Poverty and the Labor Market in Venezuela 1982-1995

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The purpose of this paper is to describe the performance of the Venezuelan labor market in the period between 1982 and 1995, and to analyze its impact on the evolution of poverty. The period we analyze is a convulsed one, along which Venezuela suffered from the consequences of both changes in the international financial market conditions, and a sustained deterioration of economic management. Growth and inflation were highly volatile, real wages fell in a sustained way, and poverty increased dramatically.

In spite of repeated attempts to produce some kind of adjustment to the changing international market conditions —first by a contractionary policy between 1982 and 1985 followed by a short-lived expansion between 1986 and 1988, in turn followed by an orthodox adjustment in 1989 that led to another short-lived expansion between that date and 1992, which in turn was followed by a deep recession between that date and 1995— the underlying determinants of the Venezuelan economic crisis remain in place today as firmly as they were in 1982. In spite of the variety of policy orientations of these adjustment attempts, they could never reverse in a sustained way the falling trend of productivity (as reflected by average product per worker), and always resulted in an increasing gap between average product per worker and real wages (see Figure I-1).

The increase in poverty is just an expected result of this adjustment dynamics. The processes in the labor market by which poverty increased, however, are not simply captured by a conventional Harris-Todaro type of model which postulates that during a long contraction the informal sector employment expands, producing a widening of the differentials between formal and informal sector incomes. In fact, our data shows that poverty affected as much, if not more, formal sector as informal sector workers. Our data indicates that in Venezuela economic growth will bring about a reduction in the incidence of poverty, except when growth is accompanied by high and variable inflation (see Figure I-2). The combination of inflation variability and wage arrangements in the formal sector that generated imperfect wage indexation led to situations in which informal sector workers were in a better position to defend their real wages than their formal sector counterparts. In these cases, the variability of inflation caused a deterioration of real wages in the formal sector, which in turn offset any potential gains that the increase of growth might have had on poverty reduction. When growth declines with little inflation increase, informal employment grows and it becomes the main source of poverty increase

During the 1980's Venezuela experienced a severe increase in the percentage of the population living in poverty. By 1989 poverty had increased over 150% from its 1980 level.. The largest rise in poverty took place at the beginning of the decade when the head count ratio rose by 36% between 1982 to 1985. However, poverty increased in Venezuela both during this recessionary sub-period *and* during the expansion between 1986 and 1988. The percentage of the population with incomes below the poverty line continued to rise throughout the decade. By 1992, after a fast growth period that lasted 3 years, poverty incidence had been reduced to pre-1985 levels. However, the stalling of the adjustment policy in 1992 resulted in stagnant growth, and poverty levels resumed their ascending curve. Today, the percentage of household with incomes below the poverty line is at its highest point since the beginning of the 80's. In our view, the events between 1986 and 1988 qualify the Psacharopoulos-Morley hypothesis[1] of a positive correlation between growth and poverty reduction, highlighting the idea that only

[1] See Pscharopoulos, G., S. Morley, A. Fiszbein, H. Lee, and B. Wood, "Poverty and income distribution in Latin America: the story of the 1980s", report No. 27, LAC Technical Dept., Regional Studies Program, The World Bank, December 1992.

sustainable (non inflationary, stable) growth has the effect predicted by the hypothesis.

As we will develop in the following section, the main labor market problem (and the main explanation of the surge in poverty counts) in Venezuela is falling real wages, not unemployment. The labor market appears to have an unending ability to absorb labor, even though the price is the collapse in productivity and real wages we show in Figure I-1. It is tempting to follow this line of argument and affirm that the expansion of the informal sector 'caused' the increase in poverty, and indeed there is a high correlation between the share of informal sector on total employment and poverty. However, a more detailed look at the data shows that the labor market dynamic in this period is not fully captured in this simplified statement of causality.

Section II will be dedicated to an exploration into the dynamics of the Venezuelan labor market through the use of conceptual framework derived from segmented labor market models such as the Harris-Todaro one. After introducing the basic labor market and macroeconomic background data, we use a traditional boom-bust periodization to analyze the evolution of employment and wages in the different segments of the labor market. The central message of this section is that in the Venezuelan case the pattern of adjustment of the private formal and the informal sector is modulated by the level and variability of the inflation rate: volatile inflation annihilates the ability of wage bargaining arrangements in the formal sector to stop the erosion of real wages, even if the economy is growing. Therefore, the combination of high growth and volatile inflation can produce the paradox of informal sector wages raising while private formal sector wages are falling.

Section III will open with an analysis of the overall evolution of poverty, to go on with an analysis of the sub-periods identified in the previous section. There we will use a decomposition of the FGTB-class of poverty indices in order to track down the variations in poverty to the different segments of the labor market. We will show that the consequence of the fact that high and variable inflation results in a rapid deterioration of the private formal real wage is an increase in the contribution of the modern sector to overall poverty. Again, this contradicts the usual idea that poverty results from the expansion of informal or unregulated segments in the labor market given real wage rigidity in the modern segment.

