

**The impact of welfare reform on families in data
from the Survey of Income and Program Participation**
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Richard Bavier
Office of Management and Budget
Room 6001
New Executive Office Building
Washington, DC 20503
(202) 395-4688
rbavier@omb.eop.gov

(The author is a policy analyst at the Office of Management and Budget. The views expressed are the author's personal views and do not represent the views of OMB or the Administration.)

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Abstract

Consistent with analysis of welfare reform impacts using annual data from the Current Population Survey, monthly data from the Survey of Income and Program Participation show beneficial impacts on welfare participation, employment, poverty, and income among female family heads with children. There are indications that families who left the rolls due to welfare reform have experienced more economic difficulties than other leavers. Nonetheless, once off the rolls, post-reform leavers saw economic improvement.

Outcomes and impacts

Nearly six years after enactment of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWO or simply "welfare reform") most analysts have found generally positive outcomes.¹ Welfare dependence has declined as evidenced by the 50 percent drop in average monthly caseloads of the Temporary Assistance for Needy Families program (TANF) below the 1994 peak for the predecessor Aid to Families with Dependent Children (AFDC). During this period, the economic status of female family heads with children,² the group affected most directly by welfare reform, has improved in annual data from the March Current Population Survey (CPS).³ Even the poorest showed gains over the last several years after a post-1995 dip. Analysis of expenditure levels provide an even more positive picture.⁴ Several samples specially created to monitor what happened under TANF have also reported income gains. The Urban Institute's National Survey of American Families found that families leaving welfare in 1999 did as well or better economically than 1998 leavers.⁵ Researchers employing data from Women's Employment Project, find that "work pays" for post-reform welfare leavers.⁶

However, researchers have also found that some families lost ground economically after leaving welfare. In their first year off the rolls, nearly half of all leavers had average monthly income lower than their last months on welfare.⁷

These descriptive analyses tell us what has happened, often termed outcomes, since enactment of PRWO. A smaller number of analyses have tried to estimate what difference welfare reform made, often termed impacts. So far, estimates of welfare impacts have been limited largely to annual data from the March Current Population Survey.⁸ The earliest CPS analyses focused on how much of the historic post-1994 caseload decline was due to welfare reform and how much to

the strong economy of the late 1990s.⁹ More recently, Schoeni and Blank found positive impacts of pre-reform welfare waivers on the employment, earnings, and income of less-skilled females in the CPS.¹⁰ Kaushal and Kaestner¹¹, and O'Neill and Hill¹² find even larger positive impacts of PRWO on welfare participation and employment among subgroups of females likely to be affected by reform.

Because, until recently, the March CPS did not permit identification of welfare transitions, these analyses cannot tell us whether the impacts they find reflect the experience of parents leaving welfare because of reform or parents deterred from welfare by reform. To maximize and sustain positive impacts, and ameliorate negative impacts, of PRWO, policy makers need to know whether reform has had differential impacts on welfare leavers and the deterred. Post-exit difficulties among leavers could be targeted more easily for intervention to the extent that leavers are known to TANF and other assistance programs for low-income families. The deterred are less easily identified. Nonetheless, findings that any negative impacts are concentrated among the deterred could still tell us where resources should be allocated, an initial step to effective interventions.

SIPP's longitudinal character allows us to estimate impacts of reform on more precisely defined groups. Welfare leavers can be identified and followed in SIPP. And while identification of the deterred remains a challenge, SIPP allows specification of a more precise proxy than CPS.

Limitations of SIPP

Sample loss and item non-response are the principal cautions with SIPP. Surveys never manage to collect all the data they want from every household in their sample. Moreover, with panel surveys, some households that provide information at the start, move and are lost, or refuse to provide information at subsequent visits. In addition, households that do provide some information may not answer all the questions they are asked.

These problems, sample loss and item non-response, have been growing in national federal household surveys, including SIPP. By the end of the four-year 1996 panel, about one-third of the sample had been lost.¹³ Of those still in the sample, about half did not provide amounts for some types of income. These levels are higher than in the 1993 SIPP panel wave files that also will be used for comparisons.

Census does its best to correct for sample loss by increasing the sample weights - or the number of households each sample household is assigned to represent. And it corrects for item non-response by imputing answers based on other information the household has provided and responses provided by other households with similar characteristics. As with other surveys, sample loss from SIPP is not random, but tends to occur more frequently with households that have less economic stability.¹⁴ Analysis of welfare leavers from the first few waves of the 1996 panel found that those who remained in the sample were

more likely to have earnings in their exit month.¹⁵ So welfare leavers who remain in the sample may be a little more successful than those who are lost.

Income of leavers over 24 months

Findings reported earlier from the first three years of the four-year, 37,000 household SIPP panel that began in 1996 were largely consistent with major themes from the many state-level “leavers studies,” and also with analysis of income trends among female family heads with children in the CPS.¹⁶ Release of data from the last year of the 1996 SIPP panel allows us to follow families through 1999. This expands the pool of families for impact analysis. It also provides a reasonably large number of leavers (n=695) who can be observed for 24 months following their exits.¹⁷ The longer observation is significant because many leavers do not see income gains until the second year.

Figure 1 shows the monthly household income of AFDC/TANF leavers who remained in the 1996 SIPP panel sample for at least 24 post-exit months.¹⁸ In figure 1, leavers are grouped into thirds based upon their post-exit household money income plus food stamps, adjusted for household size. The top third saw strong income gains over their first two exit years. The tracks for the middle and bottom thirds are fairly flat.¹⁹

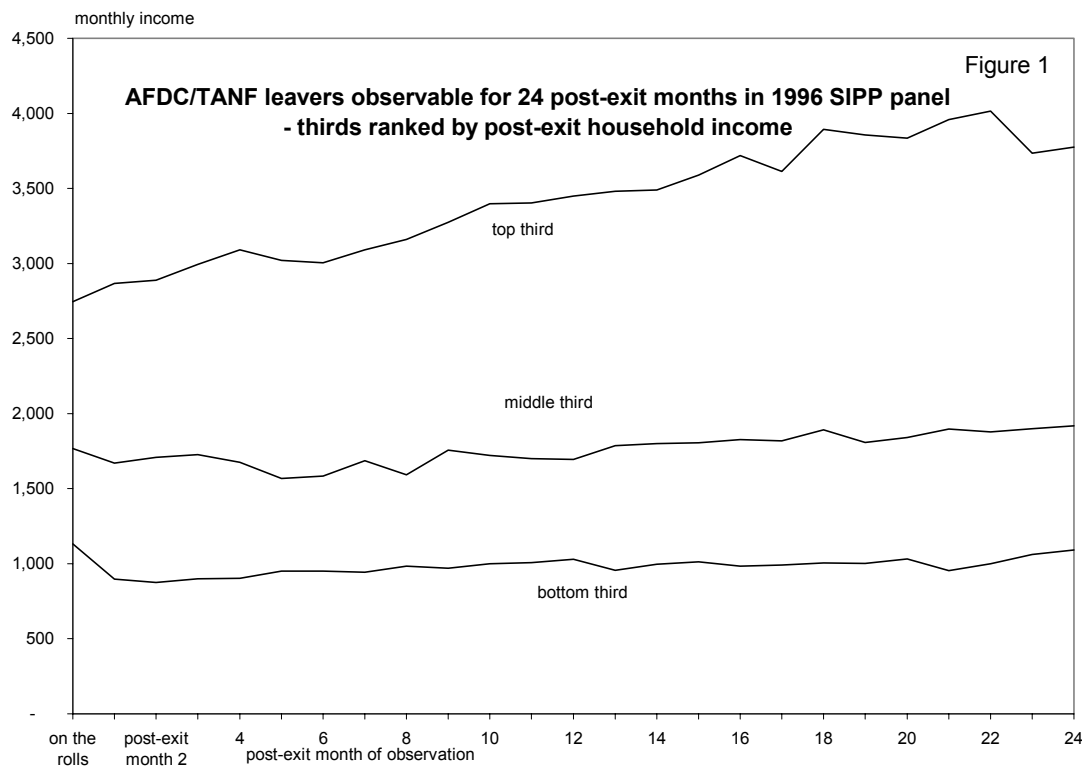
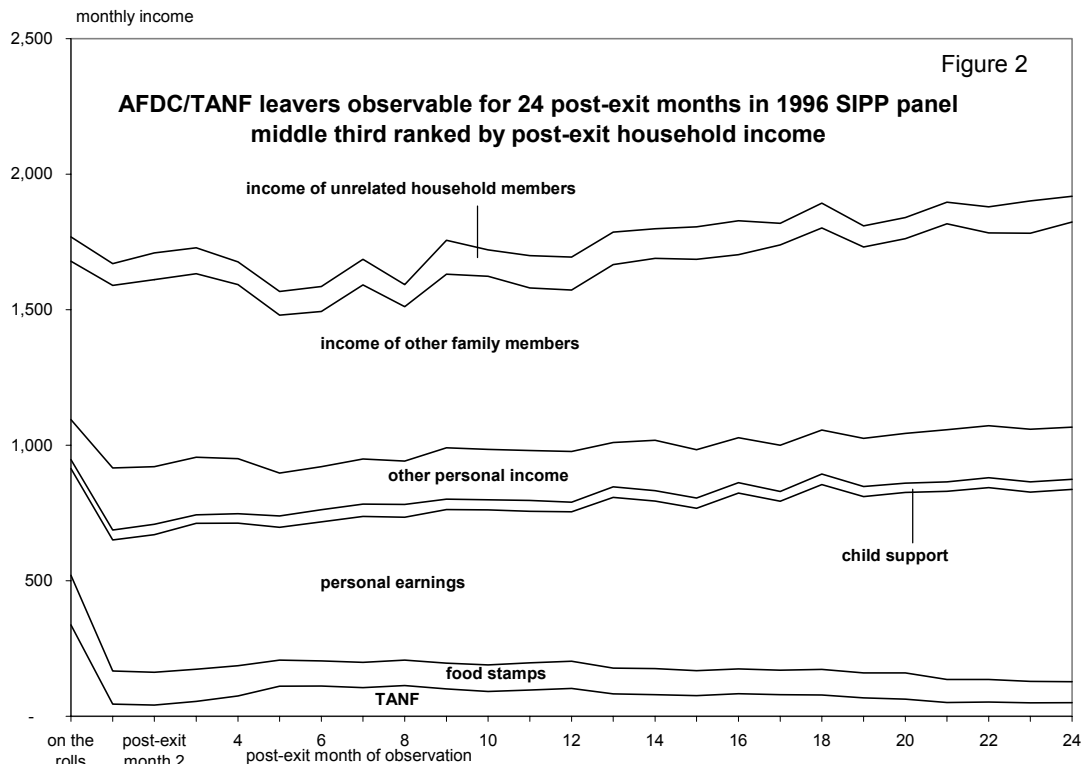


Figure 2 presents a more detailed picture of the incomes of the middle third of all leavers on figure 1. Figure 2 may be regarded as presenting the experience of

typical leavers, around the median for all leavers. Household income remained below income the last months on the rolls during the first year, but then remained above during the second.



