Before and After TANF:
The Economic Well-Being of Women Leaving Welfare

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February 2002

IRP publications (discussion papers, special reports, and the newsletter *Focus*) are available on the Internet. The IRP Web site can be accessed at the following address: http://www.ssc.wisc.edu/irp/

Abstract

Welfare caseloads have fallen dramatically in the last several years, raising questions about the economic well-being of former participants. We use administrative data from Wisconsin to provide information on the employment, earnings, and income of those who left welfare. We offer a context for understanding postwelfare well-being by making two comparisons. First we compare outcomes for welfare leavers under early Wisconsin reforms with outcomes for those who left under the later, more stringent TANF program. We also make a pre-post comparison of individual experiences, examining a leaver's employment, earnings, and income during a calendar quarter of welfare receipt with these outcomes a year after leaving welfare.

We find substantially higher rates of exit in the later cohort. Leavers in the later cohort are slightly more likely to be employed, with 84 percent employed during the year after exit, compared with 81 percent in the first cohort. Earnings are lower in the second cohort, which we find to be related to its members having human capital and labor market characteristics associated with lower earnings.

We measure postexit personal income by adding earnings, cash assistance, Food Stamps, and the estimated EITC available to leavers and subtracting estimated payroll and income taxes. We find that leavers have substantially higher earnings than they did prior to exit, but on average the decline in benefits outweighs these increases, and as a result total measured net income in the year following exit is lower. We also make this pre-post comparison using an estimate of the *family* income of leavers. Although this measure reduces the rates of poverty postexit, the poverty rates of leavers are quite high, with recent leavers more likely to be poor. These results provide valuable information on outcomes for welfare recipients as reform efforts have evolved.

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I.   INTRODUCTION

Since the passage of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA), welfare caseloads have fallen dramatically, raising questions about who has left welfare, the level of employment, earnings, and government benefits of those who have left, and broader measures of their postexit economic well-being. These questions are particularly timely because federal funding for the main cash welfare program, Temporary Assistance for Needy Families (TANF), will expire in 2002, and one of the issues in reauthorization will be the extent to which welfare reform has "worked."

It will be difficult to know whether reform has worked, because no state that we are aware of has commissioned an explicit evaluation of the effects of its current TANF policies. Instead, there are several state-level studies of later outcomes among women who left welfare. (For reviews of state-specific studies of AFDC leavers, see Acs and Loprest, 2001; Loprest, 1999; U.S. General Accounting Office, 1999; and Cancian et al., 1999.) These studies are not necessarily convincing evidence for the effectiveness of welfare reform because there is no explicit counterfactual. For example, it is difficult to know whether a given level of employment, earnings, or income is a "success" or a "problem" unless there is a point of comparison. In this paper we begin by providing descriptive information on those who have recently left welfare in Wisconsin. One of the key contributions of this paper is to provide two points of comparison. We compare the postexit earnings, employment, and income of recent leavers with those who left welfare 2 years earlier. We also compare a measure of postexit income (earnings plus in-work supports and any benefits) to each woman's measured income in the quarter before welfare exit. Although these comparisons cannot fully answer questions about the *effects* of welfare reform, they do

provide valuable information on *outcomes* for welfare recipients, and provide important context for considering other evidence regarding the effects of the reform.

A national study of the effects of welfare reform is difficult, because programs in each state are quite different and thus the characteristics of the key features of welfare reform in each state are hard to identify. (Moreover, available data do not generally have sufficient samples in individual states.) An alternative is to select a particular state that may provide particularly useful information. We believe the experience of Wisconsin is of special interest because it has the TANF program that focuses most heavily on work (Gais et al., forthcoming). Since 1997, *no cash assistance* has been available to families unless they participate in work or work-like activities through the Wisconsin Works (W-2) program or unless they have a child less than 13 weeks old. Moreover, cash benefits are available only after a period of program participation, to mirror the world of work. Wisconsin began work-based welfare reforms in the late 1980s, and it was one of the first states to establish a radically different approach to assisting low-income families—an approach focused on work. Because other states may consider Wisconsin's example, an examination of Wisconsin's leavers may offer insight into the results of a work-based welfare system. Moreover, a comparison of those who left welfare under the early Wisconsin reforms (which had a work emphasis, but were not totally work-based) with those who left under the later, more stringent work-based regime may offer insight into the relationship between these different policy models and levels of employment and economic well-being.[1]

In this paper we study the time patterns of employment, earnings, and incomes of members of two groups—women who left welfare in late 1995 (under early welfare reform) and women who left welfare 2 years later, after the initial implementation of W-2, the state's post-PRWORA program. We provide information on the socioeconomic characteristics of leavers and on the work, earnings, and

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[1]An additional advantage to selecting Wisconsin is that, because there have been several studies of its welfare reform, we have substantial information to help us understand the limitations (and strengths) of our data.

income patterns of these two cohorts in the year after they left welfare (1996 and 1998). We also make an additional comparison, examining individual leavers to see whether their own earnings and in-work supports a year after leaving total more or less than the welfare income they had received. Although these comparisons help us consider the level of well-being of welfare leavers, findings provide descriptive information on outcomes rather than estimates that isolate the effects of welfare reform.

II.   PRIOR LITERATURE

There is a growing literature on the economic well-being of women who have left welfare. (For national studies, see, for example, Cancian and Meyer, 2000; Harris, 1996; Loprest, 2001; Meyer and Cancian, forthcoming; and Pavetti and Acs, 1997. For studies in individual states or groups of states, see, for example, Acs and Loprest, 2001; Brauner and Loprest, 1999; Cancian et al., 1999; Friedlander and Burtless, 1995; Loprest, 1999; U.S. Department of Health and Human Services, 1999a,b; U.S. General Accounting Office, 1999.) Most studies find that about two-thirds of leavers work in the first years after exiting, and that they earn between $6.50 to $7.50 per hour. Poverty rates are quite high—more than 50 percent in the early years after leaving (Acs and Loprest, 2001; Cancian et al., 1999; Loprest, 2001).

However, there is little prior literature that explicitly compares the economic well-being of those who left welfare at different times. One might expect that those who left AFDC/TANF in 1997 would be doing worse than those who left in 1995, because the most work-ready participants are likely to be the first to leave. Some evidence shows that the composition of the caseload has been shifting over time toward a higher percentage of those with more barriers to employment (see, for example, Cancian and Meyer, 1995). Other studies find surprisingly few differences in the characteristics of recipients (Zedlewski and Alderson, 2001) . Indeed, leavers in the later cohort exited after the implementation of stricter time limits and work requirements, and this change in regime might encourage or demand

increased earnings.[2] The main study providing information on leavers at two different periods is by

Loprest (2001), who compares those leaving welfare in 1995–97 with those leaving in 1997–99, using the

National Survey of America's Families (NSAF). She finds that recent leavers and earlier leavers have

similar rates of employment, hourly wages, family monthly earnings, and posttax family incomes. Recent

leavers have slightly lower poverty rates, but slightly higher rates of economic hardship (housing

problems or worries about food). These findings of very small differences could be the result of increases

in employment and earnings in some states (perhaps states with a very work-focused policy) being offset

by decreases in others (states with a less work-focused policy). By using data from a state with a very

work-focused program, the research reported here can inform our understanding of the national efforts. In

addition, we provide an additional point of comparison: An individual's postwelfare outcomes are

compared to her outcomes in a quarter of welfare receipt. In the final section of this paper, we compare

our findings with those in the current literature.

III.   DATA, SAMPLE, MEASURES, AND APPROACH

Data

      The analysis reported here is based on administrative data from the Wisconsin. We have merged

data from (1) the Client Assistance for Re-employment and Economic Support (CARES) system, which

includes information collected in administering AFDC, W-2, and related means-tested programs, (2) the

Computer Reporting Network (CRN) system, the precursor of CARES, providing earlier AFDC

administrative data useful for constructing an AFDC history for each case, and (3) the Unemployment

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[2]Changes in the economy could also affect whether leavers from different cohorts have different outcomes. The aggregate data show little change between 1996 and 1998 in Wisconsin; for example, the unemployment rate was 3.5 percent in 1996 and 3.4 percent in 1998.

Insurance (UI) system, which includes information on quarterly earnings and employers. (Additional

information on data construction and sources is contained in the Appendix.)

<u>Sample</u>

Our samples begin with women receiving assistance under AFDC-Regular or W-2 (Wisconsin's

TANF program) in September of 1995 and 1997 who are listed as the "case head" and who do not have

the other parent of any of the children also listed on the case. We define a woman as having left welfare

if she exits cash assistance within 3 months of our initial observation and remains off the welfare

caseload for at least 2 consecutive months. (Our samples include those who returned to welfare within

the next calendar year as well as those who stayed off.) Appendix Table 1 provides information on the

characteristics of the 49,605 AFDC recipients in September 1995, the 8,042 women who left AFDC

during the last quarter of 1995, the 20,608 recipients in September 1997, and the 8,162 who left AFDC or

W-2 during the last quarter of 1997. The rate of exit is much higher in the second period: 16 percent of

women participating in AFDC in September 1995 left the program in the next 3 months; in 1997, 40

percent of those receiving cash assistance in September 1997 left within 3 months.

Although the characteristics of the two groups of leavers are fairly similar, Wisconsin's 1997

recipients appear to have more barriers to work. For example, women who left welfare in the last quarter

of 1997 were more likely to have low levels of education (46 percent with less than a high school degree

versus 34 percent in 1995), more children, very young children, and children with a disability (receiving

SSI). Leavers in the later year were also less likely to have recent work experience and were much more

likely to be African American and to live in Milwaukee County (the most urbanized county in the state).

<u>Empirical Measures and Their Attributes</u>

Our main outcomes of interest are a leaver's employment, earnings, and personal income.

Employment and earnings data are taken from the Wisconsin UI earnings records. Because these data are

provided by employers, we believe they are more accurate than survey reports in measuring formal employment and earnings. However, because these data do not contain information on individuals who move out of state, are self-employed, or are in jobs not covered by the UI system (covered workers include about 91 percent of official Wisconsin workers), we are unable to distinguish between women who truly have no earnings and those who have unrecorded earnings.

