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The Employment, Earnings, and Income of Single Mothers in Wisconsin Who Left Cash Assistance: Comparisons among Three Cohorts

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Abstract

We use administrative data from Wisconsin to compare employment, earnings, and income outcomes for welfare leavers under early AFDC reforms and under the later, more stringent TANF program. We consider outcomes for women leaving welfare in 1999, updating an earlier analysis of those who left welfare in 1995 and 1997. We find substantially higher rates of exit in the later periods. Later leavers are somewhat more likely to work, but their earnings are lower. We also make a pre-post comparison of individual employment and income experiences, examining a leaver's outcomes during a calendar quarter of welfare receipt with these outcomes a year after leaving welfare. On average, substantial earnings growth is outweighed by declines in benefits, resulting in reduced total measured net income. The reductions in income from before to after exit are greater for those in the 1995 cohort relative to those in the 1997 and 1999 cohorts.

The Employment, Earnings, and Income of Single Mothers In Wisconsin Who Left Cash Assistance: Comparisons among Three Cohorts

After passage of the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996, cash assistance caseloads in Wisconsin fell 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 the post-exit economic well-being of "leavers." We have analyzed these questions in a series of papers, of which the most recent compares outcomes of those who left cash welfare in 1997 and those who left in 1995 (Cancian et al., forthcoming). This paper extends this work, adding a third cohort, those who left in 1999.

Evaluating recent reforms is difficult, as welfare policies vary dramatically across states, and there are few comprehensive evaluations of state Temporary Assistance for Needy Families (TANF) policies. Nonetheless, a growing literature analyzes outcomes under TANF in individual states. This literature includes general studies of outcomes for TANF participants as well as experimental evaluations of some programs (for example, see Ziliak, 2002, for a review of nine state studies; Berlin, 2002, for a review of key experimental evaluations, and Grogger et al., forthcoming, for a review of both state-specific and cross-state studies). Among recent studies of welfare reform are several state-level analyses 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 often limited in their conclusions 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. (See Haveman, 2000, on the strengths and weaknesses of alternative designs for welfare evaluation.)

It could be argued that an ideal study of the effects of welfare reform would involve a national sample of individuals and their families, studying their experiences after state reform is enacted. This approach could, in principle, allow comparisons across a variety of approaches in the wake of the 1996

federal legislation. However, such a national study of the effects of welfare reform is difficult. First, the state-specific programs vary substantially, and in a variety of dimensions; thus the characteristics of the key features of welfare reform in each state are hard to identify. Moreover, available national data sets do not have sufficient samples in most states.

In our work, we have chosen an alternative approach—namely, to select a particular state, Wisconsin, with particularly useful information over a long period of time encompassing varying intensities of reform effort. In its final form, the Wisconsin reform focuses very heavily on "work" together with work-related supports including child care assistance and highly subsidized health insurance for the mothers (Gais et al., forthcoming).

As we discuss in greater detail below, Wisconsin began work-based welfare reforms in the late 1980s, and by 1995 had in place a work-oriented cash assistance program similar to that which has been implemented by many other states after, and in response to, the national welfare reform legislation of 1996. By 1997, Wisconsin had moved to a stringent, work-focused approach not dissimilar to that which other states are likely to consider in response to subsequent national reform legislation requiring more stringent work mandates. This work-focused approach has continued to today. However, substantial support for work activities in the form of child care assistance and highly subsidized health insurance, including health insurance coverage for parents as well as children, were added in recent years. Hence, an examination of the experiences of Wisconsin's leavers under various policy regimes may offer insight into the effects of national legislation that mandates more work-intensive policy measures.[1]

In our analysis, we compare the post-exit earnings, employment, and income of women (and their families) who exited Wisconsin's cash assistance program in 1995, 1997, and 1999. We also compare a measure of post-exit income (earnings plus work supports and in-kind benefits) with each woman's measured income in the quarter before leaving cash assistance. Although these comparisons cannot fully

[1]An additional advantage to studying 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.

answer questions about the effects of the Wisconsin reform effort, they do provide valuable information on outcomes for cash assistance recipients who have left welfare at different points in time. As such, our findings provide important context for considering other evidence regarding the effects of the reform.

WELFARE REFORM IN WISCONSIN

Wisconsin has been a leader in welfare reform.[2] Early reform initiatives in the late 1980s included requiring job search or training for most women receiving benefits and requiring regular school attendance for teenagers in AFDC families. Many reforms were confined to selected counties and did not include Milwaukee County, home to most of the state's welfare participants.

The Pay for Performance (PFP) program, a substantial work-focused reform, was implemented statewide in March of 1996. Under this program many applicants were diverted from welfare, and those who chose to complete the application process were required to perform significant up-front job search or work-related activities before their case could be opened. Nonparticipation often led to loss of the full family benefit (not just the benefit amount for the mother) and even mothers of very young children were expected to participate.

In the summer of 1997, PFP was phased out and was replaced by the state's TANF program, Wisconsin Works (or W-2,) in September 1997. The work focus of W-2 mirrored the earlier PFP program in important ways: it also required work or work-like activities, had cash benefits available only after a period of program participation, and required even mothers of very young children to participate. But W-2 also included some important new changes in program structure and administration. W-2 program "tiers" included a large Community Service Jobs program. Although grants varied somewhat by tier, they did not vary with family size. In Milwaukee, home to the majority of state welfare participants, program administration was moved from the county to five independent organizations—including both not-for-

[2]For more information on the history of welfare reforms in Wisconsin, see Wiseman (1996).

profit and for-profit groups. Wisconsin's W-2 program is one of the most work-focused TANF programs in the country.

In the years after 1998, Wisconsin added substantial resources in the form of additional resources for child care subsidies to the work-focused emphasis of W-2. And, in the summer of 1998, BadgerCare was inaugurated, providing highly subsidized health insurance to mothers and children, supplementing Medicaid support available for children, with coverage available up to 200 percent of the poverty line.[3] With BadgerCare in place, mothers could enter the workforce, and leave cash assistance, without fear of being without health insurance.

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, 2001; 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, forthcoming; Friedlander and Burtless, 1995; Loprest, 1999; U.S. Department of Health and Human Services, 1999a,b; and 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 and $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, forthcoming; Loprest, 2001).

There is little prior literature that explicitly compares the economic well-being of those who left welfare at different times or under different policy regimes. One notable exception is Pamela Loprest (2001). Using data on several states from the National Survey of America's Families (NSAF), she compares the employment, earnings, and income experiences of leavers during an earlier (1995–1997)

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[3]To establish eligibility, family income must be below 185 percent of the poverty line.

and a later (1997–1999) period, and finds similar outcomes for both recent and earlier leavers. Although recent leavers have slightly lower poverty rates, they experience 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). Conclusions are also complicated by potential differences in the characteristics of leavers in different periods. Some studies have shown that the composition of the welfare caseload shifted over time toward a higher percentage of those with more barriers to employment (see, for example, Cancian and Meyer, 1995), but other studies suggest surprisingly few differences in the characteristics of recipients (Zedlewski and Alderson, 2001).

A second type of study compares outcomes for different cohorts of leavers who faced different policies (Cancian et al., forthcoming; Carrington et al., 2002). Missouri leavers in the late 1990s were more likely to be employed and to have higher earnings, and less likely to return to cash assistance, than leavers in the early 1990s (Carrington et al., 2002). Our earlier work (Cancian et al., forthcoming) follows the same strategy as the present analysis, but compares the outcomes after leaving cash assistance for only the first two cohorts of women included in this study. In that study, we found substantially higher rates of exit in 1997 than in 1995. The leavers in 1997 were somewhat more likely to work than the 1995 leavers, but their earnings were lower. We also made a pre-post comparison of individual employment and income experiences, examining a leaver's outcomes during a calendar quarter of welfare receipt and these outcomes a year after leaving welfare. On average, substantial earnings growth is outweighed by declines in benefits, resulting in reduced total measured net income.

As with the earlier studies, the differences in outcomes across cohorts for Wisconsin leavers may reflect changes in the characteristics of leavers, changes in the welfare regime (for example, implementation of stricter time limits and work requirements, or the addition of substantial work supports), or changes in economic conditions among the periods. However, we note that there were few

substantial differences in the Wisconsin economic climate between 1996 and 2000; for example, the unemployment rate was 3.5 percent in 1996, 3.4 percent in 1998, and 3.5 percent in 2000.

DATA, SAMPLE, MEASURES, AND APPROACH

Data

The analysis reported here is based on administrative data from the state of Wisconsin. We 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 Insurance (UI) system, which includes information on quarterly earnings and employers. (Additional information on data construction and sources is contained in the Appendix.)

Sample

Our samples begin with women receiving assistance under AFDC-Regular or W-2 in September of 1995, 1997, and 1999 who are listed as the "case head" and who do not have the father 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.)

Table 1 provides information on the characteristics of:

- the 49,605 AFDC recipients in September 1995, and the 8,042 women who left AFDC during the last quarter of 1995,
- the 20,608 recipients of cash assistance in September 1997, and the 8,162 women who left AFDC or W-2 during the last quarter of 1997, and
- the 7,363 recipients of cash assistance in September 1999, and the 2,997 women who left cash assistance under W-2 during the last quarter of 1999.

