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ABSTRACT

Possible causes for the rapid increase in the poverty rate from 1980 to 1982 were investigated, with two factors in particular being considered: the impact of the welfare program provisions of the Omnibus Budget Reconciliation Act of 1981 (OBRA), and the recessionary economy experienced during that year. The basic study design used a computer simulation of four fiscal year 1982 economic and legislative scenarios representing the following: (1) a baseline poverty population during fiscal 1982 under the assumption of a stronger economy and without the OBRA changes that took effect; (2) the combined effects of OBRA and recession on the poverty rate; (3) the independent effects of OBRA welfare program changes on poverty; and (4) the independent effects of the weak economy on the poverty rate. Major findings include the following: (1) the relative impact of the economy was greater than OBRA, but OBRA's impact on poverty among children and female headed families was stronger (while the economy affected working adults and married couple families more severely); (2) OBRA increased poverty by 2 percent and the weak economy increased poverty by 6 percent, for a combined increase of 8 percent. Following the narrative, study methods and poverty rate estimates are discussed in appendices. (Many statistical tables are included in the text) (KH)

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AND

SUBCOMMITTEE ON PUBLIC ASSISTANCE AND UNEMPLOYMENT COMPENSATION

OF THE

COMMITTEE ON WAYS AND MEANS
U.S. HOUSE OF REPRESENTATIVES

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# EFFECTS OF THE OMNIBUS BUDGET RECONCILIATION ACT OF 1981 (OBRA) WELFARE CHANGES AND THE RECESSION ON POVERTY



JULY 25, 1984

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WASHINGTON : 1984

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## LETTER OF SUBMITTAL

LIBRARY OF CONGRESS,
CONGRESSIONAL RESEARCH SERVICE,
*Washington, DC, July 13, 1984.*

Hon. CHARLES B. RANGEL,
*Chairman, Subcommittee on Oversight,*

Hon. HAROLD FORD,
*Chairman, Subcommittee on Public Assistance and Unemployment Compensation,*
*Committee on Ways and Means, U.S. House of Representatives.*

DEAR MR. CHAIRMEN: In response to your letter to me of September 7, 1983, I am submitting a report entitled "The Effects of the Omnibus Budget Reconciliation Act of 1981 (OBRA) Welfare Changes and the Recession on Poverty" prepared by Mathematica Policy Research (MPR), Inc. under contract to the Congressional Research Service (CRS). This report is the second part of our response to your original request. Last fall we supplied you with material that formed the bulk of your Committee Print entitled "Background Material on Poverty."

The second part of your request, which is addressed in the accompanying report, was for an analysis of the relative importance of the recession, budget reductions, and other factors on the recent increases in the poverty rate. You were particularly interested in the effects of the changes made to the Aid to Families with Dependent Children (AFDC) program.

It has been difficult for Congress to obtain information on the effects of the changes to public welfare programs enacted in OBRA. A major roadblock to obtaining this information has been the fact that at the same time the program changes were going into effect, the economy was rapidly moving into recession. Thus, it has been difficult to separate the effects of legislated program changes from the effects of the deteriorating economy. The microsimulation design of this report provides a method for sorting out program effects from economic effects. The design allowed analysis of both the combined and individual effects of OBRA welfare changes and the recession on the poverty rate. The report also examines changes in the poverty rate as they affect different subgroups of the population, such as children or two-parent families.

We hope that the report will serve the needs of your committee as well as those of other committees and Members of Congress.

Sincerely,

GILBERT GUDE, *Director.*

COMMITTEE ON WAYS AND MEANS,
HOUSE OF REPRESENTATIVES,
*Washington, DC, September 7, 1983.*

Hon. GILBERT GUDE,
*Director, Congressional Research Service, the Library of Congress, Washington, DC.*

DEAR DR. GUDE: The Subcommittee on Oversight and the Subcommittee on Public Assistance and Unemployment Compensation of the Committee on Ways and Means will be holding a hearing on the increase over the past four years in the number of individuals whose incomes are below the poverty index. We anticipate that the hearing will be held in mid-October.

As Chairmen of the Subcommittees, we request the assistance of the Congressional Research Service in compiling a background briefing document in a style similar to Committee Print 98-2 which would:

(1) Describe the official poverty line and various other measures,

(2) Compile historical tables and graphs illustrating poverty rates in the population and selected population subgroups under the various definitions of poverty,

(3) Analyze using four CRS generated data files, the relative importance of the recession, budget reductions and other factors for the increased poverty rate,

(4) Document the major 1981 budget reductions and the erosion in real terms of public assistance benefits, and

(5) Outline briefly various policy options to reduce poverty.

We look forward in working with you on this important project and appreciate your cooperation. If you have any questions, please contact Wendell E. Primus at 225-2747.

Sincerely,

HAROLD FORD,
*Chairman, Subcommittee on Public Assistance and Unemployment Compensation.*

CHARLES B. RANGEL,
*Chairman, Subcommittee on Oversight.*

## PREFACE

This study is a joint effort of the Congressional Research Service (CRS) and Mathematica Policy Research (MPR). CRS developed the overall research design and contracted with MPR to carry out the research. MPR conducted the simulation analysis and prepared this report. Data processing assistance was provided by Social & Scientific Systems.

The authors would like to thank the numerous individuals who provided helpful review and guidance. In particular we would like to thank Nancy Gordon and Marilyn Moon of the Congressional Budget Office, Terry Hedrick of the General Accounting Office, the staff of the Ways and Means Committee, William Robinson, Vee Burke and Richard Hobbie of CRS, and Pat Doyle and Harold Caswell of MPR for their review and comments. Ken Cahill was the Project Manager for CRS and he and Carolyn Merck of CRS were responsible for the original conception of the project and for providing continuing guidance throughout the project. The manuscript was typed by Marguerite Winslow.

HAROLD BEEBOUT.
CONSTANCE F. CITRO.
*June 14, 1984.*

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## EXECUTIVE SUMMARY

Given the rapid increase in the poverty rate from 1980 to 1982, it is important to identify the possible causes. Was the major reason for the increase the weakening economy? (The unemployment rate rose from 7.4 percent in September 1980 to 7.6 percent in September 1981 and to over 10 percent in September 1982.) The weak economy would be expected to increase poverty through lower employment and earnings. Or, was the major reason for the increase the Omnibus Budget Reconciliation Act of 1981 (OBRA)? (OBRA took effect at the beginning of fiscal 1982 and mandated changes in public transfer program rules that may have reduced the income of low-income families and increased poverty, other factors remaining the same.) Alternatively, was the reason for the increase other social and demographic factors unrelated to the economy or OBRA?

This paper examines the poverty population during fiscal year 1982 and then asks three questions:

- How many and what kinds of persons were added to the poverty population because of OBRA welfare program changes and the recessionary economy? That is, what were the combined effects of OBRA and recession on the poverty rate?
- What would be the size and composition of the poverty population with OBRA, but an unchanging economy? That is, what were the independent effects of OBRA welfare program changes on poverty?
- What would be the size and composition of the poverty population without OBRA welfare program changes, but with the recessionary economy? That is, what were the independent effects of the weak economy on the poverty rate?

Using a microsimulation approach described in the following chapter, the principal results of this research are summarized below and in Table A.

- Both the recessionary economy and OBRA increased the size of the population in poverty, but the relative impact of the economy was greater. Enactment of OBRA increased the overall number of persons classified as poor by 2 percent over the total that would have been obtained had the 1981 AFDC program gone unchanged; the weak economy increased the number of poor by almost 6 percent and, together, OBRA and the recession operated to increase the number of poor by almost 8 percent, or 1 person in 12. We would also expect that as economic recovery takes place, the increase in the poverty rate attributable to the recession would decline, and at some level of recovery, be reversed.
- The recessionary economy independently had the stronger impact on poverty among working-age adults, operating to increase the number of poor persons 18 to 64 by well over 8 percent. OBRA also had a slight impact, and, together, OBRA and



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the recession increased the number of poor working age adults by over 1 in 10.

- OBRA had a stronger impact on poverty among children than among working age adults, operating to increase the number of children in families under the poverty threshold by close to 3 percent. The weak economy increased poverty among children by well over 4 percent; and, together, OBRA and the weak economy increased the number of children counted under the 1982 poverty line by close to 8 percent.
- The weak economy independently had the stronger impact on poverty among members of married couple families, resulting in an increase of well over 9 percent in the number of poor among this group. OBRA also had a slight impact, and, together, OBRA and the recession raised poverty among persons in married couple families by close to 12 percent or 1 in 8.
- OBRA independently had the stronger impact on poverty among members of families headed by females, resulting in an increase of close to 3 percent in the number counted as poor among this group. The weak economy had a smaller impact and, together, OBRA and the weak economy increased the number of persons in families headed by females under the poverty index by almost 5 percent or 1 in 20.
- The simulation results indicated that neither the OBRA welfare program changes nor the recessionary economy had much impact on poverty among the elderly, unrelated individuals, or those with weak or no attachment to the labor force.
- Using the aggregate poverty gap—the amount of money required to bring the income of all families up to the poverty line—as the measure, OBRA and the recessionary economy together increased the poverty gap by $2.2 billion or nearly 8 percent. By family status, married couples had the largest percentage increase in their poverty gap.

TABLE A.—IMPACT OF OBRA AND THE RECESSIONARY ECONOMY ON POVERTY RATES FOR SELECTED POPULATION GROUPS, FISCAL YEAR 1982

[In percent]

| Population group | Change in poverty rate | | |
|---|---|---|---|
| | Independent effect of OBRA welfare program changes | Independent effect of the recessionary economy | Combined effect |
| All persons | +2.0 | +5.7 | +7.6 |
| Working-age adults | +1.6 | +8.4 | +10.2 |
| Children | +2.9 | +4.6 | +7.6 |
| Married-couple families | +2.3 | +9.6 | +11.9 |
| Female-head families | +2.8 | +1.8 | +4.7 |

Source: Tabulations of microsimulation data base developed by Mathematica Policy Research and Social & Scientific Systems from the March 1981 Current Population Survey.

The study results just presented indicate how the size of the poverty population changed as a result of the OBRA legislation, the recessionary economy, and both factors together. It is important to understand the base case, from which changes were measured. Briefly, the level of poverty in each of the demographic groups in the base case scenario—without OBRA and assuming a continuation of 1980 levels of economic activity—is presented below.

- Overall about 1 person in 8 was poor in 1982.
- The poverty rate was lower among persons in families than among unrelated individuals, with about 1 family member in 9 below the poverty line.
- The poverty rate was higher among children under 18—over 1 in 6 children were in families with income beneath the poverty index—than among adults.
- Unrelated individuals had a much higher than average poverty rate with over 1 person in 5 in poverty.
- Persons in single-parent female headed families had a high poverty rate with over 1 in 3 of such persons classified as poor.
- Persons in families lacking strong attachment to the labor force (excluding the elderly) had poverty rates much higher than average, with over one-half of those with weak or no labor force attachment of the family heads classified as poor.
- The elderly had poverty rates just above the average—about 1 in 7 were in poverty—but had the largest proportion of near poor.

These results are based on a computer simulation of four fiscal year 1982 economic and legislative scenarios. The simulation techniques used to produce these scenarios were designed to provide a consistent set of estimates that measure the differences in income and poverty across the scenarios. The scenario representing "real world" conditions was carefully specified and benchmarked to represent as faithfully as possible the fiscal year 1982 economic climate and government program rules. However, as with all models, the estimates are only as good as the assumptions upon which they are based. Also, because of minor differences in the income measure, the simulated poverty rates do differ somewhat from the official published rates. These differences and the underlying assumptions are discussed in the appendixes. The estimates with OBRA differ from the "real world" of fiscal year 1982 because the model assumed full implementation of the OBRA provisions on October 1, 1981. The provisions were actually implemented over a several month period starting on October 1, 1981.

Notwithstanding these caveats, the study findings on the effects of OBRA welfare program changes and the recessionary economy on poverty in fiscal year 1982 appear reasonable and in accord with expectations. The finding that the recessionary economy and OBRA together increased the number of persons in poverty by about 8 percent is in line with the change in poverty reported in official Census Bureau estimates based on the annual March Current Population Surveys. According to the official published estimate, poverty rose over 7 percent from calendar 1981 to calendar 1982, a slightly different time period than examined here.

The important contributions of this study are twofold:

- First, we demonstrate that microsimulation models can yield results helpful to decisionmakers as to the impact of complicated policy changes.
- Second, we are able to separate the effects of two complex factors affecting poverty simultaneously. In this case we find that OBRA increased poverty by 2 percent and the weak economy increased poverty by 6 percent—for a combined increase of 8 percent.

# EFFECTS OF THE OMNIBUS BUDGET RECONCILIATION ACT OF 1981 (OBRA) WELFARE CHANGES AND THE RECESSION ON POVERTY

## Chapter I. INTRODUCTION

This paper examines the impact of two factors on the number and characteristics of the poverty population during fiscal year 1982: (1) the welfare program provisions of the Omnibus Budget Reconciliation Act of 1981 (OBRA) which were implemented over time at the start of fiscal year 1982, and (2) the recessionary economy experienced during that year.

We are interested in assessing the impact of OBRA, because the legislation changed provisions of income support programs such as Aid to Families With Dependent Children in ways that could reduce income levels of previously eligible families. Obviously, a recessionary economy would be expected to depress income levels by raising unemployment and lowering hours of work. During fiscal year 1982, income levels were affected both by the provisions of OBRA and by a recessionary economy.

This paper describes a baseline poverty population during fiscal 1982 under the assumption of a stronger economy and without the OBRA changes that took effect. The paper then seeks to answer three questions:

- Compared to a scenario without the OBRA changes in program rules and with the stronger economy of 1980 continuing into fiscal 1982, how many and what kinds of persons were added to the poverty population because of OBRA and the recessionary economy? That is, what were the combined effects of OBRA and the recessionary economy on the poverty rate?
- What would be the size and composition of the poverty population with OBRA but an unchanging economy? That is, what were the independent effects of OBRA on poverty?
- What would be the size and composition of the poverty population without OBRA but with a recessionary economy? That is, what were the independent effects of the recessionary economy on the poverty rate?

In order to provide a context for assessing the findings and approach of this study, we review several relevant studies of the impact of the OBRA legislation before proceeding to describe the methods we employed and our findings.

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MPR reference No. 7578-013. June 18, 1984. Authors: Constance F. Citro and Harold Beebout. Presented to Congressional Research Service, Library of Congress, by Mathematica Policy Reserch, Inc., Washington, D.C.

**Review of Other Relevant Studies**

As noted earlier, the 1981 OBRA legislation substantially modified the targeting of AFDC benefits. In order to examine the magnitude of those changes, the Office of Family Assistance (OFA) in the Social Security Administration compared the characteristics of a sample of the pre-OBRA AFDC caseload as of May 1981 with a sample of the post-OBRA caseload as of May 1982. As reported by Wilbur A. Weder (1983), the principal findings were that, as expected, the only portions of the caseload with significant changes were recipient families with earned income and those with stepparents in the household. The proportion of cases with earnings declined by about one-half from 11.5 percent of the total caseload in May 1981 to 5.6 percent in May 1982. The proportion of cases with stepparents in the household declined from 6.6 percent of the caseload in May 1981 to 3.4 percent in May 1982. (See page 9 for why such a decrease might be expected.)

The reduction in cases with earnings, as reported by Weder, is very consistent with the simulation analysis conducted for this CRS study. In the simulation analysis we observe about one-half the cases with earners who either lost eligibility or ceased participating under the simulation representing the OBRA changes compared to the simulation without OBRA.

While the Weder study can observe the change in caseload characteristics between the pre-OBRA and the post-OBRA samples and can measure the total caseload reduction, it cannot sort out the OBRA impacts on the caseload from those of the rapidly deteriorating economic environment. The increase in the unemployment rate from 7.5 percent in May 1981 to 9.5 percent in May 1982 tended to expand the AFDC rolls while the OBRA changes were restricting eligibility. The net impact of the two factors operating in opposite directions, according to Weder, was a reduction in the caseload of 319,000 persons. That reduction indicates that OBRA was the dominating factor for the AFDC caseload, but, to obtain estimates of the separate effects of OBRA alone or the economy alone, other methods such as simulation must be employed.

It also is useful to compare our estimates of OBRA impacts with the General Accounting Office (GAO, 1984) evaluation of the 1981 AFDC changes. GAO based their evaluation on statistical analyses of national AFDC caseload and outlay data plus detailed analysis of individual case record data from five sites. GAO's key results were:

- OBRA resulted in a reduction in the average monthly national caseload of 13.7 percent. This GAO finding is close to the model estimate of a 12.0 percent reduction.
- Within the sites GAO looked at, OBRA resulted in the closing of from 39 to 60 percent of AFDC cases with earnings in the first few months of implementation. This GAO finding is consistent with the model's national estimate of 50 percent, although the GAO study refers to one group traced over time in each of five locations while the model refers to two national cross section estimates.
- OBRA resulted in a reduction in aggregate AFDC payments nationally of 9.3 percent. This GAO estimate is somewhat less

than the model estimate of about 13 percent for the effect of OBRA alone. However, GAO's approach may not have fully accounted for the countervailing effect of the simultaneous weakening of the economy. Our estimate of the combined impact of OBRA and the economy was about 9 percent and, hence, is consistent with an interpretation of GAO's estimate of the combined effects.

The findings from the GAO evaluation are generally consistent with the OFA study and are quite similar to the results of the simulation model used in this study. The consistency of the model results with these other studies increases our confidence in the model results. Neither of the methodologies employed in the OFA nor the GAO studies directly estimated the effects of the weakening economy or separated them from the OBRA effects. However, the GAO national statistical model estimating OBRA's effect on caseloads did take account of changes in the number of unemployed female heads of families.

The Research Triangle Institute conducted a study for the Office of Family Assistance, "Evaluation of the 1981 AFDC Amendments" (RTI, 1983), that offers a third relevant comparison with our analysis. Their findings generally were consistent with the GAO study. The RTI results are based on a national probability sample of AFDC cases which were tracked from September 1981 through October 1982. A similar sample was tracked from September 1980 through September 1981 to provide a pre-OBRA comparison to better measure OBRA's impact on caseload dynamics. The major findings were:

- OBRA significantly increased the rate of case closing for AFDC families with earnings—55 percent of the September 1981 earner cases were not on AFDC 1 year later compared to 28 percent of the 1980 earner cases 1 year later. While the behavior of a single cross section is not easily translatable to the net change between two cross section caseloads simulated by the model, it does appear to to consistent with the model results.
- OBRA did not have an appreciable effect on AFDC cases without earnings. This RTI finding is also consistent with the model results with the possible exception of stepparent cases.
- Data from both the 1980 and the 1981 samples indicate that AFDC earners experience employment instability and that the instability was not affected by OBRA. About 18 percent of earners in both samples who were on AFDC a year later did not have jobs 1 year later. No comparable estimate is available from the model.

As mentioned earlier, the RTI findings are similar to those of GAO and generally are consistent with the results of the simulation model.

