

PN-ARP-625

83531

STAFF WORKING PAPERS

Number 10

**REAL WAGES, POVERTY AND ECONOMIC POLICY CHANGES
IN SOUTH AMERICA AND MEXICO IN THE 1980s:
A REVIEW OF THE EVIDENCE**

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June 1993

**Bureau for Latin America and the Caribbean
U.S. Agency for International Development
Washington, D.C. 20523**

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Dr. Elliott is an economist in the Bureau for Latin America and the Caribbean. He thanks Clarence Zuvekas and Mary Ott for comments on an earlier draft of this paper, but absolves them of responsibility for any remaining errors of fact or interpretation.

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I. INTRODUCTION AND BACKGROUND

During the 1980s, the countries of Latin America and the Caribbean (LAC) experienced economic crises of a depth and duration unprecedented in the post-World War II era. At varying points in the 1980s and early 1990s, nearly all the LAC countries adopted programs of stabilization and structural adjustment -- of varying degrees of comprehensiveness and effectiveness -- in an effort to overcome their economic crises and reinitiate economic growth on a sustainable basis. There has been much controversy about the programs adopted, and their effects on income distribution and poverty frequently have been claimed to be adverse.

Part of the question has to do with the effects on working people: how have the stabilization and structural adjustment programs affected real wages and employment in the Latin American countries in the last decade? Can the effects of the crisis on wages and unemployment be disentangled from the effects of stabilization and adjustment measures? Economic modelling and simulation would be needed to disentangle the effects fully, but on the basis of a review of the evidence, some preliminary conclusions (qualitative more than quantitative) are possible.

In this paper, the experience of Mexico and ten South American countries is reviewed to see if any common patterns can be discerned. Programs are classified according to whether they involved primarily stabilization or structural adjustment or both, and whether they were gradual or of the "shock" variety. Some attention is given to changes in the situation of people on pensions and other fixed incomes, and to the evolution of real wages of different subgroups of workers. For example, a recent article suggests that in Chile those elderly people with social security as their only income would be below Chile's official poverty line. Additional research on changes in the status of such groups would be desirable.

To summarize the conclusions briefly, the movement of real wages and unemployment in the eleven countries examined here followed a fairly well-defined common pattern. With the onset of economic crisis due to a decline in the external terms of trade and the drying up of external credit on easy terms at the beginning of the 1980s, real wages tended to fall and unemployment to increase, sometimes dramatically, as real per capita GDP growth turned negative (see Table I-7) or slowed. Both real GDP (Table I-6) and real wages (Table I-2) tended to stagnate/fall regardless of whether an effective stabilization program had been launched or stabilization was being --

intentionally or unintentionally -- postponed. In many cases a series of ineffectual attempts to stabilize the economy were made which involved some mix of austerity measures that may have contributed, to some degree, to the economic slowdown. Effective stabilization, when it did come, was typically associated with a further fall in the real wage to a lower, more stable level, and with an eventual resumption of real wage growth and a tendency for unemployment to decline.

The effects on the extent and depth of poverty were largely as might have been expected. Think about what might be expected to happen. If the size distribution of wage income is assumed to be fairly equal and stable, and poor people are assumed to derive the greater part of their income from wage employment, then movements in real wages and urban unemployment as captured in official surveys may be a fairly good, though somewhat rough, first guide to changes in the situation of the urban working poor. An ILO/PREALC study (1983) found that in 1970 in the Latin American countries wage and salaried workers (as opposed to the self-employed) made up on average somewhat more than 70% of the work force, so that movements in real wages are significant for a large proportion of the working-age population (p. 92). However, real wages and real GDP occasionally moved in opposite directions, and this can mean (for example, if real wages were rising while real GDP were falling) that self-employment incomes and transfer payments received by the poor may have declined still more than real GDP during such periods.

Increases in unemployment and decreases in real wages can be expected to push significant numbers of households below the poverty line and so increase the percentage of the population living in poverty, while reductions in unemployment and increases in real wages will have the opposite effect.

The same argument can be made also with respect to the relationship between changes in average real GDP and the percentage of the population living in poverty (%INPOV), if the size distribution of personal or household income from all sources is fairly stable through time. Declines in average real GDP will be associated with corresponding increases in %INPOV, and increases in average real GDP will be associated with declines in %INPOV. The same holds true for the intensity of poverty measure, the population-share weighted average gap between actual income and poverty-level income.

To test these hypotheses, wage and unemployment movements are compared with changes in poverty indicators for which estimates have been made available at different points in time by a recently published CEPAL study. For the countries for which both sets of data are available, poverty worsened as real wages fell and unemployment rose in the first half or three-quarters of the 1980s; therefore, as real wages recovered and unemployment

declined subsequently, the percentage of households living in poverty presumably has declined.

All eleven countries eventually found or are finding it necessary to undertake stabilization programs with orthodox elements, notably monetary and fiscal discipline, and elimination or reduction of broad-based consumption subsidies (ideally replacing them with means-tested targetting of subsidies). The alternative has proven to be continued high inflation and/or stagnation. It takes time for programs of stabilization and structural reform to work, and in the intervening years real wages can fall further and unemployment can worsen. Some countries (e.g. Chile) have used public works programs to moderate the adverse impact of crisis and adjustment on the labor market (World Bank, World Development Report 1990, pp. 118-119).

II. ECONOMIC POLICY CHANGES: EARLY AND LATE ADJUSTERS

The countries examined in this paper can be divided into two classes with respect to economic policy changes in the 1980s and early 1990s: early adjusters or continuous adjusters (e.g. Bolivia, Chile, Colombia and Mexico); and late adjusters (Argentina, Brazil, Paraguay, Peru and Venezuela). (Ecuador and Uruguay fall into somewhat of an intermediate category.) Of the early adjusters Bolivia adjusted its economic policy quickly and comprehensively (1985), while the others followed a more gradual path. Chile liberalized its trade early and radically, in the 1970s, and when faced with a crisis and the need to stabilize in the early 1980s did not go back much on the trade liberalization; on the other hand, Chile took a long time to get its inflation rate down to low levels. Colombia was slower to liberalize its trade but has not let its inflation rate get above 20-30% per year. Some countries started early on stabilization and late on trade liberalization, and some vice versa, and others (e.g. Bolivia and Venezuela) tackled both problems at once. (The sequence in which stabilization and trade liberalization and other structural adjustment reforms should be undertaken has been, and remains, a subject of controversy; however, as Edwards [1992] has shown, the consensus seems to be that stabilization should precede structural adjustment.)

The need to adjust and stabilize became evident at about the same time for all the countries studied here. Terms of trade shifts, higher world interest rates, and shortfalls in export earnings relative to earlier expectations -- and the role of the oil price increases of 1973 and 1979 -- are a common theme in the story of the early 1980s, and it has been told many times (e.g. Williamson 1990). Expenditures, especially public sector expenditures, had been allowed to become excessive relative to what could be financed without resort to inflation and

unsustainably heavy external borrowing. Inflation accelerated accordingly and in some cases went totally out of control.

In addition, it became evident to policy makers that high-cost import-substituting policies were not working as expected, but instead were sacrificing exploitation of actual comparative advantage without developing comparative advantage along the lines that had been hoped for. The amounts of external financing and assistance that were needed on a sustained basis were well beyond what could be expected from official creditors and multilateral development lending institutions. Appeal needed to be made to the funds and management capabilities of foreign private capital and of home-grown entrepreneurs who in many cases had long ago moved both their funds and themselves out of the country.

Therefore, the needed economic policy changes practically defined themselves: reduce public spending and inflationary domestic finance; broaden the tax base, improve tax administration and taxpayer compliance, and end reliance on the "inflation tax"; replace indiscriminate, broad-gauge subsidies to producers and consumers with limited targetted subsidies; unify and depreciate official exchange rates in real terms and allow them to be basically market-determined; open up the economy by reducing tariff and nontariff trade barriers; remove other distortions by allowing domestic markets (e.g. commodity and credit markets) to function without subsidies which the government could not afford and without controls which could not be enforced except by driving business out of the country or into the underground economy; privatize state-owned enterprises (which often involves reducing payrolls through layoffs and early retirement); and attract foreign capital by adopting sound economic policies and improving the legal, regulatory and judicial framework.

To date the onset of the crises requiring adjustment, and to establish when stabilization and adjustment began, two data series are particularly useful -- real exchange rates and point-to-point inflation.

In theory, periods of foreign trade liberalization should be associated with real depreciation of the currency, since real depreciation is needed to keep external payments in balance. In addition, real exchange rate appreciation tends to be associated with episodes of unsustainable, deficit-financing-fueled economic expansion which lead to a crisis, and to economically costly restrictions on foreign trade and investment. Real depreciation, on the other hand, is associated with the tighter fiscal and monetary policies required for stabilization, as well as with the lifting of trade restrictions. Thus, real appreciation leading to a crisis is typically followed by real depreciation, reimposition of fiscal and monetary discipline, and relaxation of

trade restrictions (although there may be an initial period of tightened restrictions to speed the stabilization process). This pattern was observed for Bolivia, Colombia, Chile, Mexico and Venezuela in the 1980s and Argentina in 1990/91.

Other aspects of stabilization and structural adjustment can include liberalization of the capital account, lifting of ceilings on interest rates, improved expectations for the economy, and rebuilding of real balances. These factors can lead to or be associated with real appreciation of the currency. Thus, in spite of the fact that from September 1990 onward Peru greatly tightened its monetary and fiscal policy, relaxed import restrictions and reduced tariffs, and resumed servicing its debt to the World Bank and the IDB, its currency appreciated heavily in real terms following initiation of the shock stabilization and adjustment program of September 1990.

The quantitative data are presented in Annex I. These data have been drawn mostly from CEPAL (ECLAC) and IDB documents. The identification of the timing of economic crisis, stabilization and liberalization is based on a reading of country studies.

Table I-1 presents a summary periodization of events, for each of the countries, including the onset of crisis (C), effective stabilization (S), economic liberalization (L), and recovery (R), as well as hyperinflationary episodes (H). Liberalization is defined principally as substantial reduction of tariff and non-tariff barriers. The onset of economic crises requiring stabilization measures is determined according to published studies of individual countries, and to flareups in the inflation rate (see Table I-8/10). Similar criteria are used to identify periods of effective stabilization and reform.

Table I-2 presents average real wage (i.e. price level-deflated) data for 1980 through 1992, while Table I-3 presents real minimum wage data for the same years. Table I-4 presents unemployment data for 1981 through 1992, and Table I-5 looks at real wages and unemployment rates in the 1970s.

The remaining tables present data on aggregate and per capita real GDP, real wages, the real effective exchange rate for exports, the inflation rate, labor force participation, population growth, urbanization, and poverty.

Problems of data quality and interpretation are discussed in Annex II (e.g., the well-known questions of what economic significance the minimum wage rate typically has and how changing a legislated minimum wage rate affects employment and incomes of those below or close to the poverty line). Fleischer (1980:200-204) presents a clear explanation of how in a situation of monopsony in labor markets, a correctly set and effectively enforced minimum wage can simultaneously increase employment and

wages by eliminating monopsony power, but points out the absence of credible evidence, in the United States at least, that monopsony prevails to any significant extent in labor markets as a practical matter.

Annex III presents time charts of real wages in the countries studied.

Annex IV contains a discussion of the adverse impact of inflation on low-income earners' cash balance holdings.

III. CRISIS, REFORM, AND THE TIME PATTERN OF REAL WAGE, EMPLOYMENT AND POVERTY CHANGES

Average real wages tended to fall over much of the crisis period, which typically preceded initiation of effective economic stabilization and reform measures (Argentina and Peru). In some cases (Mexico), real wages fell when the measures were initiated (Mexico launched an effective stabilization program with very little delay, unlike some of the other countries, although implementation of stabilization measures was sporadic until 1986). This can be seen from a comparison of Tables I-1 and I-2. The initiation of stabilization when real wages were/had already been falling was associated with a still further, typically one-time, fall in real wages. In Colombia, where the decline in the real wage rate did not occur during the crisis period (there was a subsequent, very gradual decline), unemployment rose. (The typical crisis period in most cases followed an expansionary phase in which real wages had risen.)

Real wages by and large moved "procyclically," i.e., with the economic cycle -- that is, real wages and real GDP tended to (but did not always) move in the same direction (a tendency noted in a recent analysis of monetary shocks and output fluctuations in Colombia [Reinhart and Reinhart 1991:70-77]), both tending to fall in crisis periods. Real wages and unemployment tended to move in opposite directions over much of the cycle, as can be seen from comparing Tables I-2 and I-4. In short, as output and employment contracted and unemployment rose, the resulting adverse impacts on aggregate labor income tended not to be offset by any tendency for real wages to rise (contrary to some of the standard textbook models).

Thus unemployment tended to worsen as real wages fell over much of Latin America's "lost decade." Once economic recovery got under way following a period of stabilization, real wages tended to rise as open unemployment came down. (For example, Chile in 1992 achieved a 20-year low in its open unemployment rate, and real wages had risen by 15% over their 1988 levels.)

The tendency of real wages and labor productivity to move with the business cycle has been noted in the United States since Tarshis' 1939 article on this subject. Since this phenomenon is in seeming contradiction to the notion that marginal product of labor declines with increasing employment and rises as employment is reduced, there have been a number of attempts to explain it in terms of extensions to conventional economic theory as detailed in Sargent (1979).

With implementation of stabilization and reform measures, inflation came down, sometimes dramatically, and real wages tended to stabilize around a new level, lower than that prevailing before the program or prior to the onset of the crisis.

After some years of relative stability in the price level (i.e. moderate or low inflation at a steady pace) and of structural adjustment, growth of real wages has tended to resume, with variation around the new trend being fairly limited. Real wage stability of this kind, combined with lower unemployment, can be expected to be associated with reductions in the prevalence of poverty and with some movement towards greater equality in income distribution.

Aside from this, there seems to have been no stable or simple relationship between inflation and changes in the real wage level: periods of high and accelerating inflation sometimes coincided with a rise in the real wage, and sometimes with a decline, occasionally a precipitous one (Tables I-2, I-8, and I-10).

