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**Economic Patterns of
Single Mothers Following
Their Poverty Exits**

Final Report

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EXECUTIVE SUMMARY

With the passage of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA), policymakers have placed an increased emphasis on the importance of employment and earnings as a key way out of poverty and dependency for single mothers. During the middle and late 1990s, the Temporary Assistance for Needy Families (TANF) program, aided by a strong economy, helped move many recipients off the welfare rolls and into work. The dramatic declines in welfare caseloads during this period led to several studies that have looked at the labor force transitions of former welfare recipients. However, few studies have focused on earnings and income progression, poverty dynamics, and the pathways out of poverty for single mothers more generally. The broader population of single mothers includes those who have never received welfare but may be at greater risk of needing public assistance. As more single mothers move off the welfare rolls, or never enter welfare, it is important to discern their prospects for long-term self-sufficiency.

The purpose of this study is to broaden knowledge about the extent to which single mothers remain out of poverty and the factors most strongly associated with their continued economic progress. We used the 2001 Survey of Income and Program Participation (SIPP) data, collected by the U.S. Census Bureau, to examine the income and employment experiences of a nationally representative sample of single mothers who exited poverty. We identified single mothers who exited poverty during 2001, and tracked their experiences over the subsequent two-year period.

In our study, we start by focusing on the following two sets of questions:

- ***Who are single mothers who exit poverty and what are their reasons for exiting?*** How common are poverty and poverty exits among single mothers? Do the characteristics of single mothers who exit poverty differ from those of single mothers who are never poor, and those who are poor but do not exit poverty? What proportion exit poverty because of a change in employment and earnings or a change in family composition?
- ***How long do single mothers who exit poverty stay out of poverty?*** What are the main reasons these single mothers reenter poverty? How long are their subsequent poverty spells? How common is poverty “cycling”?

Based on the duration of their non-poverty and poverty spells during the two-year follow-up period, we classify single mothers who exited poverty in 2001 into one of three groups: (1) those who exited poverty and never returned, (2) those who cycled in and out of poverty, and (3) those who returned to poverty and stayed poor. Because poverty dynamics differed markedly across these three groups of single mothers, the rest of our analysis focused on the following two sets of additional questions:

- *Who are single mothers who exit poverty and stay out of poverty? How do their characteristics differ from those who cycle in and out of poverty and those who return to and remain in poverty?* What are the characteristics of single mothers in each group? Do the reasons single mothers exit poverty differ across these groups?
- *What are the income, employment, and welfare receipt experiences of these three groups over a two-year period following their poverty exits?* How do their experiences differ? What proportion of months do they spend out of poverty? What are their employment and welfare experiences? What factors are associated with their economic success?

We first briefly describe the data and sample used for the study and our analytic approach to conducting the analyses. We then summarize the main findings related to each of the four broad sets of questions.

A. DATA, SAMPLES, AND ANALYTIC APPROACH

Data and Sample. This study used data from the 2001 SIPP, a nationally representative longitudinal data set. The 2001 SIPP covers the period from late 2000 through 2003. It provides detailed monthly measures on labor force participation (for those age 15 and older), income, participation in public programs, and household composition. The primary sample for our analysis consisted of single mothers who exited poverty during the first 12 months of the panel period (roughly 2001). Our definition of a “single mother” included all single female family heads with related children under 18 in the family. Overall, we had a sample of 615 single mothers who exited poverty during the first 12 months of the panel period (roughly 2001). In our analysis, we treated the single mother as the unit of analysis and tracked her poverty status in whatever family she was in during any given month using the income of that family.

We used the official U.S. Census Bureau poverty measure as the primary one for the study. This measure has some well-documented shortcomings, but it is the one most commonly used in research and facilitates comparisons with other studies. Under the official measure, a family is “poor” if its total family income is less than its poverty threshold. Income includes earnings; cash assistance (such as TANF benefits, unemployment compensation, or Supplemental Security Income [SSI]); child support; educational assistance; pension income; and interest and dividends. Income does not include non-cash benefits such as food stamps; Medicaid; public housing subsidies; and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).

A key issue for our study was defining poverty spells. Because we observed high levels of poverty volatility, we were concerned about “noise” in the monthly poverty timelines and explored several strategies to smooth poverty spells. We elected to smooth volatility by closing all near-threshold spells, where a near-threshold spell is defined as a spell in which income is within 10 percent of the poverty threshold for the duration of the spell. Our main results, however, are not sensitive to the income smoothing strategy.

Analytic Approach. Our findings are primarily based on descriptive analyses in which we tabulated means and distributions of variables of interest. All figures were calculated using

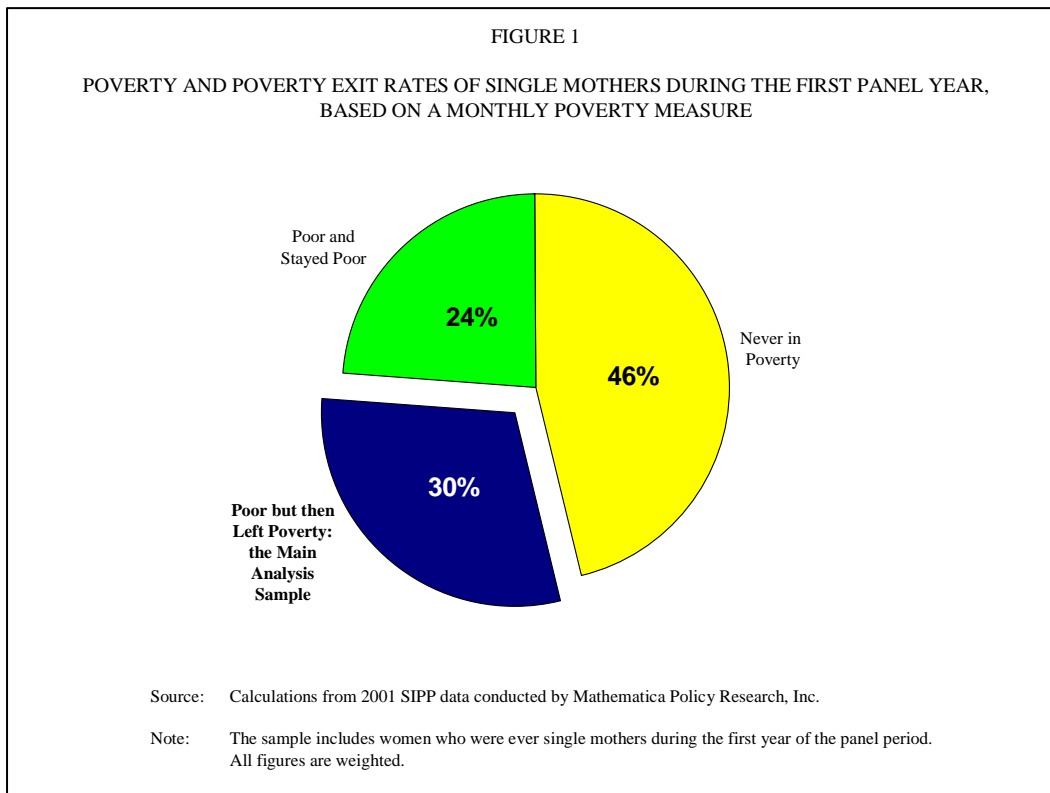
longitudinal sample weights in SIPP to make the findings representative of the U.S. civilian population in April 2001. We also used life-table methods to look at the duration of non-poverty spells as well as subsequent poverty spells. Finally, we conducted multivariate analyses to examine the relative importance of individual and job characteristics associated with successful poverty exits.

B. HOW MANY SINGLE MOTHERS EXIT POVERTY, WHO ARE THEY, AND WHAT ARE THEIR REASONS FOR EXITING?

We find that both poverty and poverty exits are common among single mothers. Single mothers who exit poverty differ from other groups of single mothers. The most common reason for exiting poverty is an increase in the single mothers' earnings, which are driven by increases in employment rates and increases in hourly wage rates and hours worked among those already employed. Changes in family composition are a much less common trigger event for this population.

- *More than half of single mothers in 2001 were poor at some time during the year, and among those poor, just more than half had exited poverty by the end of the year.*

Among all single mothers in 2001, 54 percent experienced poverty for at least one month (Figure 1). Thirty percent of all single mothers (55 percent of those ever poor) subsequently exited poverty by the end of 2001. These single mothers are the core sample for our analyses.



- ***In 2001, single mothers who exited poverty were somewhat less disadvantaged than those who stayed in poverty, but were more disadvantaged than those who were never poor.***

Single mothers who experienced poverty in 2001, regardless of whether or not they exited poverty in 2001, were considerably more likely than those who were never poor to be younger and to have never been married. They also were more likely to be nonwhite. Poor single mothers who exited poverty had lower educational levels and more health limitations than those who were never poor, but were better off than those who stayed poor. For example, about 20 percent of single mothers who exited poverty had no high school credential, compared to 42 percent of those who never exited poverty, and 11 percent of single mothers who were never poor (not shown). Similarly, 12 percent of single mothers who exited poverty reported a health limitation, compared to nearly one-quarter of those who did not exit poverty, and 6 percent of those never poor. There were also considerable differences across the poverty groups in rates of employment and receipt of public assistance, with single mothers who were never poor having the highest rates of employment and lowest rates of public assistance receipt.

These findings suggest that our main analysis sample of poverty exiters is not a random sample of single mothers. Rather, they are a select group who are somewhat better off than single mothers with longer spells of poverty, but not as well off as those who are less likely to enter poverty.

- ***An increase in own employment or earnings is the most common event associated with poverty exits for single mothers.***

In 2001, about three-quarters of single mothers who exited poverty experienced an employment or earnings increase at the time of their poverty exit (Table 1). Of these women, about 21 percent experienced an earnings increase because they became employed, while the remainder experienced an earnings increase either in their current job or as they moved directly from one job into another (not shown). An increase in the earnings of other adult relatives in the family is a less common “trigger” event; only about 11 percent of the sample experienced this event. This low percentage is consistent with the finding that many poor single mothers do not live with other adult relatives.

About 11 percent of sample members experienced family composition changes prior to their poverty exit (Table 1). Most changes were due to increases in the number of adult relatives in the family; only three percent of the sample exited poverty because they became married. These findings are in contrast to those of Bane and Ellwood (1986) who, using data from the 1970s and early 1980s, found that marriage accounted for about 26 percent of poverty transitions for female-headed households, and that earnings increases accounted for 33 percent of poverty transitions. It is likely that our results differ because of the increased labor force attachment of single mothers since the Bane and Ellwood (1986) study and, in particular, since PRWORA.

TABLE 1
EVENTS ASSOCIATED WITH POVERTY EXITS FOR SINGLE MOTHERS IN 2001
(Percentages)

	Experienced Event ^a
Either Own Employment or Earnings Increase	75
Earnings Increase of Another Adult Relative in Family	11
Family Composition Changes	
Became married	3
Number of adults in family increased	7
Number of children in family decreased	3
Number of children under age 6 decreased	3
Any family composition change	11
Other Changes	13
Sample Size	571

Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: The sample includes poor single mothers who ever exited poverty during the first year of the panel period. Trigger events were identified using a two-month window prior to the poverty exit. The two-month window requires that we limit our sample to those who left poverty after the second month of the analysis period. All figures are weighted.

^aEvents are *not* mutually exclusive, because a single mother may have experienced more than one event.

C. HOW LONG DO NON-POVERTY SPELLS LAST AND WHY DO SINGLE MOTHERS REENTER POVERTY?

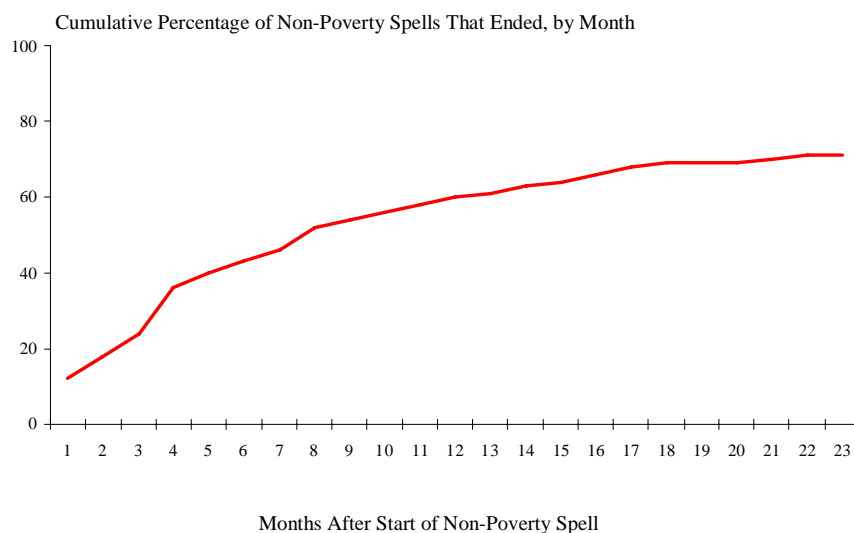
Many single mothers who exited poverty in 2001 soon returned to poverty—about 60 percent of these single mothers were back in poverty within a year. However, subsequent poverty spells for these women were very short, so that many sample members exited poverty again. Thus, we find considerable cycling in and out of poverty for this population.

- *The majority of single mothers who exit poverty return to poverty within one year; however, subsequent poverty spells are shorter than the initial non-poverty spells.*

The median duration of the first observed non-poverty spell for our sample was eight months (Figure 2). About one-quarter of non-poverty spells ended within three months, 60 percent of spells ended within one year, and 72 percent ended within two years. Thus, many single mothers who exit poverty soon return to poverty. Spell durations were typically short for each type of trigger event associated with the poverty exit (not shown). However, there is some evidence that non-poverty spells were slightly longer for those who exited poverty because of family composition changes than for other reasons (the median spell length was 11 months for those with family composition changes compared to 8 months for others, although these differences were not statistically significant).

FIGURE 2

CUMULATIVE EXIT RATES FOR NON-POVERTY SPELLS OF SINGLE MOTHERS WHO EXITED POVERTY IN 2001



Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: The sample includes spells out of poverty for poor single mothers who exited poverty during the first year of the panel period. The follow-up period is two years. All figures are weighted.

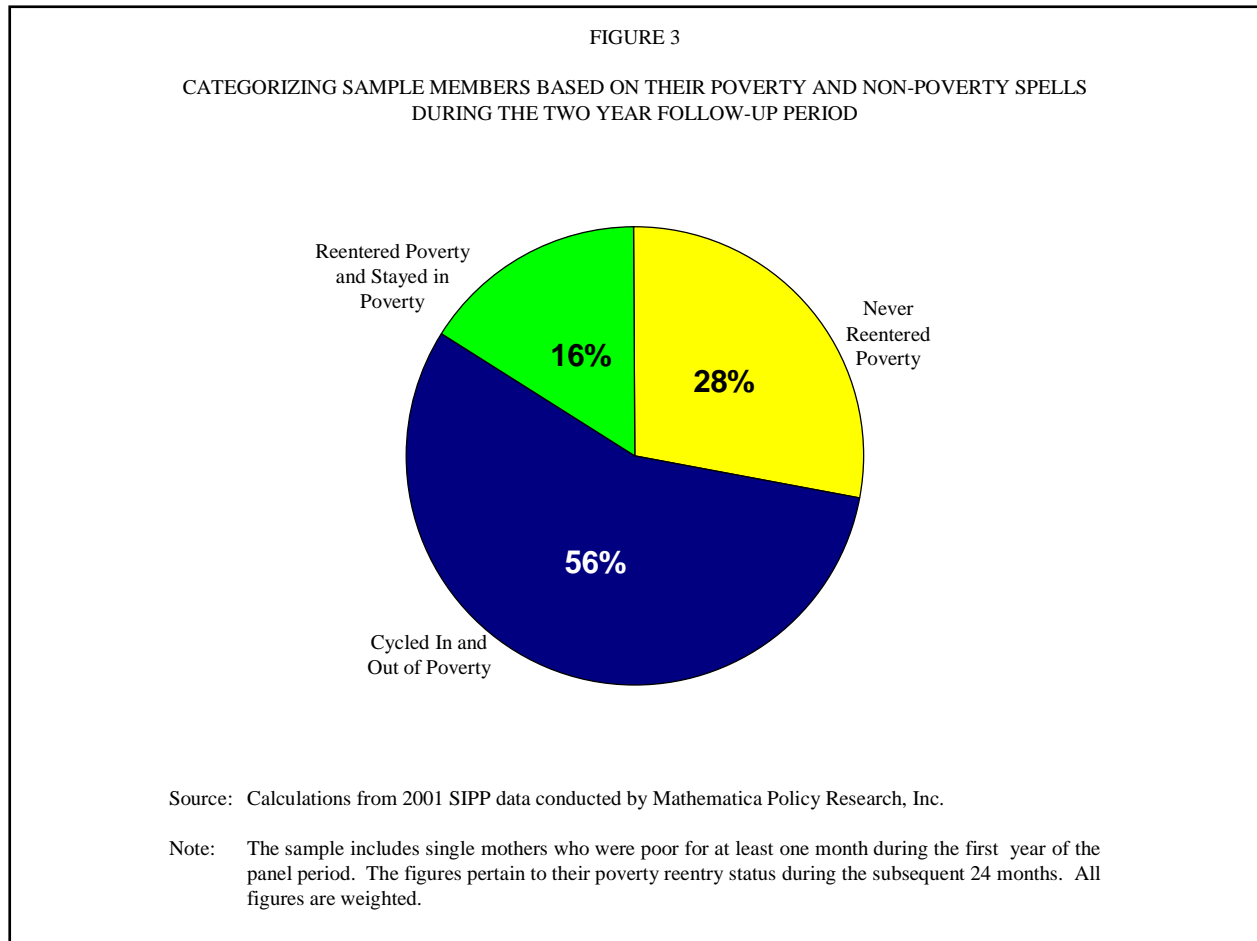
Among our sample of single mothers who reentered poverty, the median poverty spell duration was only about five months, compared to eight months for the initial non-poverty spell. Furthermore, nearly three-quarters of these poverty spells ended within a year (not shown). These results suggest that although many single mothers in our sample cycled in and out of poverty, they tended to spend more time out of poverty than in it.

- *The reasons for reentering poverty are analogous to the reasons for exiting poverty.*

Earnings decreases were the most common trigger event for the 72 percent of sample members who reentered poverty within the two-year follow-up period; decreases in the earnings of other adult relatives in the family and family composition changes were much less common (not shown). Furthermore, there is a strong association between the trigger events for poverty exits and poverty returns. For instance, about 84 percent of those with an earnings-related trigger event for the initial poverty exit also experienced an earnings-related trigger event when they reentered poverty (not shown).

- *The majority of single mothers who exit poverty cycle in and out of poverty during a two-year follow-up period. However, nearly thirty percent exit poverty and remain out of poverty over the follow-up period.*

Our sample of single mothers who exited poverty can be divided into three groups based on their poverty and non-poverty spells during the two-year follow-up period. These groups (as shown in Figure 3) are (1) *poverty leavers* (those who exited, but never reentered poverty; 28 percent), (2) *poverty cyclers* (those who cycled in and out of poverty; 56 percent), and (3) *poverty returners* (those who reentered poverty and stayed in poverty; 16 percent). The finding that more than half the sample is in the cycler group suggests that substantial income volatility exists among this population. However, the findings also suggest that nearly 30 percent of women successfully exit poverty. Next, we provide more information on the characteristics and outcomes for these three groups of women and try to identify factors associated with successful outcomes.



D. WHAT ARE THE CHARACTERISTICS OF THOSE IN THE THREE POVERTY GROUPS AND WHAT ARE THE FACTORS RELATED TO EXITING POVERTY?