TABLE 1
Characteristics of AFDC-Regular Caseload in Wisconsin
(cases active in September 1995, September 1997 and September 1999)

	1995		1997		1999	
	Total[a]	Leavers[b]	Total[a]	Leavers[b]	Total[a]	Leavers[b]
Total (N)	49,605	8,042	20,608	8,162	7,363	2,997
Region						
Milwaukee	54.6	38.8	74.9	55.3	82.3	77.2
Other urban	29.6	36.7	17.7	30.8	13.0	17.1
Rural	15.8	24.5	7.4	13.9	4.7	5.7
Case Head's Age						
18–24	36.0	32.2	37.3	37.9	39.7	41.4
25–29	23.8	24.0	22.4	23.3	20.3	23.16
30–39	32.1	34.9	30.7	30.3	28.9	26.9
40+	8.1	9.0	9.6	8.5	11.1	8.5
Education						
<11 years	24.3	18.9	29.4	24.7	29.6	27.4
11 years	19.3	14.9	25.0	21.7	28.1	28.0
12 years	42.1	47.9	36.0	40.8	34.1	35.5
>12 years	14.3	18.4	9.6	12.8	82.2	9.1
Race						
White	40.4	53.6	22.2	34.8	17.5	19.6
African American	42.1	30.3	57.1	43.9	64.4	62.5
Hispanic	7.0	6.8	8.4	8.6	6.5	5.9
Other	4.4	3.8	4.2	5.2	1.4	1.7
Unknown	6.0	5.5	8.1	7.5	10.1	10.3
Number of Own and Foster Children						
1	39.0	46.8	33.1	35.3	37.0	35.8
2	29.7	30.2	29.0	29.8	29.3	29.4
3+	31.3	23.0	37.9	34.9	33.6	34.7
Age of Youngest Child						
<1	18.5	14.7	23.5	26.8	30.6	38
1	17.1	14.0	17.7	17.0	13.9	12.7
2	13.1	12.6	11.2	10.2	9.9	9.1
3–5	24.1	25.9	21.7	20.9	17.6	16.2
6–11	19.4	22.4	18.6	18.3	19.7	17.1
12–18	7.8	10.4	7.3	6.9	9.3	6.9

(table continues)

TABLE 1, continued

	1995		1997		1999	
	Total[a]	Leavers[b]	Total[a]	Leavers[b]	Total[a]	Leavers[b]
Other Household Members						
Other children only	2.6	1.8	4.0	3.0	6.1	6.6
Other adults only	21.0	23.3	18.6	19.7	17.7	16.8
Other adults and other children	7.5	8.2	7.5	7.7	6.3	6.8
Child on SSI	9.1	6.3	11.6	8.7	11.6	10.2
Start of Current Spell[c]						
0–3 months ago	14.8	27.7	17.0	20.7	34.0	36.4
4–6 months ago	6.8	10.3	9.8	11.6	19.1	22.1
7–9 months ago	5.2	6.6	6.8	7.7	9.9	10.7
10–12 months ago	4.4	5.4	5.3	6.0	6.3	6.1
13–18 months ago	7.1	7.0	6.4	6.7	6.3	6.4
19–24 months ago	6.1	5.1	4.6	4.7	3.6	3.2
> 24 months ago	55.7	37.9	50.2	42.5	20.8	15.2
Number of Months Received Welfare in Previous Two Years[c]						
6 months or less	10.0	16.3	8.5	12.4	27.3	32.1
7–12 months	9.1	13.3	9.4	11.7	28.1	19.6
13–18 months	12.0	16.9	14.4	16.2	19.4	20.3
19–24 months	68.9	53.5	67.7	59.6	35.3	28.0
Number of Quarters with Earnings in Previous Two Years[c]						
None	29.0	14.5	22.4	13.8	18.8	11.8
1–3 quarters	31.9	29.0	34.4	33.9	31.8	29.6
4–7 quarters	29.1	37.2	33.9	38.7	39.1	44.5
8 quarters	10.0	19.2	9.4	13.6	10.3	14.1

[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); the fifth and sixth columns include those 18 or older in October 1997 (N=6,559 and 2,696).

The rate of exit is much higher in the second and third periods: 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; in 1999, 41 percent of cash assistance recipients in September 1999 left within 3 months.

Our 1995 cohort left cash assistance before Wisconsin implemented key statewide work-focused welfare reforms. As noted above, PFP began in March of 1996, after the 1995 group had left welfare. W-2 began in September 1997. Thus, the 1995 cohort left a welfare program that had undergone early reforms, but that had yet to implement the more demanding work-focused requirements of PFP on a statewide basis. The 1997 cohort left cash assistance after the Wisconsin program had been transformed by PFP and during the initial and work-focused implementation of W-2. The final cohort, those who left cash assistance in 1999, were exiting a W-2 program that retained its emphasis on work, but which had added substantial work supports in the form of child care and family health insurance.

Given earlier reforms and substantial declines in the caseload, we would expect women receiving benefits in 1997 and 1999 to have greater barriers to work on average than those receiving benefits in 1995. We discuss the factors associated with leaving welfare for each cohort in the results section below. In interpreting outcomes for the three cohorts it is important to consider differences in the characteristics of women receiving and leaving welfare in each period, and our measures capture a substantial array of differences in circumstances and characteristics of welfare participants and leavers in the three periods. However, the potential for other unobserved differences in welfare participants and leavers or the labor markets into which they enter must be considered in interpreting our results.

Empirical Measures and Their Attributes

Our main outcomes of interest are leavers' 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 the measurement of formal employment and earnings. However, because these data do not contain information on individuals

who move out of state, who are self-employed, or who are in jobs not covered by the UI system (covered workers include about 94 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 federal Earned Income Tax Credit (EITC) 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 under her own control, we do not include the income of a spouse or partner. 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 information on household composition of selected individuals after leaving cash assistance.[4] We include the earnings of any new spouses or potential partners, along with the EITC and taxes associated with their 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 own income.

Other analysis of post-exit well-being based on more inclusive survey data suggests that measures of income limited to only mothers' earnings and benefit receipt understate family income. For example, Meyer and Cancian (1998) examine economic well-being of a national sample in the first 5 years after

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[4]If the 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 some information on other adults in the household.

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, the difference in poverty rates from the two measures may provide insight into the interpretation of our findings.[5] 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).[6]

While we recognize these considerations, administrative data are the only consistently available source of information on recent AFDC/TANF leavers. Although our measure of income is not a complete estimate of economic well-being, it does allow an assessment of self-sufficiency based on own earnings, a focus of welfare reform.[7] Moreover, the extent to which earnings and other supports (Food Stamps, EITC) observed after leaving cash assistance replace (or fail to replace) welfare income is seen as critical by

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[5]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.

[6]For example, Bavier (2001) reports that only about 70 percent of the total amount of AFDC benefits known to be paid through administrative records are reported in Survey of Income and Program Participation (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.

[7]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.

many policymakers.[8] 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 three cohorts. Any differences in outcomes we observe may merely be the result of differences in observable characteristics. A simple approach to exploring whether the success of leavers varies over the cohorts is to conduct a multivariate analysis on the pooled sample, differentiating among cohorts with an indicator variable. In such an analysis, the coefficient on the indicator variables measures differences in the success of the members of various cohorts, controlling for observable characteristics. However, it is possible that there are different relationships between the outcomes and the characteristics in the various periods. Hence, we also estimate a fully interacted model and conduct a test to see whether the fully interacted model fits the data better than the pooled model. (The fully interacted model is equivalent to estimating separate models for each period.) Because this model does not provide a straightforward answer to the question of differences in the success of various cohorts, we use the estimated results to predict outcomes for women with specific sets of characteristics, and then compare these simulated results across cohorts.

RESULTS

Before considering the outcomes, we first review the characteristics of leavers. Table 1 provides information on the characteristics of all single-parent recipients and welfare leavers in 1995, 1997, and 1999. Although the characteristics of the groups of leavers are fairly similar, in general the leavers in the

[8]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 post-leaving 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 work supports is an important step toward the goal.

1999 cohort are somewhat more disadvantaged than those in the 1997 cohort, and the members of both of these later cohorts are more disadvantaged than the earliest cohort.

For example, women who left welfare in the last quarters of 1997 and 1999 were more likely to have low levels of education (46 percent with less than a high school degree in 1997, and 55 percent in 1999, compared with 34 percent in 1995), more children, very young children, and children with a disability (receiving SSI). Leavers in the last two cohorts were also much more likely to be African American and to live in Milwaukee County (the most urbanized county in the state). Table 2 presents the results of a descriptive multivariate analysis, presenting 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 three cohorts of leavers. The final columns of the table indicate whether the coefficients for the 1995 and 1997 cohorts, and for the 1999 and 1997 cohorts, are significantly different from each other. In 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 the 1995 and the 1997 cohorts, but not the 1999 cohort. The final columns show that there is no statistically significant difference in the effect of high school graduation between the first two cohorts, but there is between 1997 and 1999. Having more than a high school degree also had a significant positive relationship with the probability of leaving welfare in both the 1995 and the 1997 cohorts, but it is significantly larger for the 1997 leavers.

Consider, first, the differences in the probability of leaving welfare in the 1995 and 1997 cohorts. 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 include 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.

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

	1995 Cohort		1997 Cohort		1999 Cohort		1995 and 1997	1997 and 1999
	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error	Cohorts Different	Cohorts Different
Case Head's Age								
Continuous	0.055 **	0.007	0.015	0.009	0.042 *	0.016	**	
Age squared	-0.001 **	0.000	0.000 *	0.000	-0.001 *	0.000	**	
Education (compared to less than a high school degree)								
High school graduate	0.090 **	0.016	0.129 **	0.021	-0.008	0.034		**
More than high school graduate	0.123 **	0.022	0.293 **	0.034	0.079	0.056	**	**
Race (compared to white)								
African American	-0.073 **	0.022	-0.335 **	0.029	0.075	0.052	**	**
Hispanic	0.116 **	0.031	-0.027	0.040	0.016	0.074	**	
Other	-0.135 **	0.037	-0.255 **	0.052	0.192	0.066		**
Number of Own and Foster Children (compared to one)								
Two	-0.050 **	0.018	0.095 **	0.026	0.035	0.039	**	**
Three or more	-0.162 **	0.021	0.083 **	0.028	0.086 *	0.043	**	**
Age of Youngest Child (compared to less than one)								
1	0.158 **	0.026	0.005	0.031	-0.265 **	0.050	**	**
2	0.241 **	0.027	-0.034	0.036	-0.284 **	0.056	**	**
3–5	0.246 **	0.024	-0.024	0.030	-0.307 **	0.048	**	**
6–11	0.247 **	0.027	-0.039	0.034	-0.331 **	0.052	**	**
12–18	0.306 **	0.036	-0.019	0.049	-0.465 **	0.073	**	**
Other Adults in Household	0.049 **	0.017	0.043	0.024	0.018	0.037		
Other Children in Household	0.002	0.025	-0.038	0.032	0.066	0.048		
At Least One Child on SSI	-0.028	0.028	-0.131 **	0.032	-0.049	0.050	*	
County of Residence (compared to other urban counties)								
Milwaukee	-0.159 **	0.031	-1.043 **	0.050	-0.164	0.111	**	**
Rural counties	0.107 **	0.021	-0.019	0.047	-0.002	0.085	*	