Finally, we discuss a more descriptive study of AFDC cases with earnings in New York City and the States of Georgia and Michigan, conducted by the School of Social Work at Columbia University, the Institute for Social Research at the University of Michigan, and the Center for the Study of Social Policy (1984) in Washington, D.C. Female-headed AFDC families who were affected by one of three key OBRA provisions were studied to determine the impact

of OBRA on family income, welfare utilization and work status. The key relevant findings are:

- The elimination or reduction of the AFDC grant to the female headed families because of OBRA significantly reduced their income and increased poverty rates. In New York City, 28 percent of such families in the study had cash incomes below the poverty level before OBRA with the poverty rate almost doubling to 52 percent after OBRA. In Georgia, the impact was less dramatic with female head AFDC families in poverty rising from 81 to 89 percent. Data on cash income were not available for Michigan. Because of the limited universe used in the study, it is not possible to infer national estimates which can be compared to the model results. The direction of the impacts obviously is consistent.
- This study claims that a substantial portion of the cases closed by the OBRA provisions later returned to the rolls and because they stopped working were eligible for a much larger payment. Based on that observation, the study maintains OBRA savings will be smaller than generally believed. Based on the cases in their samples, 27 percent of the closed New York City cases, 24 percent of the closed Michigan cases, and 38 percent of the closed Georgia cases had returned to AFDC during the first year in New York, the first 16 months in Michigan, and the first 19 months in Georgia. Whether that result is caused by OBRA or represents the normal instability of employment for AFDC recipients is impossible to determine. The GAO study, for example stated that "working AFDC recipients were not more likely to stop working and increase their reliance of AFDC after OBRA implementation than they were in the prior years." It is not possible to compare these results with those of the model.

The four studies reviewed above generally are consistent with the results of the simulation model concerning the impact of OBRA on AFDC cases with earnings. That consistency increases our confidence in the model, including estimates for other effects that were not examined in the studies we reviewed. This review also points out that the key research questions concerning the independent effects of OBRA and the economy on the poverty population, a focus of this study, have not received much attention in other studies. Only one of the studies attempted to describe the impact of OBRA on poverty, the study published by the Center for the Study of Social Policy, but those results can not be used to infer national estimates and do not control for changing economic conditions.

All of the studies examined above were based on observing AFDC units in the pre-OBRA period and then observing them again in the post-OBRA period. The actual research approach varied, with the OFA study using two cross sections and other studies tracking the cases over time for as long as 19 months. The principal advantage of those approaches is that they provide insight into what actually happened. However, they have limited capability to separate out the OBRA effects from those of the economy and other factors. They can also only be carried out after sufficient time has elapsed to collect the postchange data and conduct the analysis.

CRS/MPR used a different method for this study. This study relies on computer microsimulation methods in which computer experiments are conducted to infer the impact of the change in the program rules resulting from OBRA and the impact of the change in economic conditions on the incomes and poverty status of low income families. For example, in this approach an experiment is run to determine the impact of OBRA. The program rules without the OBRA changes are applied first to a large sample of households. Then the model applies the program rules with the OBRA changes. The difference between the computer runs in the number of persons in poverty is the OBRA impact because the economy and other factors have been held constant by the model. The model then alters the employment status of individuals to simulate the weak economy to determine the effect of the economy on poverty while holding program rules constant.

The simulation model allows the effects of the program changes to be separated from the effects of the economy and other factors. The simulation modeling approach also allows the estimated effects of a program change to be examined before it is implemented, thus providing policymakers with information on the likely impacts before they make a decision. The simulation approach is limited in that it is only as good as the research and assumptions that are built into it. This study, with findings comparable to other survey-type analyses, greatly increases our confidence in the use of microsimulation models.

### Study Design

The basic design for this study, as laid out by CRS, consists of a two by two matrix representing what fiscal year 1982 would have been like under four different program and economic scenarios. These four scenarios vary according to whether or not the OBRA changes are included and whether a stronger versus a recessionary economy is assumed as shown in Figure I.1.

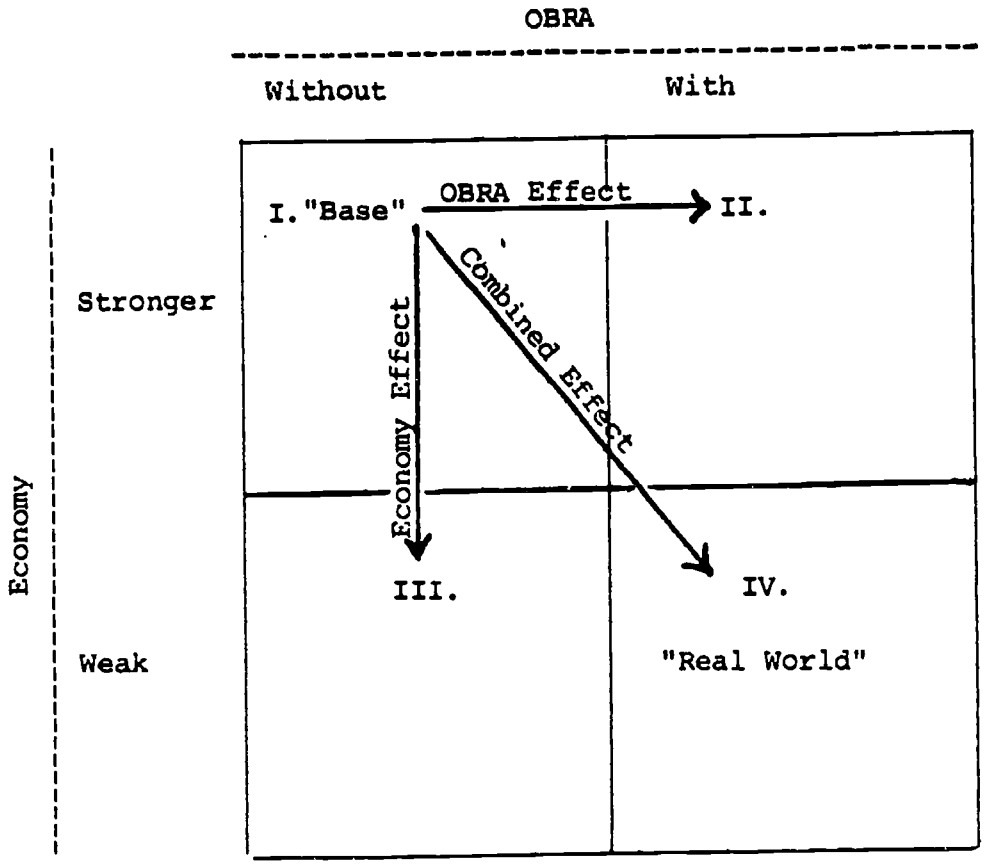
Figure I.1 graphically portrays the four alternative scenarios that were modeled for this study and the effects that each scenario was designed to measure. Scenario I, labeled the "Base", is the comparison point for the other three scenarios. The base scenario faithfully represents the size and demographic composition of the U.S. population during fiscal year 1982. However, this scenario uses a set of assumptions about the state of the economy and a set of assumptions about the rules governing eligibility and benefits for income transfer programs that stand at the opposite corner from what actually characterized the period. The base scenario, thus, assumes a stronger economy (average unemployment rate of 7.1 percent) than fiscal year 1982 exhibited and also does not model the changes mandated by OBRA in transfer program rules. By comparing the poverty rate measured under the base scenario to the rates measured under scenarios that model either or both the actual economic and legislative conditions of fiscal 1982, we can assess the impacts of the economic and program changes experienced during that year.

Looking at the corner in the diagram opposite the base scenario, we see scenario IV, labeled the "real world." This scenario faithfully represents the size and demographic composition of the popula-

tion in fiscal year 1982 and also models the actual economic conditions of that period and the transfer program changes introduced by OBRA. Specifically, the real world scenario models a weak economy with an average unemployment rate of 9.1 percent and also models changes mandated by OBRA that restricted eligibility and benefits for various welfare programs. The approximation to the real world of fiscal year 1982 is not exact. One important difference is that OBRA program changes were assumed to be fully implemented on October 1, 1981, rather than phased in over several months as actually occurred. Since the basic purpose of this study is to examine the effects of the fully implemented OBRA welfare program provisions, the assumption of full year implementation is a useful feature. The full year assumption indicates the likely longer term effects. However, it does exaggerate the actual fiscal year 1982 effects.

FIGURE I.1

SCHEMATIC REPRESENTATION OF STUDY DESIGN WITH FOUR SCENARIOS



We are interested in determining which factor—the recessionary economy or OBRA—had the greater impact on poverty in fiscal 1982. Hence, we developed two other scenarios that let us determine that portion of the total change in poverty that can be attributed independently or solely to OBRA and that portion that can be attributed solely to the weak economy. Scenario II was designed to measure the independent effects of OBRA. This scenario is the same as the base scenario on one dimension, namely that it models a stronger economy with unemployment averaging 7.1 percent, thus representing the same set of economic assumptions compared to the base. In contrast to the base, scenario II uses the OBRA welfare program provisions. Hence, comparing the poverty rate under scenario II with the base rate tells us what impact the OBRA legislation had on the poverty population estimate when we use the same set of economic assumptions in the comparison.

Scenario III was designed, conversely, to measure the independent effects of the recessionary economy in fiscal 1982. The scenario is the same as the base scenario in that it does not model any of the program changes introduced by OBRA, thus using the same set of program rules as the base. In contrast to the base, scenario III models a recessionary economy with unemployment averaging 9.1 percent. Hence, comparing the poverty rate under scenario III with the base rate tells us what impact the weak economy had by itself on poverty when we do not vary the program rules in the comparison.

## Study Methods [1]

Microsimulation takes a set of survey or census data pertaining to individual households, families, and persons, and adjusts the data to represent a specified time period and set of demographic and economic conditions. In contrast to survey data, with microsimulation four different scenarios could be prepared to consistently represent alternative economic and legislative scenarios.

The data set used as the starting point for the simulations was the March 1981 Current Population Survey (CPS), which is also the survey used by the Bureau of the Census for preparing the official poverty figures. The CPS contains approximately 65,700 households and is conducted monthly by the Bureau of the Census to measure current labor force activity and demographic characteristics of the civilian, noninstitutionalized population residing in the 50 States and District of Columbia. The survey each March includes added labor force and income information for the preceding calendar year. The March 1981 CPS hence obtained an extensive set of demographic, economic, and employment data for the survey month (March 1981) and calendar year 1980.

Two data files were created from the March 1981 CPS using the MATH (Micro Analysis of Transfers to Households) microsimulation model.[2] One file simulated the population in fiscal year 1982

[1] Appendix A to this report provides a detailed description of the simulation procedures and data set used to develop the four fiscal 1982 scenarios. Complete documentation is available in Doyle et al. (1983).

[2] The work was performed by staff of Mathematica Policy Research, Inc., and Social & Scientific Systems, Inc., under a contract from the Congressional Research Service.

under the stronger economy with and without the provisions of OBRA. The second file simulated the population with a weak economy and with and without the OBRA provisions.

*Steps in the simulation*

In effect, the microsimulation sought to create data sets that as closely as possible represent the responses that would have been obtained from households and persons if an actual survey had been conducted under the specified conditions of the scenario. It is vitally important in reviewing any study based on simulated data to understand the steps that were followed and the assumptions that were made in developing the synthetic data sets. The stages involved in developing the two files employed for this analysis included:

*Demographic projections.*—As the first step in the simulation, the March 1981 CPS was adjusted to represent the population—227.8 million persons—estimated by the Bureau of the Census for fiscal year 1982.

*Unemployment rate adjustment.*—The second step involved adjusting the CPS to reflect two different unemployment rates. For scenarios I and II that assumed better economic conditions than those actually experienced during fiscal year 1982, the average monthly unemployment rate of 7.1 percent observed during calendar 1980 in the annual retrospective data in the March 1981 CPS was adopted. For scenarios III and IV that assumed the weak economy characterizing fiscal 1982, the survey employment data were adjusted to represent an average monthly unemployment rate of 9.1 percent. The adjustment also took into account the widely differing unemployment rates experienced by the States (see Appendix A).

*Income projections.*—This phase of the project adjusted the calendar 1980 income amounts on the March 1981 CPS by type, such as earnings, asset income, unemployment compensation, and so on, excepting means-tested public transfer program benefits that were separately simulated. Adjustments were made to each adult record in the sample to achieve consistency with income projected for fiscal 1982 under each of the two economic scenarios of higher and lower unemployment.

*Welfare benefits simulation.*—In this final phase of constructing the two data sets, routines of the MATH model were used to simulate participation in means-tested public transfer programs and the dollar amount of benefits received. These simulations are more fully described below because it was in this stage that changes mandated by the OBRA legislation of 1981 were modeled.

*Simulation of public welfare*

The general approach to simulating welfare recipients and benefit amounts was first to determine family units or persons categorically eligible to participate in benefit programs based on requirements such as age or disability not related to income. Next it was determined whether the categorically eligible units had sufficiently low income and assets to qualify for a benefit. For means-eligible units, the amount of the potential benefit was computed. Finally,

eligible units were selected to participate based on several characteristics. The main programs simulated in this manner included:

- Supplemental Security Income (SSI) for the aged, blind, and disabled.
- Aid to Families With Dependent Children (AFDC) for single-parent families including families with a stepparent present and for unemployed and incapacitated two-parent families.
- The Food Stamp program for household units.

The simulation of welfare caseloads and benefits incorporated the relevant provisions of the OBRA legislation in scenarios II and IV, while using pre-fiscal-year 1982 program rules in scenarios I and III. The effects of lower versus higher unemployment rates (scenarios I and II versus scenarios III and IV) or program participation and benefits were modeled as well. Below are brief summaries of the simulation assumptions and results for each welfare program under the various scenarios.

*Supplemental Security Income (SSI).*—The simulation model constructed filing units containing aged or disabled persons that were categorically eligible for SSI and then determined income eligibility, calculated benefits, and selected participants. The OBRA legislation did not substantially change the provisions of SSI. Hence, there was no difference in the number of simulated SSI participants or benefit amounts between the pair of the pre-OBRA and post-OBRA scenarios under each set of economic conditions. As expected, the recession also had a very small impact according to the model estimates. Participants in SSI and dollar benefits were less than 1 percent higher in the pair of scenarios (III and IV) that assumed a weak economy compared with the pair (scenarios I and II) that assumed a stronger economy.

*Aid to Families With Dependent Children (AFDC).*—The AFDC program is far more complex in its provisions than SSI and the simulation was accordingly more involved. Eligible AFDC units were formed from families containing a child deprived of parental support due to death, continued absence from the home, physical or mental incapacity of a parent, or, in some States, unemployment of the principal earner. The OBRA legislation made numerous changes in the AFDC program that were incorporated in the simulation including:

(1) In the States that permitted persons over 17 to be considered as children for purposes of AFDC eligibility, OBRA stipulated that only persons who were 18 and in school could be so considered. Prior to OBRA, these States allowed persons aged 18 to 20 and in school to be considered as children in addition to persons under 17.

(2) OBRA limited AFDC means eligibility to units with gross income less than 150 percent of the unit's full standard of need for the States. Units were ruled ineligible on this basis even if their net countable income after deductions and other adjustments would have met the State's payment standard. A few States made changes in their need standard that counteracted the intended effect of this screen.

(3) OBRA made part of the income of stepparents countable in determining AFDC eligibility and benefits. Generally, income above the monthly AFDC need standard for a one-

person unit is countable as unearned income. Before OBRA the income of stepparents was not countable even if they assumed financial responsibility for the child, unless the state required all stepparents to do so.

(4) OBRA changed the computation of countable income. Before OBRA, the first $30 and one-third of the remainder of earned income were deducted from countable income and then actual work-related and child care expenses added to the potential benefit as credits. After OBRA, the $30 and one-third deduction was limited to the first 4 months that a unit was on AFDC and had earned income. Also, work-related and child care expenses were changed from credits equal to the actual expenses incurred to a standard deduction of $75 per month for work-related expenses and a child care deduction equal to actual expenses with a $160 per month per child cap. The work-related expenses deduction was prorated for part-time workers.

(5) OBRA stipulated that all AFDC payments below $10 per month be dropped.

The characteristics of the simulated AFDC recipients were compared to other data including tabulations of the May 1981 and 1982 sample of case records compiled by OFA/SSA (Weder, 1983). That comparison indicated the case record data had just over 50 percent of the earners in the initial CPS simulated file. Hence, the proportion of AFDC participating families with earnings was benchmarked to the case record information in order not to overestimate the impact of OBRA on AFDC families. The procedures followed in making those benchmark adjustments are described in Appendix B.

The simulation results indicated that OBRA and the recession had substantial effects on the AFDC caseload and benefits. Comparing the scenario with a stronger economy in fiscal 1982 but OBRA program rules to the baseline scenario of a stronger economy and pre-OBRA legislation, the model estimated that the OBRA rules resulted in a decrease in the AFDC caseload of over 12 percent and a decrease in benefits of over 13 percent. Comparing the scenario without the OBRA program changes but a weak economy to the baseline scenario without OBRA and a stronger economy, the model estimated that the recession resulted in an increase in the AFDC caseload and benefits of about 5 percent. The model estimated that the combination of OBRA, which operated to reduce the AFDC rolls, and the recession, which operated to increase the rolls, had a net effect of reducing the fiscal 1982 caseload by about 8 percent and benefits by about 9 percent compared to the baseline scenario.

*The Food Stamp Program.*—Similar procedures were used to simulate participants and benefits under the Food Stamp Program as for the public assistance cash income support programs. The OBRA legislation made several changes in the Food Stamp Program that would be expected to reduce benefits and thereby reduce the combined amount of cash and in-kind income available to families. Statistics regularly published by the Bureau of the Census from CPS data do not count in-kind benefits with cash income in determining poverty. For this reason and because of technical problems in deriving annual food stamp values consistent with other income

sources, *we excluded food stamp benefits from the calculation of poverty status in this study.*[3] Generally, however, had food stamps been included as income in computing the poverty estimates, the poverty population would have been reduced in all scenarios.

## Examining the Impacts of OBRA and the Recession on Poverty

The result of the application of microsimulation techniques as summarized above was to create two data sets that make it possible to examine the combined and independent effects of passage of the OBRA legislation and the weak economy experienced during fiscal 1982 on the economic well-being of the American population. For this report, we tabulated the data in a format designed to assess the effects of each of the scenarios on the number of persons with income low enough to be classified as poor. We examined the effects on poverty in the total population and among subgroups of the population such as children, the elderly, and members of different types of families and households.

The concept of poverty used in the tabulations is that employed by the Bureau of the Census in producing the official poverty reports from data contained in the March Current Population Survey.[4] Using CPS reported gross income before taxes (excluding in-kind benefits such as food stamps), the Census Bureau annually tabulates persons with their own or their family income below the applicable poverty threshold—which varies by family size, among other variables. For this report, we compared the gross income of families and unrelated individuals simulated by the MATH model under each scenario with poverty thresholds calculated for fiscal 1982. Table I.1 shows the number and percent of persons in poverty by family status for each of the four scenarios.

Given the provisions of OBRA which tightened eligibility requirements and payment standards for AFDC, we would expect poverty to be higher under the scenarios with OBRA program rules. We would also expect the weak economy to increase poverty. Table I.1 supports these expectations. Under the baseline scenario that represented fiscal 1982 without OBRA and with a stronger economy, the model estimated that almost 12.6 percent or about one in eight of all persons had income under the poverty index. Under the scenario representing "real world" fiscal 1982 conditions—both a weak economy and OBRA program rules—poverty rose by nearly 1 percentage point to just over 13.5 percent, or close to one in seven persons, the highest of the four scenarios. Hence, the model estimated that OBRA and the weak economy experienced in fiscal 1982 together increased the number of persons with income under the poverty index by almost 8 percent or 2.2 million persons. We would expect the impact of the recession on poverty to be lessened, or reversed, as economic recovery takes place. The extent of the change would, of course, depend on the extent of the recovery.

