austerity, The Brookings Institution.
c. Lustig, Nora. (1995) op cit. Table 1.1
d. Londoño/Székely(1997), Persistent Poverty and excess inequality: Latin America, 1970-1995, Inter-American Development Bank
e. ECLAC (1996) Social Panorama of Latin America 1996, Santiago de Chile.
f. Lustig, Székely (1998). "Economic Trends, Poverty and Inequality in Mexico". IADB-SDS POV, Washington, D.C.
g. ECLAC (1999). Social Panorama of Latin America, 1998.
h. CEPAL 1989 "Antecedentes Estadisticos de la Distribucion del Ingreso en el Peru, 1961-1982". Serie Distribucion del Ingreso No. 8. and CEPAL 1996 Social Panorama of Latin America 1996, Santiago de Chile.
i. Escobal, Javier, Jaime Saavedra and Máximo Torero (1998). "Los Activos de los Pobres en el Perú". Documento de Trabajo Nº26. Grupo de Análisis para el Desarrollo, Lima.
j. Ruprah and Marcano (1998), Mimeo, work in progress. Washington, D.C.
"+", means an increase, "-", means a decline , "=", means no change, Blanks mean "not available"

Table 2. Inequality and Crisis (Gini Coefficient)

Country	Year of Crisis	Gini before Crisis		Year of Crisis		Gini after Crisis			After GDP Capita vs. yr. of the Crisis	Crisis per vs. yr. Before Crisis
Argentina[a] (Greater Buenos Aires)	1985	0.40	(1983)	0.40	=	0.45	(1988)	+	+	-
Argentina[b] (Greater Buenos Aires)	1989	0.44	(1986)	0.53	+	0.45	(1992)	+	+	+
Argentina[c] (Greater Buenos Aires) §/	1995	0.36	(1994)			0.38	(1996)	+	+	-
Brazil[d]	1990	0.61	(1989)	0.61	=	0.59	(1992)	-	+	-
Chile[e] (Santiago)	1982	0.53	(1980)	0.54	+	0.55	(1984)	+	-	-
Costa Rica[e]	1982	0.40	(1980)	0.42	+	0.38	(1984)	-	+	-
Dominican Republic[f] §/	1985	0.42	(1984)			0.51	(1986)	+	+	+
Dominican Republic[d]	1990	0.51	(1989)			0.52	(1992)	+	+	-
Guatemala[e] §/	1982	0.48	(1981)			0.53	(1986)	+	-	-
Mexico[g]	1982	0.50	(1977) §/			0.51	(1984)	+	-	-
Mexico[h]	1986	0.47	(1984)			0.53	(1989)	+	+	+
Mexico[i]	1995	0.48	(1994)			0.46	(1996)	-	+	-
Panama[d*]	1983	0.48	(1980)			0.52	(1986)	+	-	-
Panama[d*]	1988	0.52	(1986)			0.57	(1989)	+	-	-
Peru[e] (Lima)	1983	0.34	(1981)			0.39	(1984)	+	+	-
Peru[e] (Lima)	1988	0.39	(1987)			0.41	(1989)	+	-	-
Uruguay[g] (Urban)	1982	0.43	(1981)			0.40	(1983)	-	-	-
Venezuela[d]	1983	0.44	(1981)	0.45	+	0.48	(1985)	+	-	-
Venezuela[d]	1989	0.47	(1987)	0.46	-	0.46	(1991)	-	+	+
Venezuela[d]	1994	0.45	(1992)	0.50	+	0.47	(1995)	+	+	-

Note: Headcount based on individual per capita household income unless otherwise noted

§/ based on households

Real GDP per capita data from WDI, World Bank.

Sources:

a. Fiszbein et al (1993) "La Pobreza y la Distribucion de los Ingresos en America Latina: Historia del Decenio de 1980" LAC Technical Dept. Report No. 27, The World Bank, Washington, D.C.

b. "Argentina's Poor: A Profile". World Bank (1995), Washington D.C.

c. Altimir, Oscar and Luis Becaria. 1997. Efectos de los cambios macroeconomicos y de las reformas sobre la pobreza urbana en la Argentina. Paper prepared for the project "Politicos Macroeconomicos y Pobreza en America Latina y el Caribe. UNDP, IDB, ECLAC. October.

d. Londoño and Székely (1997), "Persistent Poverty and excess inequality: Latin America, 1970-1995", Inter-American Development Bank

e. Morley (1994) "Poverty and Inequality in Latin America, Past Evidence and Future Prospects." Policy Essay No. 13 ODC, Washington, D.C.

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h. Lustig/Székely (1998), "Economic Trends, Poverty and Inequality in Mexico." IADB-SDS POV, Washington, D.C.

i. INEGI (Mexico). CD-ROM. Encuesta Nacional de Ingresos y Gastos de los Hogares, 1992, 1994 y 1996.