The graph starts at a point labeled “on the rolls.” This is the average income of the last two pre-exit months for each leaver.

First, notice the changes from the left-most values, labeled "on the rolls," to the first post-exit month. As expected, income from AFDC/TANF declines sharply, and food stamps too, although less so. The line between "personal earnings" and "child support" does not decline as steeply, showing that earnings made up some of the loss. About half of leavers represented on figure 2 had some earnings in their last month on the rolls, so income in a typical month on welfare probably was not as high as the last month.

Leavers sometimes received other transfers besides TANF or food stamps. They are included in the area labeled "other personal income." Five to ten percent reported general assistance or some other cash welfare other than TANF. Around one-fifth received SSI, either for themselves or in behalf of a child. Seven percent reported social security benefits.

In the exit-month, 29 percent reported they were residing in public housing or otherwise receiving rental assistance. However, the monthly amounts of that

kind of transfer are not included on the SIPP file and so not included in figures 1 and 2.

In any single month, between one and four percent reported no household money income or food stamps. About the same share reported only food stamps or rental assistance. No leavers had zero household income over the whole 24 months.

If the Earned Income Tax Credit were added to post-exit incomes of eligible earners, income levels would be higher. Similarly, if work expenses, positive income taxes, and payroll taxes were subtracted, net gains would be lower.

Income received by others

The thickest layer on figure 2 is labeled "income of other family members." In any single month, around half of all leavers lived with other family members with income.²⁰ By comparison, in any given month, only 8 or 9 percent of leavers lived with unrelated household members who had income. The amounts of income received by other family members and by unrelated household members were similar - around \$2,000 per month by the end of the period. But for all the speculation about the importance of "boy friends" in understanding falling caseloads, leavers in SIPP were about five-times as likely to live with other family members than any kind of unrelated household members. And only 5 percent of leavers in the 1996 SIPP panel described themselves as living with an "unmarried partner."

The wave 2 topical module of the 1996 panel asked very detailed questions about the relationships of everyone in the household to everyone else. These one-time data are the basis of the most complete view we have of where this income by other family members comes from.

Table 1: Income of other family members of welfare leavers

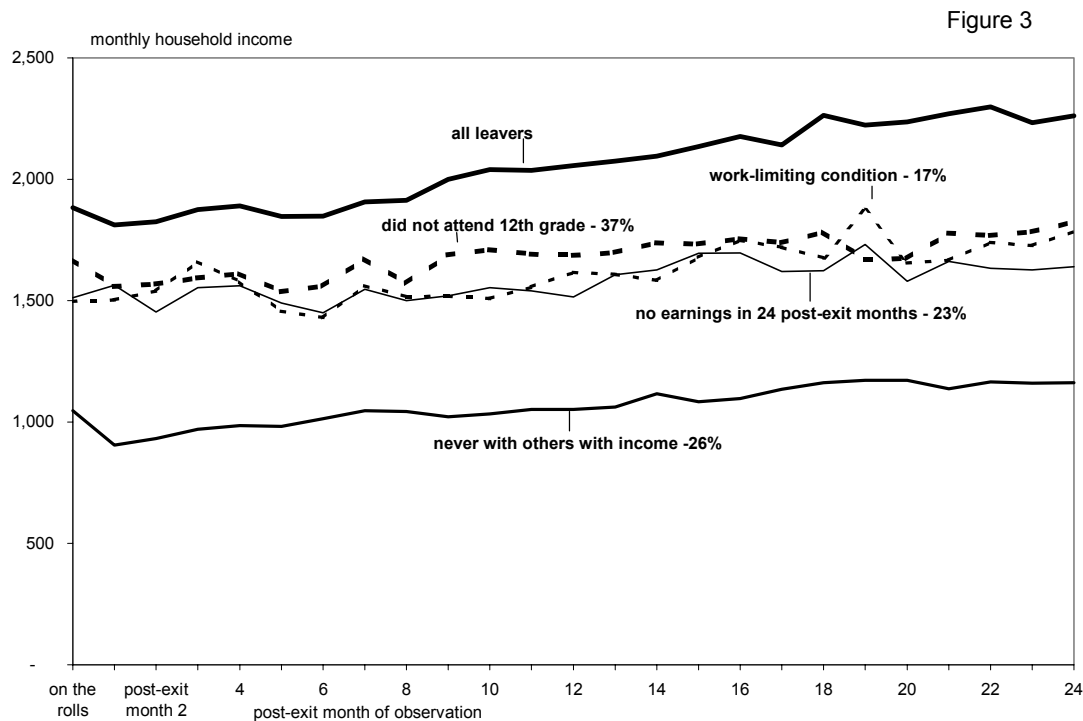
observed in month 8 of the 1996 SIPP panel		percent of all family income
family money income plus food stamps	1,699	
personal money income plus food stamps	907	53%
income of other family members	793	47%
		percent of all income of other family members
with family members with money income or food stamps		
with a spouse	22%	
income received by spouse	287	36%
earnings received by spouse	217	27%
cash transfers received by spouse	36	5%
food stamps received by spouse	13	2%
with a parent	17%	
income received by parent	247	31%
earnings received by parent	191	24%
cash transfers received by parent	28	3%
food stamps received by parent	7	1%
with a child (15 or older)	13%	
income received by child (15 or older)	89	11%
earnings received by child (15 or older)	73	9%
cash transfers received by child (15 or older)	15	2%
food stamps received by child (15 or older)	0	0%

Note: The table shows income from other family members of welfare leavers observable for at least 24 post-exit months. Monthly income amounts are from month 8 of the panel, using relationship detail from the topical module from wave 2.

Table 1 accounts for nearly four-fifths of the income received by other family members. More than one-fifth of leavers in that month resided with a spouse who had income. A little less than one-fifth resided with at least one parent with income. About one-in-eight lived with a child (not necessarily a minor) who had some income. On average, earnings made up more than three-fourths of the income of these family members.

Disadvantaged groups

Figure 3 shows that mean household income of leavers with labor market disadvantages displays a similar pattern of gradual improvement over the observation period. As expected, monthly incomes of these groups fall below the average for all leavers.



In the 1996 panel, nearly one-fourth of leavers had no personal earnings at any point during the 24-month post-exit observation period. Most lived in households with others who had some income, but household income remained low and poverty rates remained around 60 percent for those with no earnings at all.

About one-fourth of leavers in the 1996 panel did not reside at any point during 24 post-exit months with anyone else who received income. Poverty rates for those who had only their personal incomes throughout stood at 70 percent in the exit month. Still, as figure 3 shows, there was some improvement over the observation period, principally in earnings.

Leavers who did not reach grade 12 constituted 37 percent of all leavers in the 1996 panel. They worked in 40 percent of all months in their first two post-exit years, compared to 63 percent for leavers who attended grade 12.

Among leavers who could be followed for 24 post-exit months, 17 percent reported a medical condition at exit that limited the kind or amount of work they could do. They were employed in only about one-fourth of all months. They were more likely to return to TANF, and, in any month, from one-fourth to more than one-third reported receiving SSI for themselves.

Is this experience very different from earlier periods?

Earlier SIPP panels provide perspective on the recent experience portrayed in figures 1-3 above. In figure 4, the income of leavers who could be followed for at least 24 post-exit months in the smaller 1993 SIPP panel shows gradual improvement over the observation period, as in figure 3. The exception is leavers with no earnings at any point in the observation period. Overall, the picture appears very similar to the 1996 panel, with perhaps a little less improvement over time.