Finally, in Section IV some concluding remarks will be presented.

Growth and Labor Market Performance

At the beginning of the 80s Venezuela was suffering from the consequences of the development of a large sector of public enterprises, mainly in basic industrial activities as steel and aluminum, a strategy that was adopted at the heights of the 1973 oil boom. The nature of the budget commitments that this strategy implied was completely different from previous public sector involvement in social services and infrastructure development.

On the one hand, these commitments were larger, involving a growing fraction of the fiscal budget. On the other hand, once these budgetary commitments were made, reducing them in the future implied large financial and economic losses. This created a rigidity in the fiscal budget which translated the world oil price fluctuations into macroeconomic instability.

A rapidly increasing external debt was the way to make compatible the contradicting demands of the powerful groups associated with government traditional activities (mainly social services in education and health) with the new and increasingly powerful group that had appeared around the new public enterprise sector. While current receipts financed traditional government activities, the public enterprise sector began increasingly to finance its expansion through external debt.

In 1982 the debt crisis hit Venezuela in a dramatic fashion and, by closing the escape valve that external financing had represented up to that moment, induced a dynamics of volatile and increasing inflation. To the extent that nominal wages are slow to adjust to price variations, as seems to have been the case in Venezuela, adjustment can rely on the reduction of real wages to align national expenditure to national income in the presence of external or domestic shocks. In fact, between 1982 and 1995 there is a dramatic fall in real wages in all sectors in Venezuela: by 1995 average real wages had fallen by 53% relative to 1982 (see Figure II-1). Even though the informal sector was the one that suffered the largest fall (58%), private formal and public sector wages had fallen by 44 and 52% respectively. Because inflation exhibits a well-defined growing trend within the period, one is bound to suspect that at least part of this decline in real wages is connected to the inability of existing wage arrangements in the private and public sectors to keep pace with high and variable inflation. This decline in real wages could not fail to be reflected in increased poverty, and the head count ratio grew from 26% in 1982 to 48% in 1995.

Given this downward flexibility of real wages it is not surprising that unemployment along this period does not show any definite trend in spite of a disappointing growth performance, as is shown on Figure II-2.

This aggregate performance, however, hides very different behavior of the public, private formal, and informal segments of the Venezuelan labor market, some of whose summary statistics are presented in Table II-1. The public sector comprises employees in governmental activities and public institutes, and accounts for 20% of total employment during the period. In terms of employment behavior, the public sector is the most stable employer —as shown by its lowest coefficient of variation on employment—, but does so at the cost of a large variability of real wages. The private formal sector comprises employers and employees of firms with 5 or more employees and all managerial, and professional self-employed. It accounts for slightly less than 40% of total employment on average during the period, has the more stable real wages,

and shows an intermediate level of variability of employment. The other 40% of employment is generated in the informal sector —which accounts for all employers and employees in firms with less than 5 employees, plus the rest of the self-employed— which shows a high variability of real wages and the largest employment variability. It is by now a conventional approach[2] to predict that in a developing country during adjustment the labor market will follow the predictions of a Harris-Todaro type of model; i.e.: that in a contractionary period informal sector real incomes will fall much more than modern sector wages, reflecting the increased flow of labor to the informal sector (new entrants and workers who loose their jobs in the modern sector). The model implies that wage determination in the private formal sector follows a bargaining process whereby unions negotiate wages and firms determine employment. As a consequence, one would expect to observe that employment variability is larger in the private modern sector than in the informal sector, which is not the case in Table II-1.

Table II-1 The Venezuelan Labor Market: Some Summary Statistics for the Period 1982-1995

	Mean	Standard Deviation	Coeff. of Variation
Total			
Employment	6,156.3	954.1	15.50
Real Wages	23,492.1	4,807.7	20.47
Public Sector			
Employment	1,182.3	92.8	7.85
Real Wages	26,622.1	5,735.4	21.54
Private Formal Sector			
Employment	2,372.8	427.7	18.02
Real Wages	26,267.1	4,778.6	18.19
Informal Sector	2,601.2	542.9	20.87
Employment	19,388.1	4,169.1	21.50
Real Wages			

Source: *Encuesta de hogares por muestreo*, OCEI, v.s years and author´s calculations.
Employment is measured in 1.000´s employees. Real wages in constant 1992 Bolívares (deflated by CPI).