"+", means an increase, "-", means a decline , "=", means no change, Blanks mean "not available"

Table 3: Social Impact of Economic Crises

	Argentina (1995)	Dominican Republic (1990)	Jamaica (1985)	Mexico (1982)	Mexico (1995)	Venezuela (1994)
Main crisis indicators [1]	-In 1995 GDP per capita fell 4.2% and private per capita consumption fell 6.4%.	-In 1990 GDP per capita fell 7.6% and private per capita consumption fell 13.9%.	-In 1985 GDP per capita fell 6.2%.	- In 1983 GDP per capita fell 6.3% and private per capita consumption fell 7.4%.	- In 1995 GDP per capita fell 8.1% and private per capita consumption fell 11.5%.	-In 1994 GDP per capita fell 4.6% and private per capita consumption fell 8.3%.
Poverty and inequality	-Urban income based gini index rose from 0.36 in 1994 to 0.38 in 1996 [2]. -Moderate poverty headcount rose from 16.9% in 1993 to 24.8% in 1995 [2].	-National income based gini index rose from 0.51 in 1989 to 0.52 in 1992 [3]. -Poverty headcount rose from 36% in 1989 to 40% in 1992 [4].	-Moderate poverty rose from 29.1% in 1980 to 29.6% in 1988 [5].	- 1984-1989: National income based gini index rose from 0.43 to 0.47 - Moderate poverty headcount rose from 28.5 to 32.6% , extreme poverty rose from 13.9% to 17.1in 1994 to 43% in 1996.	- Moderate poverty headcount rose from 36% in 1994 to 43% in 1996 [6].	-National income based gini index rose from 0.45 in 1992 to 0.50 in 1994 [7]. -Moderate poverty headcount rose from 41% in 1993 to 54% in 1994 [7] and the extreme poverty rose from 16.8% to 27.5% during the same period [7].
Labor markets [8]	-In 1995 the average real wage fell 1.1%. -The urban open unemployment rate rose from 11.5% in 1994 to 17.5% in 1995.	-Minimum urban real wages fell 3% in 1991 [9].	-The open unemployment rate decreased from 25.5% in 1984 to 23.6% in 1986.	- 1983-1988: The average wages fell by between 36% and 46% depending on the sector. -Urban open unemployment rate rose from 4.2% to 6.3%	-The average real remuneration increased 3.7% in 1994 but decreased 13.5% in 1995 [a][10] -Urban open unemployment rate rose 2.6 percentage points between 1994 and 1995 (3.7% to 6.3%). In 1997 it fell back to its 1994 level [10].	-Average real wages [b] fell 15.7% in 1994 and 4.6% in1995. -Urban open unemployment rate rose from 6.8% in 1993 to 8.9% in 1994.
Social spending [10]	-Social spending as a share of total expenditure rose from 65.2% in 1994 to 66.8% in 1995, as percentage of GDP it increased from 18.1% to 18.6% in the same period. -Education spending as percentage of GDP rose from 3.7% in 1994 to 4.0% in 1995; meanwhile the health spending as percentage of GDP rose from 1.9% to 2.0% in the same period.	- Social spending as percentage of total expenditure decreased from 39.6% in 1989 to 36.6% in 1990 and as a percentage of GDP decreased from 6.6% to 4.7% in the same period. -Spending on education as percentage of GDP decreased from 1.5% to 1.2% Spending on health as percentage of GDP decreased from 1.2% to 1.1% in the same period.	-Spending on education as percentage of GDP decreased from 7.2% in 1982 to 0.6% in 1985. In 1986 it rose to 1.2%. -Health spending as percentage of GDP decreased from 10.6% in 1982 to 6.1% in 1985.	- 1983-1988: Social spending fell 33.1% - 1983-1988: Social spending on education fell 29.6; spending on health fell 23.3%	-Social expenditure as percentage of GDP decreased from 9.0% in 1994 to 6.8% in 1995. -The education spending as percentage of GDP decreased from 3.9% in 1994 to 3.6% in 1996.	-Real per capita social expenditure in 1990-1991 was 9.0% of GDP. In 1996-1997 it fell to 8.4%. -Spending on education as percentage of GDP rose from 3.9% in 1993 to 4.4% in 1995.
Health and Nutrition [12][13]	-The per capita daily protein grams intake decreased 3.8% in 1995, in 1996 it increased 1.9%. -In 1995 deaths from pneumonia and influenza rose nearly 6%.	-The number of infants aged 6-11 months suffering from chronic malnutrition rose from 9.6% in 1986 to 17% in 1991. -Per capita daily protein grams intake decreased 6.8% in 1990. The next year it increased 4.6%	-The per capita daily protein grams intake decreased 5.9% in 1985 then increased 4.9% in 1986.	-Infant mortality continued to decline between 1982 and 1989, but at a slower rate than in the previous decade - Infant and pre-school mortality caused by nutritional deficiencies increased from 1982 after years of decline. The number of infants suffering from slow fetal growth and malnutrition increased from 8.5% of the total diseased children in 1981 to 11.7% in 1984.	-Mortality from anemia increased in children under 1, from 6.3 deaths per 100,000 live births in 1993 to 7.9 in 1995, and in children between the ages of 1 and 4 from 1.7 to 2.2 deaths per 100,000 respectively.	-The per capita daily protein grams intake decreased 4.2% in 1993, 2.9% in 1994 and 0.5% in 1995
Education [14]	-Total primary enrollment [c] growth declined from 2.2% in 1993 to 0.62% in 1996.	-Total primary enrollment [c] declined from 97.1% in 1988 to 96.6% in 1990.	-Total primary enrollment [c] rose slowly between 1985 to 1987, from 100.0 to 100.8.	-The proportion of graduates who entered the subsequent educational level declined after 1982. - In rural zones the dropout rate rose by almost 3 percentage points.	-In 1994 total primary enrollment [c] growth was 0.44% and it fell in the next year to 0.35%	-Total primary enrollment [c] declined from 94.4% in 1993 to 91.7% in 1995.