Both OBRA and the weak economy had an effect on poverty, but as seen in the table, the economic impacts were much larger than the program impacts. Under the scenario that, like the baseline, as-

[3] Appendix A to this report describes the food stamp simulations and problems in valuing benefits in more detail

[4] See the glossary for explanation of the poverty definition used by Census.

sumed a stronger economy, but represented OBRA program provisions, 12.8 percent of persons were in poverty. Hence, the OBRA program rules independently increased poverty by 2 percent compared to the baseline. Under the scenario that, like the baseline, used pre-OBRA program rules but assumed a weak economy, almost 13.3 percent of total persons were in poverty. Hence, the weak economy independently increased poverty by close to 6 percent compared to the baseline. In sum, of the total increase in poverty of almost 8 percent, the weak economy accounted for three-fourths of the change and OBRA program provisions for the other one-fourth.

TABLE I.1.—PERSONS IN POVERTY DURING FISCAL YEAR 1982 BY FAMILY STATUS UNDER FOUR ECONOMIC AND LEGISLATIVE SCENARIOS

[Persons in thousands]

| Scenario | Total persons | | Persons in families | | Unrelated individuals | |
|---|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | Number | Percent |
| Total persons | 227,816 | 100.0 | 200,157 | 100.0 | 27,659 | 100.0 |
| Persons below the poverty level: | | | | | | |
| Scenario I: Without OBRA with stronger economy | 28,596 | 12.55 | 22,434 | 11.21 | 6,162 | 22.38 |
| Scenario II: With OBRA rules and with stronger economy | 29,153 | 12.80 | 22,990 | 11.49 | 6,163 | 22.28 |
| Scenario III: Without OBRA and with weak economy | 30,198 | 13.26 | 23,767 | 11.87 | 6,430 | 23.25 |
| Scenario IV: With OBRA and with weak economy | 30,785 | 13.51 | 24,355 | 12.17 | 6,430 | 23.25 |
| Percent change in poverty compared to baseline: | | | | | | |
| Scenario I: Without OBRA and with stronger economy | | | | | | |
| Scenario II: With OBRA and with stronger economy | | +2.0 | | +2.5 | | ±0.0 |
| Scenario III: Without OBRA and with weak economy | | +5.7 | | +5.9 | | +4.4 |
| Scenario IV: With OBRA and with weak economy | | +7.6 | | +8.6 | | +4.4 |

Source: Tabulations of microsimulation data base developed by Mathematica Policy Research and Social & Scientific Systems from the March 1981 Current Population Survey.

These findings about the impacts of OBRA welfare program changes and of the weak economy on poverty contrast with the findings noted above with regard to the impacts on the AFDC caseload. The OBRA changes, which accounted for only one-fourth of the total increase in poverty, had by far the greater impact of the two factors on families participating in the AFDC program, resulting in a decrease of over 13 percent in the number of AFDC recipients. The OBRA AFDC changes were designed to tighten eligibility rules for the program, so that the sizable impact of OBRA on the caseload is not surprising. This impact would not however, be expected to result in an equally large effect on poverty, because loss of AFDC income does not necessarily result in families crossing the

poverty line partly because many AFDC families were below poverty before the OBRA changes. Conversely, the weak economy, which accounted for almost three-fourths of the total increase in poverty of 8 percent, had a much smaller impact on AFDC families. Loss of employment and earnings due to the weak economy resulted in an increase of about 5 percent in AFDC caseload, which only partly offset the 13 percent decrease attributable to OBRA. Most families who experience earnings loss are not eligible for AFDC or do not elect to participate if eligible, so the smaller impact of the weak economy on the caseload is understandable.

Finally, note that poverty rates varied dramatically for people in families versus unrelated individuals. Under every scenario, the model estimated the rate for persons not in families at over twice the rate for family members. In contrast, looking at differences among the scenarios, OBRA and the weak economy together increased the estimated poverty count among family members by over 8 percent while increasing the poverty estimate among unrelated individuals by only 4 percent.

We should note that the poverty estimate for the real world fiscal 1982 scenario produced by the MATH model of about 13.5 percent is lower than the Census Bureau's published estimate for calendar 1982 based on the CPS of 15 percent. There are several reasons for this difference,[5] including:

- Poverty has been rising in the 1980's, so that a slightly lower poverty rate would be expected for fiscal year 1982 which spans an earlier time period than calendar year 1982.
- The period covered by fiscal year 1982 averaged lower monthly unemployment—9.1 percent—compared to the average monthly rate of close to 10 percent experienced in calendar year 1982 and consequently poverty would be expected to be less.
- Most importantly, the methods used to produce the data sets for this analysis included simulation of public transfer benefits. Typically less than 75 percent of paid-out welfare benefits are reported to the CPS. In contrast, the MATH model simulates benefits to achieve correspondence with program administrative data. Hence, the model assigns higher incomes to welfare recipients which should result in lower poverty rates compared to estimates based on reported CPS data.

Differences between the simulation model estimates of poverty and published estimates are less important for this study than might be the case for other kinds of analysis. The purpose of this study was to compare differences in poverty between scenarios that explicitly assumed different economic conditions and legislative outcomes, but otherwise used the same data. As long as the various scenarios were accurately modeled, the comparisons of differences in poverty rates should be valid.

The remaining chapters of this paper describe the size of the poverty population in fiscal year 1982 under each scenario and endeavor to assess the importance of OBRA and of the weak economy in increasing poverty. Chapter II presents a detailed picture of pover-

[5] Appendix D includes a fuller explanation of why the CPS-based poverty rate for 1982 should be expected to differ from the rate reported here

ty under the baseline scenario; that is, under scenario I without the OBRA legislation and with a stronger economy (as simulated by the MATH model). In order to provide a context for the later examination of the effect of OBRA and the weak economy, we look at the extent of poverty among different age groups, among persons categorized by type of family and household, and among groups classified by their attachment to the labor force. We also look at the number of near poor; that is, the population with income between 100 and 150 percent of poverty.

In Chapter III we assess the combined effects of OBRA and the weak economy of fiscal year 1982 by comparing the picture of the poverty population drawn in Chapter II with that shown by the data representing scenario IV, which assumed higher unemployment and OBRA transfer program rules. The focus is on identifying and assessing the differences between the two scenarios.

Finally, in Chapter IV we seek to identify the independent effects of OBRA and also the independent effects of the weak economy on poverty, and to assess which of the two factors appeared to have the greater impact for the population as a whole and for subgroups of the populations. To assess the independent effects of OBRA, we compare the picture of the poverty population from Chapter II with the picture shown by tabulations of scenario II that assumed the stronger fiscal year 1982 economy but OBRA program rules. To estimate the independent effects of the weak economy, we compare the picture from Chapter II with that shown by tabulations of scenario III that assumed higher unemployment but excluded the provisions of OBRA.

### Limitations of the Study

The reader should keep in mind that all of the tabulations shown in this report represent estimates based on assumptions contained in the microsimulation procedures. The simulation techniques have been developed with care to represent as faithfully as possible the stipulated economic conditions and government program rules. Nevertheless, the data used in this analysis are subject to errors introduced by the simulation assumptions that may affect the validity of comparisons among different scenarios.[6]

Some specific limitations of the study should be noted:

- AFDC families in the CPS-based data sets created by the model have substantially more earned income than is characteristic of case records, and the primary impact of the OBRA changes was on earners. While we corrected the original model estimates for this potential bias (see Appendix B), the correction may not be exact.
- On the other hand, the model may have modestly underestimated the impact of OBRA on poverty because the OBRA provisions related to unemployment insurance (UI) and public service employment were not explicitly modeled. The most important of these provisions for UI restricted extended benefits by changing the triggering mechanism. That OBRA provision

[6] The data are subject as well to errors in the March 1981 CPS. However, errors in the survey are less important for this analysis because all four scenarios that are being compared derived from the same survey and hence reflect the survey errors to the same extent.

as well as others were partially reversed by 1982 legislation as discussed in Appendix C. Because of the temporary implementation of some of the provisions and because others only acted through changes in the behavior of States, the decision was made not to model the UI provisions explicitly. The result is that, while the OBRA UI provisions are included in the combined effects (scenario IV), they are implicitly attributed to the economy rather than to OBRA. In any case, we believe these effects are not large, as described in Appendix C.

- The simulation also did not account for changes in the social security program mandated by OBRA that trimmed back some benefits and tightened eligibility standards. The impact of those provisions on the poverty rate would likely be very small.[7]
- The simulation did not allow for changes in behavior, such as increased or decreased work effort, which might result from OBRA program changes. Other studies mentioned above have indicated that considerable employment instability existed for AFDC recipients before OBRA. and appeared to continue after its implementation. We would expect it to be difficult for AFDC recipients to increase their work effort during a severe recession.

Finally, the reader should bear in mind that the definition of poverty in this study and in official statistics measures available income as money income before taxes. Hence, changes in noncash transfer programs such as Food Stamps and Medicaid and changes in the tax system are not reflected in the poverty rates shown here. The reader should also remember the OBRA scenarios assume full year implementation rather than the more gradual phasing in over several months that actually occurred.

[7] Changes not included in the 1981 OBRA legislation such as the disability review process might have had an effect, but they were not a logical part of this OBRA study.

## Chapter II. THE POVERTY POPULATION UNDER THE BASELINE SCENARIO FOR FISCAL YEAR 1982

To begin the analysis, in this chapter we look at the number of persons classified as poor during fiscal year 1982 in the total population and population subgroups under the scenario we have labeled as the "baseline." This scenario assumed that the lower unemployment rate of 7.1 percent that was observed during calendar 1980 would continue through fiscal year 1982 and that eligibility rules for transfer programs would be those in effect prior to the adoption of the OBRA legislation. By using this scenario as the baseline, we can then in subsequent chapters assess the combined and independent impacts of OBRA and the weak economy that actually occurred during fiscal year 1982 on changes in the size and composition of the poverty population.[1]

The reader should keep in mind that the baseline scenario, like the other three scenarios, represents a simulation of conditions in fiscal year 1982 under a certain set of assumptions regarding the economy and program regulations. Hence, the reader should not expect the numbers presented on poverty under any of the scenarios to look the same as the official numbers published by the U.S. Bureau of the Census for calendar year 1982 from the Current Population Survey. In addition to differences resulting from use of a simulation methodology versus survey reporting, the poverty figures presented in this report are based on a more inclusive measure of income and cover a somewhat earlier time period than do the published CPS figures.

The simulation numbers on poverty, although not the same as the CPS figures, are comparable both for the total population and important subgroups. Hence, while the reader should keep in mind that a somewhat different measure of poverty is being used in this study than that used by the Bureau of the Census, the relative differences evident in comparison of the four scenarios reasonably represent the magnitude of the impact of OBRA and the recession on the poor. Appendix D briefly reviews the Bureau of the Census figures on poverty for calendar year 1982 and compares these figures to the simulation results.

### Poverty Among the Total Population and Population Subgroups

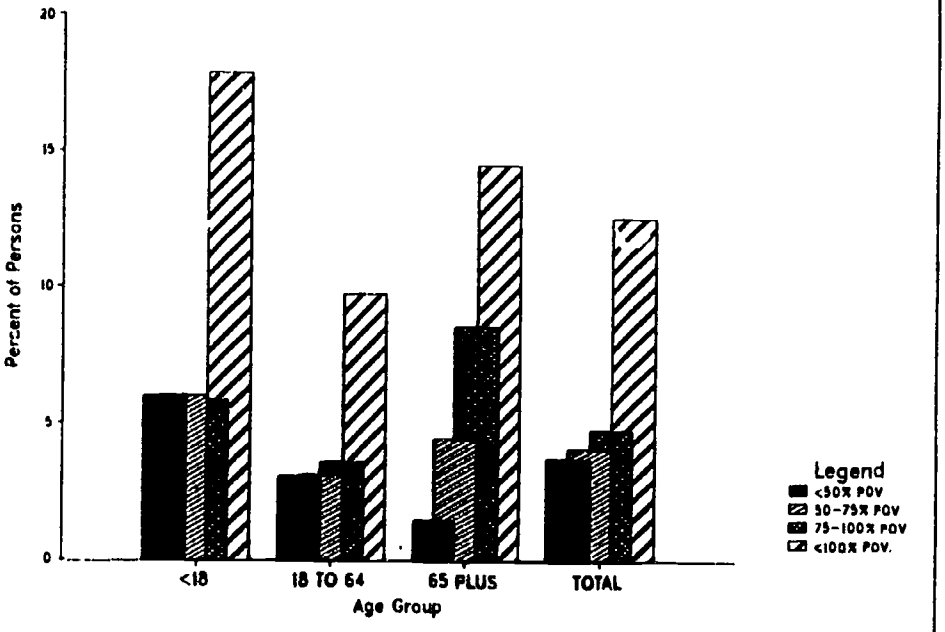
Figure II.1 shows the proportion of the population with counted income below the poverty index for the total population and for children, working age adults, and elderly in the baseline scenario. The right-most bar on the chart indicates that about one in eight

[1] All tabulations were prepared from microsimulation data bases developed by Mathematica Policy Research and Social & Scientific Systems from the March 1981 Current Population Survey. All tabulations in this chapter were prepared from the version of the data base representing scenario I: fiscal 1982 with a stronger economy and without OBRA program rules.

persons in the total population had available income below the applicable poverty level.[2]

Figure II.1

Percent of Persons in Poverty
By Age Group Baseline, 1982




By age, children under 18 were the poorest group, with over one in every six children estimated to be in poverty. Working age adults between 18 and 64 were the least poor group, with only 1 in 10 persons estimated to be in poverty. Older adults 65 and over fell in the middle, with about one in seven estimated to be in poverty. Note that the model classified the vast majority of the elderly poor—almost nine-tenths—as having available income in the range from 50 percent of the poverty level up to the poverty line. That is, relatively few poor elderly were very poor with income below 50 percent of poverty. In contrast, the model classified about one-third of poor children and poor working age adults as very poor.

Figure II.2 shows, for the total population and major age groups, the proportion poor plus the proportion who can be considered near-poor with available income in the range from the poverty line up to 150 percent of poverty under the baseline scenario. In total, the model estimated that close to one-fourth of the population under this scenario were poor or near-poor. The elderly had the highest proportion—almost one-third—of poor and near-poor combined, but over half of that total were in the near-poor income

[2] We use the term "available income" as a simpler expression than "income of the person's family or own income if an unrelated individual." The reader should keep in mind that determination of poverty for family members is based on the combined income of all adult family members. See the glossary for a full explanation of determination of poverty status.

range as opposed to below poverty. Children had almost the same proportion of poor and near-poor combined as the elderly, but, in contrast, the majority of poor and near-poor children were below poverty. The model estimated fewer than one in five working-age adults as poor or near-poor.

Figure II 2

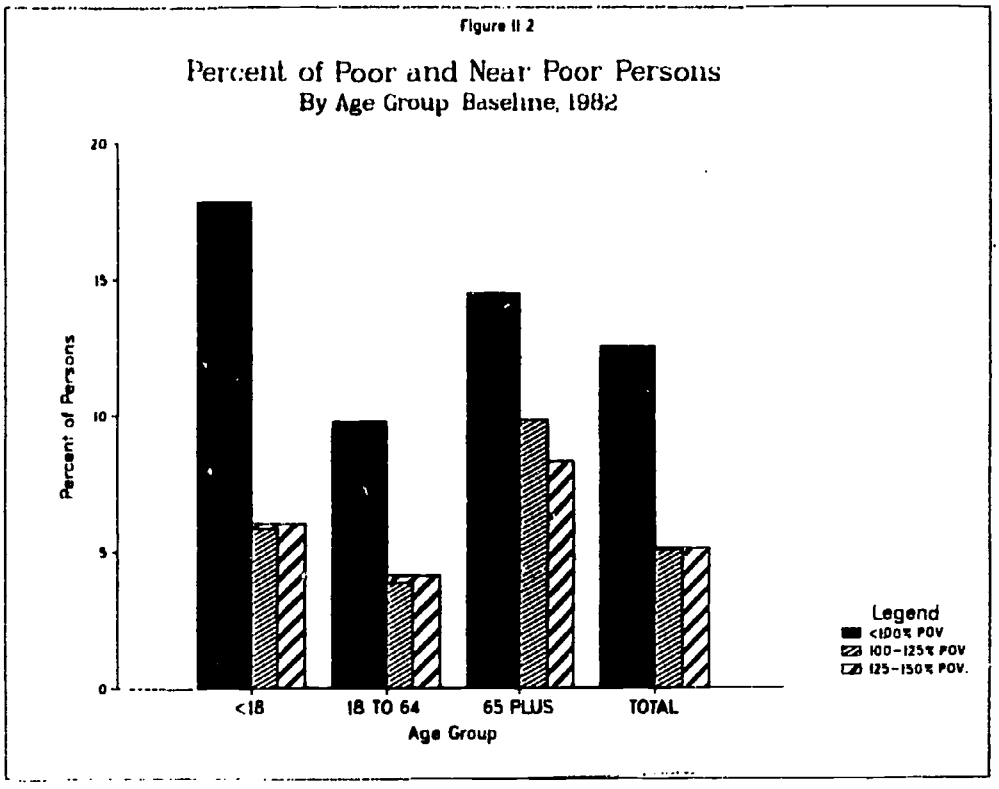
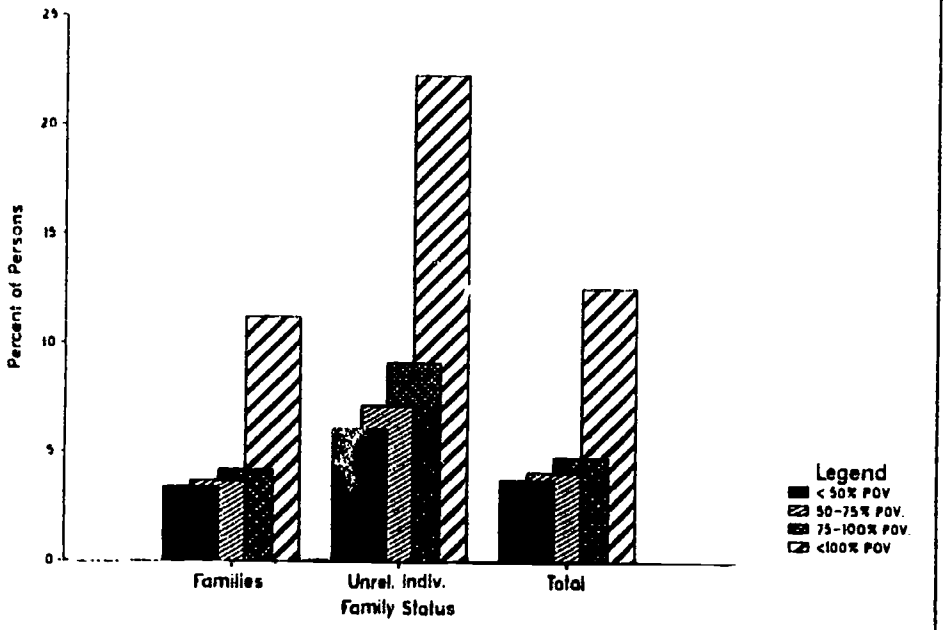


Figure II 3

Percent of Persons in Poverty
By Family Status Baseline, 1982




Poverty rates among persons in families versus unrelated individuals are compared in Figure II.3. Persons in families showed a similar profile to total persons which is not surprising, given that during fiscal year 1982 close to 9 in 10 Americans lived in a family situation. The model estimated a slightly smaller proportion of family members—about one in nine—to be in poverty under the baseline scenario for fiscal 1982 compared to the proportion poor—one in eight—of all persons. Persons not living in families, which include unrelated individuals living alone and with other unrelated individuals and also unrelated individuals living in the same house as a family, showed a much higher poverty rate compared to family members. Over one-fifth of unrelated individuals had available income below poverty compared to just one-ninth of family members.