We also examine a leaver's "personal" or "own" income, a measure of the income under her own control. This includes her own earnings and the cash and Food Stamp benefits she receives for the family. We also add in the amount of the Earned Income Tax Credit she would receive based on her earnings and subtract the amount of payroll and income taxes we estimate she would pay (details in the Appendix). Because our interest is in the income that is under her own control, we do not include the income of a spouse or partner or the amount of child support she receives. We calculate poverty status based on this measure of personal income, using the official poverty line.

Finally, we examine a measure of family income. Family income will differ from our measure of own income primarily to the extent that a welfare leaver has a spouse or partner with income. Although the women in our sample did not have a recorded spouse or partner when they received AFDC/TANF, they may have had one later. The administrative records do contain some information on household composition after leaving cash assistance.[3] We have included the earnings of any new spouses or potential partners, along with the EITC and taxes associated with these earnings, in our measure of family income. (We do not include the earnings of individuals who appear to be the leaver's parents.) Because the measurement of the leaver's own income is more accurate than that of family income, we focus most of our attention on the leaver's own outcome.

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[3]If a leaver continues to receive Food Stamps, she is required to report all members of her household (with the exception of another adult who purchases and prepares meals separately). Moreover, if she returns to AFDC or W-2, or if she leaves Medicaid and then reapplies, she would be asked to list all household members. Thus to the extent that leavers continue to receive benefits and report any changes in household composition, we have information on other adults in the household.

Other analysis of postexit well-being based on more inclusive survey data suggests that measures

of income limited to only mothers' earnings and benefit receipt understate *family* income. Meyer and

Cancian (1998) examine economic well-being of a national sample in the first 5 years after leaving

AFDC. They present information on poverty rates in these 5 years using two different measures of

income, "own income" and total family income, both based on self-reports. Although their measure of

"own income" differs from that used here,[4] the difference in poverty rates from the two measures may

provide insight into the interpretation of our findings. They find that poverty rates based on family

income are 56, 50, 48, 45, and 41 percent over the 5 years; rates based on own income are 79, 72, 68, 70,

and 64 percent.

All sources of information on economic well-being for leavers have limitations. Ethnographic

research suggests that a substantial portion of welfare recipients have informal earnings (Edin and Lein,

1997), and these do not appear in administrative records. On the other hand, survey self-reports also may

fail to include full and accurate measures of informal earnings. Moreover, welfare receipt is substantially

underreported in many surveys, and the underreporting appears to increase over time, so the

identification of those receiving welfare (and therefore those leaving) may be quite inaccurate (Bavier,

2001; Hotz and Scholz, 2001).[5]

We recognize these considerations, but administrative data are the only consistently available

source of information on recent AFDC/TANF leavers. Although our measure of income is not a complete

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[4]Their measure of own income includes child support and social insurance as well as a woman's own
earnings, AFDC, and Food Stamps. Nonetheless, it is roughly comparable to our administrative data measure
because child support and social insurance are received by relatively few leavers.

[5]For example, Bavier (2001) reports that only about 70 percent of the total amount of AFDC benefits paid
(known through administrative records) are reported in SIPP as received in 1996–1997, and SIPP is generally
thought to be one of the most accurate data sources for income. Some of the gap is due to underreporting, some to
nonresponse, and some to attrition.

estimate of economic well-being,[6] it does allow an assessment of self-sufficiency based on own earnings, a focus of welfare reform. Moreover, the extent to which *earnings* and *in-work supports* (Food Stamps and the EITC) observed after leaving cash assistance replace (or fail to replace) welfare income is seen as critical by many policymakers.[7] Finally, inasmuch as the downward bias of our measure is consistent across time periods, it is of less concern when used as the basis of cross-cohort comparisons.

Approach

We are primarily interested in whether outcomes for welfare leavers differ over the two cohorts. Any differences in outcomes we observe may merely be the result of differences in observable characteristics. A simple approach to exploring whether recent leavers are doing better or worse than the previous cohort is to conduct a multivariate analysis on the pooled sample, differentiating between cohorts with an indicator variable; the coefficient on the indicator variable provides an indication of whether recent leavers are doing better or worse, controlling for observable characteristics. However, it is possible that there are different relationships between the outcomes and the characteristics in the two periods. We also run a fully interacted model (equivalent to separate models in each period) and conduct a test to see if the fully interacted model fits the data better than the pooled model. Because this model does not provide a straightforward answer to the question of whether recent leavers are doing better or worse, we use the results to calculate estimated outcomes for women with a given set of characteristics, then compare these simulated results across cohorts.

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[6]In addition to the above considerations, our measure of a leaver's "net" income does not include information on unreimbursed child care expenses or other work expenses, other components of economic well-being. Nor do we place a value on the time women spend at home raising their children; to the extent that a woman staying home with her child considers herself to have a higher level of well-being than a woman with equal net income who is working, we are overestimating the increase in well-being associated with increased earnings.

[7]For example, the response of the Wisconsin Department of Workforce Development (2001) to a recent audit emphasizes the need to compare the dollar amount of the mother's postleaving income with her AFDC or W-2 benefits. The response notes that while the eventual goal of W-2 is the replacement of welfare with earnings, a replacement of welfare with earnings and in-work supports is an important step toward the goal.

IV.   RESULTS

Before considering the outcomes, we first review the characteristics of leavers. Appendix Table 2 presents the results of a descriptive multivariate analysis, with probit estimates of the probability of leaving welfare in each period. Because separate models fit the data better than a combined model, we show results separately for the 1995 and 1997 leavers. The final column of the table indicates whether the coefficients for the two cohorts are significantly different from each other. For example, considering the second panel, we see that relative to those with less than a high school degree, high school graduates were significantly more likely to leave welfare in both cohorts, with no statistically significant difference in the effect of high school graduation between the two cohorts. Having more than a high school degree also had a significant positive impact on the probability of leaving welfare, but in this case the magnitude of the effect is significantly larger in the second period.

In both periods we find some evidence that women were more likely to leave if they had fewer barriers to employment. Factors that increased the probability of exit included greater education (as mentioned above), more adults in the household, and more prior work experience. Women were also more likely to leave welfare if they were Hispanic or white than if they were African American or other, if they lived outside of Milwaukee, if they lived in an area with lower levels of female headship, and if they had fewer months of prior welfare receipt.

Overall, although the magnitude of effects varies between the two cohorts, the direction of most statistically significant relationships remains the same. There is one important exception to this otherwise consistent pattern. Women with more children were less likely to leave welfare in the first period than those with fewer children, but they were actually *more* likely to leave in the second. This change is consistent with the changes in grant amounts over this period. In both periods we expect that, all else equal, women with larger families generally face more substantial barriers to employment. In 1995,

women with larger families were also eligible for more generous cash assistance, so their lower

likelihood of leaving is not surprising. However, for the later cohort, W-2 payments do not vary with

family size. Larger families experienced substantial declines in the level of benefits, but smaller

families—especially those with only one or two children—experienced potential gains. Thus, it may be

that in the later period women with only one child were less likely to leave welfare than those with larger

families because their potential benefits actually rose over these 2 years. One other noteworthy difference

between the two cohorts is that whereas women in Milwaukee were less likely to exit in both periods, the

coefficient in the later period is much larger, showing increasing differences between exit patterns in

Milwaukee and the rest of the state.

Employment and Earnings after Welfare

Table 1 compares the earnings and work experience of the two cohorts in the year after exiting.

Employment rates do not differ markedly between the two periods, with about 70 percent of leavers in

both years having some earnings in each quarter. A slightly higher percentage of leavers in the second

cohort have earnings at some point during the year, 84 percent versus 81 percent in the first cohort.

However, earnings (in 1998 dollars) are lower in the second cohort, with mean annual earnings totaling

$1,400 less than in the earlier cohort ($7,700 versus $9,100) and median earnings totaling nearly $2,000

less.[8] These differences are consistent with the hypothesis that the new "work first" strategy emphasizes

entry into the labor market, perhaps pushing people with fewer employment skills to accept lower-paying

jobs. They are also consistent with the hypothesis that the new strategy pushes people with more barriers

(e.g., child care difficulties) into the labor market, where they work fewer hours.

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[8]These differences decline modestly if we consider the full sample (including those with no earnings), for whom 1995 mean and median earnings are $7,385 and $6,479 versus 1997 mean and median earnings of $6,467 and $5,016.

TABLE 1
Earnings and Work Experience of Leavers in Year after Exit (1998 dollars)

	1st Quarter after Exit	2nd Quarter after Exit	3rd Quarter after Exit	4th Quarter after Exit	Year after Exit
All Leavers (4th Q 1995, N=8,042)					
Percentage with earnings	69.0	68.8	68.9	68.7	81.1
Among those working in quarter/year					
Mean earnings	$2,545	$2,630	$2,616	$2,940	$9,108
Median earnings	$2,538	$2,626	$2,539	$2,896	$8,608
All Leavers (4th Q 1997, N=8,162)					
Percentage with earnings	69.6	68.3	68.3	68.1	83.9
Among those working in quarter/year					
Mean earnings	$2,081	$2,275	$2,338	$2,744	$7,709
Median earnings	$1,924	$2,101	$2,163	$2,579	$6,662

Note: Between 2.2 and 2.8 percent of the women in the 1995 cohort and between 2.9 and 3.8 percent of those in the 1997 cohort who worked earned less than $100 in any given quarter.

Figure 1 shows the industry of the main job in the first year after welfare for the 1995 and 1997

leavers. We first assign each woman's main employer to one of 14 industries. We then rank the 14

industry groups by the first-year earnings of the women in our sample who begin in a particular industry.

Under this ranking, the industry with the lowest earnings for the 1995 cohort is restaurants, while the

highest-earning industry is financial services. This ranking of industries enables us to examine the extent

to which individuals begin in a "good" industry (from the perspective of earnings only). The figure

displays the percentage of each cohort not working (the first bars) and the percentage working in various

industries, with the lowest-earning industry, restaurants, shown in the second bars and the highest-

earning industry (financial services) in the final bars. The figure shows that although leavers in the

second cohort are more likely to be working, they are less likely to be in the highest-earning sectors

(financial services, durable manufacturing, and nondurable manufacturing). They are somewhat more

likely to be working in the three lowest-earning sectors (restaurants, hotels, and retail trade), and

substantially more likely to be working in temporary agencies.