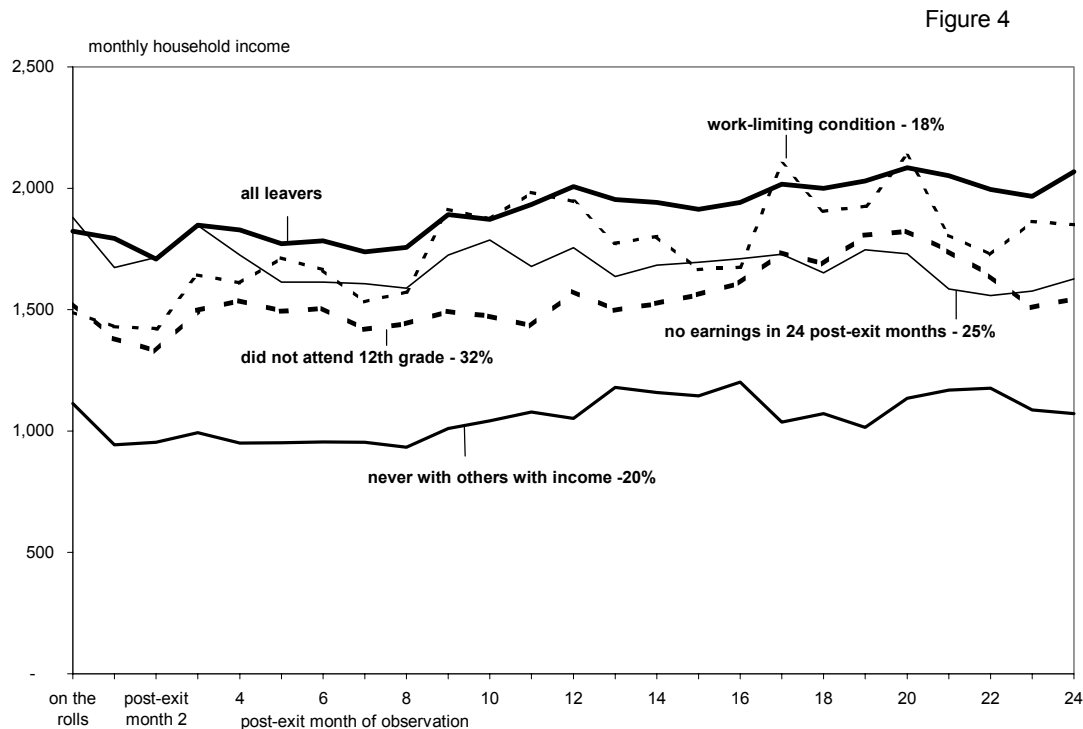
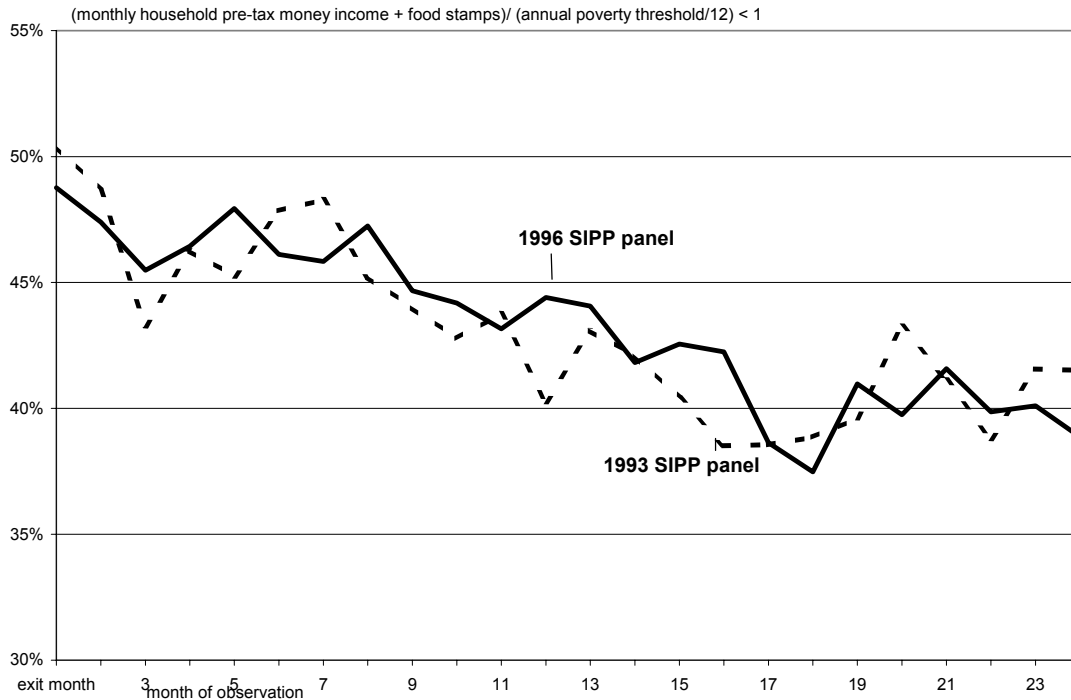


Figure 5, which compares monthly income to simulated monthly poverty thresholds in the 1993 and 1996 panels, also suggests that, while the volume of leavers increased dramatically with PRWO, their experiences off the rolls have been similar to years just prior to enactment.²¹

Figure 5



Regression analysis

Descriptive statistics suggest that the experience of recent leavers hasn't been very different than the experience of earlier leavers. Once off the rolls, leavers typically see improvement over the first two years, even those with labor market disadvantages. But, given the stronger economy in the second half of the 1990s, shouldn't 1996 panel leavers have even steeper income increases compared to 1993 panel leavers? Or, if the volume of leavers swelled in mid-decade with families who otherwise would have stayed on welfare, shouldn't we expect that these PRWO-induced leavers would depress the income trajectory of leavers as a group? These are questions about the impacts of welfare reform. To answer them, we need to compare what actually happened to estimates of what the poverty and income experience of leavers would have been if PRWO had not been enacted. These estimates will be based on the experience of pre-reform leavers, after controlling for differences in the characteristics of the leavers and the strength of the economy.

Beneficial impacts on welfare exits, employment, and poverty among female family heads with children

The CPS-based impact analyses of O'Neill and Hill and of Kaushal and Kaestner cited earlier found lower welfare participation and positive employment impacts among groups likely to be affected, principally female family heads with children. Starting with the broader group of all women aged 18-65, whether or not they

were female family heads, Schoeni and Blank's preferred approach for isolating TANF impacts found negative impacts on welfare participation and poverty, and positive impacts on employment and income.²² SIPP data provide evidence of similar beneficial impacts of welfare reform.²³

The SIPP analysis that follows includes observations from 1993-99, but these years are covered by only two panels. The 1993 panel includes observations from 1993-95, and the 1996 panel includes observations as late as the early months of 2000. To first test consistency with the CPS-based findings, independent point-in-time samples of female family heads were identified from January 1994 (n=1,868) and from January 1998 (n=3,216). Because only one pre-PRWO and one post-PRWO cohort are employed, this design cannot distinguish the effects of PRWO from other uncontrolled time-varying factors, as the CPS analyses attempt to do.

Whether female i receives welfare at any point during a year of observation (Y_i) was estimated with the following logit model:

$$Y_i' = a + b_1TANF + b_2'x_i + b_3state_i \quad \text{eq. 1}$$

$$Y_i = \begin{cases} 1 & \text{for } Y_i' > 0 \\ 0 & \text{for } Y_i' \leq 0 \end{cases}$$

$TANF = 1$ for the January 1998 cohort.

x_i is a vector of control variables for female i including personal characteristics, household characteristics, and resident state unemployment levels and unemployment change.²⁴

$state$ is a vector of dummy variables for 41 states with at least one case in each cohort.

Consistent with the positive findings of the CPS-based impact analyses, the $TANF$ dummy coefficient was negative and significant for welfare receipt and poverty.²⁵ It was positive and significant for earnings and monthly household income. Controlling for other demographic and economic variables, female family heads in the later cohort were less likely to receive welfare, less likely to be poor, and more likely to have earnings. They had higher real monthly incomes, adjusted for household size. In the later SIPP cohort, female family heads also were more likely to live with other family members, an indication that welfare reform changed the way families shared resources and expenses. Coefficients, standard errors, and significance measures are presented in appendix table A-1.

Most caseload impacts were from exits rather than entries

The impacts of reform on welfare participation could result from impacts on exits from welfare, on entries, or both. SIPP's longitudinal design permits us to address this question.

Women who were female family heads in January 1993 or January 1997, one year before the cohorts chosen for appendix table A-1, were disaggregated into those who were receiving welfare and those who were not. From those subgroups, those who could be observed for the next 11 months were identified. Equations like eq. 1 were formulated to observe whether the *TANF* dummy variable was significantly associated with exits and entries, after controlling for demographic and economic factors.

Female family heads who reported receiving welfare in January 1997 were more likely to exit the rolls by the following December than were January 1993 recipients. Those not receiving welfare in January 1997 were less likely to receive benefits the following December. The results appear in appendix table A-2. Both exit impacts and entry impacts contributed to the welfare impacts on appendix table A-1.²⁶ The magnitude of the exit impacts was larger. By this measure, impacts of PRWO on exits reduced participation among female family heads by about 7 percentage points, and entry impacts reduced participation by about 2 percentage points.²⁷

Welfare leavers

An inference from the significant coefficient on *TANF* for welfare exits on appendix table A-2 is that leavers on figures 1-3 and figure 5 include some who would have remained on the rolls longer if PRWO had not been enacted. We don't know which individual exits were policy-induced. However, because parents who stay longer on welfare tend to have less to offer the labor and marriage markets than those who leave, we'd expect that policy-induced leavers, who would have remained longer on welfare except for enactment of PRWO, would have a harder time in the labor market than other leavers.

This line will be explored in two stages. First, the economic experience of post-reform leavers will be compared to pre-reform leavers' controlling for personal characteristics, the strength of the economy, and program parameters. Second, several hypotheses about the incidence of the differences in experience will be tested.

All females in the 1993 (n=338) and 1996 (n=1,002) panels who stopped receiving AFDC/TANF for at least two months and remained in the panel for at least 11 consecutive months after the exit month were selected.²⁸ Models like eq. 1 were estimated for a range of outcomes, including whether the leaver had any exit-year earnings, whether the leavers' households were poor in the final quarter of their exit year, whether the mean monthly income in the second half of

the observation year was \$50 lower or higher than in the first half, and whether the leaver returned to welfare for at least two months.

One significant change in the independent variables for the leaver model was the addition of a trend variable. In the two panels, exits that could be followed for 12 months occurred each year from 1993-98. So a trend variable based on the year of exit was added to control for other time-varying factors not explicitly controlled. In the results presented in appendix tables, this variable generally shows favorable trends - employment rising, welfare participation and poverty falling. As intended, the coefficients may reflect factors not modeled explicitly, such as expansions of the Earned Income Tax Credit. However, gradual improvements in the state monthly unemployment rate variable over the period provide little variation for the model to distinguish from the trend variable. Tests of interaction terms for the trend and unemployment variables were not significant.

In addition, the leavers model added three AFDC/TANF policy variables. Binary variables were included to indicate whether the AFDC/TANF benefits in the leaver's state were especially high relative to other states, whether the state's benefits were especially low relative to other states, and whether the state had been identified by other researchers as adopting strict TANF sanction and time-limit policies.²⁹

A final significant change to the model was the *TANF* variable. Initially, a dummy variable was set at 1 beginning the month the leaver's state of residence converted from AFDC to TANF, or earlier if the state had operated a broadly based waiver demonstration with TANF-like time-limit or sanction policies. This TANF-conversion dummy was negative and significant in predicting any earnings during the exit year, and positive and significant predicting a return to welfare and poverty in the final quarter. The *TANF* dummy was not significant for a \$50 per month change in income over the second half of the exit year. Output from this model is presented in appendix table A-3.