Real wages fell in periods of postponed/forced/incomplete adjustment as well as in the preliminary phases of successful stabilization and adjustment programs. What this paper characterizes as periods of postponed adjustment have sometimes been called by other authors (e.g. some of those in Paredes and Sachs, 1991) periods of forced adjustment or of adjustment without stabilization; while stabilization and adjustment measures may have been tried, in those cases the result was incomplete or inadequate adjustment.

Unemployment rose in the 1980s, in some cases to very high levels, before coming down again (e.g. Chile, Uruguay). Reported rates of open unemployment in some countries (e.g. Argentina, Brazil, Mexico) have tended to be fairly low, given the age structure of the working-age population, and to change little through time, in absolute terms, although the changes even in these countries may amount to a doubling or a halving of the rate.

Changes in average real wages and urban unemployment, as reported in surveys, tend to track and help explain corresponding

changes in poverty as measured by changes in the percentage of the population below the poverty line. The observed movements of urban unemployment and real wages and proportion of households in poverty are largely consistent with what would be expected.

IV. LABOR FORCE PARTICIPATION RATES

Any impact of declining real wages and rising unemployment on household incomes, and on their size distribution, may have been offset to some extent by higher female labor force participation rates; but evidence on such a pattern is mixed. Sex-disaggregated labor force participation data for 1960, 1970, 1980 and 1985 from the CEPAL yearbook show significantly higher female labor force participation in 1980 than in 1970 but not much growth of participation between 1980 and 1985, the period in which the crisis hit and worsened (Table I-11). However, a recent article by Psacharopoulos and Winter (1992) cites increasing female labor force participation from the 1950s and 1960s to the 1980s in all the Latin American countries examined by these authors, and claims both that "female participation rates increased more rapidly during the economic crisis of the 1980s, when women sought to supplement declining family incomes" and that "these increases have been largely maintained following the crisis."

It should be noted that the data Psacharopoulos and Winter present do not distinguish between the first part of the 1980s and the latter part of this period. If their assertion that the increase was maintained is correct, however, this means either that female participation increased in good times as well as bad, and cannot be seen as purely as a response to lower real wages or increased unemployment of male workers, or that the recovery from the crisis has not sufficed for households to reattain their previous real income levels without the higher female labor force participation being maintained.

V. REAL WAGES, DEVALUATION AND TRADE LIBERALIZATION

The relationship between real wages and real exchange rate changes seems to have been somewhat complex, as might be expected. Currencies tended to appreciate in real terms in the early part of the 1980s and to depreciate and stabilize in the latter part of the 1980s. On the one hand, real wage decreases could be expected to be associated with depreciation of the real exchange rate, since with depreciation, imported consumer goods are more expensive than they might otherwise have been and "other things equal" this would lower real wages. But to the extent exports and/or domestically produced substitutes for imports are labor-intensive, and/or that real exchange rate depreciation

stimulates economic expansion, one might expect real wages to rise rather than fall as the currency depreciates in real terms -- although the economic expansion may occur only after a (perhaps quite considerable) lag following the depreciation, especially if monetary and fiscal policy is being held tight to make the devaluation "stick" in real terms. A comparison of real exchange rate data in Table I-9 and of periods of trade liberalization (indicated in Table I-1) with real wage data in Table I-2, shows no clear or obvious pattern between real wage changes and real depreciation or trade liberalization.

A recent multi-country study (Lal 1991:294-295) interprets movements of Colombia's average real wage rate and real exchange rate in the 1970s as suggesting that in Colombia non-tradables are more labor-intensive than tradables, which would imply that trade liberalization and real exchange rate depreciation in that country could be expected to be associated with downward pressure on real wages.¹ However, Thoumi (1981), using another methodology, found just the opposite -- namely, that non-tradables in Colombia were less labor-intensive than importables or exportables in the 1960s and early 1970s. Real wage rates in Colombia show only a slightly declining downward trend from 1985 to the present, a period during which the Colombian economy was opened up more and the real exchange rate depreciated. However, from 1985 to the present, the urban unemployment situation in Colombia has tended to improve.

Pronounced real appreciation of the Peruvian currency over 1990-92 has been associated with only anemic recovery of real wages from the very low levels they had reached during the 1988-90 hyperinflation. The real appreciation of Peru's currency from 1988 to 1990 was associated with declining real wages. Strong real depreciation in Argentina from 1986 to 1989, however, coincided with a 15% decline in real wages. While real depreciation and radical trade liberalization in Bolivia in late 1985 were associated with a large initial fall in the real wage rate, subsequent real depreciation coincided with a recovery of the average real wage to almost its pre-depreciation level.

Mexico, Bolivia and Chile, which have clearly stabilized and liberalized their economies, were experiencing rising real wages and declining unemployment rates by the end of the 1980s, while Colombia, which stabilized in 1985 and began a major liberalization process in 1990, has experienced real wage stability with only a minor downward trend, and has seen

¹ Lal (1991:294-295), citing a study by Urdinola et al., classifies the relative capital-intensity of exports (kX), imports (kM) and nontradeables (kN) in Colombia as follows: $kM > kX > kN$. In other words, nontradeables are found to be the least capital-intensive and hence the most labor-intensive.

unemployment decline somewhat. The Colombian trade opening (apertura) is expected to remedy a slowdown in the growth of total factor productivity and thus should eventually improve real wages.

VI. INFLATION, REAL WAGES AND UNEMPLOYMENT

There is no clear or stable link between inflation and high real wages or between inflation and low unemployment. This pattern is in accordance with the conclusions of state-of-the art economic analysis and the U.S. experience of "stagflation" in the 1970s. The experience of the South American countries and Mexico in the 1980s shows only that it is possible, with appropriate policies, to have a favorable scenario of rising real wages, low or falling unemployment, and low and/or falling inflation. This confluence is obviously favorable to lower-income groups in society.

While real wages can be seen to rise briefly in periods of high and/or accelerating inflation (e.g. Argentina 1982-85, São Paulo, Brazil 1983-85 and 1988-89, Peru 1985-87, and Uruguay 1982-85), only to fall back as inflation was reduced (Argentina 1985-86 and Brazil 1989-91) or was intensified (Argentina 1987-89, Brazil 1986-88, Bolivia 1983-85, Peru 1987-90, and Uruguay 1988-90), they have also risen as inflation comes down (São Paulo, Brazil, 1985-86, Bolivia 1986-91, Mexico 1987-92, and Uruguay 1985-87) or as inflation remains at a low or moderate level (Chile, 1985-92).

Similarly, there is no stable trade-off between unemployment and inflation. Unemployment increased as inflation accelerated in Peru from 1987 to 1990, and then came down somewhat when inflation decelerated in 1991. But unemployment seems to have fallen during the Bolivian inflation of 1983-85, and risen during the low-inflation stabilization period until 1988-89. Since 1989 inflation in Bolivia has remained low, real wages have risen and unemployment has been coming down. Other, contradictory episodes can be cited.

Inflation does seem to introduce unnecessary uncertainty into the picture, and it reduces the real value of household savings, where savings instruments with positive real returns are not available. Even when such instruments are available, access to them may be limited for households with only modest amounts to invest.

Inspection of the data series suggests that real wages seemed to show rather strong "up-and-down" annual variability around their trend lines through time in high-inflation countries and/or periods (Argentina, Brazil and Peru), and only moderate

variability through time in low- to moderate-inflation countries and/or periods (Chile, Colombia, Mexico and Uruguay).

The high-inflation countries also seem to show a pattern where real wage increases and declines are considerably greater than the corresponding year-to-year changes in real GDP (e.g. Argentina, 1981-85, but not 1987-90, Brazil, and Peru), while in low-to-moderate inflation cases (Chile, Colombia, Mexico since 1988, Uruguay and Venezuela) this tendency is less pronounced. Bolivia 1987-91 -- a period of moderate to low inflation -- seems to be an exception in that real wage increases far outpace real GDP increases (Tables I-8 and I-10). The general pattern seems consistent with the observation that high inflation tends to increase relative price variability and uncertainty).

Given the cost to wage earners, in terms of forgone consumption, of maintaining their holdings of money constant in real purchasing power terms as inflation increases, real wage gains in highly inflationary periods were probably offset to some significant extent by the eroding effect of higher inflation on monetary balances. Dollarization and flight into durable goods may have ameliorated this situation to some extent.

In some economies (e.g. Brazil) high and frequently adjusted deposit account rates may have made it possible for people with interest-bearing bank accounts to minimize the adverse real balance effect on liquid assets. Sturzenegger (1992) has emphasized the regressive aspect of the "inflation tax."

Berg and Hunter (1992) also note that high inflation rates make analysis of poverty levels and trends from household surveys difficult since bouts of inflation "raise margins of error in estimates of trends in real expenditures and incomes."

VII. POVERTY

Household survey data on the percentage of households in poverty and extreme poverty (indigencia), i.e. below cut-off levels of income, have been assembled as part of a CEPAL (ECLAC) project and are available in a recent CEPAL document (1991) for most of the South American countries and Mexico for three years, in or around 1970, 1980 and 1986. It is interesting to compare changes in these poverty percentages with changes in the average real wage and unemployment rate. Both the CEPAL document and a recent study by Berg and Hunter (1992) provide valuable insight into the problems involved in measuring poverty and making intertemporal and inter-country comparisons of poverty (see Annex II for more details on these problems).

Poverty can also be measured in terms of the percentage of the population (i.e., individuals) below a poverty line. Since

households vary in size and composition, the percentage of households in poverty can differ from the percentage of the population in poverty. Similarly, changes in the percentage of urban households living in poverty can differ considerably from the corresponding changes in the percentage of the urban population in poverty, since the average household crossing the poverty line between two points in time may be larger or smaller than the average household below the poverty line. However, Table I-14 shows that, while the percentage of the population in poverty in all the countries exceeds the corresponding percentage of households in poverty, the margin is usually not very large, and increases in the one percentage generally always correspond to approximately equal increases in the other. The discussion that follows is in terms of the number of households below the poverty line, to avoid undue complication.

CEPAL's definition (1991) -- a standard one -- of the poverty-line income is an income just equal to "twice the income needed to buy a basket of food which satisfies minimum calorie needs" (i.e. it assumes poor households spend 50% of their income on food) while the destitution (indigencia or extreme poverty) line is defined by "the income needed to buy a basket of food to satisfy minimum calorie needs" with nothing left over for other things.

While the CEPAL research shows that from 1970 to 1980, rates of urban poverty and of extreme urban poverty fell somewhat, it also shows that the situation in most countries subsequently deteriorated substantially, during the first part of the 1980s.

For all of the countries covered, the change in the percentage of urban households below CEPAL's standardized, country-specific poverty line is consistent with changes in one or more of the labor-market variables: average real wage rate, minimum real wage rate or unemployment. In the cases of Brazil and Peru, the effect of declines of the minimum wage rate in real terms seems to have dominated rises in average wages and an improved employment situation (see Tables I-14 through I-16 in Annex I).

Reviewing the data in Tables I-14 through I-16 in Annex I, country experiences can be summarized and compared. In Argentina the unemployment rate rose by about 3 points, more than doubling, between 1980 and 1986. The average wage was about 2% higher and the minimum wage 10% higher in real terms in 1986 than in 1980 and real GDP was 7% lower. This pattern may be consistent with the observed 5-point rise (almost a doubling) in the percentage of households (hogares) below the poverty line, since the 10% rise in average real wages seems to be more than offset by the more than doubling of the unemployment rate, and the decline in real GDP may have included reductions in self-employment income and induced reductions in real transfer payments to pensioners.

The slight increase in the proportion of the households in poverty between 1970 and 1980 seems to be associated with the significant decline in average real and minimum wages between the two dates, since real GDP was about 30% higher in 1980 than in 1970, and urban unemployment was significantly lower.

However, in Brazil the unemployment rate was reported to be almost 3 percentage points or 43% less in 1987 than in 1979, and the average real wage was about 50% higher in São Paulo and 10% higher in Rio than in 1979. Yet the percentage of urban households below the poverty line rose by 4 percentage points, or more than 10% (from 30% to 34%), between 1979 and 1987. These trends suggest that the average real wage and/or unemployment data may not be very representative of the experience of most of the labor force, and indeed in 1987 the real minimum wage in Rio was far below its 1979 level: 73 versus 98 (1980=100). This movement in divergent directions of the average real wage rate and the minimum real wage is especially notable in Brazil for the two years compared. (In Peru there is a similar divergence when 1986 is compared with 1979.) It may also be noted that in Brazil, 1986 was the first year the unemployment rate had fallen so low, and real wages in São Paulo had begun to rise above their 1980 level only in 1985.

Comparing 1979 and 1970 in Brazil, the proportion of urban households in poverty was 5 percentage points lower (30% instead of 35%) in 1979 than nine years earlier. This may be considered to be consistent with the fact that in 1979 the average real wage was almost 25% higher than in 1970, and real GDP was more than twice as high as it had been. There had been virtually no change in the urban unemployment rate or the real minimum wage.

In Uruguay the unemployment rate in 1986 was 4 points above its 1981 level (or about 60% higher), and average real wages had declined by almost 30%. This seems consistent with the observed 5-point (55%) increase in the percentage of urban households below the poverty line. The one-point decline in the proportion of urban households below the poverty line between 1970 and 1981 is consistent with the increase in real GDP and the decline of the unemployment rate over the 1970s. However, it is hard to understand how real GDP growth and a decline in unemployment would have been accompanied by, as the data show, a 50% decline in the average real wage.

In Colombia the real wage in 1986 was 20% higher than in 1980, but the urban unemployment rate rose by 4 points, from 9.7% to 13.8%. Despite the rise in unemployment, the number of urban households below the poverty line was about the same (36% in both years). This suggests that the number of households plunged below the poverty line by increased unemployment must have been about offset by increased real wages for those working poor who managed to stay employed and by increased self-employment

incomes. The modest reduction in the proportion of urban households below the poverty line between 1970 and 1980 may be consistent with the increase in the real minimum wage (assuming that the real minimum wage increase reflects market forces or that it has relatively small disemployment effects and raises the real take-home pay of large numbers of workers around the poverty line). The reduction in poverty is also consistent with the growth of real GDP over this period.