The explanation of this apparent paradox, however, may be related to the effects of variable and increasing inflation in the bargaining ability of different groups of workers in the labor market. In the private formal sector unions may not be able to avoid large real wage losses if inflation is variable, to the extent that they look to the past (and are surprised by inflation surges) and/or the institutional characteristics of the wage bargaining process generate long contracts. The fact that the typical duration of a collective agreement in Venezuela is around 24 months[3], a period far too long to avoid a fall in real wages in the presence of high and variable inflation, suggests that this is indeed the case. Errors in the prediction of inflation would cause both employment variability to be smaller and real wage variability to be larger than predicted by a conventional model.

In low growth periods the informal sector acts as an employment buffer, and in principle one should expect to see real wages falling there to adjust to the increased employment generation. However, in an expansionary context it may be the case that a spot labor market —where wages are frequently renegotiated either by exit or by a flexible price determination of the service being sold— may help workers to avoid real wage losses in the presence of high and variable inflation. The absence of labor regulations enforcement in the informal sector makes for more flexible and adaptable employment and wage arrangements, that eases the process of adjustment to inflation "surprises" and allows workers to better defend their real wages in an expansionary context.

[2] For an application of a related approach to the Venezuelan case, see Betancourt, K., Freije, S., and Márquez, G. "*Mercado Laboral: instituciones y regulationes"*, Ed. IESA, Caracas, 1995.

[3] See ILO, *Informe de la Misión de la Oficina Internacional del Trabajo sobre el diagnóstico de las relaciones laborales en Venezuela*, mimeo, Caracas, 1991.

Finally, in the case of the public sector one is to expect employment variability to be the lowest of all sectors given public managers aversion to conflict, and the potential of conflict implied by personnel reductions. If this is the case, then fiscal policy determines the pattern of wage adjustment. Given that the public sector does not accommodate its employment policy, the degree of wage variability depends on fiscal adjustment: with employment fixed, public sector wage policy is just the mirror image of fiscal policy.

In order to further analyze these hypothesis about the behavior of the different segments of the labor market we can define two expansionary and three contractionary sub-periods in this time frame by looking at the overall growth and macroeconomic performance, with very well defined dividing points. Some summary statistics of the macroeconomic and labor market background of the period are presented in Table II-2. In a context of overall decline in real wages, we find that increasing inflation makes the adjustment of real wages in the modern sector larger than predicted by the "classical" model for any given rate of employment generation in the modern sector. Furthermore, we find that in two of our five sub-periods informal sector incomes grew even though modern sector real wages were falling.

1982-1986: A "CLASSICAL" CONTRACTIONARY PERIOD

In 1982 the debt crisis hit Venezuela strongly, given the large stock of short term debt that had been used to finance ambitious projects during the oil price surge between 1974 and 1981. The government failed to implement a significant adjustment policy and as a consequence the currency collapsed at the beginning of 1983, breaking a historic tradition of currency stability that had lasted more than thirty years.

In order to restore the macroeconomic equilibrium the government imposed price, imports, and exchange rate controls. A stern fiscal adjustment program was adopted, that resulted in negative growth in 1983 and 1984. A new government assumed power in 1984 and sustained this contractionary fiscal policy, that resulted in the restoration of macroeconomic balances, albeit at the cost of negative GDP growth both that year and in 1985. By 1985 macroecomic equilibria were effectively restored, and inflation was kept under control. One of the effects of the control system enacted in 1982-83 was to close the economy to foreign competition, and thus to create some limited space for import substitution: between 1982 and 1985 the share of tradable sectors on non-oil GDP grew from 23.8 to 30.4% and stagnated there until 1988. The expansionary fiscal policy adopted later (in 1986) did not result in any increase in the share of tradables.

The main instability during this period is associated with growth, which is negative and highly variable, while inflation is relatively stable. At the same time that labor demand falls at more than 2% yearly in the private formal sector, informal sector employment expands at above 4% yearly. Public sector employment, in turn, was practically frozen during the period as an effect of the fiscal adjustment policy. In spite of the strong expansion of the informal sector, unemployment reached a peak of 13.4% of the EAP in 1984 and fell at the end of the period to 10.3%.

Most of the weight of price adjustment in the labor market was carried by the informal sector, where average income fell by almost 6% yearly. Both in the public and in the private formal sector real wages fell by more than 3% yearly, even though the government used a policy of strong minimum wage increases to counteract the falling tendency of real wages.

The labor market followed an adjustment path of the kind predicted by the "classical" theory of segmented labor markets: the informal sector expanded rapidly and partially compensated the fall of labor demand in the modern sector. As a consequence, incomes in the informal sector fell more than in the modern sector, and the wage differential between the two segments increased.

1986-1988: AN INFLATIONARY EXPANSION

In 1986 the adjustment policy was reversed, and a strong expansionary policy was adopted even though that same year oil prices collapsed. Growth accelerated at first, though at a high inflationary cost: average inflation almost tripled relative to the previous sub-period. By the end of 1988 it was evident that the expansionary policy was unsustainable, and that a drastic adjustment was needed to restore a semblance of economic order.