More significant results were obtained by setting *TANF* to 1 for all exits beginning July 1996 or later.³⁰ The earnings and poverty coefficients were similar to results with the TANF-conversion dummy. With the July 1996 specification, post-reform leavers were found to be more likely to experience a \$50 per month income loss in the second half of the exit year, and less likely to experience a \$50 per month income gain. The July 1996 dummy did not predict a return to welfare. Mean values of the independent variables and regression results are presented in appendix table A-4.³¹

Whether the impacts appear with conversion to TANF or in mid-1996, they seem to emerge before PRWO policies could actually have been applied to individual cases.³² Consequently, any causal connection measured by the July 1996 or TANF conversion date dummies appears to be, in part, anticipatory. We know that some staff recommended that parents preserve months of eligibility by moving into the workforce as soon as possible, but don't know how frequently

this occurred, or to what effect.³³ Heightened welfare stigma and new “signals” from welfare staff have been reported as well, although, again we have no quantitative measures of their frequency or effect.³⁴ Moreover, media attention to welfare dependency, and reports of its harmful effects on families, accumulated in the first half of the decade.³⁵ The message would appeal to parents’ natural concern for the well-being of their children. When this new ethos of welfare was publicly confirmed in mid-1996 by enactment of reforms intended to replace welfare with employment, parents may already have been prepared to respond.

A proxy measure of impacts of TANF sanctions

Although the impacts appear prior to application of PRWO policies, some link with policies that sanction welfare parents with benefit reductions for failure to comply with program requirements also is suggested. PRWO allows for more severe and immediate penalties for noncompliance, and other researchers have found that sanctioned families are less successful than other leavers.³⁶

Starting with the 1996 panel, SIPP asked welfare leavers the reasons for up to two exits in each wave. In the early waves of the 1996 panel, it is not possible to identify directly those families whose welfare benefit ends due to noncompliance. However, we can identify leavers who do not report any of three generally positive reasons for their exits: increased earnings; family structure change; a decision not to participate, though eligible. Appendix table A-5 finds that leavers not offering a positive reason are no more or less likely to have earnings. The positive coefficient on the dummy variable predicting poverty just fails conventional standards of significance, while the positive coefficient on the dummy predicting a return to welfare is significant. If these are sanctioned cases, many appear to be “curable” in program jargon, meaning that benefits are restored after compliance.

Appendix table A-5 presents coefficients for the standard control variables, and a dummy indicating the absence of a positive reason for exit. The size and significance of the coefficients on the TANF-conversion and July 1996 dummies on appendix tables A-3 and A-4b are much greater than on A-5, so sanctions should be viewed as a supplemental, rather than a substitute, explanation.

Incidence of exit-year difficulties

The *TANF* dummies on table A-4b are significant after controlling for observable personal characteristics. So the greater likelihood of post-reform economic difficulties is not entirely a matter of greater frequency of low educational attainment, work-limiting conditions, large families, or other observable disadvantages among post-reform leavers. Mean values of independent variables in table A-4a confirm that those with observable labor market disadvantages were represented among leavers at about the same rates before and after reform.³⁷

The next step is to test several other hypotheses about the incidence of the greater likelihood of post-exit difficulties among post-reform leavers shown in table A-4b. The hypotheses will be tested by comparing coefficients in models estimated with pre-July 1996 leavers to coefficients estimated with later leavers.

Hypothesis 1 After mid-1996, the effects of observable labor-market disadvantages, such as low educational attainment, were amplified among both policy-induced leavers and other leavers, regardless of their state of residence.

Hypothesis 2 The negative impacts measured in the July 1996 dummy were concentrated among leavers in states with rigorous sanction and time-limit policies.

Hypothesis 3 The negative impacts measured in the July 1996 dummy were concentrated among policy-induced leavers, regardless of their state of residence.

Under the first two hypotheses, PRWO made exit years harder for both policy-induced leavers and those who would have left anyway. Hypothesis 1 posits that this was a general impact, while under Hypothesis 2 the impact was concentrated in states that adopted certain policies. Under the third hypothesis, PRWO changed the composition of the group of families that left welfare by adding families more likely to experience economic difficulties.

Appendix table A-6, which displays the results of similar models estimated separately with pre-July 1996 leavers and later leavers, supports the third hypothesis. Hypothesis 1 predicts that coefficients on observable characteristics associated with post-exit economic difficulties would be larger and more significant in the post-reform model, but they are not. Hypothesis 2 predicts that the coefficient on a variable identifying states that other researchers have classified as adopting especially rigorous sanction and time-limit policies would be negative and significant for earnings and positive and significant for poverty. But neither coefficient is significant.

By its nature, Hypothesis 3 is not subject to direct confirmation with these data because we have not identified policy-induced leavers. We cannot rule out unobserved employment demand or policy factors behind the significant July 1996 dummies on appendix table A-4b. But we have reason to expect that leavers who would have remained on the rolls except for PRWO are more apt than other leavers to possess unmeasured personal characteristics associated with lower labor market success.

The importance of unobservable characteristics in labor force participation among disadvantaged adults is well-known from the employment and training literature.³⁸ An expert panel advising the Department of Labor that an experimental design would be necessary to avoid biased estimates of the impacts of the Jobs Partnership Training Act noted:

... the decision to enter a program is a result of systematic differences between those who enroll and those who do not, even if both groups have the same observable demographic characteristics and economic histories before enrollment.³⁹

Controlling for selection bias has been a central issue in econometric estimates of the labor market effects of welfare as well.⁴⁰

The concern over unobservables can be illustrated with eq. 2, a modification of eq. 1 in which V , indicating participation in a voluntary training program, is substituted for $TANF$.

$$Y_i' = a + b_1V + \mathbf{b}_2' \mathbf{x}_i + b_3state_i \quad \text{eq. 2}$$

If Y_i' in eq. 2 measured whether the person received any earnings (or exited welfare) during the year, we would suspect positive bias in the coefficient on V on the grounds that unobservable variables, such as motivation, both increase the likelihood that someone will participate in a training program and the likelihood that she will have earnings, whether or not she participated in training. If we could somehow measure the relevant unobservable variables accurately, and add, for example, $b_4motivation_i$ to eq. 2, we would reduce the positive bias in the coefficient measuring the impact of the training program, V .⁴¹

Introduction of $b_4motivation_i$ into eq. 1 likewise would reduce bias in measurement of the impact of $TANF$ in table A-4b. However, with eq. 1, we expect the improved specification to reduce *negative* bias in $TANF$. In this case, the policy variable is not likely to correlate positively with motivation. The new PRWO policy regime is not voluntary, and it applies to all recipients. Rather than identifying a subgroup with relatively higher levels of motivation, table A-2 tells us that $TANF$ identifies a group that includes many who would have remained on welfare except for PRWO. We expect motivation to correlate negatively with welfare participation, and those who would have remained on welfare without PRWO to possess lower levels of motivation than those who would have left the rolls anyway. So variation between pre- and post-reform periods in *motivation* that correlates with lower probability of post-reform exit-year earnings would enter eq. 1 as a negative bias in $TANF$.

Hypothesis 3 predicts that if mean values of *motivation* were added to appendix table A-4a, levels among pre-reform leavers would be higher than among post-reform leavers. Unfortunately, we cannot measure *motivation* directly and have no data based upon a random assignment of recipients to pre-reform and post-reform policy regimes to assure that unobservables are not biasing measurements of $TANF$ impacts on earnings. So the support for Hypothesis 3 amounts to data on table A-6 that are inconsistent with Hypotheses 1 and 2 but consistent with Hypothesis 3, and expectations about the likely roll of employment-correlated unobservables in the models that generated table A-4b.

It is also possible that the TANF program *altered* the motivation of policy-induced leavers. This would seem consistent with the earlier observation of an anticipatory response to reform. If PRWO eliminated all relevant differences in unobservables, such differences between policy-induced leavers and other leavers could not explain the significant coefficients on *TANF*. However, the possibility that PRWO altered motivation does not entail that the new regime or the new ethos eliminated *all* differences in relevant unobservables.

Unobserved instead of unobservable

The preceding discussion assumed that the July 1996 dummy variable *TANF* reflected the effects of unmeasured personal characteristics that were strictly unobservable, such as motivation and self-confidence. Instead, the relevant unspecified variables may just be unobserved, such as domestic violence, substance abuse, transportation barriers, or other observable characteristics typically not included on national household surveys, even one as content-rich as SIPP, but linked to lower exit rates and poor employment experience.⁴² If we suppose that such characteristics and conditions inhibit employment, we would predict that they would be more common among families that remain on the rolls than among leavers. Then reforms that induced more exits among families that otherwise would have remained on welfare would be expected to increase the proportion of leavers with these barriers, and thereby lower mean economic success among welfare leavers as a group.

Families deterred from welfare

In addition to its impacts on recipients, it is likely that reform deterred or diverted families from joining the welfare rolls in the first place. A decline among welfare entries is evident in administrative data, including among those reporting that they had never received welfare before.⁴³ No less than welfare leavers, families that would have joined the welfare rolls but were deterred by reform may be experiencing economic success or economic difficulty on that account.

From appendix table A-2, we see that female family heads not on the rolls in January 1997 were less likely to be receiving welfare the following December than a parallel cohort from January 1993. Some of the non-joiners on table A-2 may actually have been non-returners whose experience would be reflected in appendix table A-4. However, A-2 also includes some parents who were never recipients and who might have been deterred from welfare by PRWO.

Because persons deterred from welfare are not as easy to identify as leavers, a proxy group must be chosen. For the analysis that follows, persons who were female family heads at some point in the 1993 panel and received no AFDC at any point during the panel (termed “never-ons” here, although they might have received welfare prior to the start of the panel; $n=1,422$), and a parallel group from the 1996 panel ($n=3,315$), were selected if they could be followed for 12 consecutive months.⁴⁴ Female family heads have high welfare participation

rates, and if any parents were deterred from welfare by PRWO, some of the deterred probably were in this subgroup. However, this proxy group will also include unaffected families whose experience may dilute or confound the measure of impacts on the deterred.