We find important differences between the three groups at the time of their poverty exits. Single mothers who never returned to poverty during the two-year follow-up period were less disadvantaged than the other two groups in their basic demographic and human capital characteristics. Interestingly, in the months leading up to the poverty exits, there were no differences across the groups in their employment, earnings, and poverty ratios. However, those who stayed out of poverty after exiting poverty were more likely than the other two groups to have exited poverty because of an earnings increase. Furthermore, the poverty leaver group had substantially higher earnings gains, and held jobs with higher wages and better benefits when they exited poverty compared to the other two groups.

- *As might be expected, poverty leavers tend to be the least disadvantaged of the three groups, while the poverty returners are the most disadvantaged.*

About half of poverty leavers had more than a high school degree at the time of poverty exit, compared to 41 percent of poverty cyclers and only 34 percent of poverty returners (Table 2). The poverty leavers were also much less likely to have a health limitation that affected their ability to work than poverty returners (12 percent versus 27 percent). Poverty leavers also tended to be somewhat older and more likely to have ever been married than the other two groups, and were also less likely to have received public assistance prior to their poverty exits.

- *Employment and earnings increases are the most common trigger events associated with poverty exits for all groups, but the poverty leavers are the most likely to have these events.*

About 80 percent of the poverty leavers in our sample experienced an earnings-related trigger event in the two months prior to their poverty exit, compared to 75 percent for poverty cyclers and 65 percent for poverty returners (Table 3). Earnings increases of another adult relative in the family and family composition changes were less common trigger events for all groups. It is notable, that those in the poverty leavers group were twice as likely to marry as those in the other two groups (six percent versus three percent) although marital rates were low for all groups. Finally, poverty returners were more likely than the other single mothers to have exited poverty because of “other changes,” such as increases in public assistance receipt, unemployment insurance receipt, or other sources of income.

TABLE 2
KEY CHARACTERISTICS IN THE MONTH BEFORE LEAVING POVERTY,
BY TYPE OF SINGLE MOTHER WHO EXITED POVERTY
(Percentages)

Characteristics	Never Reentered Poverty	Cycled In and Out of Poverty	Reentered Poverty and Stayed Poor
Age			
Younger than 30	30*	35	50
Average (years)	35.1*	33.9*	31.3
Race/Ethnicity			
White and other non-Hispanic	47	52	47
Black, non-Hispanic	31	27	36
Hispanic	22	22	16
Ever Married	62*	55*	44
Has a Health Limitation	12*	8*	27
Educational Attainment			
Less than high school/GED	+	+	
High school/GED	8	23	31
Some college, no degree	42	36	34
Associate or vocational degree	28	24	21
College graduate or more	10	11	11
	12	6	2
Age of Youngest Child			
Younger than 3	33	28	30
Average age (years)	6.7*	6.7*	5.6
Number of Children			
3 or more	22	24	29
Average number	1.9	1.9	2.0
Adults in the Family			
Does not live with other adults	80	73	80
Average number of adults	1.3	1.4	1.4
Poverty Ratio			
Less than 0.5	37	31	39
At least 0.5, less than 1.0	63	69	61
Average poverty ratio	0.6	0.6	0.6
Employed	64	73*	60
Received TANF	2*	11*	19
Received Food Stamps	14*	31*	55
Average Family Income (Dollars)	756	833	769
Sources of Family Income^a			
Own earnings	50	53	49
Others' earnings	19	15	13
Social insurance and disability	6	6	8
Means-tested government assistance	2	7	10
Child support and alimony	15	11	12
Other income	8	9	8
Sample Size	172	340	103

Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: Sample includes single mothers who exited poverty in the first year of the panel period. All figures are weighted.

^aSocial insurance and disability income includes income from federal and state SSI, state unemployment, other unemployment, workers' compensation, employer sick benefits, and disability insurance. Means-tested government assistance includes income from TANF, General Assistance, WIC, and other welfare. Child support and alimony income includes pass-through child support, regular child support, and alimony.

*The difference in variable *means* between the indicated group and those who reentered poverty and stayed poor is statistically significant at the .05 level.

+The difference in variable *distributions* between the indicated group and those who reentered poverty and stayed poor is statistically significant at the .05 level.

TABLE 3
EVENTS ASSOCIATED WITH POVERTY EXITS FOR SINGLE MOTHERS,
BY TYPE OF SINGLE MOTHER
(Percentages)

Event ^a	Experienced Event ^a		
	Never Reentered Poverty	Cycled In and Out of Poverty	Reentered Poverty and Stayed Poor
Own Employment or Earnings Increase	80*	75	65
Earnings Increase of Another Adult Relative in Family	12	11	11
Family Composition Changes			
Became married	6	3	3
Number of adults in family increased	7	7	9
Number of children in family decreased	1	4	3
Number of children under age 6 decreased	3	2	3
Any family composition change	11	10	12
Other Changes	9*	13	19
Sample Size	164	314	93

Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: The sample includes poor single mothers who ever exited poverty during the first year of the panel period. Trigger events were identified using a two-month window prior to the poverty exit. All figures are weighted.

^aEvents are *not* mutually exclusive, because a single mother may have experienced more than one event.

*The difference in variable means between the indicated group and those who reentered poverty and stayed poor is statistically significant at the .05 level.

- ***Among those who exit poverty because of employment or earnings increases, the poverty leaver group has the largest earnings increases.***

Average earnings in the base month (1 or 2 months prior to the poverty exit) were similar for each group in our sample (about \$750; Table 4). However, the average earnings *increase* for the poverty leaver group (\$956) was more than twice as large as for poverty returners (\$467) and also substantially larger than for cyclers (\$509).

Consequently, poverty leavers typically start their non-poverty spells with higher earnings than other single mothers. As discussed next, this occurs because poverty leavers tend to have higher-paying jobs and to work more hours than those in the other two groups.

TABLE 4

JOB CHARACTERISTICS IN THE MONTH OF POVERTY EXIT FOR SINGLE MOTHERS,
BY TYPE OF SINGLE MOTHER
(Includes Those Who Left Poverty Due to an Employment or Earnings Increase)

Characteristic of Main Job ^a	Never Reentered Poverty (1)	Cycled In and Out of Poverty (2)	Reentered Poverty and Stayed Poor (3)
Average Monthly Earnings (Dollars) ^b			
In month before the trigger event	764	773	703
In month of the trigger event	1,720	1,282	1,170
Hours Worked per Week			
Percentage worked full-time (35 hours or more)	81	69	71
Average hours worked per week	37.8	35.9	36.6
Average Hourly Wage Rate (Dollars)	11.10*	8.93	7.80
Average Weeks Worked in Job	4.1	4.0	4.1
Health Insurance Coverage (Percentage)	57*	31	23
Union Member (Percentage)	10	8	8
Occupation (Percentage Distribution)	+		
Professional/technical	27	16	11
Sales/retail	11	16	8
Administrative support/clerical	29	19	22
Service	24	29	37
Machine/construction/production/transportation	8	17	18
Other	1	3	4
Sample Size	130	231	59

Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: The sample includes women who exited poverty during the first year of the panel period because of employment or an earnings increase (using a two-month window prior to the poverty exit). All figures are weighted.

^aIf the sample member held more than one job, the figures pertain to the job where the sample member worked the most hours.

^bMonthly earnings for each worker are calculated as the product of the reported hourly wage rate, average hours worked per week, and the number of weeks worked in the month. These earnings are typically lower than the monthly earnings reported directly by sample members.

*The difference in the variable *means* between the indicated group and the group in column (3) is statistically significant at the .05 level.

+The difference in the variable *distributions* between the indicated group and the group in column (3) is statistically significant at the .05 level.

- ***At the start of their non-poverty spells, those in the poverty leavers group typically hold higher paying jobs with more benefits and work more hours than single mothers in the other two groups, suggesting that job quality may be related to successful poverty exits.***

Among those in our sample with earnings-related trigger events, the average hourly wage rate was considerably higher for poverty leavers than for the other two groups (\$11.10, versus \$8.93 for poverty cyclers and \$7.80 for poverty returners; Table 4). Similarly, a higher percentage of poverty leavers worked full time (81 percent, compared to about 70 percent for the

other two groups), although these differences are not statistically significant. They were also significantly more likely to have health insurance through their job (57 percent, compared to 31 percent for cyclers and 23 percent for poverty returners). Furthermore, poverty leavers were more likely than the other two groups to hold professional and technical jobs and less likely to be employed in lower-paying service occupations.

Thus, we see that although single mothers in each of the three groups tend to have similar employment and earnings levels in the months prior to poverty exits, the single mothers with the most successful outcomes (poverty leavers) are more likely than their counterparts to experience earnings-related trigger events and to find higher-quality jobs around the time they exit poverty. This may be related to their higher education levels and better health.

E. WHAT ARE THE INCOME AND EMPLOYMENT EXPERIENCES OF SINGLE MOTHERS WHO EXIT POVERTY?

Differences across the three groups extended into the follow-up period. The income and employment experiences during the two-year follow-up period were very different for the three groups of single mothers, with those who exited poverty and never returned experiencing higher earnings growth over time, and moving to better jobs with better benefits over time. Because changes in earnings levels are the key events associated with movements in and out of poverty for this population, it is not surprising that single mothers in the group with the most successful outcomes had higher employment and earnings levels throughout the follow-up period than those in the groups with less successful poverty exits. Similarly, those in the cycler group had higher earnings over time than those who returned to poverty and stayed. The earnings of the poverty returners diminished over time and these women became increasingly reliant on public assistance, particularly food stamps. Our multivariate analysis shows that although few factors are statistically significant in the models, education and health limitations, as well as initial job characteristics, are significant predictors of who is successfully able to stay out of poverty and who is not.

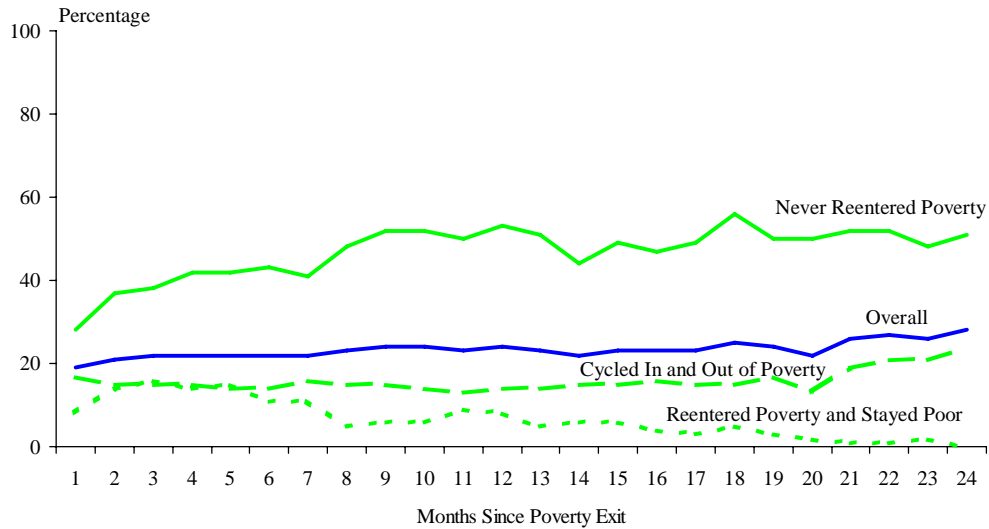
- ***Single mothers in the poverty leavers group exhibit considerable upward movement away from the poverty threshold over time. The two other groups do not experience large gains in income relative to the poverty threshold.***

Single mothers in our sample who exited poverty and did not return (poverty leavers) were more likely to have incomes at least twice the poverty ratio than the other two groups. By the end of the follow-up period, about half the poverty leavers had incomes more than twice the poverty threshold (Figure 4). In contrast, during most months of the followup, less than 20 percent of poverty cyclers and less than 5 percent of poverty returners had incomes over twice the poverty threshold.

Consistent with these trends, poverty leavers had relatively high incomes (\$3,001 on average per month) compared to average monthly incomes of about \$1,864 for cyclers and \$1,165 for poverty returners (not shown). Although there are considerable differences in the incomes of the three groups of single mothers, their own earnings and the earnings of other family members represent most of the income for all three groups; relatively little income comes from public assistance.

FIGURE 4

PERCENTAGE WITH INCOME OF MORE THAN TWICE THE POVERTY THRESHOLD,
BY MONTH SINCE POVERTY EXIT



Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: The sample includes poor single mothers who exited poverty during the first panel year. The follow-up period is two years. All figures are weighted.

- *There is considerable diversity in the extent of income growth over time among single mothers who exit poverty.*

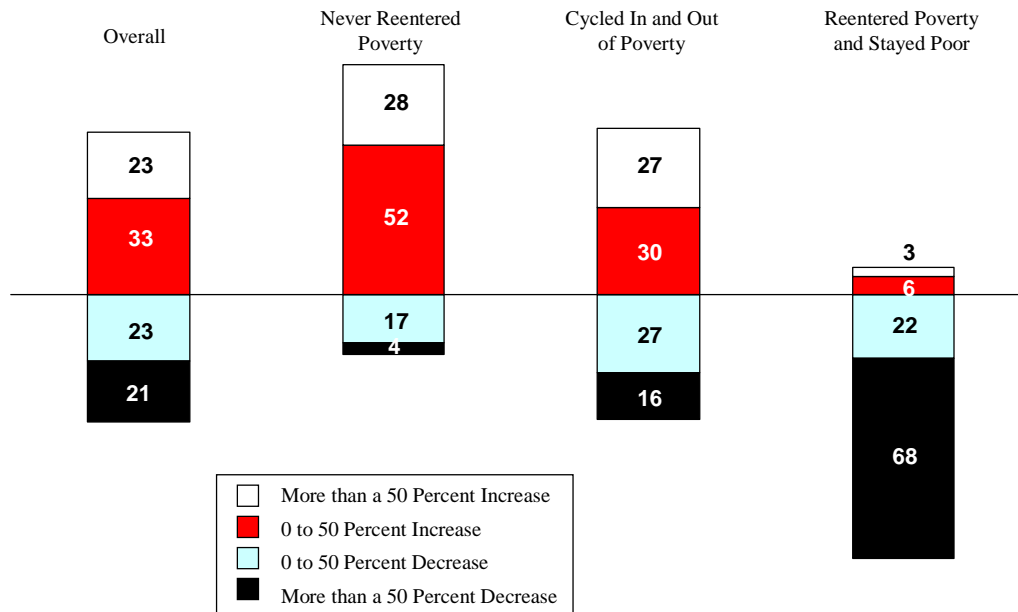
Over the two-year follow-up period, most single mothers in the poverty leavers group experienced income increases; 80 percent had income increases, and more than one in four had increases greater than 50 percent (Figure 5). For poverty cyclers, similar numbers experienced income losses and income gains. Most poverty returners experienced large declines in income during the two-year window; more than two-thirds of this group had income decreases greater than 50 percent. These findings highlight the uncertainty and variety of experiences for single mothers following their poverty exits.

- *During a two-year follow-up period, the poverty leavers have higher employment rates and higher-quality jobs than the other groups.*

Not surprisingly, employment rates were highest among sample members who never reentered poverty and lowest among those who returned to poverty and remained poor. Poverty leavers were employed for 88 percent of the follow-up period, compared to 75 percent for poverty cyclers, and only 46 percent for poverty returners (Figure 6). Poverty leavers were also more likely than those in the other two groups to work in full-time jobs and in jobs that provided

FIGURE 5

CHANGE IN INCOME DURING THE TWO YEARS FOLLOWING POVERTY EXIT,
BY TYPE OF SINGLE MOTHER



Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: The sample includes poor single mothers who exited poverty during the first panel year. The follow-up period is two years. Changes in income refer to the difference between average income during the first four months of the followup and average income during the last four months of the followup. All figures are weighted.

health insurance coverage (not shown). Poverty leavers also had higher wages than the other two groups, and they spent 37 percent of the follow-up period in a job offering hourly wages greater than \$10, compared to 17 percent of cyclers and only 6 percent of poverty returners (not shown).

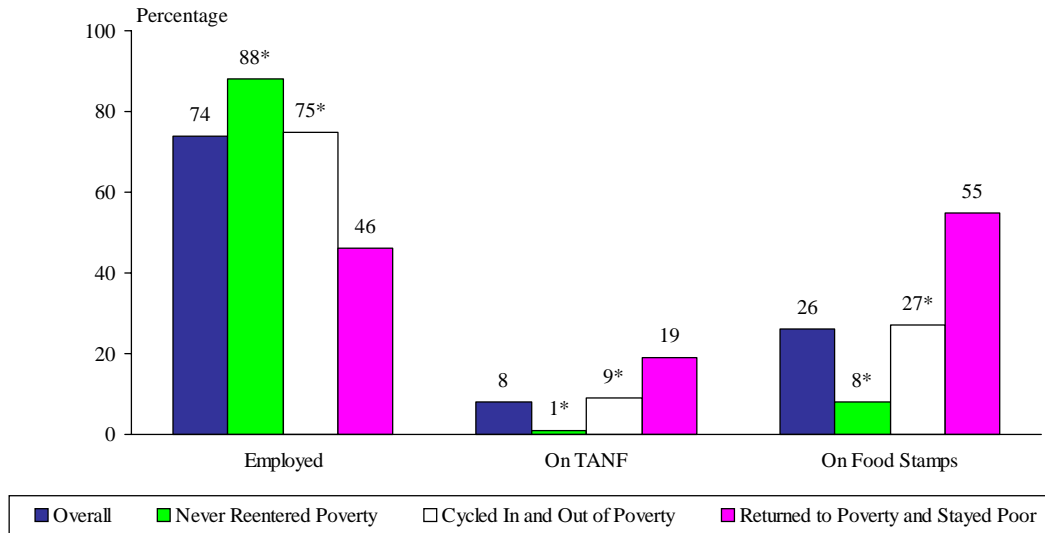
- *The average job quality of poverty leavers improves substantially over time, while the average job quality of the other two groups does not.*

Poverty leavers in our sample who were employed in the first month of the followup had average hourly wages of \$9.43 in the first job held during the followup compared to average hourly wages of \$12.05 in the last job held during the followup, an increase of 28 percent (not shown). The average wages of employed poverty cyclers increased by 22 percent from \$7.65 to \$9.37, while the wages of employed poverty returners increased by only 6 percent, from \$6.95 to \$7.38.

The pattern that emerges for having a job that provides health insurance coverage is even more dramatic. Employer-based health insurance coverage increased by 12 percentage points for employed members of the most successful group, while coverage increased slightly for poverty cyclers and decreased slightly for poverty returners (not shown). The differences in employment and job quality across the three groups translated into large differences over time in average earnings across the groups (Figure 7).

FIGURE 6

PERCENTAGE OF TIME SPENT EMPLOYED, ON TANF, OR ON FOOD STAMPS DURING THE TWO YEARS FOLLOWING POVERTY EXIT



Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: The sample includes poor single mothers who exited poverty during the first panel year. The follow-up period is two years. All figures are weighted.

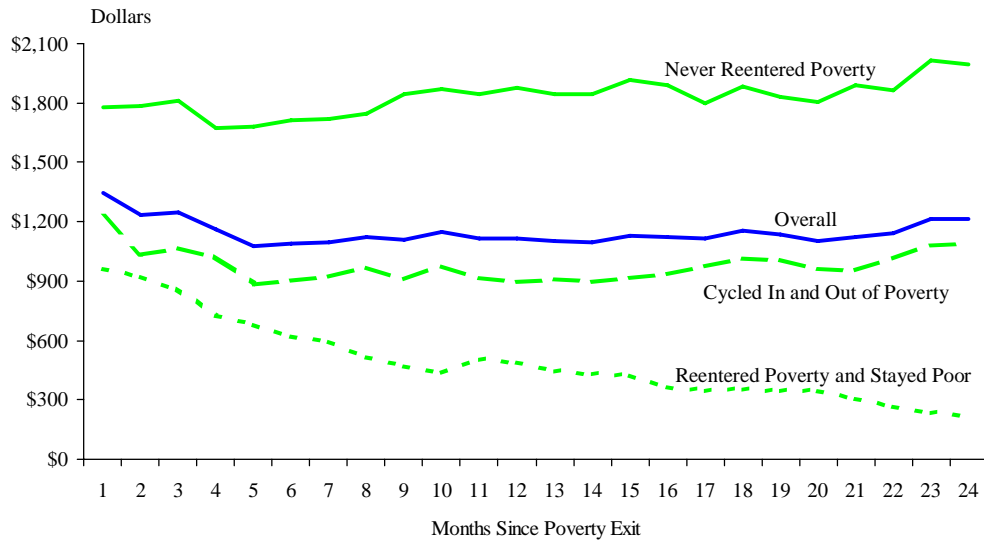
*The difference in variable means between the indicated group and those who reentered poverty and stayed poor is statistically significant at the .05 level.

