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ABSTRACT

This paper explores the relationship between the macroeconomy and the poverty rate. The first section provides evidence that poverty was far less responsive to macroeconomic growth in the 1980s than it had been in earlier decades. The section explores and rejects four reasons for this: It is not due to the exclusion of in-kind income from the data, to the regional location of the poor, to the public assistance changes of the early 1980s, or to the changing demographic composition of the poor. Instead, it is almost entirely due to declines in real wages that occur among low-wage workers over the 1980s. In fact, employment and weeks of work per year within low-income households expands more rapidly in the 1980s than in the 1960s. This is almost entirely offset, however, by declines in weekly earnings at the bottom of the income distribution. The result is that economic growth has been a far less effective anti-poverty tool over the past decade.

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The longest expansion in U.S. economic history occurred during the 1960s. The economic growth of this period is typically considered one of the primary reasons for the sharp decline in the U.S. poverty rate over that decade. In fact, it was during this decade that the term "trickling down" was first coined, to refer to the positive effect of economic growth on the well-being of the poor (Anderson, 1964). Estimates based on data from the 1960s and 1970s have consistently shown a strong negative correlation between macroeconomic expansion and the poverty rate.

Between the fourth quarter of 1982 and the fourth quarter of 1990, the U.S. experienced its second longest economic expansion. After the sharp recession of 1981/82, the poverty rate exceeded 15 percent and it would have been reasonable to expect that the strong expansion that followed would have produced a sharp decline in poverty. This did not occur. While poverty clearly declined over the entire period of the expansion, it still stood at 12.8 percent in 1989, well above its historic low of 11.1 percent in 1973, and at about the same level as in 1980. The macroeconomic expansion did not bring down poverty as quickly as historical evidence would have indicated. In 1988, for instance, when the overall economy grew by more than 4 percent, poverty fell by a statistically insignificant amount.

This paper explores the unexpectedly slow decline in poverty that occurred over the expansion of the 1980s. The next section presents evidence on the "stickiness" in the poverty rate in the past decade, compared to earlier decades. The following section investigates several potential non-earnings-related explanations for this fact. There is little evidence that the slowdown in the response of poverty to economic growth is due to problems

with the measurement of poverty, to changes in transfer policy in the early 1980s, to the regional distribution of the poor during the 1980s expansion, or to changes in family composition among the poor.

The final section of the paper investigates the decreased responsiveness of income and earnings to the macroeconomy among low-income households in the 1980s. A growing body of literature has recently begin to explore the widening in wage differentials among less-skilled and more skilled workers over the 1980s.[1] That literature indicates that substantial real wage declines occurred among low-wage workers throughout the expansion of the 1980s, while substantial real wage increases occurred among higher-wage workers. These trends are clearly correlated with the trends in poverty. Declining real wages will make it harder for low-income families to escape poverty. The point of this paper is not to describe that wage decline further, but to investigate how important this decline was relative to other factors that were operating at the bottom of the income distribution.

The lower responsiveness of poverty to economic growth is not due to changes in labor market responsiveness over the 1980s expansion. In fact, labor market involvement was more responsive during the 1980s: the unemployment rate fell more rapidly, and earners in the bottom quintile of the population increased their work effort more sharply in the 1980s than in the 1960s. The lower responsiveness of income among low-income households to the economic expansion of the 1980s is entirely due to declining real wages, which offset the increase in labor market effort, resulting in slower income growth.

The implication of these results is that the changing wage structure of the 1980s made economic growth a far less effective tool for reducing poverty than it was in the expansion of the 1960s. It is still an open question

whether these trends will continue into the 1990s. If they do, economic growth cannot be expected to produce substantial declines in the poverty rate.

I. THE CHANGING RELATIONSHIP BETWEEN THE MACROECONOMY AND POVERTY

In 1984 Alan Blinder and I wrote a paper estimating the effect of general macroeconomic variables on the poverty rate (Blank and Blinder, 1986). Using the official data on poverty, we regressed the poverty rate against a set of control variables for the macroeconomic environment. That regression, based on data from 1959 to 1983, is presented in column 1 of table 1.[2] As shown at the bottom of table 1, the coefficients indicate that in a steady state a 1 point increase in the male unemployment rate (a measure of core unemployment in the economy) would increase the poverty rate by an almost identical 0.98 points. A 1 point rise in inflation would increase poverty by a much smaller 0.12 points. A 1 point rise in the percent of GNP devoted to government transfers would decrease the poverty rate by about half a point.

This regression equation, based on the historical relationship between poverty and macroeconomic indicators, can be used to forecast poverty for the 1980s. Multiplying the regression coefficients from column 1 of table 1 by the actual values of the macroeconomic variables after 1983 results in a series of annual poverty rate forecasts. By 1989, this regression equation would have predicted a poverty rate of 9.3 percent, largely due to a sharp decline in unemployment and inflation over these years. In reality, the poverty rate was 12.8 percent. Figure 1 shows this effect, with a plot of the actual poverty rates from 1959 to 1989, against the fitted values of the equation in column 1 from 1959 to 1983 and the forecast values from 1984 to 1989. As Figure 1 indicates, the predicted values diverge steadily from the

actual poverty rate throughout the expansion of the 1980s.

Column 2 of table 1 indicates the nature of this divergence. In this column, the identical regression is calculated using data from 1959 through 1989 (that is, including the 6 newly available observations.) The results are astonishingly different. The coefficients change dramatically with the addition of these new observations, so that the effects of both unemployment and inflation become small and insignificant. The effect of transfers as a share of GNP changes sign.

Column 3 of table 1 further investigates these differences, by adding three additional variables: a dummy variable, equal to 1 from 1983 on, which allows a shift effect in the general level of poverty over the expansion; the product of this dummy variable and the male unemployment rate, which allows the coefficient on unemployment to differ in the 1980s; and the product of this dummy variable and transfers as a percent of GNP, which allows the coefficient on this variable to differ in the 1980s. The result is a set of coefficients on the original variables similar to those found in column 1, as well as a set of additive coefficients, showing how the effects of these variables diverged during the expansion of the 1980s.

Column 3 indicates that both unemployment and transfers appear to have "perverse" effects on poverty over the 1980s. All else held constant, for every 1 point fall in unemployment after 1982, poverty <u>increased</u> by 0.42 points. After 1982, a 1 point rise in the share of transfers in GNP is associated with a 1.58 point <u>rise</u> in poverty. This exercise indicates the difficulties of drawing causal conclusions from regression analysis. The negative correlation between unemployment and poverty in the 1980s should not be interpreted to imply that rising unemployment in the 1990s will decrease

poverty. Rather, it is more likely that other (unmeasured) factors, occurring at the same time that unemployment fell, were offsetting the unemployment effects during the 1980s, resulting in a negative coefficient. The question of this paper is what those other unmeasured effects might be.

The regressions from Blank and Blinder focus particularly on the effects of unemployment and inflation on the poor. A simpler way of observing the changing relationship between economic growth and poverty is to regress the percent change in poverty against the percent change in real GNP. Using available poverty rates[3], table 2 presents coefficients that estimate the percent change in poverty resulting from a 1 percent change in GNP in three different time periods. For instance, column 1 of table 2 indicates that the poverty rate among all persons decreased by 2.53 percent for every 1 percent increase in GNP over the 1960s, but decreased by only 1.69 percent for every 1 percent increase in GNP over the expansion of the 1980s.

The evidence in table 2 indicates that the lower responsiveness of poverty to the expansion of the 1980s occurs among a wide range of groups in the population and is evident among both those whose incomes have historically been more responsive and those who are generally less responsive to the macroeconomy. Poverty rates calculated among families (column 4) show a pattern identical to that of poverty rates among individuals (column 1). Poverty among children (column 2) is more responsive to economic growth and poverty among the elderly (column 3) is less responsive than is the total poverty rate. For both groups, however, their responsiveness was lower in the 1980s. Female-headed families (column 5) show a markedly lower responsiveness to economic growth in both time periods.[4] Black families (column 6) escaped poverty faster than other groups when the economy grew in the 1960s, but their

poverty rate has shown virtually no responsiveness to the economic growth of the 1980s.