Although persons living as a member of a family were less likely than unrelated individuals to be in poverty, this was true primarily for married couple families as shown in Figure II.4, which categorizes family members by family type. The model estimated only 1 in 14 members of married couple families had available income below poverty under the baseline scenario. Among the small group of persons living in single-parent male head families, about one in eight were in poverty, or close to the proportion for all family members. Among persons living in a single-parent female head families, however, well over one-third were in poverty.



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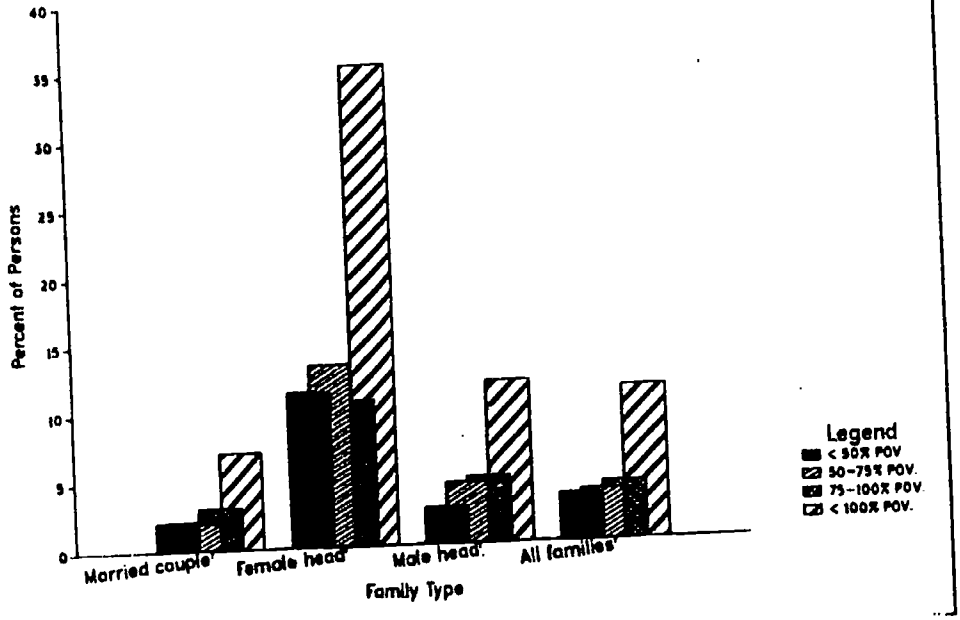
Figure II.4

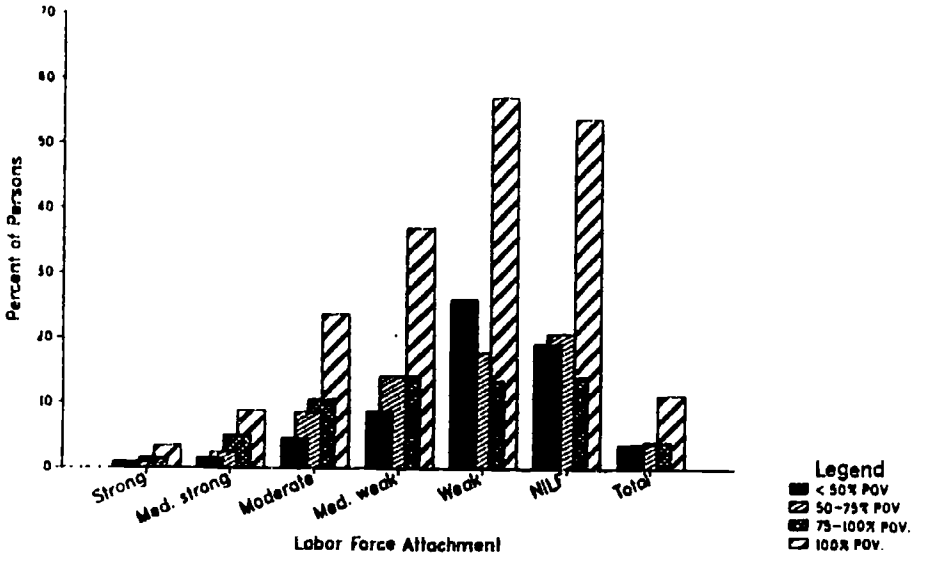
Percent of Family Members in Poverty
By Family Type: Baseline, 1982




Poverty rates among families vary widely by the degree of labor force attachment of the family heads. Figure II.5 shows the estimated proportion poor during fiscal 1982 under the baseline scenario among family members grouped by six categories of labor force attachment. (Families headed by persons 65 and over, most of whom are retired, are excluded.) The simulation results showed a strong relationship, as one would expect, between declining labor force attachment and consequently lower earned income, and rising poverty. One in thirty persons were poor among families with strong labor force attachment (the left-most bar on the chart), defined as families where either the head or the spouse worked 2,000 or more hours during the year (full time employment). As labor force attachment (measured by hours worked of the head or spouse) dropped, estimated poverty rose. The highest poverty rates were for persons in families with weak attachment to the labor force, defined as families where the head or spouse worked less than 500 hours or was unemployed, and in families with neither the head nor the spouse in the labor force. Well over 50 percent or over one in every two persons in these types of families were in poverty. (Again, these figures exclude persons in families with elderly heads.)

Figure II.5

Percent of Family Members in Poverty
By Labor Force Attachment of Family Heads
Baseline, 1982




Note: Excluding families headed by elderly persons

Data not shown indicate that poverty among unrelated working-age adults 18 to 64 categorized by their labor force attachment exhibited a pattern very similar to the pattern evidenced for family members in the previous chart. Of unrelated adults strongly attached to the labor force, the model estimated fewer than 1 in every 35 were poor during fiscal year 1982 under the baseline scenario. In contrast, the proportion in poverty among unrelated adults age 18 to 64 with a weak attachment to the labor force was as high as 7 in every 10.

In summary, during fiscal year 1982, under the baseline scenario that assumed continuation of a stronger economy and without OBRA transfer program rules, the poverty population overall accounted for approximately one in eight of all persons. Among the categories examined, persons with the highest estimated proportions in poverty included:

- Children under 18—over one in six children were poor.
- Unrelated individuals—over one in five persons not part of a family were poor.
- Persons in single-parent families headed by a female—over one in three such persons were poor.
- Persons in families (excluding the retired) and working-age unrelated individuals with only moderate, weak, or no attachment to the labor force—close to one in four persons in the moderate attachment category were poor and well over one in two persons in the category of weak labor force attachment were poor.

The elderly were better off than the groups listed above—about one in seven were in poverty. However, the elderly had the highest proportion—close to one-third—of poor and near-poor combined of the age groups examined.

### Average Poverty Gap

The above discussion focused on the proportion of various groups in poverty. Another aspect of evaluating the situation of the poor concerns the difference in dollars between their available income and the poverty threshold. This difference is referred to as the poverty gap. Clearly, persons with a small poverty gap, that is, whose available income is close to the poverty line, are better off than persons with a large gap whose available income is far below the poverty line. Table II.1 shows the average per person dollar amount of the poverty gap during fiscal year 1982 under the baseline scenario for persons below poverty categorized by family status and type. The model estimated the average gap for all persons in poverty at $1,012, assuming continuation of a stronger economy and without OBRA program rules in fiscal year 1982.

Clearly, the average gap for poor family members was lower than that for poor unrelated individuals. Among [illegible] or family members, those in single-parent female head families had an average gap estimated at $963—close to the average for all poor persons but over 25 percent greater than the gap for poor persons in married couple families. Among poor unrelated individuals, the gap was highest—over $2,000—for those living with other persons, either families or other unrelated individuals.

TABLE II.1.—ESTIMATED AVERAGE PER PERSON POVERTY GAP IN DOLLARS FOR PERSONS BELOW THE POVERTY LEVEL BY FAMILY STATUS—BASELINE SCENARIO FOR FISCAL YEAR 1982

| Family status | Per person dollar amount of poverty gap |
|---|---|
| All persons in poverty | $1,012 |
| Poor persons in families: | |
| In married couple families | 766 |
| In single female head families | 963 |
| In single male head families | 897 |
| Poor unrelated individuals: | |
| Living alone | 1,346 |
| Living in family households | 2,223 |
| Living with other unrelated individuals | 2,022 |

Source Prepared by Mathematica Policy Research and Social & Scientific Systems.

Note The poverty gap for persons in families is calculated as the applicable poverty level minus the family's income divided by the number of persons in the family. For unrelated individuals, the gap is the difference between the poverty level and their own income. See the glossary for a detailed definition of all terms.

The estimated per person poverty gap for poor family members varied widely by labor force attachment of family heads (excluding

families headed by the elderly) as shown in Table II.2. Poor persons in families with weak attachment of the heads to the labor force had the highest estimated per person poverty gap—at $1,142, over 25 percent higher than the gap for all poor persons in families with nonelderly heads. Poor members of families headed by persons not in the labor force at all showed the next highest gap.

TABLE II.2.—ESTIMATED AVERAGE PER PERSON POVERTY GAP IN DOLLARS FOR FAMILY MEMBERS BELOW POVERTY BY LABOR FORCE ATTACHMENT OF THE FAMILY HEADS—BASELINE SCENARIO FOR FISCAL YEAR 1982

| Labor force attachment | Per person dollar amount of poverty gap |
|---|---|
| All persons in poor families with heads under age 65 | $909 |
| Heads with: | |
| Strong and moderately strong labor force attachment | 652 |
| Moderate labor force attachment | 705 |
| Moderately weak labor force attachment | 798 |
| Weak labor force attachment | 1,142 |
| Heads not in labor force | 991 |

Source: Prepared by Mathematica Policy Research and Social & Scientific Systems.

Note: Families headed by elderly are excluded. The poverty gap for persons in families is calculated as the applicable poverty level minus the family's income divided by the number of persons in the family. Labor force attachment measured by the hours worked of the family head or spouse. See the glossary for a detailed definition of all terms.

It is perhaps surprising that the average poverty gap for poor members of families headed by persons not in the labor force, while higher than the average gap for all poor persons in families, was not the highest of all categories shown. While we have not analyzed the kinds of families included in each category of labor force attachment, we surmise that families headed by persons with no attachment to the labor force differ in important ways from families with weak attachment. Poor families with the family heads not in the labor force likely include a large number where the heads retired early or are disabled. These families may have modest incomes from pensions or welfare programs that leave them in poverty but not as poor as families where the heads have only weak attachment to the labor force and are not receiving unearned income.

## Chapter III. THE COMBINED EFFECTS OF OBRA AND THE RECESSION ON POVERTY DURING FISCAL YEAR 1982

In this chapter, we examine the impact of the Omnibus Budget Reconciliation Act and the recession on the number and characteristics of the poor during fiscal year 1982 among the total population and selected population subgroups. We do this by tabulating figures on the poverty population from the simulation for scenario IV that reflected the recessionary economy experienced during fiscal 1982 (9.1 percent unemployment) and that used the OBRA program rules for calculating welfare benefits. We compare these figures with the picture of the poverty population presented in Chapter II for the baseline scenario (see Figure III.1). This comparison shows the impact of the recessionary economy combined with tightened rules for welfare benefits on the extent of poverty in the United States in fiscal 1982.

### Impact of OBRA and the Recession on Poverty Rates

Table III.1 shows the percent of total persons with available income below specified proportions of the poverty line from under 50 percent of the poverty index to between 125 and 150 percent of the poverty threshold. The table compares scenario IV representing the "real world" conditions of fiscal year 1982 with the simulated baseline scenario I of a stronger economy without OBRA provisions.

The recession combined with OBRA, clearly did have an impact on poverty as shown in the table. Under scenario IV, about 13.5 percent or one in seven persons had income below the poverty line. Under scenario I, only about 12.6 percent or one in eight of total persons were estimated to be below the poverty line. The difference between 13.5 and 12.6 percent in poverty is not large on the face of it, but the difference represents an estimated increase of close to 8 percent in the number of poor under the weak economy OBRA scenario which translates into almost 2.2 million more persons in poverty. The difference is large enough that it is unlikely to be due to sampling variation alone.[1]

As we have noted before, the principal OBRA provisions modeled in this study are the changes in the AFDC program. These changes operated to reduce the number of recipients and the dollar amount of benefits. The weak economy exerted a countervailing effect because some families that lost work and earnings turned to AFDC. The model estimated that the combined impact was a reduction in the annual ever participating caseload of 8 percent or about 1,104 thousand persons. A number of those persons undoubtedly fell below the poverty line as a result of losing AFDC income and

[1] See Appendix E for discussion of the significance of differences reported in the text.

became part of the 2.2 million additional poor persons under the real world scenario compared with the baseline.

Looking next at the subcategories of poor and near-poor persons shown in Table III.1 to determine more precisely where OBRA and the weak economy had an impact, we see that the greatest combined effect of OBRA and the recessionary economy was on the proportion of persons with income in the range from 75 percent of poverty up to the poverty line. The simulation results showed an estimated increase of almost 11 percent in the number poor in this group comparing scenario IV with scenario I. OBRA and the recessionary economy also had a strong impact on the proportion of very poor persons with income below 50 percent of poverty, with the simulations showing an estimated increase of slightly over 8 percent in the size of this group under the weak economy OBRA scenario compared with the baseline.

FIGURE III.1

SCHEMATIC REPRESENTATION OF STUDY DESIGN--COMPARISON OF SCENARIO IV WITH SCENARIO I

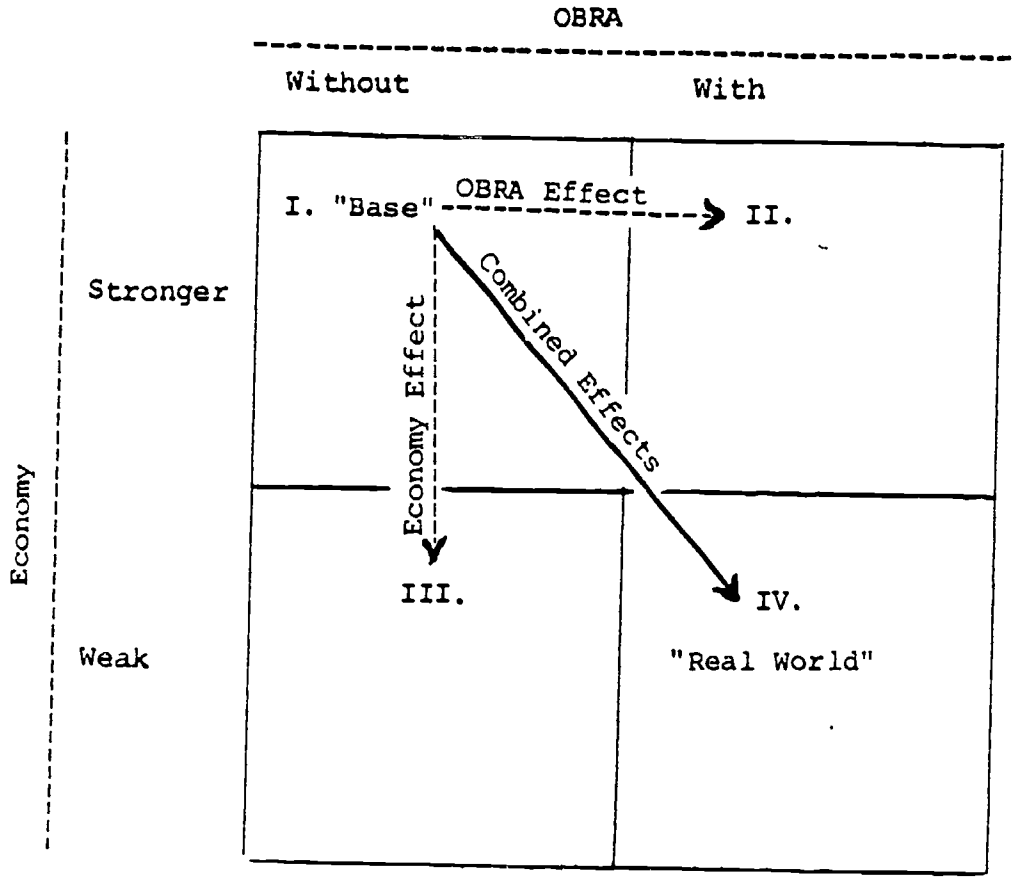


TABLE III.1.—PERCENT POOR AND NEAR POOR DURING FISCAL YEAR 1982: COMBINED EFFECTS OF OBRA WELFARE CHANGES AND THE RECESSIONARY ECONOMY

| Ratio of income to poverty index | Percent poor of total persons | | |
|---|---|---|---|
| | Scenario I: stronger economy without OBRA | Scenario IV: recessionary economy with OBRA | Percent difference of scenario IV over scenario I |
| Below 50% of poverty index | 3.71 | 4.01 | +8.1 |
| 50 to 75% of index | 4.08 | 4.21 | +3.2 |
| 75 to 100% of index | 4.77 | 5.29 | +10.9 |
| Poor: Total below 100% | 12.55 | 13.51 | +7.6 |
| 100 to 125% of index | 5.07 | 5.41 | +6.7 |
| 125 to 150% of index | 5.12 | 5.16 | +0.8 |
| Near poor: Total 100 to 150% of index | 10.19 | 10.57 | +3.7 |

Source: Prepared by Mathematica Policy Research and Social & Scientific Systems.

Note: See the glossary for definition of terms.

OBRA and the recessionary economy had less of an impact on the proportion of near-poor persons with income above poverty but below 150 percent of poverty who represented about 10 percent of all persons in each scenario. The simulation results showed about 4 percent more near-poor persons under scenario IV compared with the baseline scenario I. Clearly, most of the combined impact of OBRA and the recession on the near-poor was in the group closest to the poverty line with income from poverty up to 125 percent of poverty. The simulation results showed an increase of almost 7 percent for this group under scenario IV compared with the baseline scenario.