- ***Rates of TANF receipt are fairly low for the single mothers in the sample. Food stamp receipt rates are somewhat higher, particularly for poverty returners.***

TANF receipt was low for all three groups of single mothers. Only 5 percent of poverty leavers ever received TANF income in the two years after exiting poverty, while 20 percent of poverty cyclers and 39 percent of poverty returners received TANF at some point during the followup (not shown). While it is likely that many of the poverty leavers would not qualify for TANF given their higher income levels, it is interesting that a larger fraction of poverty returners did not end up receiving TANF. Overall, sample members received TANF for only 8 percent of the follow-up period, on average (Figure 6). Single mothers in the poverty returners group received TANF for 19 percent of the follow-up period, compared to only 9 percent of the time for cyclers, and only 1 percent of the time for the poverty leavers. Food stamp receipt rates were somewhat higher, particularly for the poverty returners. This group received food stamps for about 55 percent of the follow-up period, compared to 27 percent among the poverty cyclers, and only 8 percent for poverty leavers (Figure 6).

FIGURE 7

AVERAGE MONTHLY EARNINGS, BY MONTH SINCE POVERTY EXIT



Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: The sample includes poor single mothers who exited poverty during the first panel year. The follow-up period is two years. All figures are weighted.

- *Education level, health status, and initial job quality are strongly associated with poverty experiences during the followup.*

Single mothers who are more employable are more likely to remain non-poor after leaving poverty and less likely to return to poverty. Compared to sample members with no high school degree, those with a high school degree were nearly twice as likely to remain non-poor following a poverty exit (not shown). Those with health limitations were significantly less likely to be poverty cyclers and were more likely to return to poverty and remain poor. Initial job characteristics were also among the most important factors associated with poverty dynamics. Sample members who found a job that provided health insurance coverage were nearly 60 percent more likely to remain non-poor than otherwise similar sample members who did not. Similarly, those who were able to find a job offering hourly wages greater than \$10 were over 50 percent more likely to remain non-poor than those who did not.

F. SUMMARY AND CONCLUSIONS

Overall, a mixed picture emerges about the economic success, in the medium term, of single mothers who exit poverty. Nearly 30 percent remain out of poverty. These women tend to have higher education levels and less health problems than other single mothers. The majority of single mothers who exit poverty, however, cycle in and out of poverty, with short spells out of

poverty and even shorter spells in poverty. Over time, these cyclers experience some income growth, spend more time out of poverty than in it (nearly half were out of poverty for at least three-quarters of the follow-up period), and become slightly less reliant on public assistance. Only about 15 percent of the sample returned to poverty and were unable to exit again. These women tend to be the most disadvantaged, with low levels of education and significant health problems, and tend to live without other adults and to have more and younger children than those in the other groups.

Our key finding is that employment and earnings play a primary role in the economic outcomes for this population. Earnings-related trigger events are, by far, the most common reasons for poverty exits and reentries. Family composition changes, which were more common reasons for poverty transitions in the 1970s and 1980s, have become much less common trigger events during the post-PRWORA period. At the time of poverty exit, the members of the group with the most successful outcomes had higher-paying jobs (with more benefits and in higher-paying occupations) than those of their counterparts and were able to sustain these jobs. Possible reasons for this are that these women tended to have higher education levels and fewer health problems, and that they lived with more adult relatives who could provide support with child care and finances. Given that many single mothers are able to find jobs, but many are not able to sustain or advance in these jobs, policies providing employment support for single mothers who exit poverty could help improve their economic success.

This study provides a detailed look at prospects for self-sufficiency among single mothers who exited poverty in the post-PRWORA period. In examining the findings, it should be kept in mind that the 2002-2003 period in which we track income and employment experiences of those who exited poverty was marked by weaker economic conditions than in earlier years. For instance, after a booming economy in the late 1990s and 2000, when the national unemployment rate was below four percent, the unemployment rate during the 2002-2003 period had crept close to six percent. The weaker economic conditions these single mothers faced could have affected their experiences, and made it more difficult for them to remain employed and stay out of poverty. The fact that the unemployment rate did not make a difference in our multivariate analyses, combined with the fact that the economic downturn was fairly mild, suggests that the poverty patterns for these single mothers might not differ much at other times. Furthermore, a thorough understanding of the issues raised in the study can provide insights into policy initiatives for single mothers, such as work supports for former welfare recipients, including the Earned Income Tax Credit, child care subsidies, and approaches to improve job retention and advancement.

I

INTRODUCTION

With the passage of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA), policymakers and researchers have recognized the importance of employment and earnings as a key way out of poverty and dependency for single mothers. During the middle and late 1990s, the Temporary Assistance for Needy Families (TANF) program, aided by a strong economy, helped move many recipients off the welfare rolls and into work. Several studies have looked at the labor force transitions of former welfare recipients, but few have focused on earnings and income progression, poverty dynamics, and the pathways out of poverty for single mothers (including those who have never received welfare). Single mothers represent a group vulnerable to extensive contact with poverty, and it is important to discern their prospects for long-term self-sufficiency.

This study seeks to broaden knowledge about the extent to which single mothers remain out of poverty and the factors most strongly associated with their continued economic progress. We used the 2001 Survey of Income and Program Participation (SIPP) data, collected by the U.S. Bureau of the Census, to examine the income and employment experiences of single mothers who exited poverty. We identified single mothers who exited poverty during 2001, and tracked their experiences over the subsequent two-year period.

In our study, we started by focusing on the following two sets of questions:

- ***Who are single mothers who exit poverty and what are their reasons for exiting?*** How common are poverty and poverty exits among single mothers? Do the characteristics of single mothers who exit poverty differ from those of single mothers who do not exit poverty? What proportion exits poverty because of a change in employment and earnings or a change in family composition?
- ***How long do single mothers who exit poverty stay out of poverty?*** What are the main reasons these single mothers reenter poverty? How long are their subsequent poverty spells? How common is poverty cycling?

Based on the duration of their non-poverty and poverty spells during the two-year follow-up period, we found that single mothers who exit poverty can be classified into three groups: 28 percent who exit poverty and never return, 56 percent who cycle in and out of poverty, and 16 percent who return to poverty and stay poor. Poverty dynamics differ markedly across these three distinct groups of single mothers. Thus, the remainder of our study focused on the following two sets of additional questions:

- *Who are single mothers who exit poverty and stay out of poverty? How do their characteristics differ from those who cycle in and out of poverty and those who return to and remain in poverty?* What are the characteristics of single mothers in each group? Do the reasons single mothers exit poverty differ across these groups?
- *What are the income, employment, and welfare receipt experiences of single mothers across the three groups?* How do their experiences differ? What proportion of months do they spend out of poverty? What are their employment and welfare experiences? What factors are associated with their economic success?

The remainder of this introductory chapter is in four sections. First, we present background information for the study and review the related literature. Second, we briefly summarize data, samples, and key definitions for the study, and third, discuss our analytic approach. Fourth, we provide a brief summary of study findings. We conclude with a roadmap to the rest of the report.

A. BACKGROUND AND RELATED LITERATURE

Poverty has been a persistent and relatively common phenomenon in the United States, particularly among single mothers and female-headed families. In a recent assessment of poverty levels and trends using data from the Current Population Survey (CPS) for the period from 1967 through 2003, Hoynes et al. (2004) report that the point-in-time poverty level among the general population remained around 13 percent from 1980 through 2003, despite large increases in the gross domestic product (GDP) during the same time period. Poverty rates for single mothers were even higher. While the annual poverty rate for individuals in families with married parents was 7 percent in 2003, 40 percent of individuals in families with single-parent heads were poor (Hoynes et al. 2004). Similar patterns are found when poverty is measured on a monthly level. For instance, Naifeh (1998) presents descriptive results from the 1993 panel of SIPP that suggest that nearly half of individuals in female-headed households have experienced at least two months of poverty during a two-year analysis period, compared to 14 percent of those in married couple families.

1. Findings from the Poverty Dynamics Literature

A large literature on poverty dynamics offers valuable context to our study. The literature finds that most people who experience poverty have short spells, but the relatively few long spells represent the majority of the poor at any given time. The seminal work of Bane and Elwood (1986), based on evidence from the 1970 through 1982 panels of the Panel Study of Income Dynamics (PSID), shows that 45 percent of poverty spells end within a year, but more than half of the poor in a given survey year are in the midst of a poverty spell lasting 10 years or more. Similar patterns have been found in studies using monthly poverty measures using the SIPP data (Ruggles and Williams 1987; Eller 1996; Naifeh 1998) and in descriptive evidence presented in studies that use other methodological approaches (Rank and Hirschl 2001; Stevens 1994; Stevens 1999; McKernan and Ratcliffe 2002). Studies that look at poverty patterns by gender of household head find that female-headed households have much higher incidence of poverty, higher rates of recidivism, and longer poverty spells (Bane and Ellwood 1986; Stevens 1999; McKernan and Ratcliffe 2002).

Although the literature on the dynamics of poverty exits is well developed, few studies have investigated the dynamics of poverty recidivism. One exception is Stevens (1999), whose study of poverty persistence also includes duration analysis of non-poverty spells. Using data from the 1968 through 1989 waves of the PSID, the author finds that poverty recidivism is common—more than half of those who leave poverty return within five years. Stevens (1999) finds that individuals in female-headed households are significantly less likely to exit poverty and significantly more likely to reenter after having exited. These differences translate into much greater poverty exposure among those who live in female-headed households, leading Stevens to conclude that “even a short period spent in a female-headed household significantly increases poverty persistence.”

The literature examining trigger events associated with poverty entry and exit has emphasized the importance of changes in income and employment status. Bane and Ellwood (1986) find that a change in the household head’s earnings is by far the most common event associated with poverty entry and exit among all households. These findings are supported in multivariate analysis based on data from the PSID and SIPP presented in McKernan and Ratcliffe (2002), which shows that employment events, rather than changes in household composition or disability status, are the most important factors in poverty entry and exit.

Studies, however, have also found large differences in events associated with poverty dynamics for female-headed households/families compared to the general population. Bane and Ellwood (1986) report that, while nearly 60 percent of poverty spells in two-parent households begin with a decline in the head’s income, only 14 percent of poverty spells in female-headed households begin this way. The most common event associated with poverty entry for female-headed households is a transition from married to single, rather than a change in income by a household member. Multivariate analysis presented in McKernan and Ratcliffe (2002) also supports the finding that transitions to and from female-headed households are important in explaining poverty transitions.

2. Findings from the Post-PRWORA Welfare Studies

The well-being of single mothers has been a topic of much interest among policymakers and researchers, particularly with the passage of PRWORA. Because increased employment was a central goal of the 1996 welfare reform, the labor market participation of single mothers has been a primary focus of the welfare literature. Several nationally representative studies have linked welfare reform and other policy changes to increased employment among single mothers (Meyer and Rosenbaum 2000; Blank and Schmidt 2001). Similarly, state studies of welfare leavers uniformly find high rates of employment. In a synthesis of ASPE-funded state studies, Acs and Loprest (2001) report that the median employment rate of single parents one year after leaving welfare was about 70 percent.

Despite high average levels of employment among former welfare recipients, evidence of a large degree of employment churning exists. For example, in a longer-term study of TANF recipients in Wisconsin, Wu et al. (2005) found that nearly 40 percent of their sample had patterns of unstable employment levels over a six-year follow-up period. Johnson and Corcoran (2003) also present evidence of a high degree of job instability and limited mobility to better quality jobs among welfare participants in Michigan. Wood et al. (2004) examine the poverty

patterns of former welfare recipients in a study of current and former TANF recipients in New Jersey and find that, after leaving poverty, transitions back into poverty are common. Of the people in their sample who had left poverty by the second year after entering TANF, more than half returned to poverty during the ensuing three years.

Our review of the findings of the relevant literature highlights the facts that (1) incidence of poverty is much higher among our target population of single mothers, and (2) the factors underlying poverty transitions are somewhat different for single mothers than for the general population. The review of research from the recent welfare literature on the employment and poverty patterns among current and former welfare participants suggests a great deal of heterogeneity in the experience of mothers participating in welfare who leave poverty. However, little is known about the success, or lack thereof, of single mothers following poverty exits, particularly in the post-PRWORA period. The objective of this study is to help fill this void by using longitudinal data on a large, nationally representative sample of single mothers to present a detailed picture of their income, employment, and earnings during the period following poverty exit and to identify factors associated with successful exits from poverty.

B. DATA, SAMPLES, AND KEY DEFINITIONS

This study used as its primary data source the 2001 SIPP, a large, multipanel, longitudinal survey that collected demographic and socioeconomic information on a nationally representative sample of U.S. households. The data cover the period from late 2000 through 2003. SIPP provides detailed monthly measures on labor force participation (for those age 15 and older), income, participation in public programs, and household composition.¹ This section provides a brief overview of some of the key data and sample decisions made for this study; the Appendix provides a more detailed description of these decisions.

Selecting the Poverty Measure. We used the official U.S. Census Bureau poverty measure as the primary one for the study. This measure has several well-documented shortcomings, but it is the one most commonly used in research examining poverty-related issues, and it offers a straightforward and easily understood method for gauging poverty. The use of the official poverty measure also facilitates comparisons of our study results with those of previous research.

Under the official measure, a family is “poor” if its total family income is less than its money income threshold (based on the Office of Management and Budget’s Statistical Policy Directive 14). Money income includes earnings; cash assistance (such as TANF benefits, unemployment compensation, or Supplemental Security Income [SSI]); child support; educational assistance; pension income; and interest and dividends. Income does not include non-cash benefits such as food stamps; Medicaid; public housing subsidies; and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).² There are 48

¹In addition to SIPP data, in our multivariate analyses, we utilize basic national- and state-level data on economic conditions, poverty levels, and welfare rules.

²Because food stamps are often considered a “near-cash” benefit, we experimented with including food stamp benefits in our definition of cash income; however, this led to only minor changes in our sample. See the Appendix for more discussion of issues related to income definition.

possible poverty thresholds that vary according to the size of the family and the ages of its members. These thresholds do not vary geographically, but they are updated annually for inflation using the Consumer Price Index for All Urban Consumers (CPI U).

We measured poverty at the family level largely because the family is the basis for the official definition of poverty. A SIPP family is a group of two or more persons related by birth, marriage, or adoption and living together; a SIPP family does not include cohabiters. We also considered using the subfamily—a nuclear family unit—rather than the family in defining poverty and found that this change made little difference in the size of our sample (see Appendix).

Analysis Sample and Unit of Analysis. The primary sample for the analysis consists of single mothers who, during the first 12 months of the panel period (roughly 2001), were in poverty in one month and exited poverty during the following month. If a sample member had more than one poverty exit during the one-year window, we used the first exit for the analysis. We defined single mothers as those women who, during the month before spell exit, were (1) older than 15 (so that employment information is available), (2) living with a related child younger than 18, and (3) unmarried. We included single mothers who were cohabiting with a partner, whose spouses were absent, or who were in school during the panel period.³ This definition of a “single mother” included all single female family heads with related children under 18 in the family, rather than only single female family heads living with their own children under age 18. Thus, for instance, our sample included a small number of single grandmothers living with their grandchildren, and single aunts living with their nieces and nephews. Overall, we have a sample of 615 single mothers who exited poverty during the first 12 months of the panel period.

A key decision for the analysis was how to deal with changes in family composition. For example, a woman might move out of the family she is living in and move in with others, or other people might join her family. In our analysis, we treated the single mother as the unit of analysis and tracked her poverty status in whatever family she was in during any given month using the income of that family, even if its members changed from month to month. Thus, our analysis focused on obtaining estimates of, for example, the duration of non-poverty spells of single mothers who exited poverty rather than the duration of non-poverty spells of the families that contained these women.

Defining Poverty and Non-Poverty Spells. Another key decision for the study was how to define poverty spells. In data sets that try to capture monthly income, “transitional” poverty spells are sometimes observed—that is, in a given month, a family can have a sudden income dip due either to real changes in income or to measurement error. Such dips can lead to more people being “ever” poor than “consistently” poor. It is also possible that for those with incomes near the poverty threshold, small deviations in income could lead to frequent changes in poverty

³The decision to include single mothers with a cohabiting partner is based on our focus on family-level poverty rather than household-level poverty. Consistent with this approach, we do not include cohabiters in constructing poverty thresholds, nor do we include their income as available family resources. This strategy is equivalent to assuming that cohabiters consume only their own resources and do not contribute toward or consume the resources of the family.

status. We conducted analyses to determine the extent to which such churning is present in our data and what steps could be taken to measure the “true” income volatility of single mothers.

We observed a high degree of poverty churning in the sample and were concerned about “noise” in the monthly poverty timelines. Thus, we explored several strategies to smooth poverty spells: (1) doing nothing, (2) closing “near-threshold” spells, (3) closing one-month spells, and (4) using a three-month moving average of family income. Based on these explorations, we elected to smooth volatility by closing all near-threshold spells, where a near-threshold spell is defined as a spell in which income is within 10 percent of the poverty threshold for the duration of the spell. Our main results, however, are not sensitive to the income-smoothing strategy.

C. ANALYTIC APPROACH

Our study used data from SIPP to examine the income and employment experiences of single mothers who exited poverty during the 2001 to 2003 period. In particular, we identified a sample of 615 single mothers who exited poverty during 2001 and tracked their experiences over the subsequent two-year period. In this section, we briefly describe our approach to conducting the various analyses described above. A detailed discussion of our methodological approach is provided in the Appendix.

Descriptive Analyses. Our study is primarily based on descriptive analyses in which we tabulated means and distributions of variables of interest. All figures were calculated using longitudinal sample weights in SIPP to make the findings representative of the U.S. civilian population in April 2001. Descriptive methods were used in analyses to (1) calculate poverty rates and poverty exit rates among single mothers in 2001; (2) profile single mothers who exited poverty in 2001 and how they compared to other single mothers; (3) profile the three groups of single mothers who exited poverty based on their poverty and non-poverty spells during the two-year follow-up period; and (4) compare the income, poverty, and job experiences of the three groups over the follow-up period. Where relevant, we conducted t-tests or chi-square tests to gauge whether or not observed differences in variable distributions across different groups of single mothers are statistically significant.⁴

We also used descriptive methods to identify key events that might have triggered sample members’ initial poverty exits and their subsequent poverty reentries. In our analysis, we identified trigger events over a two-month window and a four-month window prior to the poverty exit and examined the proportion of sample members who exited poverty via various pathways.

Finally, we used life-table methods to look at the duration of non-poverty spells as well as subsequent poverty spells. These methods account for right-censored spells—that is, spells that were ongoing at the end of the follow-up period.

⁴All standard error estimates used in these tests account for clustering and stratification in the SIPP design.

Multivariate Analyses. We conducted multivariate analyses to examine the relative importance of individual and job characteristics associated with successful poverty exits. In these analyses, we also included as model covariates national- and state-level data on economic conditions, poverty levels, and welfare rules. We estimated logit models where we modeled, as a function of covariates, the probability that a sample member spent a significant fraction of the two-year follow-up period out of poverty. We also estimated multinomial logit models to examine factors associated with membership in each of the three groups of poverty exiters: (1) single mothers who exited poverty and stayed out of poverty, (2) those who returned to poverty and remained poor, and (3) those who cycled in and out of poverty.