Note:
a Only includes urban workers.
b Only includes Manufacturing.
c Total Primary enrollment is defined as the share of people enrolled in primary school as a percentage of people in the age group corresponding to primary education.

Sources:
1 Information about GDP was extracted from the IDB. Statistical and Social Database, and Private Per Capita Consumption was extracting from ECLAC. Statistical Yearbook for Latin America and the Caribbean.
2 Altimir and Becaria (1998) "Efectos de los Cambios Macroeconómicos y de las Reformas sobre la Pobreza Urbana en la Argentina" in Ganuza, Taylor, and Morley *Política Macroeconómica y Pobreza en América Latina y el Caribe* (PNUD/CEPAL/BID).
3 Deininger and Squire (1996). Measuring Income Inequality: a new database. WP, World bank.
4 Aristy and Dauhajre (1997). "Efectos de las Políticas Macroeconómicas y Sociales sobre la Pobreza en la República Dominicana" Mimeo.
5 Londoño and Székely (1998). "Persistent Poverty and Excess Inequality: Latin America, 1970-1995", IADB.
6 CEPAL. Panorama Social 1998.
7 Ruprah and Marcano (1998), Mimeo, work in progress. Washington D.C.
8 The average real wage came from ECLAC. "Statistical Yearbook of Latin America and the Caribbean" and "Estudio Económico de América Latina y el Caribe", and the unemployment rate was obtained from IDB. Statistical and Social Database.
9 CEPAL. Statistical Yearbook, 1997.
10 Lustig, Nora. (1998) Mexico, The Remaking of an Economy.
11 Social spending, including Education and Health expenditure was obtained from "Social Panorama" and "Statistical Yearbook or Latin America and the Caribbean" (Several Editions).
12 Data on health indicators and malnutrition was extracted from PAHO. Health in the Americas (Several years).
13 Information about per capita daily protein grams intake was extracted from IDB. Statistical and Social Database.
14 Information about education enrollment rate was obtained from IDB. Statistical and Social Database.