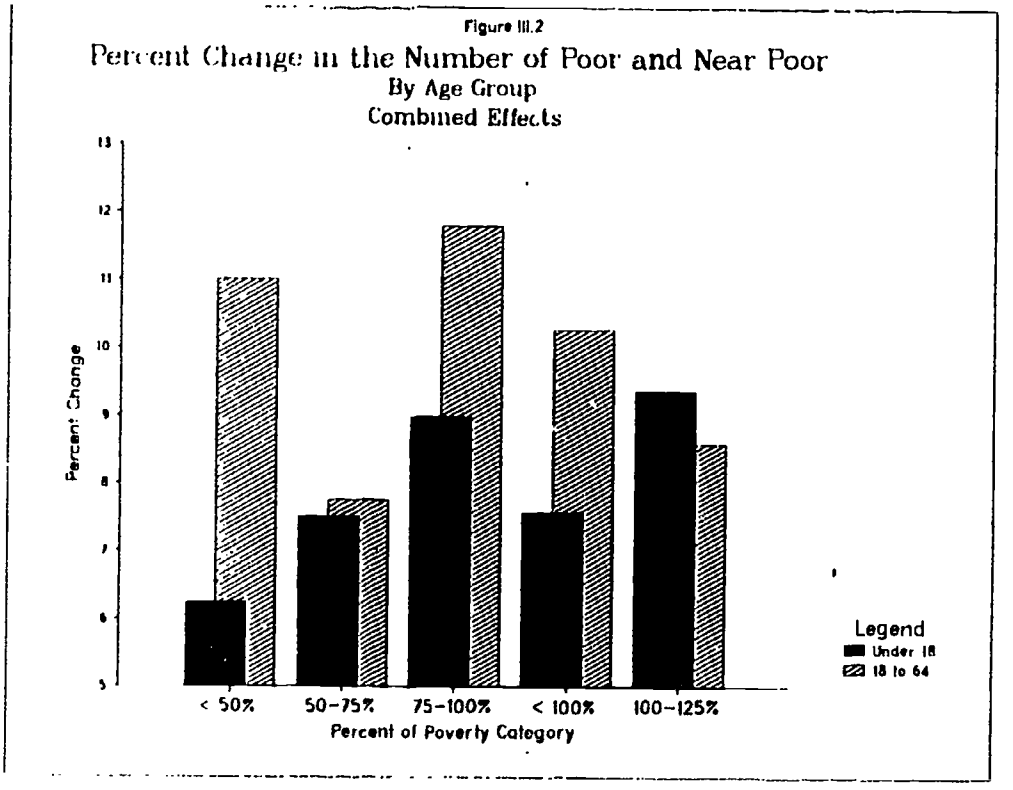
In Chapter IV we determine which of the two factors analyzed in this report—OBRA program rules and the recession—had the stronger impact on the size of the various categories of poor and near poor. In the remainder of this chapter, we look at the combined impact of OBRA and the recessionary economy on the size of the poor and near-poor populations for important subgroups.

The impact of OBRA and the recession on poverty among working-age adults 18 to 64 and children under 18 is shown in Figure III.2 in terms of the percent change between the baseline scenario and scenario IV in the size of the poverty population. The left bar of each pair shows the percent change in the size of the particular category for children and the right bar the percent change for working-age adults.

As is evident, OBRA and the weak economy had a stronger impact on increasing poverty and near poverty among working-age adults than among children. Overall, OBRA and the recessionary economy together operated to increase the estimate of the poverty population among adults (those with available income below 100 percent of the applicable poverty line) by over 10 percent. The effect for children was somewhat less pronounced—OBRA and the

recessionary economy together operated to increase the estimated poverty population among this age group by under 8 percent. The combined impact of OBRA and the weak economy on poverty among adults was greatest for those adults with available income below 50 percent of the poverty line and between 75 and 100 percent of poverty. For children, the greatest impact was on those persons under 18 with available income in the range from 75 to below 100 percent of poverty and in the near-poor category of available income from 100 to 125 percent of poverty.

Data not shown indicate that OBRA and the recessionary economy had a negligible impact on poverty among persons 65 years of age and over. We would not expect there to be much impact on poverty among the elderly. The OBRA legislation did not mandate changes for the SSI program, from which the elderly benefit much more than from AFDC or General Assistance, so that the elderly suffered little if any transfer payment reductions under OBRA. In addition, the majority of the elderly were not working and therefore would not be affected by earnings loss due to the weak economy.




In contrast, we would expect to find, as Figure III.2 shows, a significant combined impact of the recession and OBRA on poverty among both working-age adults and children for the converse of the reasons offered to explain why there was virtually no impact on the elderly. The weak economy reduced earnings which represent a major source of income for working-age adults and their

children and OBRA tightened eligibility and restricted benefits for programs such as AFDC that benefit both these age groups. Looking at Figure III.2, we speculate that the weak economy may have had a stronger impact than OBRA. When compared with that of children, the percent change in poverty was greater for adults, proportionally more of whom are in families with earnings and fewer in families eligible for welfare.

In Figure III.3, we look at the impact of the recessionary economy combined with OBRA on poverty among family members (represented by the left bar for each income-to-poverty ratio category) versus unrelated individuals (the right bar for each category). Although fewer family members were poor or near-poor overall under either scenario than was true for unrelated individuals, OBRA and the weak economy had a greater combined impact on increasing the size of the poor and near-poor groups among members of families. Together OBRA and the weak economy operated to increase the estimated poverty population among family members by close to 9 percent. The increase was greatest—over 10 percent—for those family members with available income in the range of 75 to below 100 percent of poverty and was significant as well for family members with available income in the range just above poverty.

For unrelated individuals, OBRA and the weak economy operated to increase poverty by just over 4 percent, a much smaller figure than the increase for family members. This increase of 4 percent masked more dramatic changes for specific income-to-poverty ratio categories. Thus, OBRA and the recessionary economy together increased by 12 to 13 percent the number of very poor unrelated individuals with income below 50 percent of poverty and also those close to the poverty line with income in the range from 75 to below 100, while resulting in a decrease in the category with income in the range from 50 to 75 percent of poverty. Apparently, unrelated persons in some but not all categories were shifted downward in terms of their available income as a ratio to the poverty line.

Figure III.3

Percent Change in the Number of Poor and Near Poor Among Family Members and Unrelated Individuals

Combined Effects

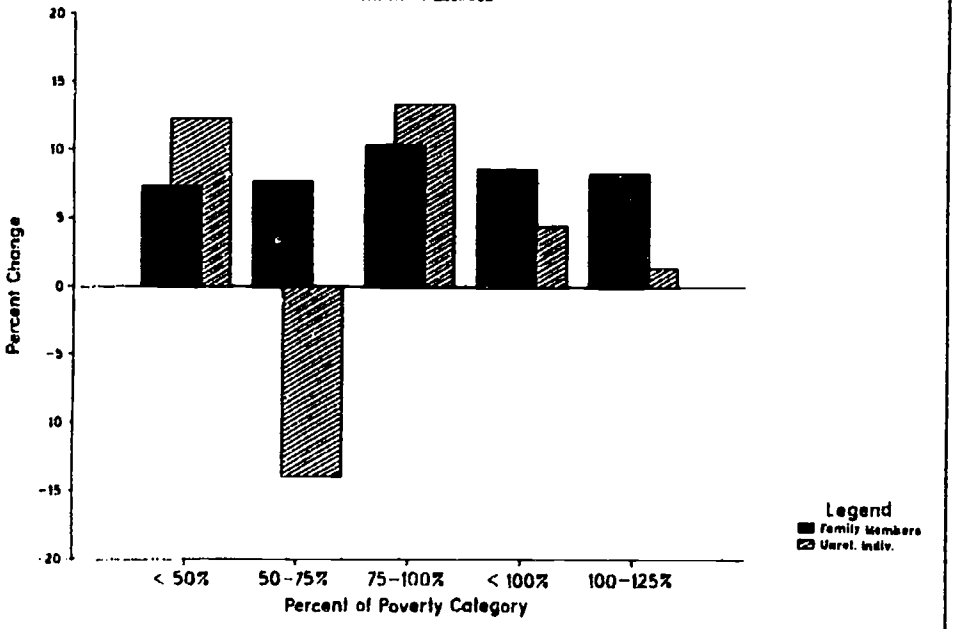
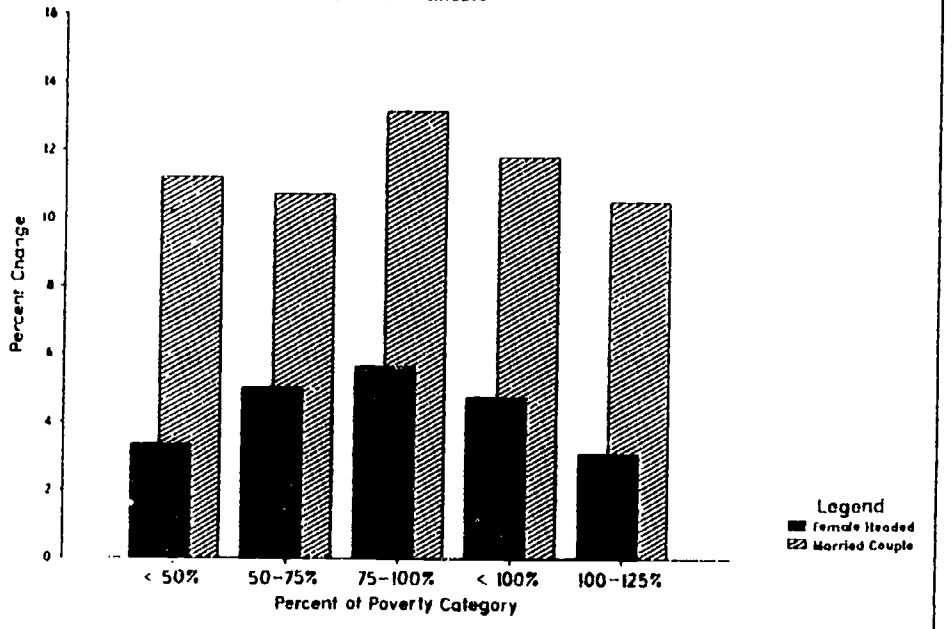



Figure III.4

Percent Change in the Number of Poor and Near Poor Among Members of Married Couple and Female Headed Families

Combined Effects



The combined impact on poverty is examined next by type of family. In Figure III.4, the left bar for each income-to-poverty ratio category shows the percent change comparing scenario IV to the baseline scenario for persons in married couple families, while the right bar gives the percent change for persons in families headed by females. The proportions of poor and near-poor among married couple family members were estimated to be considerably smaller under either scenario than the proportions for female head family members. Nevertheless, the recessionary economy and OBRA together had a greater impact on poverty in married couple families. The simulation estimated that OBRA and the recessionary economy operated to increase poverty among married couple family members by close to 12 percent, compared to an increase for members of female head families of less than 5 percent.

For married couple family members, the pattern of change was very similar for all categories shown from the very poor (those with available income below 50 percent of poverty) up to those just above the poverty line with available income between 100 and 125 percent of poverty. For members of female head families, the combined impact was also similar for the categories from the very poor up to those just above poverty. The largest impact for both groups was on the proportion with income in the range from 75 to 100 percent of poverty.

Finally, we look at the combined impact on members of families categorized by the labor force attachment of the family heads. The analysis is more complicated than was true when we looked at age and family type subgroups of the population. This is because the size of each category of labor force attachment changed from scenario to scenario as well as the proportion of persons who were poor in each category. In contrast, the number of persons under age 18 or in married couple families remained constant among all four fiscal 1982 scenarios.

As simulated by the model, differing economic assumptions produced changes in the size of each category of labor force attachment. The scenarios that assumed a recessionary economy showed fewer persons in the category of strong labor force attachment of the family heads and more persons in the category of weak attachment of the heads compared to the scenarios that assumed a stonger economy. We first look at the effects on the relative size of each category of labor force attachment before looking at differences in the proportions who were poor within each category. Table III.2 shows the distribution of total family members by labor force attachment of the family heads from strong attachment (one or both heads worked full time during fiscal year 1982) to weak attachment (neither head worked more than 500 hours) and no attachment at all. (The table excludes members of families headed by the elderly.) The distributions are shown for scenario IV and the baseline scenario.

TABLE III.2—PERCENT OF FAMILY MEMBERS BY LABOR FORCE ATTACHMENT OF THE FAMILY HEADS DURING FISCAL YEAR 1982: REAL WORLD VERSUS BASELINE SCENARIO

| Labor force attachment of heads | Percent of total family members | | Percent difference of scenario IV over scenario I |
|---|---|---|---|
| | Scenario I: stronger economy without OBRA | Scenario IV: recessionary economy with OBRA | |
| Strong | 71.33 | 68.19 | −4.4 |
| Moderately strong | 10.41 | 10.91 | +4.8 |
| Moderate | 4.81 | 5.68 | +18.1 |
| Moderately weak | 2.81 | 3.56 | +26.7 |
| Weak | 3.54 | 4.50 | +27.1 |
| Not in labor force | 7.10 | 7.16 | +0.8 |

Source: Prepared by Mathematica Policy Reaserch and Social & Scientific Systems.

Note: Excludes families headed by elderly persons. See the glossary for definition of terms.

As can be seen, the recessionary economy had a strong impact on the size of each of the categories of labor force attachment. Over two-thirds of family members (excluding those in families headed by the elderly) were in families with strong labor force attachment of the heads under each scenario, but the model estimated that the recessionary economy decreased the size of this category by over 4 percent. Conversely, while small proportions of family members were in families with the heads only weakly attached to the labor force, the weak economy operated to increase the size of this category by over 27 percent, or one-fourth compared to the baseline scenario. The impact of the weak economy on the size of the category of heads not in the labor force at all was negligible. These findings are not at all surprising, given that the recession would be expected to reduce hours worked.

Although these two scenarios differed in their assumptions regarding both transfer program provisions and the strength of the economy, the differences in hours worked and, hence, labor force attachment were entirely due to the effects of the recession. The assumption used in the model was that there would be no labor supply adjustments to program changes.[2] Thus, there are no differences in the size of each category of labor force attachment due to different transfer program eligibility and benefit rules. However, as discussed above, the model estimated that substantial shifts occurred in the distribution by labor force attachment because of the different economic assumptions.

Given the impact of the weak economy on the overall size of categories of labor force attachment of family heads, what was the combined effect of OBRA and the recessionary economy on the proportions poor and near-poor? Figure III.5 shows the percent change between the baseline and the real world scenario of OBRA and a weak economy in the proportions poor and nearpoor for members

[2] This assumption of no change in labor supply behavior was supported by the RTI study which found no evidence of widespread behavioral response to the OBRA changes (RTI, 1983).

of families at two extremes of labor force attachment. The left bar of each pair shows the percent change in the proportion represented by the particular income-to-poverty ratio category for families where one or both heads had a strong attachment to the labor force, while the right bar gives the percent change where the heads had a weak attachment to the labor force. (Both sets of figures exclude members of families headed by the elderly.)

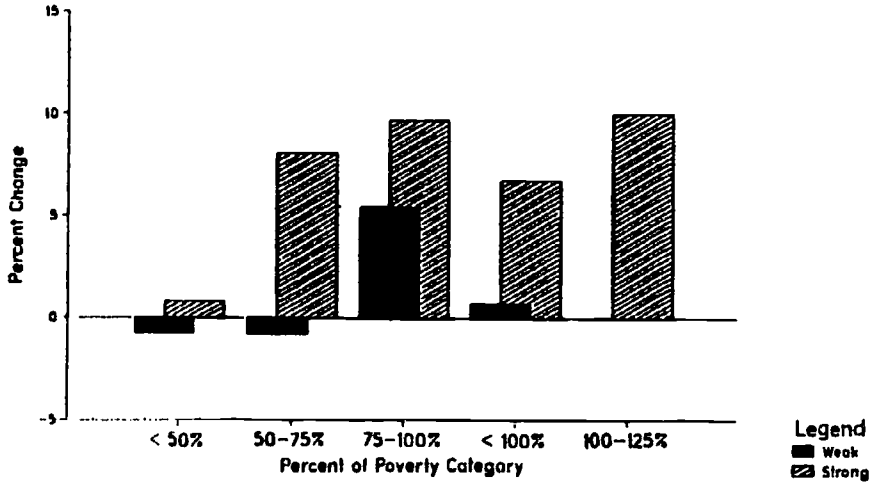
Note that this figure shows the change in the proportions of poor and near-poor for each scenario and not the change in the total size of the categories. Thus, while we saw in Table III.2 that the weak economy reduced the overall number of persons in families with strong labor force attachment of the heads, we see in Figure III.5 that OBRA and the weak economy increased by well over 6 percent the relative proportion with available income below poverty. The combined effects for members of families with strong attachment of the heads were particularly pronounced for those with available income near the poverty line in the categories from 50 to 75 percent, 75 to 100 percent, and 100 to 125 percent of poverty. Members of families where one or both heads continued to work full time very likely had their incomes adversely affected by reduced hourly earnings, by reduced hours of work for other family members, and also by the changes mandated by OBRA that restricted eligibility and benefits for AFDC families with earnings.

Conversely, while we saw in Table III.2 that the weak economy resulted in a sizable increase in the number of persons in families with weak attachment of the family heads to the labor force, we see in Figure III.5 that the relative proportion in poverty between the real world and baseline scenarios for this group was virtually unchanged. It is true that the weak economy operated to increase the number of poor persons in families with weak labor force attachment of the family heads, by virtue of increasing the overall size of this category, but OBRA and a recessionary economy did not change the relative proportion in poverty. The only noticeable effect of OBRA and the weak economy for this group was to increase the size of the category from 75 to 100 percent of poverty by about 5 percent.

As we saw in Table III.2, OBRA and the recession together had virtually no effect on the number of poor persons in families where neither head was attached to the labor force. Data not shown also indicate that OBRA and the weak economy together had very little effect on the relative proportions in poverty and near poverty. Such families had no earnings under the stronger economy and hence would not be adversely affected by a weak economy, nor would they be affected by the OBRA changes in program rules which were primarily aimed at AFDC families with earnings.

Figure III.5

Percent Change in the Number of Poor and Near Poor Family Members by Labor Force Attachment of Family Head
Combined Effects




Note: Excluding families headed by elderly persons.

In summary, we can state that the recession and OBRA had a significant combined impact on poverty among many groups of the population. Compared with the baseline scenario of a stronger economy without OBRA program rules, we estimate that the recessionary economy experienced during fiscal year 1982 combined with OBRA operated to:

- Increase the number of persons overall with counted income below the poverty threshold by almost 8 percent, amounting to close to 2.2 million more poor, and to increase the number of persons just above poverty (with income from 100 to 125 percent of the poverty line) by close to 7 percent.
- Increase the number of poor working age adults by over 10 percent and the number of poor children under age 18 by close to 8 percent.
- Increase the number of poor members of married couple families by close to 12 percent and the number of poor members of female head families by close to 5 percent.
- Increase the proportion of poor members of those families with the heads still strongly attached to the labor force by well over 6 percent.
- Increase the number of poor members of families with weak labor force attachment of the heads but not the relative proportion in poverty.

The recession and OBRA had negligible effects on poverty among the elderly and among those not in the labor force, and only moderate impacts on poverty among unrelated individuals.

**Impact of OBRA and the Recession on the Total Poverty Gap**

Finally, we look at the combined impact of OBRA and a recessionary economy on the total poverty gap during fiscal year 1982. We examine the total poverty gap summed over all poor persons in this section instead of the average per person poverty gap, because changes in the average per capita poverty gap can be confusing to interpret. Conditions that put more people into poverty do not necessarily make each one of them poorer. If newly poor persons were not pushed very far below the poverty line, then the average per capita poverty gap might be smaller rather than larger with more people in poverty. Changes in the total amount of the poverty gap summed over all persons are much more straightforward to interpret.

Table III.3 shows the total poverty gap in billions of dollars under scenario IV, the total under the baseline scenario, and the difference in dollar and percentage terms. We see that the total gap for all persons in poverty under scenario IV, the "real world," was close to $31 billion. Under scenario I the estimated total poverty gap was less than $29 billion. Hence, OBRA and the recession together increased the total poverty gap by over $2 billion or close to 8 percent (the same percentage increase that was observed for the proportion of total persons in poverty).

Under the baseline scenario, the model estimated that members of poor families had a total poverty gap of about $19 billion or two-thirds of the grand total. Members of poor married couple families accounted for about half of the total poverty gap for family members as did members of poor single-parent female head families, with the small number of members of poor single male head families (not shown in the table) accounting for the remainder. Under the real world scenario with OBRA and a weak economy, the total poverty gap for poor family members increased by $1.6 billion, or over 8 percent, compared to the baseline.