D. SUMMARY OF KEY FINDINGS

Both poverty and poverty exits are common among single mothers. More than half of single mothers in 2001 experienced poverty for at least one month during the year, and, among those poor, more than half exited poverty by the end of the year. Single mothers who exited poverty in 2001 were more disadvantaged than single mothers who were never poor in 2001, but were somewhat less disadvantaged than poor single mothers who did not exit poverty in 2001.

The most common reason associated with exiting poverty for single mothers is an increase in their own employment or earnings. In 2001, about three-quarters of single mothers who exited poverty experienced an employment or earnings increase soon before their poverty exit. Changes in family composition and in the earnings of other adult relatives in the family are much less common events associated with poverty exits for this population.

Many single mothers who exit poverty soon return to poverty (in 2001, the median non-poverty spell duration was about eight months and about 60 percent of non-poverty spells ended within one year). However, subsequent poverty spells for these women tend to be even shorter, suggesting that many poor single mothers exit poverty again. Thus, we find considerable cycling in and out of poverty for this population.

Based on the duration of their non-poverty and poverty spells during a two-year follow-up period, we found that single mothers who exit poverty can be classified into one of three groups: (1) 28 percent who exit poverty and never return—*poverty leavers*; (2) 56 percent who cycle in and out of poverty—*poverty cyclers*; and (3) 16 percent who return to poverty and stay poor—*poverty returners*. Poverty dynamics differ markedly across these three distinct groups of single mothers at the time of their poverty exits and afterward.

At the time of their poverty exits, the poverty leavers tend to be less disadvantaged than the other two groups of single mothers in their basic demographic and human capital characteristics. For instance, they are more likely than the other two groups to be high school and college graduates and less likely to have health problems. Poverty leavers also have older and fewer children, and are more likely to live with other adult relatives. They are also less likely to receive public assistance. It is interesting, however, that in the months leading up to the poverty exits, there are no differences across the groups in their employment, earnings, and poverty levels.

The poverty leavers, however, are more likely than the other two groups to exit poverty because of an employment or earnings increase. Furthermore, the members of this more highly educated group tend to have substantially higher earnings gains when they exit poverty, primarily because they tend to work more than the other groups and to find higher-paying jobs. Thus, initial job quality at the time of poverty exit is associated with more successful outcomes for this population.

Differences across the three groups extend into the post-poverty-exit period. Poverty leavers tend to experience higher earnings growth over time than the other two groups, and move to better jobs with greater benefits. In contrast, the earnings of the poverty returners tend to diminish over time, and these women tend to become increasingly reliant on public assistance.

Overall, a mixed picture emerges about the economic success, in the medium term, of single mothers who exit poverty. Nearly 30 percent remain out of poverty, and only about 15 percent return to poverty and are unable to exit again. The majority of single mothers who exit poverty cycle in and out of poverty with short spells of non-poverty followed by even shorter spells of poverty. Over time, these cyclers experience some income growth, spend more time out of poverty than in poverty (nearly half stayed out of poverty for at least three-quarters of months over a two-year follow-up period), and become slightly less reliant on public assistance. However, their economic progress is slow.

Our key finding is that employment and earnings play a primary role in the economic outcomes for single mothers who exit poverty. Increases and decreases in single mothers' earnings are, by far, the most common reasons for their poverty exits and reentries. Education levels, health status, and the number of adult relatives in the family are important factors associated with economic success for this population, partly due to their effects on employment and earnings. Given that many single mothers are able to find jobs, but many are not able to sustain or advance in these jobs, policies providing employment support for single mothers who exit poverty could help improve their economic success.

In examining these findings, it should be kept in mind that the 2002-2003 period in which we track income and employment experiences of those who exited poverty was marked by weaker economic conditions than in earlier years. For instance, after a booming economy in the late 1990s and 2000, when the national unemployment rate was below four percent, the unemployment rate during the 2002-2003 period had crept close to six percent. The weaker economic conditions these single mothers faced could have affected their experiences, and made it more difficult for them to remain employed and stay out of poverty. The fact that the unemployment rate did not make a difference in our multivariate analyses, combined with the fact that the economic downturn was fairly mild, suggests that the poverty patterns for these single mothers might not differ much at other times. Furthermore, a thorough understanding of the issues raised in the study can provide insights into policy initiatives for single mothers, such as work supports for former welfare recipients, including the Earned Income Tax Credit, child care subsidies, and approaches to improve job retention and advancement.

E. ROADMAP TO THE REST OF THE REPORT

Chapter II of the report compares the characteristics of single mothers who exit poverty to those of other groups of single mothers. This chapter also examines key events associated with poverty exits. Chapter III reports results from the spell analysis, including the length of non-poverty spells, reasons that single mothers reenter poverty, and the duration of subsequent poverty spells.

Chapters IV and V focus on the three groups of single mothers who exited poverty: those who remained out of poverty for the rest of the follow-up period, those who cycled in and out of poverty, and those who returned to poverty for the remainder of the period. In Chapter IV, we compare the characteristics of single mothers in these three groups and their reasons for exiting poverty. Chapter V focuses in more detail on the income and employment experiences of these three groups, as well as their job characteristics and public assistance receipt over the two-year period. Chapter V concludes with the findings from our multivariate analyses that describe factors—measured at the time of poverty exit—that are associated with economic success for the study population.

II

HOW MANY SINGLE MOTHERS EXIT POVERTY, WHO ARE THEY, AND WHAT ARE THEIR REASONS FOR EXITING?

As discussed in this chapter, more than one-half of single mothers in 2001 were poor at some point during the year, but more than one-half of those poor exited poverty before the year ended. Given the large fraction of poor single mothers who exit poverty, it is of policy importance to understand their demographic characteristics and key events that are associated with their poverty exits. These results will provide context for our subsequent analysis of poverty dynamics for this population presented in Chapters III to V.

This chapter contains four sections. The first section documents the percentage of single mothers who were poor during the first year of the panel period (roughly 2001)—the poverty rate for single mothers. This section also examines the percentage of poor single mothers who exited poverty in 2001—the poverty exit rate. The second section summarizes information on the characteristics of single mothers who exited poverty and how they differ from other single mothers. The third section summarizes key events that may be associated with poverty exits, such as earnings and family composition changes. Finally, because most single mothers exit poverty via earnings gains, in the fourth section we examine the characteristics of jobs held by single mothers just before and after their poverty exits.

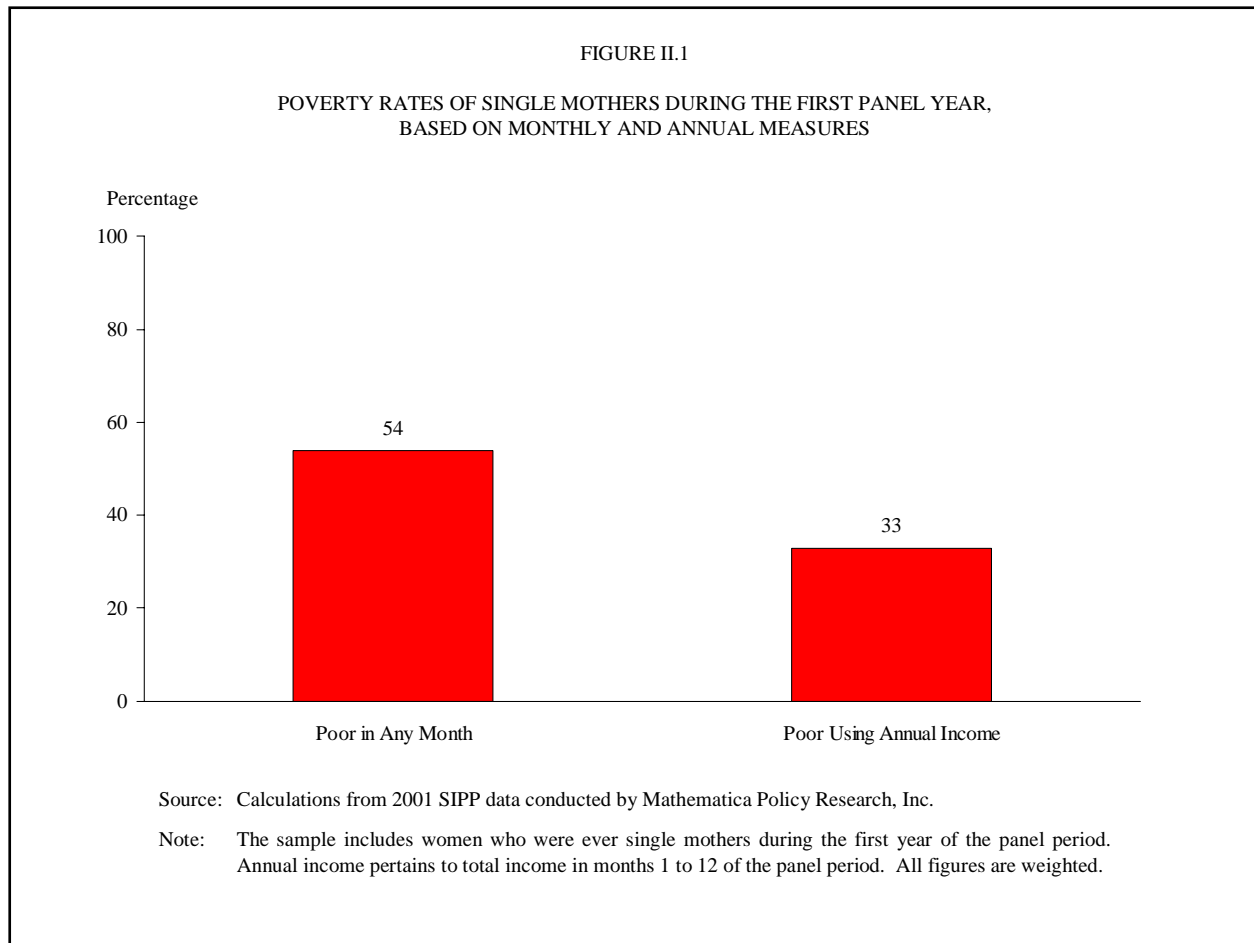
A. HOW MANY SINGLE MOTHERS ARE POOR, AND HOW MANY EXIT POVERTY?

This section addresses two key research questions related to the overall poverty status of single mothers in 2001: (1) How many single mothers were poor for at least one month during the year? and (2) How many of those poor subsequently left poverty by the end of the year? The sample for this analysis includes those who were ever single mothers during the first year of the panel period.

- *More than one-half of single mothers were poor for a least one month in 2001.*

In 2001, 54 percent of single mothers had family incomes below the poverty line for at least one month (Figure II.1). Thus, the majority of single mothers in 2001 experienced poverty at some point. This poverty rate is similar to the one found by Naifeh (1998) for female-headed households based on the 1993 panel of SIPP.

We also calculated the 2001 poverty rate for single mothers using their annual family incomes. The annual poverty rate will be similar to the percentage ever poor in 2001 if those



who are poor in a given month tend to be poor in other months during the year (and similarly for those who are not poor in a given month).

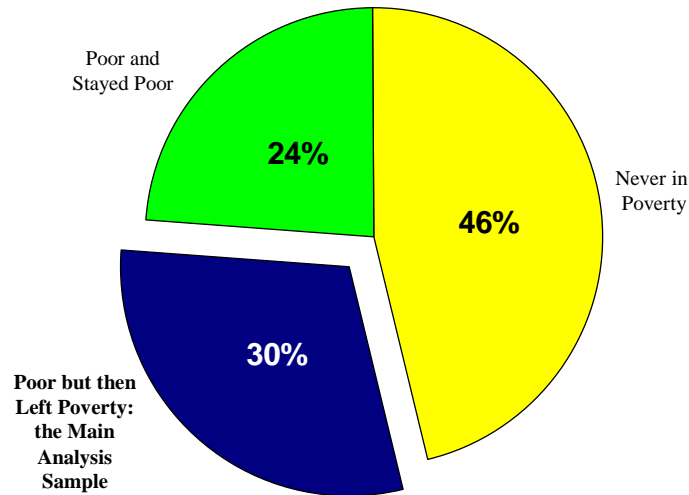
We find that one-third of single mothers in 2001 were poor based on their annual incomes (Figure II.1). The finding that the percentage ever poor (54 percent) is considerably larger than the annual poverty rate (33 percent) suggests that single mothers' poverty spells tend to be short. This income volatility is consistent with findings presented later in this report on the overall income experiences of our sample during a two-year follow-up period.

- ***The majority of single mothers who were poor in 2001 exited poverty before the end of the year.***

The 54 percent of single mothers who were ever poor in 2001 can be categorized into two groups (Figure II.2). The first group consists of those who subsequently exited poverty in 2001—30 percent of all single mothers (our main analysis sample for subsequent chapters). The second group consists of those who were in poverty for the remainder of 2001—24 percent of all single mothers (Figure II.2). Thus, among poor single mothers, about 55 percent exited poverty

FIGURE II.2

POVERTY AND POVERTY EXIT RATES OF SINGLE MOTHERS DURING THE FIRST PANEL YEAR,
BASED ON A MONTHLY POVERTY MEASURE



Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: The sample includes women who were ever single mothers during the first year of the panel period. All figures are weighted.

before the end of the year.¹ These findings again suggest that many poor single mothers have short spells of poverty, an issue that we examine more fully later in this report.

B. WHAT ARE THE CHARACTERISTICS OF SINGLE MOTHERS WHO EXIT POVERTY?

To provide perspective on the characteristics of single mothers who exit poverty (“poverty exiters”), we compared their demographic characteristics to those of two other groups of single mothers: (1) single mothers who were poor in 2001 and stayed poor for the rest of the year (“poverty stayers”), and (2) single mothers who were never poor in 2001. Demographic characteristics for poverty exiters pertain to the month before they exited poverty, whereas demographic characteristics for the other two groups pertain to the last month during the first panel year when they were single mothers. We conducted statistical tests to gauge whether differences between the demographic characteristics of poverty exiters and each comparison group are statistically significant.

¹This 55 percent figure is calculated by dividing 30 by 54.

Our key finding is that, in 2001, single mothers who exited poverty were less disadvantaged than those who stayed in poverty but were more disadvantaged than those who were never poor. These differences suggest that our main analysis sample of poverty exiters is not a random sample of single mothers. Rather, poverty exiters are a select group who are somewhat better off than single mothers with longer spells of poverty, but not as well off as those who are less likely to enter poverty.

- ***Poor single mothers are more likely than those never poor to be younger and non-white. They are also more likely to live with no other adult relatives and to have more and younger children.***

In 2001, about 36 percent of poverty exiters and 41 percent of poverty stayers in our sample were younger than 30 years old, compared to only one-quarter of those never poor (Table II.1). In addition, 56 percent of poverty stayers and 50 percent of poverty exiters are African American or Hispanic, compared to less than 40 percent of those never poor.

More than 80 percent of single mothers ever in poverty in 2001 lived with no other adult relatives (such as parents, grandparents, siblings, aunts and uncles), compared to less than 60 percent of those never poor. These findings suggest that poor single mothers may have fewer sources of family income to help them escape poverty. Child care may also be an important issue for those poor because these women tend to have younger and more children than those not poor. For instance, nearly one-third of poverty stayers had more than two children, compared to 24 percent of poverty exiters and only 12 percent of those never poor. In addition, the age of the youngest child was less than 3 years old for 39 percent of poverty stayers, 29 percent of poverty exiters, and 19 percent of those never poor. The larger number of children for those poor also increases the family poverty threshold, thereby making it more difficult for these women to escape poverty.

- ***Poor single mothers have lower educational attainment levels and much higher self-reported health limitations than those who are not poor.***

About 42 percent of poverty stayers in our sample did not have a high school credential, compared to 20 percent of poverty exiters and 11 percent of those never poor (Table II.1). Similarly, about 18 percent of those never poor were college graduates, compared to only 4 percent of poverty stayers. These differences in educational levels are statistically significant at the 5 percent significance level. These findings partly reflect the older ages of those who were never poor, but the same pattern holds within age categories (not shown).

Health status is strongly associated with the poverty status of single mothers. Nearly one-quarter of poverty stayers had a health limitation, compared to only 12 percent of poverty exiters and 6 percent of those never poor.

TABLE II.1
CHARACTERISTICS OF SINGLE MOTHERS IN REFERENCE MONTH,
BY POVERTY EXIT STATUS
(Percentages)

Characteristics	All Single Mothers (1)	Never in Poverty (2)	Poor but then Left Poverty (3)	Poor and Stayed Poor (4)
Percentage in Group	100	46	30	24
Demographic Characteristics				
Age		+		+
Younger than 20	3	2	4	2
20 to 29	29	23	32	39
30 to 39	34	32	39	33
40 or older	34	43	25	26
Average age (years)	35.4	37.4*	33.8	33.7
Race/Ethnicity		+		+
White and other non-Hispanic	53	61	50	44
Black, non-Hispanic	29	25	29	37
Hispanic	17	14	21	19
Ever Married	58	66*	55	46*
Has a Health Limitation	12	6*	12	22*
In Public or Subsidized Housing	16	5*	18	33*
Educational Characteristics				
Educational Attainment		+		+
Less than high school/GED	21	11	20	42
High school/GED	34	34	37	32
Some college, no degree	22	24	24	15
Associate or vocational degree	12	14	11	7
College graduate or more	11	18	7	4
In School	9	7*	11	11
Family Characteristics				
Age of Youngest Child		+		+
Younger than 3	27	19	29	39
3 to 6	24	22	26	25
6 to 12	27	29	28	23
13 to 18	22	30	17	13
Average age (years)	7.2	8.5*	6.5	5.5*
Number of Children		+		+
1	50	59	44	38
2	30	29	32	30
3 or more	21	12	24	32
Average number	1.8	1.6*	1.9	2.1*
Number of Adults in Family		+		+
1	69	59	76	81
2	18	22	16	12
3 or more	13	19	8	7
Average number	1.5	1.7*	1.4	1.3
Cohabiting	6	2*	7	11*

TABLE II.1 (continued)

Characteristics	All Single Mothers (1)	Never in Poverty (2)	Poor but then Left Poverty (3)	Poor and Stayed Poor (4)
Family Income				
Monthly Family Income		+		+
Less than \$1,000	39	0	65	79
At least \$1,000, less than \$2,000	25	22	33	20
At least \$2,000, less than \$3,000	13	27	2	1
At least \$3,000	23	50	0	0
Average (dollars)	2,054	3,644*	801	603*
Means of Support				
Employed	70	87*	68	40*
Earnings in Month (Dollars)	1,130	2,041*	417	253*
Received Any Public Assistance	30	12*	33	62*
Received TANF	9	2*	10	23*
Received FSP	25	6*	30	54*
Sources of Income^a				
		+		+
Own Earnings	55	56	52	42
Others' Earnings	25	28	15	6
Social Insurance and Disability	3	2	6	16
Means-Tested Government Assistance	2	0	6	17
Child Support and Alimony	7	6	12	11
Other Income	8	8	8	8
Locational Characteristics				
Region of Residence				
Northeast	18	18	18	17
South	39	28	38	41
Midwest	21	23	17	21
West	22	22	25	20
Lives in a Metropolitan Area	61	65	56	60
Sample Size	2,100	967	615	518

Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: All figures are weighted. The sample includes women who were ever single mothers during the first year of the panel period. Poverty is defined at the family level using the official poverty definition. "Single mothers" include unmarried female family heads who were older than 15 and living with a child younger than 18. The demographic characteristics for the poverty exiters pertain to the month before they exited poverty, and the demographic characteristics for the other two groups of women pertain to the last month during the first panel year when they were single mothers.

^aSocial insurance and disability income includes income from federal and state SSI, state unemployment, other unemployment, workers' compensation, employer sick benefits, and disability insurance. Means-tested government assistance includes income from TANF, General Assistance, and other welfare. Child support and alimony income includes pass-through child support, regular child support, and alimony.

*The difference in the variable *means* between the indicated group and the group in column (3) is statistically significant at the .05 level.

+The difference in the variable *distributions* between the indicated group and the group in column (3) is statistically significant at the .05 level.