Figure 1. Adjustment Rankings with changes in Distribution

NPV for the Economy

NPV for the Urban Worker with Medium Education

NPV for the Rural Poor

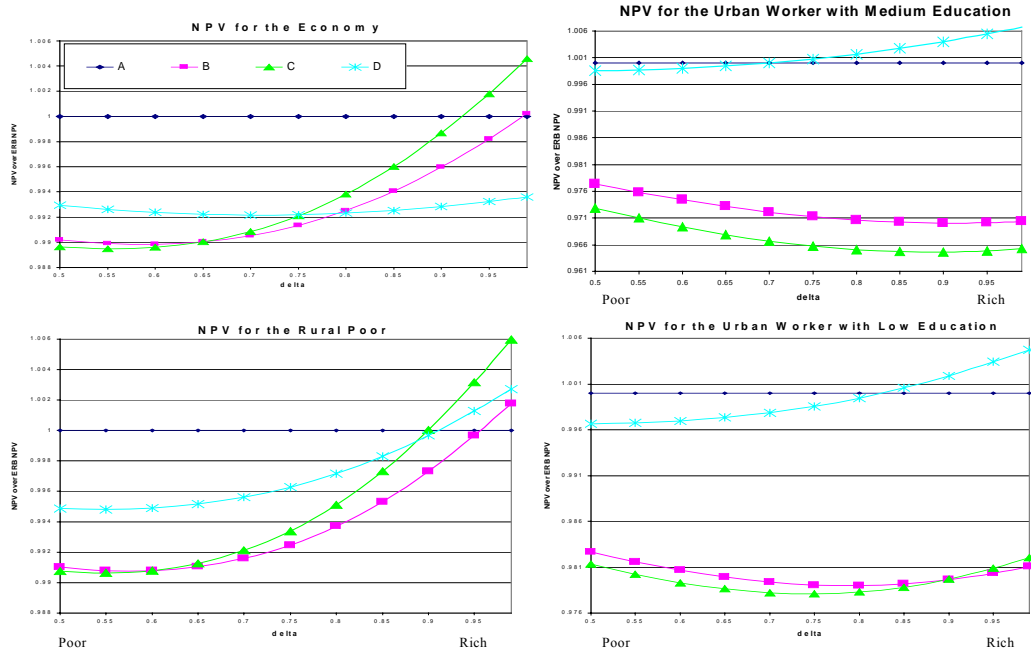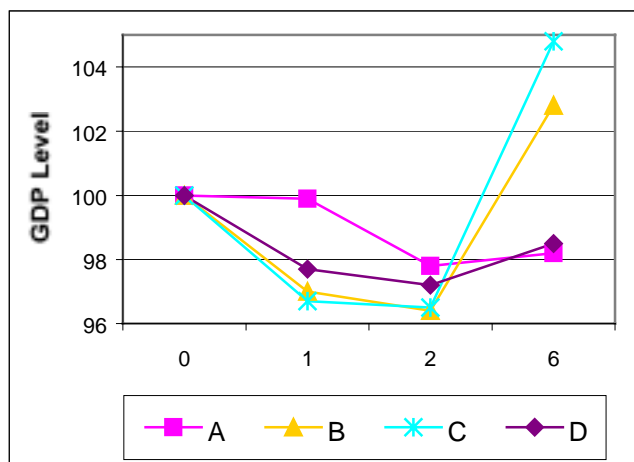**NPV for the Urban Worker with Low Education**

Figure 2. Adjustment Rankings without changes in income distribution

Source: Own calculation with results from de Janvry, Fairgeix and Sadoulet (1991)

Program	Rankings		
	Net Present Value	Poor Utility	Non-Poor Utility
A	2	1	2
B	3	4	3
C	1	3	1
D	4	2	4

_____

Assumptions:

Net Present Value (NPV) calculations assumed a discount factor of 0.95. The consumption level of the poor was one fourth of those of the rich (this was the initial distribution of consumption in the model) under all the adjustment paths. There is no consumption smoothing. Welfare is measured in utility terms and the following utility function (for both rich and poor) was used:

$$U = \sum_i \delta^i \left[\log(c_i - \bar{c}) \right]$$ for i=0,1,2 and 6, where δ=0.95 and $\bar{c} = 19.25$

Comments on the assumptions:

No consumption smoothing is a vital assumption since with consumption smoothing the only thing that matters is the NPV. These results would hold under a large family of utility functions so long that they have enough "curvature". The discount factor of .95 (which implies a discount rate of 5.26) is between the range of what is commonly assumed in macro dynamic models. Changes in the discount rate would alter the rankings of alternative adjustment paths for both rich and poor, but differences in the rankings between the rich and the poor are still likely to arise.

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Appendix

Figures 1 and 2 are based on the results of the computable general equilibrium model from De Janvry , A. Fargeix and E. Sadoulet (1991). The model was intended to resemble the economy of Ecuador in the 1980s. The authors simulated a 30% decline in the price of the primary export and a 40% decline in government foreign borrowing. The base scenario, i.e., the steady state without the shock, implies a 3.4% growth in GDP, a 28% increase in the money supply, and 1.5% increase in government expenditures per year.

They simulate how the economy would react to the shock under four different types of adjustment programs, namely:

A .Exchange Rate Adjustment
Money Supply increases 40%   per year.
Government Expenditures increase 1.5% per year.

B. Fiscal Adjustment
Money Supply increases 40%   per year.
Reduce public consumption and public investment proportionally to keep the deficit constant.

C. Fiscal Adjustment
Money Supply increases 40.0% per year.
Reduce public consumption to keep the deficit constant (preserving public investment).

D. Money Base
Money Supply increases 25% per year.
Government Expenditures increase 1.5% per year.

Based on the simulation results, we generated two distributive paths. Figure 1 uses the authors' results; Figure 2 uses the authors' results for the economy as a whole but assumes that the reduction in incomes is proportionally distributed.