Mean monthly household income among high-school dropout never-ons in the 1996 panel showed improvement over a two-year observation, increasing from about \$1,800 to about \$2,900. After controlling for the demographic and economic variables employed throughout, the regression coefficient on the July 1996 dummy variable for any earnings in the observation year among never-ons was negative, but fell just short of significance by conventional standards. There were no poverty impacts. The July 1996 dummy was positively and significantly associated with the probability that never-ons would reside with other family members at some point during the year. The dummy was positive and significant for marriage in the last observation month, as well.⁴⁵ The significant family formation dummies may help explain the lack of poverty impacts despite the negative coefficient on the dummy predicting earnings. The results are presented in appendix table A-7.

Perspectives

The descriptive statistics examined earlier show post-exit economic improvement among leavers in the 1996 SIPP panel (although this is not to suggest that no families were worse off economically as a result of reform). In figure 1, most of the income gains appear among the most-successful third of welfare leavers. But even towards the bottom of the distribution of leavers, figure 5 finds declining poverty over the first two post-exit years. Disadvantaged subgroups of leavers in the 1996 panel (figure 3) show improvement as well. A straight-forward reading of figure 2 is that the typical welfare leaver averaged *lower* household income the first post-exit year than on the rolls, but *higher* income the second post-exit year. (And keep in mind that figure 2 does not reflect direct taxes, including EITC, or work expenses, and that income shown for the months before exit probably is higher than income on the rolls most months for these recipients when earnings were less common.)

A separate question is whether any of the improvement is attributable to PRWO. The impact analyses address that question.

From the perspective of all female family heads, welfare reform impacts in SIPP (table A-1) and in the CPS analyses cited earlier were positive. Controlling for other demographic and economic variables, reform reduced welfare participation and poverty among female family heads, and increased employment and household incomes.

Participation impacts were driven principally by exits (table A-2), although entry impacts were detected as well. There are indications that policy-induced exits among post-reform leavers were more prone to economic difficulties (table A-4b), although the descriptive data and table A-1 do not suggest that policy-induced

leavers were generally worse off than if they had remained on welfare. The policy-deterred among female family heads never on welfare may have coped with reform by marriage or otherwise residing with family members (table A-7).

Once reform had pushed many families off the rolls who otherwise would have remained longer, the July 1996 dummies on table A-4b indicate that the exit-year incomes of policy-induced leavers would have been lower and their poverty rates higher than other leavers', all else being equal. But figures 3-5 show that the exit year incomes of 1996 panel leavers were not lower, and poverty rates were not higher, than 1993 panel leavers'.⁴⁶ All else was not equal, principally the stronger economy of the late 1990s.

Appendix

Tables presenting results of logit models mentioned in the text follow. Note that estimates of standard errors do not fully take into account the complex design of the SIPP sample, and will tend to be understated for that reason.

Table A-1: Logit model results for female family heads with children in January 1994 or January 1998

dependent variable with dependent variable independent variables	with earnings			with welfare			with relatives		
	coefficient	standard error	probability of a greater Chi-squared	coefficient	standard error	probability of a greater Chi-squared	coefficient	standard error	probability of a greater Chi-squared
	0.632			0.218			0.341		
did not exceed 11th grade	-1.247	0.080	<.0001	0.887	0.085	<.0001	0.282	0.076	0.000
African-American	-0.307	0.084	0.000	0.814	0.094	<.0001	0.375	0.076	<.0001
work-limiting condition at observation start	-2.032	0.113	<.0001	1.340	0.110	<.0001	-0.040	0.101	0.691
three or more children in household at start	-0.531	0.079	<.0001	0.770	0.085	<.0001	-0.004	0.076	0.962
child under age 3	-0.685	0.084	<.0001	0.328	0.093	0.000	0.533	0.080	<.0001
never-married at start	-0.252	0.081	0.002	0.408	0.091	<.0001	0.171	0.076	0.025
age 26-35	0.340	0.099	0.001	-0.021	0.110	0.850	-0.780	0.095	<.0001
age 36 or older	0.789	0.109	<.0001	-0.553	0.123	<.0001	-0.030	0.100	0.761
state unemployment rate	-0.093	0.099	0.349	0.173	0.112	0.123	0.147	0.094	0.115
did not reside in metropolitan area at start	-0.300	0.098	0.002	-0.003	0.115	0.980	0.093	0.091	0.306
1998 cohort	0.332	0.140	0.017	-0.616	0.156	<.0001	0.499	0.132	0.000
dependent variable with dependent variable independent variables	0.324								
did not exceed 11th grade	0.965	0.077	<.0001	-0.916	0.064	<.0001			
African-American	0.570	0.080	<.0001	-0.571	0.063	<.0001			
work-limiting condition at observation start	0.733	0.101	<.0001	-0.733	0.082	<.0001			
three or more children in household at start	0.856	0.075	<.0001	-0.858	0.062	<.0001			
child under age 3	0.267	0.083	0.001	-0.258	0.066	<.0001			
never-married at start	0.199	0.079	0.012	-0.179	0.062	0.004			
age 26-35	0.300	0.099	0.002	-0.186	0.078	0.018			
age 36 or older	-0.206	0.108	0.056	0.269	0.084	0.001			
state unemployment rate	-0.055	0.095	0.562	0.059	0.072	0.410			
did not reside in metropolitan area at start	0.308	0.094	0.001	-0.281	0.073	0.000			
1998 cohort	-0.222	0.135	0.100	0.258	0.103	0.012			

Table A-2 : Logit model results for female family heads in January 1993 or January 1997, by welfare status

dependent variable with dependent variable independent variables	January recipient exits during the year			January non-recipient is welfare recipient in December		
	coefficient	standard error	probability of a greater Chi-squared	coefficient	standard error	probability of a greater Chi-squared
	0.307			0.049		
did not exceed 11th grade	-0.217	0.122	0.076	0.802	0.188	<.0001
African-American	-0.452	0.144	0.002	0.805	0.200	<.0001
work-limiting condition at observation start	-0.247	0.149	0.097	0.660	0.267	0.014
three or more children in household at start	-0.356	0.125	0.004	0.751	0.187	<.0001
child under age 3	-0.131	0.146	0.368	0.167	0.213	0.432
never-married at start	-0.387	0.139	0.005	0.430	0.203	0.034
age 26-35	-0.334	0.163	0.041	-0.667	0.233	0.004
age 36 or older	-0.483	0.178	0.007	-1.152	0.266	<.0001
state unemployment rate	0.069	0.133	0.607	0.027	0.211	0.899
in state with observation-year unemployment increase	0.173	0.251	0.490	-0.070	0.391	0.858
did not reside in metropolitan area at start	0.313	0.166	0.060	0.138	0.235	0.557
1997 cohort	1.120	0.247	<.0001	-0.782	0.384	0.042

Table A-3: Logit model results for welfare leavers with reform dummy set at TANF conversion

dependent variable with dependent variable independent variables	returned to welfare during year			any earnings during the year			poor in final quarter		
	coefficient	standard error	probability of a greater Chi-squared	coefficient	standard error	probability of a greater Chi-squared	coefficient	standard error	probability of a greater Chi-squared
	0.281			0.675			0.428		
did not exceed 11th grade	0.227	0.139	0.104	-0.707	0.139	<.0001	0.365	0.128	0.004
African-American	0.415	0.165	0.012	-0.213	0.170	0.212	0.330	0.149	0.027
work-limiting condition at observation start	0.410	0.165	0.013	-1.808	0.167	<.0001	0.468	0.152	0.002
three or more children in household at start	0.155	0.138	0.263	-0.275	0.141	0.052	0.477	0.127	0.000
child under age 3	-0.004	0.154	0.977	-0.184	0.157	0.243	-0.025	0.141	0.859
never-married at start	-0.003	0.155	0.986	0.169	0.162	0.296	0.118	0.142	0.407
age 26-35	-0.031	0.180	0.864	0.142	0.187	0.448	0.201	0.166	0.228
age 36 or older	-0.192	0.200	0.336	-0.186	0.200	0.354	0.284	0.182	0.119
state unemployment rate	0.029	0.144	0.841	-0.253	0.153	0.098	-0.038	0.135	0.779
in state with observation-year unemployment increase	-0.043	0.153	0.781	0.038	0.156	0.809	0.026	0.139	0.850
in state with high AFDC/TANF benefits	-0.266	0.710	0.708	-0.515	0.806	0.523	0.089	0.672	0.894
in states with low AFDC/TANF benefits	-0.268	1.218	0.826	-0.809	1.264	0.522	-0.273	1.212	0.822
in states with rigorous time-limits or sanctions	-0.354	0.328	0.281	0.564	0.329	0.086	-0.146	0.290	0.615
did not reside in metropolitan area at start	0.023	0.186	0.901	0.027	0.188	0.885	0.110	0.168	0.513
year of exit	-0.393	0.081	<.0001	0.114	0.082	0.162	-0.077	0.073	0.295
exit after TANF conversion	1.715	0.233	<.0001	-0.919	0.225	<.0001	0.530	0.199	0.008
dependent variable with dependent variable independent variables	income \$50 per month lower			income \$50 per month higher					
	0.385			0.523					
did not exceed 11th grade	-0.019	0.126	0.884	-0.005	0.124	0.967			
African-American	0.155	0.147	0.290	-0.155	0.144	0.282			
work-limiting condition at observation start	0.139	0.150	0.354	-0.316	0.148	0.032			
three or more children in household at start	0.189	0.125	0.129	-0.070	0.122	0.566			
child under age 3	0.159	0.138	0.249	-0.172	0.135	0.201			
never-married at start	0.013	0.140	0.927	-0.085	0.136	0.531			
age 26-35	-0.163	0.162	0.315	0.050	0.158	0.751			
age 36 or older	0.130	0.177	0.464	-0.140	0.174	0.420			
state unemployment rate	-0.033	0.132	0.801	0.097	0.128	0.447			
in state with observation-year unemployment increase	0.270	0.134	0.044	-0.231	0.133	0.083			
in state with high AFDC/TANF benefits	0.035	0.700	0.960	0.020	0.656	0.976			
in states with low AFDC/TANF benefits	2.154	1.216	0.077	-1.703	1.208	0.159			
in states with rigorous time-limits or sanctions	-0.066	0.284	0.815	0.035	0.280	0.899			
did not reside in metropolitan area at start	-0.170	0.165	0.302	0.186	0.161	0.249			
year of exit	0.020	0.072	0.776	0.006	0.070	0.931			
exit after TANF conversion	-0.007	0.194	0.971	0.083	0.190	0.662			