Growth during this period was high and stable, while inflation became increasingly high and volatile. Employment in the modern sector grew at a very high rate (11.5%), as domestic producers continue to occupy the space left by the reduction of imports caused by a sustained real devaluation and a stringent system of import controls. At the same time, the abandonment of fiscal restraint was translated into employment growth in the public sector at a rate of almost 4% yearly.

Minimum wage policy was clearly used as an anti-inflationary device, and the minimum wage fell by 6% yearly. Public sector wage policy was also one of containment, and real public sector wages fell by almost 4% yearly. In the private formal sector the volatility of inflation in a context of imperfect wage indexation caused wages to fall by 1.8% yearly. By contrast, informal sector incomes enjoyed the positive effect of an expanding economy, a slow employment growth (below 1% during the period), and a better ability to adapt both prices and wages to the new conditions. As a consequence, incomes in the informal sector increased by 1.4% yearly and the wage differential between the formal and informal sector narrowed down.

The surge of inflation in this period caused a break with the "classical" dynamics of segmented labor market adjustment. Even though labor demand behaved as expected in an expansionary period (modern sector employment grew faster than informal sector employment), the adjustment on the price side caused modern sector wages to fall while informal sector incomes were increasing, belying the idea that modern sector workers are better armed to defend their incomes than their informal sector counterparts.

THE 1989 ADJUSTMENT SHOCK

The new government that assumed in 1989 adopted an orthodox approach to stabilization policy in the framework of an International Monetary Fund-sponsored adjustment package. The adjustment policy was designed as shock therapy, and by the end of 1989 fiscal and external balances were restored, though at the price of a 8.6% fall of GDP.

The adjustment in 1989 had dire short term consequences on growth and inflation, but by the end of 1989 monthly inflation rates had returned to pre-adjustment levels. Wages fell in all segments of the labor market, with the fall ranging between 13% for private formal sector and the public sector and almost 17% for the informal sector. Employment contracted in the formal private sector, and the expansion in public sector employment did little to alleviate the pressure in the labor market. The gap between supply and demand in the labor market was filled by both an increase in unemployment, that reached almost 10%, and by a rapid expansion of the informal sector, where employment grew by 7%.

The employment adjustment was just as predicted by the conventional model: the sudden fall of aggregate demand led to a fall in formal sector employment, and the informal sector stepped in to partially fill the gap. Again as predicted by the conventional model, the wage differential between formal and informal sector widened.

1990-1992: ADJUSTMENT AND EXPANSION

Having restored macroeconomic order, and facing a favorable oil price panorama, the policy adopted in 1990 was again an expansionary one. In order to avoid the appearance of fiscal disequilibria, the government undertook a number of privatizations that served to finance the fiscal cost of the policy

given the absence of tax reform. However, by 1992 political opposition began to erode the credibility of the government, to the point that two military coups were attempted during the year, and any consistently market-oriented economic policy had been abandoned by mid-1993.

This was a period of fast GDP growth and high, though stable, inflation. Employment generation was highest in the private formal sector, where employment grew by 5.6% yearly, even though informal sector employment was still growing at a hefty 3.6%. Public sector employment, in turn, grew very slowly at less than 1% annually. Unemployment fell rapidly and by 1992 had reached a level similar to that of 1988.

In spite of this promising panorama real wages fell in both the private formal and public sectors at 3 and 1.6% respectively, reflecting the inability of the existing institutional wage bargaining arrangements to keep pace with high inflation. Minimum wage policy, in turn, was being used again as an anti-inflationary device with minimum wages falling by around 1% annually. Informal sector incomes grew at 0.5% annually, leading to a narrowing of the wage differential between the formal and informal sectors.

During this period the employment adjustment was just as predicted by the conventional model, but the income side of adjustment again reflected the inability of existing wage arrangements in the formal sector to defend real wages against high inflation.

1992-1995:
THE IMPLOSION OF ADJUSTMENT

The political crisis that erupted in 1992 finally led to the impeachment of the President, with two care-taker governments until the elections at the end of 1993 were won by a loose coalition of groups that had opposed the adjustment policy of 1989. A deep financial crisis, partially incubated by lax regulation in the context of the expansionary fiscal policy of the previous period, exploded at the beginning of 1994. As the government choose to rescue the failing banks, fiscal deficit surged to 15.4% of GDP in 1994. Inflation almost doubled from the previous period, but it remained relatively stable (as shown by the low coefficient of variation in Table II-2).

The collapse of growth led to a rapidly falling labor demand in the private modern sector, where employment fell by 3.7% annually. Public sector employment policy was expansionary, but the bulk of employment growth was produced in the informal sector, with employment growing there at more than 10% per year. At the end of the period, employment in the formal sector accounted for 48% of total employment, up from 40% in 1992.