The results reported in Table 1 and Figure 1 document substantial postexit employment and

suggest the potential importance of earnings to postwelfare economic status. At the same time, the results

show substantial diversity in labor market experience. As an initial step toward understanding postexit

employment patterns, we now turn to an examination of characteristics associated with labor market

success, using multivariate descriptive models. We examine two measures of labor market success:

whether a woman has recorded employment, and the level of earnings in the first year (among those with

earnings). In both cases we measure the impact of individual characteristics *at exit* on employment and

earnings *in the first year after exit*. In addition to the characteristics included in our previous analysis of

the probability of leaving welfare, we include an indicator variable denoting whether the individual had

earnings in the quarter of exit (the last quarter of 1995 or 1997) to differentiate recent earnings

FIGURE 1
Industry of Longest Job in Year after Exit
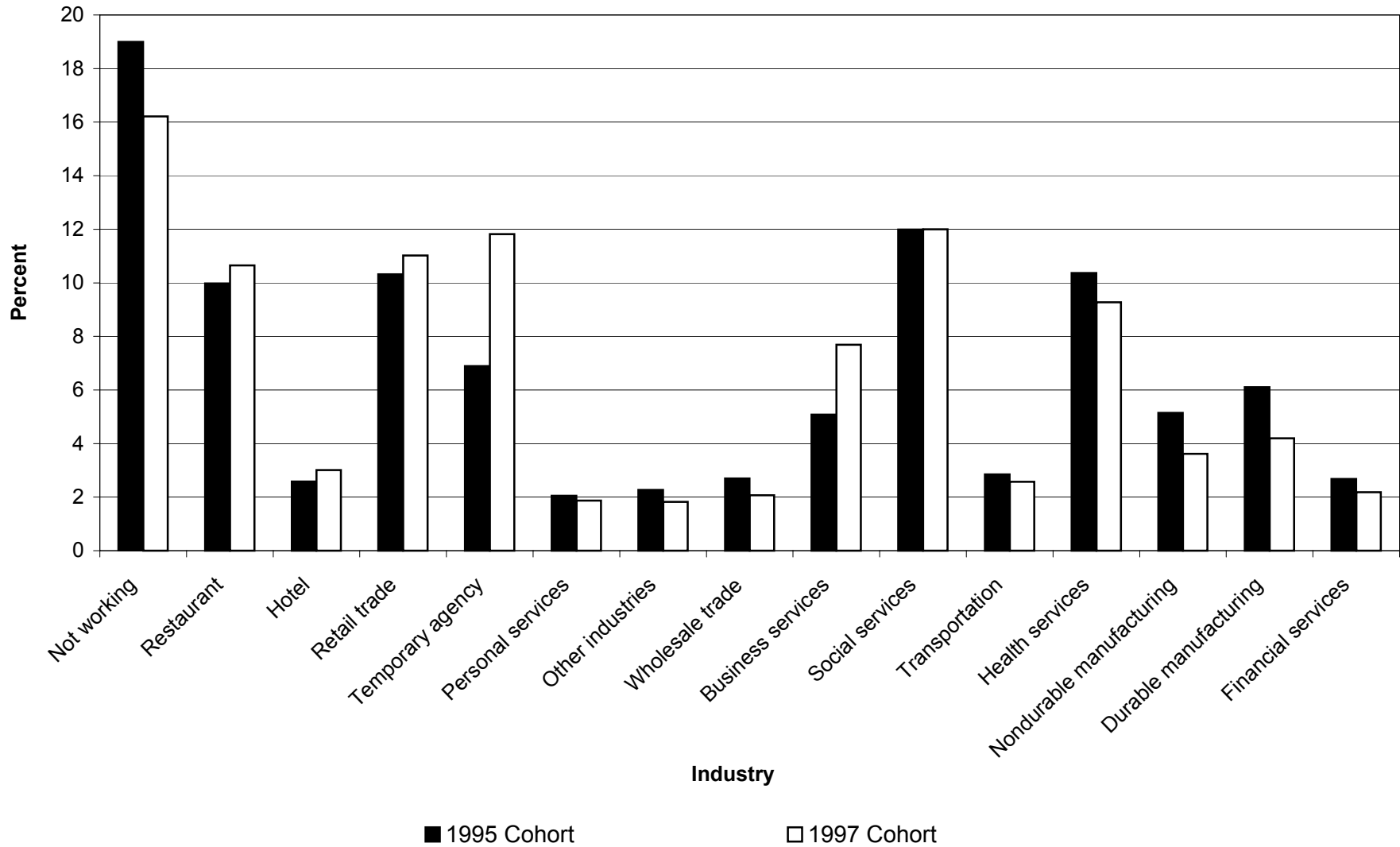
experience. We also include variables for the industry of the primary employer in the quarter of exit (last quarter of 1995 or 1997) and an indicator variable for having more than one employer in that quarter.

Table 2 reports the results of a probit analysis of employment among women who left welfare. We again show separate results for the two cohorts. In both cohorts, employment is less likely for women of color, and more likely for those with more prior work experience, those employed in the quarter of exit, and, among those employed, those with more than one employer. Contrary to expectations, employment is significantly more likely among those who had more months of welfare receipt in the 24 months prior to the sample being drawn. Finally, employment in a temporary agency in the quarter of exit is associated with being less likely to be employed in the following year than being employed in many other industries. As shown in the last column of Table 2, there are relatively few differences between the two cohorts in the relationships of initial characteristics and employment.[9]

In Table 3, we show ordinary least squares estimates of the level of earnings in the first year among those with any earnings. Among workers in the first cohort, earnings are significantly higher for those with more education and more work experience, those working in the quarter of exit, those living in areas with fewer female-headed households, and those living in areas with lower unemployment rates. Among those working at exit, those with multiple employers had higher later earnings. Earnings also varied significantly with industry of primary employer in the quarter of exit. For example, women working in temporary agencies in that quarter earned more in the following year than those initially employed in restaurants, but significantly less than those in business, financial, health or social services, transportation, wholesale trade, or manufacturing. Somewhat surprisingly, among workers, those with more children and younger children actually had higher earnings, though the differences are small. This may reflect that women with greater family responsibilities or higher child care costs need more

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[9]A likelihood test shows that we can reject a hypothesis that the same model fits both cohorts (χ^2, 45 = 71.6, p = .01).

TABLE 2
Probit Estimates of the Probability of Working in Year after Exit (leavers only)

	1995 Cohort			1997 Cohort			1995 and 1997 Cohorts Different
	Coefficient		Std. Error	Coefficient		Std. Error	
Case Head's Age							
Continuous	-0.014		0.022	-0.038	*	0.018	
Age squared	0.000		0.000	0.000		0.000	
Education (compared to less than high school degree)							
High school graduate	0.015		0.048	0.068		0.046	
More than high school graduate	0.064		0.064	0.142	*	0.068	
Race (compared to white)							
African American	-0.187	**	0.067	-0.159	**	0.060	
Hispanic	-0.213	*	0.085	-0.248	**	0.079	
Other	-0.113		0.106	-0.071		0.095	
Number of Own and Foster Children (compared to 1)							
2	-0.011		0.052	0.030		0.055	
3 or more	-0.013		0.061	0.030		0.059	
Age of Youngest Child (compared to less than 1)							
1	0.069		0.077	-0.015		0.066	
2	-0.003		0.081	-0.018		0.080	
3–5	-0.033		0.073	-0.045		0.065	
6–11	0.075		0.082	0.033		0.073	
12–18	0.026		0.105	0.016		0.101	
Other Adults in Household	0.021		0.049	0.056		0.050	
Other Children in Household	0.015		0.073	-0.160	*	0.068	
At Least One Child on SSI	0.009		0.087	-0.137		0.071	
County of Residence (compared to other urban counties)							
Milwaukee	0.103		0.090	-0.162		0.089	*
Rural counties	0.062		0.058	-0.183	**	0.071	**
Number of Quarters with Earnings in Previous 2 Years[a] (compared to 0)							
1–3	0.453	**	0.057	0.517	**	0.055	
4–7	0.760	**	0.061	0.764	**	0.061	
8	1.205	**	0.097	1.033	**	0.102	

(table continues)

	1995 Cohort		1997 Cohort		1995 and 1997 Cohorts Different
	Coefficient	Std. Error	Coefficient	Std. Error	
Percentage of Female-Headed Households in ZIP Code of Residence	-0.220	0.208	-0.011	0.177	
Number of Months Received Welfare in Previous 2 Years[a] (compared to 6 or fewer)					
7–12	0.165 *	0.073	0.069	0.077	
13–18	0.265 **	0.077	0.134	0.080	
19–24	0.311 **	0.058	0.248 **	0.066	
More than One Spell in Previous 2 Years[a]	0.009	0.053	0.036	0.051	
Unemployment Rate in County of Residence[b]	-0.059	0.031	0.064 *	0.026	**
Industry of Job in Quarter of Exit (compared to temporary agency)					
Not working	-1.191 **	0.088	-1.325 **	0.079	
Business services	0.243	0.138	-0.364 **	0.103	**
Durable manufacturing	0.373 **	0.138	-0.037	0.149	*
Financial, insurance, real estate	1.210 **	0.368	0.017	0.224	**
Health services	0.700 **	0.137	0.285 *	0.129	*
Hotels/lodging	0.147	0.177	0.194	0.189	
Non durable manufacturing	0.347 *	0.149	0.241	0.171	
Other industries	0.320	0.203	-0.184	0.189	
Personal services	0.189	0.199	0.160	0.232	
Restaurants	0.155	0.115	0.073	0.110	
Retail trade	0.368 **	0.117	0.117	0.105	
Social services, public administration, education	0.781 **	0.138	0.280 *	0.116	**
Transportation, communication, public utilities	0.613 **	0.213	0.276	0.220	
Wholesale trade	0.523 *	0.237	0.403	0.274	
More than One Employer in Quarter of Exit	0.438 **	0.087	0.309 **	0.071	
Constant term	1.104 **	0.368	1.500 **	0.311	**
Log likelihood	-2262.1		-2354.1		

*Statistically significant at the 5% level.

**Statistically significant at the 1% level.

Note: Model also controls for missing race and percentage of female-headed households variables.

[a]October 1993 through September 1995 for the 1995 cohort, and October 1995 through September 1997 for the 1997 cohort.

[b]September 1995 for the 1995 cohort, and September 1997 for the 1997 cohort.