Table A-4: Independent variable means and logit model results for welfare leavers with July 1996 dummy

Table A-4a: Independent variable means

	exit pre-7/96	exit 7/96 or later
did not exceed 11th grade	0.3717	0.3468
African-American	0.3009	0.3536
work-limiting condition at observation start	0.2168	0.1903
three or more children in household at start	0.3805	0.3874
child under age 3	0.3407	0.3108
never-married at start	0.3230	0.3941
age 26-35	0.3850	0.3885
age 36 or older	0.3164	0.3547
in state with observation-year unemployment increase	0.2854	0.2658
in state with high AFDC/TANF benefits	0.2965	0.3277
in states with low AFDC/TANF benefits	0.1372	0.1453
in states with rigorous time-limits or sanctions		0.2095
did not reside in metropolitan area at start	0.3208	0.2992
July 1996 or later		0.6627

Table A-4b: Logit model results with July 1996 dummy

dependent variable with dependent variable independent variables	returned to welfare during year			any earnings during the year			poor in final quarter		
	coefficient	standard error	probability of a greater Chi-squared	coefficient	standard error	probability of a greater Chi-squared	coefficient	standard error	probability of a greater Chi-squared
	0.281			0.675			0.428		
did not exceed 11th grade	0.256	0.136	0.060	-0.745	0.139	<.0001	0.386	0.128	0.003
African-American	0.436	0.161	0.007	-0.202	0.169	0.234	0.326	0.149	0.029
work-limiting condition at observation start	0.417	0.160	0.009	-1.802	0.166	<.0001	0.472	0.152	0.002
three or more children in household at start	0.229	0.135	0.089	-0.318	0.141	0.024	0.503	0.126	<.0001
child under age 3	-0.007	0.150	0.962	-0.191	0.157	0.225	-0.018	0.141	0.899
never-married at start	0.082	0.151	0.585	0.120	0.160	0.455	0.151	0.142	0.288
age 26-35	0.019	0.177	0.916	0.167	0.188	0.374	0.180	0.167	0.282
age 36 or older	-0.121	0.196	0.537	-0.191	0.200	0.339	0.281	0.183	0.124
unemployment rate	0.014	0.142	0.920	-0.317	0.153	0.038	0.017	0.135	0.901
in state with observation-year unemployment increase	0.007	0.150	0.962	0.001	0.156	0.994	0.046	0.139	0.740
in state with high AFDC/TANF benefits	-0.085	0.693	0.902	-0.584	0.805	0.469	0.124	0.675	0.854
in states with low AFDC/TANF benefits	-0.272	1.212	0.822	-0.985	1.270	0.438	-0.126	1.212	0.917
in states with rigorous time-limits or sanctions	-0.474	0.324	0.143	0.655	0.342	0.056	-0.285	0.301	0.343
did not reside in metropolitan area at start	-0.008	0.183	0.963	0.003	0.189	0.989	0.133	0.169	0.430
year of exit	-0.059	0.080	0.459	0.100	0.084	0.232	-0.092	0.075	0.219
exit July 1996 or later	0.219	0.246	0.375	-0.951	0.264	0.000	0.700	0.233	0.003
dependent variable with dependent variable independent variables	income \$50 per month lower			income \$50 per month higher					
	0.385			0.523					
did not exceed 11th grade	-0.007	0.127	0.955	-0.013	0.124	0.915			
African-American	0.137	0.148	0.352	-0.134	0.145	0.354			
work-limiting condition at observation start	0.140	0.151	0.355	-0.315	0.148	0.034			
three or more children in household at start	0.190	0.125	0.129	-0.066	0.123	0.589			
child under age 3	0.175	0.138	0.206	-0.189	0.135	0.163			
never-married at start	0.019	0.140	0.894	-0.087	0.136	0.525			
age 26-35	-0.208	0.163	0.203	0.092	0.159	0.563			
age 36 or older	0.104	0.178	0.560	-0.115	0.175	0.513			
unemployment rate	0.036	0.133	0.787	0.034	0.129	0.790			
in state with observation-year unemployment increase	0.291	0.135	0.031	-0.251	0.134	0.061			
in state with high AFDC/TANF benefits	0.003	0.705	0.997	0.053	0.660	0.936			
in states with low AFDC/TANF benefits	2.355	1.218	0.053	-1.878	1.210	0.121			
in states with rigorous time-limits or sanctions	-0.254	0.297	0.393	0.149	0.290	0.609			
did not reside in metropolitan area at start	-0.124	0.166	0.458	0.139	0.162	0.391			
year of exit	-0.157	0.074	0.034	0.192	0.072	0.008			
exit July 1996 or later	0.913	0.232	<.0001	-0.845	0.224	0.000			

Table A-5: Logit model results for welfare leavers with dummy for exit reason not earnings or family change or choice not to participate though eligible

dependent variable with dependent variable independent variables	returned to welfare during year			earnings in last month			poor in final quarter		
	coefficient	standard error	probability of a greater Chi-squared	coefficient	standard error	probability of a greater Chi-squared	coefficient	standard error	probability of a greater Chi-squared
	0.280			0.676			0.443		
did not exceed 11th grade	0.372	0.161	0.021	-0.755	0.166	<.0001	0.339	0.150	0.024
African-American	0.503	0.192	0.009	-0.312	0.201	0.121	0.450	0.176	0.011
work-limiting condition at observation start	0.474	0.192	0.014	-1.955	0.201	<.0001	0.459	0.182	0.012
three or more children in household at start	0.351	0.160	0.028	-0.258	0.168	0.123	0.553	0.148	0.000
child under age 3	0.162	0.177	0.361	-0.003	0.186	0.988	0.036	0.164	0.827
never-married at start	0.056	0.178	0.752	0.156	0.187	0.404	0.092	0.164	0.577
age 26-35	-0.079	0.208	0.703	0.149	0.221	0.499	0.163	0.193	0.398
age 36 or older	-0.114	0.231	0.621	-0.134	0.238	0.574	0.278	0.213	0.191
state unemployment	0.152	0.189	0.423	-0.270	0.209	0.196	0.120	0.177	0.499
in state with observation-year unemployment increase	0.073	0.174	0.675	0.092	0.182	0.615	0.100	0.159	0.529
in state with high AFDC/TANF benefits	0.215	0.822	0.794	-1.100	0.895	0.219	-0.166	0.808	0.838
in states with low AFDC/TANF benefits	0.042	0.536	0.938	-1.078	0.626	0.085	1.622	0.523	0.002
in states with rigorous time-limits or sanctions	-0.486	0.489	0.321	-0.399	0.533	0.453	0.164	0.452	0.717
did not reside in metropolitan area at start	0.166	0.222	0.453	-0.035	0.231	0.879	0.031	0.203	0.877
year of exit	-0.074	0.103	0.469	0.036	0.107	0.736	0.001	0.094	0.991
exit not for earnings, family change, or choice	0.657	0.384	0.087	0.015	0.447	0.974	0.535	0.378	0.157

Table A-6: Logit model results for welfare exits before July 1996 and later

	exit before Jul-96		exit Jul-96 or later		pre-post difference
	coefficient	standard errors	coefficient	standard errors	
any earnings in exit year					
did not exceed 11th grade	-0.8639	0.2689	-0.7249	0.1741	0.1390
African-American	-0.0557	0.3224	-0.2253	0.2092	-0.1696
work-limiting condition at observation start	-2.1049	0.3225	-1.8803	0.2133	0.2246
three or more children in household at start	-0.6874	0.2650	-0.1997	0.1773	0.4877
child under age 3	-0.7557	0.3153	0.0152	0.1948	0.7709 *
never-married at start	0.1167	0.3212	0.0224	0.1951	-0.0943
age 26-35	0.2299	0.3592	0.1075	0.2340	-0.1224
age 36 or older	-0.5132	0.3796	-0.1504	0.2511	0.3628
state unemployment rate	0.1656	0.3472	-0.3261	0.2121	-0.4917
in state with observation-year unemployment increase	-0.2019	0.3255	0.1735	0.1938	0.3754
in state with high AFDC/TANF benefits	9.5891	209.0000	-0.9378	0.9135	-10.5269
in state with low AFDC/TANF benefits	-0.7933	1.6149	-0.8888	0.6290	-0.0955
in state with rigorous time-limits or sanctions			11.2286	255.4	
not in metro area	0.3703	0.3370	-0.2047	0.2506	-0.5750
annual trend	0.3125	0.1775	0.1058	0.1094	-0.2067
poor in final quarter of observation					
did not exceed 11th grade	0.4718	0.2431	0.3342	0.1597	-0.1376
African-American	0.2261	0.2789	0.3910	0.1873	0.1649
work-limiting condition at observation start	0.7695	0.2784	0.4411	0.1946	-0.3284
three or more children in household at start	0.3855	0.2381	0.6490	0.1591	0.2635
child under age 3	-0.1985	0.2828	0.0756	0.1748	0.2741
never-married at start	0.3108	0.2744	0.1550	0.1746	-0.1558
age 26-35	0.3583	0.3185	0.1034	0.2072	-0.2549
age 36 or older	0.3727	0.3533	0.2733	0.2262	-0.0994
state unemployment rate	-0.3044	0.3017	0.2022	0.1864	0.5066
in state with observation-year unemployment increase	-0.1931	0.2848	0.1642	0.1720	0.3573
in state with high AFDC/TANF benefits	1.3070	1.2519	-0.1956	0.8417	-1.5026
in states with low AFDC/TANF benefits	0.0081	1.3776	1.5426	0.5500	1.5346
in state with rigorous time-limits or sanctions			0.3167	1.3165	
not in metro area	0.2220	0.2866	0.0260	0.2261	-0.1960
annual trend	-0.2687	0.1568	-0.0609	0.0976	0.2078