It is worth noting that for most of these groups, poverty is also less responsive to economic growth over the 1970s and early 1980s as well. I do not focus on this fact primarily because the time period between 1970 and 1982 was a very different economic period than the 1960s and the latter part of the 1980s. The thirteen years between 1970 and 1982 contained four business cycles, with five years of negative GNP growth, and a rapid increase in both inflation and unemployment. It is perhaps not surprising that poverty is less responsive to short and sequential upturns and downturns in the economy.

In contrast, the expansion of the 1960s lasted for over nine years, and the expansion of the 1990s lasted for almost eight years. Table 3 indicates how similar these periods were, focussing on the seven-year periods 1963-69 and 1983-89, the two periods which we shall use extensively in the rest of this paper.[5] In both of these periods, the economy experienced sustained and continuous economic growth. As table 3 indicates, in the 1960s real GNP grew by 34.7 percent over this period. In the 1980s, real GNP grew by a very similar 30.1 percent. Similarly, unemployment fell 37.0 percent over these seven years in the 1960s, while it fell by a slightly higher 45.3 percent in the 1980s. Inflation rose by 24.8 percent in the 1960s and by 26.3 percent in the 1980s. In short, these periods are quite comparable in terms of their general macroeconomic trends.[6] Since my interest is in the effect of <u>sustained</u> economic growth on the poverty rate and the income of low-income households, these two seven-year periods provide an interesting comparison.

II. INVESTIGATING POSSIBLE NON-EARNINGS-RELATED HYPOTHESES

The evidence in tables 1 and 2 indicate that aggregate poverty rates appear less responsive to economic growth in recent years. This need not necessarily mean that incomes among any group are actually growing more slowly in the 1980s. A variety of possible compositional changes or measurement problems could cause the effects observed above. This section investigates four possible hypotheses. The approach of the section is to first investigate whether these issues would have affected the trend in poverty over the 1980s. If not, it is assumed that they did not affect the responsiveness of poverty to the macroeconomy. If they affect the trend in poverty, then their impact on the responsiveness of poverty is analyzed.

A. Problems in the Poverty Measurement: The Exclusion of In-kind Income

An ongoing controversy over the appropriate definition of poverty has led many analysts to question the accuracy of current poverty definitions.[7] It may be possible that the seeming differences between poverty trends in the 1980s and earlier decades are due to growing problems in the measurement of poverty, rather than any real changes in behavior among the poor. The most obvious measurement problem that might be confounding the poverty data is the exclusion of in-kind income from family resources.[8] In the 1960s, most current in-kind programs were small or nonexistent, but these programs expanded rapidly in the following decade. Official income statistics do not include the resources available to families from in-kind programs. If this income were counted, poverty rates would be lower. If these programs expanded during the macroeconomic expansion of the 1980s, family resources could be growing faster than reported income and the seeming "unresponsiveness" of

poverty to the macroeconomy could be simply a byproduct of the exclusion of in-kind income from the data.

Table 4 presents the changes in spending per person in the two major in-kind transfer programs, medicaid and food stamps, over the 1980s. Monthly food stamp benefits per recipient, while expanding during the recession, contract between 1983 and 1989, indicating that poverty would not have fallen any faster over the expansion if food stamps were included in the income statistics. In contrast, medicaid expenditures per recipient continued to rise throughout the 1980s, although the rate of increase slowed after 1983.[9] There is, however, substantial debate over whether and how medical services should be counted as part of income. It seems clear that a dollar in medical services received is not equivalent to a dollar in income. Few low-income people, if given extra income, would spend it on health insurance. For these reasons, many analysts prefer not to impute the value of medicaid services into cash income.[10]

The Bureau of the Census has, for several years, provided unofficial estimates of poverty with in-kind income included in household income. A consistent series is available from 1979 through 1987.[11] Table 5 shows the change in poverty between 1979 to 1983 and 1983 to 1987 for the official poverty rate, the unofficial poverty rate including in-kind food and housing benefits, and the unofficial poverty rate including in-kind food, housing, and medical benefits.

The results are consistent with those in table 4, indicating that no growth in food stamp and housing benefits occurred during the expansion of the 1980s. The change in poverty between 1983 and 1989 with these two benefits included is identical to the change in the official poverty rate. The real

increase in medicaid expenditures causes an additional drop of only 0.1 point in the poverty rate. Thus, the trends in poverty are virtually identical between 1983-87 in all three columns. The percentage changes in the in-kind poverty rates are slightly higher because they are calculated on a lower base. The evidence in tables 3 and 4 provide little support for the hypothesis that poverty would have declined substantially faster during the expansion of the 1980s had a fuller measure of family income been used. Thus, the differential responsiveness of poverty to economic growth over the expansion of the 1980s is probably not due to the omission of in-kind benefits in the calculation of poverty rates.

B. The Regional Location of the Poor During the Expansion

There was an unusually high degree of regional variation in the economy during the expansion of the 1980s. For instance, in 1988, the coefficient of variation in unemployment rates across states reached a 20-year peak, indicating that there were quite large differences between unemployment levels across states.[12] While New England and the mid-Atlantic states saw enormous growth in employment and business activity, the industrial Midwest remained sluggish well into the mid-1980s.

If the poor were disproportionately located in the regions and states that experienced lower growth, their ability to expand income might have been more limited than aggregate economic growth would indicate. In other words, the seeming non-responsiveness of poverty could be due to the regional distribution of the poor and reflect dispersion in regional growth experiences rather than any aggregate decline in the overall responsiveness of poverty to economic expansion.

To investigate this question I use the March 1979 and 1989 Current Population Survey (CPS) data. This provides a random sample of the entire U.S. population. Rather than focussing on individuals, I focus on what I will call family units, which is essentially the combined sum of families and unrelated individuals as defined by the Census Bureau. A family unit consists of all related persons who live in the same household. Households with two unrelated single roommates consist of two family units. Households with three generations consist of one family unit. A family unit is assumed to be the appropriate economic entity for pooling income. Throughout the rest of this paper, all poverty counts and income statistics will use family units as the observational level at which the data is analyzed.[13]

Table 6 presents the distribution of poor and non-poor family units across the nine Census regions for 1979 and 1989. While a slightly higher percentage of the poor live in the East South Central, West South Central, and South Atlantic regions, and a slightly lower percentage live in the other regions, the distributions are quite similar in both years. As the bottom of table 6 indicates, a chi-squared test of equality between the two distributions cannot reject the hypothesis that they are identical in both years. A similar test, based on the distribution of the poor and non-poor across states, also fails to reject the hypothesis that the state distributions are identical in both years.

Given the evidence in table 6, it is possible to reject the theory that the regional distribution of the poor gave them less of an opportunity to experience income growth in the 1980s. Over this decade, the poor and the non-poor were distributed in essentially the same way across regions.

There is, however, a possibility that the important geographical

distinction between the poor and the non-poor is not their state or regional location, but their urban location. Increasing attention in recent years has focused on the problems of low-income families and individuals living in concentrated areas of urban poverty (Wilson, 1987), often called "underclass" areas. If increasing numbers of the poor were located in urban ghettoes in the 1980s than in the 1960s, and if it is harder to find employment and escape poverty in these areas, then this could have lowered the responsiveness of poverty to economic growth.

While it is not possible to test this hypothesis thoroughly in this paper, table 7 provides data on the urban location of the poor and non-poor that indicates there is little evidence of large shifts in urban location among the poor over these years. Column 1 of Table 7 indicates that the share of the poor living in central city locations during the expansion of the 1960s was between 33 and 34 percent. The share of the poor living in central city locations during the expansion of the 1980s was a virtually identical 35 percent. Column 2 indicates that the share of the poor living outside central cities but within major metropolitan areas increased somewhat between the 1960s and 1980s. In contrast, among the non-poor, the share in central cities (column 3) drops from 35 percent in the early 1960s to 25 percent by the end of the 1980s. Thus, a trend away from central city residence occurs among the non-poor. The non-poor also show an increased share living in metropolitan areas outside central cities (column 4).