(table continues)

TABLE 2, continued

	1995 Cohort		1997 Cohort		1999 Cohort		1995 and 1997	1997 and 1999
	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error	Cohorts Different	Cohorts Different
Number of Quarters with Earnings in Previous Two Years[a] (compared to zero)								
1–3 quarters	0.340 **	0.020	0.449 **	0.027	0.305 **	0.047	**	**
4–7 quarters	0.492 **	0.021	0.623 **	0.028	0.481 **	0.048	**	*
8 quarters	0.759 **	0.026	0.949 **	0.039	0.699 **	0.065	**	**
Percentage of Female-Headed Households in Zipcode of Residence	-0.336 **	0.066	-0.182 *	0.072	-0.108	0.108		
Number of Months Received Welfare in Previous Two Years[a] (compared to 6 months or less)								
7–12 months	-0.152 **	0.028	-0.015	0.041	0.065	0.048	**	
13–18 months	-0.247 **	0.028	-0.059	0.040	0.101	0.053	**	*
19–24 months	-0.371 **	0.022	-0.078 *	0.034	-0.030	0.047	**	
More than One Spell in Previous Two Years[a]	0.249 **	0.019	0.040	0.024	0.014	0.036	**	
Unemployment Rate in County of Residence[b]	-0.013	0.011	0.048 **	0.015	-0.044	0.039	**	*
Constant Term	-2.052 **	0.121	-0.153	0.148	-0.812	0.265	**	*
Log Likelihood	-20003.4		-11762.0		-4754.2			

* 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, October 1995 through September 1997 for the 1997 cohort, and October 1997 through September 1999 for the 1999 cohort.

[b]September 1995 for the 1995 cohort, September 1997 for the 1997 cohort, and September 1999 for the 1999 cohort.

Overall, although the magnitude of effects varies between the 1995 and 1997 cohorts, the direction of most statistically significant relationships remains the same. The one important exception is that women with more children were less likely to leave welfare in the 1995 cohort, but they were more likely to leave in the 1997 cohort. 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. However, 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 1997 cohort, cash assistance does not vary with family size. While larger families experienced substantial declines in the level of cash benefits, smaller families—especially those with only one or two children—experienced potential gains. Thus, it may be that in the 1997 cohort 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.

Next, compare the estimated coefficients for the 1999 cohort with those in the 1995 and 1997 cohorts. Substantial changes in the correlates of leaving are observed in the 1999 cohort. In this last cohort, fewer factors are related to leaving: for example, there is now no statistically discernible relationship between leaving and the level of schooling (as mentioned above), race, county, or prior welfare receipt. The relationship between the number of children and the probability of leaving in 1999 is positive and similar to that in 1997, and in both cases the pattern is the opposite of the 1995 pattern, where having more children was negatively and significantly related to the probability of leaving. The relationship between the age of the youngest child and the probability of leaving in 1999 is opposite of what it was 1995—in the later year, the older the youngest child the lower the probability of leaving, while in 1995 mothers with older children were more likely to be leavers. The pattern in 1997 is

intermediate to the 1995 and 1999 patterns. The probability of leaving among those with more work experience in 1999 was similar to the relationships seen in 1995 and 1997.

Employment and Earnings after Welfare

Table 3 compares the earnings and work experience of the three cohorts during the year after they left the cash assistance rolls. Employment rates do not differ markedly between the 1995 and 1997 periods, with nearly 70 percent of leavers in both years having some earnings in each quarter. The employment rate for the latest cohort is about 5 percentage points lower, perhaps reflecting the somewhat higher barriers to work faced by these recent leavers. A slightly higher percentage of leavers in the 1997 cohort have earnings at some point during the year, 84 percent, compared with 81 percent in 1995. By the 1999 cohort, this had again fallen to 81 percent. However, earnings (in 2000 dollars) are lower in the 1997 cohort than in the 1995 cohort, and are lower still for the 1999 cohort. Mean earnings in the first year after leaving welfare fell from $9,600 in the 1995 cohort, to $8,100 in the 1997 cohort, to $7,300 in the 1999 cohort. Median earnings fell about $2,000 between the 1995 group and the 1997 group, and an additional $1,500 for the 1999. These differences are consistent with the hypothesis that the more stringent "work first" strategy affecting the latter two cohorts emphasizes entry into the labor market, perhaps pushing people with fewer employment skills and more barriers to working into the labor market, where they accept lower-paying jobs or work fewer hours.

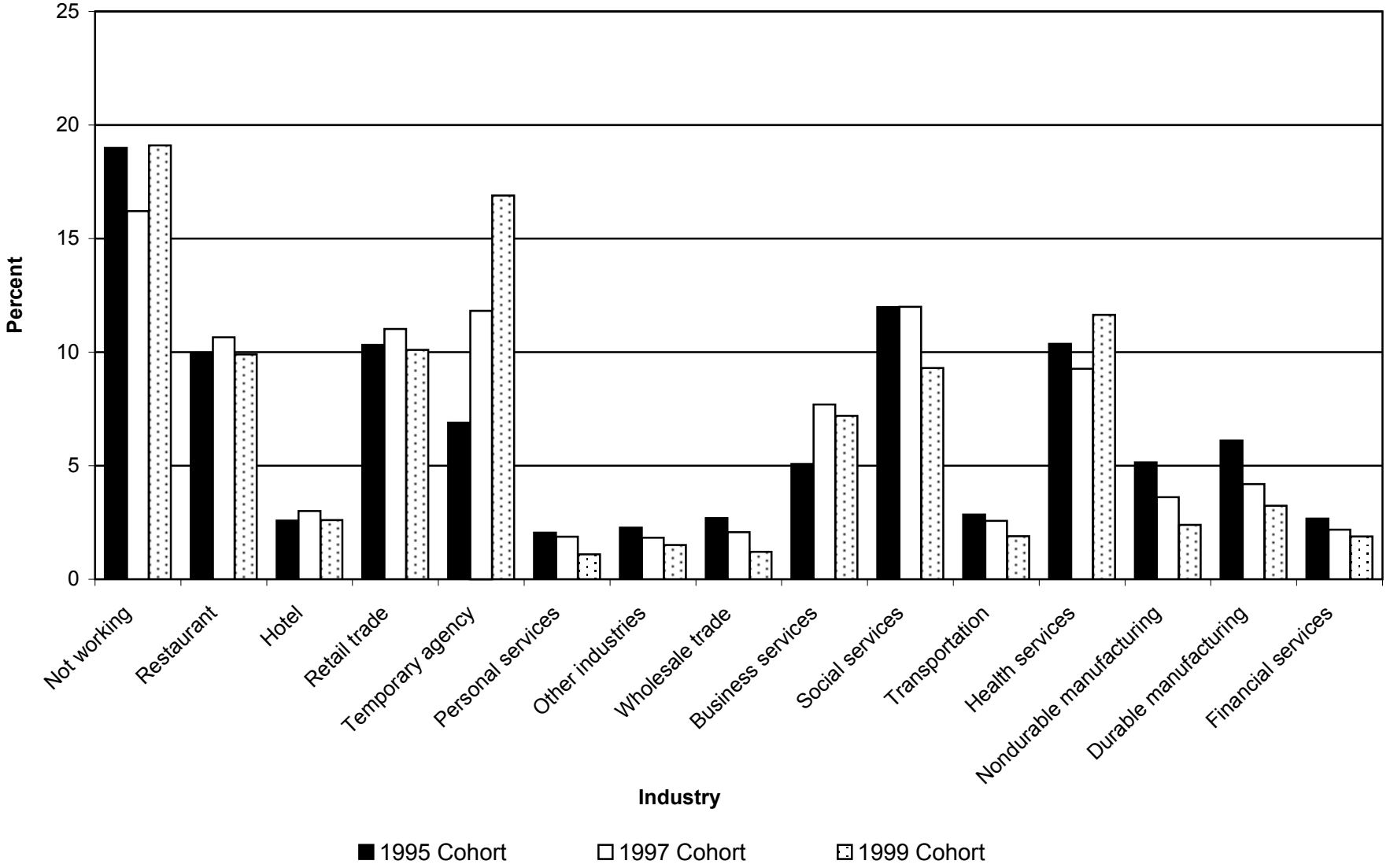
Figure 1 shows the industry of the main job in the first year after welfare for the three cohorts of leavers. We first assign each woman's main employer to one of 14 industries. We then rank the 14 industry groups by the first-year earnings of the women in our sample who begin in a particular industry. Under this ranking, the industry with the lowest earnings for the 1995 cohort is restaurants, and the industry with the highest earnings 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 set of bars and the

TABLE 3
Earnings and Work Experience of Leavers in Year after Exit (2000 dollars)

	1st Quarter after Exit	2nd Quarter after Exit	3rd Quarter after Exit	4th Quarter after Exit	Year after Exit
1995 cohort					
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	$2,689	$2,778	$2,764	$3,106	$9,622
Median earnings	$2,681	$2,774	$2,682	$3,059	$9,094
1997 cohort					
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	$2,198	$2,403	$2,470	$2,899	$8,144
Median earnings	$2,033	$2,220	$2,285	$2,725	$7,038
1999 cohort					
All Leavers (4th Q 1999, N=2,997)					
Percentage with earnings	64.2	62.7	62.6	63.4	81.0
Among those working in quarter/year					
Mean earnings	$2,180	$2,295	$2,353	$2,508	$7,286
Median earnings	$1,925	$2,024	$2,078	$2,291	$5,654

Note: Between 2.2 and 2.8 percent of the women in the 1995 cohort, between 2.9 and 3.8 percent of those in the 1997 cohort, and between 3.8 and 4.4 percnet of those in the 1999 cohort who worked earned less than $100 in any quarter.