- *There are large differences across the poverty groups in rates of employment and receipt of public assistance.*

Employment rates in the reference month were 87 percent for those never poor, 68 percent for those who exited poverty, and only 40 percent for those who remained poor (Table II.1). These differences are statistically significant. Average monthly earnings follow the same pattern across the groups. Similarly, 23 percent of those who remained poor in 2001 received TANF benefits, and more than one-half received Food Stamp Program (FSP) benefits, compared to much smaller percentages for other single mothers.

- *Family income levels and sources of monthly income differ across the three groups of single mothers.*

In the reference month, the average family income of poverty exiters was about \$800 (Table II.1). By comparison, the average monthly family income was more than four times higher (\$3,644) for those never poor. Average family income was about 25 percent lower for poverty stayers (\$600) than poverty exiters (\$800). For poverty exiters, more than one-half of their family income typically came from their own earnings. This percentage is similar to the corresponding figure for those never poor. As expected, poverty stayers had the smallest share of family income coming from earnings and the largest share coming from public assistance benefits.

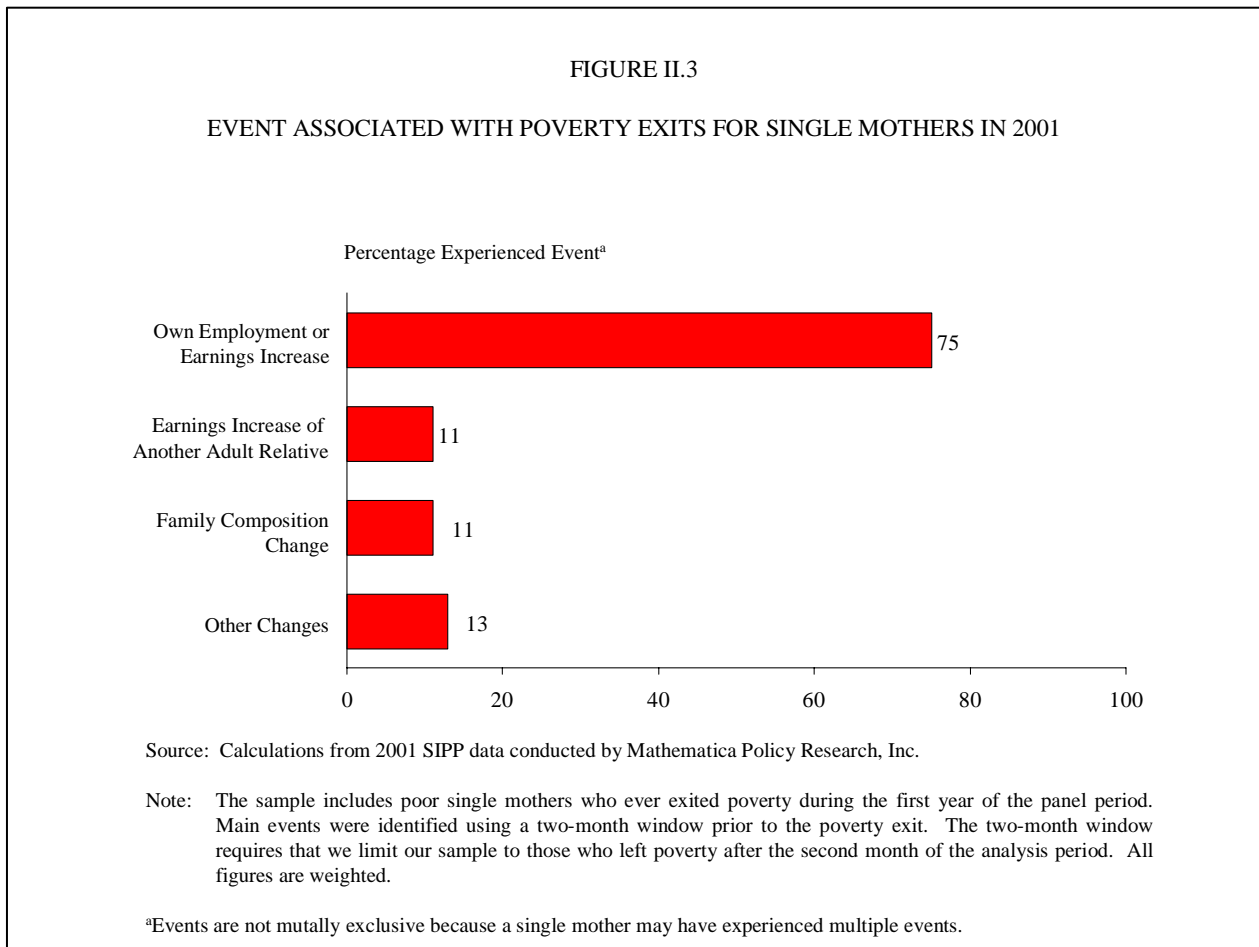
C. WHAT ARE KEY EVENTS ASSOCIATED WITH POVERTY EXITS?

It is important to identify key events that are associated with poverty exits for single mothers—denoted hereafter as “trigger” events—so that policymakers can promote targeted policies to help move at-risk single mothers off poverty. In this section, we examine the proportion of sample members who exited poverty via various pathways. The examined trigger events include the following:

- An earnings increase of the single mother
- An earnings increase of another adult relative in the family
- A family composition change, such as whether the single mother became married, whether the number of adults in the family increased, whether the number of children in the family decreased, and whether the number of children under age 6 decreased
- Both an earnings and family composition change
- Other reasons, including an increase in the receipt of public assistance

We identified trigger events over a two-month window prior to the poverty exit.² We present summary statistics for each trigger event separately because some sample members experienced more than one event (Figure II.3).³

Our key finding is that most single mothers who exit poverty do so because of their earnings gains. This suggests that strategies to promote job retention and improve the quality of jobs held by single mothers could help increase the percentage of poor single mothers who exit poverty.



²Use of a two-month window restricts our sample to those who exited poverty after the second panel month. Trigger event patterns are very similar when trigger events are identified over windows of other lengths.

³Our analysis examines only trigger events experienced by our sample members. We do not examine the proportion of all single mothers in poverty who experienced each trigger event or the poverty exit rate among single mothers who experienced each trigger event. McKernan and Ratcliffe (2002) present results from a comprehensive poverty entry and exit trigger analysis for female-headed households.

- *An increase in their own earnings is the most common trigger event associated with poverty exits for single mothers.*

In 2001, about three-quarters of single mothers who exited poverty experienced an employment or earnings increase soon before their poverty exit (Figure II.3). Some experienced an earnings increase because they became employed (employment rates increased from about 68 to 75 percent), whereas some experienced an earnings increase either in their current job or as they moved from one job into another one.

An increase in the earnings of other adult relatives in the family is a less common trigger event; only about 11 percent of the sample experienced this event. This low percentage is consistent with the finding that many poor single mothers do not live with other adult relatives.

- *Family composition changes account for a small share of all trigger events.*

About 10 percent of sample members experienced family composition changes prior to their poverty exit (Figure II.3). Most changes were due to increases in the number of adult relatives in the family. Only about 3 percent of the sample became married or experienced reductions in the number of children in the family. About half of those with family composition changes also had an earnings increase (not shown).

These findings contrast markedly with those of Bane and Ellwood (1986), who found that marriage was associated with 26 percent of poverty transitions in female-headed households, and earnings gains accounted for 33 percent of poverty transitions. It is likely that our results differ because of the increased labor force attachment of single mothers since the Bane and Ellwood (1986) study and, in particular, since PRWORA.

D. WHAT SIZE EARNINGS GAINS ARE ASSOCIATED WITH POVERTY EXITS, AND WHAT ARE THE JOB CHARACTERISTICS OF POVERTY EXITERS?

We have seen that increases in employment and earnings are, by far, the most common events associated with the poverty exits of single mothers. Here, we provide more information on these earnings-related trigger events by examining changes in employment rates, earnings, and job characteristics soon before and after these trigger events occur.⁴

- *Earnings for those with employment and earnings increases are low in the several months prior to their poverty exits. However, average monthly earnings nearly double soon before and after the trigger event.*

Average earnings in the base month were only about \$751 for the full sample of those with earnings-related trigger events. This \$751 figure is obtained by multiplying 79 percent of those

⁴As discussed in the Appendix, the base month for this analysis is either one or two months prior to the poverty exit.

who were employed during the base month, as well as the zero earnings for the 21 percent of those who were unemployed during the base month (Table II.2).⁵

Average monthly earnings for this sample nearly doubled from \$751 in the base month to \$1,382 in the follow-up month. Among those with jobs in the base period, average earnings increased from \$951 to \$1,397 (Table II.2). Among those without jobs in the base period, average earnings increased from \$0 to \$1,270 (Table II.2). Although earnings gains for the full sample were large in percentage terms, it is important to keep in mind that base month earnings were low.

- ***Monthly earnings increased because of increases in employment rates, hourly wage rates, hours worked per week, and weeks worked per month.***

As discussed, average monthly earnings for those with earnings-related trigger events substantially increased by \$631 (from \$751 to \$1,382) between the base and follow-up months. These earnings gains occurred due to increases in each component of earnings. First, employment rates increased from 79 to 100 percent during this period. This factor explains about 30 percent of the earnings gains.

Second, those who were employed in the base period received higher wages, worked more hours per week, and worked more weeks per month in the follow-up month than in the base month (Table II.2). The average hourly wage increased by \$1.81 per hour from \$7.41 in the base month to \$9.22 in the month of the trigger event. Similarly, sample members typically worked about 2 hours more per week in the follow-up month (36.1 hours on average, compared to 34.7 hours on average in the base month), and a higher percentage worked full-time (71 percent, compared to 63 percent in the base month; Table II.2). Furthermore, the sample worked about two to three extra days in the follow-up month than in the base month (approximately half a work week). Consistent with these findings, the sample was more likely to obtain jobs that provided health insurance coverage (39 percent in the follow-up period, compared to 35 percent in the base period). There were no differences, however, in job occupations across the two time periods.

Results in this chapter suggest that single mothers who exit poverty do so primarily because they obtain jobs (for those unemployed) or obtain better jobs (for those already employed). A key research issue that we examine in subsequent chapters is the extent to which these single mothers are able to sustain these jobs during a two-year follow-up period.

⁵Monthly earnings for each worker were calculated as the product of the reported hourly wage rate, average hours worked per week, and the number of weeks worked in the month. These earnings are typically lower than the monthly earnings reported directly by sample members. We used these constructed monthly earnings measures so that we could consistently disaggregate earnings into its component parts (wages, hours worked, weeks worked, etc.) in the analysis presented below.

TABLE II.2

JOB CHARACTERISTICS OF SINGLE MOTHERS WHO LEFT POVERTY DUE TO
AN EMPLOYMENT OR EARNINGS INCREASE

Characteristic of Main Job ^a	Job in the <u>Base</u> Month Before the Trigger Event for Those Employed (1)	Job in the Month of the Trigger Event	
		Those Employed in the Base Month: 79 Percent of Sample (2)	Those Unemployed in the Base Month: 21 Percent of Sample (3)
Average Monthly Earnings (Dollars) ^b	951	1,397	1,270
Hours Worked per Week			
Percentage worked full-time (35 hours or more)	63	71	75
Average hours worked per week	34.7	36.1*	38.3
Average Weeks Worked in Job	3.7	4.2*	3.2
Average Hourly Wage Rate (Dollars)	7.41	9.22*	10.36
Health Insurance Coverage (Percentage)	35	39	34
Union Member (Percentage)	7	10	6
Occupation (Percentage Distribution)			
Professional/technical	17	16	27
Sales/retail	13	14	12
Administrative support/clerical	20	21	29
Service	33	32	18
Machine/construction/production/transportation	17	15	10
Other	1	2	4
Sample Size	332	332	88

Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: The sample includes women who exited poverty during the first year of the panel period because of an employment or earnings increase (using a two-month window prior to the poverty exit). All figures are weighted.

^aIf the sample member held more than one job, the figures pertain to the job where the sample member worked the most hours.

^bMonthly earnings for each worker are calculated as the product of the reported hourly wage rate, average hours worked per week, and the number of weeks worked in the month. These earnings are typically lower than the monthly earnings reported directly by sample members.

*The difference in the variable *means* between columns (1) and (2) is statistically significant at the .05 level.

+The difference in the variable *distributions* between columns (1) and (2) is statistically significant at the .05 level.

III

HOW LONG DO NON-POVERTY AND SUBSEQUENT POVERTY SPELLS LAST, AND WHY DO SINGLE MOTHERS REENTER POVERTY?

This brief chapter begins our analysis of the income experiences during a two-year follow-up period of single mothers who exit poverty. The analysis examines how long their non-poverty spells last, reasons for their poverty reentries, and how long their subsequent poverty spells last. Thus, the focus of the analysis is on non-poverty and subsequent poverty spells. These spells are aggregated in later chapters to examine overall poverty experiences for this population.

This chapter addresses three key research questions:

- ***What is the duration of spells out of poverty for single mothers who exit poverty?*** What is the median spell duration? How many women reenter poverty within three months, one year, and two years? Do spell durations tend to differ by the trigger event that is associated with the poverty exit?
- ***What are key events associated with poverty reentries?*** To what extent are earnings and family composition changes associated with the rate at which single mothers return to poverty? Is there a correlation between “trigger” events associated with poverty exits and those associated with subsequent poverty reentries?
- ***What is the duration of subsequent poverty spells (for those who return to poverty)?*** Are poverty spells typically longer or shorter than non-poverty spells?

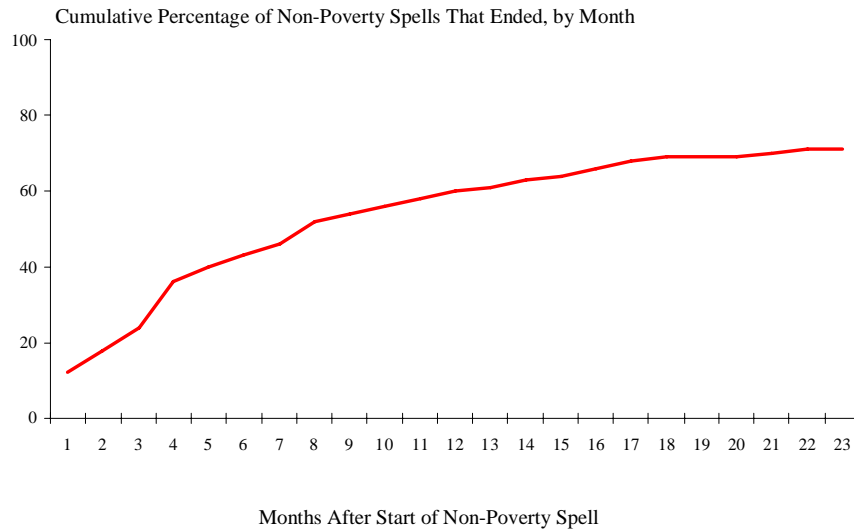
The analysis was conducted using the sample of single mothers who exited poverty during the first panel year (roughly 2001). The spell analysis was conducted using simple life-table methods that account for right-censored spells—that is, spells that were ongoing at the end of the follow-up period. These life-table methods are discussed in detail in the Appendix.

- ***The majority of single mothers who exit poverty return to poverty within one year.***

Many single mothers who exit poverty soon return to poverty. The median duration of the first observed non-poverty spell for our sample was eight months (Figure III.1). Furthermore, about one-quarter of non-poverty spells ended within three months, 60 percent of spells ended within one year, and 72 percent ended within two years.

FIGURE III.1

CUMULATIVE EXIT RATES FOR NON-POVERTY SPELLS OF SINGLE MOTHERS WHO EXITED POVERTY IN 2001



Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: The sample includes spells out of poverty for poor single mothers who exited poverty during the first year of the panel period. The follow-up period is two years. All figures are weighted.

At the same time, a substantial percentage (40 percent) of non-poverty spells lasted more than a year, and more than one-quarter lasted for more than two years. Thus, there is considerable variation in the poverty experiences of single mothers.

- *Spell durations out of poverty tend to be short for each type of trigger event associated with the initial poverty exit. However, spells tend to be slightly longer for those who experience family composition changes than for those who experience other types of trigger events.*

For each type of trigger event, nearly three-quarters of single mothers who exited poverty in 2001 reentered poverty within two years (Table III.1). However, non-poverty spells tended to be slightly longer for those who exited poverty due to family composition changes than for other reasons. The median non-poverty spell duration was about 11 months for those who exited poverty because of a family composition change, compared to about 8 months for those who exited poverty due to their own earnings increases, increases in the earnings of other adult relatives in the family, and other types of exits. However, these differences were not statistically significant.

TABLE III.1

CUMULATIVE EXIT RATES FOR NON-POVERTY SPELLS OF SINGLE MOTHERS
WHO EXITED POVERTY IN 2001, BY TYPE OF POVERTY EXIT
(Percentages)

Month After Start of Spell	Cumulative Exit Rates, by Primary Type of Poverty Exit			
	Employment or Own Earnings Increase	Earnings Increase of Another Adult Relative	Family Composition Change	Other Type of Exit
1	12	11	11	9
2	19	16	21	15
3	25	18	24	16
4	37	29	26	34
5	40	37	26	39
6	44	37	29	42
7	47	45	36	43
8	51	52	42	52
9	54	55	44	55
10	56	58	47	55
11	57	58	58	57
12	59	63	62	60
13-16	64	73	75	67
17-20	67	76	75	71
21-23	69	76	75	75
Sample Size	379	41	30	121

Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: The sample includes poor single mothers who ever exited poverty during the first year of the panel period. All figures are weighted.

These findings suggest that, although increases in employment and earnings are the most common trigger events associated with poverty exits of single mothers, those who experience these events do not have shorter spells than those who experience other, less common trigger events.

- *The reasons for reentering poverty are analogous to the reasons for exiting poverty.*

Employment and earnings decreases were the most common trigger event for the 73 percent of sample members who reentered poverty within the two-year follow-up period; decreases in the earnings of other adult family members and family composition changes were much less common (Table III.2). The distribution of trigger events for poverty reentries is very similar to the distribution of trigger events for poverty exits. Furthermore, there is a strong association

TABLE III.2
EVENTS ASSOCIATED WITH POVERTY REENTRIES FOR SINGLE MOTHERS,
WITHIN A TWO-MONTH WINDOW
(Percentages)

Event ^a	Experienced Event ^a
Either Own Employment or Earnings Decrease	73
Earnings Decrease of Another Adult Relative in Family	16
Family Composition Changes	
Became single	0
Number of adults in family decreased	8
Number of children in family increased	3
Number of children under age 6 increased	4
Any family composition change	10
Other Changes	14
Sample Size	443

Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: The sample includes poor single mothers who ever exited poverty during the first year of the panel period. Trigger events were identified using a two-month window prior to the poverty exit. The two-month window requires that we limit our sample to those who left poverty by the third month of the analysis period. All figures are weighted.

^aEvents are *not* mutually exclusive, because a single mother may have experienced more than one event.

between the two sets of trigger events (Table III.3). For instance, about 84 percent of those with an earnings-related trigger event for the initial poverty exit also experienced an earnings-related trigger event when they reentered poverty (although the associations are not as strong for the less common types of trigger events).

These findings suggest that earnings gains and losses are the primary factors associated with movements in and out of poverty for single mothers. Thus, policies aimed at stabilizing employment and earnings for this population could help reduce these movements.

- *Subsequent poverty spells tend to be shorter than initial non-poverty spells.*

Among single mothers in our sample who reentered poverty, the median poverty spell duration was only about five months, compared to eight months for the initial non-poverty spell (not shown). Furthermore, nearly three-quarters of poverty spells ended within a year. These results suggest that, although many single mothers cycle in and out of poverty, they tend to spend more time out of poverty than in poverty (as discussed further in Chapter V).