There is little evidence in table 7 that more poor were caught in central city locations in the 1980s than in the 1960s. The constant share of the poor population in urban locations over these decades suggests that changing urban location is not a primary cause of the decreased responsiveness

of the poor to the macroeconomy of the 1980s. This does not, however, rule out the possibility that factors related to urban location caused the slower decline in poverty over that decade. First, it is possible that central city locations became less economically viable for residents, particularly as the non-poor population moved elsewhere. Thus, central city residents might be more disadvantaged in the 1980s than they were in the 1960s in terms of their access to jobs. Second, it is possible that "central city location" is too aggregate a measure, and that the correct measure should be "living in areas of concentrated urban poverty." There is evidence that the percent of poor living in areas of high poverty increased between 1970 and 1980 (Rickets and Sawhill, 1988). Unfortunately, I lack any data on economic growth and expansion in central city versus non-central city locations, much less on such changes within particularly poor central city areas. If such effects are occurring, they will show up as part of the earnings-related effects measured in the next section of the paper.

C. Did Policy Changes in the 1980s Offset Economic Growth?

In the first two years of the Reagan Administration, there were major changes in transfer programs, particularly those aimed at the poor. Some of these changes affected the operation and administration of the programs, while others limited eligibility and benefits. It is sometimes argued that poverty stayed unduly high in the 1980s because of the policy changes in these programs in the early part of the decade.

While these program changes may have contributed to the sharp rise in poverty during the recession of the early 1980s, it is more difficult to understand why such changes would have lessened the responsiveness of the poor

to economic growth over the expansion of the mid-to-late 1980s. In particular, if such cuts reduced the availability of public transfer funds, standard economic theory would predict that this should have increased labor supply. As employment expanded in the 1980s, one might have expected greater responsiveness to the labor market environment after the cuts (with less non-earned income to rely on) than before the cuts.

In addition, there is also evidence that many of the federal cuts in funding for state-local programs did not fully occur, because states made up the losses. A variety of federal categorical programs, many of them particularly aimed at low-income families, were abolished and their dollars diverted into newly-created block grants to the states, with less money in these block grants than had been provided earlier through the programs. Nathan and Doolittle (1987), in an extensive study of the effects of the 1981 Federal cuts on the services provided by states, found that few of the programs rolled into these block grants experienced substantial cuts, as states shifted funds from other programs, or (as the recession of the early 1980s ended) put new state revenues into these programs.

On the other hand, Nathan and Doolittle do note that the cuts in Aid to Families with Dependent Children (AFDC), the primary welfare program available to low-income families, did get passed on directly to recipients. I explore the effects of these cuts on poverty rates between 1978 and 1988 by again using the March 1979 and 1989 CPS data.[14] In table 8 I tabulate the percent of the population reporting receipt of AFDC, the dollars they receive, and the poverty rate and poverty gap[15] in 1978 (column 1) and 1988 (column 3). In columns 2 and 4, I use the eligibility and benefit rules of the AFDC program for these two years in each state to simulate the percent estimated to be

eligible for AFDC, the dollars they would receive, and the poverty rate and poverty gap under this simulation. In the final column, I simulate the effect on AFDC recipiency and poverty in 1988 if the 1978 programs were in effect.

Before discussing the results, let me note several caveats about the simulations performed in table 8. First, the CPS data provides information on public assistance received, which is a more inclusive category than AFDC.[16] This is one reason why the simulations in row one show fewer families on AFDC than actually report receiving income from it. In the second part of table 8, which calculates equivalent numbers among female-headed households, this pattern is not present, which is reassuring since the vast amount of public assistance income among these households is AFDC income.

Second, the simulation of 1978 programs on 1988 data ignores all potential labor supply changes that AFDC program changes might induce. In other words, the simulation in column 5 takes all income other than AFDC income as fixed (and by default, takes labor supply as fixed.) It is not clear whether the net effect of the program cuts was to increase or decrease labor supply. Among those whose AFDC was reduced or ended, one might expect an increase in labor supply. But the increase in tax rates on the program is generally agreed to have decreased labor supply among ongoing AFDC recipients (Moffitt, 1986). If one believes that overall labor supply increased as the availability of AFDC income fell, then the simulated effect of 1978 programs on the poverty rate in 1988 produces an underestimate; had the 1978 programs continued throughout the decade, labor supply would have been lower and poverty higher.

The simulations in columns 2 and 4 of table 8 are similar to such simulation results elsewhere in the literature (for instance, see Ruggles and

Michel, 1987). While the number reporting receipt of AFDC income is reasonably well estimated, the simulations allocate more AFDC dollars to these women than they report receiving.[17] The poverty rates resulting from the simulations are virtually identical to reported poverty rates, not surprising since the AFDC program in most states is too limited to move anyone out of poverty, but poverty gaps in the simulations are smaller.

The effect of changes in the AFDC program can be seen by comparing columns 4 and 5. Column 5 of table 8 indicates that if the 1978 programs were available in 1988, the percent of the population on AFDC would be virtually identical to the percent who are simulated to be on AFDC (column 4) under the actual 1988 programs. The amount of money available to these recipients would be larger, however. Poverty rates would be lower by only a very small amount; poverty gaps would fall by a few hundred dollars. If the 1978 programs were in effect in 1988, the poor would surely be somewhat better off, according to these simulations, because they would have more AFDC dollars available. But the overall poverty rate would be largely unaffected by this change.

The implication of table 8 is that the cuts in AFDC, the primary cash income program to experience cuts in the early 1980s, had little effect on the overall trend in poverty over the 1980s. Poverty would not have been appreciably lower in 1988 had AFDC remained unchanged. In addition, there is little theoretical reason to believe that these cuts would have decreased the responsiveness of the poor to the macroeconomy.

D. The Changing Demographic Composition of Family Units

Table 2 indicated that not all groups among the poor are equally responsive to economic growth. For instance, poverty among female-headed

households and elderly households is less affected by the growth in overall employment opportunities. This implies that some of the shift in responsiveness during the 1980s may have been due to shifting demographic composition among the poor. Since more of the poor were in female-headed households in the 1980s than in the 1960s and 1970s, aggregate poverty could be less responsive to GNP growth, not because any group had become less responsive, but because those family types with lower responsiveness had increased their share of the poor population.

To investigate the extent to which changing demographic composition has affected poverty rates, I again turn to the March CPS data. This data is available on tape from 1964 through 1990.[18] Since data on income and poverty are based on households' experiences in the previous year, this provides me with continuous annual information from 1963 through 1989. As before, I investigate poverty and income among family units.

A sense of the importance of the demographic composition of family units to the poverty rate can be seen in table 9. Column 1 of table 9 reports the actual changes in poverty rates among all family units. Over the 1960s poverty falls by over 7 points, while it rises by 0.37 of a point over the 1980s.[19]

In column 2 I recalculate poverty rates, holding the demographic composition of family units constant at their 1964 levels. In particular, I hold constant the population shares of six groups: single female heads with other relatives in the family unit, single male heads with other relatives, married couples with other relatives, married couples living alone, single females living alone, and single males living alone.[20] Column 2 therefore indicates what the change in poverty rates would have been had the demographic

composition of the population remained constant. Column 3 reports the difference between column 2 and column 1, which is essentially the change in poverty rates that occurred solely because of the change in demographic composition.

Column 2 indicates that poverty would have fallen more rapidly (or risen more slowly) in each of the last three decades had the composition of the population remained unchanged. In particular, poverty was almost one point higher (0.88) in 1969 because of shifts toward poorer family types between 1963 and 1969. Poverty was over one point higher (1.39) by the end of the 1970s, when these demographic shifts occurred at a relatively faster rate. Over the 1980s, these shifts continued to increase poverty, but only by about one-third as much as over the 1970s.