FIGURE 1
Industry of Longest Job in Year after Exit



highest-earning industry (financial services) in the final set of bars. The figure shows that although leavers in the 1997 cohort are more likely to be working than those in the 1995 cohort, 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.

In moving from the 1997 to the 1999 cohort, the percentage not working rises back to the level in 1995, while the shift away from the higher-paying industries to the lower-paying industries continues. The increase in the percentage who are employed in temporary agencies observed in moving from the 1995 to the 1997 cohorts persists in moving to the 1999 cohort. Over these three cohorts, the percentage employed by temporary agencies increased from 7 percent, to 12 percent, to nearly 17 percent. This shift to lower-earning sectors, and to temporary agencies, may reflect the somewhat lower employability of leavers in the later cohorts. Alternatively, changes in employment opportunities or the pace of job placement may account for the different mix of industries.

The results reported in Table 3 and Figure 1 document substantial post-exit employment and suggest the potential importance of earnings to post-welfare economic status. At the same time, the results show substantial diversity in labor market experience. As an initial step toward understanding post-exit employment patterns, we use multivariate descriptive models to examine the characteristics associated with labor market success. We measure labor market success as the existence of recorded employment and as 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, 1997, or 1999) to differentiate recent earnings experience. We also include variables for the industry of the primary employer in the quarter of exit (last quarter of 1995, 1997 or 1999) and an indicator variable for having more than one employer in that quarter.

Table 4 reports the results of a probit analysis of employment among women who left welfare. We again show separate results for the three cohorts. In both the 1995 and 1997 cohorts, employment is less likely for women of color, but this is not the case for the most recent cohort: in 1999, Hispanics are more likely than whites to work after leaving welfare, and African Americans are as likely. Similarly, the level of schooling of the woman is positively related to the probability of employment in the 1997 cohort, but this is not the case for the 1995 or 1999 cohorts. For all of the cohorts, the probability of employment in the year after exit is higher for those with more prior work experience in the 2 years prior to exit, those employed in the quarter of exit, and those with more than one employer in the quarter of exit. Contrary to expectations, for all of the cohorts, employment is significantly more likely among those who had more months of welfare receipt in the 24 months prior to the sample being drawn.[9] Finally, relative to most other industries, employment in a temporary agency in the quarter of exit is associated with being less likely to be employed in the following year, though the differences are not statistically significant for most industries in 1997. As shown in the last columns of Table 4, there are relatively few differences between the 1995 and 1997 cohorts or between the 1997 and 1999 cohorts in the relationships of initial characteristics and employment. However, a likelihood test indicates that separate models fit the data better than the same model.

In Table 5, we show ordinary least squares estimates of the level of earnings in the first year among those with any earnings. As the last two columns of the table suggest, there are few differences among the cohorts in the relationships between earnings levels and other characteristics. In general, earnings are significantly higher for those with more education and more work experience, those working in the quarter of exit, and those living in areas with fewer female-headed households. For the first two

[9]This result is noteworthy as we expect women with longer welfare histories to face greater barriers to employment. It may be that shorter-term recipients are more likely than longer-term recipients to leave welfare for marriage (and therefore are less likely to work after exit). Alternatively, it may be that among leavers, short-term recipients (those who entered more recently when there were greater barriers to entry) are more disadvantaged, in ways our data do not capture. However, if this were the explanation we might also expect the positive relationship between length of welfare history and employment to also hold for welfare history and earnings (Table 5, below), and it does not.

TABLE 4
Probit Estimates of the Probability of Working in the Year after Exit (leavers only)

	1995 Cohort		1997 Cohort		1999 Cohort		1995 and 1997	1997 and 1999
	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error	Cohorts Different	Cohorts Different
Case Head's Age								
Continuous	-0.015	0.022	-0.038 *	0.018	-0.014	0.035		
Age squared	0.000	0.000	0.000	0.000	0.000	0.001		
Education (compared to less than a high school degree)								
High school graduate	0.018	0.047	0.068	0.046	0.104	0.076		
More than high school graduate	0.073	0.064	0.142 *	0.068	-0.134	0.121		*
Race (compared to white)								
African American	-0.183 **	0.067	-0.160 **	0.060	0.101	0.111		*
Hispanic	-0.219 *	0.085	-0.248 **	0.079	0.436 **	0.164		**
Other	-0.119	0.106	-0.065	0.095	0.165	0.254		
Number of Own and Foster Children (compared to one)								
Two	-0.014	0.052	0.033	0.055	-0.125	0.087		
Three or more	-0.018	0.061	0.033	0.059	-0.193 *	0.091		*
Age of Youngest Child (compared to less than one)								
1	0.068	0.077	-0.012	0.066	-0.143	0.109		
2	-0.002	0.080	-0.016	0.080	-0.046	0.128		
3–5	-0.034	0.073	-0.046	0.065	-0.121	0.105		
6–11	0.072	0.082	0.033	0.073	-0.122	0.110		
12–18	0.021	0.105	0.017	0.101	-0.212	0.157		
Other Adults in Household	0.021	0.049	0.057	0.050	-0.024	0.080		
Other Children in Household	0.011	0.073	-0.161 *	0.068	-0.133	0.102		
At Least One Child on SSI	0.011	0.087	-0.136	0.071	-0.120	0.102		
County of Residence (compared to other urban counties)								
Milwaukee	0.114	0.090	-0.155	0.089	-0.209	0.232	*	
Rural counties	0.058	0.058	-0.186 **	0.071	0.168	0.170	**	

TABLE 4, continued

	1995 Cohort		1997 Cohort		1999 Cohort		1995 and 1997	1997 and 1999
	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error	Cohorts Different	Cohorts Different
Number of Quarters with Earnings in Previous Two Years[a] (compared to zero)								
1–3 quarters	0.448 **	0.057	0.515 **	0.055	0.424 **	0.093		
4–7 quarters	0.757 **	0.061	0.765 **	0.061	0.903 **	0.101		
8 quarters	1.203 **	0.097	1.040 **	0.102	1.326 **	0.175		
Percentage of Female-Headed Households in Zipcode of Residence	-0.226	0.207	-0.020	0.177	-0.151	0.243		
Number of Months Received Welfare in Previous Two Years[a] (compared to 6 months or less)								
7–12 months	0.169 *	0.073	0.069	0.077	-0.054	0.102		
13–18 months	0.267 **	0.077	0.133	0.080	0.311 **	0.116		
19–24 months	0.315 **	0.058	0.247 **	0.066	0.226 *	0.102		
More than One Spell in Previous Two Years[a]	0.010	0.053	0.038	0.051	-0.049	0.076		
Unemployment Rate in County of Residence[b]	-0.060	0.031	0.063 *	0.026	0.105	0.081	**	
Industry of Job in Quarter of Exit (compared to temporary agency)								
Not working	-1.191 **	0.088	-1.326 **	0.079	-0.872 **	0.100		**
Business services	0.241	0.138	-0.365 **	0.103	0.334	0.194	**	**
Health services	0.699 **	0.137	0.285 *	0.129	0.589 **	0.179	*	
Restaurants	0.158	0.115	0.073	0.110	0.237	0.172		
Retail trade	0.370 **	0.117	0.118	0.105	0.463 **	0.164		
Social services, public administration	0.781 **	0.138	0.279 *	0.116	0.867 **	0.200	**	*
Other low-paying industries[c]	0.167	0.143	0.181	0.154	0.068	0.210		
Other high-paying industries[c]	0.461 **	0.103	0.094	0.101	0.459 **	0.164	*	
More Than One Employer in Quarter of Exit	0.436 **	0.086	0.304 **	0.071	0.498 *	0.126		
Constant Term	1.113 **	0.368	1.493 **	0.311	0.717	0.574		
Log Likelihood	-2266.9		-2357.5		-957.1			

* Statistically significant at the 5% level.

** Statistically significant at the 1% level.

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

[a]October 1993 through September 1995 for the 1995 cohort, October 1995 through September 1997 for the 1997 cohort, and October 1997 through September 1999 for the 1999 cohort.

[b]September 1995 for the 1995 cohort, September 1997 for the 1997 cohort, and September 1999 for the 1999 cohort.

[c]Low-paying industries include hotels and personal services. High-paying industries include: manufacturing, financial services, transportation, wholesale trade, and other industries.

TABLE 5
OLS Estimates of Gross Earnings in the Year after Exit (leavers with earnings in year after exit only)

	1995 Cohort		1997 Cohort		1999 Cohort		1995 and 1997	1997 and 1999
	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error	Cohorts Different	Cohorts Different
Case Head's Age								
Continuous	357.2 **	85.0	89.3	56.6	2.2	140.0	*	
Age squared	-4.7 **	1.3	-0.8	0.8	1.0	2.2	*	
Education (compared to less than a high school degree)								
High school graduate	1161.2 **	168.3	1153.2 **	132.1	1763.5 **	252.0		
More than high school graduate	2748.2 **	217.2	2436.1 **	196.0	3077.5 **	430.6		
Race (compared to white)								
African American	322.2	235.8	-78.8	173.0	-413.8	372.7		
Hispanic	621.2	329.9	395.4	239.5	528.6	553.7		
Other	736.5	399.5	1434.3 **	291.7	-264.6	920.5	*	*
Number of Own and Foster Children (compared to one)								
Two	324.1	179.9	292.6	159.5	795.2 **	294.3		
Three or more	935.4 **	219.8	186.1 **	191.6	385.3	328.1		
Age of Youngest Child (compared to less than one)								
1	-4.5	284.7	186.1	191.6	-181.9	381.3		
2	-342.4	293.9	395.5	227.8	-852.8 *	422.0	*	**
3–5	-764.0 **	264.9	-410.0 *	189.3	-422.9	364.3		
6–11	-339.0	295.2	-202.0	214.1	-633.0	399.4		
12–18	-924.2 *	377.3	-357.9	310.1	-517.0	617.2		
Other Adults in Household	-259.2	172.3	160.4	146.0	-178.8	285.9		
Other Children in Household	6.2	270.9	-121.3	207.1	16.9	357.5		
At Least One Child on SSI	-1858.9 **	323.2	-979.0 **	220.2	-839.9 *	408.9		
County of Residence (compared to other urban counties)								
Milwaukee	2363.3 **	325.2	1535.5 **	260.3	1587.3 *	728.2		
Rural counties	-1038.7 **	200.7	-781.4 **	215.6	-811.0	559.2		