TABLE 3
OLS Estimates of Gross Earnings in Year after Exit (leavers with earnings in year after exit only)

	1995 Cohort			1997 Cohort			1995 and 1997 Cohorts Different
	Coefficient		Std. Error	Coefficient		Std. Error	
Case Head's Age							
Continuous	336.7	**	80.3	103.3		68.0	*
Age squared	-4.5	**	1.2	-0.6		1.0	*
Education (compared to less than high school degree)							
High school graduate	1,077.3	**	159.0	1,295.4	**	147.7	
More than high school graduate	2,582.6	**	205.6	2,710.6	**	219.6	
Race (compared to white)							
African American	261.7		223.5	66.0		194.1	
Hispanic	523.5		311.8	547.4	*	278.5	
Other	757.2	*	377.3	1,745.5	**	335.7	
Number of Own and Foster Children (compared to 1)							
2	339.8	*	170.0	281.0		180.8	
3 or more	908.6	**	207.6	484.8	*	199.4	
Age of Youngest Child (compared to less than 1)							
1	38.2		268.7	281.2		214.6	
2	-277.9		277.4	516.6	*	255.8	*
3–5	-658.1	**	250.3	-419.8	*	212.6	
6–11	-260.4		278.7	-255.2		240.6	
12–18	-763.5	*	356.5	-498.6		357.5	
Other Adults in Household	-230.8		162.7	134.0		164.9	
Other Children in Household	40.7		255.8	-24.2		239.1	
At Least One Child on SSI	-1,763.8	**	305.0	-1,073.2	**	254.5	
County of Residence (compared to other urban counties)							
Milwaukee	2,226.4	**	307.6	1,924.6	**	293.9	
Rural counties	-939.5	**	190.1	-709.4	**	246.0	
Number of Quarters with Earnings in Previous 2 Years[a] (compared to 0)							
1–3	430.9		295.5	211.1		266.9	
4–7	658.2	*	294.9	722.4	**	270.1	
8	2,340.5	**	323.6	2,723.1	**	313.6	

(table continues)

	1995 Cohort			1997 Cohort			1995 and 1997
	Coefficient		Std. Error	Coefficient		Std. Error	Cohorts Different
Percentage of Female-Headed Households in ZIP Code of Residence	-2,505.1	**	684.5	-2,057.9	**	558.8	
Number of Months Received Welfare in Previous 2 Years[a] (compared to 6 or fewer)							
7–12	-56.3		257.6	-114.8		258.8	
13–18	-88.7		256.7	-376.3		264.6	
19–24	-108.4		213.2	-433.8		224.9	
More than One Spell in Previous 2 Years[a]	-416.4	*	168.6	-422.0	*	164.9	
Unemployment Rate in County of Residence[b]	-307.9	**	106.8	-242.7	**	88.1	
Industry of Job in Quarter of Exit (compared to temporary agency)							
Not working	-3,455.8	**	317.9	-3,665.5	**	261.6	
Business services	1,416.1	**	389.5	-103.4		306.5	**
Durable manufacturing	3,243.7	**	371.7	3,999.2	**	400.2	
Financial, insurance, real estate	3,788.1	**	485.1	3,432.6	**	544.4	
Health services	2,757.7	**	317.6	1,892.7	**	287.5	*
Hotels/lodging	-596.3		500.4	-1,030.6	*	446.8	
Non durable manufacturing	2,972.4	**	391.0	2,543.5	**	402.0	
Other industries	543.5		522.9	-1,044.2		547.4	*
Personal services	433.2		552.0	280.0		534.1	
Restaurants	-691.3	*	331.7	-1,295.3	**	274.1	
Retail trade	-380.8		315.6	-675.2	**	260.0	
Social services, public administration, education	2,260.1	**	313.3	1,839.8	**	273.9	
Transportation, communication, public utilities	2,417.7	**	441.2	1,468.9	**	437.4	
Wholesale trade	1,227.2	*	509.5	1,464.2	**	537.5	
More than One Employer in Quarter of Exit	430.6	**	165.1	-354.9	*	155.1	**
Constant term	2,017.8		1,321.2	4,666.8	**	1,121.0	
R^2	0.2437						

*Statistically significant at the 5% level.

**Statistically significant at the 1% level.

Note: Model also controls for missing race and percentage of female-headed households variables.

[a]October 1993 through September 1995 for the 1995 cohort, and October 1995 through September 1997 for the 1997 cohort.

[b]September 1995 for the 1995 cohort, and September 1997 for the 1997 cohort.

substantial earnings in order to leave welfare or to be employed given that they have left welfare. Those in Milwaukee and other urban counties have higher earnings than those in rural counties.

There are few differences between the cohorts in the relationship between earnings levels and other characteristics. Although we show the separate model, for consistency with the other results, a likelihood test indicates that a simple pooled model fits both cohorts as well as the separate models (F, 45 = .01, p > .10). In the simple pooled model, the coefficient on the indicator variable for the later cohort is not significantly different from zero at conventional levels (p = .12). Because the later cohort has substantially lower earnings in the bivariate but not the multivariate context, this suggests that the lower earnings are related to their having different characteristics, ones which are associated with doing worse in the labor market. Moreover, the likelihood test shows that allowing the returns to various characteristics to vary between the cohorts does not improve the explanatory power of the model.

Benefits, Income, and Poverty after Welfare

To calculate income and poverty, we first add cash assistance and Food Stamps to earnings. Over the first year, 29 percent of women leaving welfare in 1995 returned to AFDC. Women leaving in 1997 were somewhat less likely to return—25 percent received benefits in the first year. Among those who returned, the amount received was about $1,000/year higher in the second cohort (about $3,000, versus $2,000). A potential reason is that W-2 benefits (received by the second cohort) are higher than are AFDC maximum benefits (received by the first cohort) for families with one or two children. The relatively lower rate of returning to welfare in the second period is notable, given that a high proportion of cases leaving welfare in the second period included individuals with more substantial barriers to employment. On the other hand, differences in Food Stamp amounts are consistent with the view that individuals leaving in the second period include more who continue to need assistance: 81 percent of the 1997 leavers received Food Stamps during the next year, compared with only 57 percent of 1995 leavers.

Moreover, recipients in the second cohort received an average of $1,934 in Food Stamps, compared with $1,343 in the first cohort.

Our measure of a woman's own postexit income includes her earnings reported to the UI system, estimated federal income taxes, payroll taxes, and the EITC, cash assistance, and Food Stamps.[10] We also have a measure of "family income" that includes the earnings of other adults listed as being part of the household in the AFDC/W-2, Food Stamp, or Medicaid files. Figure 2 compares mean income in the third quarter of 1995 (and 1997) with mean income in the third quarter of 1996 (and 1998), in each case multiplying quarterly data by four to get annualized data. The first bar shows annualized income for the first cohort in the quarter immediately prior to leaving AFDC (July to September 1995) and indicates that these leavers had significant earnings even before exit, averaging about $4,700.[11] Estimated "net taxes" (EITC benefits less payroll and any income taxes on these earnings) add about $1,000 in income, AFDC about $4,400, and Food Stamps about $2,100. Thus total "own income" is about $12,200 and can be seen in the figure as all parts of the bar except the top portion. We then add in the net earnings of others in the household[12] (recall that we limited our sample to single mothers in September 1995 and 1997); this adds only a small amount. A year later, earnings for this cohort of leavers have increased substantially, to $7,200; increases in EITC are largely offset by increased taxes; and AFDC and Food Stamps are *much*

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[10]One of the limitations of our measure is that some child care expense offsets are included in "preleaving" income (because those paying for child care while receiving AFDC receive higher AFDC checks). While we would like to include these offsets only to the extent that they are greater than expenditures, we do not know out-of-pocket expenditures in either period. Because the increased earnings seen in the postexit period are likely to be the result of greater hours of work, we suspect that out-of-pocket expenditures on child care are higher after leaving welfare than they were while receiving it. Thus, if these expenses were included, the decline in economic well-being that we find in the figures that follow would be even greater. Moreover, we expect that some mothers had informal earnings while on welfare, and these may be lower postwelfare to the extent that these women are in the formal employment sector. On the other hand, we expect that earnings of partners may be higher when the women are off welfare than when they are on.

[11]Our sample begins with those receiving benefits in September. Some women have earnings in the July-September quarter before their spell of AFDC began, so receive earnings and AFDC sequentially. Others combine work and welfare during the same month.

[12]We include the earnings of others and any changes in payroll taxes or the EITC that result from these earnings.

FIGURE 2
Income before and after Exit
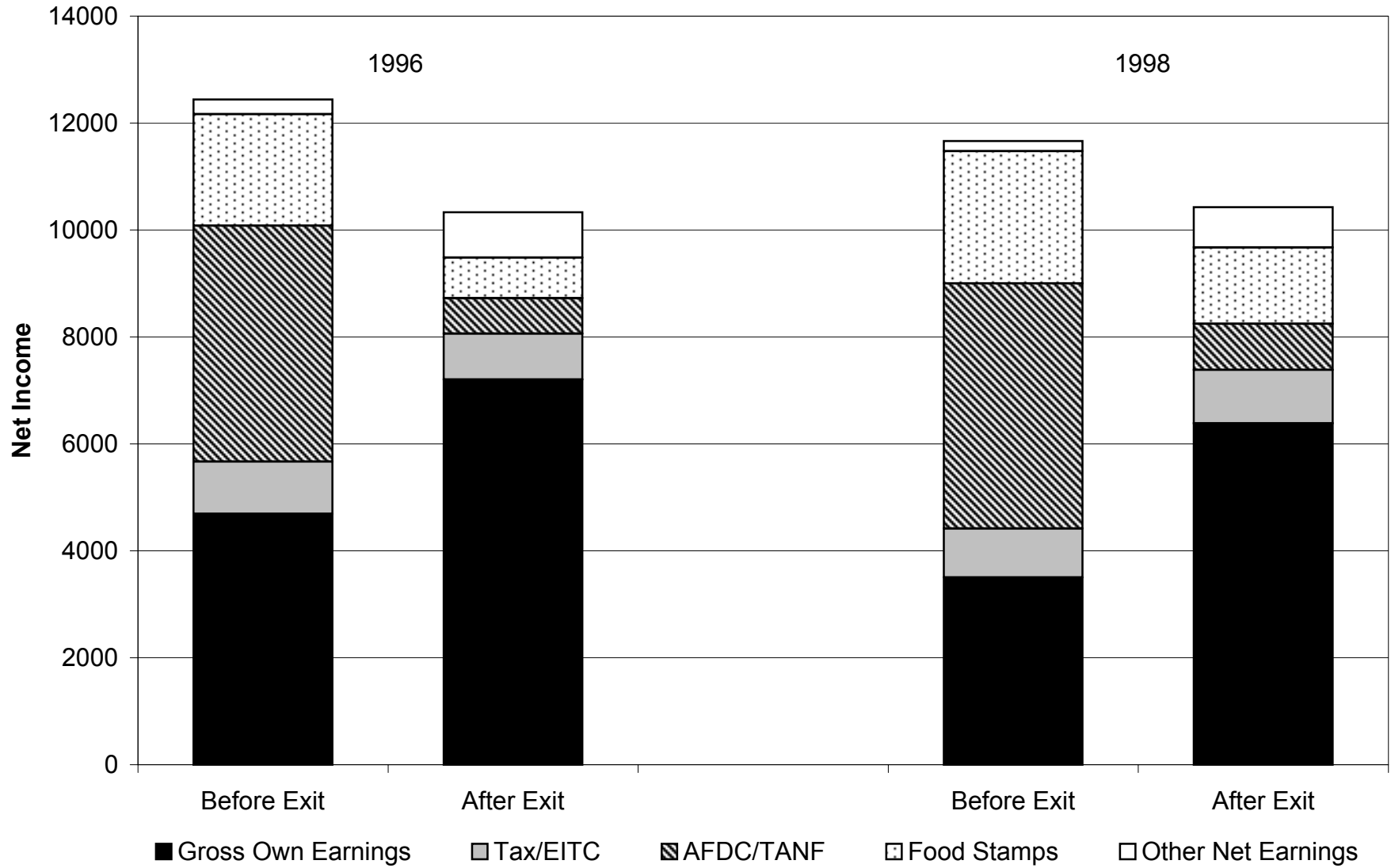
Note: This measure of income includes only gross earnings reported to the Wisconsin Unemployment Insurance system, AFDC/TANF cash payments and Food Stamps received in Wisconsin, and estimated federal EITC and payroll taxes. All leavers are included.