It should be noted, however, that -- as pointed out in the World Development Report, in the section "Does How We Measure Poverty Really Matter" (1990: 28) -- a reduction of the percentage of households in poverty may be accompanied and offset by a worsening of poverty for those far below the poverty line, so that the overall result is a worsening of the poverty problem. The example cited in the World Development Report is an increase in the producer price of a food-staple commodity. A theoretical example of how an employment-shifting and -reducing minimum wage increase could have such a result can be constructed. There is no evidence of which I am aware, however, that indicates a worsening of poverty for those far below the poverty line in Colombia between 1970 and 1980, or from 1980 to 1986.

In Peru the urban unemployment rate in 1986 was almost 50% lower than in 1979, and average real wages were reported to be somewhat higher than in 1979. Yet the number of urban households below the poverty line had increased by ten percentage points, from 35% to 45%. While this increase in urban poverty appears inconsistent with the unemployment and average real wage data, it can be explained perhaps by the steep decline in the real value of the minimum wage: the legislated minimum wage, in real terms, was only about 56% of its 1980 level. In addition, real GDP was about 10% lower in 1986 than in 1979, and the proportion of the population living in cities had grown, in large part due to the influx of people from the countryside fleeing poverty and insurgency. Thus in Peru the real reduction in the legislated minimum wage is not the only possible explanation for the increased incidence of urban poverty; and to the extent that the decline of the real minimum wage reflects the worsening economic situation, it is only a proximate determinant.

The proportion of urban households living in poverty had also increased significantly, from 28% to 34%, between 1970 and 1979. Real GDP was about 40% higher in 1979 than in 1970, but urban unemployment was higher, and real wages much lower in 1979 than in 1970. Again, there had been significant immigration from the countryside in this period. In large part, the rural poor were coming to the cities, where they remained poor but probably less so than they would have been in the countryside. CEPAL estimates indicate that while urban poverty increased from 1970 to 1979, the situation in the countryside and in the country as a whole improved. Between 1979 and 1986, however, the situation

for the country as a whole worsened. In 1986 the poverty rate for the country as a whole was higher than in 1979, while the poverty rate in the countryside was (probably) only slightly lower than in 1970.

It may be that the legal minimum wage in Peru is equal to or greater than what many people earn there in informal-sector urban wage-employment or self-employment, but it also may be more representative of what the average poor person at or below the poverty line earns in urban employment (i.e. closer to the median urban wage), than is the average private sector wage rate reported for Lima. If so, then the real decline in the minimum wage in Peru over the period can be seen as causing/representing a similar decline in unskilled labor's average wage rate in the urban sector, or, otherwise expressed, in the median urban wage rate), and such a decline may explain much of the indicated increase in poverty over the period. Moreover, there was a considerable shift of urban/rural population shares due to continued migration from rural to urban areas, much of which probably comprised poor people coming to the cities and swelling the number of low-income households there (Table I-13). The urban share of population rose to 70% by 1990.

It should be noted that 1970, 1979 and 1986 were all relatively "good" years for Peru, 1986 being the expansionary, low-inflation first year of a heterodox, populist economic program that unfortunately would rapidly degenerate into hyperinflation and stagflation.

In Venezuela the percentage of urban households living in poverty was higher in 1986 than in 1981 at least in part because both average and minimum wages were lower in real terms, and the unemployment rate was higher, in 1986 than in 1981. Real GDP was also slightly lower. That the percentage of urban households living in poverty was slightly lower in 1981 than it had been in 1970 may seem hard to explain given that real GDP was apparently lower in 1981 than it had been in 1970. But Venezuela had presumably cut back on oil production in the 1970s as part of the OPEC strategy. And in 1981 it was experiencing a weakening of the world market for oil, its principal export. On the other hand, 1970 was a pre-OPEC year when oil prices were very low relative to the levels they would reach in the 1970s. Real wages in Venezuela were higher in 1981, and urban unemployment was lower, than in 1970, and this would seem to explain the slight reduction in urban poverty.

It is interesting to note that urban poverty in Mexico was about 3 points higher in 1984 (a year of crisis and reform, before economic recovery had gotten fully under way) than in 1970. This is consistent with the fact that real wages, still on a moderate decline, were somewhat lower than in 1970 (as can be seen from comparing data in Tables I-2 and I-5). However, urban

unemployment in 1984 was significantly lower than in 1970, and real GDP and per capita GDP were both significantly higher in 1984 than in 1970, and even than in 1977. While conditions worsened somewhat in the cities between 1970 and 1984, they improved nationwide, and hence even more so in the rural areas, according to the CEPAL estimates, which show the proportion of households in poverty nationwide falling from 34% in 1970 to 32% in 1977 and to 25% in 1984. (One wonders if the implied improvement in the situation in the countryside -- where poverty fell from 49% in 1970 to 43% of households in 1984 -- may have helped pave the way for the recent land reform legislation giving ejidatarios full individual ownership and right to alienate and pledge individual landholdings.)

The foregoing analysis is in terms of "proximate determinants" of the percentage of the population below the poverty line. It should not be taken as implying that an increase in the legislated minimum wage, for example, would necessarily leave the unemployment rate unchanged. To the extent that an increase in the minimum wage reduced employment and increased unemployment or employment in unregulated enterprises paying less than the minimum wage, the poverty-alleviating impact of the increase in the minimum wage would be offset to some extent by the poverty-worsening impact of the induced increase in unemployment. It is conceivable that it could be more than offset by this latter effect. The percentage of households below the poverty line might have been reduced but the degree of poverty of those remaining below the line worsened.

The important point, however, is that the observed changes in unemployment and the average and minimum real wage do seem to have had, by and large, the expected impacts on the poverty problem. Changes in real GDP also seem consistent with what has happened, as is not surprising since real GDP changes tend to be correlated with real wage changes (positively) and unemployment changes (negatively).

To see that the effects described above are the ones that can be expected, if data on real wages and urban unemployment are reasonably accurate, one need only think of an initial situation in which 20% of households are below the poverty line, and in which 50% of this 20% have combined wage and other income no more than 30% less than the poverty-line income, while 50% of the 80% of the households which are above the poverty line have combined wage and other income within 20% of the poverty line income. It can readily be imagined how a 20% rise or fall in the average or minimum real wage would change significantly the percentage of the population with incomes below the poverty line. Similarly, if the typical urban poor household has two wage earners and wage income makes up 80% of its total income, the loss of a job is equivalent in its effect on household income to a 30%-70% reduction in the real wage (depending on who in the household

loses his or her job -- women's wages being typically less than men's wages), so a doubling of the unemployment rate, say from 5% to 10%, would tend to push a significant number of households below the poverty line; a reduction in the unemployment rate would have the opposite effect.

The CEPAL study (1991:115-134), shows that large proportions of urban households have incomes very close to the poverty-line income, just above and just below the poverty line, and that this is also the case for the even-lower "destitution" (indigencia) income line.

The fact that wage and unemployment data are consistent, therefore, with the available poverty data from the CEPAL poverty project would seem to suggest that they are reasonably accurate and can serve as benchmark data for measuring year-to-year changes in the urban poverty situation in Mexico and the South American countries, although less confidence can be attached to them as proxies for measuring countrywide changes in the poverty situation.

As has been seen, the declines in real GDP and real wages of the early-to-mid eighties were matched by an increase in urban poverty in most countries, reversing earlier trends. This period for most of the countries examined here was one in which effective stabilization and structural adjustment programs had yet to be put in place or were only in their early stages of operation. As structural adjustment and stabilization took hold, and economies began to operate more efficiently, real wages and output began to recover and urban unemployment came down in the early-adjusting countries of Bolivia, Chile, Colombia and Mexico.

It seems reasonable to expect that the recovery in real wages and employment is likely to be matched by a corresponding reduction in urban poverty rates. According to Gary Fields (1991) this has already been happening. Fields' judgment is that while the poverty situation worsened significantly in the course of the 1980s, after worsening to a certain point, the situation began to improve toward the end of the decade, even though by that time poverty rates in Brazil, Colombia, Costa Rica, Guatemala and Mexico were still above what they had been in the early 1980s.

Similarly, to the extent that real wages hold steady or continue to grow and unemployment declines, it can be anticipated that poverty rates could fall even below the levels reached in the late 1970s and at the outset of the 1980s.

The CEPAL study (1991) does not take so optimistic a view, however. Indeed, it uses a multiple regression analysis (pp. 76-77) to argue that by 1989 the proportions of households in poverty for Latin America as a whole could be expected to be

greater in both urban and rural areas and for countries as a whole than in or circa 1986. The CEPAL authors claim in effect that in most Latin American countries low growth of GDP means lower average per capita incomes and that, there being in their view no tendency toward less inequality in what are generally highly unequal income distributions, this means that more households are necessarily being pushed below the poverty line. The CEPAL regression equations are country-specific and include such variables as real GDP, open unemployment, and average and minimum real wages. Country-by-country projections apparently are not available.

However, without seeing the regression equations, one can venture a hypothesis more along the following lines. Since real wages have been rising and unemployment rates falling in most of the countries which have implemented orthodox stabilization and structural adjustment programs, poverty levels in these countries most likely have declined to close to their 1980 levels, and country-specific, regression-based projections would predict this. Since Brazil has yet to achieve stabilization, and Argentina, Peru, and Venezuela only recently began their adjustment programs, and since as yet there is little evidence of a recovery of real wages in these countries, it is conceivable that poverty indicators in these large countries, and therefore for Latin America as a whole, will continue to deteriorate or not improve for at least several more years.

VIII. CONCLUSIONS

Adverse exogenous developments (e.g. terms of trade deterioration and higher world interest rates) and domestic economic policy inadequacies brought crisis to most Latin American countries in the early 1980s and made the 1980s a "lost decade" not only for economic growth, but also, as we have seen, for poverty alleviation. Failure to adjust promptly compounded these countries' difficulties. Once effective programs of stabilization and comprehensive structural adjustment were implemented, economic growth resumed, real wages recovered, and unemployment rates declined -- although in some cases the positive effects occurred after a lag of several years. If the mechanism that translates lower real wages and higher unemployment into increased poverty prevalence works in reverse, as can be expected, the recovery will bring poverty rates down.

Two additional conclusions can be drawn from this analysis. First, economic crisis and the attendant transition period of adjustment entail significant costs for wage workers and in particular for those below and close to the poverty line. Thus, it is important for the countries of the region to adhere to sound macroeconomic and trade policies, avoiding exchange rate overvaluation, excessive and highly non-uniform protection

through tariffs and nontariff barriers, and misallocation of scarce investment and human resources, since bad policies helped lead to and/or aggravate the economic crisis and prolonged recession of the 1980s and can do so again. Secondly, external circumstances are continually changing, and so stabilization programs will probably become necessary again and again in the future, especially since countries have become more open in their trading policies and hence, perhaps, more exposed to shifts in world supply and demand of the commodities and services in which they specialize. To the extent possible, such programs should recognize the special adjustment problems of those above, but near the poverty line, or already below it, and make provision for the alleviation of these problems through public employment programs, unemployment insurance, and other safety net programs.

ANNEX I: TABLES

TABLE I-1: SEQUENCE OF CRISIS, LIBERALIZATION AND STABILIZATION

	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>
Argentina		C				L		H	S		
Brazil	C							L,H		S	
Chile	C		S			L	R				
Paraguay		C						C,L,S			Rev
Uruguay	C			S						L,R	
Bolivia	C		H	S,I				R			
Colombia	C			S	R				L - - -		
Ecuador	C,S,L		R,S,L			Rev,C	L,S	Rev	L		L,S
Peru	C		L,S		Rev				H,S	L	
Venezuela		C							S,L	R	
Mexico	C,S			L - - -	L	R					

Key:

- C: Crisis
- L: Liberalization
- S: Stabilization
- H: Hyperinflation or extremely high inflation bordering on hyperinflation
- R: Recovery
- Rev: Reversal (typically only partial)

Notes: "S" and "L" denote start of effective stabilization and liberalization programs, respectively.

The Southern Cone economies liberalized their economies to varying degree in the 1970s. Argentina, Chile and Uruguay stabilized and opened up their economies in the 1970s (PREALC, 1983:24), but reversed course to varying degrees as difficulties were encountered. However, Corbo and de Melo (1987) argue that of these three only Chile liberalized significantly. Argentina and Uruguay liberalized their capital accounts before their trade while Chile did the opposite. By the end of 1991, considerable stabilization, liberalization and economic growth had occurred in Uruguay; but inflation was still high and not under control.

Grindle and Thoumi, in Bates and Krueger (1993:161), describe the Ecuador case as "a decade of muddling toward adjustment." The approach to reform and stabilization was gradualistic and characterized by periodic reversals and slippages in response to shifting pressures from domestic interest groups. Paraguay's economic problems are overstated by the term "crisis"; difficulties have been mild compared to most other countries.

Developments leading up to the 1982-83 crisis started in 1980-81, but the initial reaction was to increase borrowings from external sources to postpone adjustment and ride out the storm.

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TABLE I-2: REAL AVERAGE WAGES IN SOUTH AMERICA & MEXICO
(1980=100)

	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>
Argentina	80	101	117	106	102	94	93	85	80	76	76
Brazil-Rio	122	113	105	112	122	105	103	102	88	88	106
-S Paulo	107	94	97	120	151	143	152	165	142	122	133
Chile	109	97	97	93	95	94	101	103	105	110	115
Uruguay	107	85	72	67	72	75	76	76	71	73	75
Bolivia 1)	93	109	61	44	na						
2)	87	90	88	70	54	57	68	70	77	85	na
Colombia	105	110	118	115	120	119	118	119	113	115	117
Peru	110	93	87	78	98	101	76	42	36	42	43
Venezuela	93	88	78	74	74	67	62	55	53	55	na
Mexico	102	81	75	76	72	71	72	75	78	83	85
Ecuador*	76	64	63	60	65	61	54	42	35	na	na
Paraguay	102	95	92	90	86	96	102	109	107	na	na

Sources: CEPAL publications, except for Bolivia, Ecuador, Paraguay and Venezuela, which are from the IDB's Economic and Social Progress in Latin America (ESPLA), 1986 and subsequent issues. IDB data are for non-agricultural employees and workers, and are for the second half of the year. For Bolivia, the first series, ending in 1985, is from the 1986 ESPLA. The second is pieced together from subsequent issues of the same document.