(table continues)

TABLE 5, continued

	1995 Cohort		1997 Cohort		1999 Cohort		1995 and 1997	1997 and 1999
	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error	Cohorts Different	Cohorts Different
Number of Quarters with Earnings in Previous Two Years[a] (compared to zero)								
1–3 quarters	393.9	312.9	717.1 **	201.7	463.1	510.6		
4–7 quarters	649.8 *	312.3	1342.9 **	210.3	1041.2 *	514.4		
8 quarters	2411.3 **	342.6	3491.2 **	261.6	3618.9 **	583.7		
Percentage of Female-Headed Households in Zipcode of Residence	-2709.0 **	725.1	-1766.1 **	501.3	-2585.2 **	832.6		
Number of Months Received Welfare in Previous Two Years[a] (compared to 6 months or less)								
7–12 months	-76.1	273.0	-71.0	229.1	-500.2	351.7		
13–18 months	-106.6	272.0	-225.3	234.5	-846.6 *	397.0		
19–24 months	-90.3	225.8	-157.0 *	197.2	-1116.0 **	370.7		
More than One Spell in Previous Two Years[a]	-418.0 *	178.5	-332.2 *	147.0	-667.6 *	273.1		
Unemployment Rate in County of Residence[b]	-324.5 **	113.2	-159.2 *	77.9	134.7	254.3		
Industry of Job in Quarter of Exit (compared to temporary agency)								
Not working	-3648.3 **	336.8	-4848.1 **	220.0	-2975.3 **	398.5		
Business services	1489.9 **	412.8	-432.2	284.6	138.2	537.7	**	
Health services	2912.3 **	336.6	2042.0 **	273.0	2900.2 **	435.9		
Restaurants	-714.6 *	351.5	-1211.3 **	258.5	-608.3	473.1		
Retail trade	-386.3	334.4	-562.9 **	245.3	170.7	427.3	*	
Social services, public administration	2390.8 **	332.0	2012.4 **	259.1	2327.0 **	448.0		
Other low-paying industries[c]	-143.8	433.8	-3023.1 **	441.8	-222.5	664.4		
Other high-paying industries[c]	2781.7 **	303.1	-498.7	372.0	2436.1 **	429.6	*	
More Than One Employer in Quarter of Exit	440.2 *	174.9	-142.0	147.9	-637.8 *	269.1	**	
Constant Term	2155.5	1399.6	3974.6 **	946.2	4500.8 *	2196.6		
R-square	0.2382		0.283		0.2454			

* Statistically significant at the 5% level.

** Statistically significant at the 1% level.

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

[a]October 1993 through September 1995 for the 1995 cohort, October 1995 through September 1997 for the 1997 cohort, and October 1997 through September 1999 for the 1999 cohort.

[b]September 1995 for the 1995 cohort, September 1997 for the 1997 cohort, and September 1999 for the 1999 cohort.

[c]Low-paying industries include hotels and personal services. High-paying industries include: manufacturing, financial services, transportation, wholesale trade, and other industries.

cohorts, the unemployment rate in the county was negatively and significantly related to earnings, but this relationship does not exist in the 1999 cohort. Among those in the 1995 cohort who were working at exit, those with multiple employers had higher later earnings; but for the 1999 cohort, having multiple employers at the time of exit was negatively and significantly related to later earnings. Over all of the cohorts, earnings varied significantly with industry of primary employer in the quarter of exit. Women working in temporary agencies in that quarter tend to earn more in the following year than those initially employed in restaurants, hotels/personal services, or retail trade. On the other hand, they tend to earn significantly less then those in health, social services/public administration/education, or manufacturing/financial services/transportation/wholesale trade. Somewhat surprisingly, among workers, those with more children and younger children actually had higher earnings, though the differences are small. It may be that women with greater family responsibilities or higher child care costs did not leave welfare unless they had jobs with higher earnings. Those in Milwaukee and other urban counties have higher earnings than those in rural counties.

Although we present the separate models for consistency with our other results, a likelihood test shows that a simple pooled model fits both cohorts as well as the separate models. In the simple pooled model, the coefficients on the indicator variable for the 1997 cohort is not significantly different from zero at conventional levels ($p = .12$) when compared to the 1995 cohort. Because the 1997 cohort has substantially lower earnings than the 1995 cohort in the bivariate but not the multivariate context, this suggests that the lower earnings of the later cohort are related to their observed characteristics, including prior labor market experience, which tend to be associated with poorer labor market outcomes. In contrast, the coefficient on the indicator variable for the 1999 cohort *is* significantly different from zero, indicating that 1999 leavers have lower earnings than both 1995 and 1997 leavers, even after holding constant the differences in observed characteristics.

Benefits, Income, and Poverty after Welfare

In analyzing income and poverty, our measure of a woman's own post-exit 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.

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. Reversing the trend, 35 percent of those who left in 1999 returned in the next year. Among those in the 1995 cohort who returned to the cash assistance rolls, the amount received from that source was about $2,200 per year, compared with about $3,200 for returners from the 1997 cohort and $2,600 for returners from the 1999 cohort.

This pattern is somewhat puzzling. The increased cash assistance received by families in the later cohorts reflects the higher W-2 cash benefits (received by the 1997 and 1999 cohorts) relative to the 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 after 1996 included individuals with more substantial barriers to employment. This lower rate of return may reflect either the greater probability of working of later leavers or the high barriers to receiving W-2, or both. Increases in the likelihood of returning to benefits in the latest cohort

[10]One of the limitations of our measure is that some child care expense offsets are included in "pre-leaving" income (because those paying for child care while receiving AFDC receive higher AFDC checks). Although 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 post-exit 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 after leaving welfare to the extent that these women move into 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.

may reflect the difficulties of women in this cohort (who had the most barriers to work) in sustaining employment.

Differences in Food Stamps receipt are consistent with the view that a higher proportion of women leaving cash assistance after 1996 continue to need assistance: 88 percent of the 1999 leavers, and 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 later cohorts who received benefits, received larger amounts, averaging about $2,500 in the 1999 cohort, about $2,000 in the 1997 cohort, and about $1,400 in the 1995 cohort.

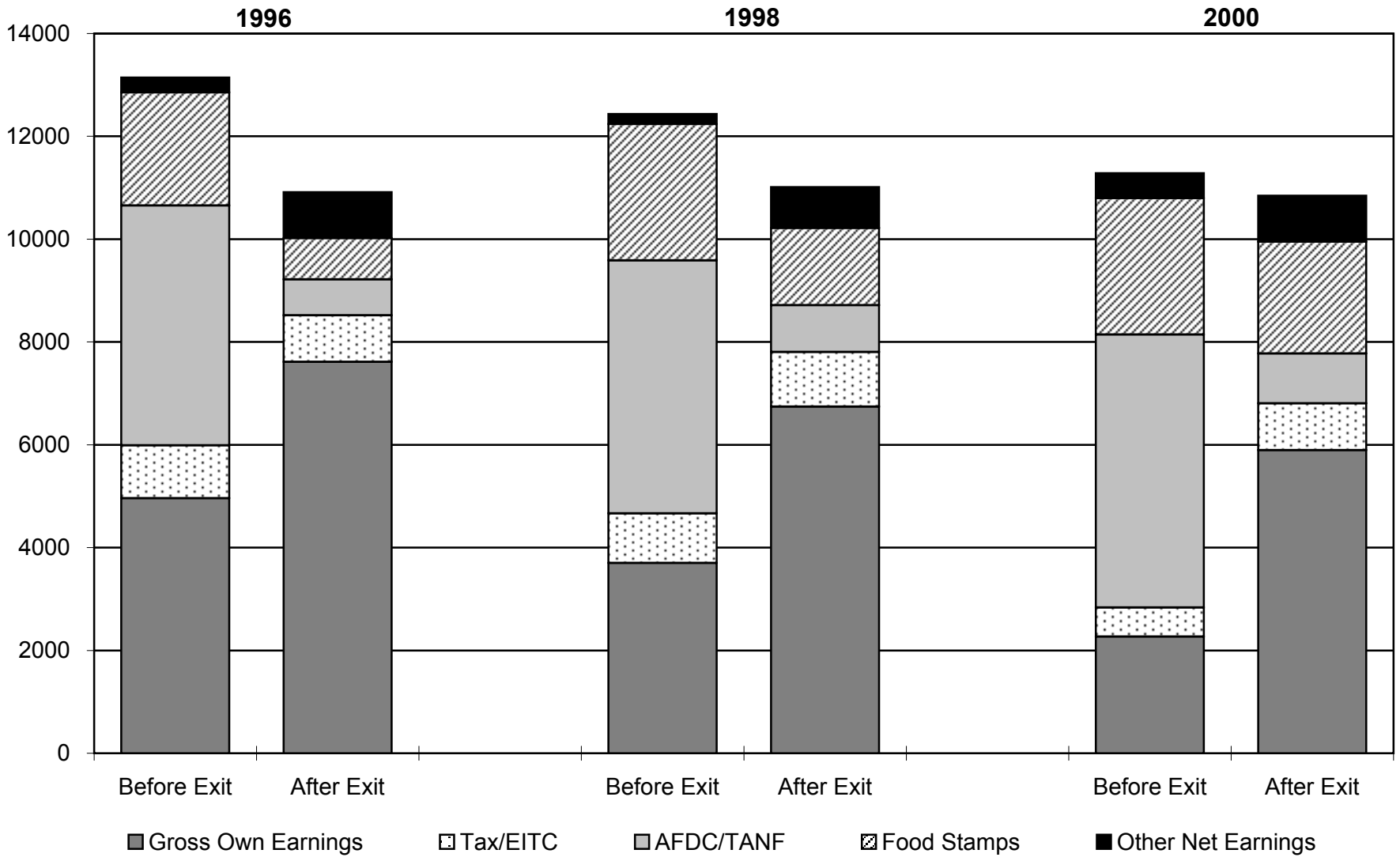
Figure 2 compares annualized mean income in the quarter prior to leaving cash assistance (the third quarter of 1995, 1997, and 1999) with annualized mean income based on the third quarter of the year after leaving welfare (1996, 1998, and 2000).[11] The first bar shows the components of annualized income for the 1995 cohort in the quarter immediately prior to leaving AFDC, and shows that these leavers had significant earnings even before exit, averaging about $5,000 per year.[12] Estimated "net taxes" (EITC benefits less payroll and any income taxes on these earnings) add about $1,000 in income, AFDC about $4,700, and Food Stamps about $2,200. Thus total own income is about $12,900 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 (recall that we limited our sample to single mothers in September 1995, 1997, and 1999); this adds only a small amount.[13] A year later, earnings for this cohort of leavers have increased substantially, to $7,600; increases in EITC are largely offset by increased taxes; and AFDC and Food Stamps are much

[11]The figure uses annualized income in the year after exit, based on the third quarter. If we instead use income over the calendar year, the results are similar.