lower. Thus, total measured own income is substantially lower, despite the large earnings increase. The earnings of others adds about $800, not enough to offset the other losses in our measure of family income. The later cohort tells a similar story—lower total measured own and family income as large increases in own earnings (and small increases in others' earnings) are outweighed by large declines in TANF and Food Stamps.[13]

As we discussed above, postexit family income differs from own income because it includes income of a spouse or partner or other family members. In the first cohort, 7 percent have earnings from a spouse/partner, and another 4 percent have a spouse/partner without earnings. These numbers increase to 9 percent and 6 percent in the second cohort. In addition, some leavers have earnings from other family members (teens or adult children with their own earnings). Adding the earnings of spouses, partners, and others increases the incomes of only 13 and 11 percent of the families, but these earnings are not trivial for those who have them—over $3,000 in the year after exit. These estimates of the percentage of welfare mothers who have a spouse/partner, and the amounts of earnings provided, are lower than those of survey estimates (see Appendix). Thus, we tend to place more weight on the estimates of *own* income.

The average income figures mask substantial diversity in outcomes. In Figure 3 we divide individuals in the postexit period into three categories: those who are "worse off" (earnings or income has declined by $1,000 or more), "about the same" (earnings or income within $1,000 of previous amounts), and "better off" (earnings or income has increased by $1,000 or more). We compare preexit income (four times the amount in the third quarter of 1995 or 1997) with postexit income (four times the amount in the third quarter of 1996 or 1998). We use three measures of income: own earnings (without EITC or taxes), own income (earnings, EITC, taxes, AFDC/W-2, and Food Stamps), and family income (adding in the net earnings of other household members). The figure demonstrates that own earnings

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[13]Using calendar-year information for the postwelfare period (an annual measure) produces nearly identical results to the third-quarter annualized measures. For example, own income in the annual measure in the later cohort is $9,819; using the annualized measure it is $9,672.

FIGURE 3
Pre-Post Comparisons of Earnings and Income

Worse Off   ■ About the Same   ☐ Better Off
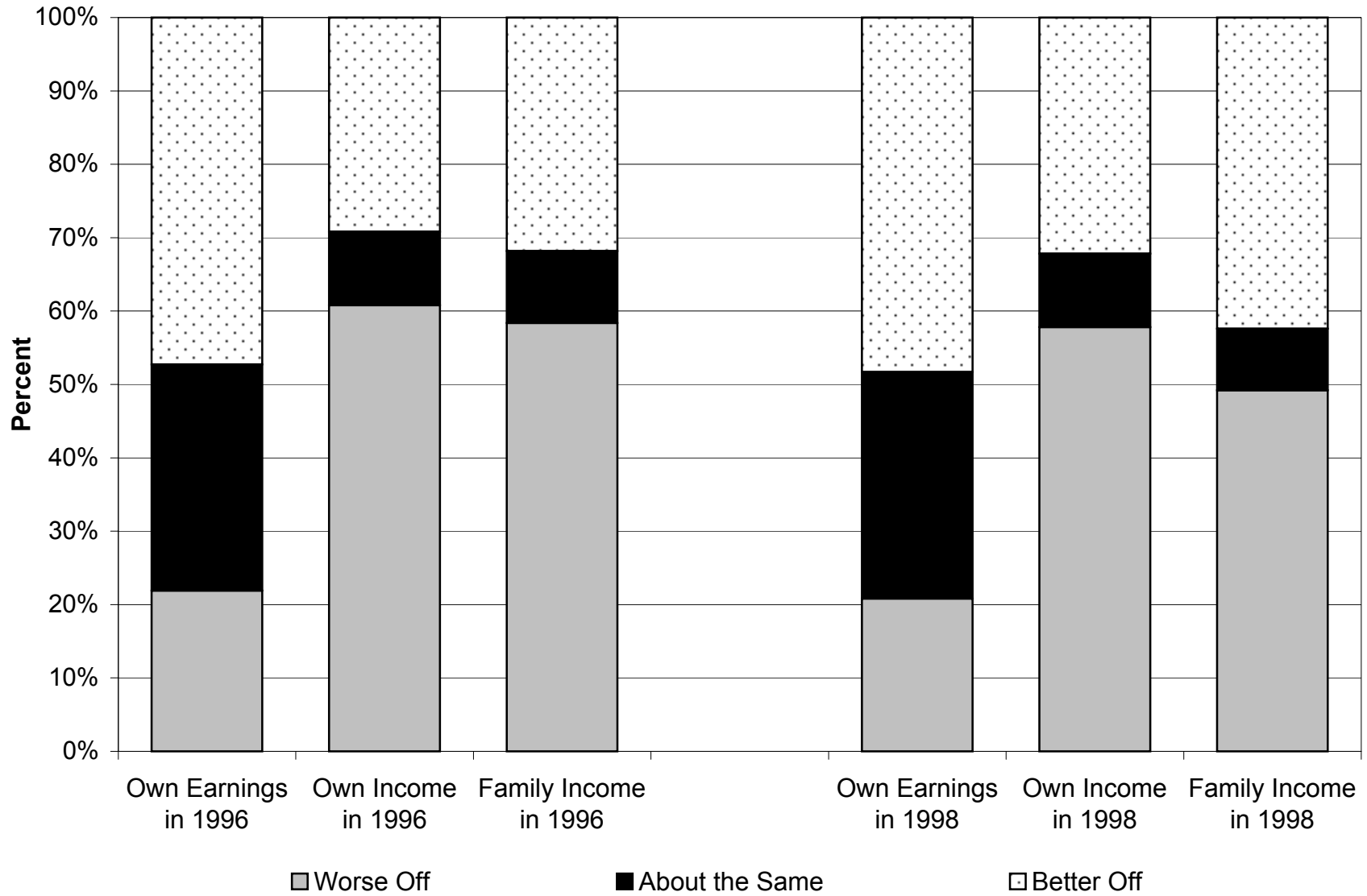
Note: "Worse off" and "better off" refer to decreases or increases of more than $1000/year when comparing annual measured income to four times the third-quarter income of the previous year.

increased for nearly half the leavers. In the first cohort, 47 percent of leavers have more earnings than they did before exit, 31 percent have similar earnings (many of these are without earnings in either period), and the remaining 22 percent have lower earnings. The second cohort's figures are nearly identical, with corresponding percentages of 48, 31, and 21, respectively. In contrast to the improved earnings, most of the sample has lower own income. In the first cohort, 61 percent have lower income and only 29 percent have higher income. There is a slight improvement in the second cohort, with 58 percent having lower income and 32 percent having higher. Adding in the earnings of others in the household improves the picture slightly for the first cohort and more substantially for the second—in 1998, 42 percent of leavers were better off using our measure of family income compared with only 32 percent using our measure of own income. However, nearly half of leavers are worse off than they were before leaving welfare, according to all the income-based measures.[14]

We now turn to an absolute measure of economic well-being and compare three measures of annual income (after-tax earnings plus the EITC, our own income measure, and our family income measure) to the poverty line and 150 percent of the poverty line. Seventy percent of the first cohort have after-tax earnings below poverty, 25 percent are near poor (between 100 and 150 percent of poverty), and only 5 percent have earnings of at least 150 percent of the poverty line. Adding in other sources of own income decreases the poverty rate somewhat, to 63 percent, and adding the income of other household members decreases it even more, to 59 percent. The second cohort has even higher poverty rates—80 percent based on after-tax earnings, 72 percent based on own income, and 69 percent based on family income.

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[14]The postexit annual figures tell a similar story—generally the annual figures show more women doing better than the annualized figures. For example, the percentage better off based on own earnings is 52 and 55 percent in the annual figures versus 47 and 48 percent in the annualized figures. Similarly, the percentage better off based on own income is 34 and 37 percent using the annual figures versus 29 and 32 percent using the annualized figures.

In Table 4 we examine the probability that own after-tax income is above the poverty line in the first year after exit, using a multivariate probit analysis. Overall, the results are generally similar for the two cohorts.[15] Not surprisingly, the characteristics associated with having own income above the poverty line generally parallel those for total earnings. In particular, poverty rates are lower for those with more education, more work experience, and smaller families, those working in the quarter of exit, those living in areas with fewer female-headed households, and those living in areas with lower unemployment rates. Poverty rates also vary significantly with industry of primary employer in the quarter of exit, following the same pattern as for earnings. There is no consistent relationship between poverty and the age of the youngest child. Although African Americans had less employment, they were actually less likely to be poor than were whites, all else equal. One exception to the similarity of results between the cohorts is that those in the later cohort with two children are more likely to have incomes above poverty than are one-child families. An analysis of having estimated *family* income above the poverty level shows quite similar results.