Real wages fell in all sectors. The fast expansion of employment in the informal sector was accommodated by a fall in real wages of almost 15% yearly. However, the public and private formal sector also suffered extensively (with real wages falling annually by 10 and 6% respectively). Minimum wage policy was also contractionary, with the minimum wage falling by more than 4% yearly. At the end of the period, the gap between real wages in the informal and private formal sectors had reached a record high, with informal sector wages reaching only 58% of private formal ones.

The Evolution of Poverty

In our analysis we will use the class of poverty measures proposed by Foster, Greer and Thorbecke[4]. The FGTB indices represent different degrees of poverty aversion depending on the value of one fixed parameter. In general terms, the proportionate short-falls from the poverty line are raised to a power a, representing the magnitude of our concern with respect to the distribution of these short-falls among the poor. The measure sums the short-falls over the poor and standardizes by the total population. The general form of the FGTB index is:

$$P_a = \frac{1}{n}\sum_{i=1}^{q}\left(\frac{Z-Y_i}{Z}\right)^a$$

where,
i = index over population,
n = population size,
q = population under the poverty line,
Z = poverty line (twice the cost of a consumption basket of goods),
Y = household income per capita,
a = degree of poverty aversion.

If a=0 the index becomes the head-count ratio, given by the proportion of the population whose per capita income is less than the poverty line. If a=1 the index becomes the aggregate poverty gap, representing the percentage by which the mean income of the poor falls short of the poverty line multiplied by the head-count ratio. With a=2 the index increases when, for a constant aggregate poverty gap, the distribution of income among the poor worsens.

Ideally, a poverty measure should increase given a reduction in income of any person below the poverty line (monotonicity axiom), or a pure transfer of income from a person below the poverty line to anyone who is richer (transfer axiom). The head-count ratio (P_0) is not sensitive to either one of these axioms. The aggregate poverty gap (P_1) fulfills the first axiom but does not tell us anything about the distribution of income among the people that suffer from a shortfall of income relative to the poverty line. Finally, when a=2, P_2 becomes a measure sensitive to the severity of poverty, and it may be related to the average poverty gap and the inequality among the poor, as[5]:

$$P_2 = \frac{P_1^2}{P_0} + \frac{(P_0 - P_1)^2}{P_0}(CV_p^2$$

where CV_p denotes the coefficient of variation of income among the poor.

The first term in the formula above reflects the contribution of the poverty gap to P_2, and the second term is the contribution of inequality among the poor to P_2. While P_2 is not easily interpretable, its ability to reflect the severity of poverty for comparison purposes makes it attractive.

The FGTB indices are easily decomposable into sub-groups allowing us to account for the contribution of each one of these sub-groups to overall poverty. Thus, the index of total poverty becomes a weighted sum of each group's index, with weights equal to the percentage of the national population in each sub-group (with *j* indexing over the different groups)

[4] Foster, James, J. Greer, and E. Thorbecke (1984) "A Class of Decomposable Poverty Measures", Econometrica, Vol. 52, pp: 215-251.

[5] Ravallion, Martin (1992) "Poverty Comparisons. A Guide to Concepts and Methods". LSMS Working Paper No. 88. The World Bank.

THE OVERALL CHANGES IN POVERTY INDICES

We base our poverty estimates on family incomes derived from household surveys collected twice a year by the Statistics Office of Venezuela (OCEI). Households are defined as poor if their calculated per capita income falls short of twice the cost of an adequately defined consumption basket of goods[6]. Measuring poverty against income instead of household consumption carries problems of underreporting which could overestimate the amount of poverty for a given period. In order to partially correct for underreporting, household reported incomes were adjusted by a correction factor derived from income levels in national accounts for each given year.

Even if the poverty gap (P_1) and the P_2 measure did follow the overall trend of the head-count ratio (P_0) during most of the decade, we do find that both P_1 and P_2 increased less (fell more) than the head-count ratio during the whole period, with the notable exception of the 1992-1995 period. In other words, the increase in the incidence of poverty was larger than the increase in its severity during the 80's, but this changed in the 1992-1995 period.