TABLE III.3

ASSOCIATION BETWEEN TRIGGER EVENTS FOR INITIAL POVERTY EXITS
AND POVERTY REENTRIES FOR SINGLE MOTHERS
(Percentages)

Main Trigger Event Associated with the Poverty Reentry	Main Trigger Event Associated with the Initial Poverty Exit				
	Own Employment or Earnings Change	Earnings Change of Another Adult Relative in Family	Family Composition Change	Both Family Composition and Earnings Changes	Other Reason
Own Employment or Earnings Change	84	13	9	50	29
Earnings Change of Another Adult Relative in Family	2	44	19	11	9
Family Composition Change	2	21	23	7	7
Both Family Composition and Earnings Changes	4	6	15	28	6
Other Reason	9	17	34	5	48
Sum	100	100	100	100	100
Sample Size	286	36	24	19	78

Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

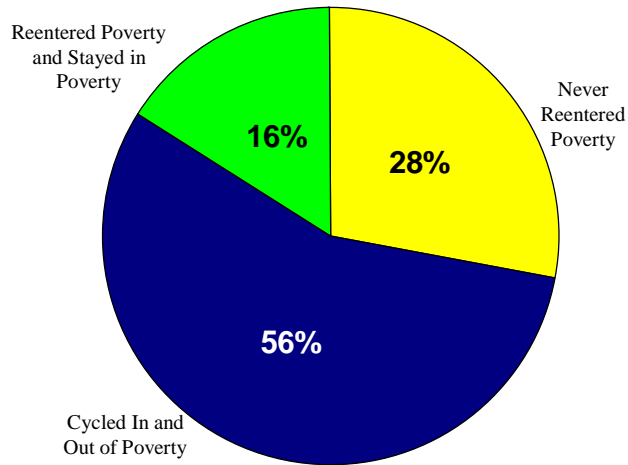
Note: The sample includes poor single mothers who ever exited poverty in the first year of the panel period and subsequently reentered poverty within the two-year follow-up period. The trigger events are identified using a two-month window prior to the poverty exit or reentry. All figures are weighted.

- *The majority of single mothers who exit poverty cycle in and out of poverty during a two-year follow-up period. However, nearly thirty percent remain out of poverty.*

Figure III.2 summarizes sample members' experiences based on their poverty and non-poverty spells during the two-year follow-up period. The sample can be divided into one of three groups: (1) 28 percent who never reentered poverty, (2) 56 percent who cycled in and out of poverty, and (3) 16 percent who reentered poverty and stayed in poverty. The finding that more than half the sample is in the cycler group suggests that there is substantial poverty volatility among this population. In the next two chapters, we provide more information on the characteristics and experiences of these three groups of single mothers, including identifying factors that may be associated with their successful economic outcomes.

FIGURE III.2

CATEGORIZING SAMPLE MEMBERS BASED ON THEIR POVERTY AND NON-POVERTY SPELLS DURING THE TWO YEAR FOLLOW-UP PERIOD



Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: The sample includes single mothers who were poor for at least one month during the first year of the panel period. The figures pertain to their poverty reentry status during the subsequent 24 months. All figures are weighted.

IV

WHAT ARE THE CHARACTERISTICS OF, AND THE REASONS FOR, EXITING POVERTY FOR GROUPS WITH DIFFERENT POVERTY DYNAMICS?

The previous chapter identified three groups of single mothers who exited poverty in 2001 on the basis of their spells in and out of poverty during the two-year follow-up period:

- *Poverty Leavers:* Those who left and never reentered poverty (28 percent)
- *Poverty Cyclers:* Those who cycled in and out of poverty (56 percent)
- *Poverty Returners:* Those who reentered poverty and stayed in poverty (16 percent)

The group of poverty leavers had the most successful income-related outcomes, because its members stayed out of poverty for the remainder of the follow-up period. The largest group of single mothers—poverty cyclers—consists of those who had multiple poverty and non-poverty spells during the follow-up period. These women experienced substantial swings in income, due primarily to swings in their own earnings. The smallest group—poverty returners—had the worst income-related outcomes, because they reentered poverty and remained poor for the rest of the two-year period.

In Chapter V, we will present detailed evidence that the economic outcomes of single mothers, including their income, employment, and welfare receipt experiences, differ markedly across these three groups (thus, results are presented separately for each group). In this chapter, we provide contextual information for the analysis in Chapter V by examining the background characteristics of the three groups of single mothers and key events associated with their poverty exits.

This chapter addresses three key research questions:

- *At the time of poverty exit, how do demographic characteristics differ across the three groups of single mothers?*
- *Do trigger events associated with poverty exits differ across the groups?*
- *How do job characteristics at the time of the poverty exit vary by group?*

The descriptive information provided in this chapter could be used to help identify, at the time of poverty exit, single-mother groups who are at particular risk of experiencing poor

outcomes (poverty cyclers and, especially, poverty returners). Appropriate services could then be targeted to these at-risk women.

A. HOW DO DEMOGRAPHIC CHARACTERISTICS DIFFER ACROSS THE THREE GROUPS?

The three groups of single mothers who exit poverty differ in their average education levels, health status, and prior public assistance receipt. As expected, single mothers who reenter poverty and stay poor (poverty returners) tend to be more disadvantaged than the other two groups of women; those who never return to poverty (poverty leavers) tend to be the least disadvantaged. However, it is surprising that the groups are not very different in their employment, income, and poverty levels prior to their poverty exits.

- *Single mothers who leave poverty and remain poor have higher education levels and are substantially less likely to have health problems than the other two groups of single mothers.*

Among the group of poverty leavers in our sample, half had more than a high school degree at the time of poverty exit, compared to 41 percent of poverty cyclers and only 35 percent of poverty returners (Table IV.1). The poverty leavers were also much less likely to have a health limitation that affected their ability to work than poverty returners (12 percent compared to 27 percent).

- *Poverty leavers are somewhat older and more likely to have ever been married than their counterparts in the other two groups.*

On average, poverty leavers in our sample were about 35 years old at the time of program exit, compared to about 34 to 31 years old for those in the other two groups (Table IV.1). Over 60 percent of poverty leavers had ever been married prior to poverty exit, compared to 55 percent of poverty cyclers and 44 percent of poverty returners (Table IV.1).

There were no differences, however, in other demographic characteristics across the three groups. For instance, the percentage minority (about 50 percent), the average number of children (about 2.0), and the percentage living with no other adult relatives (about 80 percent) did not vary by group.

- *Prior to their poverty exits, poverty leavers are considerably less likely to have had received TANF and food stamps than those in the other groups; however, employment rates and poverty levels are similar across the groups.*

The receipt of TANF and food stamps was much less prevalent for poverty leavers in our sample than for other single mothers (Table IV.1). Only 2 percent received TANF in the month prior to their poverty exit, compared with 11 percent of the cyclers and 19 percent of the poverty returners. Similarly, only 14 percent of poverty leavers received food stamps in the month prior to their poverty exit, compared with 31 percent of the cyclers and 55 percent of the poverty returners.

TABLE IV.1
KEY CHARACTERISTICS IN THE MONTH BEFORE LEAVING POVERTY,
BY TYPE OF SINGLE MOTHER WHO EXITED POVERTY
(Percentages)

Characteristics	Never Reentered Poverty	Cycled In and Out of Poverty	Reentered Poverty and Stayed Poor
Age			
Younger than 30	30*	35	50
Average (years)	35.1*	33.9	31.3
Race/Ethnicity			
White and other non-Hispanic	47	52	47
Black, non-Hispanic	31	27	36
Hispanic	22	22	16
Ever Married	62*	55	44
Has a Health Limitation	12*	8*	27
Educational Attainment			
Less than high school/GED	8	23	31
High school/GED	42	36	34
Some college, no degree	28	24	21
Associate or vocational degree	10	11	11
College graduate or more	12	6	2
Age of Youngest Child			
Younger than 3	33	28	30
Average age (years)	6.7	6.7	5.6
Number of Children			
3 or more	22	24	29
Average number	1.9	1.9	2.0
Adults in the Family			
Does not live with other adults	80	73	80
Average number of adults	1.3	1.4	1.4
Poverty Ratio			
Less than 0.5	37	31	39
At least 0.5, less than 1.0	63	69	61
Average poverty ratio	0.56	0.62	0.57
Employed	64	73*	60
Received TANF	2*	11*	19
Received Food Stamps	14*	31*	55
Average Family Income (Dollars)	756	833	769
Sources of Family Income^a			
Own earnings	50	53	49
Others' earnings	19	15	13
Social insurance and disability	6	6	8
Means-tested government assistance	2	7	10
Child support and alimony	15	11	12
Other income	8	9	8
Sample Size	172	340	103

Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: Sample includes single mothers who exited poverty in the first year of the panel period. All figures are weighted.

^aSocial insurance and disability income includes income from federal and state SSI, state unemployment, other unemployment, workers' compensation, employer sick benefits, and disability insurance. Means-tested government assistance includes income from TANF, General Assistance, and other welfare. Child support and alimony income includes pass-through child support, regular child support, and alimony.

*The difference in variable *means* between the indicated group and those who reentered poverty and stayed poor is statistically significant at the .05 level.

+The difference in variable *distributions* between the indicated group and those who reentered poverty and stayed poor is statistically significant at the .05 level.

It is somewhat surprising, however, that employment rates and poverty levels prior to the poverty exit did not vary more across groups. The average ratio of family income to the poverty threshold was about 0.6 (or 60 percent for each group (Table IV.1). Nearly two-thirds of single mothers in each group worked in the month prior to the poverty exit, with employment rates being slightly higher for the poverty cycler group than those in the other two groups.

- *Average family income, sources of family income, and earnings do not vary substantially across the three groups.*

In the month before leaving poverty, average monthly family income was low for sample members in all groups (about \$800; Table IV.1). Furthermore, for each group, the key source of family income was the earnings of the single mother (about 50 percent of all income). Thus, earnings were similar across the three groups. There are, however, some small differences across the groups in income shares from alternative sources; poverty leavers had a slightly higher share of income from the earnings of other adults in the family, and the poverty returners had a higher share of income from public assistance (Table IV.1).

Thus, we found that, while there are some clear differences across the groups in their demographic characteristics, including whether they were ever married, the age of their youngest child, their education level, and their health status, there are few differences in their earnings and income levels prior to their poverty exits. These results suggest that single mothers who exit poverty are a somewhat homogeneous population with low family incomes and low earnings.

At the same time, the finding that those with the poorest outcomes (poverty returners) have the lowest education levels and the highest prevalence of health problems could provide a partial explanation as to why these single mothers have trouble remaining above the poverty line. Furthermore, the substantially higher education levels of poverty leavers than of cyclers could also partially explain the more positive outcomes experienced by the poverty leavers. As discussed in Chapter V, education and health factors *remain* important in the multivariate analysis, where we control for other factors that could be associated with membership in each group.

B. DO POVERTY EXIT TRIGGER EVENTS AND JOB CHARACTERISTICS DIFFER ACROSS THE THREE GROUPS?

In Chapter II, we found that earnings and employment gains are the primary trigger events associated with poverty exits for single mothers. Here, we first address whether these trigger events are equally common among the three groups of single mothers and the magnitude of the earnings increases for each group. In addition, we examine whether, at the time of poverty exit, the group of poverty leavers hold higher-paying jobs than those in the other groups. This information is important for assessing whether job quality at the time of program exit is associated with time spent out of poverty during the medium term.

- *Employment and earnings increases are the most common trigger events associated with poverty exits for all groups, but the poverty leavers are the most likely to have these events.*

About 80 percent of the poverty leavers in our sample experienced an employment or earnings increase in the two months prior to their poverty exit, compared to 75 percent for the cyclers and 65 percent for the poverty returners (Table IV.2). Earnings increases of another adult relative in the family and family composition changes were less common trigger events for all groups. It is notable, however, that the poverty leavers were twice as likely to marry as those in the other two groups (six percent versus three percent), although these differences are not statistically significant. Finally, the poverty returners were more likely than the other groups to have experienced other trigger events, such as increases in public assistance receipt.

TABLE IV.2
EVENTS ASSOCIATED WITH POVERTY EXITS FOR SINGLE MOTHERS,
BY TYPE OF SINGLE MOTHER
(Percentages)

Event ^a	Percentage Experienced Event ^a		
	Never Reentered Poverty (1)	Cycled In and Out of Poverty (2)	Reentered Poverty and Stayed Poor (3)
Own Employment and Earnings Increases	80*	75	65
Earnings Increase of Another Adult Relative in Family	12	11	11
Family Composition Changes			
Became married	6	3	3
Number of adults in family increased	7	7	9
Number of children in family decreased	1	4	3
Number of children under age 6 decreased	3	2	3
Any family composition change	11	10	12
Other Changes	9*	13	19
Sample Size	164	314	93

Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: The sample includes poor single mothers who ever exited poverty during the first year of the panel period. Trigger events were identified using a two-month window prior to the poverty exit. The two-month window requires that we limit our sample to those who left poverty after the second month of the analysis period. All figures are weighted.

^aEvents are *not* mutually exclusive; thus, a single mother may have experienced more than one event.

*The difference in the variable means between the indicated group and the group in column (3) is statistically significant at the .05 level.

- *Among those who exit poverty because of employment or earnings increases, the poverty leaver group has the largest earnings increases.*

Average earnings in the base month (one or two months prior to the poverty exit) were similar for each group in our sample (about \$750; Table IV.3).¹ However, the average earnings *increase* in the month of the trigger event for the poverty leaver group (\$956) was more than twice as large as for poverty returners (\$467) and also substantially larger than for cyclers (\$509) (Table IV.3).

TABLE IV.3

JOB CHARACTERISTICS IN THE MONTH OF POVERTY EXIT FOR SINGLE MOTHERS WHO LEFT POVERTY DUE TO AN EMPLOYMENT OR EARNINGS INCREASE, BY TYPE OF SINGLE MOTHER

Characteristic of Main Job ^a	Never Reentered Poverty (1)	Cycled In and Out of Poverty (2)	Reentered Poverty and Stayed Poor (3)
Average Monthly Earnings (Dollars) ^b			
In month before the trigger event	764	773	703
In month of the trigger event	1,720	1,282	1,170
Hours Worked per Week			
Percentage worked full-time (35 hours or more)	81	69	71
Average hours worked per week	37.8	35.9	36.6
Average Hourly Wage Rate (Dollars)	11.10*	8.93	7.80
Average Weeks Worked in Job	4.1	4.0	4.1
Health Insurance Coverage (Percentage)	57*	31	23
Union Member (Percentage)	10	8	8
Occupation (Percentage Distribution)	+		
Professional/technical	27	16	11
Sales/retail	11	16	8
Administrative support/clerical	29	19	22
Service	24	29	37
Machine/construction/production/transportation	8	17	18
Other	1	3	4
Sample Size	130	231	59

Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: The sample includes women who exited poverty during the first year of the panel period because of employment or an earnings increase (using a two-month window prior to the poverty exit). All figures are weighted.

^aIf the sample member held more than one job, the figures pertain to the job where the sample member worked the most hours.

^bMonthly earnings for each worker are calculated as the product of the reported hourly wage rate, average hours worked per week, and the number of weeks worked in the month. These earnings are typically lower than the monthly earnings reported directly by sample members.

*The difference in the variable *means* between the indicated group and the group in column (3) is statistically significant at the .05 level.

+The difference in the variable *distributions* between the indicated group and the group in column (3) is statistically significant at the .05 level.

¹The Appendix discusses how the base month is defined.

Consequently, poverty leavers typically start their non-poverty spells with higher earnings than other single mothers. As discussed next, this occurs because poverty leavers tend to have higher-paying jobs and to work more hours than those in the other two groups.

- ***At the start of the non-poverty spell, poverty leavers typically hold higher-paying jobs with more benefits and work more than single mothers in the other two groups, suggesting that job quality may be related to successful poverty exits.***

Among those in our sample with earnings-related trigger events, the average hourly wage rate was considerably higher for poverty leavers than for the other two groups (\$11.10, versus \$8.93 for cyclers and \$7.80 for poverty returners; Table IV.3). Similarly, a higher percentage of poverty leavers worked full-time (81 percent, compared to about 70 percent for the other two groups), although these differences are not statistically significant. They also were significantly more likely to hold jobs that provided health insurance coverage (57 percent, compared to 31 percent for cyclers and 23 percent for poverty returners). Furthermore, poverty leavers were much more likely than the other two groups to hold professional and technical jobs and less likely to be employed in lower-paying service occupations.

Results from this chapter paint an interesting picture. Single mothers in each group tend to have similar employment and earnings levels in the several months *before* their poverty exits. However, single mothers with the most successful outcomes (poverty leavers) are more likely than their counterparts to experience earnings-related trigger events and to find higher-quality jobs around the time they exit poverty. This may have occurred due to their higher education levels. There were smaller differences in job quality at the start of the non-poverty spell, however, between the poverty cyclers and the poverty returners.

On the whole, the results suggest that job quality is associated with time spent out of poverty during the follow-up period, an issue that we explore further in the next chapter.

V

WHAT ARE THE INCOME AND EMPLOYMENT EXPERIENCES OF SINGLE MOTHERS WHO EXIT POVERTY?

The previous chapter discussed the characteristics and reasons for leaving poverty of three key groups of single mothers: (1) those who exited poverty and never reentered (*poverty leavers*), (2) those who moved in and out of poverty (*poverty cyclers*), and (3) those who returned to poverty and remained poor (*poverty returners*). The poverty leavers had higher levels of human capital than the other two groups and were more likely to have exited poverty as a result of employment and earnings events. They were also able to find employment in higher-quality jobs.

This chapter complements the analysis presented in the previous chapter by examining the overall poverty and employment experiences of these three groups of single mothers. The primary focus of the chapter is on documenting the magnitude of the difference in the experiences of the three groups. We provide summary measures of their experiences over a two-year follow-up period and look at trends over time in these outcomes. Where appropriate, we also examine the individual experiences of these single mothers, as the summary and trend measures could mask important differences at the individual level.

This chapter addresses five key research questions:

- *What are the overall poverty and income experiences of single mothers who exit poverty?*
- *What are the individual income and poverty experiences of single mothers who exit poverty?*
- *What are the employment and earnings experiences of single mothers who exit poverty?*
- *To what extent do single mothers who exit poverty receive public assistance?*
- *What factors are associated with single mothers achieving successful economic outcomes during the two years following a poverty exit?*

In general, we find that all three groups of single mothers who exited poverty demonstrate a high level of labor market attachment, as most of their income comes from earnings and most of their time is spent employed. These outcomes are particularly evident among poverty leavers and poverty cyclers. However, job quality and earnings for poverty cyclers are lower than for leavers, and cyclers tend to have incomes that are near the poverty threshold. Having higher levels of human capital and the ability to find higher-quality jobs are among the factors most strongly associated with achieving more successful outcomes following poverty exits.

A. WHAT ARE THE OVERALL POVERTY AND INCOME EXPERIENCES OF SINGLE MOTHERS WHO EXIT POVERTY?

The two most successful groups of single mothers (poverty leavers and cyclers) spent more time out of poverty than in poverty over the two-year follow-up period, although the average income for cyclers during the followup was not far above the poverty line. A large majority of poverty returners were poor for most of the followup.