* Minimum wages.

TABLE I-3: REAL MINIMUM WAGES IN SOUTH AMERICA & MEXICO
(1980=100)

	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>
Argentina	98	137	168	117	110	121	94	42	41	56	45
Brazil-Rio	107	97	87	89	89	73	69	72	53	60	55
Chile-min income	117	94	81	76	74	69	74	80	88	96	100
Uruguay	104	89	89	93	89	90	85	78	69	62	62
Bolivia*	100	103	86	46	32	38	39	37	31	na	na
Colombia	104	108	114	110	114	113	110	111	108	104	103
Peru-Lima	80	81	62	54	56	60	52	25	23	16	16
Venezuela	79	74	67	97	91	109	90	73	59	55	na
Mexico	93	77	72	71	65	62	54	51	46	44	42
Ecuador	76	64	63	61	65	61	53	47	36	31	32
Paraguay	101	94	94	100	108	123	135	138	132	126	115

Sources: CEPAL publications.

* 1982=100; series is from U.N./ECLAC, Economic Survey of Latin America and the Caribbean. Some are nationwide, some are for capital cities, some are for "upper urban sectors." See CEPAL publications for details.

TABLE I-4: URBAN UNEMPLOYMENT RATES IN SOUTH AMERICA & MEXICO
(% of urban labor force)

	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>
Argentina	2.6	4.7	5.3	4.7	4.6	6.1	5.6	5.9	6.3	7.6	7.5	6.5	6.9
Brazil	7.2	7.9	6.3	6.7	7.1	5.3	3.6	3.7	3.8	3.3	4.3	4.8	5.9
Chile	11.7	11.1	22.1	19.0	18.5	17.0	13.1	11.9	10.2	7.2	6.5	7.3	5.0
Uruguay	7.4	6.7	11.9	15.5	14.0	13.1	10.7	9.3	9.1	8.6	9.3	8.9	9.3
Bolivia	7.5	na	na	8.5	6.9	5.8	7.0	7.2	11.6	10.2	9.5	7.0	6.8
Colombia	9.7	8.2	9.3	11.7	13.4	14.1	13.8	11.8	11.2	9.9	10.3	10.0	10.5
Peru	10.9	6.8	6.6	9.0	8.9	10.1	5.4	4.8	7.9	7.9	8.3	5.9	na
Venezuela	6.6	6.8	7.8	11.2	14.3	14.3	12.1	9.9	7.9	9.7	10.5	10.1	8.0
Mexico	4.5	4.2	4.2	6.6	5.7	4.4	4.3	3.9	3.5	2.9	2.9	2.7	3.2
Ecuador	5.7	6.0	6.3	6.7	10.5	10.4	10.7	7.2	7.4	7.9	6.1	8.5	na
Paraguay	2.1	4.6	9.4	15.0	7.3	5.1	6.1	5.5	4.7	6.1	6.6	5.1	6.1

Source: CEPAL, "Preliminary Overview" (various years).

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**TABLE I-5: REAL WAGES IN SOUTH AMERICA AND MEXICO IN
THE INDUSTRIAL SECTOR, MINIMUM REAL WAGES, AND
URBAN OPEN UNEMPLOYMENT RATES 1970-1980**

	<u>Industrial Wages</u>			<u>Minimum Wage</u>		<u>Urban Unemployment</u>		
	<u>1970</u>	<u>1975</u>	<u>1980</u>	<u>1975</u>	<u>1980</u>	<u>1970</u>	<u>1975</u>	<u>1980</u>
	(1970=100)			(1970=100)		(percent)		
Arg.	100.0	111.8	92.9	101.8	55.0	4.9	3.7	2.3
	100.0	104.8	56.7					
Brazil	100.0	128.4	128.4	96.0	101.7	6.5	na	6.2
	100.0	128.2	155.3			3.7	2.3	na
Chile	100.0	62.1	103.8	na	76.0	4.1	15.0	11.7
				62.9	81.3			
Uruguay	100.0	76.1	44.3	114.4	80.8	7.5	12.7*	7.4
Bolivia	100.0	92.9	81.4	131.3	182.7*		7.7*	5.8
	100.0	89.6	97.0					
Col.	100.0	80.3	97.6	96.7	127.3	10.6	11.0	9.7
Peru	100.0	117.1	87.7		83.3	6.9	10.9	7.1
				97.0	75.2	6.9	7.5	7.1
Ven.	100.0	115.9	122.1	9/7*105	105.6	7.8	6.6	6.6
Mexico	100.0	112.9	115.4	112.0	110.0	7.0	7.2	4.5

Sources: PREALC/Tokman (1982:99 and 1983:10-11,80) and CEPAL, "Preliminary Report" (1992 and earlier years).

* 1976; Uruguay's urban unemployment rate for 1975 is not available, but for 1974 it was 8.1%.

Notes: There are some discrepancies between various publications -- for example, PREALC (1982:99) contains numbers on urban unemployment based on household surveys that sometimes differ from those in CEPAL publications. According to this source, average wage data for the industrial sector come in some cases from periodic surveys (encuestas) of establishments above a certain size, ranging from 5 or more employees in Brazil and Venezuela, to 10 or more in Colombia and Peru, and to 20 or more in Chile. In other cases the data use a very different kind of sample: establishments accounting for the greater part of production (Mexico); the industrial wage determined by collective bargaining agreements (convenios colectivos) (Argentina); and, in some Central American countries, social security records.

For most countries wage data include all payments to workers, including overtime but not family allowances, and do not adjust downward for social security payments. For some countries wage payments to manual/blue collar workers only (obreros) are included; for others payments to apprentices and white collar workers are included (PREALC 1982:137). In Argentina the basic "collective agreement" wage in some years after 1976 is said to have understated actual payments, including high "supplements" (complementos altos), by a large margin, and therefore to have overstated the actual decline in average real wages before 1976.

TABLE I-6: GROWTH OF REAL GDP
(percent)

	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>
Argentina	-6.7	-6.3	3.0	2.0	-5.1	5.2	3.1	-1.8	-6.3	-0.2	7.3	6.0
Brazil	-2.0	1.4	-2.7	4.8	7.9	7.6	3.6	-0.1	3.3	-4.4	0.9	-1.5
Chile	5.2	-13.1	-0.5	6.2	2.2	5.7	5.7	7.5	9.8	2.0	5.8	9.5
Uruguay	1.0	-10.7	-5.9	-1.2	1.7	8.3	7.9	-0.2	1.5	0.7	1.6	7.0
Bolivia	0.7	-6.6	-8.6	-3.7	-1.0	-2.5	2.6	3.0	2.8	2.6	4.1	3.5
Colombia	2.3	1.0	1.2	3.6	3.8	6.9	5.6	4.2	3.5	3.7	2.2	3.0
Peru	3.7	-0.2	-12.0	4.4	2.3	8.7	8.0	-8.4	-11.5	-5.1	1.9	-2.5
Venezuela	-1.0	-1.3	-5.6	-1.1	0.0	6.6	3.8	5.9	-7.8	6.8	10.2	7.5
Mexico	8.3	0.0	-5.2	3.5	2.6	-3.8	1.7	1.2	3.3	4.4	3.6	2.5
Ecuador	3.8	1.1	-1.2	-4.5	3.9	2.8	-4.8	8.8	0.2	1.4	4.2	3.5
Paraguay	8.7	-0.7	-3.0	3.3	4.0	-0.3	4.5	6.7	5.9	3.1	2.3	1.5

Source: CEPAL (1990 and 1992 and earlier years).

TABLE I-7: GROWTH OF REAL GDP PER CAPITA
(percent)

	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>
Argentina	-8.4	-7.2	1.1	0.9	-6.4	3.8	1.8	-3.0	-7.5	-1.0	6.0	4.8
Brazil	-6.5	-1.6	-5.6	2.8	5.7	5.5	1.6	-2.0	1.4	-6.1	-0.8	-3.1
Chile	3.5	-14.5	-2.2	4.3	0.5	4.0	3.9	5.7	8.0	0.3	4.1	7.8
Uruguay	0.8	-10.6	-6.6	-1.9	1.0	7.7	7.3	-0.7	0.9	0.2	1.0	6.4
Bolivia	-1.7	-6.9	-9.0	-3.0	-3.4	-4.9	0.1	0.5	0.4	0.2	1.7	1.1
Colombia	0.1	-1.1	-0.2	1.7	1.7	4.9	3.7	2.3	1.7	1.9	0.5	1.4
Peru	1.6	-2.3	-14.1	2.1	0.0	6.4	5.8	-10.3	-13.3	-7.0	-0.1	-4.5
Venezuela	-4.0	-4.0	-8.1	-4.2	-2.5	4.0	1.3	3.4	-9.9	4.4	7.8	5.0
Mexico	6.1	-3.0	-6.5	1.2	0.2	-5.9	-0.5	-1.0	1.0	2.2	1.4	0.6
Ecuador	0.8	-1.8	-4.0	1.5	1.4	-1.2	-7.2	6.1	-2.3	-1.0	1.7	1.1
Paraguay	5.3	-4.0	-6.0	0.0	0.9	-3.3	1.4	3.6	2.9	0.2	-0.5	-1.3

Sources: CEPAL, Changing Production Patterns with Social Equity (1990), Table II.1, and "Preliminary Overview" (various issues). Per capita real GDP growth rates for Bolivia seem to have been adjusted upwards for the period 1985-89, perhaps because of the results of the latest population census. Over the period 1981-92, Colombia, Chile and Uruguay had the fastest growth of GDP per capita.

TABLE I-8: GROWTH OF AVERAGE REAL WAGE
(percent)

	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>
Arg.	-10.6	-10.4	26.2	27.3	-9.3	-3.9	-8.3	-0.9	-8.7	-5.1	-5.1	0.8
Braz-Rio	8.5	12.1	-7.3	-6.7	6.4	8.7	-13.3	-2.1	-0.9	-14.4	0.2	25.0
-S Paulo	4.7	2.4	-12.3	2.9	24.4	25.2	-5.0	6.2	8.6	-14.0	-11.8	10.0
Chile	8.9	-0.2	-10.9	0.1	-3.8	1.7	-0.4	6.7	1.9	1.8	4.9	4.7
Uruguay	7.5	-0.6	-20.7	-14.8	-5.8	6.8	4.6	1.5	-0.3	-7.2	3.7	3.3
Bolivia	na	-7.9	2.8	-1.6	-20.1	-23.1	5.4	19.6	2.4	10.7	10.7	na
Colombia	1.4	3.4	5.2	7.3	-3.0	4.8	-0.7	-1.4	1.7	1.9	0.5	1.4
Peru	-1.7	8.3	-15.3	-6.6	-11.0	25.6	3.9	-24.9	-45.5	-12.8	15.5	1.9
Ven.	na	-0.4	-4.8	-11.2	-5.7	0.0	-9.2	-8.4	-10.6	-3.9	5.0	na
Mexico	3.5	0.9	-21.0	-7.3	1.5	-5.8	-0.3	0.6	4.9	3.6	6.5	8.2
Ecuador*	-13.8	-11.9	-16.2	-1.3	-3.8	7.6	-5.5	-12.7	-21.1	-17.6	na	na
Paraguay	5.3	-2.8	-7.1	-3.6	-2.1	-4.3	12.3	6.1	6.4	-1.9	na	na

Source: CEPAL (various years). Real wage rate changes reported for Peru in CEPAL's "Preliminary Overview" changed a lot between the 1987 and 1991 editions.

* Minimum wages.

TABLE I-9: REAL EFFECTIVE EXCHANGE RATE INDEXES
FOR EXPORTS IN SOUTH AMERICA & MEXICO
(1985=1.00)

	<u>1980</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>
Argentina	60	107	93	107	105	125	137	150	113	83	
				95	107	131	137	144	113	86	82
Brazil	91	71	94	99	102	99	92	73	61	68	
				97	106	104	94	72	65	76	85
Chile	68	67	79	81	117	124	130	122	126	120	
				80	123	134	141	133	140	138	133
Uruguay	68	60	94	98	96	96	103	101	112	93	
				97	99	103	111	111	129	111	104
Bolivia	143	147	143	101	125	122	134	129	157	156	
				88	136	139	147	135	191	215	234
Colombia	111	81	82	88	131	149	150	153	174	170	
				86	132	147	150	153	173	171	174
Peru	95	74	85	84	84	74	84	52	38	30	
				83	89	81	84	52	42	35	35
Venezuela	99	81	90	103	118	158	153	177	188	173	
				99	121	161	156	184	192	180	169
Mexico	76	97	125	94	116	119	96	89	88	77	
				101	139	145	118	110	108	98	91
Ecuador				102	110	125	146	150	159	151	143
Paraguay				81	107	115	120	125	125	108	108

Source: CEPAL (1992). Based on consumer price indices of countries and their trading partners; export share-weighted. A decline in the index indicates real appreciation.

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**TABLE I-10: CPI INFLATION RATES (DECEMBER-TO-DECEMBER)
IN SOUTH AMERICA & MEXICO
(percent)**

	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>
Argentina	131	209	434	688	385	82	175	387	4924	1344	84	18
Brazil	95	91	179	209	239	59	395	993	1862	1585	475	1312
Chile	10	21	24	23	26	17	21	13	22	27	19	14
Uruguay	29	21	52	66	83	71	57	69	89	129	82	59
Bolivia	25	297	329	2177	8171	56	11	22	17	18	15	11
Colombia	28	24	17	18	22	21	24	28	26	32	27	26
Peru	73	73	125	112	158	63	115	1723	2775	7650	139	56
Venezuela	11	7	7	18	6	12	40	36	81	37	31	33
Mexico	29	98	81	59	64	106	160	52	20	30	19	13
Ecuador	18	24	53	25	24	27	33	86	54	50	49	66
Paraguay	15	4	14	30	23	24	32	17	29	44	12	17

Source: CEPAL, "Preliminary Overview." The 1992 data refer, variously, to June-to-June, September-to-September, October-to-October, or November-to-November price-level variations.