The combined effects on the total poverty gap were particularly pronounced for members of poor married couple families—the model estimated an increase of close to 14 percent in their poverty gap under the real world scenario compared with the baseline. For members of poor single female head families, the estimated increase was just 4 percent. These changes are comparable to the estimated changes in the number of poor among these family types under the two different scenarios. Finally, the table shows an estimated increase in the poverty gap for poor unrelated individuals of half a billion dollars or over 6 percent under the real world scenario compared with the baseline scenario.

TABLE III.3.—ESTIMATED TOTAL DOLLAR POVERTY GAP FOR FISCAL YEAR 1982 BY FAMILY STATUS: REAL WORLD VERSUS BASELINE SCENARIO

| Family status | Total dollar poverty gap (in billions) | | Difference of scenario IV from I | |
|---|---|---|---|---|
| | Scenario I: stronger economy without OBRA | Scenario IV: recessionary economy with OBRA | Amount | Percent |
| Total persons in poverty | $28.7 | $30.9 | +$2.2 | +7.7 |
| Poor persons: | | | | |
| In families | 19.1 | 20.7 | +1.6 | +8.4 |
| In married couple families | 8.8 | 10.0 | +1.2 | +13.6 |
| In single female head families | 9.6 | 10.0 | +0.4 | +4.2 |
| Poor unrelated individuals | 9.7 | 10.3 | +0.6 | +6.2 |

Source: Prepared by Mathematica Policy Research and Social & Scientific Systems.

Note: See the glossary for definition of terms.

We have seen that the weak economy experienced during fiscal year 1982 and the OBRA welfare program changes together had a significant impact on the proportion of persons in poverty. The question becomes whether this impact was due primarily to the weak economy, primarily to OBRA, or about equally to both. In the last chapter of the paper, we determine the independent effects of OBRA and the weak economy on poverty.

## Chapter IV. THE INDEPENDENT EFFECTS OF OBRA AND THE RECESSION ON THE POVERTY POPULATION DURING FISCAL YEAR 1982

We have looked at the number of poor among the total population and population subgroups under the "real world" conditions of fiscal year 1982, as simulated by our model and at the estimated size of the poverty populations under our baseline scenario. In this chapter, we turn to assessing the independent effects of OBRA welfare program changes versus the independent effects of the recessionary economy.

To assess the independent effects of OBRA, we tabulate the poverty population from a scenario that, like the baseline scenario, assumed continuation of a stronger economy into fiscal 1982 but also used the OBRA provisions for calculating means-tested transfer program eligibility and benefits. (This is scenario II of the four which were developed.) To single out the effects of the recessionary economy, we tabulate the poverty population from a scenario that, like the baseline, assumed no OBRA program provisions but did model the recession actually experienced in fiscal 1982. (This is scenario III.) The results of scenarios II and III can then be compared with the picture of poverty already presented for the baseline (scenario I) and for real world fiscal 1982 conditions (scenario IV).

### Independent Impact of OBRA and the Economy on Poverty Rates

Table IV.1 shows the percent poor of the total population during fiscal 1982 under each of the four scenarios. It is clear that the recessionary economy had a strong impact on poverty, increasing the poverty population by almost 6 percent. OBRA also had a substantial effect, although the magnitude was smaller, increasing the poverty population by 2 percent. The combined impact of OBRA and the weak economy as noted in Chapter III was to increase poverty by close to 8 percent. Hence, the effects of OBRA accounted for about one-fourth and the effects of the weak economy for about three-fourths of the total impact.[1]

These findings about the independent impacts of OBRA welfare program changes and the weak economy on poverty contrast with the study findings about the independent impacts on AFDC. OBRA, which had the smaller independent effect on poverty, had the larger effect on AFDC. The OBRA provisions that tightened eligibility and benefits for AFDC resulted in an estimated decrease in

[1] Note that the independent effects of OBRA and the weak economy on poverty do not always sum to the combined effect. This is because of an interaction between the two factors. A proportion of families that lose earnings will turn to AFDC for assistance, thereby obtaining income that may keep them out of poverty. However, this proportion will differ between scenarios III and IV because of the different eligibility and benefit provisions each scenario models. The simulation did not assume any labor supply response to welfare program changes, so that no interaction of this kind is modeled.

the AFDC caseload of over 13 percent, representing almost three-fourths of the combined impact. In contrast, the weak economy, which accounted for almost three-fourths of the total increase in poverty, accounted for about one-fourth of the change in AFDC. Loss of employment and earnings due to the weak economy operated to increase the AFDC caseload by about 5 percent. These findings are not surprising, given that the set of OBRA changes modeled in this study were directed at restricting AFDC, but not other income sources, while the weak economy adversely affected earnings of many families not eligible for AFDC as well as earnings of some eligible families.

TABLE IV.1.—PERCENT POOR DURING FISCAL YEAR 1982 UNDER FOUR DIFFERENT SCENARIOS

| Scenario | Percent poor of total persons | Percent difference from the baseline scenario I |
|---|---|---|
| I: Without OBRA and stronger economy | 12.55 | ..... |
| II: With OBRA rules and stronger economy (independent effects of OBRA). | 12.80 | +2.0 |
| III: Without OBRA and recessionary economy (independent effects of the economy). | 13.26 | +5.7 |
| IV: With OBRA rules and recessionary economy (combined effects). | 13.51 | +7.6 |

Source: Prepared by Mathematica Policy Research and Social & Scientific Systems.

Note: See the glossary for definition of terms.

Continuing with analysis of changes in the poverty population, we look as the combined and independent effects of the enactment of OBRA and recessionary economic conditions on the proportions of persons with available income below specified percentages of the poverty threshold. Figure IV.1 shows categories that span the very poor (persons with income below 50 percent of the poverty index) to the near-poor persons with income from 100 to 125 percent of the poverty threshold.

The recession clearly had the greater independent impact on poverty among three of the four income-to-poverty ratio categories shown. For very poor persons, those with income below 50 percent of poverty, the weak economy accounted for four-fifths of the total 8 percent increase in this category compared to the baseline scenario. The recessionary economy accounted for all of the increase in the near-poor category and over five-sixths of the increase in those with income just below the poverty index. The adoption of OBRA welfare program rules had modest effects on the number of the very poor and those just below poverty and a stronger impact on the proportion with income in the range of 50 to 75 percent of the poverty line. Compared with the baseline, OBRA increased the

size of this moderately poor group by over 3 percent, while the recessionary economy had no statistical effect.[2]

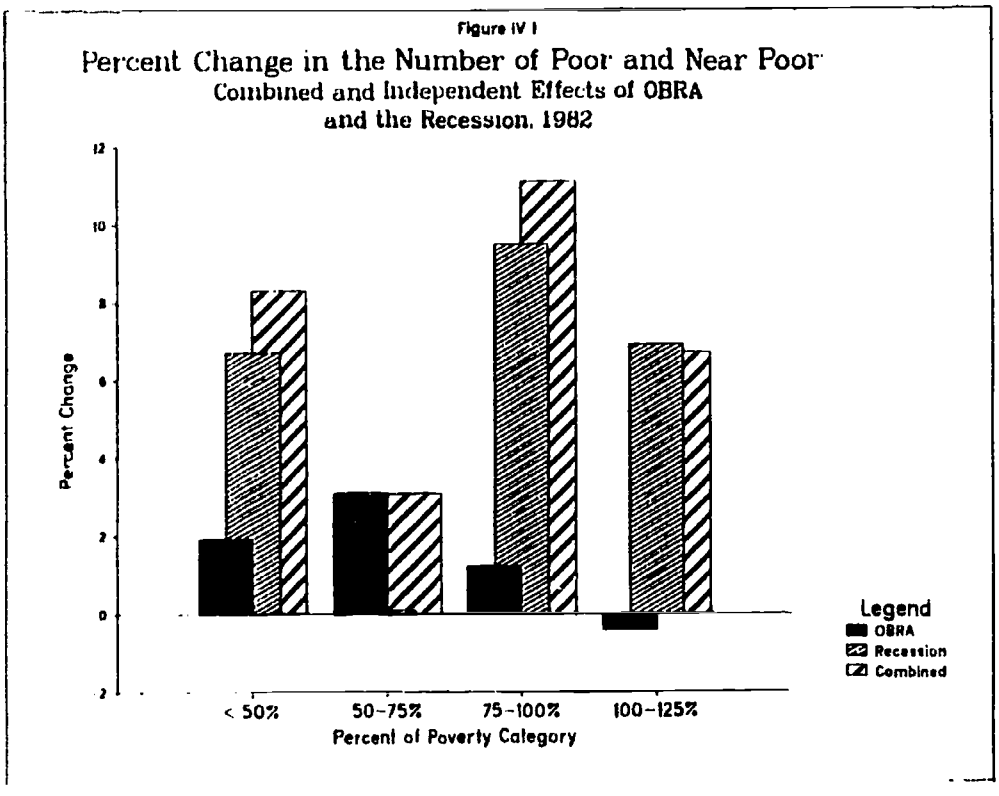



TABLE IV.2.—PERCENT POOR OF WORKING AGE ADULTS DURING FISCAL YEAR 1982 UNDER FOUR DIFFERENT SCENARIOS

| Scenario | Percent poor of persons 18–64 | Percent difference from the baseline scenario I |
|---|---|---|
| I: Without OBRA and stronger economy | 9.77 | ..... |
| II: With OBRA rules and stronger economy (independent effects of OBRA). | 9.93 | +1.6 |
| III: Without OBRA and recessionary economy (independent effects of the economy). | 10.59 | +8.4 |

[2] The absence of an effect on the 50 to 75 percent of the poverty line category could have two different explanations. One explanation is that the recession operated to push some fraction of persons down the income scale into the category of income from 50 to 75 percent of poverty, but at the same time pushed other persons from this category into the very poor category, so that the net effect on the number of persons with income 50 to 75 percent of poverty compared to the baseline was nil. The alternative explanation is that individuals losing their jobs because of the recession skipped over this category when their income dropped and that many of the families in the category were transfer program recipients not affected by the recession.

TABLE IV.2.—PERCENT POOR OF WORKING AGE ADULTS DURING FISCAL YEAR 1982 UNDER FOUR DIFFERENT SCENARIOS—Continued

| Scenario | Percent poor of persons 18–64 | Percent difference from the baseline scenario I |
|---|---|---|
| IV: With OBRA rules and recessionary economy (combined effects). | 10.77 | +10.2 |

Source: Prepared by Mathematica Policy Research and Social & Scientific Systems.

Note: See the glossary for definition of terms.

The impact of OBRA legislation and the weak economy on poverty among working-age adults is the subject of Table IV.2. The OBRA program changes had a very modest effect on the poverty rate for this age group. Comparing scenario II with the baseline, the model estimated that the adoption of OBRA increased the number of poor working age adults by about 1½ percent. The OBRA program rules that limited earnings and work-related expense deductions under the AFDC program would have affected benefits of eligible families with employed adults (who are a small proportion of AFDC families). Clearly, the recessionary economy had the greater impact. Comparing scenario III with the baseline, the model estimated that the weak economy experienced in fiscal 1982 increased the number of poor working-age adults by well over 8 percent. The recession had a significant impact because this age group contains most of the persons in the labor force whose earnings would be affected by an economic downturn. Of the combined impact of the recession and OBRA, which together increased the number of poor working-age adults by over 10 percent, the recessionary economy accounted for over four-fifths and OBRA less than one-fifth of the total change.

OBRA and the recession had somewhat different impacts on poverty among children compared to working-age adults. As Table IV.3 shows, the effects of the recessionary economy were less pronounced for the younger age group. Comparing scenario III with the baseline, the model estimated that the weak economy increased the number of children categorized as poor by close to 5 percent. This increase represented about three-fifths of the total increase in poverty of nearly 8 percent attributed to the weak economy and OBRA together. The effects of OBRA on poverty among children were somewhat stronger than for working-age adults, which is not surprising since the program most affected by OBRA was AFDC. Comparing scenario II with the baseline, the model estimated that the effects of OBRA increased the number of children categorized as poor by almost 3 percent, representing two-fifths of the total increase. The OBRA-mandated changes, including those that reduced the family income limit from qualifying for AFDC and that limited earnings and deductions, would adversely affect the available income for children. The recession would also have this effect by reducing employment and earnings for working adult family mem-

bers. That the effect of the weak economy was less marked for children, however, than for working-age adults, is undoubtedly because of the substantial number of children in families that receive transfer payments and have little or no income from earnings.

TABLE IV.3.—PERCENT POOR OF CHILDREN DURING FISCAL YEAR 1982 UNDER FOUR DIFFERENT SCENARIOS

| Scenario | Percent poor of persons under 18 | Percent difference from the baseline scenario I |
|---|---|---|
| I: Without OBRA and stronger economy | 17.86 | ..... |
| II: With OBRA rules and stronger economy (independent effects of OBRA). | 18.37 | +2.9 |
| III: Without OBRA and recessionary economy (independent effects of economy). | 18.68 | +4.6 |
| IV: With OBRA rules and recessionary economy (combined effects). | 19.21 | +7.6 |

Source: Prepared by Mathematica Policy Research and Social & Scientific Systems.

Note: See the glossary for definition of terms.

TABLE IV.4.—PERCENT POOR OF PERSONS IN MARRIED COUPLE FAMILIES DURING FISCAL YEAR 1982 UNDER FOUR DIFFERENT SCENARIOS

| Scenario | Percent poor of persons in married couple families | Percent difference from the baseline scenario I |
|---|---|---|
| I: Without OBRA and stronger economy | 7.04 | ..... |
| II: With OBRA rules and stronger economy (independent effects of OBRA). | 7.20 | +2.3 |
| III: Without OBRA and weak economy (independent effects of the economy). | 7.72 | +9.6 |
| IV: With OBRA rules and weak economy (combined effects) | 7.88 | +11.9 |

Source: Prepared by Mathematica Policy Research and Social & Scientific Systems.

Note: See the glossary for definition of terms.

We next consider the effects of OBRA and the weak economy on poverty among persons classified by family type. For persons living in married couple families, the model estimated fewer than 1 in 12 to be in poverty during fiscal year 1982 under any scenario. However, there were significant differences in the poverty rates among the various scenarios, as seen in Table IV.4. The weak economy had a particularly strong impact on the extent of poverty among this group. Comparing scenario III with the baseline, the weak economy increased poverty among members of married couple families by well over 9 percent, representing four-fifths of the total in-

crease in poverty of close to 12 percent for this group due to the weak economy and OBRA combined. Apparently, hours of work and earnings of married couples were strongly affected by the recession. Moreover, married couple families would be less likely to receive support from income transfer programs and any benefits received from unemployment insurance would only partially offset earnings loss.

The OBRA transfer program provisions also had an effect on poverty among members of married couple families but that effect was much smaller than the effect of the recession. Comparing scenario II with the baseline, the model estimated that OBRA increased poverty among this group by over 2 percent, representing one-fifth of the total increase. Members of married couple families can be eligible for AFDC in some States if the principal earner is unemployed. They can also be eligible if one spouse is the stepparent of the dependent children or if both spouses are disabled. Hence, persons in married couple families could have their eligibility denied or their benefits reduced and consequently suffer a decline in their available income with the changes made by OBRA to the AFDC program.

The simulation results show a different picture with regard to the effects of OBRA and a recessionary economy on the poverty population for members of single-parent female head families than what we observed for married couple families. Under all four scenarios, the model estimated over one-third of persons living in families headed by females to be in poverty during fiscal year 1982, or five times the number poor among married couple family members. On the other hand, as seen in Table IV.5, the combined effect of OBRA and the weak economy on poverty among female head family members was much less pronounced—OBRA and the weak economy together increased the proportion below the poverty index by less than 5 percent or less than half the total increase in the proportion of poor among members of married couple families. Of the total increase in poverty among female head family members, OBRA accounted for a larger share and the recession for a smaller share than was observed for persons living in married couple families.

Comparing scenario II with the baseline, the model estimated that the adoption of OBRA increased poverty among female head family members by close to 3 percent, representing three-fifths of the total increase. Clearly OBRA had a stronger impact on poverty among this group of persons than any other group we have examined thus far. On the other hand, comparing scenario III with baseline, the recession increased poverty among female head family members by less than 2 percent, representing less that two-fifths of the total increase. Lesser labor force attachment of female head family members compared to married couple family members would account for this result, as the weak economy would not cause as marked a change in employment earnings.

We do not present tabulations for older persons or persons not in families. As we have already noted, OBRA and the weak economy together had very little impact on poverty among these groups.

TABLE IV.5.—PERCENT POOR OF PERSONS IN SINGLE FEMALE HEAD FAMILIES DURING FISCAL YEAR 1982 UNDER FOUR DIFFERENT SCENARIOS

| Scenario | Percent poor of persons in single female head families | Percent difference from the baseline scenario I |
|---|---|---|
| I: Without OBRA and stronger economy | 35.23 | ..... |
| II: With OBRA rules and stronger economy (independent effects of OBRA). | 36.21 | +2.8 |
| III: Without OBRA and weak economy (independent effects of the economy). | 35.85 | +1.8 |
| IV: With OBRA rules and weak economy (combined effects) | 36.90 | +4.7 |

Source: Prepared by Mathematica Policy Research and Social & Scientific Systems.

Note: See the glossary for definitions of terms.

TABLE IV.6.—PERCENT POOR OF PERSONS IN FAMILIES WITH STRONG LABOR FORCE ATTACHMENT OF THE HEADS DURING FISCAL YEAR 1982 UNDER FOUR DIFFERENT SCENARIOS

| Scenario | Percent poor of persons in families with strong labor force attachment | Percent difference from the baseline scenario I |
|---|---|---|
| I: Without OBRA and stronger economy | 3.36 | ..... |
| II: With OBRA rules and stronger economy (independent effects of OBRA). | 3.52 | +4.8 |
| III: Without OBRA and recessionary economy (independent effects of the economy). | 3.41 | +1.5 |
| IV: With OBRA rules and recessionary economy (combined effects). | 3.58 | +6.5 |

Source: Prepared by Mathematica Policy Research and Social & Scientific Systems.

Note: See the glossary for definitions of terms.

Finally, we consider the separate effects of OBRA and the recession on poverty among family members at the extreme of labor force attachment of the family heads. Table IV.6 shows the proportion poor under each of the four scenarios among persons in families where one or both heads were strongly attached to the labor force. Under any scenario, the model estimated fewer than 1 in 25 members of such families to be in poverty. However, there were interesting differences in the poverty rates among the scenarios.

The OBRA program provisions had a particularly strong impact on the extent of poverty among this group. Comparing scenario II with the baseline, the model estimated that OBRA increased the number classified as poor among persons in families with strong labor force attachment of the heads by close to 5 percent. This

figure represents close to three-fourths of the total 7 percent increase for this group due to OBRA and the weak economy together. Families with strong attachment to the labor force that nevertheless had low earnings would be affected by the OBRA changes that altered the treatment of earnings and work-related expenses in calculating benefits.

In contrast, comparing scenario III with the baseline, the model estimated that the recession resulted in very little change in the proportion poor among members of families with strong labor force attachment of the heads. Initially, this result seems strange, since a weak economy directly affects employment and earnings. And, in fact, as we saw in Chapter III, there were estimated considerably fewer persons in families where the heads had strong labor force attachment under the recessionary economy scenario compared with the stronger economy scenario. What Table IV.6 indicates is that, for those cases where the family heads were still strongly attached to the labor force under the weak economy, the poverty rate was little different than for the larger number of cases where the family heads were strongly attached to the labor force assuming a stronger economy.