[12]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.

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

FIGURE 2
Pre- and Post-Exit Income



lower. Thus, total measured own income is substantially lower, despite the large earnings increase. The earnings of others adds about $900, not enough to offset the other losses in our measure of family income.

The pattern for the 1997 cohort is similar. The earnings of this cohort are lower than those of the 1995 cohort just prior to leaving, and while they increased over the subsequent year they reached only about $6,700. Again, cash assistance fell substantially in the subsequent year, though a higher net level of support from the combination of the EITC and taxes is reported. Food Stamp benefits did not fall as much for this 1997 cohort as they did for the 1995 cohort, and earnings contributed by others in the household again increased. In sum, average income declined by over $1,000.

The pre-exit earnings of the 1999 cohort were substantially lower than for the prior cohorts, and averaged only about $2,300. Similar to the other cohorts, earnings have increased substantially a year later, to $5,900. Again, the level of cash assistance fell substantially from before to after exit, and the level of Food Stamp benefits did not decrease as markedly. Finally, this last cohort received a somewhat larger contribution to income from other adults than did the prior two cohorts, though the levels are still quite low, with a mean of less than $1,000. The decrease in income from before to after exit is smaller for this last cohort than for the two previous groups of leavers. The most recent cohort has comparable post-exit income to those in the 1995 and 1997 cohorts. Given the somewhat greater barriers to work and fewer years of schooling of the women in the 1999 cohort relative to those in the earlier cohorts, this result seems to reflect the higher take-up and higher value of in-kind benefits, which may reflect improved program administration (though distinguishing this effect from those of the general environment or the economy is difficult) and a higher probability of take-up when expected benefits are greater.

Apart from these differences among the cohorts, in general women who left cash assistance in Wisconsin experienced 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 AFDC/TANF and Food Stamps.[14]

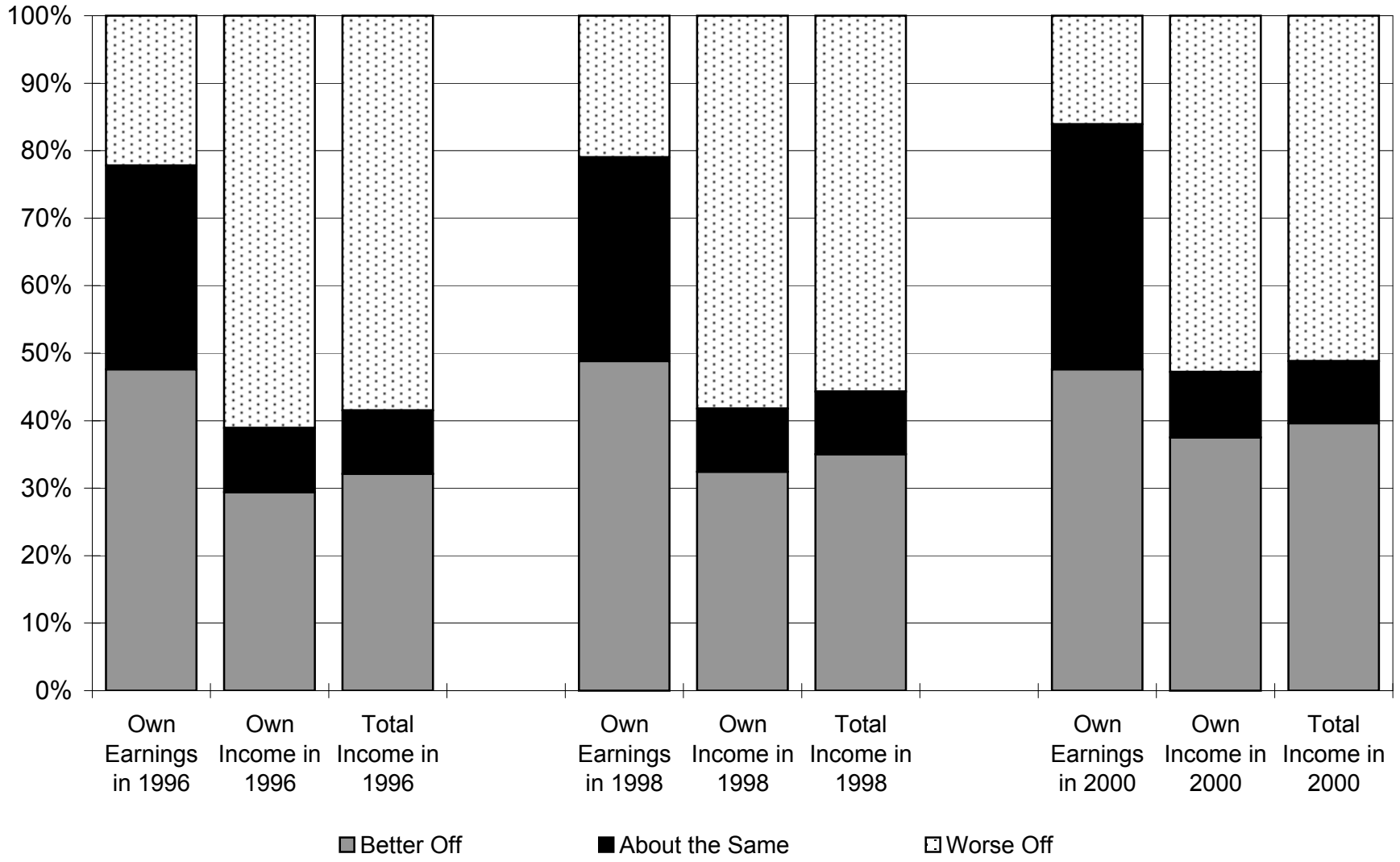
As we discussed above, post-exit family income differs from own income because it includes income of a spouse or partner or other family members. In each cohort, 5–7 percent of the households of the leavers have earnings from a spouse or partner at some point in the next year, and another 4–5 percent have a spouse or partner without earnings. In addition, some leavers have earnings from other family members (teens or adult children with their own earnings). Although adding the earnings of spouses, partners, and others increases the incomes of only 16–18 percent of the families over the next year, among those households with other earnings, this income source is substantial, averaging over $4,000 in the year after exit.[15] These estimates of the percentage of leaver mothers who have a spouse or partner, and the amounts of earnings provided, are lower than those of survey estimates (see the Appendix). Thus, we place more reliance on the estimates of own income.

The average income figures mask substantial diversity in outcomes. In Figure 3 we divide individuals into three categories: those in the post-exit period 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 pre-exit income, which we convert into an annual figure (four times the amount in the third quarter 1995, 1997, or 1999) with post-exit income (four times the amount in the third quarter of 1996, 1998, or 2000). 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 increased for almost half the leavers in each cohort. In the 1995 and 1997 cohorts, 30 percent have similar earnings (many of these are without earnings in

[14]Using calendar year information for the post-welfare period (an annual measure) produces similar results to the third-quarter annualized measures.

[15]Although 16–18 percent of leavers have earnings from others in the household at some point during the year, only 11 percent have earnings from others in the third quarter of the next year, the quarter that we use for our pre-post comparisons.

FIGURE 3
Pre-Post Comparison of Earning and Income



either period), and the remaining 21–22 percent have lower earnings. For the last cohort, 36 percent have similar earnings, and only about 16 percent earned less after they left cash assistance than before leaving.

In contrast to the improved earnings, most of the women have lower own income in all of the cohorts. In the 1995 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 income. The improvement continues in the 1999 cohort: 53 percent of the women have lower own income while 38 percent have higher own income.

Adding the earnings of others in the household to own income improves the picture for each cohort. Using this measure, the most recent cohort has the highest proportion of leavers with increases in family income: 32 percent of 1995 leavers were better off, compared with 35 percent in 1997 and 40 percent in 1999. However, over half of leavers are worse off than they were before leaving welfare, according to both the income-based measures and for all of the cohorts.[16]

We compare the income of these mothers to the national poverty line (and to 150 percent of the poverty line), again using our three measures of annualized income. Seventy percent of the first cohort have after-tax earnings below the poverty line, 25 percent are near poor (between 100 and 150 percent of the poverty line), 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. The pattern for the 1999 cohort is very similar to that of the 1997 cohort with after-tax earnings, own income, and family income poverty rates of 81, 73, and 69 percent, respectively.

In Table 6 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 three cohorts. Not surprisingly, the characteristics associated with having own income above the poverty

[16]The post-exit annual figures tell a similar story.