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TABLE I-11: LABOR FORCE PARTICIPATION RATES
(percent)

	<u>1960</u>	<u>1970</u>	<u>1980</u>	<u>1985</u>
TOTAL				
Argentina	49.7	48.6	46.0	45.6
Brazil	47.1	44.9	49.2	49.1
Chile	45.3	41.7	43.0	44.4
Uruguay	49.2	48.1	47.9	47.5
Bolivia	56.1	49.3	45.5	45.6
Colombia	45.6	44.1	42.2	43.3
Peru	46.4	42.3	43.3	44.0
Venezuela	47.6	42.9	45.2	47.0
Mexico	43.1	41.4	46.8	46.4
MEN				
Argentina	78.3	73.4	68.3	67.1
Brazil	77.9	71.8	72.4	71.8
Chile	72.5	66.5	63.7	65.2
Uruguay	74.3	71.6	68.8	67.6
Bolivia	80.4	75.8	72.3	70.9
Colombia	75.5	69.8	65.6	67.3
Peru	73.1	67.3	65.8	66.5
Venezuela	77.1	67.3	67.9	68.4
Mexico	72.5	68.2	70.9	68.1
WOMEN				
Argentina	21.4	24.4	24.7	24.7
Brazil	16.8	18.5	26.6	26.6
Chile	19.7	18.4	23.1	24.4
Uruguay	24.2	25.2	27.8	28.2
Bolivia	33.2	24.1	20.1	21.5
Colombia	17.6	20.3	19.0	19.2
Peru	20.4	17.5	21.3	21.4
Venezuela	17.2	18.8	24.0	25.3
Mexico	14.3	15.2	25.1	25.0

Source: CEPAL, 1990 Statistical Yearbook for the LAC Region.

Notes: From 1960 to 1985 there has been a tendency for male participation rates to decline (presumably mainly due to earlier retirement combined with aging of the population, rising school enrollment ratios and a tendency to stay in school longer -- indeed, this can be confirmed by examination of age-specific tables in PREALC 1982) and for female participation rates to rise in most countries of the region. (In Bolivia, the trend for female participation was downward, not upward, levelling off in the 1980s. It may be that the 1950 census classification was not comparable to those of later censuses in Bolivia.) But by the 1980s the tendency for the male participation rate to fall had levelled off or even reversed itself.

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NOTES TO TABLE I-11 (continued)

To the extent that women's labor force participation is rising, declining real wage rates may reflect a higher percentage of women in the surveyed establishments.

Age-specific participation rates are required for a more careful analysis of what is happening. Presumably, the female participation rates in Table I-12 below are for prime working ages. Even so, these data suggest that official statistics have considerably underestimated female participation in the region.

TABLE I-12: FEMALE LABOR FORCE PARTICIPATION
AND WAGE DIFFERENTIAL
(percent)

	Female Labor Force Participation Rate		Female-to-Male Pay in the 1980s
	1950s/1960s	1980s	
Argentina	27	37	65
Brazil	21	37	61
Chile	33	35	47
Uruguay	34	49	57
Colombia	22	48	85
Peru	27	33	66
Venezuela	21	38	71
Mexico	21	38	86

Source: Adapted from Psacharopoulos and Winter (1992).

Note: The female-to-male pay ratio shown here is one that has been computed for equal endowments of human capital.

TABLE I-13: URBAN POPULATION GROWTH AND
URBAN SHARE OF TOTAL POPULATION
(percent)

	Average Annual Rate of Growth		% Urban in 1990
	1965-1980	1980-1990	
Argentina	2.2	1.8	86
Uruguay	0.7	0.8	86
Brazil	4.3	3.4	75
Chile	2.6	2.3	86
Bolivia	4.3	3.1	51
Colombia	3.6	2.9	70
Peru	4.3	3.1	70
Mexico	4.4	2.9	73

Source: World Bank, World Development Report 1992.

TABLE I-14: PERCENTAGE OF URBAN HOUSEHOLDS (Hh) AND OF PERSONS (P) IN URBAN HOUSEHOLDS BELOW POVERTY LINE

	<u>1970</u>		<u>1980 or Closest Year</u>			<u>1980 or Closest Year</u>		
	<u>Hh</u>	<u>P</u>	<u>Hh</u>	<u>P</u>	<u>Diff</u>	<u>Hh</u>	<u>P</u>	<u>Diff</u>
Argentina	5	na	7	9	2	12	15	3
Brazil (1979, 87)	35	na	30	34	4	34	38	4
Chile	12*	na	na	na	na	na	na	na
Uruguay (1981, 86)	10	na	9	13	4	14	19	5
Bolivia	na	na	na	na	na	na	na	na
Colombia	38	na	36	40	4	36	40	4
Peru (1979, 86)	28	na	34	38	4	45	52	7
Venezuela (1981, 86)	20	na	18	20	2	25	30	5
Mexico (1977, 84)	20	na	na	na	na	23	30	7
Mexico, national	34	na	32	40	8	25	37	12

Source: CEPAL, Magnitud de la pobreza en América Latina en los Años Ochenta, Estudios e Informes de la CEPAL #81 (Santiago, Chile, 1991), pp. 50-1, 75. This publication's 1970 estimates "corresponded to" those published in CEPAL's Magnitud de la pobreza en América Latina but may not be strictly comparable to those for the 1980s.

* As quoted in Thorp (1991:59), citing Molina (1982).

Notes: Although urban poverty in Peru grew substantially between 1970 and 1979 (CEPAL 1991:75), for the country as a whole and specifically in rural areas poverty is considered to have declined during this earlier period. One explanation is that many of the rural poor may have moved to the cities. But from 1979 to 1986, CEPAL's estimates show the percentage of households in Peru in poverty for the country as a whole rising by more than it fell between 1970 and 1979. From 1979 to 1986, the poverty situation, as measured by the proportion of the population below the poverty line, improved somewhat in the countryside but worsened considerably in the cities, so that for the country as whole the situation worsened. Moreover, the proportion of the rural population below the extreme poverty line rose in the countryside as well as in the urban areas between 1979 and 1986.

It is not clear how street children and other homeless and their incomes are counted -- as individual households or part of a larger household -- nor whether they were counted in proportion to their numbers. Probably over time the number of single and two-person households is growing relative to number of larger households, especially in the cities, as more people live to retirement age and more younger people set up their own households. The difference between the proportion of persons in poverty and the proportion of households in poverty grows dramatically in the 1980s in both Peru and Venezuela, and to a lesser degree in Mexico.

TABLE I-15: AVERAGE AND MINIMUM REAL WAGE (RW) RATES, AND URBAN UNEMPLOYMENT (U) IN 1970, 1980 AND 1986 OR CLOSEST YEARS (1980=100 for RW; percent for U)

	1970			1980 or Closest Year			1986 or Closest Year		
	Avg	Min	U	Avg	Min	U	Avg	Min	U
	RW	RW		RW	RW		RW	RW	
Argentina	107	182	4.9	100	100	2.6	102	110	5.6
Brazil 79,87	78	98	6.5	95	98	6.4	105/143	73	3.7
Chile	96	132	4.1	100	100	11.7	95	74	13.1
Uruguay 81,86	227	na	7.5	108	103	6.7	72	89	10.7
Bolivia	122	123	na	100	100	5.8	62	32	7.0
Colombia	103	79	10.6	100	100	9.7	120	114	13.8
Peru 79,86	114	120	6.9	89	81	11.2	98	56(63)	5.4
Venezuela 81,86	82	94	7.8	95	97	6.8	74	64	12.1
Mexico 77,84	87	91	7.0	na	113	8.3	80	72	5.7

Sources: CEPAL, Statistical Yearbook, 1981, 1987 and 1991; Magnitud de la pobreza, pp. 56-57.

TABLE I-16: REAL GDP, TOTAL AND PER CAPITA, 1970 AND LATER YEARS (1980=100)

	1970		1980 or c. 1980		1986 or c. 1986	
	Real GDP	Real pc GDP	Real GDP	Real pc GDP	Real GDP	Real pc GDP
Argentina	77.5	91.3	100.0	100.0	93.4	85.7
Brazil 79, 87	43.7	55.6	92.8	94.8	117.9	101.1
Chile	78.1	91.6	100.0	100.0	102.7	92.8
Uruguay 81, 86	74.1	76.9	101.4	100.8	91.4	88.1
Bolivia	68.2	88.0	100.0	100.0	88.5	76.0
Colombia	58.9	74.3	100.0	100.0	121.2	107.0
Peru 79, 86	68.3	89.4	94.7	99.0	107.2	91.8
Venezuela,81,86	98.0	139.4	98.9	101.5	97.2	82.1
Mexico 77, 84	53.4	71.2	78.2	85.4	107.3	97.4

Sources: CEPAL, Statistical Yearbook, 1981, 1987 and 1991; Magnitud de la pobreza, pp. 56-57.

Note: Real income is related to terms-of-trade changes and net interest payments abroad as well as to GDP growth in the concept of gross domestic income.

ANNEX II: DATA PROBLEMS AND WHAT THE DATA MEAN

REAL WAGES

Published real wage rate series are sometimes revised rather drastically. In some cases the data may have overstated real wage increases or understated declines in times of repressed inflation, if official price levels are used in the CPI when most people are paying black market prices. Such overstatement is said to have occurred in Argentina in 1986, when price controls resulted in severe shortages for some items (Kaufman 1990). (Another example, from an earlier period, is Chile in 1972-73.) To the extent that the consumer price index (CPI) index has been computed using out-of-date weights and/or on the basis of inaccurately sampled price data, movements in a real wage rate index may understate or overstate the actual movement in real wages for the groups concerned. It is possible that in some countries the CPI index is being computed on the basis of outdated weights.

To the extent the real wage statistics include employers' contributions to social security funds and health insurance systems, movements in real wage data may be misleading if these systems provide little actual benefit to the workers. Similarly, real wage data may be misleading to the extent real wage statistics are calculated omitting benefits in kind (which may vary considerably from country to country).

MINIMUM WAGE DATA

There is always a question as to the relevance of minimum wage data. The effect of changes in the legislated minimum wage on employment of, and wages actually received by, low-productivity and higher-productivity workers, is controversial. The number of people and occupations not covered by a legislated minimum wage may be substantial, as may be the number of people theoretically covered but working in the "informal" sector at wages well below the legal minimum. Enforcement may be sporadic. The minimum wage may be a reference wage. Or the minimum wage may be so low that the unconstrained market-determined wage for even the lowest paid workers is above it.

In Colombia in the 1960s and 1970s, according to Thoumi (1981), changes in legislated minima tended to lag so far behind CPI inflation that government-mandated minimum wages were below prevailing wages occasionally. To the extent legislators are concerned with the potential adverse effects of raising the minimum wage, they may be cautious in raising it, so that increases in the real minimum wage can be expected to lag behind average real wage increases, and decreases in the real minimum

wage may tend to exceed decreases in average real wages. See the discussions in PREALC (1983) and the World Bank Country Study, Chile: An Economy in Transition (1980).

On the other hand, Liuksila (1992) claims that adjustment of the minimum wage has traditionally been an important social policy tool in Colombia and that recent studies provide indirect evidence that by affecting real wages in construction, the public sector and the informal sector, minimum wage adjustments (which generally are made once a year) have helped protect the real earnings of low-income groups, and even affected positively the average wage in rural areas.

Another possibility is that the minimum wage is sometimes "binding" (i.e. set higher than the unconstrained market equilibrium wage rate for unskilled labor) and sometimes not. It is likely that in most Latin American countries the urban minimum wage was binding prior to the onset of the crisis years in 1982, but not thereafter (as Sebastian Edwards has suggested in a recent informal session at the Institute for Policy Reform), since the urban minimum wage declined so strongly in real terms in most countries of the region and generally has not recovered its pre-1982 level in real terms.

URBAN UNEMPLOYMENT

Urban unemployment data vary greatly among countries for various reasons, and may be biased downwards because of "discouraged worker" effects. On the other hand, in some countries (especially in the Caribbean), they tend to be biased upwards, by including students and others not truly in the labor force. Moreover, open unemployment figures tell only part of the story. Most of those who cannot secure wage employment become self-employed, in which case many earn below-average incomes. But at the same time a significant number of those who are self-employed workers/independent contractors may earn well above the average wage and find a high and steady demand for their services. Thus Latin American statistical offices have emphasized, as much as the open unemployment rate statistics, the underemployment statistics (those working for very low wages or for less than 35 hours a week, and/or who would like to work longer hours to earn more).

This paper does not look at underemployment statistics. It would seem that underemployment should rise as real wages fall and as unemployment rises. The evidence is that, by and large, unemployment and real wages have tended to be correlated.

As can be seen from Table I-2, the pattern and timing of real wage changes differs greatly among countries (and even between Rio and São Paulo). Movements in the average real wage

rate can conceal divergent movements in the real wages of different groups. For example, the real minimum wage rate has moved very differently from the average real wage rate in both Brazil and Peru. Between 1979 and 1982 the real wages of public sector workers in Peru increased by 30% (Webb in Paredes and Sachs 1991:9; ECLAC data from the Preliminary Overview 1987, tell a totally different story for central government employees in Peru), and wages of private sector workers in the metropolitan Lima area rose by more than 10%, from 88.9 to 100.5 (according to Preliminary Overview 1987). In the 1980s, on the other hand, the real incomes of public sector workers in Peru fell sharply relative to other workers (Paredes and Sachs, 1991:25). During the first 18 months of the García administration, wages for white collar workers grew 32.3% in real terms and those for blue collar workers by 50% (Cáceres and Paredes 1991:86). Average real public sector wages in Latin America for 1978-85 are found in ECLAC, Economic Survey of the Latin America and Caribbean Region 1985, p. 40; for Argentina see Larraín and Selowsky (1991:18).