- *Most poverty cyclers remain non-poor for the majority of the two years after poverty exit, while most poverty returners spend most of this time in poverty.*

Most single mothers who leave poverty were non-poor at any given point in time during the two years following their poverty exit and spent most of the followup non-poor (Figure V.1; Figure V.2). This is true, by definition, for those who did not return to poverty. However, it is also the case for poverty cyclers. In a given month, about 60 percent of poverty cyclers were out of poverty. The percentage out of poverty for this group dropped quickly from 100 percent in the first month to 60 percent in month 6. This percentage then stayed relatively constant through month 16 before recovering to about 70 percent two years after poverty exit. In contrast, the monthly percentage out of poverty for poverty returners declined quickly from 100 to 28 percent during the first year of the followup. By definition, everyone in this group was poor at the end of

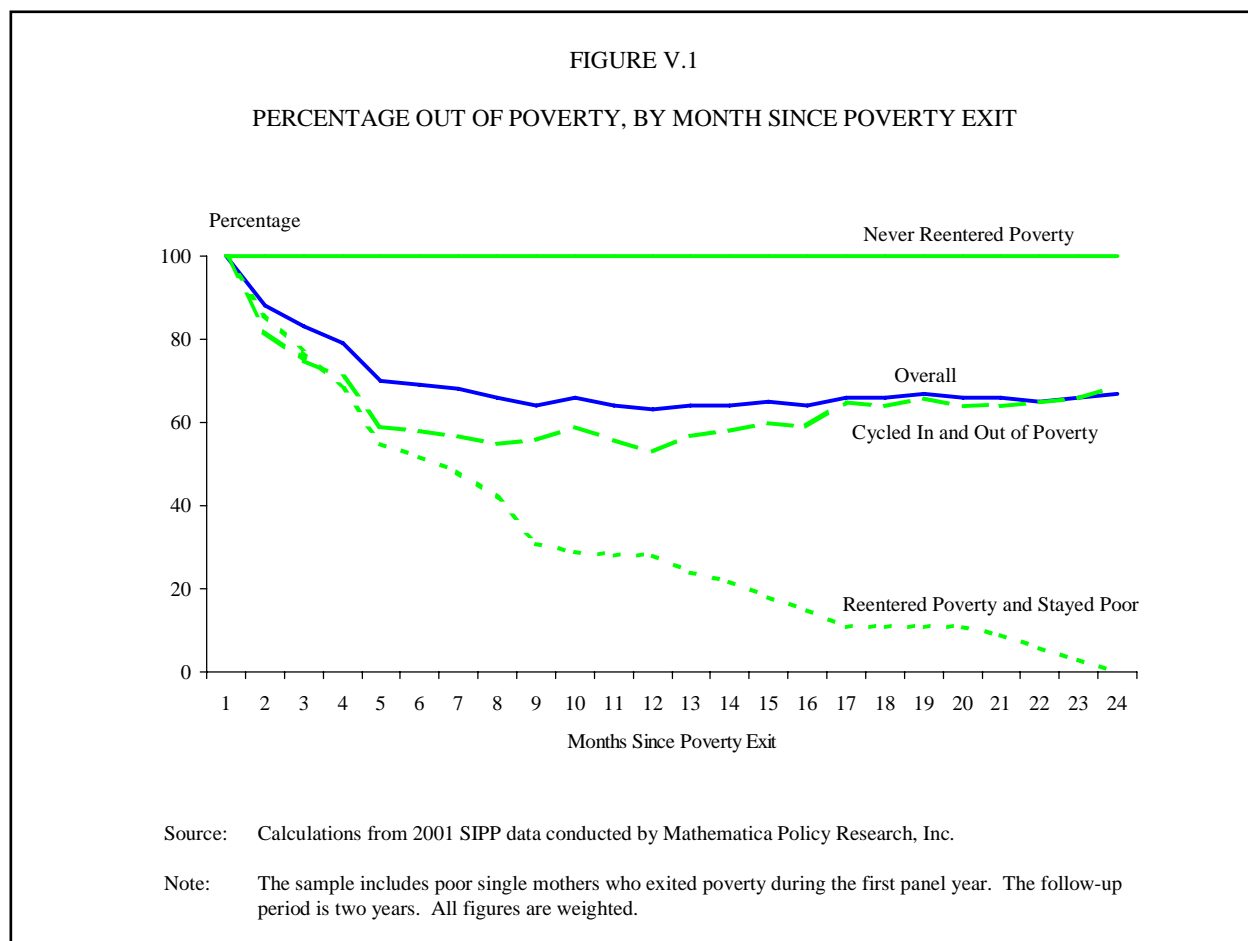
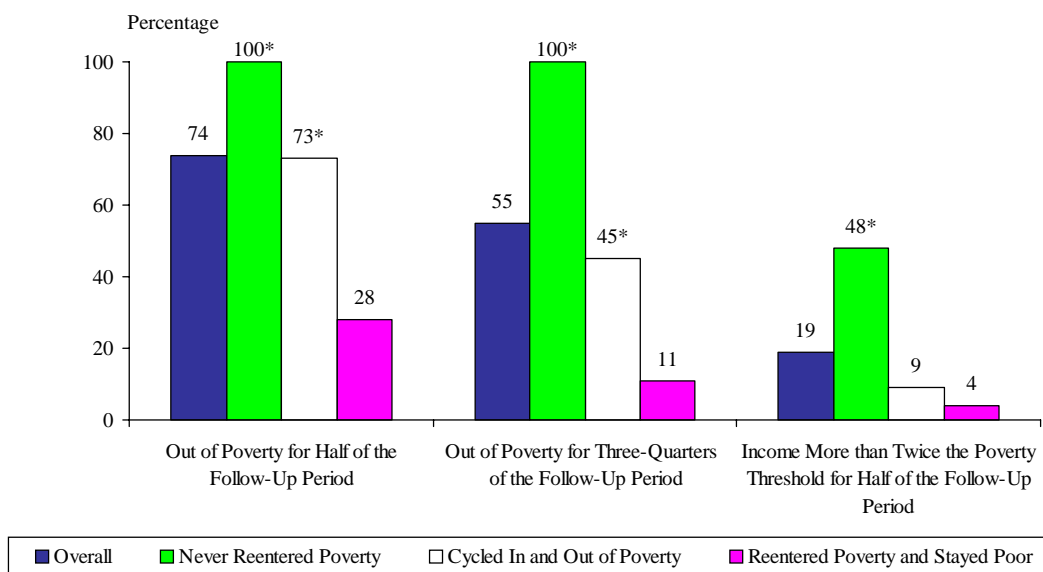


FIGURE V.2

TIME SPENT IN POVERTY AND WITH INCOME OF MORE THAN TWICE THE POVERTY THRESHOLD, BY TYPE OF SINGLE MOTHER



Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: The sample includes poor single mothers who exited poverty during the first panel year. The follow-up period is two years. All figures are weighted.

*The difference in variable means between the indicated group and those who reentered poverty and stayed poor is statistically significant at the .05 level.

the followup. The rapid drop in the percentage out of poverty for this group suggests that the large majority of them returned to poverty within a year of poverty exit.

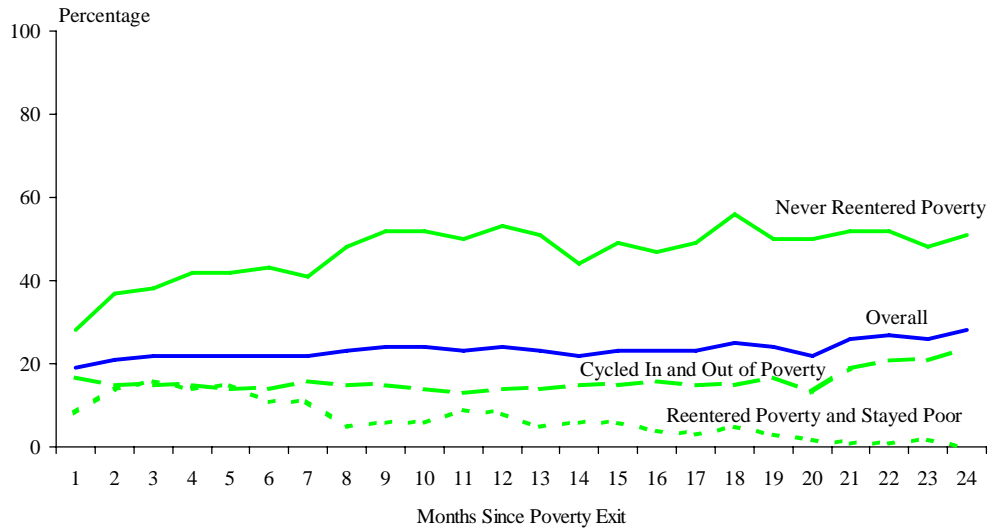
Consistent with these trends, most cyclers are non-poor for the majority of the two years following their poverty exit (Figure V.2). About three-quarters of the single mothers in this group remained non-poor for more than half of the follow-up period, while nearly half remained out of poverty for more than three-quarters of the followup. This finding is consistent with the findings in Chapter III that non-poverty spells tend to be longer than poverty spells for this group. In conjunction, these findings underscore the point that, while returning to poverty is common for single mothers who leave poverty, most of those who become poor again leave poverty quickly and spend more time non-poor than in poverty.

- ***The poverty leaver group exhibits considerable upward movement away from the poverty threshold over time. The two other groups do not experience large gains in income relative to the poverty threshold.***

During the two years following poverty exit, poverty leavers had an increase in the percentage with income of more than twice the poverty threshold (Figure V.3). About a quarter of these women had poverty ratios greater than two in the first month of the followup, while over half had this level of income two years later. Sample members from the other two groups were

FIGURE V.3

PERCENTAGE WITH INCOME OF MORE THAN TWICE THE POVERTY THRESHOLD,
BY MONTH SINCE POVERTY EXIT



Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: The sample includes poor single mothers who exited poverty during the first panel year. The follow-up period is two years. All figures are weighted.

much less likely to experience periods with income of more than twice the poverty threshold. For example, less than 20 percent of poverty cyclers had incomes at this level during most months of the followup. This rate remained relatively constant through the first 20 months of the followup before increasing slightly.

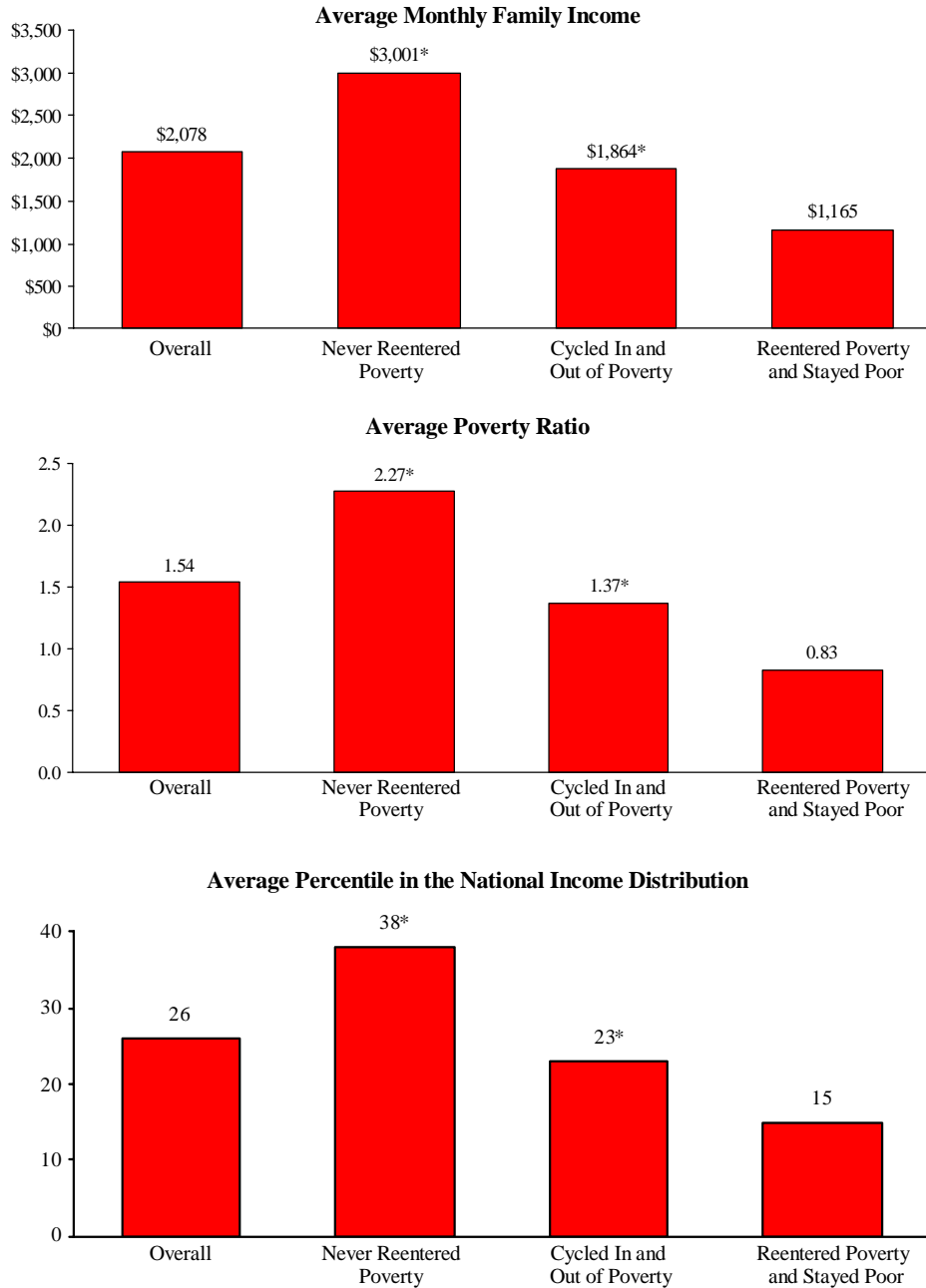
Consistent with the relatively high percentage of poverty leavers who had income of twice the poverty threshold at any given point in time, it was common for them to experience this high level of income for large portions of the followup. Nearly half of them had incomes that were twice the poverty threshold for at least half of the followup (Figure V.2). This experience was much less common among the other two groups. Less than 10 percent of cyclers and less than 5 percent of poverty returners had poverty ratios greater than two for at least half of the followup.

- ***Poverty leavers have moderately high average incomes. However, the other two groups have much lower average incomes; they remain near the poverty line and have low incomes compared to the national income distribution.***

Poverty exiters had relatively high average incomes (Figure V.4). Their average income during the followup was \$3,001 per month, which was more than twice the poverty threshold and corresponded to the 38th percentile of the national income distribution. However, the average income of poverty cyclers was only \$1,864, which was just 37 percent higher than the poverty

FIGURE V.4

AVERAGE MONTHLY FAMILY INCOME, POVERTY RATIO, AND NATIONAL INCOME PERCENTILE DURING THE TWO YEARS FOLLOWING A POVERTY EXIT



Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: The sample includes poor single mothers who exited poverty during the first panel year. The follow-up period is two years. All figures are weighted.

*The difference in variable means between the indicated group and those who reentered poverty and stayed poor is statistically significant at the .05 level.

threshold and corresponded to only the 23rd percentile of the national income distribution. The average income of poverty returners was lower still, at \$1,165, which was 17 percent below the poverty threshold and corresponded to the 15th percentile of the national income distribution. These results suggest that, while the group of single mothers that remained out of poverty was quite successful following poverty exits, the other two groups, which represent the majority of single mothers who exit poverty, had incomes that were not far from the poverty line.

- *All three groups of single mothers who exit poverty exhibit a high degree of self-sufficiency, as most income comes from earnings, while relatively little comes from cash public assistance, such as TANF.*

For all three poverty profile subgroups, their own earnings and the earnings of other family members were the largest two sources of income (Table V.1). Poverty leavers are the most reliant on earnings, as 86 percent of their income came from their own earnings or the earnings of other family members. However, even poverty returners were quite reliant on employment, as over three-fifths of their income came from earnings. Relatively little income came from cash

TABLE V.1
INCOME SOURCES DURING THE TWO YEARS FOLLOWING A POVERTY EXIT,
BY TYPE OF SINGLE MOTHER (PERCENTAGES)

Family Income Source ^a	Overall	Never Reentered Poverty	Cycled In and Out of Poverty	Reentered Poverty and Stayed Poor
Own Earnings	55	61	53	43
Earnings of Other Adult Relatives in Family	25	25	26	18
Social Insurance and Disability	4	2	4	11
Means-Tested Government Assistance	2	0	3	8
Child Support and Alimony	7	6	7	10
Other Income	7	6	7	10
Sample Size	615	172	340	103

Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: All figures are weighted. Poverty is defined at the family level using the official poverty definition. “Single mothers” include unmarried female family heads who are older than 15 and living with a related child younger than 18.

^aSocial insurance and disability income includes income from federal and state SSI, state unemployment, other unemployment, workers’ compensation, employer sick benefits, and disability insurance. Means-tested government assistance includes income from TANF, General Assistance, and other welfare. Child support and alimony income includes pass-through child support, regular child support, and alimony.

means-tested government assistance programs: less than 5 percent for the two more successful groups, and less than 10 percent for poverty returners.¹

B. WHAT ARE THE INDIVIDUAL INCOME AND POVERTY EXPERIENCES OF SINGLE MOTHERS WHO EXIT POVERTY?

In the last section, we examined the aggregate poverty experiences of the three groups of single mothers that exited poverty. Overall, we find that poverty leavers experience higher income to needs levels and move further away from the poverty threshold over time compared to the other two groups. However these trends and aggregate outcomes may mask variation in single mothers' experiences. In this section, we track the experiences of the sample at the individual level, by comparing their experiences during the first four months after they exited poverty to those during the last four months of the two-year follow-up period. We have seen that most single mothers in all three groups left poverty because they experienced earnings gains. In this section, we examine whether the income changes we observed were distributed evenly across all single mothers in a group and the extent to which single mothers gained or lost income over time.

- *There is considerable diversity in the extent of income growth over time across the three groups of single mothers who exit poverty.*

We find considerable variation in the income experiences of single mothers following a poverty exit. Over the two-year follow-up period, most poverty leavers experienced income increases; 80 percent had income increases, and more than one in four had increases greater than 50 percent (Figure V.5). Poverty cyclers were as likely to experience income gains as they were to experience income losses. Most poverty returners experienced large declines in income during the two-year window following poverty exits; about two-thirds of this group had income decreases greater than 50 percent.

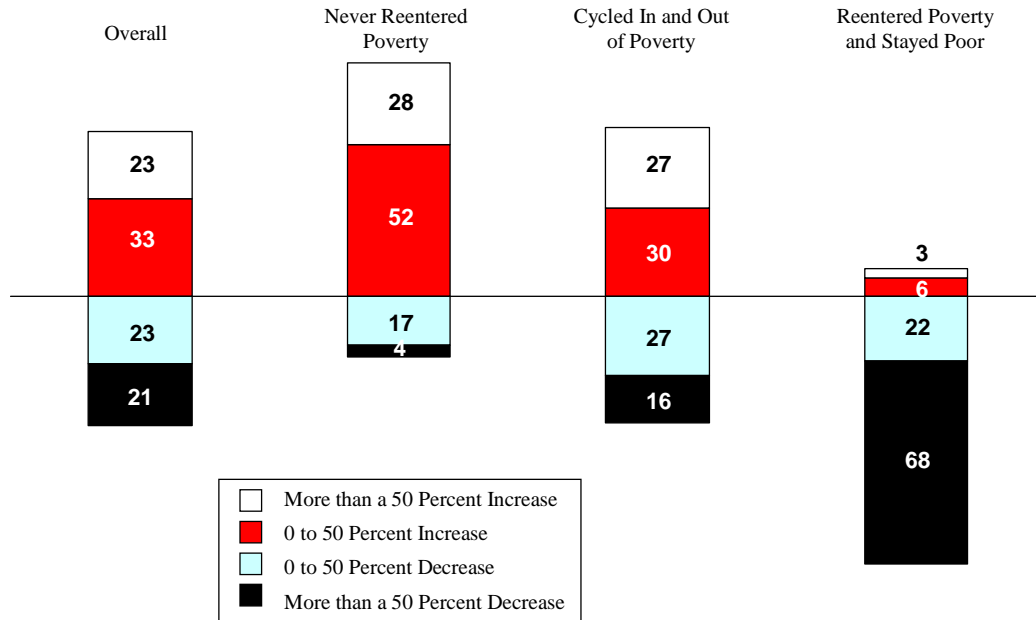
- *Average income increases are much larger for poverty leavers than for the other two groups.*

The average income change for poverty leavers was an increase of \$540 (not shown). In contrast, the average income change for poverty cyclers was an increase of \$84, while the average change for poverty returners was a decrease of \$1,187. These findings highlight the uncertainty and variety of experiences for single mothers following poverty exits.