Simulations and Sensitivity Tests

Interpreting differences in outcomes across the two periods is complicated by changes in the background characteristics of welfare recipients over time. One method of exploring whether outcomes differ between the periods while holding the observed characteristics of leavers constant is to put both cohorts together in a combined model, differentiating with a simple indicator variable, rather than the separate models shown above. These combined models show that women were more likely to leave in the 1997 cohort than the 1995 cohort. They also show that 1997 leavers were significantly more likely to work but less likely to have own or family income above poverty. The level of earnings, among those who were working, does not differ between the cohorts.

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[15]A likelihood test shows that we can reject a hypothesis that the same model fits both cohorts (χ^2, 45 = 93.3, p < .01).

TABLE 4
Probit Estimates of Probability of Having After-Tax Income over Poverty Line in Year after Exit (leavers only)

	1995 Cohort		1997 Cohort		1995 and 1997
	Coefficient	Std. Error	Coefficient	Std. Error	Cohorts Different
Case Head's Age					
Continuous	0.034	0.019	0.000	0.017	
Age squared	0.000	0.000	0.000	0.000	
Education (compared to less than high school degree)					
High school graduate	0.189 **	0.038	0.313 **	0.037	*
More than high school graduate	0.443 **	0.048	0.499 **	0.053	
Race (compared to white)					
African American	0.191 **	0.052	0.033	0.048	*
Hispanic	0.237 **	0.072	0.105	0.068	
Other	0.037	0.090	0.174 *	0.086	
Number of Own and Foster Children (compared to 1)					
2	-0.115 **	0.040	0.187 **	0.043	**
3 or more	-0.564 **	0.050	-0.331 **	0.050	**
Age of Youngest Child (compared to less than 1)					
1	0.001	0.064	0.072	0.054	
2	-0.012	0.066	0.152 *	0.063	
3–5	-0.111	0.060	0.029	0.054	
6–11	0.000	0.066	0.069	0.060	
12–18	-0.117	0.084	0.054	0.087	
Other Adults in Household	-0.093 *	0.039	-0.054	0.042	
Other Children in Household	-0.014	0.061	0.027	0.060	
At Least One Child on SSI	-0.621 **	0.080	-0.504 **	0.072	
County of Residence (compared to other urban counties)					
Milwaukee	0.506 **	0.073	0.592 **	0.081	
Rural counties	-0.157 **	0.046	-0.219 **	0.066	
Number of Quarters with Earnings in Previous 2 Years[a] (compared to 0)					
1–3	0.339 **	0.071	0.139 *	0.069	*
4–7	0.419 **	0.071	0.236 **	0.069	
8	0.818 **	0.077	0.630 **	0.079	

(table continues)

	1995 Cohort		1997 Cohort		1995 and 1997
	Coefficient	Std. Error	Coefficient	Std. Error	Cohorts Different
Percentage of Female-Headed Households in ZIP Code of Residence	-0.511 **	0.160	-0.311 *	0.135	
Number of Months Received Welfare in Previous 2 Years[a] (compared to 6 or fewer)					
7–12	-0.016	0.061	-0.012	0.064	
13–18	0.089	0.060	-0.130 *	0.066	*
19–24	0.129 **	0.050	-0.045	0.055	*
More than One Spell in Previous 2 Years[a]	-0.030	0.040	-0.027	0.041	
Unemployment Rate in County of Residence[b]	-0.079 **	0.026	-0.060 *	0.025	
Industry of Job in Quarter of Exit (compared to temporary agency)					
Not working	-1.134 **	0.075	-1.048 **	0.070	
Business services	0.246 **	0.090	-0.036	0.075	*
Durable manufacturing	0.518 **	0.086	0.462 **	0.094	
Financial, insurance, real estate	0.586 **	0.118	0.761 **	0.128	
Health services	0.491 **	0.074	0.362 **	0.069	
Hotels/lodging	-0.025	0.115	-0.092	0.115	
Non durable manufacturing	0.570 **	0.090	0.333 **	0.096	
Other industries	0.095	0.122	-0.244	0.142	
Personal services	0.126	0.127	0.100	0.127	
Restaurants	-0.129	0.077	-0.265 **	0.070	
Retail trade	-0.028	0.073	-0.069	0.064	
Social services, public administration, education	0.405 **	0.073	0.320 **	0.066	
Transportation, communication, public utilities	0.347 **	0.103	0.229 *	0.103	
Wholesale trade	0.217	0.118	0.320 *	0.127	
More than One Employer in Quarter of Exit	0.041	0.039	-0.062	0.038	
Constant term	-1.097 **	0.309	-0.872 **	0.280	**
Log likelihood	-4034.3		-3789.9		

*Statistically significant at the 5% level.

**Statistically significant at the 1% level.

Note: Model also controls for missing race and percentage of female-headed households variables.

[a]October 1993 through September 1995 for the 1995 cohort, and October 1995 through September 1997 for the 1997 cohort.

[b]September 1995 for the 1995 cohort, and September 1997 for the 1997 cohort.

Another method of exploring outcomes before and after TANF net of the differences in observed

characteristics is to simulate the outcomes for a woman with a particular set of characteristics in each

period. Table 5 presents simulated results for women in each cohort with the same characteristics, using

the separate-cohort models. We consider the probability of leaving welfare and, for leavers, the

probability of employment and having own income over the poverty line in the year following exit. We

present estimates for women with two sets of characteristics based on what would typically be thought to

be "high" and "low" barriers to self-sufficiency. Prototype A, a young African American woman, has not

completed high school and has three children, the youngest of whom is 1 year old; in contrast, prototype

B is older, white, has completed some college, and has one child aged 12–18 (other characteristics are

shown on the table).[16] To the extent that individual differences are captured by our measures, Table 5

illustrates the change in outcomes for similar individuals in the two periods.

The first two rows of Table 5 show the results for prototypes A and B in Milwaukee. Women

with A's characteristics were highly unlikely to leave welfare in the early period—only 2 percent are

estimated to have left in the last quarter of 1995. In contrast, 41 percent of women with B's

characteristics are predicted to have left. For both groups, exit rates grow substantially in the second

period—to 13 percent for A and 62 percent for B. The rates of exit are higher in other urban counties,

and higher still in rural counties. However, the overall pattern is the same—substantial increases in the

probability of exiting between the two periods, as well as the expected differences between A and B.

Although the probability of leaving welfare grew substantially in this period, the next columns of

Table 5 suggest that first-year postexit employment grew by a small amount or stayed about the same

across the periods. In both periods, a high percentage of women are predicted to work, with little

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[16]These characteristics were selected to represent a set of traits thought to describe women facing "high" and "low" barriers to employment. The results in this paper do not necessarily confirm these assumptions. For example, while African Americans are less likely than whites to be working , as expected (Table 2), they are more likely to be above poverty (Table 4).

TABLE 5
Simulations of Probabilities for Women with Differing Barriers to Work

	Likelihood of Leaving Welfare		Likelihood of Any Employment in Year after Exit		Predicted Earnings if Employed in Year after Exit		Likelihood of Own Income above Poverty Line in Year after Exit	
	1995 Cohort	1997 Cohort	1995 Cohort	1997 Cohort	1995 Cohort	1997 Cohort	1995 Cohort	1997 Cohort
Prototype A in Milwaukee	0.023	0.128	0.753	0.862	$8,088	$6,829	0.180	0.157
Prototype B in Milwaukee	0.405	0.622	0.955	0.978	$11,914	$11,870	0.704	0.671
Prototype A in other urban county	0.042	0.429	0.774	0.861	$7,049	$5,984	0.126	0.085
Prototype B in other urban county	0.512	0.916	0.961	0.978	$10,875	$11,025	0.621	0.531
Prototype A in rural county	0.054	0.448	0.788	0.832	$5,911	$5,135	0.095	0.051
Prototype B in rural county	0.560	0.923	0.965	0.970	$9,737	$10,176	0.554	0.427

Notes: Prototype A is defined as aged 22, <12 years education, African American, three children, youngest child aged 1, no other household members, no children on SSI, no work in previous 2 years, received welfare 19–24 months in previous 2 years.

Prototype B is defined as aged 29, >12 years education, white, one child, youngest child aged 12–18, no other household members, no children on SSI, worked eight quarters in previous 2 years, received welfare 6 months or less in previous 2 years.

All cases assume mean percentage of female-headed households, mean unemployment rate for the region, and that the woman is working in a temporary agency in the quarter of exit.

difference between the regions. In each of the prototype-region cases, the likelihood of employment rose (sometimes only slightly) between the cohorts. The earnings simulations show substantial predicted declines for the women assumed to have "high" barriers and small declines or small increases for those assumed to have "low" barriers. Finally, the likelihood of having own income above the poverty line varies substantially between prototypes A and B and suggests a decrease in the probability of being poor between the periods (though only slightly in some cases).

V.   SUMMARY, DISCUSSION, AND CONCLUSIONS

We find higher rates of employment for women who have left welfare under recent reforms than have been reported in many other studies. In both cohorts, over four-fifths of leavers were employed at some point in the first year after exit; estimates from other states are generally closer to two-thirds (Acs and Loprest, 2001; Cancian et al., 1999; U.S. Department of Health and Human Services, 1999a,b; U.S. General Accounting Office, 1999). The national estimates from the NSAF are 61 to 64 percent (Loprest, 2001), but this is employment during a particular week rather than over the whole year. Our finding is consistent with other studies showing that single mothers in Wisconsin have relatively high levels of labor force participation (Wiseman, 1999). Given that individuals are working, our earnings estimates of $8,000–$9,000 per year are generally similar to other states (Acs and Loprest, 2001; Brauner and Loprest, 1999; Cancian et al., 1999; U.S. General Accounting Office, 1999). Loprest (2001) does not present NSAF estimates of a leaver's own earnings but does present median monthly family earnings of $1,246 and $1,360 for working families, an estimate much higher than the Wisconsin data on family earnings. Also similar to outcomes in other states, we find that about 20 percent of leavers return to cash benefits within the first several months, and that Food Stamp recipiency is fairly common in the first year. Finally, consistent with results of other studies of leavers, we find poverty rates, based only on own income, to be quite high (63 and 72 percent). NSAF estimates of poverty based on family income

(including the EITC and Food Stamps) are similarly quite high (though lower than our findings), 41–48 percent (Loprest, 2001).