Comparison of real minimum wage time series data with real average wage data seems to show real minimum wage movements relatively much larger than those of average real wages in some countries (e.g. Argentina, Chile and Peru). On occasion, the two series even move in opposite directions (compare Brazil between 1979 and 1987 with Peru from 1979 to 1986). The greater swings in the minimum wage data may be explained to some extent if the series are for money payments only and exclude in-kind payments, which may be relatively constant and are more important relative to money payments for minimum wage-level workers than for others. (For Chile the minimum wage data are actually a series called the "minimum income." For Colombia the data refer to the "minimum wage in the high[-wage?] urban sectors.")

Cáceres and Paredes, in Paredes and Sachs (1991:106), point out that there is a correlation, confirmed by empirical research, between inflation and variability of relative prices.

Data on open urban unemployment rates seem somewhat problematic. They range from very high on average (Chile prior to 1987 and Uruguay) to extremely low (Argentina, Brazil and Mexico) and from extremely variable and seemingly quite sensitive to changes in external economic conditions (Colombia and Chile) to near constant (Brazil and Mexico). In high- and variable-inflation countries there seems to have been little variability of the unemployment rate through time in the 1980s. Differences in coverage of the various national unemployment surveys and in how unemployment is defined may account for much of the differences. But in the absence of an in-depth comparative study it is difficult to know why levels and patterns of change are so different or what weight, if any, to attach to reported rates of urban unemployment as opposed, say, to changes in private real consumption or real wages.

In view of the apparently somewhat problematic character of the urban unemployment data, there might not seem to be much point to examining the time patterns of changes in unemployment versus real wage changes for the various countries. Kaufman, in his study of adjustment in Mexico, Argentina and Brazil, does not even cite unemployment rate data. However, comparing the changes in each country's unemployment rate relative to its initial or average value over the decade normalizes to some extent the data and makes them look more credible for the low-unemployment-rate countries. For example, in Mexico the reported unemployment rate was 6.7% in the crisis/stabilization program year of 1983, and while this may seem rather low considering the macroeconomic situation, it does represent a 50% rise over the previous year's level and is more than twice the level of 1990, when the economy was doing well. The ratio of highest to lowest unemployment rates for Argentina is about 1.75:1 and for Brazil about 2:1; these are comparable to the corresponding ratios for Chile.

MEASURING POVERTY: SOME CAVEATS

The importance, for international comparisons, of a definition of poverty that is uniform, but flexible enough to allow for country differences in the "minimum consumption basket," can be seen from the review in Berg and Hunter (1992) of the widely differing definitions on which some countries base their absolute poverty lines. According to Berg and Hunter, while the standard definition of the poverty-line income is some multiple of the income needed to buy a [country-specific] "least cost nutritionally adequate basket of common food items," the multiple applied varies widely, ranging from a low of 1.25 in Jamaica up to 2.0 in Venezuela. In Brazil the poverty-line income is defined simply as a specified fraction of the minimum wage (which suggests that the minimum wage itself is frequently adjusted to take account of the changing cost of the minimally adequate basket, but does not apply to a large proportion of jobs). In Colombia a household lacking any one of five shelter-related indicators, apparently even if its income is double or more than that required to buy the minimum food basket, is officially classified as poor; this definition seems more rigorous in that some households would be officially classified as poor that would not be so classified in other countries.

As Berg and Hunter note, household surveys usually focus on expenditures (although surveys may note reported incomes), since income is more variable in time and hard to measure, especially for the self-employed or those whose income derives in substantial part from self-employment. Household survey data essentially permit comparison of household expenditure with poverty-line incomes.

The CEPAL international comparisons study cited here uses a uniformly defined poverty-line income for the countries and time periods covered: an income less two times what is needed to buy a basic food basket is at or below the poverty line; if the income is less than enough to buy a basic minimum requirements basket, the person or household is in "misery," or indigente. The CEPAL study used household surveys to determine the percentage of the population having less than the cutoff level of income. Thus, since household surveys are taken infrequently, the poverty estimates in the CEPAL study were available for only two or three points in time for each of the countries covered.

Households vary in size, and changes in the percentage of urban households living in poverty can differ considerably from the corresponding changes in the percentage of the urban population in poverty. This is because the households crossing the poverty line between two points in time may be larger or smaller than the average household below the poverty line. For example, in Annex I, Table I-14 shows that in Peru in 1979 about 35% of urban households were below the poverty line, and that by 1986 some 45% were below this line. The corresponding figures for percentage of the population below the poverty line were 38% in 1980 and 52% in 1986, suggesting a more severe worsening of the poverty situation than if we had looked at households alone. The data suggest that in 1979 the average poor urban household in Peru was somewhat larger than the average non-poor urban household, and that between 1979 and 1986 relatively more large households than small households joined the ranks of the urban poor, since the percentage of urban people in poverty increased by more than the percentage of urban households in poverty, and that the average size of poor urban households increased from 1979 to 1986. Table I-14 shows that for all countries covered the percentage of the population in poverty exceeds the percentage of households in poverty, and that changes in the one percentage have corresponded to similar changes in the other.

TABLE II-1: Percentage of Urban Households (Hh) and of Persons (P) in Urban Households below Poverty Line

	1970		1980 or Closest Year			1986 or Closest Year		
	Hhs	P	Hhs	P	Diff	Hhs	P	Diff
Argentina	5	na	7	9	2	12	15	3
Brazil (1979, 87)	35	na	30	34	4	34 ^b	38	4
Chile	12 ^a	na	na	na	na	na	na	na
Uruguay (1981, 86)	10	na	9	13	4	14	19	5
Bolivia	na	na	na	na	na	na	na	na
Colombia	38	na	36	40	4	36	40	4
Peru (1979, 86)	28	na	35	38	3	45	52	7
Venezuela (1981, 86)	20 ^d	na	18	20	2	25	30	5
Mexico (1977, 84)	20	na	na	na	na	23	30	7
Mexico, national	34	na	32	40	8	25 ^c	37	12

Source: CEPAL, Magnitud de la pobreza en América Latina en los Años Ochenta, Estudios e Informes de la CEPAL #81 (Santiago, Chile, 1991), pp. 50-1, 75. This publication's 1970 estimates "corresponded to" those published in CEPAL's Magnitud de la pobreza en América Latina and may not be strictly comparable to those for the 1980s.

^a As quoted in Thorpe (1991) p. 59, citing Molina (1982).

^b 40% according to Berg and Hunter's (BH) reading of the CEPAL study.

^c 30% according to the BH reading of the CEPAL study.

^d BH also attribute to CEPAL's estimates for Venezuela very different figures than those in the CEPAL publication I consulted.

Note: BH's CEPAL data are taken from Gary Fields' 1990 study, as Fields cited them, and/or from Dominique van de Walle's 1991 study published as a World Bank LATHR.

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TABLE II-2: Average and Minimum Real Wage (RW) Rate, and Urban Unemployment (U) in 1970, 1980 and 1986 or Closest Years (index numbers and percentages)

	<u>1970</u>			<u>1980 or Closest Year</u>			<u>1986 or Closest Year</u>		
	<u>Avg</u>	<u>Min</u>	<u>U</u>	<u>Avg</u>	<u>Min</u>	<u>U</u>	<u>Avg</u>	<u>Min</u>	<u>U</u>
	<u>RW</u>	<u>RW</u>		<u>RW</u>	<u>RW</u>		<u>RW</u>	<u>RW</u>	
Argentina	107	182	4.9	100	100	2.6	102	110	5.6
Uruguay 81, 86	227	na	7.5	108	103	6.7	72	89	10.7
Brazil 79, 87	78	98	6.5	95	98	6.4	73	73	3.7
Chile	96	132	4.1	100	100	11.7	95	74	13.1
Bolivia	122	123	na	100	100	5.8	62	32	7.0
Colombia	103	79	10.6	100	100	9.7	120	114	13.8
Peru 79, 86	114	120	6.9	89	81	11.2	98	56 (63)	5.4
Venezuela 81, 86	82	94	7.8	95	97	6.8	74	64	12.1
Mexico 77, 84	87	91	7.0	na	113	8.3	80	72	5.7

Sources: CEPAL, Statistical Yearbook, 1987; Magnitud de la pobreza (1991), pp. 56-57.

TABLE II-3: Urban Poverty in Chile (Greater Santiago Area Only)
(percent)

<u>Year</u>	<u>Total Poverty</u>	<u>Absolute Poverty^a</u>	<u>Moderate Poverty^b</u>
1976	57		
1979	36	12	24
1985	46		
1988	50	23	27
1989	41	15	26

Source: Berg and Hunter (1992), p. II-6. The data are from a Brookings Occasional Paper by Carol Graham, "From Emergency Employment to Social Investment: Changing Approaches to Poverty Alleviation in Chile" (forthcoming as of February 1992).

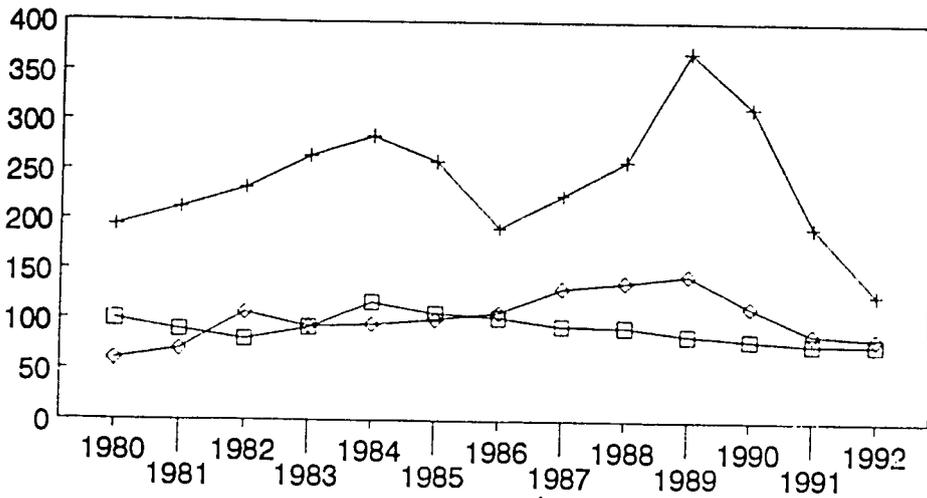
^a Income less than required to buy the minimum food basket.

^b Income less than twice what is required to buy the minimum food basket but greater than required to buy the minimum food basket.

Note: In addition to using the standard-definition CEPAL estimates of percentage of population living in poverty, Berg and Hunter (1992) assembled longer time series for this variable by drawing upon other researchers' and official estimates. The Berg and Hunter study contains real wage indices only for five countries and for the years 1980-1987 (p. V-5 in the preliminary 1992 version). In some cases this resulted in fairly long time series (Brazil, Chile, Colombia, Venezuela).

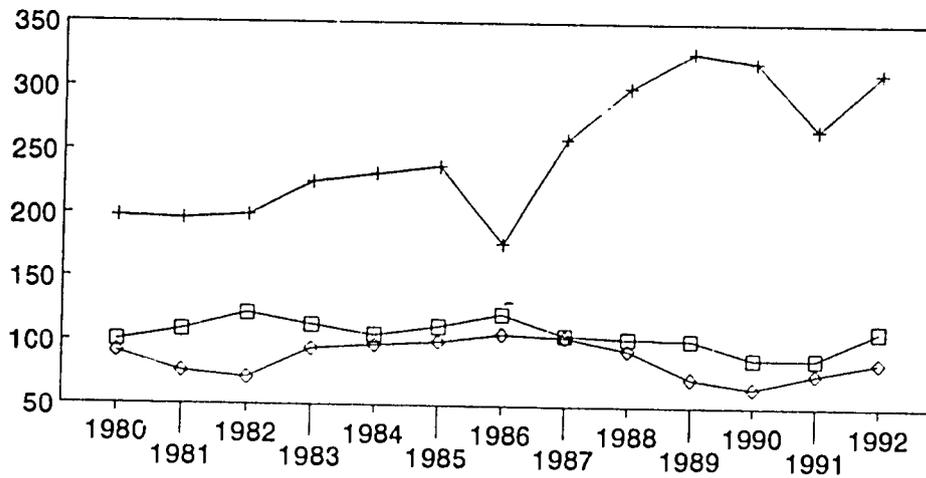
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ANNEX III – REAL AVERAGE WAGE
ARGENTINA