* significant at .10

Table A-7: Logit model results for female family heads with no panel welfare

	coefficient	standard error	probability of a greater Chi-squared	coefficient	standard error	probability of a greater Chi-squared
dependent variable	any earnings during the year			poor in final quarter		
with dependent variable	0.877			0.148		
independent variables						
did not exceed 11th grade	-1.254	0.111	<.0001	1.012	0.105	<.0001
African-American	0.094	0.127	0.457	0.532	0.105	<.0001
work-limiting condition at observation start	-2.111	0.135	<.0001	0.625	0.142	<.0001
three or more children in household at start	-0.376	0.116	0.001	0.621	0.101	<.0001
child under age 3	-0.596	0.134	<.0001	-0.250	0.131	0.056
never-married at start	0.074	0.128	0.562	0.192	0.110	0.081
age 26-35	0.512	0.152	0.001	-0.080	0.139	0.566
age 36 or older	0.524	0.162	0.001	-0.146	0.148	0.322
state unemployment rate	-0.100	0.071	0.157	-0.176	0.065	0.007
in state with observation-year unemployment increase	0.052	0.111	0.637	-0.085	0.099	0.389
did not reside in metropolitan area at start	-0.201	0.123	0.103	0.231	0.111	0.038
1996 panel	-0.185	0.134	0.167	0.011	0.120	0.929
dependent variable	with relatives at some point during year			married in last month		
with dependent variable	0.482			0.111		
independent variables						
did not exceed 11th grade	0.259	0.093	0.005	-0.122	0.142	0.392
African-American	0.414	0.082	<.0001	-0.261	0.137	0.057
work-limiting condition at observation start	0.345	0.121	0.004	0.200	0.184	0.277
three or more children in household at start	0.203	0.084	0.016	0.156	0.122	0.203
child under age 3	1.163	0.101	<.0001	0.154	0.139	0.268
never-married at start	0.020	0.084	0.809	-1.182	0.149	<.0001
age 26-35	-0.524	0.106	<.0001	-0.354	0.156	0.023
age 36 or older	0.292	0.112	0.009	-0.868	0.168	<.0001
state unemployment rate	-0.101	0.045	0.024	0.036	0.070	0.606
in state with observation-year unemployment increase	-0.083	0.072	0.249	-0.250	0.111	0.025
did not reside in metropolitan area at start	0.090	0.082	0.276	0.234	0.123	0.056
1996 panel	0.917	0.090	<.0001	0.871	0.121	<.0001

¹ Many thanks to Howard Rolston for thoughtful comments.

² In what follows, the term "female family heads" will be used for "female family heads with children."

³ Wendell Primus, Lynett Rawlings, Kathy Larin, and Kathryn Porter (1999) "The Initial Impacts of Welfare Reform on the Economic Well-Being of Single-Mother Families with Children," (Washington, DC: Center on Budget and Policy Priorities). Richard Bavier (2002) "Material Well-Being," in Douglas Behsarov (ed.), *Family Well-Being After Welfare Reform*, (College Park, MD: University of Maryland School of Public Affairs) available at <http://www.welfare-reform-academy.org>.

⁴ Bruce D. Meyer and James X. Sullivan (2000) "The Effects of Welfare Reform: The Material Well-Being of Single Mothers in the 1980s and 1990s," (Joint Center on Poverty Research Working Paper 206).

⁵ Pamela Loprest (2001) "How Are Families That Left Welfare Doing? A Comparison of Early and Recent Welfare Leavers," *Assessing the New Federalism Policy Brief B-36* (Washington, DC: The Urban Institute).

⁶ Sheldon Danziger, Colleen Heflin, Mary E. Corcoran, and Elizabeth Oltmans (2001) "Does It Pay to Move From Welfare to Work?" manuscript (Women's Employment Project).

⁷ Maria Cancian, Robert Haveman, Thomas Kaplan, and Daniel Meyer (1999) "Work, Earnings, and Well-Being after Welfare: What Do We Know?" (Joint Center on Poverty Research Working Paper 73); Richard Bavier (2001) "Welfare reform data from the Survey of Income and Program Participation," *Monthly Labor Review* (124.7: 13-24). Sheila Zedlewski, "Family Incomes: Rising, Falling, or Holding Steady?" Panel presentation at the Fall 2001 conference of the Association for Public Policy Analysis and Management.

⁸ The Survey of Program Dynamics and the Panel Study of Income Dynamics are other longitudinal surveys that will enable impact analysis of welfare reform. Sandra Hoffreth, Stephen Stanhope, and Kathleen Mullan Harris have used the PSID to estimate impacts of policy and economic conditions on exits and returns through the period of welfare waivers ending in 1996. See, (2001) "Exiting Welfare in the 1990s: Did Public Policy Influence Recipients' Behavior?" and (2001) "Remaining Off Welfare in the 1990s: The Influence of Public Policy and Economic Conditions." Both are reports produced for the Economic Research Service of the U.S. Department of Agriculture.

⁹ Several reviews of these efforts are available. See Rebecca Blank (2001), "Declining Caseloads/ Increased Work: What Can We Conclude About the Effects of Welfare Reform?" *Economic Policy Review* . 7.2: 25-36, (New York: Federal Reserve Bank); Stephen H. Bell (2001), "Why are Welfare Caseloads Falling?" *Assessing the New Federalism Discussion Paper 01-02*. (Washington, DC: The Urban Institute); Douglas Besharov and Peter Germanis (2000) "Welfare reform - four years later," *The Public Interest* 140: 17-35. Methodological issues for these time-series analyses are addressed in, Robert A. Moffitt and Michele Ver Ploeg (eds.) (2001) *Evaluating Welfare Reform in an Era of Transition* (Washington, DC: National Research Council).

¹⁰ Robert F. Schoeni and Rebecca Blank (2000), "What has welfare reform accomplished? Impacts on welfare participation, employment, income, poverty, and family structure," Working Paper 7627 (Boston, MA: National Bureau of Economic Research).

¹¹ Kaushal, Neeraj and Robert Kaestner (2001), "From Welfare to Work: Has Welfare Reform Worked?" *Journal of Policy Analysis and Management*, 20.4: 699-719 The authors employ March CPS data from 1995-1999 and estimate difference-in-differences with comparison groups thought less likely to be influenced by the policy change.

¹² June O'Neill and M. Anne Hill (2001), "Gaining Ground? Measuring the Impact of Welfare Reform on Welfare and Work," Civic Report 17, (New York: The Manhattan Institute). The authors employ March CPS data for 1983-2000 with the effects of TANF measured by a dummy variable set for the month of implementation.

¹³ To put that in a way that bears on the current topic, a total of 1,987 people in the 1996 SIPP panel qualify as AFDC/TANF leavers, meaning they received benefits, then did not for at least the next two in-sample months. When these sample cases are projected to the population using the weights they are assigned for their exit months, that represents 5.9 million leavers. (Many

returned to TANF at some point, and may have exited more than once. But the 5.9 million counts leavers only once.) Many of the figures presented below reflect leavers from 1996-97 who remain in the sample for at least the 24 months following their exit. About 4.0 million people left AFDC/TANF in 1996 or 1997 in SIPP. However, only 695 sample cases, representing 1.9 million leavers, or about half of all 1996-97 leavers, remained in the sample for 24 post-exit months.

¹⁴ Constance Citro and Graham Kalton (eds.) (1993), *The Future of the Survey of Income and Program Participation*, (Washington, DC: National Research Council) 103-4.

¹⁵ Bavier (2001).

¹⁶ Bavier (2001).

¹⁷ Descriptive data on welfare leavers presented here include all leavers regardless of the sex or marital status of the former recipient. About nine-in-ten SIPP AFDC/TANF leavers are female. To focus on AFDC/TANF recipients subject to work requirements and time-limits, both descriptive data and multivariate analysis exclude recipients who also report receiving SSI in their own behalf or who have no natural, step, or adopted children in the AFDC/TANF assistance unit.

¹⁸ The income measure displayed on Figure 1 does not include rental assistance or the effect of direct taxes, including the Earned Income Tax Credit. Nor does it net out costs of work expenses and child care. EITC has become a major source of federal cash assistance for low-income working families with children. Despite efforts to encourage low-income parents to receive their EITC in advance throughout the year, virtually all EITC is received as a lump sum when returns are filed. If an upper-limit estimate of EITC amounts (without considering positive income tax liabilities) based on household earnings were spread out across the year on figure 1, along with the employees' share of payroll taxes, the level of the top third would decline. The middle third would see an income gain of a little less than \$200 per month in the first year, and a little more than \$100 per month in the second. The bottom third's level would increase a little less than \$200 the first year and a little more than \$200 the second. These rough estimates apply the 1997 EITC parameters for two or more qualifying children to annual household earnings separately over the first and second 12 post-exit months. Of course, if incomes were adjusted to reflect the effects of direct taxes, the underlying distribution of leavers into thirds would also change.

¹⁹ While those who return to welfare are somewhat more common in the bottom third of all leavers, in any month, only about one-fourth of leavers in the bottom third are receiving TANF. The income tracks of leavers who do not return to welfare within the 24-month follow-up are very similar. The middle third displays a slightly more pronounced incline.

²⁰ Analysis of data from the Three Cities Study also notes the importance of income from other household members. However, the share of household income from the personal earnings of the leaver appears much higher in that urban sample than in SIPP. Robert Moffitt and Jennifer Roff (2000), "The Diversity of Welfare Leavers," Policy Brief 00-02, Welfare, Children, and Families: A Three-City Study, Table 4.

²¹ Official poverty thresholds are defined for families of various compositions. Census includes on the SIPP public use files a threshold amount that treats household members as if they were all family members. Figure 5 compares monthly household income to 1/12 this annual threshold for the household based on household composition that month.

²² Schoeni and Blank (2001) Table 3.

²³ By selecting female family heads as the unit, the analysis here may understate impacts of welfare reform on families with children if PRWO had impacts on marriage or fertility. Analysis of "never-ons" below finds an indication of one such impact. Also see: Schoeni and Blank (2000); Richard Bavier (2002) "Recent Increases in the Share of Young Children with Married Mothers," manuscript; David T. Ellwood (2000) "The Impact of the Earned Income Tax Credit and Social Policy Reforms on Work, Marriage, and Living Arrangements," *National Tax Journal*, 53.4:1063-1105; Gregory Acs and Sandi Nelson (2001) "Honey I'm Home. Changes in Living Arrangements in the Late 1990s," Assessing the New Federalism Policy Brief B-38, (Washington, DC: The Urban Institute); Alan Dupree and Wendell Primus (2001) "Declining Share of Children Lived with Single Mothers in the Late 1990s," (Washington, DC: Center for Budget and Policy Priorities).