TABLE 6

Probit Estimates of the Probability of Having After-Tax Income above the Poverty Line in the Year after Exit (leavers only)

	1995 Cohort		1997 Cohort		1999 Cohort		1995 and 1997	1997 and 1999
	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error	Cohorts Different	Cohorts Different
Case Head's Age								
Continuous	0.035	0.019	0.000	0.017	-0.036	0.032		
Age squared	-0.001	0.000	0.000	0.000	0.001	0.001		
Education (compared to less than a high school degree)								
High school graduate	0.192 **	0.038	0.315 **	0.037	0.439 **	0.061	*	
More than high school graduate	0.443 **	0.048	0.506 **	0.053	0.459 **	0.102		
Race (compared to white)								
African American	0.194 **	0.052	0.034	0.048	-0.060	0.090	*	
Hispanic	0.247 **	0.071	0.113	0.068	0.295 *	0.135		
Other	0.028	0.089	0.172 *	0.086	-0.137	0.238		
Number of Own and Foster Children (compared to one)								
Two	-0.120 **	0.040	0.188 **	0.043	-0.018	0.070	**	*
Three or more	-0.565 **	0.050	-0.324 **	0.049	-0.499 **	0.083	**	
Age of Youngest Child (compared to less than one)								
1	-0.005	0.064	0.072	0.054	0.014	0.094		
2	-0.019	0.066	0.147 *	0.063	-0.096	0.107		
3–5	-0.120 *	0.059	0.027	0.054	-0.132	0.092		
6–11	-0.008	0.066	0.063	0.060	-0.224 *	0.101		*
12–18	-0.132	0.083	0.054	0.087	-0.036	0.145		
Other Adults in Household	-0.094 *	0.039	-0.060	0.042	-0.042	0.070		
Other Children in Household	-0.019	0.061	0.024	0.060	-0.016	0.087		
At Least One Child on SSI	-0.620 **	0.080	-0.507 **	0.072	-0.320 **	0.114		
County of Residence (compared to other urban counties)								
Milwaukee	0.503 **	0.073	0.610 **	0.081	0.700 **	0.192		
Rural counties	-0.161 **	0.045	-0.223 **	0.066	-0.227	0.144		

(table continues)

TABLE 6, continued

	1995 Cohort		1997 Cohort		1999 Cohort		1995 and 1997	1997 and 1999
	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error	Cohorts Different	Cohorts Different
Number of Quarters with Earnings in Previous Two Years[a] (compared to zero)								
1–3 quarters	0.330 **	0.071	0.140 *	0.069	0.264 *	0.135		
4–7 quarters	0.413 **	0.071	0.234 **	0.069	0.419 **	0.135		
8 quarters	0.808 **	0.077	0.627 **	0.078	0.918 **	0.150		
Percentage of Female-Headed Households in Zipcode of Residence	-0.514 **	0.160	-0.305 *	0.135	-0.572 **	0.205		
Number of Months Received Welfare in Previous Two Years[a] (compared to								
7–12 months	-0.019	0.061	-0.022	0.064	-0.001	0.085		
13–18 months	0.087	0.060	-0.137 *	0.066	-0.023	0.098	*	
19–24 months	0.132 **	0.050	-0.047	0.055	-0.116	0.092	*	
More than One Spell in Previous Two Years[a]	-0.029	0.040	-0.023	0.041	-0.098	0.068		
Unemployment Rate in County of Residence[b]	-0.078 **	0.026	-0.067 **	0.025	-0.086	0.066		
Industry of Job in Quarter of Exit (compared to temporary agency)								
Not working	-1.136 **	0.075	-1.045 **	0.070	-0.893 **	0.107		
Business services	0.245 **	0.090	-0.036	0.075	0.228	0.132	*	
Health services	0.492 **	0.074	0.363 **	0.069	0.578 **	0.104		
Restaurants	-0.129	0.077	-0.263 **	0.070	0.119	0.119		
Retail trade	-0.027	0.073	-0.068	0.064	0.104	0.104		
Social services, public administration	0.405 **	0.073	0.322 **	0.066	0.108 **	0.108		
Other low-paying industries[c]	0.041	0.094	-0.007	0.091	0.163	0.163		
Other high-paying industries[c]	0.436 **	0.066	0.336 **	0.061	0.102 **	0.102		
More Than One Employer in Quarter of Exit	0.038	0.039	-0.054	0.038	-0.021	0.066		
Constant Term	-1.102 **	0.308	-0.849 **	0.280	-0.522	0.627		
Log Likelihood	-4046.4		-3808.8		-1345.65			

* Statistically significant at the 5% level.

** Statistically significant at the 1% level.

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

[c]Low-paying industries include hotels and personal services. High-paying industries include: manufacturing, financial services, transportation, wholesale trade, and other industries.

line generally parallel those for total earnings. In particular, poverty rates are lower for those with more education, more work experience, smaller families, those working in the quarter of exit, and those living in areas with fewer female-headed households and with lower unemployment rates. Poverty rates also vary significantly by the industry of primary employer in the quarter of exit, generally following the same pattern as for earnings. There is not a consistent relationship between poverty and the age of the youngest child. Although African Americans did not have higher earnings, they were actually less likely to be poor than were whites in 1995, all else equal; this relationship did not continue in the later cohorts. Hispanic leavers and their families in both the 1995 and 1999 cohorts were also less likely to be poor. Although there are few differences in the coefficients between the cohorts, a likelihood test shows that separate models provide a better fit for the data than a combined model. An analysis of poverty rates using estimated family income shows quite similar results.

Simulations and Sensitivity Tests

Interpreting differences in outcomes across the two periods is complicated by the effects of changes in the characteristics of welfare recipients and changes over time in factors other than welfare policy (for example, the state of the economy or the attitudes of society toward the receipt of cash assistance). To evaluate the effects of welfare reform, we seek to isolate the impact of changes only in the policy regime. In the absence of an experiment, data for such an evaluation are not available. We can, however, analyze differences in outcomes accounting for the change between the cohorts in the observed characteristics of the women. In interpreting these analyses, at least two limitations should be noted. First, we can only account for observed differences in individual characteristics; if there are systematic unobserved differences in our samples of leavers, our estimates will be biased. Second, even controlling for differences in the characteristics of the leavers, we cannot distinguish differences in the coefficient estimates due to changes in welfare policy, as opposed to other changes in the macroeconomic environment.

One method of exploring whether outcomes differ between the periods while holding the observed characteristics of leavers constant is to put the three cohorts together in a combined model, differentiating the cohorts with indicator variables, rather than the separate models shown above. This approach restricts the returns to characteristics to be the same across cohorts. These models show that women were most likely to leave in the 1999 cohort, then in the 1997 cohort, then in the 1995 cohort, with each difference statistically significant. They also show that 1997 and 1999 leavers were significantly more likely to work than 1995 leavers, with no significant difference between the two later cohorts. Despite being more likely to work, the later cohorts are less likely to have own or family income above the poverty level (again there is no difference between 1997 and 1999). The level of earnings among those who were working does not differ between 1995 and 1997, but 1999 leavers have lower earnings.

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 7 presents simulated results for women in each cohort with the same characteristics, using the fully interacted models, which allow for differing returns to characteristics across cohorts. 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 which previous analyses suggest are associated with "high" and "low" barriers to self-sufficiency: prototype A is a young African American woman who has not completed high school and has three children, the youngest of whom is 1 year old, who lives in Milwaukee County and who had no work experience and received welfare for 19–24 months in the 2 years prior to exit; in contrast, prototype B is older, white, has completed some college, has one child aged 12–18, lives in a rural area, has received welfare 6 months or less and has worked in all eight quarters in the 2 years prior to exit. To

TABLE 7

Simulation Estimates for Women with Different Barriers to Work

	1995	1997	1999
Likelihood of Leaving Welfare			
Prototype A	0.036	0.156	0.239
Prototype B	0.507	0.901	0.491
Likelihood of Employment			
Prototype A	0.753	0.773	0.715
Prototype B	0.910	0.916	0.929
Predicted Earnings if Employed			
Prototype A	$8,014	$6,394	$6,022
Prototype B	$8,717	$8,481	$9,727
Own Income < Poverty Rate			
Prototype A	0.711	0.758	0.841
Prototype B	0.529	0.668	0.671

Notes: Prototype A is defined as aged 22, <12 years education, African American, three children, youngest child aged 1, no other household members, lives in Milwaukee County, no work in previous two years, received welfare 19-24 months in previous two years.

Prototype B is defined as aged 29, >12 years education, white, one child, youngest child aged 12-18, no other household members, lives in rural county, worked eight quarters in previous two years, received welfare six months or less in previous two years.

All cases assume woman is working in a temporary agency in the quarter of exit and does not have a child on SSI.

the extent that individual differences are captured by our measures, Table 7 illustrates the change in outcomes for these similar individuals in the three periods.[17]

The first two rows of Table 7 show the results for the likelihood of leaving welfare. For prototype A, the likelihood of leaving is very low in 1995, 3.6 percent, but increases to 15.6 percent in 1997 and 23.9 percent in 1999. The likelihood of leaving is substantially higher for prototype B, and also increases dramatically from 1995 to 1997 but decreases dramatically between 1997 and 1999. This primarily reflects different patterns across rural-urban areas. A high percentage of rural recipients left welfare in 1997 (about three-quarters of rural recipients in September 1997 left within the next 3 months), but by 1999, only half the rural recipients left.

The likelihood of employment also varies substantially across the prototypes—women with high barriers (A) were less likely to be employed than women with low barriers (B) during each period. For both A and B, there are not large differences between the cohorts in the probability of employment. Predicted earnings decline across the three cohorts for women with high barriers, especially between 1995 and 1997. For the low-barrier prototype, earnings are fairly stable between the first two periods and then increase in 1999. Thus, there is substantial growth over time in the gap between the earnings of the two prototypes. Finally, women with A's characteristics are predicted to have very high poverty rates across all three periods, and these increase from 71 percent to 76 percent to 84 percent. Predicted poverty rates for B are lower, but also increase over the cohorts, from 53 percent to 67 percent to 67 percent.

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[17]To the extent that there are systematic unobserved differences among the three cohorts of leavers, our estimates and simulations may be biased.

Note that the characteristics shown were selected to represent a set of traits thought to describe women facing high and low barriers to employment. However, the associations vary across outcomes. For example, although African Americans are less likely than whites to be working (Table 4), in 1995 they are more likely to be above the poverty level (Table 6).