We summarize our results of the explicit comparisons of leavers in the two different periods, discussing three methods: the simple bivariate comparisons, pooled models with cohort indicator variables (which control for observed differences in characteristics), and simulations from separate models (which control for both observed differences in characteristics and different returns to these characteristics). We also compare our results to the early-late leavers bivariate comparisons in the NSAF (Loprest, 2001).[17] We find much higher probabilities of leaving in the recent (1997) cohort using all three methods. These recent leavers have slightly higher employment rates using all three methods, but the differences are not large. The NSAF finds no significant difference. Our earnings analysis is more mixed. Recent leavers who are employed have substantially lower earnings in the simple bivariate and, generally, in the simulations, but the pooled model shows no statistically significant difference. The NSAF report compares only family earnings (not own earnings) and finds no significant difference between the cohorts. We find that recent leavers are more likely to be poor, based on either own or family income, a result that is generally consistent across all three models. In contrast, the NSAF shows that more recent leavers are *less* likely to be poor, based on family income.

In addition, we compare a leaver's earnings and income in the quarter before leaving welfare to her situation a year later. Our calculations tend to show that a leaver's earnings are substantially higher 1 year later, but declines in benefits outweigh the increases in earnings, resulting in lower own income and generally lower family income (using the best available measure of family income). Although we find that this decline in income occurs in both cohorts, the figures for the more recent leavers are not quite as negative.

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[17]Note that leavers are defined somewhat differently. Loprest defines a leaver as someone who is no longer receiving benefits, but who did receive benefits in a previous period. Thus, those who do leave but then return are not counted as leavers.

Interpreting these differences is complicated because of changes in the background characteristics of welfare recipients, changes in the economy, and likely changes in unobserved characteristics of leavers in the two periods. None of our methods can convincingly account for unobserved differences, and thus we view these results as suggestive, rather than documenting an explicit result of policy.

The encouraging news from this paper is that most women are working. The first challenge of welfare reform, to move recipients into the labor market quickly, seems to have been successfully met for many participants in Wisconsin. In both cohorts we see that over half of leavers have substantially higher earnings in the first year after welfare than they had in the quarter before leaving. However, we would argue that this is only part of the story. Another policy goal should be to increase economic well-being, and the early results suggest that this is a much stiffer challenge. Fewer than half of the leavers had higher measured net income a year after leaving. We have noted that our measure of net income neglects some potentially important sources; research that can include these other sources is clearly needed. More broadly, ongoing monitoring of more inclusive measures of economic well-being (not just income, but other measures of economic hardship as well) is needed to know whether policy reforms have met this second challenge.

Finally, we note that the Earned Income Tax Credit has a significant effect on poverty rates, even when it is considered simultaneously with payroll taxes. For example, poverty rates based only on a leaver's gross earnings are 78 percent in the first year; subtracting payroll taxes and adding the EITC decreases the poverty rate to 70 percent.[18] In a regime in which single mothers are expected to rely primarily on their own earnings, earnings supports within the tax system are especially important.

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[18]Note that we have added estimated EITC to earnings in the first year after exit, even though most households would not receive the EITC payment until after the end of the year.

APPENDIX

Sample, Variables, and Comparisons between Family and Own Incomes

I.   SAMPLE

We extracted data from the CARES database for all 65,823 AFDC-Regular recipients in Wisconsin in September 1995 and all 30,980 recipients of either AFDC-Regular or W-2 cash benefits in Wisconsin in September 1997. For both samples, we excluded cases in which there were no children identified in the assistance group (n=716, 1995; n=195, 1997), cases in which the children were not cared for by a parent (n=6,165, 1995; n=3,543, 1997), cases in which the case head was receiving SSI (n=6,269, 1995; n=5,516, 1997), cases in which the case head was less than 18 or more than 65 years old (n=294, 1995; n=91, 1997), cases in which the case head was a male (n=1,679, 1995; n=504, 1997), cases with two parents present in the household (n=482, 1995; n=136, 1997), and cases which were open in September but received $0 in cash benefits in both September and October (n=613, 1995; n=387, 1997).

This results in final sample sizes of 49,605 for the 1995 cohort and 20,608 for the 1997 cohort. Most of the analyses in this paper are performed on the subset of each cohort that left cash assistance in the fourth quarter of the year. Specifically, leavers are defined as those who received $0 in cash assistance for two consecutive months between October and January. By this definition there were 8,042 leavers in the 1995 cohort and 8,162 leavers in the 1997 cohort.

Unlike some earlier papers on welfare leavers in Wisconsin, our study includes *all* leavers, even those who do not appear in any administrative records after leaving welfare. Thus these results are comparable in this respect to DHHS leavers' studies in other states.

II.   VARIABLES

Employment, Earnings, and Industry Variables

Employment and earnings information came from the state UI database. By using the employer

IDs provided in these data, we were able to calculate the number of employers the mother had during

these periods. Using the SIC code of the place of employment, we grouped workers into the following

categories:

Group	**SIC Codes Included in Group**
Nondurable Manufacturing	2000–2999
Durable Manufacturing	3000–3999
Transportation, Communications, and Public Utilities	4000–4999
Wholesale Trade	5000–5199
Retail Trade	5200–5799, and 5900–5999
Restaurants	5800–5899
Financial, Insurance, and Real Estate	6000–6999
Hotels, Lodging	7000–7099
Personal Services	7200–7299, and 8811
Business Services	7300–7362, 7364–7399, 8111, and 8700–8799
Temporary Agencies	7363
Health Services	8000–8099
Social Services, Public Administration, and Education	8200–8699, and 9000–9999
Other Industries	0100–1499, 1500–1999, 7500–7999, and 8999

For periods in which the mother had multiple employers, we assigned her to the SIC code group of the

employer from whom she had the most earnings during the period.

Other Variables

Demographic variables and information on benefit use come from the CARES database.

The percentage of female-headed households in the ZIP Code of residence was taken from the

1990 census ZIP Code-level database, STF3B.

Monthly county-level unemployment rates are from the Wisconsin Department of Workforce

Development, Local Area Unemployment Statistics. For members of our samples who reside on an

Indian reservation, we used the unemployment rates for the following counties: for Red Cliff we used

Bayfield; for Stockbridge Munsee we used Shawano; for Lac du Flambeau we used Vilas; for Bad River

we used Ashland; and for Oneida we used Brown (the Green Bay MSA).

<u>After-Tax Earnings Variable Calculation</u>

The after-federal-tax earnings numbers are calculated on an annual basis as follows: after-tax

earnings = UI earnings + federal EITC – federal income tax – payroll tax. The estimation of EITC,

federal income tax, and payroll tax is as follows:

- The EITC was calculated under the assumptions that the case head claims all eligible children in the case at entry for tax purposes and that the earnings reported to the UI system are the only earnings reported for tax purposes. The source of the Earned Income Tax Credit parameters is the 1998 *Green Book*.

- The federal income tax was calculated under the assumptions that the case head files as head of household, takes the standard deduction, and has exemptions equal to the number of children plus 1. Taxable income is the maximum of {(UI earnings – standard deduction – exemptions),0}. The appropriate year's tax rate schedules were used to calculate the tax due.

- Payroll tax was calculated based on the earnings reported to the UI system. The source for the rates is the 1998 *Green Book,* Table 1-35.

After calculating the after-tax earnings on a calendar year basis, we calculated the ratio of after-

tax to before-tax earnings and applied this ratio to the quarterly before-tax earnings to create quarterly

after-tax earnings.

III. COMPARISONS BETWEEN FAMILY AND OWN INCOMES

Our measure of "own" income includes the administrative record of earnings, AFDC/TANF,

Food Stamps, and estimated "net taxes." To calculate family income, one needs to know whether there

are others in the household who pool income, and the amounts of the "own" income of these others.

However, administrative records are not an ideal source to identify whether there are others in the

household. In approaching our study, we sought to minimize this problem by drawing a sample of welfare recipients who, according to the administrative record, were not married. Hence, we begin our analysis with a sample of women who, to the best of our knowledge, are single mothers. Of course, being unmarried before leaving does not ensure that the mothers are unmarried a year later, when they are "leavers."

Determination of Other Household Members

For women who continue to receive Food Stamps, Medicaid, or cash welfare after their initial exit, family composition is determined by taking all eligible members in the administrative record. (Noneligible members of the household are assumed to be from another family unit.) For those women who do not appear in any administrative record for a given month, the family composition is assumed to be the same as it was the last time we observed her.

Using this information on reported changes in household composition available in the administrative record, we find that 17 percent of our leavers have additional earners aged 16 or over in the household, about 60 percent of whom are aged 19 or more and 40 percent aged 18 or less (and presumably are the mother's older children).

Extent to Which We Have Captured Household Changes and Income from Others

Two recent studies of welfare reform in Wisconsin can be compared to our results. Although these studies use somewhat different samples, we believe they can help us understand the extent to which we have captured household changes and the extent to which our findings are similar to those from other data sources. Recall that our sample here is only single-mother welfare recipients in September 1995 and 1997 who left welfare in the next 3 months. The Wisconsin Legislative Audit Bureau (LAB) (2001) examined the state tax returns of all leavers in the first quarter of 1998, a total sample of 2,129. A survey of early W-2 recipients in the Child Support Demonstration Evaluation (CSDE) (Cancian and Meyer,

2001) provided survey evidence on over 2,000 child-support-eligible mothers who entered W-2 between September 1997 and July1998, not just leavers. We also compared our findings to the national survey analysis of mothers who left AFDC in the 1980s (Meyer and Cancian, forthcoming).[19]

We estimate that 11 percent of 1995 leavers and 15 percent of 1997 leavers have a spouse or partner in the next year. The LAB reports that 13 percent of the leavers filed with a tax status as "married, filing jointly," 52 percent filed with one of the "single" statuses, and 35 percent did not file Wisconsin taxes. Because some of those who did not file taxes have spouses/partners, and because those living with cohabitors would not file jointly, the percentage of leavers who are married or partnered would be over 13 percent. The CSDE finds that 23 percent of mothers reported a spouse or partner in the spring of 1999, rising to 28 percent in spring 2000. The national data on AFDC leavers show that about 30 percent report that they had a spouse or partner with earnings in each of the first 5 years after exit.