As was true for the elderly and unrelated individuals, OBRA and the weak economy together had negligible impact on the proportion poor among members of families where the heads were not in the labor force at all. Categories of labor force attachment between the two extremes of working full time and no labor force attachment show complex patterns of the combined and independent effects of OBRA and the weak economy. The analysis of these patterns requires looking at the changes in the size of each category of labor force attachment under the different economic assumptions, as well as at the percent poor, and is too involved to be examined in this paper.

In summary, we can state that the changes in transfer program eligibility and benefit formulas mandated by OBRA and a recessionary economy, together and separately, had an impact on poverty in fiscal year 1982 for the population as a whole and for important subgroups. We estimated that:

- The recession increased the number of persons classified as poor overall by almost 6 percent; the welfare program changes in OBRA increased the number of poor 2 percent and together, OBRA and the recession operated to increase the number of poor by close to 8 percent, or 1 in 12.
- The recession independently had the stronger impact on poverty among working age adults, increasing the number of persons 18 to 64 classified as poor by well over 8 percent. OBRA also had a slight impact, and, together, OBRA and the recession increased the number of poor working age adults by over 1 in 10.
- OBRA had a stronger impact on poverty statistics among children, many of whom are in families eligible for AFDC, than among working age adults, increasing the number of persons under 18 classified as poor by close to 3 percent. The weak economy increased poverty among children by close to 5 percent; and, together, OBRA and the weak economy increased

the number of children below the poverty index by close to 8 percent.

- The recession independently had the stronger impact on poverty among members of married couple families, resulting in an increase of well over 9 percent in the number among this group classified as poor. OBRA also had a slight impact, and, together, OBRA and the recession raised the poverty count among persons and married couple families by close to 12 percent or one in eight.
- OBRA independently had the stronger impact on poverty among members of families headed by females, which are disproportionately eligible for AFDC, resulting in an increase of close to 3 percent in the number among this group classified as poor. The weak economy had a smaller impact, and, together, OBRA and the weak economy increased the estimated poverty population among persons in female head families by almost 5 percent or 1 in 20.

Neither the OBRA program changes nor the recessionary economy had much impact on poverty among the elderly, unrelated individuals, or those with no attachment to the labor force.

### Independent Impact of OBRA and the Recession on the Total Poverty Gap

In this section, we consider the independent effects of OBRA welfare program changes and the recession on the total poverty gap during fiscal 1982. As in Chapter III, we examined the total poverty gap summed over all poor persons instead of the average per person poverty age, as the former measure is more straightforward to interpret.

The separate effects of OBRA and the recession on the total poverty gap and also the combined effect are similar to the findings for the poverty rate. The recession increased the total poverty gap by almost 5 percent or $1.4 billion—the larger impact of the two factors. The OBRA changes had a smaller impact, increasing the total poverty gap by over 2 percent or $0.7 billion—just one-half of the economic effect. The total increase in the poverty gap attributable to OBRA welfare program changes and the weak economy was close to 8 percent or $2.2 billion.

TABLE IV.7.—TOTAL DOLLAR POVERTY GAP FOR FISCAL YEAR 1982 UNDER FOUR DIFFERENT SCENARIOS

| Scenario | Total dollar poverty gap (in billions) | Percent difference from the baseline scenario 2 |
|---|---|---|
| I: Without OBRA and stronger economy | 28.7 | ..... |
| II: With OBRA rules and stronger economy (independent effects of OBRA). | 29.4 | +2.4 |
| III: Without OBRA and recessionary economy (independent effects of the ecomomy) | 30.1 | +4.9 |
| IV: With OBRA rules and recessionary economy (combined effects). | 30.9 | +7.7 |

Source: Prepared by Mathematica Policy Research and Social & Scientific Systems.

Note: See the glossary for definitions of terms.

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# APPENDIXES

## APPENDIX A—STUDY METHODS

To carry out this study, microsimulation techniques were used to develop a set of data representing the U.S. population during fiscal year 1982 under each of four alternative scenarios:

I. Fiscal 1982 if OBRA had not passed and there had been a stronger economy (the "base case" for this study).
II. Fiscal 1982 with a stronger economy and with OBRA (measuring the independent effects of OBRA).
III. Fiscal 1982 with a recessionary economy and without OBRA (measuring the independent effects of the economy).
IV. The "real world" of fiscal 1982, i.e., under OBRA and a weak economy (measuring the combined economic and program effects).

Microsimulation takes a set of survey or census data pertaining to individual households, families, and persons, and adjusts the data to represent a specified time period and set of demographic and economic conditions. No survey data set is available that provides information on the population for fiscal year 1982; hence, microsimulation techniques were necessary to develop the scenario representing real world conditions as closely as possible. These techniques were also used to represent fiscal 1982 under the other three scenarios.[1] The data set used for the simulations was the March 1981 Current Population Survey (CPS). The CPS contains approximately 65,700 households and is conducted monthly by the Bureau of the Census to measure current labor force activity and demographic characteristics of the civilian, non-institutionalized population residing in the fifty states and the District of Columbia. The survey each March includes added labor force and income information for the preceding calendar year. The March 1981 CPS, hence, obtained an extensive set of demographic, economic, and employment data for the survey month (March 1981) and calendar year 1980.

Two data files were created from the March 1981 CPS using the MATH (Micro Analysis of Transfers to Households) microsimulation model.[2] One file simulated the population with and without OBRA assuming a stronger economy (scenarios I and II). The second file simulated the population in fiscal year 1982 under the

[1] See Doyle, et al. (1983), for an in-depth discussion of the simulation procedures and data set used to develop the four fiscal 1982 scenarios.
[2] The work was performed by staff of Mathematica Policy Research, Inc. and Social & Scientific Systems, Inc. under a contract to the Congressional Research Service.

weak economy actually experienced that year without OBRA (scenario III) and with the provisions of OBRA (scenario IV).

In effect, microsimulation creates data sets that as closely as possible represent the responses that would have been obtained from households and persons if an actual survey had been conducted covering the specified time period.[3] It is vitally important in reviewing any study based on simulated data to understand the steps that were followed and the assumptions that were made in developing the synthetic data sets.

The two files for this analysis were created in several stages. The key features and assumptions of each stage are briefly summarized below:

### DEMOGRAPHIC PROJECTIONS

The first step in the simulation was to project the number and demographic composition of the March 1981 population to match Bureau of the Census published estimates applicable to fiscal year 1982. A simple trend adjustment was carried out in which each household, family, and person on the March 1981 CPS file had the survey weight multiplied by 1.0114. Using the new weights resulted in a fiscal year 1982 population estimate of 227.8 million persons.

### UNEMPLOYMENT RATE ADJUSTMENT

The average monthly unemployment rate for calendar year 1980 measured in the March 1981 CPS was 7.1 percent. For scenarios I and II that assumed a stronger economy than was actually experienced during fiscal year 1982, the observed average monthly unemployment rate on the March 1981 CPS was adopted, and hence no adjustments were made to the survey employment data.

During fiscal 1982, in contrast, unemployment increased from a low of 8.0 percent during October 1981 to a high of 10.1 percent during September 1982 and averaged 9.1 percent over the year. To simulate the average monthly rate of 9.1 percent for scenarios III and IV, the unemployment data for some persons were explicitly modified; that is, some persons who experienced unemployment had their data adjusted to reflect longer unemployment spells and some persons who did not report unemployment were assigned this status for part of the year. Unemployment during fiscal 1982 varied dramatically by states, from 15.5 percent average monthly unemployment in Michigan to 5.0 percent in Oklahoma and North Dakota. To ensure that the new file represented the geographic variation in unemployment rates, the states were grouped into five categories based on their unemployment rates for April 1982 (ranging from very high to low), and adjustments carried out separately within each group of states. The adjusted rates were close to their targets for most of the classes although slightly over the target for the U.S. as a whole (9.2 percent average monthly rate compared to the target of 9.1 percent).

[3] Often, microsimulation data sets are designed to improve upon survey responses by, for example, correcting for underreporting of income.

## INCOME PROJECTIONS

This phase of the project adjusted the calendar 1980 income amounts obtained in the March 1981 CPS separately by source (excepting income from means-tested public transfer programs which were simulated as described below). Adjustments were made for each adult (persons 15 and over) to achieve consistency with projected income in fiscal year 1982 under each of the two economic scenarios of higher and lower unemployment. The process did not attempt to correct for survey underreporting and assumed a constant relationship between CPS reported income and income estimates in the National Income and Product Accounts and in other sources over the projection period.

For the data file containing scenarios III and IV (average monthly unemployment rate of 9.1 percent experienced in the fiscal 1982 recession), projections for earnings and asset income were based on growth rates between calendar 1980 and April 1982 as reported by the Bureau of Economic Analysis in the National Income and Product Account series. Earnings and asset income together comprise almost nine-tenths of total income reported in the CPS. Income from government pensions, workmen's compensation, veterans' benefits, private pensions, and miscellaneous sources was projected to grow as a function of the increase in the Consumer Price Index, while unemployment compensation was projected using the growth in benefits paid in fiscal 1982 compared to benefits paid in calendar 1980. Social Security benefits were projected to grow in accordance with mandated cost-of-living adjustments.

For the data file containing scenarios I and II (lower average monthly unemployment rate of 7.1 percent), the income projection procedures followed were similar to those just described. Earnings and asset income projections were based on a macroeconomic model projection for fiscal 1982 prepared by Data Resources Incorporated (DRI) that assumed an unemployment rate of 7.025 percent. Unemployment compensation was projected to grow at the rate shown by average weekly earnings of private nonfarm workers in the DRI projection, while income from other sources was projected in the same manner for the lower unemployment as for the higher unemployment file. Because of the lower unemployment rate and also a higher projected increase in the Consumer Price Index, the total CPS income simulated for fiscal 1982 was 2 percent greater on the version of the file representing the two lower unemployment scenarios compared to the higher unemployment file.

## SIMULATION OF WELFARE BENEFITS

In this phase of constructing the two data sets, routines of the MATH model were used to simulate participation in means-tested public transfer programs and the dollar amount of benefits received. The general approach was first to determine family units or persons who were categorically eligible to participate based on requirements such as age or disability not related to income. Next it was determined whether the categorically eligible units has asset holdings below the program limits and countable income low enough to entitle them to receive a benefit. For means-eligible units, the amount of the potential benefit was computed. Finally,

eligible units were selected to participate as a function of characteristics such as potential benefits, census region, program type, and whether or not they reported participating in public assistance programs in the Current Population Survey. The main cash transfer programs simulated in this manner included:

- Supplemental Security Income (SSI) for the aged, blind, and disabled
- Aid to Families With Dependent Children (AFDC) for single-parent families including families with a stepparent present and for unemployed and incapacitated two-parent families.

The simulation of welfare benefits incorporated the relevant provisions of the OBRA legislation in scenarios II and IV, while using program rules without the OBRA changes in scenarios I and III. The effects of higher versus lower unemployment rates (scenarios III and IV versus scenarios I and II) on program participation and benefits were modeled as well. Below are brief summaries of the simulation assumptions and results for each welfare program under the various scenarios.

- *Supplemental Security Income (SSI).*—Eligibility for SSI was checked first by forming categorically eligible filing units containing aged or disabled persons. Asset holdings for each categorically eligible unit were checked to determine if they were below the maximum allowable for the program and then potential benefits were calculated according to the SSI program rules. Participation was simulated for scenario IV (weak economy with OBRA) based on estimated annual SSI recipients during fiscal 1982 and estimated annual payments (developed using actual April 1982 figures multiplied by an estimate of turnover in the program during the course of a year). The same probabilities for participation were then applied to the other three scenarios.

  The OBRA legislation did not substantially change the provisions of SSI. Hence, there was no difference in the number of simulated SSI participants or benefit amounts between the pairs of OBRA and without OBRA scenarios under each set of economic conditions. The recession also had a very small impact according to the model estimates. Participants in SSI and dollar benefits were less than one percent higher in the pair of scenarios (III and IV) that assumed a weak economy compared with the pair (scenarios I and II) that assumed a stronger economy.

- *Aid to Families with Dependent Children (AFDC).*—The AFDC program is far more complex in its provisions than SSI and the simulation was accordingly more involved. After determination of categorically eligible SSI units, categorically eligible AFDC units were formed. AFDC units were restricted to families containing a child deprived of parental support due to death, continued absence from the home, physical or mental incapacity of a parent, or, in some states, unemployment of the principal earner. The definition of a child varied by state and before and after OBRA. All states defined someone under eighteen as a child and some states further allowed persons aged 18 to 20 and in school (pre-OBRA) or 18 and in school (post-OBRA) to be considered as children for purposes of AFDC eligibility. Then

means-eligibility was determined. The OBRA legislation made numerous changes in the AFDC program that were incorporated in the simulation including:

(1) OBRA limited AFDC means-eligibility to units with gross income less than 150 percent of the unit's full standard of need for the state. Units were ruled ineligible on this basis even if their net countable income after deductions and other adjustments would have met the state's payment standard. A few states made changes in their need standard that counteracted the intended effect of this screen.

(2) OBRA changed the computation of countable income. Before OBRA, the first $30 and one-third of the remainder of earned income were deducted from countable income and then actual work-related and child care expenses added to the potential benefit as credits. After OBRA, the $30 and one-third deduction was limited to the first four months that a unit was on AFDC and had earned income. Also, work-related and child care expenses were changed from credits equal to the actual expenses incurred to a standard deduction of $75 per month for work-related expenses and a child care deduction equal to actual expenses with a $160 per month per child cap. The work-related expenses deduction was prorated for part time workers with the proration procedures varying by state.

(3) OBRA made the income of stepparents countable in determining AFDC eligibility and benefits. Generally, income above the monthly AFDC need standard for a one person unit is countable as unearned income. Before OBRA the income of stepparents was not countable as long as they did not assume financial responsibility for the child. If they assumed financial responsibility, their income was not countable unless the state required all stepparents to do so.

(4) OBRA stipulated that all AFDC payments below $10 per month be dropped.

Finally, participation was simulated among eligible units following the general procedures already described. As discussed in Chapter I, the simulation results indicated that OBRA and the recession had substantial effects on the AFDC caseload and benefits.

### SIMULATION OF FOOD STAMP BENEFITS

Similar procedures were used to determine categorical eligibility, means eligibility, and participation for the Food Stamp Program as for public assistance cash income support programs. The OBRA legislation made several changes in the Food Stamp Program provisions that were incorporated in the simulation of the relevant scenarios (I and IV). These included:

(1) OBRA limited food stamp means eligibility to households with gross income below 130 percent of poverty, compared to net income after deductions below the poverty line prior to OBRA, except that households with elderly or disabled persons retained the pre-OBRA net income limits.

(2) The standard deduction was frozen at $85 per month by OBRA compared to $95 (the amount that would have been in

effect during fiscal 1982 under pre-OBRA program rules) and the maximum shelter deduction was frozen at $115 compared to $130. The earned income deduction was reduced from 20 percent of earnings pre-OBRA to 18 percent under OBRA.

(3) Finally, OBRA froze the maximum coupon allotment for a family of four living in the 48 contiguous states at $223 a month compared to $243 for the higher unemployment rate pre-OBRA scenario and $245 for the lower unemployment rate pre-OBRA scenario.

If food stamp benefits were counted with cash income in determination of poverty status, all of these changes would be expected to increase the count of persons in poverty. It is also true that if food stamp benefits were counted in determining poverty status in all cases with and without AFDC, poverty rates would have been lower. However, poverty statistics regularly published by the Bureau of the Census from CPS data do not count in-kind benefits such as food stamps, public housing, medical insurance, and so on, with cash income. There are strong arguments for counting all types of in-kind benefits as income, but there are also theoretical and operational difficulties in determining what dollar value to assign. For these reasons and because the MATH model simulates current month food stamp benefit values that are not easily converted to annual amounts, we also excluded food stamp benefits from income for determination of poverty status in this study.

## APPENDIX B—BENCHMARKING THE AFDC SIMULATIONS

The OBRA changes in the AFDC program, as described in Chapter I, had the greatest impact on AFDC units with earnings. Household survey data, such as the Current Population Survey used in this study, typically show a higher proportion of AFDC recipient families with earnings than do data from actual AFDC case records. Hence, an important step in this study was to compare the composition of the AFDC units simulated by the model to actual case record data. If the model simulated a significantly higher proportion of AFDC units with earnings than shown in case records, then the result could be to overestimate the reduction in the AFDC rolls caused by the OBRA program changes and consequently overestimate the increase in poverty engendered by loss of AFDC income.

In analyzing the composition of the AFDC caseload to determine if the model simultations were biased to any degree and hence required adjustment, we used tabulations from samples of the May 1981 and May 1982 caseloads that were prepared by the Office of Family Assistance, Social Security Administration (Weder, 1983), as well as some information from the 1979 AFDC Survey (HHS, 1982).

We compared tabulations of employment status for the single-parent and unemployed parent segments of the program generated in the simulations assuming pre-OBRA program rules with tabulations from the May 1981 caseload sample and, similarly, tabulations of employment status generated in the simulations incorporating the OBRA program changes with tabulations from the May 1982 sample. As expected, these comparisons showed a substantially higher proportion of earners in the MATH model simulations based on the CPS than observed in the case record samples. These differences are not unusual, as noted in Beebout's (1981) comparison of the 1976 Survey of Income and Education with the 1977 AFDC Survey, which found approximately twice the proportion of earners on the household survey as on the case record survey. Large differences were also observed comparing monthly data from the 1979 Income Survey Development Program Research Panel with the 1979 AFDC Survey (Doyle, 1984).

Our tabulations of the simulated file representing the scenario with a weak economy and with OBRA program changes (scenario IV) indicated that 10.9 percent of the single parent plus unemployed parent AFDC families had earnings in a typical month. (Certain infrequent AFDC family types such as child only units and disabled parent units were excluded because employment status was not comparable.) In contrast, 5.6 percent of AFDC units tabulated from the May 1982 case record data had earnings. Hence, the proportion of AFDC units with earnings from the comparable

case record data represented 52.8 percent of the proportion shown in the simulation.

In order to determine the amount of bias in the simulation results, we also needed to know how much of the OBRA impact on the AFDC caseload was due to the provisions related to earnings and how much to other provisions such as a stepparent's income being counted as unearned income. Data pertaining to that question are severely limited, but, by comparing the 1981 and 1982 case record samples, we were able to derive a reasonable estimate of the two effects. Comparing the 1981 with the 1982 case record samples showed that, overall, about 8.7 percent of the caseload on the rolls in May 1981 were not on the rolls in May 1982. We estimated that 5.9 percent of the May 1981 caseload, or 218.9 thousand units, were eliminated because of the earnings provisions. Similarly, we estimated that an additional 2.8 percent of the caseload, or 105.1 thousand units, were eliminated by the stepparent or other nonearner provisions. Thus, about 68 percent of the total of 8.7 percent of units leaving the rolls left for earnings-related reasons.[1]

As a result of this analysis, we estimated that the unadjusted simulation estimates, by virtue of simulating too many AFDC units with earnings, overestimated the reduction in the number of AFDC families due the OBRA program changes. We did not have a problem with the AFDC caseload numbers simulated in scenario IV representing a weak economy with OBRA program changes, because these were controlled to actual caseload figures supplied by CRS. However, if our results overestimated the reduction in the AFDC caseload going from scenario III representing a weak economy without OBRA to scenario IV, it follows that we simulated too many AFDC families in scenario III. Similarly, our simulation of the AFDC caseload under scenario II representing a stronger economy with OBRA program changes was valid, but we simulated too many AFDC families under scenario I representing a stronger economy without OBRA changes.