²⁴ The binary control variables of personal characteristics include: age 25-34; age 35 and older; did not exceed 11th grade; African American; report of a condition that limits the kind or amount of work; never married; presence of three or more children; presence of children under 3 years of age. (To test for the possibility that marital status and the presence of children in the 1998 cohort

might be influenced by welfare reform, the model was estimated without these variables with the post-reform dummy remaining significant in each case.) Household and residence binary control variables employed are: residence in a metro area; residence in a state with increasing unemployment during the exit year. In addition, the ratio of the resident state's average monthly civilian unemployment rate over the exit year to the U.S. average for 1993 appears as a variable with four discrete levels. AFDC/TANF policy variables included in some models were: whether resident state AFDC/TANF benefits were especially high or especially low relative to other states; classification by other researchers as a state with rigorous welfare sanction and time-limit policies.

²⁵ Applying coefficients from appendix table A-1 to means of the independent variables, the later cohort was 9 percentage points less likely to receive welfare during the year and 13 percentage points more likely to have earnings during the year. For a comparable target group, Table 1 in O'Neill and Hill (2001) shows an annual welfare participation impact on single mothers of 6 percentage points in the CPS data and a positive 7 percentage point impact on employment in the week preceding the survey. Several differences in measurement may contribute to the different results. O'Neill and Hill employ data from 1983-2000 and so can employ a trend variable and an interaction of the trend and state variables. The results in table A-1 compare the experience of a post-reform cohort of female family heads to a cohort drawn from a peak period of welfare caseloads, early calendar year 1994. O'Neill and Hill measure employment impacts on point-in-time employment, while on table A-1, the dependent employment variable is employment at some point during the exit year.

²⁶ Analysis of administrative datasets found declines in the number of entries as well as exits, including declines in entries among parents who had never received welfare. Donald Oellerich (2001), "Welfare Reform: Program Entrants and Recipients," prepared for the Fourth Annual Welfare Reform Evaluation Conference.

²⁷ The marginal effect of *TANF* on exits applied the coefficient on the dummy *TANF* variable in the exit model to the proportion of the recipient sample drawn from the 1996 panel. That product was multiplied by the proportion of the entire recipient sample that exited within 12 months to estimate the share of all exits that were due to *TANF*. To estimate the effect of *TANF*-associated exits on participation rates of female family heads, the share of all exits due to *TANF* was multiplied by the proportion of the entire sample from January 1993 and January 1997 who were recipients at the start. Entry impacts were calculated by substituting non-recipient sample and entry values.

²⁸ Only females were included so that the leaver sample would be similar to the other samples employed in this analysis. The same analysis was performed on all leavers of both sexes with no important differences in results. Around 88 percent of research sample leavers were female.

²⁹ The classification of states by the rigor of their sanction and time-limits policies was developed from: Ladonna Pavetti and Dan Bloom (2001) "Sanctions and Time-limits." *The New World of Welfare*, Rebecca Blank and Ron Haskins (eds.) (Washington, DC: Brookings Institute) 245-269; Robert Rector and Sarah Youssef (1999) "The Determinants of Welfare Caseload Decline." CDA99-44 (Washington, DC: The Heritage Foundation).

³⁰ The table below displays a sensitivity test for placing the post-reform dummy variable at July 1996. To screen out effects of earlier and later periods, only 1996 exits are included. It appears that the dummy variable could most reasonably be set for July or August.

Test of alternative definitions of July 1996 dummy variable using only 1996 exits

	coefficient	probability of a larger Chi squared
prediction of any earnings during the exit year with dummy variable set at:		
Apr-96	-1.2673	0.3674
May-96	-0.9311	0.1187
Jun-96	-1.3829	0.003
Jul-96	-1.3735	0.0001
Aug-96	-1.4975	<.0001
Sep-96	-1.105	0.0012
Oct-96	-1.3148	0.0001
Nov-96	-1.0507	0.0024

³¹ The impacts identified by the dummy July 1996 variable in appendix table A-4 are quite large, and may reflect interaction with other time-varying factors, such as steady improvement in employment. Tests of interaction between the July 1996 dummy and the state unemployment variable did not yield a significant coefficient. I'm grateful to Bran O'Hara of the Census Bureau for suggesting a further specification test. Control variable coefficients developed from the pre-July 1996 leavers were used to predict the proportion of post-July 1996 leavers who would have earnings during their exit years. This estimate was compared to a similar prediction based on coefficients from a model using post-July data. The pre-period coefficients estimated more employment than the post-period, and the difference was significant at the 90 percent confidence level, indicating that the magnitude of negative impact reflected in the July 1996 in appendix table 4b is too large. At the same time, the post-period coefficients estimated significantly more employment than actually occurred, indicating that the significance of the July 1996 dummy is not disproven by differences in the coefficients of the pre- and post- control variables.

³² It is easy to overlook the early onset of impacts when focusing on the standard administrative data measure, mean monthly caseload, a measure of stock. Mean monthly caseload declines were greatest in 1997. (Bavier (2001) table A-2) Welfare exits, a measure of flow, were highest in the second half of 1996 in SIPP. In the 1993 panel, about 94,000 welfare exits were occurring each month over 1993-94. In the first six months of calendar year 1996, the level was about the same (97,000). Then a surge in exits occurred in the second half of 1996, averaging 146,000 per month, before falling back to 110,000 per month in 1997.

³³ Amy Brown, Dan Bloom, and David Butler (1997), "The View from the Field: As Time Limits Approach, Welfare Recipients and Staff Talk About Their Attitudes and Expectations," (New York: Manpower Demonstration Research Corporation)14-15.

³⁴ Besharov and Germanis (2000).

³⁵ See, for example, Leon Dash's series of eight articles about Rosa Lee Cunningham and her family, running in the *Washington Post*, starting September 18, 1994; Thomas Sancton, "How to Get America Off the Dole," *Time*, May 25, 1992, pp.44-47; Ann Blackman, James Carney, Richard N. Ostling, and Richard Woodbury, "Vicious Cycle," *Time*, June 20, 1994, pp25-33.

³⁶ Andrew Cherlin, Linda Burton, Judith Francis, Jane Henrici, Laura Lein, James Quane, and Karen Bogan (2001) "Sanctions and Case Closings for Noncompliance: Who is Affected and Why?" Policy Brief 01-1, A Three City Study (Baltimore, MD: Johns Hopkins University).

³⁷ In a related finding, several data sources show that the concentration of such disadvantages in the residual TANF caseload has not grown, as it might have if exits were concentrated among less disadvantaged recipients. Sheila R. Zedlewski and Donald W. Alderson (2001) "Before and After Welfare Reform: How Have Families on Welfare Changed?" Assessing the New Federalism Policy Brief B-32 (Washington, DC: The Urban Institute). Robert Moffitt and Andrew Cherlin, (2002) "Disadvantage Among Families Remaining on Welfare," prepared for the Joint Center on Poverty Research Conference, "The Hard to Employ and Welfare Reform." While

generally in agreement, SIPP data do show an increase in the share of TANF recipients reporting a health condition that limits the kind or amount of work they can do. This trend continues in preliminary data from the 2001 SIPP panel.

Table 2: AFDC/TANF recipients in SIPP

	1996 panel					2001 panel
	month 1	month 12	month24	month36	month 48	month 1
physical or mental work-limiting condition	23%	22%	26%	24%	26%	33%
work-preventing condition	16%	16%	19%	21%	21%	25%

³⁸ Gary Burtless and Larry L. Orr (1986) "Are Classical Experiments Needed for Manpower Policy?" *The Journal of Human Resources*, XXI.4: 606-639.

³⁹ Howard Bloom, et.al. (1985)"Recommendations of the Job Training Longitudinal Survey Research Advisory Panel," (Washington, DC: US Department of Labor) 4.

⁴⁰ Robert Moffitt (1992) "Incentive Effects of the U.S. Welfare System: A Review," *Journal of Economic Literature* XXX(March 1992):15.

⁴¹ For convenience, I'll refer to employment-correlated unobservables collectively with the positively-correlated variable *motivation*. However, other relevant unobservables may be negatively correlated with employment.

⁴² All of the following papers were presented at a February 28-March 1, 2002 conference organized by the Joint Center on Poverty Research, "The Hard-to-Employ and Welfare Reform." Copies of the papers are available on the Center's internet site. Dan Lewis, Bong Joo Lee, and Lisa Altenbernd (2002) "Serious Mental Illness and Welfare Reform." Peter D. Brandon and Denis P. Hogan (2002) "The Effects of Children with Disabilities on Mothers' Exits from Welfare." Marcia K. Meyers, Henry Brady, and Eva Y. Seto (2002) "Disabilities in Poor Families: The Consequences for Economic Stability and Welfare Use." Richard Tolman, Sandra Danziger, and Dan Rosen (2002) "Domestic Violence and Economic Well-being of Current and Former Welfare Recipients." Cynthia Needles Fletcher, Steven Garasky, and Helen Jensen (2002) "Transiting from Welfare to Work: No Bus, No Car, No Way." Harold Pollack, Sheldon Danziger, Rukmalie Jayakody, and Kristin S. Seefeldt (2002) " Substance Abuse Among Welfare Recipients: Trends and Policy Responses."

⁴³ Oellerich (2001).

⁴⁴ When, as usually was the case, the female family head met the criteria in more than one month of the panel, the first month in which the criteria were met was selected for the start of the observation year. So an individual can appear only once in the sample.

⁴⁵ Impacts on marital status were not found for all female family heads, nor for welfare leavers.

⁴⁶ Figures 1-3 and 5 show all leavers in the 1996 SIPP panel, including those leaving before July 1996. Those who left in July 1996 or later and could be followed for 12 months had simulated exit month poverty rates of 51 percent that declined to 39 percent by the 24th month. Declines among 1993 panel leavers were from 50 percent to 42 percent.