Table 9 indicates that demographic shifts affected the level and trend of the poverty rate over the past three decades, but does not provide direct evidence on their effect on the responsiveness of poverty to macroeconomic growth. Table 10 explores this question more closely, using the same data from the CPS from 1963 through 1989. In table 10 I report the results of a series of regressions of the form

(1) $PR_{t,i} - PR_{t-1,i} = \alpha_1 * PCGNP_1 + \alpha_2 * PCGNP_2 + \alpha_3 * PCGNP_3,$

where $PCGNP_1$ = percent change in real GNP for years 1963-1969, 0 otherwise;

$PCGNP_2$ = percent change in real GNP for years 1970-1982, 0 otherwise;

$PCGNP_3$ = percent change in real GNP for years 1983-1989, 0 otherwise;

and $PR_{t,i}$ represents the poverty rate for time t and group i.[21]

Columns 1 and 2 of table 10 report the coefficients α_1 and α_3 for all family units and for the six underlying demographic groups. Each coefficient can be

interpreted as the change in the level of poverty that occurs with a 1 percent increase in GNP in the indicated time period. Columns 3 and 4 use the change in the share of family units below two times the poverty line as the dependent variable, which I will refer to as the "near-poverty rate." The results in table 10 indicate the responsiveness of the poverty rate and near-poverty rate to the economic expansion of the 1960s and the expansion of the 1980s.[22]

For all family units, a one percent increase in real GNP reduces poverty by one-fourth of a point (-0.26) between 1963 and 1969, but reduces poverty by less than one-tenth of a point (-0.09) between 1983 and 1989. The same pattern occurs for the near-poverty rate as well. The difference in responsiveness between different demographic groups can be seen in rows 2 through 7. Single males and females living alone show the biggest point changes in poverty as the economy grows in the 1960s.[23] All groups show substantially lower responsiveness to GNP growth in the 1980s.

The bottom row of table 10 estimates the same regression with a new dependent variable: I create a "constant-population-weight poverty rate" holding the demographic composition of each of these six groups constant at their starting level in the 1964 data. (This is the same variable whose poverty rate changes are reported in column 2 of table 9.) The coefficients in this last row vary little from the coefficients in the first row. In both regressions, the responsiveness of poverty to GNP falls by about two-thirds between the 1960s and the 1980s. This implies that the shifting demographic composition of poverty, while it has affected the underlying poverty rate, has had little differential effect on its responsiveness to the macroeconomic expansion of the 1980s.

Table 11 verifies this by estimating the reduced responsiveness to GNP

growth indicated by the equations in table 10 among the overall poverty rate and the constant-demographics poverty rate. Row 1, column 1 indicates that the regression for all family units estimates that poverty fell 2.2 points between 1983 and 1989. If, however, poverty had been as responsive over these years as it was during a time of similar growth in the 1960s, we would have expected it to fall by 6.0 points. The difference indicates that poverty was 3.9 points higher by the end of the 1980s due to its reduced responsiveness to aggregate economic growth. Had the demographic composition of the poverty population remained unchanged, poverty would have been 3.7 points higher by the end of the 1980s (6.1-2.4). This indicates that 0.2 points in decreased responsiveness was due to the changing demographics of the poor population. As the bottom of table 11 indicates, this is 4.4 percent of the overall decline in the reduced responsiveness of the poverty rate.

In short, the changing demographic composition among the poor has had almost no effect on the making poverty "stickier" over the 1980s. Less than 5 percent of the reduced responsiveness of the poverty rate to real GNP growth can be explained by the changing composition of family types.

This section indicates that none of the four possible hypotheses investigated here explain the unexpectedly slow decline in poverty over the 1980s. Neither the omission of in-kind income from the poverty statistics, the change in AFDC program rules, or the distribution of the poor across regions has affected the relative trends in poverty over the 1980s. Changing demographic composition among the poor, while it has affected both the level and the trend in poverty over the past three decades, has had little effect on the responsiveness of poverty to the overall macroeconomy.

III. EXPLORING THE RESPONSIVENESS OF EARNINGS TO THE MACROECONOMY

The evidence above suggests that there may have been a real decrease in the responsiveness of earnings and other income components to macroeconomic growth among the poor. This section explores that possibility further.

Much of the literature on the responsiveness of the income distribution to the macroeconomy indicates that the income distribution in the United States has historically narrowed in times of economic expansion, at least in the post-World War II era. The primary reason why the poor "catch up" in economic booms is expanded employment opportunities. The incidence of unemployment, non-employment, and part-time employment is heavily skewed toward the bottom of the income distribution; when employment grows it is the unemployed, non-employed, and part-time employed who are most able to take advantage of that growth (Blank and Blinder, or Gramlich and Laren, 1984). Persons in the upper half of the income distribution who are already working full-time have little opportunity to expand their labor market involvements in a boom (although, of course, other non-working, unemployed or part-time employed family members can always expand work hours.) Thus, incomes among the poor typically grow faster in boom times because of increased labor market involvements.

Evidence on wage changes over the business cycle are more mixed. Earlier empirical evidence based on wage data from the 1940s, 1950s, and 1960s seems to indicate that wages were largely non-cyclical, but evidence from the 1970s and early 1980s indicates mild pro-cyclicality in the overall level of wages (Blank, 1990, or Keane, Moffitt and Runkle, 1988). Evidence on the relative responsiveness of wages among different groups in the income distribution is more limited. Evidence based primarily on 1970s data seems to

indicate that wages changed little with the cycle for low-income groups during that time period (Blank, 1989), but one might expect that a period of sustained economic growth, particularly if it is related to underlying productivity growth, would result in real wage gains.

Note that I cannot explore the changing responsiveness of income and income components to economic growth by looking at changes among the poor and the non-poor. Because the poverty line is a fixed absolute dollar amount (it changes only with the consumer price index), the family units below the poverty line are a constantly changing group. As income expands, the poor become increasingly selected toward the least-skilled and/or least-employable. Therefore, exploring labor market involvements among the poor over the expansion will mix together the real effects of the expansion with the changing selectivity of who is poor. Therefore, in this section, rather than focussing on the poor, per se, I will focus on different quintiles and deciles in the income distribution. I will look particularly at the responsiveness of income and income components among the bottom two deciles (the bottom 10 percent and the 10-20 percentiles of the income distribution) to investigate the effects of macroeconomic growth on low-income households. The bottom decile is composed of 100 percent poor family units in almost all time periods, and reflects the experiences of the poorest persons in the population. The second decile is composed of between 30 to 40 percent poor family units (it varies across years) and reflects the experiences of the "better-off" among the poor and of the near-poor. Changes among these two groups will be compared with the changes occurring in the upper four quintiles (groups between the 20-40, 40-60, 60-80 and 80-100 percentiles in the income distribution.)

A. Responsiveness of Income and Income Components to Economic Growth

Table 12 investigates the responsiveness of different components of income to the macroeconomy among different income groups over the 1960s and the 1980s. The estimated equations in table 12 are in the same format as equation 1; the dependent variable is indicated at the top of each column. Columns 1 and 2 show the level change in total income that results from a 1 percent increase in real GNP between 1963-69 and 1983-89, respectively. Among the bottom two deciles, total income rises only about one-third as fast in the 1980s in response to GNP growth as it does in the 1960s. Similar patterns of somewhat slower growth in income during the 1980s are evident among the middle three quintiles as well. Income among the top quintile was far more responsive to economic growth over the 1980s.

Columns 3 and 4 look at the earnings of the head of the family unit.[25] Responsiveness of earnings is lower among all groups in the 1980s expansion. For all groups except the top quintile, it is the decreased responsiveness of earnings which is primarily responsible for the decreased responsiveness of total income to economic growth.

Columns 5 and 6 investigate the responsiveness of the earnings of spouses to economic growth. These numbers are harder to interpret, since major changes in the propensity of married women to work occur over this time period and almost surely are confounded with these coefficients on GNP growth. Among the bottom two deciles there appears to be little difference in the responsiveness of spouse's earnings between the two time periods. Thus, this variable does not seem too important in explaining differences in the responsiveness of aggregate income for low-income families.

Finally, columns 7 and 8 look at the responsiveness of the residual

category "other income" to economic growth. This includes all sources of income other than primary and spouse earnings, and as a result it is a very aggregate and not very informative category.[26] For the bottom two deciles, this category is highly composed of transfer income (public and private); for top quintile groups, it contains more dividend, interest, and rental income. Only among the top quintile does this category appear to show substantial responsiveness to economic growth. Among the other groups, this category is small relative to the changes in earnings of the head.

The evidence in table 12 indicates that most of the slowdown in the growth of aggregate income among poor and near-poor income groups occurs because of the slowdown in the growth of earnings among the head of family units. Thus, it is to this issue that we turn next.