For example, during the 1985-1988 period the size of the population under the poverty line was growing but, as P_1 and P_2 remained relatively stable, the average income shortfall of, and the income distribution among, the poor remained stable. This points to a growth in overall poverty mainly due to the fall of incomes around the poverty line, and not to a worsening of the overall incomes of the poor. However, during the 1992-1995 period the opposite is true: the average income shortfall of the poor was increasing, and the income distribution worsening. This points to a fall of incomes among the poor that affected more the poorest among the poor.

$$P_a = \sum_{j=1}^{k} m_j P_j^a$$

What happened to these trends vis-à-vis economic growth? Psacharopoulos et al. (1992) hypothesized that growth reduces poverty and recession increases it (there is no conclusive empirical evidence that this relationship also holds for income distribution). The data for Venezuela partially supports this hypothesis. The 1982-1984 and 1989-1992 periods show a concomitant increase/decrease of poverty along economic decline/growth. However, 1984 and the 1985-1988

Table III-1 Poverty Indexes, Venezuela 1982-1995

Year	FGTB 0 (Head count ratio)	FGTB 1 (Income gap Head count ratio)	FGTB 2 (Distribut. sensitive measure)
1980	0.1765	0.1027	0.0856
1981	0.2282	0.1225	0.0970
1982	0.2565	0.1388	0.1086
1983	0.3265	0.1726	0.1305
1984	0.3758	0.2060	0.1579
1985	0.3477	0.1836	0.1384
1986	0.3889	0.1998	0.1454
1987	0.3884	0.1914	0.1365
1988	0.3996	0.1935	0.1358
1989	0.4444	0.2252	0.1605
1990	0.4149	0.2115	0.1544
1991	0.3537	0.1811	0.1361
1992	0.3775	0.1818	0.1296
1993	0.4137	0.1960	0.1354
1994	0.5364	0.2860	0.2062
1995	0.4819	0.2425	0.1684

Source: Author´s calculations on information from *Encuesta de hogares por muestreo*, OCEI.

[6] For a more detailed analysis of poverty line calculation and issues of underreporting of incomes, see Marquez, G. "Poverty and social policies in Venezuela" in N. Lustig (ed.) "Coping with adjustment and poverty", Brookings, 1995.

period show a reversal of the previous pattern. Poverty fell by 7% during 1984-1985 while economic decline continued. Conversely, poverty continued to grow from 1985 to 1988 even though GDP per capita grew during the whole period. The first period could be explained as a time-lagged effect, but given the resumption of growth in 1986 we would theoretically expect family incomes to begin recuperating.

In order to explain these trend reversals we will rely on the labor market analysis presented in the previous section. During the 1985-1988 period economic growth resumed, modern sector employment increased, informality and unemployment decreased, but poverty continued to rise. Poverty reduction gains through growth are necessarily related to increases in real wages and family incomes. However, we did find above that in a period of a high and variable inflation, real wages were not able to adjust rapidly enough. Besides, as fiscal adjustment took place through an erosion of wages in the public sector, it may be the case that public employees contributed to the increase in poverty in this period.

The opposite occurred during the 1990-1992 period when, even though inflation rates were 35.4%, the variability of inflation was low allowing workers to predict increases and thus to better defend their incomes. This holds particularly true for the informal sector whose wages increased more than for any other segment of the labor market. To better understand the relationship between intersectoral movements and the deterioration of incomes within employment sectors we carried out a decomposition by labor market segments analyzing poverty changes overtime.

However, because poverty is a family characteristic as opposed to individuals' labor market insertion, to establish the connection between poverty and labor market performance requires some assumption regarding how each family will be associated with each labor market segment. We assign each household to a labor market segment according to the labor market insertion of the household head. The rationale for this assumption is that the head's wage drives family income and thus, changes in the labor market insertion or the wage of the household head will be the single most important determinant of that family's welfare. Furthermore, this assumption will be neutral if the evolution of labor market insertion of household heads follows closely the trends for the whole working population. A comparison between Table II-2 (where we presented the overall trends of labor market insertion for the whole population) and Table III-2 shows that labor market participation of the heads of households followed closely overall labor market trends during the decade.

A DECOMPOSITION OF THE SOURCES OF POVERTY

By any measure Venezuela's households were especially hard hit by the transitional costs associated with changing macroeconomic policies during the last decade. We examine the effects of recession, structural adjustment, and growth on households through changes in employment and labor incomes. We contend that the relationship between poverty and the labor market depends as much on forces that determine private formal sector wages (as the ability of collective bargaining institutional arrangements to defend real wages), as it depends on the expansion/contraction of the informal or unregulated segment of the labor market.

While we do find that for Venezuela the growth of informal employment followed the trend of the head-count ratio for most of the decade (again the 1985-1988 period is an exception), its contribution to overall poverty was not always the largest. Our decomposition of the FGTB indices allow us to separate the contribution to poverty by sector due to either an expansion of the sector, or to a fall of real incomes within that same labor segment throughout a given period. We decompose poverty changes over the sub-periods defined in the previous section. For any P_α, we decompose changes over time as:

$$P_1 - P_0 = \sum_{j=1}^{k} [P_{j0}(m_{jt} - m_{j0}) + m_{j0}(P_{jt} - P_{j0}) + (P_{jt} - P_{j0})(m_{jt} - m_{j0})]$$

where j index over groups
t index over time
P_{jt} denotes poverty index for group

m_{jt} denotes the share of group j in the total population in period t.