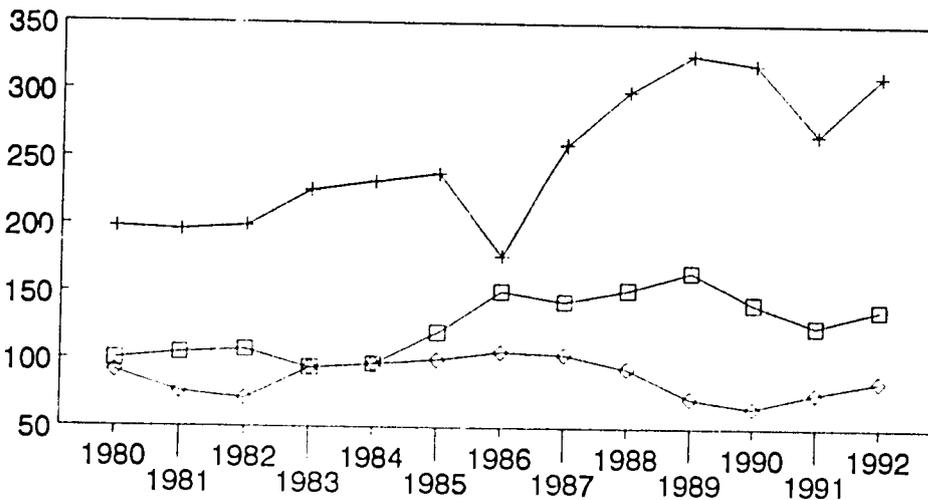
□ REAL AVERAGE WAGE + 100 X LOG INFLATION ◇ REAL EXCHANGE RATE

ANNEX III – REAL AVERAGE WAGE
BRAZIL – RIO DE JANEIRO



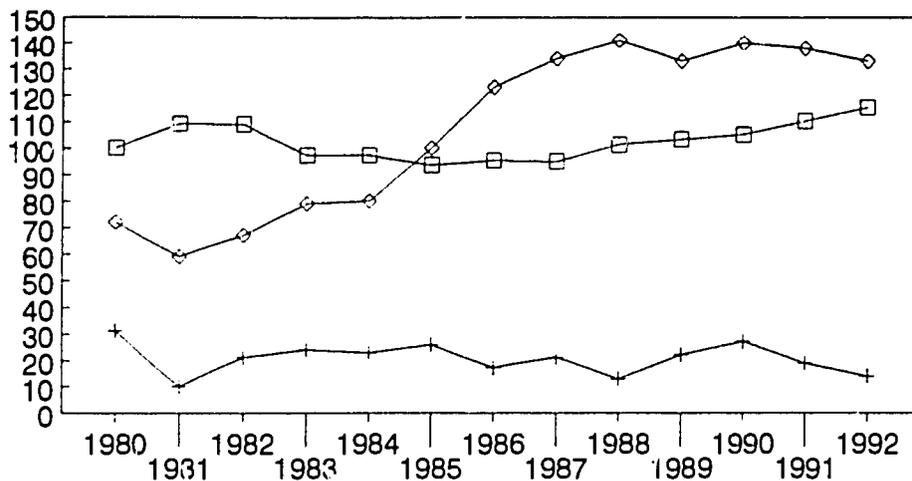
□ REAL AVERAGE WAGE + 100 X LOG INFLATION ◇ REAL EXCHANGE RATE

ANNEX III – REAL AVERAGE WAGE
BRAZIL – SAO PAULO



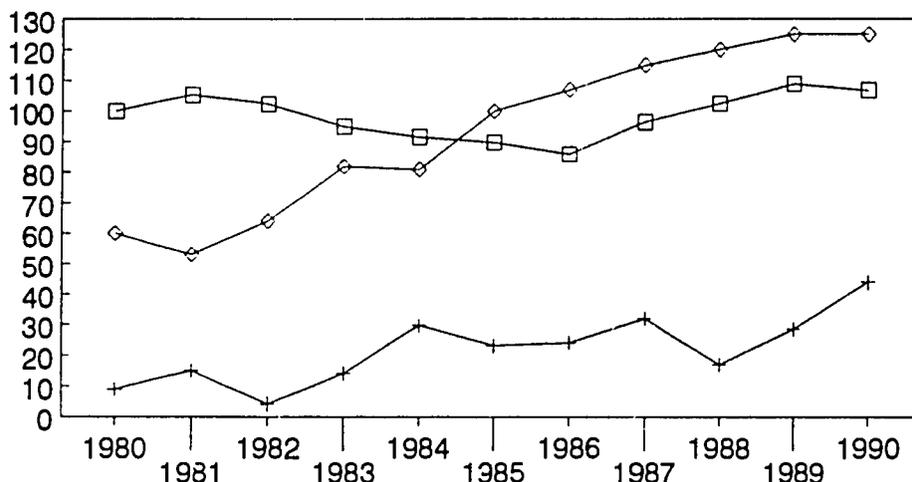
□ REAL AVERAGE WAGE + 100 X LOG INFLATION ◇ REAL EXCHANGE RATE

ANNEX III - REAL AVERAGE WAGE
CHILE



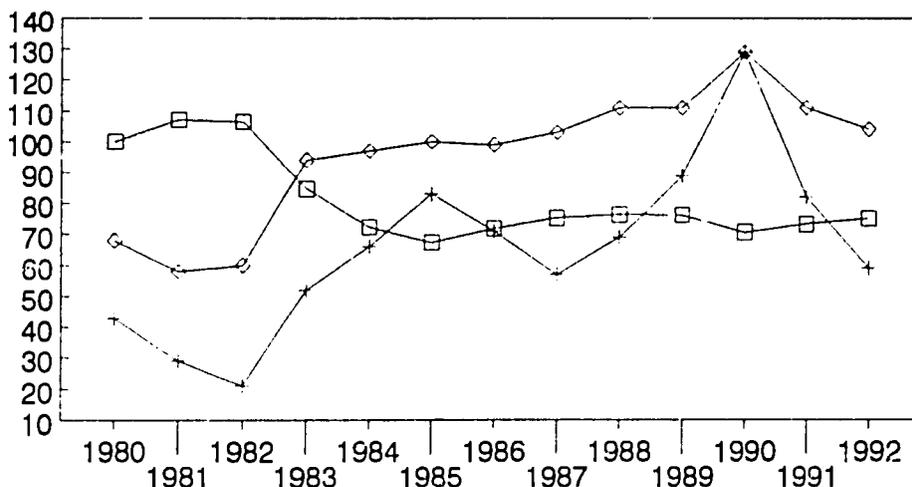
□ REAL AVERAGE WAGE + INFLATION (% PA) ◇ REAL EXCHANGE RATE

ANNEX III - REAL AVERAGE WAGE
PARAGUAY



□ REAL AVERAGE WAGE + INFLATION (% PA) ◇ REAL EXCHANGE RATE

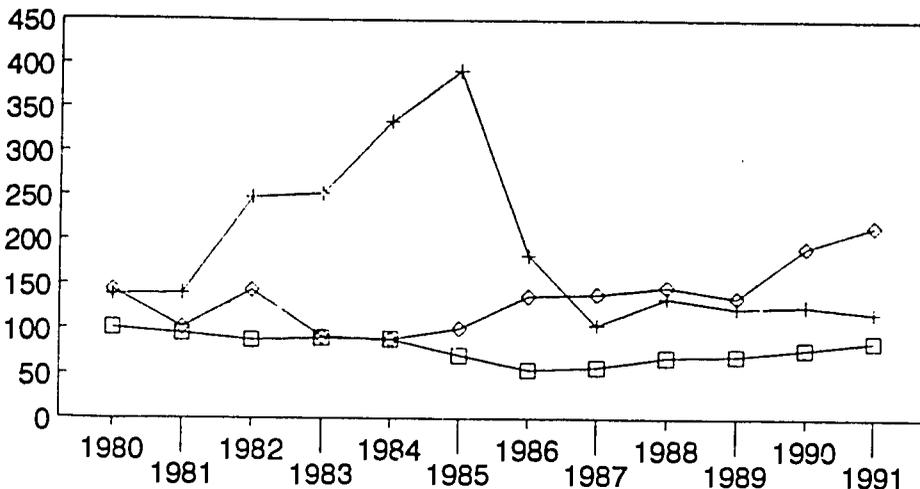
ANNEX III - REAL AVERAGE WAGE
URUGUAY



□ REAL AVERAGE WAGE + INFLATION (% PA) ◇ REAL EXCHANGE RATE

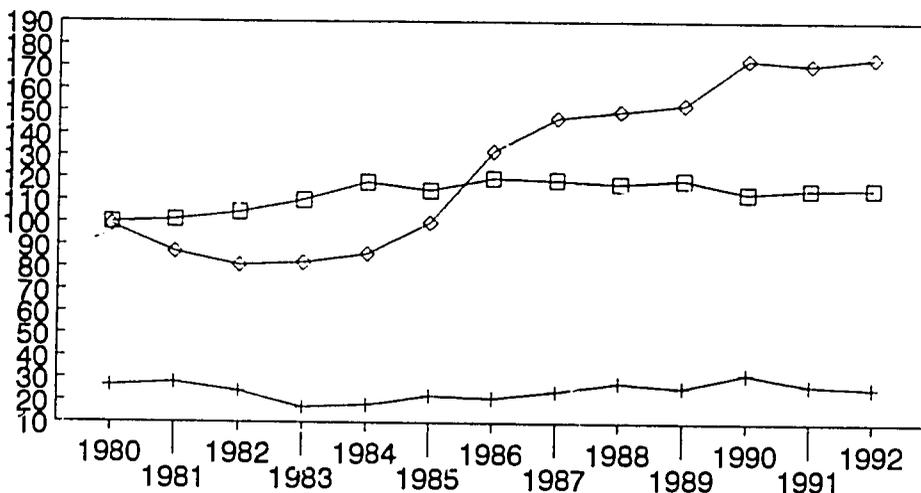
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ANNEX III - REAL AVERAGE WAGE
BOLIVIA



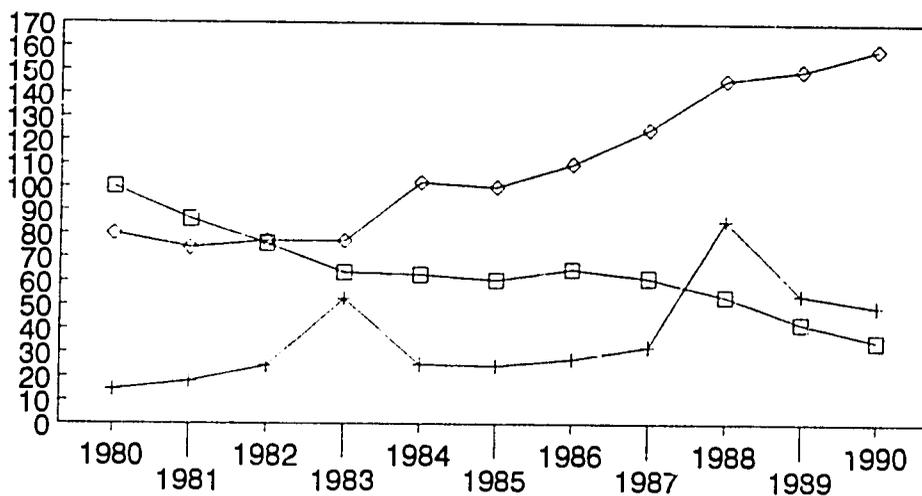
□ REAL AVERAGE WAGE + 100 X LOG INFLATION ◇ REAL EXCHANGE RATE

ANNEX III - REAL AVERAGE WAGE
COLOMBIA



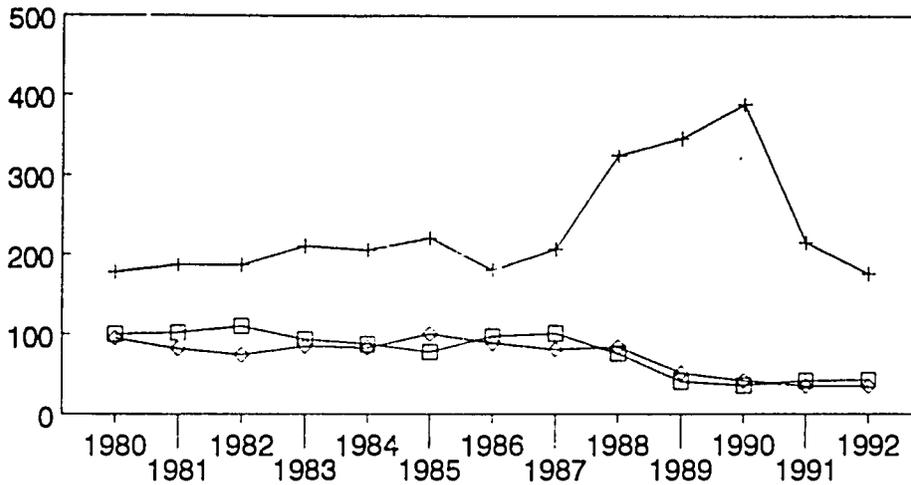
□ REAL AVERAGE WAGE + INFLATION (% PA) ◇ REAL EXCHANGE RATE

ANNEX III - REAL AVERAGE WAGE
ECUADOR



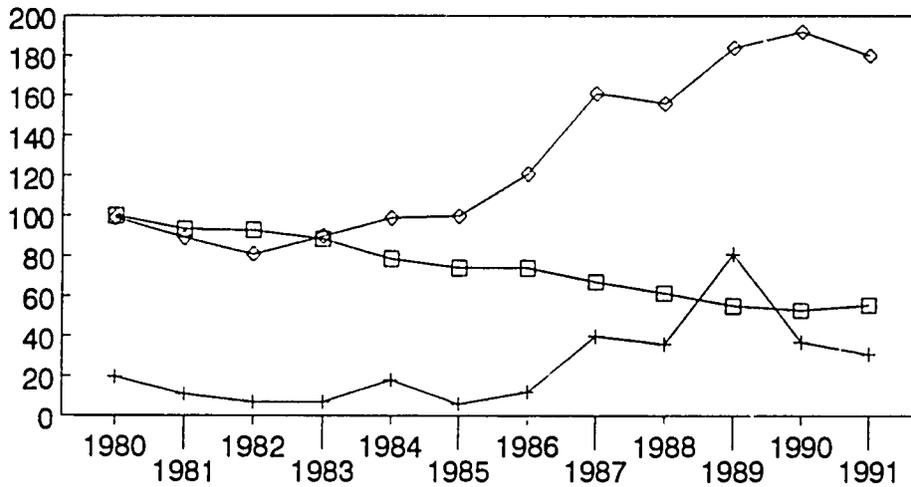
□ REAL AVERAGE WAGE + INFLATION (% PA) ◇ REAL EXCHANGE RATE

ANNEX III – REAL AVERAGE WAGE
PERU



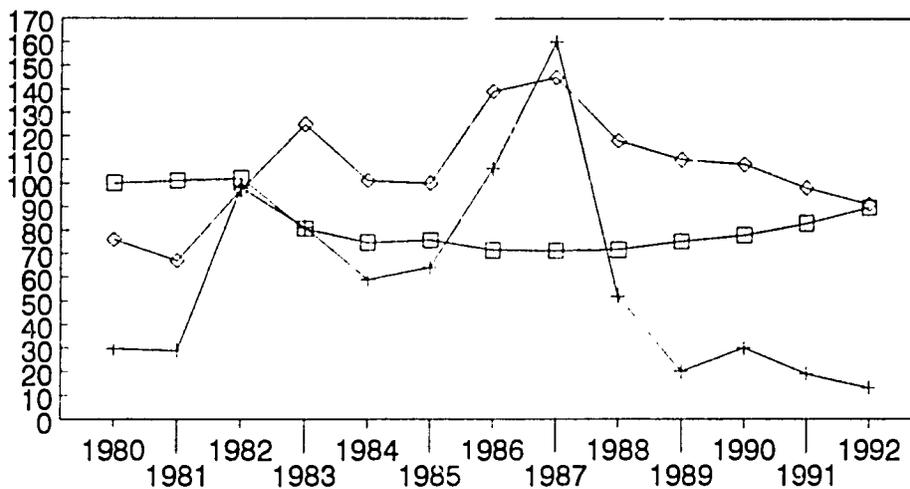
□ REAL AVERAGE WAGE + 100 x LOG INFLATION ◇ REAL EXCHANGE RATE

ANNEX III – REAL AVERAGE WAGE
VENEZUELA



□ REAL AVERAGE WAGE + 100 x LOG INFLATION ◇ REAL EXCHANGE RATE

ANNEX III – REAL AVERAGE WAGE
MEXICO



□ REAL AVERAGE WAGE + INFLATION (% PA) ◇ REAL EXCHANGE RATE

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**ANNEX IV: ADJUSTING FOR INFLATION'S ADVERSE
EFFECT ON REAL BALANCES**

Inflation forces individuals to forego consumption to the extent it becomes necessary for them to add to their money holdings to reconstitute these holdings "in real terms." As inflation accelerates, to the extent that interest rates have not kept pace and/or that people do not keep their liquid assets in interest-earning accounts or in a stable hard currency (e.g. dollars), they must add to their nominal holdings of money in order to keep their real money holdings (currency and checking account balances) constant. This is how the "inflation tax" works. (If inflation is so high or unpredictable that people are unable or choose not to add enough to their money holdings to keep them constant in real terms, real balances decline.)