B. The Responsiveness of Labor Market Involvements vs Wages.

Table 13 looks at the relative responsiveness of four different measures of labor market involvement among family unit heads. Columns 1 and 2 indicate that the decrease in the probability of unemployment over the past year was somewhat larger during the economic growth of the 1980s than during the economic growth of the 1960s, although these numbers are small and poorly determined. Thus, unemployment appears slightly more responsive to economic growth in the 1980s than in the 1960s. This pattern occurs for all groups.

Similarly, columns 3 and 4 investigate the responsiveness of the probability that a family unit head is employed over the past year. Among the bottom two deciles, this probability is unchanged or increases slightly with GNP growth in the 1980s. For the upper four quintiles, and for the population as a whole, the probability of unemployment appears slightly less responsive

to economic growth in the 1980s.

Columns 5 and 6 investigate the annual weeks of work among those who work.[27] For the top four quintiles there is little change in weeks of work over the cycle in either period. For the bottom two deciles, weeks of work grow substantially faster during the 1980s than during the 1960s expansion. Similarly, columns 7 and 8 indicate that the probability that the head is employed part-time over the year is as responsive in both expansions, except among the bottom two deciles whose part-time probabilities decline faster with the expansion of the 1980s.

In short, for the poorest 20 percent of the population, labor market involvement is generally more responsive to economic growth throughout the 1980s than it was in the 1960s: unemployment and part-time work fall more rapidly with growth in GNP, while hours of work rise more quickly. For wealthier quintiles, the difference in responsiveness between these two time periods is less striking.

There is little in table 13 to indicate that poverty should be less responsive to economic growth over the 1980s than it was during the 1960s. In fact, based on these measures of labor market involvement, table 13 would lead us to predict that poverty should have fallen faster in the 1980s, as the poorest groups responded more strongly to labor market opportunities.

Earned income among family unit heads is the product of weeks worked, the probability of working, and the weekly wage. If the probability of working and the weekly wage expanded faster in the 1980s than in the 1960s, but earned income grew less fast, then changes in the responsiveness of weekly wages to macroeconomic growth must be responsible. Note that I have no direct information on wage rates in this data set, but I can estimate weekly wages

using heads' earnings divided by the product of the probability of working times weekly hours worked.[28] But there is necessarily a lot of noise in this estimate.[29] Therefore, I do not get very precise estimates of the effect of real GNP growth on weekly wages. There are some suggestive patterns in the data, however, although they are largely insignificant.

Table 14 provides estimates of the responsiveness of real weekly wages to GNP growth. During the 1960s, real wages rose with the expanding economy for all groups. For instance, the bottom decile experienced about a $2 increase in weekly wages for every 1 percent increase in GNP, while the second decile experienced a $1 increase. In the 1980s, however, the estimated coefficients indicate that real wages for these two groups actually decrease as the economy grows (although these coefficients are insignificantly different from zero.) In short, there no evidence at all of any responsiveness in real wages among the bottom two deciles, and only a small effect among the second quintile. In fact, real wages fall for these groups during many years in the 1980s. In contrast, among the top quintile weekly wages expand more rapidly with the economy of the 1980s than the economy of the 1960s. This dramatic difference in the responsiveness of real wages among different income quintiles over the 1980s matches the results in research cited above that reports widening real wages among different groups in the income distribution.

The story from tables 12, 13, and 14 is clear: For the bottom two deciles of the income distribution, the decreased responsiveness of total income to economic growth occurred primarily because of the decreased responsiveness of head's earnings to economic growth. This in turn was due entirely to the non-responsiveness of real weekly wages to economic growth

among primary earners. Indeed, labor market involvement among the bottom 20 percent expanded more rapidly in the 1980s than in the 1960s. Had wages risen with the macroeconomy as they did the 1960s, poverty would have fallen faster than in the earlier decade. Of course, had wages grown for low-income workers over the 1980s, they might not have needed to expand their labor market involvement as much as they did. In reality, however, real wages declined over the 1980s for this group, with no responsiveness to the cycle at all. This pattern occurs both among the poor and the near poor in both of the bottom two deciles.

Table 15 investigates the changes in total earnings among family unit heads in the different income categories, decomposing earnings changes into the amount due to changes in weeks of work, changes in the probability of working, and changes in the weekly wage.[29] Comparisons are made of the changes in aggregate earnings between 1963-69 and 1983-89.[30]

Patterns across the income groups are strikingly different. Among the bottom two deciles, weeks of work and the probability of working actually fell over the 1960s, so that all of the increase in earnings over this time period is due to the rise in real weekly wages for these groups. Over the 1980s, the opposite pattern is visible. Real wages fall over the 1980s in the bottom decile, while expansions in weeks of work account for much the increase in earned income. The net result among these bottom two groups is a change in heads' total earnings that is almost identical in both periods, although arising from very different mechanisms. Among the second quintile, the comparison is not quite so striking, but the pattern is similar. Expansions in weeks of work account for far more of the earnings increase in the 1980s compared to the 1960s, and expansions in real wages account for substantially

less.

Among the 3rd and 4th quintiles, there is little difference between the 1960s and the 1980s in the decomposition of earned income changes, although aggregate income changes were lower in the 1980s. There is some evidence that weeks expanded faster in the 1980s, while the probability of working expanded faster in the 1960s. Among the top quintile, increases in real wages are the dominant cause of income increases in the 1960s, but expansion in the probability of working is also important. In the 1980s, the entire rise in earnings is due to expansion in weekly wages. Indeed, for the top quintile, labor market involvement decreases slightly over the 1980s.

IV. CONCLUSION

This paper has focussed on changes in poverty rates and in income growth among low-income family units over the economic expansion of the 1980s. Poverty was surprisingly "sticky" over this time period, declining far more slowly than previous experience would have indicated. The similarity between the sustained economic expansion of the 1960s and the sustained economic expansion of the 1980s provides an interesting comparison period to use in asking the question "why did the expansion of the 1980s have such small affects on the poverty rate?"

My evidence shows that most of the decline in the responsiveness of poverty to macroeconomic growth was not a phenomenon of changing composition of the poor, either with regard to demographic composition or regional composition. Nor was it due to policy changes in anti-poverty programs, or to the exclusion of in-kind income in the measurement of poverty. The slower income growth among families at the bottom of the income distribution was

almost entirely due to a decline in the responsiveness of earnings among family unit heads to the macroeconomy. In turn, this decline in earnings responsiveness was almost entirely due to the lack of responsiveness of real wages to the macroeconomic growth of the 1980s. It was not at all due to lower labor market involvement; in fact, labor market involvement was more responsive to the expansion of the 1980s among low-income households than it was during the 1960s.

It is not the purpose of this paper to investigate the underlying causes of the changing wage structure in this country. Other research has investigated the effects of changes in unionization, changes in technology, changes in international markets and their effects on labor demand, and changes in the relative supply of more and less-skilled workers relative to rapidly growing demand for labor market skills by employers. There is evidence that all of these issues seem to be correlated with the changing wage opportunities for low-wage workers.

The final conclusion of this paper is not a promising one for policy makers: The impact of economic growth on poverty has substantially declined in this country during the past decade. Even seven years of sustained economic expansion did little to significantly lower the poverty rate or increase incomes among low-income families. Unfortunately, other tools for reducing poverty are far less appealing: They involve focussed programs, that require large administrative organization and effort. They are also politically difficult to sustain at a high level, since upper income groups tend to experience their costs directly through increased taxes, and their benefits only very indirectly. In contrast, a reduction in poverty due to economic growth (often referred to as "trickling down") always promised that

we could have it all: We could decrease poverty at the same time that we all became richer. Unfortunately, if the changing wage patterns of the 1980s continue into the future, economic growth can no longer be relied upon as an effective weapon in future wars against poverty.

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FOOTNOTES

1. See Juhn, Murphy, and Pierce (1989), Blackburn, Bloom, and Freeman (1990), and Karoly (1990).

2. Slight differences in the results reported in table 1 and in table 8.1 of Blank and Blinder are due to minor data revisions and a slightly different measure of inflation.

3. Official poverty numbers for most demographic groups are available back to 1959.

4. This is consistent with evidence in Blank (1989), based on a different data set.

5. Ideally, one would like to use the first seven years of the 1960s expansion, rather than starting in the second year, to compare to the first seven years of the 1980s expansion. Much of the empirical work of this paper, however, uses data that is not available before 1963.