We find that 4 percent of the 1995 leavers and 6 percent of the 1997 leavers have a spouse or partner with no earnings. When there is a spouse or partner with earnings, earnings are low, but not trivial, averaging $5,911 for 1995 leavers and $4,374 for 1997 leavers. Moreover, we find earnings of other family members (primarily teenage or adult children of the leavers) for 13 percent of the 1995 leavers and 11 percent of the 1997 leavers. When this source is present, it averages $3,904 for 1995 leavers and $3,218 for 1997 leavers. Combining the earnings of spouses, partners, and other family members, we find that 18 percent of the 1995 leavers and 17 percent of the 1997 leavers have other family earnings, with an average (when present) of $5,140 for the 1995 leavers and $4,158 for the 1997 leavers.

Because the LAB has data from tax returns only, it does not have each individual's earnings when a couple files a joint return. The CSDE reports only on a spouse's/partner's earnings, not those of

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[19]All dollar figures in our leavers analysis are reported in 1998 dollars. The LAB report also uses 1998 dollars. The CSDE dollar figures are not adjusted for inflation, so are either 1998 or 1999 dollars. The national survey data from Meyer and Cancian (forthcoming) uses 1998 dollars.

other family members, and finds that about four-fifths of the partners had earnings, and when this source is present, it averages over $10,000. Similarly, the national AFDC data show that among the leavers with spouses/partners with income, mean and median amounts are well over $10,000.

Only rough comparisons of total family income can be made, as the studies differ not only in samples and time periods but also in the components of family income that are measured. We find that total family income, including earnings, AFDC/TANF, Food Stamps, and estimated EITC and taxes, covering the whole year, averaged $10,458 in 1996 and $10,470 in 1998 for all, and averaged $14,881 (1996) and $14,165 (1998) among those with other family members' earnings. The LAB reports taxable gross income (earnings and the EITC, but not AFDC/TANF, Food Stamps, nor taxes subtracted), and finds average income among those filing "married, joint" as $23,409. The large number of nonfilers (35 percent) makes a calculation of average income over all difficult. If one assumes that all nonfilers had no *taxable* income, then average gross taxable income over the whole sample would be $9,255; if nonfilers had average incomes of $5,000, the average income over all would be $11,021. The CSDE reports income from all sources (including Food Stamps but not the EITC, nor with taxes subtracted). It finds average family income of $12,082 in 1998 and $14,779 in 1999. The national data report a similar measure of income to the CSDE (including Food Stamps but not the EITC, nor with taxes subtracted). It finds median family income of about $10,000.

In summary, we have a lower rate of leavers with spouses or partners than the other sources; our estimates of 11–15 percent are most comparable to the CSDE's 23–28 percent. Our estimates of spouses'/partners' earnings, among those with earnings, are also lower than other estimates; our estimates of $4,400–$5,900 are most comparable to the CSDE's numbers of over $10,000. Because neither Wisconsin study has a directly comparable measure of income, only an approximate comparison can be made. Because the majority of leavers do not have income from other family members, our overall estimates are not as far off; our family income of about $10,500 is somewhat comparable to the LAB's

$9,300–$11,000 (although this does not include cash assistance or Food Stamps) and to the CSDE's

$12,100–$14,800. Thus, it appears that our measures of individual income are better than our measures

of family income. For this reason, we focus most of our discussion in the paper on a leaver's *own*

income. We would note, however, that while our measure of the family income of our leavers has

limitations, there is *no superior measure available* that provides a relatively current comparison of

economic well-being for different cohorts, nor do we expect that any underestimation bias that we find is

different between the two cohorts, making the cross-cohort comparisons of substantial interest.

APPENDIX TABLE 1
Characteristics of AFDC-Regular Caseload in Wisconsin
(cases active in September 1995 and September 1997)

	1995		1997	
	Total[a]	Leavers[b]	Total[a]	Leavers[b]
Total (N)	49,605	8,042	20,608	8,162
Region				
Milwaukee	54.6	38.8	74.9	55.3
Other urban	29.6	36.7	17.7	30.8
Rural	15.8	24.5	7.4	13.9
Case head's age				
18–24	36.0	32.2	37.3	37.9
25–29	23.8	24.0	22.4	23.3
30–39	32.1	34.9	30.7	30.3
40+	8.1	9.0	9.6	8.5
Education				
<11 years	24.3	18.9	29.4	24.7
11 years	19.3	14.9	25.0	21.7
12 years	42.1	47.9	36.0	40.8
>12 years	14.3	18.4	9.6	12.8
Race				
White	40.4	53.6	22.2	34.8
African American	42.1	30.3	57.1	43.9
Hispanic	7.0	6.8	8.4	8.6
Other	4.4	3.8	4.2	5.2
Unknown	6.0	5.5	8.1	7.5
Number of own and foster children				
1	39.0	46.8	33.1	35.3
2	29.7	30.2	29.0	29.8
3+	31.3	23.0	37.9	34.9
Age of youngest child				
<1	18.5	14.7	23.5	26.8
1	17.1	14.0	17.7	17.0
2	13.1	12.6	11.2	10.2
3–5	24.1	25.9	21.7	20.9
6–11	19.4	22.4	18.6	18.3
12–18	7.8	10.4	7.3	6.9
Other household members				
Other children only	2.6	1.8	4.0	3.0
Other adults only	21.0	23.3	18.6	19.7
Other adults and other children	7.5	8.2	7.5	7.7
Child on SSI	9.1	6.3	11.6	8.7

APPENDIX TABLE 1, continued

	1995		1997	
	Total[a]	Leavers[b]	Total[a]	Leavers[b]
Start of current spell[c]				
0–3 months ago	14.8	27.7	17.0	20.7
4–6 months ago	6.8	10.3	9.8	11.6
7–9 months ago	5.2	6.6	6.8	7.7
10–12 months ago	4.4	5.4	5.3	6.0
13–18 months ago	7.1	7.0	6.4	6.7
19–24 months ago	6.1	5.1	4.6	4.7
> 24 months ago	55.7	37.9	50.2	42.5
Number of months received welfare in the 2 years prior to September 1995 and 1997[c]				
6 or fewer	10.0	16.3	8.5	12.4
7–12	9.1	13.3	9.4	11.7
13–18	12.0	16.9	14.4	16.2
19–24	68.9	53.5	67.7	59.6
Number of quarters with earnings in the 2 years prior to September 1995 and 1997[c]				
None	29.0	14.5	22.4	13.8
1–3	31.9	29.0	34.4	33.9
4–7	29.1	37.2	33.9	38.7
8	10.0	19.2	9.4	13.6
Total earnings in the 2 years prior to September 1995 and 1997[c]				
<$500	39.3	20.7	33.4	22.5
$500–$2,499	18.7	15.5	21.7	21.4
$2,500–$7,499	20.8	25.5	24.0	28.0
$7,500 or more	21.3	38.4	20.9	28.1

[a] Recipients in September.
[b] Left in the last quarter of the year.
[c] Sample in the first two columns includes case heads who were 18 or older in October 1993 (N=46,047 and 7,608); the third and fourth columns include those 18 or older in October 1995 (N=18,689 and 7,434).

APPENDIX TABLE 2
Probit Estimates of Probability of Leaving, by Recipient Characteristics

	1995 Cohort			1997 Cohort			1995 and 1997 Cohorts Different
	Coefficient		Std. Error	Coefficient		Std. Error	
Case Head's Age							
Continuous	0.055	**	0.007	0.015		0.009	**
Age squared	-0.001	**	0.000	0.000	*	0.000	**
Education (compared to less than high school degree)							
High school graduate	0.090	**	0.016	0.129	**	0.021	
More than high school graduate	0.123	**	0.022	0.293	**	0.034	**
Race (compared to white)							
African American	-0.073	**	0.022	-0.335	**	0.029	**
Hispanic	0.116	**	0.031	-0.027		0.040	**
Other	-0.135	**	0.037	-0.255	**	0.052	
Number of Own and Foster Children (compared to 1)							
2	-0.050	**	0.018	0.095	**	0.026	**
3 or more	-0.162	**	0.021	0.083	**	0.028	**
Age of Youngest Child (compared to less than 1)							
1	0.158	**	0.026	0.005		0.031	**
2	0.241	**	0.027	-0.034		0.036	**
3–5	0.246	**	0.024	-0.024		0.030	**
6–11	0.247	**	0.027	-0.039		0.034	**
12–18	0.306	**	0.036	-0.019		0.049	**
Other Adults in Household	0.049	**	0.017	0.043		0.024	
Other Children in Household	0.002		0.025	-0.038		0.032	
At Least One Child on SSI	-0.028		0.028	-0.131	**	0.032	*
County of Residence (compared to other urban counties)							
Milwaukee	-0.159	**	0.031	-1.043	**	0.050	**
Rural counties	0.107	**	0.021	-0.019		0.047	*
Number of Quarters with Earnings in Previous 2 Years[a] (compared to 0)							
1–3	0.340	**	0.020	0.449	**	0.027	**
4–7	0.492	**	0.021	0.623	**	0.028	**
8	0.759	**	0.026	0.949	**	0.039	**

(table continues)

	1995 Cohort		1997 Cohort		1995 and 1997
	Coefficient	Std. Error	Coefficient	Std. Error	Cohorts Different
Percentage of Female-Headed Households in ZIP Code of Residence	-0.336 **	0.066	-0.182 *	0.072	
Number of Months Received Welfare in Previous 2 Years[a] (compared to 6 or fewer)					
7–12	-0.152 **	0.028	-0.015	0.041	**
13–18	-0.247 **	0.028	-0.059	0.040	**
19–24	-0.371 **	0.022	-0.078 *	0.034	**
More than One Spell in Previous 2 Years[a]	0.249 **	0.019	0.040	0.024	**
Unemployment Rate in County of Residence[b]	-0.013	0.011	0.048 **	0.015	**
Constant term	-2.052 **	0.121	-0.153	0.148	**
Log likelihood	-20003.4		-11762.0		

*Statistically significant at the 5% level.

**Statistically significant at the 1% level.

Note: Model also controls for missing race and percentage of female-headed households variables.

[a]October 1993 through September 1995 for the 1995 cohort, and October 1995 through September 1997 for the 1997 cohort.

[b]September 1995 for the 1995 cohort, and September 1997 for the 1997 cohort.

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