To some extent, therefore, if increases in real wages are associated with considerable rises in the consumer price level, even though the price rises are more than offset by rises in nominal wages, the real wage increases are eaten up to some extent by inflation's reduction of the real value of money holdings. Sturzenegger (1992) has argued recently that the "inflation tax" in Latin America has been far more regressive than generally realized, hitting low-income wage earners much more heavily than higher-income individuals. He maintains that for this reason anti-inflationary stabilization programs, even of the "shock" variety, have enjoyed broad popular support in most Latin American countries where they have been tried.

This section indicates the extent to which real wage increases in the South American countries and Mexico in the last decade may have been offset by the impact of inflation on cash balances or reinforced by disinflation.

Suppose that individuals want to maintain their end-of-period cash balances (currency and checking account money) in some constant or near-constant proportion, a , to their money incomes, to cover cash needs which may arise at any time during the period. The desired proportion, for lower-income wage earners, may be some fraction, b , of the countrywide ratio. At the end of each wage payment period, the earner/household would like to have, unspent, an amount in real terms of $M^*/P = a \times b \times W/P$ on hand, where W/P is the real monthly wage. Therefore, desired nominal money holdings, M^* , are a constant proportion, $a \times b$, of monthly wage income, $W \times L$:

$$M^* = a \times b \times W \times L, \text{ and in real terms, } M^*/P = a \times b \times (W/P) \times L$$

where wage income ($W \times L$) is assumed to make up the bulk of the household's income, and the level of actual nominal money holdings, M , is adjusted, continuously or at intervals, by

putting aside (not spending) money income, so as to be equal to the desired level of money holdings, M^* .

It can be shown that if inflation is $(dP/P \times 100)\%$ per month, and the wage earner wants to add enough to his/her nominal holdings of money to offset inflation and keep his/her end-of-period real money holdings, M/P , constant, the amount that must be added in the course of the month is

$$dM = (dP/P_{t-1}) \times M_{t-1}, \text{ where } [(dP/P_{t-1}) \times 100]\% \text{ is}$$

the monthly inflation rate, and M_{t-1} is the amount of money balances at the end of the previous month. (If the price level falls, the individual can relax and run down his/her cash balances to a lower level.) For example if the monthly inflation rate is 10%, and the desired level of real money holdings at the end of the month is 250 pesos corrected for inflation, the individual will have to add 25 pesos to his/her money holdings, bringing them to 275 pesos, to have the same amount on hand, in real terms, as before.

If inflation is dP/P per year, and the wage earner wants to add enough to his or her holdings of money to offset inflation and keep $(M/P)/(W/P)$ constant, the amount that must be added in the course of the year is

$$dM = \{ (dP/P_{t-1}) \times M_{t-1} \} + \{ [d(W/P)/(W_{t-1}/P_{t-1})] \times M_{t-1} \}$$

plus a cross-product term,

$$\{ (dP/P_{t-1}) \times [d(W/P)/(W_{t-1}/P_{t-1})] \} \times M_{t-1}$$

The cross-product term can generally be ignored, as being very small relative to the sum of the first two terms.

The amount which must be added in real terms is $(dM)/P_t$, where

$$(dM)/P_t = \{ (dP/P_{t-1}) \times (M_{t-1}/P_t) \} + \{ [d(W/P)/(W_{t-1}/P_{t-1})] \times (M_{t-1}/P_t) \}$$

This can be rewritten as

$$(dM)/P_t = \{ (dP/P_{t-1}) \times (M_{t-1}/P_{t-1} \times P_{t-1}/P_t) \} \\ + \{ [d(W/P)/(W_{t-1}/P_{t-1})] \times [M_{t-1}/P_{t-1} \times P_{t-1}/P_t] \}$$

ignoring the cross-product term.

Another way of looking at it, which gives the same result, is as follows. Suppose M/P equals the desired amount in period $t-1$. If so, $M_{t-1}^*/P_{t-1} = a \times b \times W_{t-1} \times L_{t-1}/P_{t-1}$. Let $L_t = L_{t-1} = 1$.

Then the individual must subtract, or set aside, from this period's wage earnings, W_t/P_t , an amount,

$$(dM)/P_t = \{(dP/P_{t-1}) + [d(W/P)/(W_{t-1}/P_{t-1})]\} \text{ TIMES the factor} \\ a \times b \times (W_{t-1}/P_{t-1}) \times (P_{t-1}/P_t),$$

to add to real balances.

For computational ease, $(dM^*)/P_t$ can also be written as M^*_t/P_t minus $M^*_{t-1}/P_{t-1} \times P_{t-1}/P_t$. The latter quantity (what is being subtracted) is what the original end-of-period balances are worth in real terms as a result of changes in the price level. (This procedure has the additional advantage of taking account of the cross-product term, too). Obviously the higher the intervening amount of inflation, the less the balances held at the end of the previous period are now worth and the more they need to be reconstituted at the expense of current period consumption out of wages. This is the computational approach taken to construct the illustrative tables using Argentine and Peruvian data (see below) to show the difference between the adjusted and unadjusted real wage rates.

In real terms, the individual's current real wage is W_t/P_t in a sense, but in a deeper sense it is the "real balance-adjusted real wage," $adjW_t/P_t = W_t/P_t - \{(dM)/P_t\}$, where $(dM)/P_t$ is defined as above.

Suppose that $a = 0.2$ (i.e., economy-wide, desired cash balances are 20% of GDP) and $b = 0.5$ (people whose principal income is wage earnings wish to hold a lesser amount, 10% of their annual earnings, in cash).

We can hypothesize also that people want to hold a constant proportion, not of W/P but of adjusted W/P , $[W/P - (dM/P)]$.

In order to demonstrate the considerable difference between real wages as they are ordinarily calculated, and real wages when a downward adjustment is made to take into account the need individuals have to add to their nominal holdings of money to offset the adverse impact of inflation on real balances, Tables IV-1 and IV-2 have been constructed using, respectively, data from Argentina and Peru, two countries in which dramatic changes in inflation and/or real wages have been experienced over the last decade.

TABLE IV-1: ARGENTINA: COMPARISON OF THE MOVEMENT OF W_t/P_t AND ADJUSTED W_t/P_t OVER TIME

(I)	(II)	(III)	(IV)	(V)	(VI)	(VII)	(VIII)	
Real Wage W_t/P_t to Base 1980 =100	Last Year's Real Wage (W_{t-1}/P_{t-1})	$a \times b \times W_t/P_t = (M^*_t/P_t)$	Ratio of P_{t-1} to P_t	$M^*_{t-1}/P_{t-1} \times a \times b \times W_{t-1}/P_{t-1}$	(IV) TIMES (V)	(III) MINUS {(IV) TIMES (V)}	(I) MINUS (VI) = Adjusted Real Wage	
1983	101	80	10.1	100/534	8.0	1.89	8.21	93
1984	117	101	11.7	100/788	10.1	1.48	10.17	106
1985	106	117	10.6	100/485	11.7	2.19	8.42	98
1986	102	106	10.2	100/182	10.6	5.60	4.60	97
1987	94	102	9.4	100/275	10.2	3.40	5.95	88
1988	93	94	9.3	100/487	9.4	1.90	7.37	85
1989	85	93	8.5	100/5924	9.3	0.14	8.32	76
1990	80	85	8.0	100/2444	8.5	0.33	7.70	73
1991	76	80	7.6	100/184	8.0	4.14	3.48	73
1992	76	76	7.6	100/118	7.6	6.41	1.15	74

TABLE IV-1 (Cont.)

IX)	X)	XI)	XII)	XIII)	XIV)	
Real Wage W_t/P_t to Base 1980	Adjusted Real Wage	$[(dM/P)/W/P]$ "Inflation Tax" as % of Real Wage Income	$[(dM/P)/M_{t-1}/P_{t-1}]$ "Inflation Tax" as % of M_{t-1}/P_{t-1}	% ch in Unadjusted Real Wage	% ch in Adjusted Real Wage	
1983	101	93	10.3	103	na	na
1984	117	106	10.1	101	15.3	14.6
1985	106	98	7.2	72	-8.9	-8.1
1986	102	97	4.3	43	-3.9	-0.3
1987	94	88	5.8	58	-0.3	-10.3
1988	93	85	7.9	79	-0.9	-2.5
1989	85	76	9.0	90	-8.7	-10.6
1990	80	73	9.1	91	-5.1	-4.8
1991	76	73	4.3	43	-5.1	0.2
1992	76	74	1.5	15	-0.8	2.4

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Some comments on Table IV-1 may be helpful for understanding the impact of the "real balance effect." For 1983, the actual real value of balances, deflated by current period prices, held at the end of the previous period is computed as the product of 8 (from column V) times the reciprocal of the change in the price index, with year t-1 as the base, 100/538 (from column IV). The product of these two terms is about 1.89. Subtracting 1.89 from the amount the individual wants to hold (10.1 in Column III) gives approximately 8.21. Therefore, 8.21 pesos of 1980 purchasing power must be subtracted from the current period real wage of 101 pesos, to keep real balances at their desired level of $.1 \times 101 \text{ pesos} = 10.1 \text{ pesos}$. Adjusting for this, we get a "real-balances adjusted" real wage of $101 - 8 = 93$ in column VIII.

The real balances adjustment does not seem to reduce the rate of change of adjusted W/P to much below that of unadjusted W/P on average, but W/P and adjW/P can move in opposite directions (e.g. the 1990/1991 and 1991/1992 movements). In the case of Peru (see Table IV-2 below), the real balance effect offsets or reinforces the movement of real wages to some extent but never so much as to cause the real wage and the adjusted real wage to move in opposite directions.

If we look at the Argentina experience, we find that in 1982 $(W/P - \text{adj}W/P)/W/P = (92 - 101)/92 = 9/92$ or about 10%, so that this can be taken as the amount of the "inflation tax" to the extent individuals didn't evade it by reducing their desired M/P to W/P ratio or shifting out of local currency into dollars. It may have been less than this, if it is argued that W/P was (maybe!) higher than it would have been without the 300% inflation of that year. If, however, we think that W/P was not significantly higher than it would have been with low inflation, then the differential does represent a significant hidden tax.

TABLE IV-2: PERU: COMPARISON OF THE MOVEMENT OF W_t/P_t AND ADJUSTED W_t/P_t OVER TIME

(I)	(II)	(III)	(IV)	(V)	(VI)	(VII)	(VIII)	
Real Wage W_t/P_t to Base 1980 =100	Last Year's Real Wage (W_{t-1}/P_{t-1})	$a \times b \times W_t/P_t = (M^*_t/P_t)$	Ratio of P_{t-1} to P_t	$M^*_{t-1}/P_{t-1} \times a \times b \times W_{t-1}/P_{t-1}$	(IV) TIMES (V)	(III) MINUS {(IV) TIMES (V)}	(I) MINUS (VI) = Adjusted Real Wage	
1983	93	80	9.3	100/225	8.0	4.13	5.17	88
1984	87	93	8.7	100/212	9.3	4.12	4.60	83
1985	78	87	7.8	100/258	8.7	3.00	4.76	73
1986	98	78	9.8	100/163	7.8	5.99	3.76	94
1987	101	98	10.1	100/215	9.8	4.72	5.41	96
1988	76	101	7.6	100/1823	10.1	0.42	7.19	69
1989	42	76	4.2	100/2877	7.6	0.14	4.01	37
1990	36	42	3.6	100/7758	4.2	0.05	3.57	33
1991	42	36	4.2	100/239	3.6	1.75	2.43	39
1992	43	42	4.3	100/157	4.2	2.71	1.54	41

TABLE IV-2 (Cont.)

IX)	X)	XI)	XII)	XIII)	XIV)	
Real Wage W_t/P_t to Base 1980	Adjusted Real Wage	$[(dM/P)/W/P]$ "Inflation Tax" as % of Real Wage Income	$[(dM/P)/M_{t-1}/P_{t-1}]$ "Inflation Tax" as % of M_{t-1}/P_{t-1}	% ch in Unadjusted Real Wage	% ch in Adjusted Real Wage	
1983	93	88	6.5	65	na	na
1984	87	83	4.9	49	-6.2	-6.0
1985	78	73	5.5	55	-11.0	-11.8
1986	98	94	4.9	49	25.6	28.5
1987	101	96	5.5	56	3.9	2.3
1988	76	69	7.1	71	-24.9	-28.1
1989	42	37	5.3	53	-45.5	-45.6
1990	36	33	8.6	86	-12.8	-13.0
1991	76	39	6.7	67	15.5	20.7
1992	76	41	3.7	37	1.7	4.1

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