Table III-2 The Evolution of Employment of Household Heads, Venezuela 1982-1995
(Average Yearly Growth End-Beginning of Period)

	1982-1985	1985-1988	1988-1989	1989-1992	1992-1995
Public	0.04	2.74	6.75	-2.02	1.08
Private Formal	-6.34	16.66	-1.75	2.63	-4.27
Informal	5.92	-0.68	5.14	2.79	8.10
Informal on Total Employment					
Beginning of Period	42.57	49.37	40.96	41.89	43.09
End of Period	49.37	40.96	41.89	43.09	50.58

Source: Author´s calculations on *Encuesta de hogares por muestreo*, OCEI, information.

The first term (the between effect) indicates whether a labor segment was increasing its population share,
and is weighted by the poverty index at the initial time. The second term (the within effect) represents changes in the poverty indices within the same sectors, weighted by the share of each group in the population at the initial time. Finally, the cross-product in the last term points to overall trends: a positive cross-product shows that an expanding sector has rising poverty and viceversa.

A decomposition of the head count ratio P_0 is shown in Table III-3, where we present the percentage of the total change of the poverty index that can be attributed to each labor market segment. A complete decomposition in absolute values and in percentage terms for each poverty index can be consulted in the Appendix.

The first period (1982-1985) was characterized by a negative rate of growth along with stable inflation, and the labor market adjusted in a "classical" form. Most of the increase in poverty in this period was due to the drop of labor incomes in the expanding informal sector: around 35% of total poverty growth is accounted by the increase in poverty within the sector (the "within" effect). The second largest source of poverty increase is the growth of the unemployment rate, accounting for around 23% of the increase in total poverty (a "between" effect). Even though the "within" contribution of the private formal sector is not negligible (20%), its contribution to the increase in poverty was minor because the sector was contracting (the -10% "between" effect). Thus, we have that poverty sources were "classically" aligned to the labor market's quantity and price adjustment.

During the second period (1985-1988) poverty continued rising in spite of GDP growth. Again, the driving force of poverty increases was the deterioration of wages across segments. However, the decomposition shows the perverse effect of a highly variable inflation on the private formal sector wages. Even though the sector was growing (note the positive "between" effect), its contribution to the overall rise in poverty over the period increased to 43% (the positive "within" effect) . Surprisingly, the "within" contribution to the increase in the head count rate was the same for the informal and the private formal sector. However, as the informal sector was contracting and the private formal was expanding (note the opposite signs of the respective "between" effects), the total contribution of the private formal sector to poverty was the largest. At the same time, it is important to highlight that the fiscal adjustment hit public sector workers very hard, and their "within" contribution to poverty growth reached 26%. On the positive side, note also that because of the fast growth in the period unemployment exhibits a negative size contribution to the increase of poverty, as measured by the negative "between" effect.

Like in the first period, during 1988-1989 the rise in poverty is explained to a large extent by the informal

Table III-3 A Decomposition of the Changes in the Head Count Ratio (P_o)
(Percent of Total Change)

	1982-1985			1985-1988		
	Between	Within	X-Prod.	Between	Within	X-Prod.
Public Sector	-1.39	8.82	-0.51	-2.75	26.56	-1.35
Employees Private						
Modern Sector	-9.73	19.42	-4.41	33.31	42.60	16.79
Other Private						
Modern Sector	-0.01	1.46	-0.01	1.16	-0.54	-0.15
Informal Sector	10.15	34.82	4.08	-33.80	42.61	-6.05
Unemployed	23.27	-0.47	-0.50	-36.24	4.76	-2.21
Inactive	0.82	14.08	0.11	-2.20	17.67	-0.18
Total	23.11	78.13	-1.24	-40.51	133.66	6.85
Overall			100.00			100.00

	1988-1989			1989-1992			1992-1995		
	Between	Within	X-Prod.	Between	Within	X-Prod.	Between	Within	X-Prod.
Public Sector	3.33	0.52	0.02	7.35	5.99	-0.71	-1.47	7.84	-0.37
Employees Private									
Modern Sector	-12.77	17.67	-1.10	-4.04	14.67	0.42	-14.27	11.29	-1.95
Other Private									
Modern Sector	-0.61	2.53	-0.28	-0.36	1.61	0.12	-0.28	2.11	-0.27
Informal Sector	0.05	40.98	0.01	-7.79	52.34	1.90	15.09	57.63	8.08
Unemployed	26.35	4.64	2.37	13.35	3.24	-0.76	5.17	1.26	0.25
Inactive	2.69	13.45	0.14	-6.32	18.35	0.62	2.69	7.02	0.17
Total	19.05	79.79	1.16	2.20	96.21	1.59	6.93	87.16	5.91
Overall			100.0			100.0			100.0

Source: Author´s calculations on data from *Encuesta de hogares por muestreo*, OCEI, vs. years.

sector. Most of the rise in the head-count ratio came from a drop of incomes in an expanding informal sector (41% of the total poverty increase). Even though inflation imposed a larger adjustment on modern sector wages, it was a rapidly shrinking sector, and therefore its contribution to overall poverty was again minor.