6. Of course, there are real differences in the economic environment of these periods as well. The difficult economic times of the 1970s and early 1980s resulted in very different expectations and fears in 1983 than were present in 1963. In addition, the more competitive international trade environment of the 1980s affected the U.S. economy in that decade much more than did the international economy of the 1960s.

7. For the most comprehensive recent discussion of this issue, see Ruggles (1990).

8. In-kind income involves the provision of goods and services rather than cash. The largest in-kind program for low-income households is medicaid, followed by food stamps and then housing subsidies. There are also a host of

relatively small in-kind programs, such as school lunch and breakfast subsidies or low-income energy assistance.

9. A wide variety of cost-control measures were implemented in the medicaid program in the early-to-mid 1980s to control medicaid budgets.

10. Imputing medical services as part of family income also has the problematic effect of making the very ill appear better off than the healthy.

11. Unfortunately, after 1987 the Bureau of the Census changed the way in which they do these estimates; the estimates currently available for 1988 and 1989 are not consistent with the earlier series. Data to calculate consistent estimates will be available from the Census at some point in the future.

12. Numbers provided by William Wascher, at the Federal Reserve Board of Governors.

13. One effect of using family units as the unit of observation is that my poverty counts do not match anything published by the Bureau of the Census. The Census reports the total number of individuals living in households whose income is below the poverty line, the total number of families (family units with at least two members) below the poverty line, and the total number of unrelated individuals below the poverty line. My poverty count is a combination of the latter two statistics. Calculating equivalent poverty definitions from my data as are reported in Census publications results in virtually identical numbers.

14. The income data from these tapes is for the preceding year.

15. The poverty gap is the average difference among all poor between family unit income and the poverty line. It shows how far below the poverty line poor families are on average.

16. For instance, it includes such items as general assistance and foster care funds.

17. This is a standard result in such simulations. There is substantial underreporting of government public assistance income among recipients.

18. For the results in the remainder of this paper, I use the Mare-Winship extracts of the March CPS for 1964 through 1988. For 1989 and 1990, I created comparable extracts from the complete CPS tapes.

19. This calculation assumes there is independence between the poverty rate of a group and its share of the population. If poverty rates change as the population share changes, due to changing selectivity into a certain family type, then the calculations in table 9 are too simple.

20. In the first three groups, in most cases the "other relatives" are children, but in some cases they are parents, siblings, grandchildren or more distant relatives. "Living alone" means living without other relatives. These family units could be living with other unrelated family units.

21. There are no intercept terms included in equation 1. Because it is a regression of changes on changes, an intercept term for each period would measure underlying trends. But such trends may be related to the nature of economic growth over each period, and I probably want to subsume them into the coefficients on GNP change. As it turns out, in the results reported in table 10 and in later tables in the paper, it makes little difference whether intercepts are included or excluded; the same conclusions will emerge. I therefore exclude intercepts from all reported results to preserve degrees of freedom.

22. All regressions in this paper rely on the percent change in real GNP as

the primary independent variable. Much of this work has been duplicated using the change in unemployment rates instead. The conclusions are identical.

23. Realize that table 10 uses the level change in poverty as the dependent variable. Had I instead used the percentage change -- as shown in table 2 -- female heads would have been among the least responsive and married couples among the most responsive, because of differences in the levels of their underlying poverty rates.

24. There is not a consistent earnings series available for this entire period. The definition of earnings changes slightly between 1966 and 1967. Essentially, earnings prior to 1967 are calculated as a residual and are several thousand dollars higher than after 1967, when persons are asked their annual earnings directly. As a result, the change in earnings between these two years is omitted by including a dummy variable for this observation in all regressions for head's and spouse's earnings and for other income (which is constructed using total income minus earnings.)

25. In later years, more disaggregate categories can be tabulated, but for this entire time period, it is difficult to consistently construct any additional income components.

26. The early years of CPS data do not provide information on exact weeks of work last year, but only provide a categorical variable. The midpoint of each category is used as an estimate of weeks in that category for each individual and these categories are used for all years (even those where specifics weeks are available) in order to create a consistent series. The result is to reduce variation in the microdata in this variable. Table 13, however, uses the means for different groups as the dependent variable and these means are

probably less affected by the categorical nature of the variable.

27. I have no information on hours of work per week in the early years of the CPS (except whether the work was part-time or not.)

28. Recall that a consistent series in weeks is available only as a categorical variable.

29. The decomposition in table 15 is based on the equation

$$(2)\ \Delta Earnings_{t,t-1} = \Delta Weeks_{t,t-1} * ProbWk_t * Wages_t + \Delta ProbWk_{t,t-1} * Weeks_{t-1} * Wages_t + \Delta Wages_{t,t-1} * Weeks_{t-1} * ProbWk_{t-1}$$

Other decompositions are possible, but give similar results.

30. Because of a break in the earnings series between 1966 and 1967, earnings pre-1967 have to be adjusted. I do this by calculating an estimated 1966-67 change based on the GNP growth in that year and the coefficient on GNP growth over the 1960s expansion. I then "backcast" from this (lower) number for 1966, using the actual reported annual percent changes in earnings between 1964, 1965, and 1966.

Table 1

EFFECT OF MACROECONOMIC VARIABLES ON POVERTY
Dependent Variable = Poverty Rate
(Based on earlier work reported in Blank and Blinder, 1986)

	1959-1983 (1)	1959-1989 (2)	1959-1989 (3)	
Constant	-5.532	-8.987	-5.440	
	(3.941)	(4.740)	(4.246)	
Male Unemployment Rate	0.649	0.078	0.646	
	(0.254)	(0.261)	(0.262)	
Inflation (CPI Growth)	0.082	0.011	0.076	
	(0.045)	(0.050)	(0.041)	
Poverty line/ Mean income	0.386	0.268	0.386	
	(0.087)	(0.100)	(0.103)	
Govt transfers/ GNP	-0.295	0.290	-.293	
	(0.265)	(0.272)	(.261)	
Lag Poverty Rate	0.341	0.712	0.337	
	(0.117)	(0.082)	(0.116)	
Dummy Var (1983-89=1)			-9.112	
			(11.462)	
Male UR * Dummy Var			-.925	
			(0.320)	
Gov Trans/GNP * Dummy Var			1.338	
			(1.105)	
Adjusted R-sqr	.989	.979	.988	
Number of Obs	24	30	30	
Steady State Effect on the Poverty Rate of a One-point Rise in:				
Male UR	.984	.270	.974	(1959-82)
			-.421	(1983-89)
Inflation	.124	.038	.115	
Trans/GNP	-.448	1.007	-.442	(1959-82)
			1.576	(1983-89)

Standard errors in parentheses.

Table 2

EFFECT OF MACROECONOMIC GROWTH ON GROWTH IN THE POVERTY RATE OF DIFFERENT GROUPS AMONG THE POOR

	Dependent Variable--Rate of Growth in Poverty among					
	All Persons (1)	Children (<18 yrs) (2)	Elderly (≥65 yrs) (3)	All Families (4)	Female-headed Families (5)	Black Families (6)
Constant	4.67	6.17	-1.20	5.07	1.54	2.45
	(1.04)	(1.29)	(2.15)	(1.09)	(1.44)	(1.18)
Percent Change in Real GNP						
1960-69[a]	-2.53	-2.85	-1.24	-2.71	-0.92	-3.66
	(0.33)	(0.41)	(1.33)	(0.35)	(0.46)	(0.81)
1970-82	-1.58	-1.66	-0.97	-1.69	-0.69	-0.55
	(.33)	(.40)	(.65)	(.34)	(.45)	(.36)
1983-89	-1.69	-1.89	-0.71	-1.82	-0.76	-0.12
	(0.39)	(0.48)	(0.78)	(0.41)	(0.54)	(0.04)
Adjusted R-sqd	.668	.621	-.019	.681	.058	.488
Number of Obs	30	30	23	30	30	23

Standard errors in parentheses.

Source of poverty rates: U.S. Department of Commerce, Bureau of the Census, Money Income and Poverty Status in the U.S., 1989, Current Population Reports, Series P-60, No. 168, September 1990.

a Data for columns 3 and 6 are available only from 1967.