In addition to the characteristics being set differently for each prototype, the simulations for both prototypes assume the woman has no children on SSI and is working in a temporary agency in the quarter of exit. Mean unemployment rate and percentage of female-headed households in the region are not changed for the simulation.

SUMMARY, DISCUSSION, AND CONCLUSIONS

In this paper we analyze the employment, earnings, and income of three cohorts of women leaving welfare in Wisconsin. We find higher rates of employment than have many other studies of women who have left welfare under recent reforms. In all three of the 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 measures employment during a particular week, rather than over the whole year. Our finding is consistent with other studies that show 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 in 1996 and 1998 are generally similar to those for other states (Acs and Loprest, 2001; Brauner and Loprest, 1999; Cancian et al., 1999; U.S. General Accounting Office, 1999).[18] Our estimate for 2000—a mean of about $7,200 and a median of about $5,600—suggests a substantial dropoff in earnings for more recent leavers; the other studies reviewed here do not yet report information for 2000.

Our results on the return to welfare during the year after leaving are 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 receiving Food Stamps is fairly common in the first year. Finally, consistent with the findings of other studies of leavers, we find poverty rates, based only on own income, to be quite high (63, 72, and 73 percent). Like our estimates, NSAF estimates of poverty based on family income (including the EITC and Food Stamps) are quite high (though lower than our findings), 41–48 percent (Loprest, 2001).

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[18]Loprest (2001) does not present NSAF estimates of a leaver's own earnings but presents median monthly family earnings of $1,246 and $1,360 for working families, an estimate that is substantially higher than our family earnings estimates for the Wisconsin leavers.

Our analysis of the economic status of leavers in three different time periods uses three methods: simple bivariate comparisons, pooled models with cohort indicator variables (which control for observed differences in characteristics), and a simulation of the outcomes for prototypical recipients from the separate models (which control for observed differences in characteristics and allow different returns to these characteristics).

We are also able to compare our results to the early-late leavers bivariate comparisons in the NSAF (Loprest, 2001).[19] We find higher probabilities of leaving in the 1997 and 1999 cohorts, using all of the methods. The 1997 leavers have slightly higher employment rates than the other two cohorts, using most 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 estimates, and the pooled model shows significantly lower earnings for 1999 than for the other two cohorts. The simulations suggest substantial increases in the earnings gap associated with observed barriers to self-sufficiency. The NSAF report compares only family earnings (not own earnings) and finds no significant difference between the cohorts. Finally, we find that recent leavers are more likely to be poor, based on either own income or family income, a result that is generally consistent across all of the 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). The decline in income lessens somewhat in each successive cohort. Indeed, although total post-exit income of the most recent cohort is less than pre-exit income, it is slightly greater than post-exit income of both the 1995 and

[19]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.

1997 cohorts, in spite of the somewhat greater barriers to work and fewer years of schooling among the 1999 leavers.

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

The encouraging news from this analysis is that in a state that has aggressively pursued work-focused welfare reform, most women are working. The first challenge of the state's welfare reform, to move recipients into the labor market quickly, seems to have been successfully met for many participants in Wisconsin. In all three 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 is to increase the economic well-being of the families of these low-skilled women. Our results imply 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 (for example, informal earnings, income of other household members who we cannot track, child support, etc.); research that includes these other sources is clearly needed. More broadly, ongoing monitoring of broader 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 EITC 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.[20] In a regime in which single mothers are expected to rely primarily on their own earnings, these work-related supports within the tax system are especially important.

[20]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

SAMPLE

We extracted data from the CARES database for all 65,823 AFDC-Regular recipients in Wisconsin in September 1995, all 30,980 recipients of either AFDC-Regular or W-2 cash benefits in Wisconsin in September 1997, and all 8,278 recipients of W-2 cash benefits in Wisconsin in September 1999. For all samples, we excluded cases in which there were no children identified in the assistance group (n=716, 1995; n=195, 1997; n=5, 1999), cases in which the children were not cared for by a parent (n=6,165, 1995; n=3,543, 1997; n=0, 1999); cases in which the case head was receiving SSI (n=6,269, 1995; n=5,516, 1997; n=33, 1999), cases in which the case head was less than 18 or more than 65 years old (n=294, 1995; n=91, 1997; n=8, 1999), cases in which the case head was a man (n=1,679, 1995; n=504, 1997; n=256, 1999), cases with two parents present in the household (n=482, 1995; n=136, 1997; n=447, 1999), and cases that were open in September but received $0 in cash benefits in both September and October (n=613, 1995; n=387, 1997; n=166, 1999).

This results in final sample sizes of 49,605 for the 1995 cohort, 20,608 for the 1997 cohort, and 7,363 for the 1999 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, 8,162 leavers in the 1997 cohort, and 2,997 leavers in the 1999 cohort.

Unlike some earlier papers on welfare leavers in Wisconsin we include all leavers, even those who do not appear in any administrative records after leaving welfare. Thus these results are comparable in this respect to Department of Health and Human Services leavers' studies in other states.

VARIABLES

Employment, Earnings, and Industry Variables

Employment and earnings information came from the state UI database. By using the employer identification provided in these data we were able to calculate the number of employers the mother had during these periods. Using the Standard Industrial Classification (SIC) or its replacement, the North American Industry Classification system (NAICS) code of the place of employment we grouped workers into the following categories:

Group	SIC Codes Included in Group	NAICS Codes Included in Group
Business Services	7300-7362, 7364-7399, 8111, and 8700-8799	5141-5182, 5322-5324, 5411-5419, 5611-5612, and 5614-5619
Health Services	8000-8099	6211-6239
Retail Trade	5200-5799 and 5900-5999	4410-4549
Restaurants	5800-5899	7221-7229
Social Services, Public Administration and Education	8200-8699, and 9000-9999	6111-6117, 6241-6244, 8131-8139, and 9211-9289
Temporary Agencies	7363	5613
Other High-Paying Industries:		
Durable Manufacturing	3000-3999	3260-3399
Financial, Insurance, and Real Estate	6000-6999	5211-5259, 5311-5313, 5331, 5511
Nondurable Manufacturing	2000-2999	3110-3259, and 5100-5112
Other Industries	0100-1499, 1500-1999, 7500-7999 and 8999	1100-2199, 2330-2383, 5120-5122, 5321, 7111-7139, 8111-8119 and 9999
Transportation, Communications, and Public Utilities	4000-4999	2210-2219, 4810-4939, 5130-5133 and 5621-5629
Wholesale Trade	5000-5199	4210-4251
Other Low-Paying Industries:		
Hotels, Lodging	7000-7099	7211-7219
Personal Services	7200-7299 and 8811	8121-8129 and 8141

Because there were fewer leavers in 1999, we had to combine some categories. We grouped durable manufacturing, financial/insurance/real estate, nondurable manufacturing, transportation/communications/public utilities, wholesale trade, and other industries into “other high-paying industries.” We grouped hotels/lodging and personal services into “other low-paying industries.”

For periods in which the mother had multiple employers, we assigned her to the SIC/NAICS 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 zipcode of residence was taken from the 1990 census zipcode-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 Metropolitan Statistical Area).

After-Tax Earnings Variable Calculation

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 Credit parameters is the 2000 *Green Book*, Table 13-12.

- 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 are used to calculate the tax due.

- Payroll tax is calculated based on the earnings reported to the UI system. The source for the rates is the 2000 *Green Book*, Table 1-1.

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.

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 16–18 percent of our leavers have additional earners aged 16 or over in the household at some point during the year, about 60 percent

of whom are aged 19 or more and 40 percent are aged 18 or less (and are presumably 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 with 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, 1997, and 1999 who left welfare in the next three 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 evidence on over 2,000 child-support-eligible mothers who entered W-2 between September 1997 and July1998, not just leavers. We also compare our findings to the national survey analysis of mothers who left AFDC in the 1980s (Meyer and Cancian, 2001). To increase comparability with the published results, we report all dollar figures in this appendix 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 (2001) uses 1998 dollars.

We estimate that 11 percent of 1995 leavers, 11 percent of 1997 leavers, and 10 percent of 1999 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 one of the "single" statuses, and 35 percent did not file Wisconsin taxes. Because some of those who did not file taxes have a spouse or partner, 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 five years after exit.

We find that 4 percent of both the 1995 and 1997 leavers and 5 percent of the 1999 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 about $5,900 for 1995 leavers, $4,400 for 1997 leavers, and $5,000 for 1999 leavers. Moreover, we find earnings of other family members (primarily teenage or adult children of the leavers) for 13 percent of the 1995 and 1997 leavers and 12 percent of the 1999 leavers. When this source is present, it averages about $3,900 for 1995 leavers, $3,300 for 1997 leavers, and $3,800 for 1999 leavers. Combining the earnings of spouses, partners, and other family members, we find that 18 percent of the 1995 leavers, 17 percent of the 1997 leavers, and 16 percent of the 1999 leavers have other family earnings, with an average (when present) of about $5,100 for the 1995 leavers, $4,200 for the 1997 leavers, and $4,000 for the 1999 leavers. Finally, we find differences when we look at the number of earners in the third quarter (the basis of our pre-post comparisons) rather than over the entire year post-exit. In the third quarter, only about 11 percent of the leavers have another family member with earnings, compared to the 16–18 percent who have another family member with earnings at some point during the year.

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 or partner's earnings, not that of 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 spouse or partner with income, mean and median amounts are over well $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 about $10,500 in 1996 and 1998, and $10,300 in 2000 for all, and averaged about $14,900 in 1996, $14,200 in 1998, and $14,400 in 2000 among those with other family members' earnings. The LAB reports taxable gross income (earnings and the EITC but not AFDC/TANF, Food Stamps, or 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 or taxes subtracted). It finds average family income of $12,082 in 1998 and $14,779 in 1999. The national data report a measure of income similar to the CSDE (including Food Stamps but not the EITC or 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 10–11 percent are most comparable to the CSDE's 23–28 percent. Our estimates of spouse or partners' earnings, among those with earning are also lower than other estimates: our estimates of $4,800–$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, we do not expect the bias to be different among the three cohorts, making the cross-cohort comparisons of interest.

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