It is worth noting at this point that our decomposition seems to point to a "secondary worker" effect taking place during this adjustment period. While the informal sector grew 7% during that year, our decomposition depicts a relatively stable sector. The difference lies in that in the former case the calculation includes all workers, while in the latter we are looking at the labor market movements of only the heads of households.

In contrast with 1988-1989, the 1989-1992 period exhibited a concomitant reduction of poverty along with economic growth. Even though modern employment was growing at a 5.6% annually, the

fall in real wages curtailed a significant contribution of this sector to poverty reduction (a "within" effect of 15%). The greatest source of poverty reduction for this period was the relative recuperation of incomes within the informal sector that (a "within" effect of 52%). Why did informal sector wages recuperated during this period even though the sector was expanding? We hypothesize that the casual and unregulated labor relations in the informal sector created a better setting there that allowed workers to adjust their wages more efficiently than in the modern sector. Therefore, they ended in a position that made them able to gain more rapidly from the growth experienced during this period.

The abandonment of structural reforms during the last period (1992-1995) brought back a deterioration of living conditions. The percentage of households with incomes under the poverty line increased to 54% in 1994 and 48% in 1995. The aggregate poverty gap and the distribution-sensitive measure also experienced increases, pointing to a deterioration of income distribution among the poor. The labor market adjusted once again in a "classical" form, and the total contribution of the informal sector to the poverty increase reached 73% (a "between" effect of 15% plus a "within" effect of 58%). However, even though formal employment fell, unemployment did not rise for the heads of households. As a consequence, informal employment grew rapidly with the concomitant deterioration of wages within the sector. Once again, we see the "classical" pattern of deterioration of incomes in an expanding sector as the main contributor to increases in overall poverty.

Even though the informal sector did undoubtedly contribute to increases in overall poverty along the period, it was also the main contributor to improvements in the living conditions of the population. During periods of recession, the labor market adjusted through an increase in the share of informal employment, an erosion of informal sector wages, and increases in poverty. However, during the only period in which growth generated significant reductions in poverty (as in 1989-1992), it was accompanied by a high but relatively stable inflation rate. Under those conditions, it was the informal sector the one that was able to defend real wages. Contrastingly, when growth was accompanied by highly variable inflation (as in the 1985-1988 period), we find that poverty continued to increase given that workers in the growing formal sector were unable to effectively contain real wage erosion.

SOME CONCLUDING REMARKS

The period between 1982 and 1995 is a remarkable one in Venezuela. If one averages out, the period may be shown as one of secular decline of growth and wages, with surging inflation. A more detailed look, however, shows a society going through stop-and-go adjustment policies that throws the economy into short and deep recessions followed by brief respites of vigorous growth that end in another recession episode. Though an explanation of this peculiar policy pattern is well outside the scope of this paper, its consequences on population welfare are clear: poverty has increased and job quality has decreased, at least if one is inclined to think about low wage jobs as low quality ones.

If growth is supposed to reduce poverty through an expansion based on "good jobs" in the modern sector, the case of Venezuela in the 1989-1992 period gives some food for thought: growth reduced poverty between 1990 and 1992 because it improved the (relative) lot of informal sector workers, not because there was an increase in the wages of workers in "good" formal sector jobs that reflected productivity improvements. In fact, quite the contrary is true: wages in the modern sector were falling while informal sector incomes were increasing. This observation suggests that the reduction of poverty needs much more than the stabilization of inflation and the resuming of growth —both tasks thoroughly accomplished during this period—, but needs to attack the underlying causes of stagnant productivity.

On the other hand, the abandonment of the adjustment policy in 1993 led to a collapse in growth and an acceleration of inflation that plunged even larger fractions of the population into even

deeper poverty. The purported concern for the poor that justified the reversal of the adjustment policy not only did not stop the deterioration of living conditions (that, by the way, were improving as poverty had fallen between 1990 and 1992), but hurt the poorest among the poor by worsening an already bad income distribution, as shown by the increase in the aggregate poverty gap and in the distribution-sensitive poverty index.

The main conclusion that can be obtained from the history of the vagaries of Venezuelan economic policy in this period is that, by failing to address the underlying causes of the economic crisis, none of the approaches tried have proven to be efficient, or useful, in improving the lot of the poor. This inability was largely the product of ignoring the fact that only by attacking the causes of a secular decline of productivity could real wages be improved in a sustainable way and, by that mechanism, poverty be reduced.

Data Appendix