Table 3

COMPARATIVE MACROECONOMIC STATISTICS DURING THE EXPANSIONS OF THE 1960S AND 1980S

Percent change in	1963-69 (1)	1983-89 (2)
Real Gross National Product (GNP)	+34.7%	+30.1%
Civilian Unemployment Rate	-37.0%	-45.3%
Inflation Rate[a]	+24.8%	+26.3%

[a] GNP Deflator

Table 4

CHANGES IN FOOD STAMP AND MEDICAID ASSISTANCE, 1979-1989

				Percent Change	
	1979	1983	1989	1979-1983	1983-1989
Food Stamps	(1)	(2)	(3)	(4)	(5)
Monthly Benefits per Recipient ($1989)	$46.90	$53.30	$51.90	+13.6%	-2.6%
Medicaid					
Medicaid Expenditures divided by Number of Recipients ($1989, using the CPI for medical services)	$2236	$2407	$2547	+7.6%	+5.8%

Source: Committee on Ways and Means, U.S. House of Representatives, 1990 Green Book, June 1990. (Appendix L, tables 9, 11, and 12.)

Table 5

COMPARATIVE CHANGES IN OFFICIAL POVERTY AND POVERTY INCLUDING IN-KIND BENEFITS

	Official Poverty Rate (1)	Including In-kind Income: Food & Hsg (2)	Including In-kind Income Food, Hsg & Medical (3)
1979	11.7	10.0	8.9
1983	15.2	14.1	12.8
1987	13.5	12.4	11.0
Change: 1979-83	+3.5	+4.1	+3.9
1983-87	-1.7	-1.7	-1.8
Percent Change: 1979-83	+29.9	+41.0	+43.8
1983-87	-11.2	-12.1	-14.1

Data Source: U.S. Department of Commerce, Bureau of the Census, Estimates of Poverty Including the Value of Noncash Benefits, 1987, Technical Paper 58, August 1988.

Table 6

REGIONAL DISTRIBUTION OF POOR AND NON-POOR FAMILY UNITS

	1979		1989	
	%Poor	%Non-Poor	%Poor	%Non-Poor
New England	4.7	5.7	3.1	5.7
Mid Atlantic	16.1	17.2	13.3	15.9
East North Central	14.9	19.5	15.5	17.7
West North Central	6.4	7.9	6.4	7.5
South Atlantic	18.7	15.2	17.5	17.0
East South Central	9.9	6.0	10.0	5.8
West South Central	13.0	9.7	15.5	10.0
Mountain	4.5	4.8	5.5	5.4
Pacific	11.7	13.9	13.1	14.9

Chi-Squared test of whether 9-region distribution of poor and non-poor are identical
(10% significance level: $X^2 = 14.7$)

	X^2-value
1979	6.5
1989	8.4

Chi-Squared test of whether 51-state distribution of poor and non-poor are identical
(10% significance level: $X^2 = 63.2$)

	X^2-value
1979	11.0
1989	12.5

Source: CPS data, March 1979 & 1989.

Region Definitions:
New England: CN,MA,ME,NH,RI,VT
Mid Atlantic: NJ,NY,PA
East North Central: IL,IN,MI,OH,WI
West North Central: IA,KA,MN,MO,NE,ND,SD
South Atlantic: DE,DC,FL,GA,MY,NC,SC,VA,WV
East South Central: AL,KT,MS,TN
West South Central: AR,LA,OK,TX
Mountain: AZ,CO,ID,MT,NV,NM,UT,WY
Pacific: AK,CA,HA,OR,WA

Table 7

URBAN LOCATION OF POOR AND NON-POOR FAMILY UNITS

	Share of the Poor Living in		Share of the Non-Poor Living in	
	Central City	Remainder of SMSA	Central City	Remainder of SMSA
1964	32.8	17.9	35.3	35.0
1970	33.9	20.8	31.7	36.3
1980	36.9	23.0	27.7	37.4
1990	35.2	22.9	25.2	38.1

Source: CPS data. Note the data are not strictly comparable across years. Starting in 1977, a category "not identified" is added and the population share in this category grows over time.

Table 8

EFFECT ON POVERTY RATES OF HOLDING AFDC RULES CONSTANT AT 1979 LEVEL

	1978		1988		1988
	Actual 1978	Simltd 1978	Actual 1988	Simltd 1988	Simltd w/ 1978 Pgms
	(1)	(2)	(3)	(4)	(5)
1. All Family Units					
Percent on AFDC[a]	5.0	3.7	3.9	3.7	3.7
Dollars of AFDC among recipients	$4173	$5732	$3245	$4523	$5307
Poverty Rate	13.5	13.5	13.8	13.8	13.7
Poverty Gap	$3297	$2885	$3604	$3197	$2986
2. Female-headed Families with children					
Percent on AFDC[a]	37.6	36.7	27.2	30.0	30.4
Dollars of AFDC among recipients	$4952	$5735	$3570	$4482	$5349
Poverty Rate	42.1	42.1	38.7	38.2	37.4
Poverty Gap	$4620	$3451	$5302	$4246	$3545

Simulations based on CPS data, March 1979 & 1989.

[a] Actual data based on those reporting public assistance income, a somewhat more inclusive category than AFDC.

Table 9

EFFECT OF DEMOGRAPHIC CHANGE ON POVERTY RATES
1963-1989

	Actual Change in Pov Rate (1)	With '64 Population Weights Constant (2)	Residual: Change in Poverty Due to Changing Demographics (3)
1963-1989	-8.42	-11.15	2.73
1963-1969	-7.03	-7.91	0.88
1969-1979	-1.76	-3.15	1.39
1979-1989	0.37	-0.09	0.46

Data calculated from the March CPS, 1964-1989. Six demographic groups are used: Single females with other relatives, Single males with other relatives, Single female living alone, Single males living alone, Married couples with other relatives, and Married couples living alone.

Table 10

RESPONSIVENESS OF POVERTY RATES AMONG DIFFERENT GROUPS TO REAL GNP GROWTH

	Dependent Variable: Change in Share of Family Units Below Pov Line — Coefficient on Percent Change in Real GNP		Dependent Variable: Change in Share of Family Units Below Twice Pov Line — Coefficient on Percent Change in Real GNP	
	1963-69 (1)	1983-89 (2)	1963-69 (3)	1983-89 (4)
All Family Units	-.26	-.09	-.46	-.18
	(.05)	(.05)	(.10)	(.10)
Single Females w/ Other Relatives	-.30	-.16	-.26	-.21
	(.12)	(.13)	(.16)	(.16)
Single Males w/ Other Relatives	-.13	-.08	-.26	-.10
	(.17)	(.17)	(.29)	(.30)
Married Couples w/ Other Relatives	-.23	-.09	-.59	-.25
	(.06)	(.06)	(.14)	(.14)
Married Couples Living Alone	-.21	-.06	-.39	-.17
	(.08)	(.08)	(.11)	(.11)
Single Females Living Alone	-.44	-.19	-.29	-.26
	(.12)	(.13)	(.10)	(.10)
Single Males Living Alone	-.38	-.12	-.44	-.16
	(.08)	(.08)	(.14)	(.15)
Data with constant population weights[a]	-.27	-.10	-.46	-.22
	(.05)	(.06)	(.11)	(.11)

Standard errors in parentheses.

[a] Based on six family groups indicated above.