We estimated the approximate size of the bias in the unadjusted simulation estimates as follows. The comparison of the case record samples with the simulation estimates showed that the proportion of AFDC units with earnings in the case records was 52.8 percent of the proportion in the simulations. Hence, if the entire reduction in the AFDC caseload resulting from OBRA was attributable to the earnings provisions, the simulated differences in the number of AFDC families between scenario III and scenario IV should be reduced by 47.2 percent (100.0 minus 52.8). However, we also took into account the proportion of the total OBRA impact on AFDC resulting from the earnings provisions which was 68 percent. Hence, only 68 percent of 47.2 percent, or 32.1 percent, should be interpreted as the bias in the unadjusted simulation estimates and used to reduce the difference in the number of AFDC families between scenarios III and IV.

[1] Note that the immediately preceding discussion should not be taken as an estimate of the total impact of OBRA on the AFDC program. Economic conditions were changing rapidly during the May 1981 to May 1982 period, making it nearly impossible to separate out the OBRA effects using two cross-section data sets.

Multiplying 32.1 percent times the difference in the number of AFDC units between scenario III and scenario IV gave us a figure of 278 thousand units. We subtracted this figure from the total number of AFDC units simulated under scenario III, resulting in an adjusted count of AFDC units that properly represented the caseload without the OBRA program changes and hence permitted a valid estimate of the impact of OBRA comparing scenarios III and IV. Before making this adjustment the estimate of the independent effects of OBRA on the AFDC caseload, was that OBRA operated to reduce the caseload by 16.7 percent. After making the adjustment, the estimate was that OBRA operated to reduce the AFDC caseload by 12.0 percent, which is the figure reported in Chapter I.

Because virtually all of the OBRA impact on poverty is the result of the AFDC changes, it is appropriate to reduce the estimate of the OBRA impact on poverty by the same 32.1 percent. That adjustment was applied to the differences between scenario III and scenario IV for each subgroup of persons in families with the result that poverty rates were higher under scenario III after the adjustment and consequently the estimated increases in poverty attributable to OBRA were lower. (Unrelated individuals were not adjusted because they are not eligible for AFDC.) The only exception to this procedure involved the classification by family type where we had additional information. For family types other than female head, we knew that most of the OBRA impact was due to earnings since stepparent units are included in the female head families. Hence, we used an adjustment of 47.2 percent instead of 32.1 percent. For families headed by females, we used a smaller adjustment of 28.2 percent to account for the stepparent cases made ineligible by OBRA that were correctly modeled.[2]

Parallel procedures were used to adjust the simulation results for scenario I compared with scenario II.

[2] The 28.2 percent is the product of the 32.1 percent and the fact that families headed by females represent about 88 percent of the AFDC caseload (.321 x .88 = .282).

## APPENDIX C—UNEMPLOYMENT INSURANCE

The 1981 OBRA legislation included four significant changes in the Unemployment Insurance (UI) program regarding benefits and financing. These changes: (1) restricted eligibility for the extended benefit program (EB) by changing the EB triggering mechanism, (2) encouraged states to constrain their programs by mandating interest payments on outstanding loans made to state U.I. systems after April 1, 1982, (3) restricted access to Trade Adjustment Assistance Program benefits, and (4) curtailed unemployment benefits to people leaving military service.[1] The Congressional Budget Office estimated these four changes produced federal budget savings of $4.6 billion in fiscal year 1983.

In spite of the potential importance of these OBRA changes, CRS and MPR made a decision early in the research project not to explicitly model the UI program changes. That decision was based on two considerations. The first consideration was that some of the effects of the OBRA legislation were soon reversed by subsequent legislation. For example, effective October 1982, Public Law 97-362 largely reversed the curtailment of unemployment compensation for ex-servicemen. Similarly, the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) partially reversed the EB reduction by creating the Federal Supplemental Compensation (FSC) program which made from 6 to 10 weeks of additional benefits available to persons who had exhausted their regular benefits. FSC benefits were later extended and liberalized by the Social Security Amendments of March 1983 with a projected fiscal year 1984 cost of $3.4 billion.

The second consideration was the very indirect effects of the provision requiring debtor states to pay interest on their UI loans. It undoubtedly encouraged the movement already underway at the state level to tighten up the UI system, however the mangitude of the impact is very difficult to quantify.

The simulations of the four scenarios described in Chapter I did not explicitly model the changes in the unemployment insurance program that were included in the OBRA legislation. The file containing the two stronger economy scenarios implicitly modeled the UI programs without any of the OBRA changes by using total UI benefits observed before OBRA changes. The file containing the two weak economy scenarios implicitly modeled the UI programs with OBRA changes by constraining total UI benefits to administrative totals during fiscal year 1982. Thus, the combined effects of the weak economy and the OBRA on unemployment benefits can be estimated. However, since the OBRA changes in the UI program were not explicitly modeled, the separate OBRA effect on UI benefits cannot be estimated nor can the effect of the economic change be separated from the OBRA changes related to the UI program. In fact, there are no differences in the unemployment benefits be-

[1] For a more detailed discussion of these changes, see Vroman, (1984).

tween the two scenarios with and without OBRA on the stronger economy file or between the two scenarios with and without OBRA on the weak economy file.

A brief discussion of the simulation of unemployment insurance benefits on the two files (corresponding to the stronger and the weak economy) may be helpful. For the stronger economy file, the level of unemployment and the distribution of the receipt of unemployment insurance were assumed to be unchanged from the patterns observed in the initial file created from the March 1981 Current Population Survey (CPS). The levels of the individual benefits were adjusted upward consistent with the growth in the average weekly wage from calendar 1980 to fiscal 1982 under the stronger economy scenario. Because the UI benefits under this approach were basically those observed in 1980 adjusted to fiscal year 1982 levels, we have UI benefits without OBRA under the stronger economy.

The weak economy high unemployment file was created by using the MATH model to alter the employment data of individuals on the March 1981 CPS consistent with the actual fiscal 1982 unemployment rate. Unemployment rates were controlled by groupings of states. Unemployment benefits were then simulated for individuals with new or increased levels of unemployment. The overall level of benefits on the file was calibrated to actual April 1982 levels. Since these actual April 1982 levels represented the period after OBRA implementation, the weak economy scenarios have a level of UI benefits that reflect OBRA changes.

Because the study design estimates OBRA effects by comparing the with and without OBRA scenarios under the strong economy, the OBRA impacts on poverty will be underestimated since the effects of UI program changes will not be picked up. In contrast, the study design overestimates the independent effect of the weak economy. Since the impacts of the weak economy are estimated by comparing the weak and stronger economy scenarios without OBRA, the UI OBRA changes will be attributed to the economic change.

While this inability to clearly separate out the OBRA UI impacts from the impacts of the weak economy is unfortunate, we do not believe the magnitude of the UI OBRA effects is large. Vroman estimates the total impact of the EB trigger, which is the key OBRA program change related to UI, as $1.91 billion in fiscal 1982. Since about 79 percent of UI is accounted for in the CPS, and hence, has a potential for reducing the poverty gap, the relevant amount in CPS terms is $1.51 billion. Since about 19 percent of all long term unemployed are classified as poor,[2] roughly 19 percent of the $1.51 or $267 million is available to reduce the poverty gap, which was estimated to be about $31 billion with OBRA and the weak economy. Thus, the dollar amount of potential UI benefits to the poor that is attributed to the change in the economy rather than being properly attributed to the OBRA changes represents less than one percent of the poverty gap. Moreover, as noted above, a significant portion of the OBRA UI changes were mitigated by Public Law 97-362 and TEFRA.

[2] The figure of 19 percent refers to those persons unemployed for at least 27 weeks. See U.S. Congress (1983).

## APPENDIX D—CONSISTENCY WITH CENSUS ESTIMATES

The poverty rate estimates produced by the MATH model simulations for this fiscal year 1982 study employ slightly different assumptions and income measures from those used by the Bureau of Census for calendar year 1982. These differences are of three types:

*Fiscal vs. Calendar Years.*—The poverty rate was rising during this period as the recession was growing increasingly severe. Thus, poverty estimates for the fiscal year would be slightly less than for the calendar year.

*Underreporting of Transfer Program Incomes.*—The CPS, as is true for all household surveys, suffers from income underreporting in general and particularly for cash transfer programs such as AFDC, SSI and General Assistance. Census estimates that typically less than 75 percent of income from AFDC and SSI is reported in the CPS. The MATH model simulations, in contrast, distribute 100 percent of the benefits to recipients. Thus, the additional income from these transfer programs tends to reduce the number of persons below the poverty threshold.

*Projections vs. Household Survey.*—The Census poverty estimates are based on a household survey, the CPS, taken during March 1983, in which respondents were asked about their income for 1982. That income was compared to the applicable poverty threshold for each family in the sample and poverty rates were estimated. In contrast, the estimates for this study were based on pre-OBRA survey data that were projected to represent fiscal 1982 under four alternative scenarios. More specifically, the March 1981 CPS was projected using assumptions, described earlier in this appendix, concerning changes in the income distribution and demographic composition of the population. The projection methods and assumptions may have produced bias although the direction is unknown.

As described above, the use of the fiscal year time period in this study and the inclusion of substantially more transfer income than in the Census estimates make the poverty rate estimate of this study smaller. The question is how much smaller than Census estimates would the estimates of this study be for a comparable period. One approach to answering that question is to compare a model estimate with a Census estimate for a time period with the same economic conditions. That comparison can be made using the model estimate for scenario I (the unemployment rate of 1980 without OBRA) and comparing it to the Census estimate for 1980. As shown in Table D.1, the model estimate of the percent of persons in poverty for scenario I is 12.6 compared to the Census estimate for 1980 of 13.2. That comparison indicates the estimates of this study are about 4.8 percent or 0.6 percentage points lower than Census esti-

mates with comparable economic conditions.[1] Hence, the MATH estimates can be normalized by adding the 4.8 percent difference to the study estimates of the poverty rate under each of the four scenarios to produce an adjusted set of MATH estimates for fiscal 1982 that are more consistent with the income measure used in the Census estimates. For the purpose of this comparison, the adjusted rate for scenario IV, the "real world" of fiscal 1982, then becomes 14.1 percent which is reasonably consistent with the Census estimate of 14.0 percent for calendar 1981 and 15.0 percent for calendar 1982.

TABLE D.1.—COMPARISON OF MATH POVERTY ESTIMATES WITH CENSUS ESTIMATES

| Estimate | Unemployment rate | Census poverty rate | MATH poverty rate | MATH poverty rate adjusted to compare consistency with Census |
|---|---|---|---|---|
| Census 1980 | 7.1 | 13.2 | ..... | ..... |
| Census 1981 | 7.6 | 14.0 | ..... | ..... |
| Census 1982 | 9.7 | 15.0 | ..... | ..... |
| MATH scenario IV (weak economy, with OBRA rules) .. | 9.1 | ..... | 13.5 | 14.1 |
| MATH scenario I (stronger economy without OBRA)..... | 7.1 | ..... | 12.6 | 13.2 |

Source: U S. Department of Commerce, Bureau of the Census, "Current Population Reports," Series P–60, No. 138 (1983) and No. 140(?).

The distribution of poverty by population subgroup is quite similar between the Bureau of the Census estimates for calendar 1980 and the model estimates for scenario I, the baseline, as shown in table D.2. The Census estimates for 1980 are used in this comparison because the economic conditions were the same as those used in modeling the baseline scenario. The similarity of the baseline simulation of poverty with the Census estimate provides that poverty is being modeled correctly.

[1] This approximation of the effect on the poverty rate of the different measure of income used in this s.udy f· · the measure used by the Bureau of the Census may underestimate the true difference. It nes that factors such as demogrpahic composition and income maintenance program gener. .cy were neutral. Those factors were probably acting to increase poverty rates.

TABLE D.2.—COMPARISON OF MATH MODEL WITH CENSUS POVERTY RATE ESTIMATES BY POPULATION SUBGROUP

| Selected characteristics | Census poverty rate: calendar 1980 | MATH poverty rate: scenario IV (unadjusted) |
|---|---|---|
| Persons: | | |
| Total | 13.2 | 12.6 |
| Age 64 and over | 15.9 | 14.5 |
| Under age 18 | 18.0 | 17.9 |
| Unrelated individuals | 23.1 | 22.3 |
| Total in families | 11.6 | 11.2 |
| In married couple families | 6.3 | 7.0 |
| In single female head families | 33.3 | 35.2 |

Source: U.S. Department of Commerce, Bureau of the Census, "Current Population Reports," series P–60, No. 138 (1983), and MATH Model Simulation for Scenario I.

## APPENDIX E—STATISTICAL SIGNIFICANCE OF DIFFERENCES IN POVERTY RATES REPORTED IN THE STUDY

The focus of this study was on measuring differences in poverty rates among the four scenarios constructed for fiscal year 1982. It is important in evaluating the results to determine whether the reported differences are large enough to be considered statistically significant, that is, not due to chance. Estimates based on surveys such as the CPS are always subject to chance variation occurring because a sample of persons was interviewed rather than the entire population. By chance, a particular sample may produce a result very different from the average result of all possible samples.

The Bureau of the Census has developed generalized standard errors for estimates of poverty rates based on the CPS that can be used to construct confidence intervals for assessing the reliability of an estimate. For example the interval from the value of two standard errors below an estimate to two standard errors above the estimate will contain the "true" result, i.e., the average result of all possible samples, with 95 percent confidence. In other words, there is less than a 5 percent chance that the particular result was due to chance. (The 95 percent confidence interval is the one most often used in determining statistical significance.) The Bureau also provides a formula for determining the statistical significance of an estimated difference between two poverty rates which is a function of the standard errors for each rate.

Detailed standard errors are provided by the Census Bureau for poverty estimates based on the March 1981 CPS in "Characteristics of the Population Below the Poverty Level: 1980", *Current Population Reports*, Series P-60, No. 133 (1982), Appendix B. Although the data used in this report were derived from the March 1981 CPS, it cannot be assumed that the same standard errors apply given that the simulations adjusted the survey data in various ways. No method has yet been developed for estimating the additional error introduced by microsimulation modeling procedures.

Nevertheless, to give the reader an idea of the likely statistical significance of the differences in poverty rates reported here, we provide confidence intervals based on the Census Bureau's standard error estimates assuming that the simulation procedures introduced negligible additional error.

For differences in the proportion poor among the total population presented in this study, we estimate that:

- The increase in poverty of 0.9 percentage points from 12.6 percent under scenario I to 13.5 percent under scenario IV, representing the combined effect of the weak economy and OBRA in fiscal 1982, is statistically significant with 95 percent confidence.[1]

[1] Confidence intervals for differences in poverty rates were calculated using table B.3 and the formula on p. 198 of Bureau of the Census (1982).

- The increasse of 0.7 percentage points from 12.6 percent poor under scenario I to 13.3 percent poor under scenario III is statistically significant with 95 percent confidence.
- The increase of 0.2 percentage points from 12.6 percent poor under scenario I to 12.8 percent under scenario II is not statistically significant, although the difference is in the expected direction. (The difference is significant with 68 percent confidence—this confidence interval runs from one standard error below an estimate to one standard error above—using a "one tailed test" that hypothesizes that the percent poor under scenario II is higher than the percent poor under scenario I.) For population subgroups expected to be affected by the OBRA program changes, such as members of families headed by females, differences between scenario I and scenario II are of a size that attains statistical significance with 95 percent confidence.

As noted before, it is not possible to calculate precise standard errors for survey data that have been adjusted through microsimulation. However, it appears that differences between most of the scenarios of the size reported for the total population and comparable differences for large subgroups would be unlikely to be due to chance.

## GLOSSARY

The terms used in this report which are defined below are generally those developed by the Census Bureau for use in presenting statistics of the population derived from the Current Population Survey. Additional detail on each of the terms can be obtained from a variety of reports routinely published by the Bureau.[1]

**Available Income** Income of a person's family or own income of an unrelated individual total income for the family is the sum of income reported as received from wages and salaries, self-employment, social security, railroad retirement, public and private pensions, veterans' benefits, unemployment and workmen's compensation, return on asset holdings, and miscellaneous sources by members of the family plus the sum of simulated public assistance benefits.

**Family** The concept of family encompasses all individuals related by birth, marriage or adoption residing within the same dwelling. Families containing the householder are referred to as primary families, those which do not are referred to as secondary families.

**Female Head Families** Families headed by a female who is either (1) unmarried or (2) married to a person who is not a member of the family.

**Labor Force Attachment** For family members this describes the degree to which family heads and spouses (when present) participated in the labor force during fiscal year 1982. For unrelated individuals this describes the degree to which the individual participated in the labor force during the year. Attachment to the labor force is defined in terms of hours worked during the year which is in turn a function of number of weeks worked and reported usual hours worked per week. The categories of labor force attachment are:

- **Strong** Either the head or spouse (if present) experienced full time employment, i.e., reported working 2000 hours or more.
- **Moderately Strong** Either the head or spouse (if present) worked 1500 to under 2000 hours.
- **Moderate** Either the head or spouse (if present) worked 1000 to under 1500 hours.
- **Moderately Weak** Either the head or spouse (if present) worked 500 to under 1000 hours.
- **Weak** Either the head or spouse (if present) worked 1 week to under 500 hours or was unemployed 1 or more weeks and the unit does not fall in one of the preceding categories.
- **Not in Labor Force** Neither the head nor the spouse (if present) was unemployed or worked at least 1 week.

All tabulations of labor force attachment prepared for this report exclude members of families where the spouse with the most hours worked or the head of a family with neither head in the labor force was under age 18 or age 65 or older. Tabulations of labor force attachment of unrelated individuals exclude those under 18 or 65 or older.

**Male Head Families** Families for whom the head is male and either he is unmarried or the spouse is not a member of the family.

**Married Couple Families** Family units where the head is married and the spouse is a member of the family.

**Poverty Gap** This is the difference between available income of the family or unrelated individual and the appropriate poverty threshold.

**Poverty Status** For members of families this is determined by comparing available income to the poverty threshold of the unit. Persons in families where available income is less than the threshold are considered poor. Persons in families where

[1] See for example. *Current Population Survey. March 1980: Tape Technical Documentation* (Washington, D.C.: U.S. Department of Commerce, Bureau of the Census, 1981).

available income is greater than or equal to the poverty threshold but less than 150 percent of the poverty threshold are considered to be near poor. For unrelated individuals the concept is the same except that the individual's own income is used to compare to the poverty threshold.

**Poverty Level or Threshold** The concept of poverty used in this report is that employed by the Bureau of the Census in producing reports from the March Current Population Survey. This definition was originally developed by the Social Security Administration in 1964 and revised by a Federal Interagency Committee in 1969. The threshold for families of three or more persons is based on the cost of the USDA economy food plan multiplied by three to allow for other necessary expenses such as shelter and clothing. For smaller families and persons living alone, the threshold is calculated using slightly higher factors times the cost of the economy food plan to take into account the relatively larger fixed expenses of smaller households. Each year, the matrix of poverty thresholds is adjusted for the change in the Consumer Price Index.

**Unrelated Individuals** These are persons living alone or persons living with other individuals to whom they are not related by blood, marriage, or adoption.

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