Table 11

DECREASED RESPONSIVENESS OF POVERTY RATES TO GNP GROWTH: SIMULATED EFFECTS

	Fitted Change in Poverty Rate 1983-1989 (1)	Expected Change in Poverty Rate if 1960s Responsiveness Had Continued (2)
(1) All Family Units	-2.17	-6.05
If demographic composition had remained unchanged at 1964 weights		
(2) All Family Units	-2.41	-6.12

Decreased reponsiveness of poverty over expansion of 80s: (Row 1, Column 2 - Column 1)	-3.88	
Decreased responsiveness if population weights constant: (Row 2, Column 2 - Column 1)	-3.71	
Decrease in responsiveness due to changing demographics:	-0.17	(4.4%)

Table 12

RESPONSIVENESS OF INCOME COMPONENTS AMONG FAMILY UNITS TO REAL GNP GROWTH

	Dependent Variable: Total Income		Head's Earnings		Spouse's Earnings		Other Income	
	Coeffic on Pct Change in Real GNP		Coeffic on Pct Change in Real GNP		Coeffic on Pct Change in Real GNP		Coeffic on Pct Changein Real GNP	
	63-69	83-89	63-69	83-89	63-69	83-89	63-69	83-89
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All Family Units	194	166	118	70	29	55	47	41
	(39)	(40)	(33)	(34)	(14)	(14)	(24)	(24)
Bottom Decile (0-10%)	48	18	30	8	5	4	13	6
	(11)	(12)	(8)	(8)	(8)	(8)	(10)	(10)
Second Decile (10-20%)	91	34	54	29	18	16	18	-11
	(18)	(18)	(16)	(16)	(10)	(10)	(16)	(16)
Second Quintile (20-40%)	138	55	91	38	14	21	34	-5
	(29)	(29)	(30)	(30)	(10)	(10)	(17)	(17)
Third Quintile (40-60%)	182	97	120	68	25	37	37	-8
	(40)	(40)	(43)	(44)	(12)	(12)	(20)	(20)
Fourth Quintile (60-80%)	235	181	144	77	58	71	33	33
	(46)	(46)	(50)	(51)	(19)	(19)	(30)	(30)
Top Quintile (80-100%)	348	473	196	150	49	188	102	135
	(95)	(96)	(83)	(84)	(41)	(41)	(89)	(89)

Standard errors in parentheses.

Table 13

RESPONSIVENESS OF LABOR MARKET INDICATORS FOR HEADS OF FAMILY UNITS TO REAL GNP GROWTH

	Dependent Variable: Prob of Unemployment Last Year — Coeffic on Pct Change in Real GNP		Prob of Employment Last Year — Coeffic on Pct Change in Real GNP		Weeks Worked Last Year — Coeffic on Pct Change in Real GNP		Prob of Part-time Emp Last Yr — Coeffic on Pct Changein Real GNP	
	63-69	83-89	63-69	83-89	63-69	83-89	63-69	83-89
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All Family Units	-.13	-.18	.20	.06	.03	.05	-.02	-.01
	(.08)	(.08)	(.08)	(.08)	(.02)	(.02)	(.04)	(.04)
Bottom Decile (0-10%)	-.12	-.16	-.01	-.01	-.03	.45	.28	.08
	(.11)	(.12)	(.10)	(.10)	(.19)	(.19)	(.18)	(.18)
Second Decile (10-20%)	-.08	-.11	.20	.24	.09	.26	-.06	-.19
	(.10)	(.10)	(.15)	(.15)	(.09)	(.10)	(.19)	(.19)
Second Quintile (20-40%)	-.19	-.26	.31	.11	.06	.11	-.07	-.07
	(.12)	(.12)	(.14)	(.14)	(.05)	(.05)	(.08)	(.08)
Third Quintile (40-60%)	-.22	-.24	.21	.05	.05	.06	-.02	-.02
	(.11)	(.11)	(.12)	(.12)	(.03)	(.03)	(.04)	(.04)
Fourth Quintile (60-80%)	-.08	-.20	.18	.03	.01	.02	-.02	-.01
	(.10)	(.10)	(.09)	(.09)	(.03)	(.02)	(.05)	(.05)
Top Quintile (80-100%)	-.05	-.08	.23	-.03	.02	.01	-.01	.04
	(.04)	(.04)	(.07)	(.07)	(.01)	(.01)	(.04)	(.04)

Standard errors in parentheses.

Table 14

RESPONSIVENESS OF WEEKLY WAGES FOR HEADS OF FAMILY UNITS TO REAL GNP GROWTH

	Dependent Variable: Weekly Wages	
	Coefficient on Percent Change in Real GNP	
	1963-69 (1)	1983-89 (2)
All Family Units	1.61	1.14
	(.98)	(.99)
Bottom Decile (0-10%)	2.18	-.32
	(.58)	(.58)
Second Decile (10-20%)	1.00	-.06
	(.61)	(.61)
Second Quintile (20-40%)	.90	.27
	(.48)	(.48)
Third Quintile (40-60%)	1.44	1.01
	(.76)	(.77)
Fourth Quintile (60-80%)	2.07	1.33
	(.95)	(.96)
Top Quintile (80-100%)	2.16	3.53
	(1.96)	(1.98)

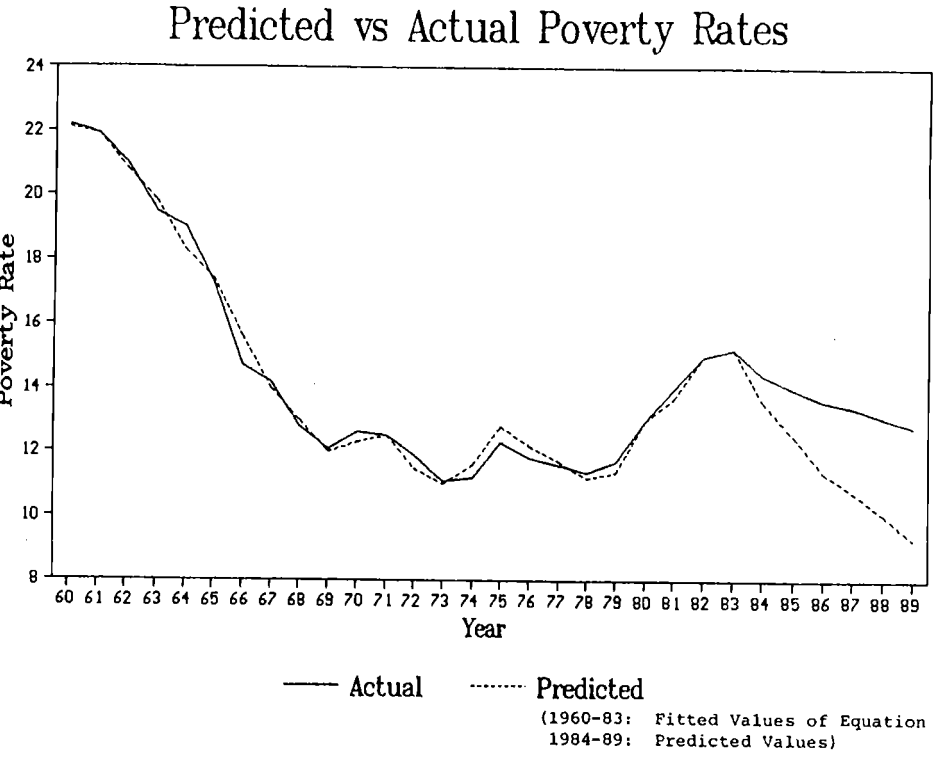
Standard errors in parentheses.

Table 15

DECOMPOSITION OF THE CHANGE IN EARNINGS AMONG FAMILY UNIT HEADS BY INCOME GROUP

1963-69	All Family Units (1)	First Decile (2)	Second Decile (3)	Second Quint (4)	Third Quint (5)	Fourth Quint (6)	Top Quint (7)
Aggregate Change in Earnings of Family Unit Head	$3228	$276	$705	$1940	$3193	$4279	$5844
Percent due to							
Change in Weeks Worked	4.1	-24.7	-10.3	9.0	9.7	0.8	4.0
Change in Prob of Employment	23.5	-35.5	12.8	30.0	23.9	25.3	33.7
Change in Weekly Wages	72.4	160.2	97.5	61.0	66.4	73.8	62.2
1983-89							
Aggregate Change in Earnings of Family Unit Head	$1816	$235	$772	$914	$1550	$2195	$3860
Percent due to							
Change in Weeks Worked	21.0	124.9	60.1	46.1	29.5	14.8	-2.3
Change in Prob of Employment	21.4	-3.0	32.8	25.9	8.5	11.4	-3.3
Change in Weekly Wages	57.5	-21.9	7.1	28.0	62.0	73.8	105.6

FIGURE 1


Predicted vs Actual Poverty Rates
Poverty Rate
24
22
20
18
16
14
12
10
8
60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89
Year
Actual
Predicted
(1960-83: Fitted Values of Equation
1984-89: Predicted Values)