¹In addition to own earnings and earnings from other family members, we group family income sources into four categories. Social insurance and disability income includes income from federal and state SSI, state unemployment, other unemployment, workers' compensation, employer sick benefits, and disability insurance. Means-tested government assistance includes income from TANF, General Assistance, and other welfare. Food stamps and other near-cash benefits are not included in this category. Child support and alimony income includes pass-through child support, regular child support, and alimony. Other income includes all remaining sources of income.

FIGURE V.5

CHANGE IN INCOME DURING THE TWO YEARS FOLLOWING POVERTY EXIT,
BY TYPE OF SINGLE MOTHER



Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: The sample includes poor single mothers who exited poverty during the first panel year. The follow-up period is two years. Changes in income refer to the difference between average income during the first four months of the followup and average income during the last four months of the followup. All figures are weighted.

C. WHAT ARE THE EMPLOYMENT AND EARNINGS EXPERIENCES OF SINGLE MOTHERS WHO EXIT POVERTY?

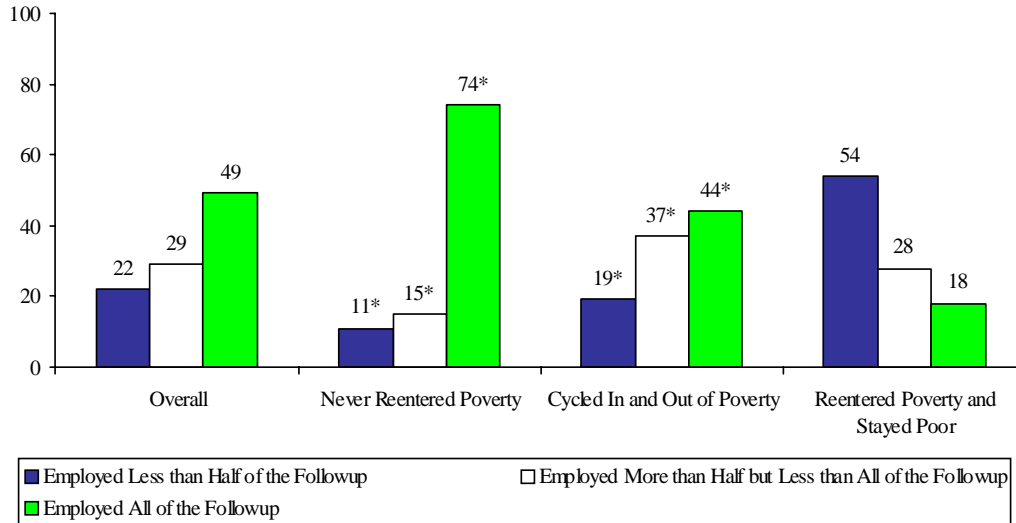
Earnings were the most important component of income for all three groups of single mothers who exited poverty. In this section, we examine the employment and earnings experiences of these women over a two-year follow-up period. While all groups had relatively strong ties to the labor market, these ties were stronger for poverty leavers and poverty cyclers than for those who returned to poverty and remained poor. Furthermore, the earnings of poverty leavers were considerably higher than those of the other two groups, because they were more likely to be employed and tended to be employed in higher-quality jobs.

- *The two more successful groups have much higher employment rates than poverty returners.*

Not surprisingly, employment rates were highest among sample members who never reentered poverty and lowest among those who returned to poverty and remained poor. This result further emphasizes the importance of finding and maintaining steady work in remaining out of poverty. Nearly three-quarters of poverty leavers were employed for the entire followup, and only about 1 in 10 were employed for less than half of the followup (Figure V.6). Poverty cyclers were less likely to be employed for the full followup but were nearly as likely to work for

FIGURE V.6

AVERAGE EMPLOYMENT RATES DURING THE TWO YEARS FOLLOWING A POVERTY EXIT,
BY TYPE OF SINGLE MOTHER



Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: The sample includes poor single mothers who exited poverty during the first panel year. The follow-up period is two years. All figures are weighted.

*The difference in variable means between the indicated group and those who reentered poverty and stayed poor is statistically significant at the .05 level.

most of the followup: 81 percent were employed for at least half of the followup. In contrast, over half of poverty returners were employed for less than 12 months during the two-year followup.

Consistent with these employment patterns, average employment rates across the entire followup were highest for poverty leavers and lowest for poverty returners. On average, poverty leavers were employed for 88 percent of the followup (not shown). The average employment rate for poverty cyclers was 75 percent. On average, poverty returners were employed for only 46 percent of the followup. Despite the differences in employment across the groups, it is important to note that even the least successful group had a moderate attachment to the labor force.

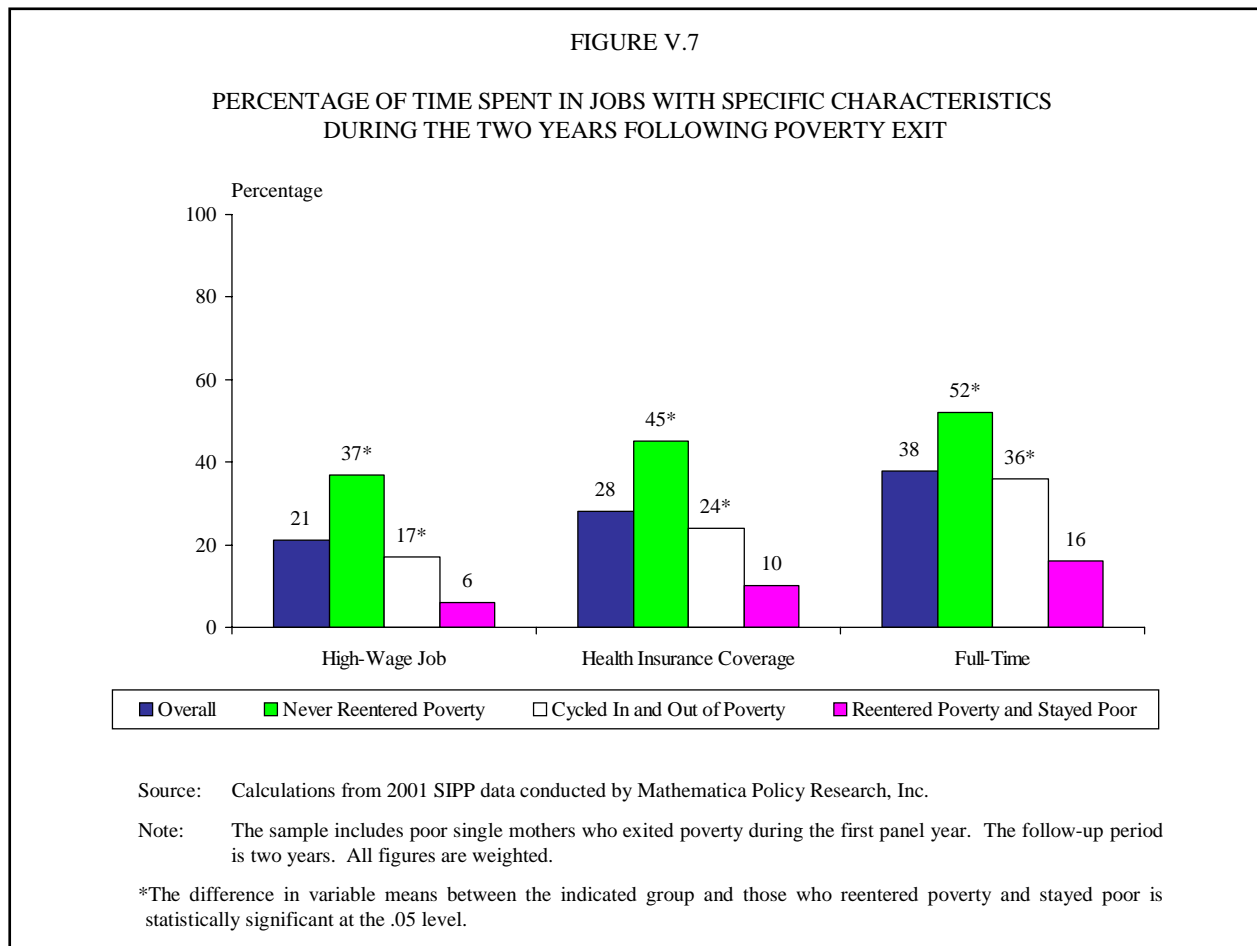
- *Poverty leavers tend to have much higher-quality jobs than the other two groups.*

Findings presented in the previous chapter demonstrate important differences in job quality for the three groups immediately after the poverty exit. These differences became larger over the course of the two years following the poverty exit. Thus, poverty leavers were the most successful at finding employment in high-quality jobs and moved into even higher-quality jobs over time. For example, on average, poverty leavers spent nearly half of the followup working in a job that provided health insurance coverage, more than one-third of the followup in a job

offering hourly wages greater than \$10, and over half of the followup working in a full-time job (Figure V.7).² In contrast, poverty cyclers typically spent one-quarter of the two years following a poverty exit in a job that provided health insurance coverage, about 15 percent in a high-wage job, and about one-third in a full-time job. Job quality for poverty returners was lower still; they spent about 10 percent of the followup in jobs that provided health insurance coverage, about 5 percent in a high-wage job, and about 15 percent of the time in a full-time job.

- *In addition to having higher-quality jobs on average, poverty leavers' job quality improves more over time than the job quality of the other two groups.*

Poverty leavers who were employed in the first month of the followup had average hourly wages of \$9.43 in the first job held during the followup, compared to average hourly wages of \$12.05 in the last job held during the followup, an increase of 28 percent (Table V.2). The average wages of employed poverty cyclers increased by 22 percent, from \$7.65 to \$9.37, while the wages of employed poverty returners increased by 6 percent, from \$6.95 to \$7.38.



²Some single mothers may not consider a full-time job to be of higher quality. In particular, some mothers may prefer part-time jobs in order to spend more time with their children.

TABLE V.2

INITIAL AND FINAL PRIMARY JOB CHARACTERISTICS OF SINGLE MOTHERS WHO WERE EMPLOYED
DURING THE MONTH OF THE POVERTY EXIT
(Percentages, Unless Specified Otherwise)

Characteristic	Overall		Never Reentered Poverty		Cycled In and Out of Poverty		Reentered Poverty and Stayed Poor	
	Initial Job	Last Job	Initial Job	Last Job	Initial Job	Last Job	Initial Job	Last Job
Hours Worked per Week								
Percentage worked full time (35 hours or more)	72	69	81	79	68	70	69	40*
Average hours worked per week	31.8	35.1*	33.3	37.3*	30.9	35.5*	32.4	29.2
Average Hourly Wage Rate (Dollars)	8.07	9.88*	9.43	12.05*	7.65	9.37	6.95	7.38
Health Insurance Coverage (Percentage)	36	41*	58	70*	29	32	19	16
Occupation (Percentage Distribution)		+		+		+		+
Professional/technical	20	21	27	25	18	21	11	13
Sales/retail	14	13	14	13	15	12	9	15
Administrative support/clerical	22	22	26	28	19	18	24	24
Service	30	31	23	23	31	35	40	33
Machine/construction/production/transportation	14	12	9	9	16	13	15	15
Sample Size	435	419	131	130	238	232	66	57

Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Notes: All figures are weighted. Poverty is defined at the family level using the official poverty definition. "Single mothers" include unmarried female family heads who are older than 15 and living with a related child younger than 18. Initial job refers to the primary job held during the first month following the poverty exit. Last job refers to the final primary job held during the last four months of the two-year followup.

*Indicates the difference in variable means between the initial job and last job is statistically significant at the .05 level.

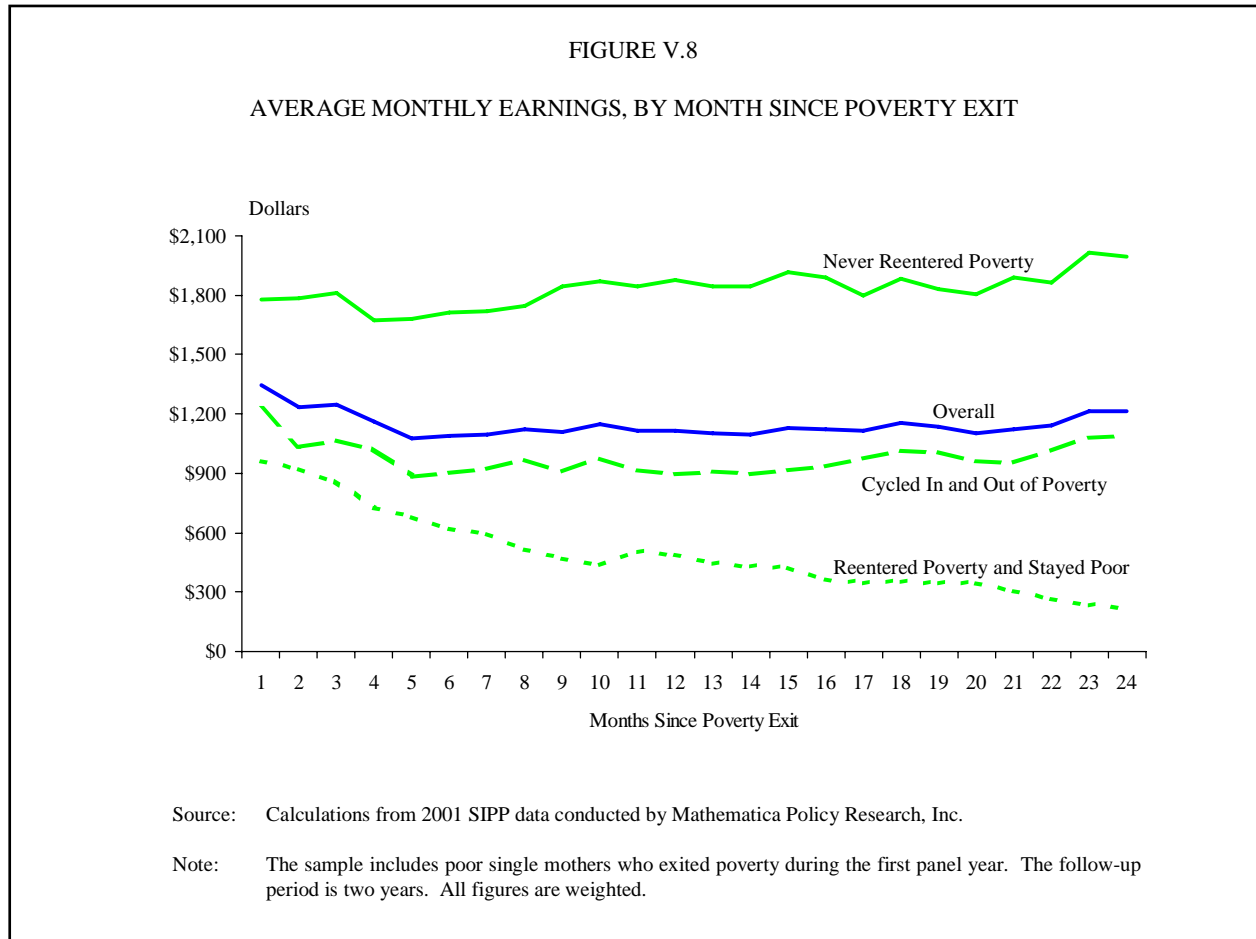
+Indicates the difference in variable distributions between the initial job and last job is statistically significant at the .05 level.

The pattern that emerges for having a job that provides health insurance coverage is even more dramatic. Employer-based health insurance coverage increased by 12 percentage points for employed members of the most successful group, while coverage increased slightly for poverty cyclers and decreased slightly for poverty returners.

- *Differences in the employment and job quality of the three groups translate into very large differences in their earnings.*

As with employment rates and job quality, earnings were highest for poverty leavers (Figure V.8). However, earnings patterns suggest a much larger difference between poverty leavers and poverty cyclers than is indicated by employment rates.

Monthly earnings for poverty leavers increased from about \$1,800 in the first month of the followup to about \$2,000 at the end of the followup (Figure V.8). Average earnings across the followup were \$1,829 for this group, and nearly 40 percent had average earnings greater than \$2,000 per month (Table V.3).³ The average earnings of poverty cyclers were much lower. In a



³These average earnings figures include months in which sample members had earnings of zero. If months with no earnings are excluded from the calculation, average earnings are somewhat higher for all three groups, and the differences in earnings across groups are similar to the differences presented here.

typical month of the followup, this group had average earnings between \$900 and \$1,000. Average earnings across the followup were almost 50 percent lower for this group than for those who did not return to poverty, at \$980 per month. The earnings of poverty returners were lower still. This group's monthly earnings declined steadily from about \$1,000 in the first month after the poverty exit to about \$200 two years later. More than 60 percent of this group had average earnings less than \$500 per month (Table V.3).

TABLE V.3
AVERAGE MONTHLY EARNINGS DURING THE TWO YEARS FOLLOWING A POVERTY EXIT,
BY TYPE OF SINGLE MOTHER
(Percentages)

Outcome	Overall	Never Reentered Poverty	Cycled In and Out of Poverty	Reentered Poverty and Stayed Poor
Average Earnings		+	+	
Less than \$500	28	13	26	61
At least \$500, less than \$1,000	19	6	25	25
At least \$1,000, less than \$1,500	25	25	29	8
At least \$1,500, less than \$2,000	15	19	15	6
At least \$2,000, less than \$2,500	6	14	3	0
At least \$2,500	8	23	2	1
Average (dollars)	\$1,146	\$1,829*	\$980*	\$497
Sample Size	615	172	340	103

Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: Sample includes single mothers who exited poverty in the first year of the panel period. The follow-up period is two years. All figures are weighted.

*The difference in variable *means* between the indicated group and those who reentered poverty and stayed poor is statistically significant at the .05 level.

+The difference in variable *distributions* between the indicated group and those who reentered poverty and stayed poor is statistically significant at the .05 level.

D. TO WHAT EXTENT DO SINGLE MOTHERS WHO EXIT POVERTY RECEIVE PUBLIC ASSISTANCE?

Another potential source of income for single mothers is public assistance. In this section, we examine the reliance of our sample on TANF and FSP benefits during the two years after their poverty exits. We find that, while relatively few single mothers consistently rely on TANF after their poverty exit, food stamps remain a common means of support for poverty returners.

- *Only a small fraction of single mothers who exit poverty receive TANF benefits during the two-year period following their poverty exit.*

Although TANF participation rates were low for all three groups, they were lowest for poverty leavers, as would be expected, since members of this group would generally not have

qualified for TANF (Table V.4). Only 5 percent of poverty leavers ever received TANF income in the two years after exiting poverty, while 20 percent of poverty cyclers and 39 percent of poverty returners received TANF at some point during the followup (Figure V.9). Rates of TANF receipt were fairly steady throughout the followup for all three groups. The rate of TANF receipt for the most successful group remained less than 5 percent in each month of the followup, the rate for poverty cyclers remained around 10 percent, and the rate for poverty returners remained near 20 percent. These findings suggest that most single mothers who leave poverty are not receiving TANF in the time following poverty exit.

TABLE V.4
 PERCENTAGE OF MONTHS RECEIVING TANF AND FOOD STAMPS
 DURING THE TWO YEARS FOLLOWING A POVERTY EXIT,
 BY TYPE OF SINGLE MOTHER
 (Percentages)

Outcome	Overall	Never Reentered Poverty	Cycled In and Out of Poverty	Reentered Poverty and Stayed Poor
Percentage of Months Receiving TANF		+	+	
None	81	95	80	61
Some, less than 25 percent	7	3	7	12
At least 25 percent, less than 50 percent	4	1	5	6
At least 50 percent, less than 75 percent	4	1	5	13
At least 75 percent	4	0	6	7
Average (percent)	8	1*	9*	19
Percentage of Months Receiving FSP		+	+	
None	54	80	49	23
Some, less than 25 percent	12	8	14	10
At least 25 percent, less than 50 percent	8	4	10	8
At least 50 percent, less than 75 percent	9	5	9	15
At least 75 percent	18	3	18	44
Average (percent)	26	8*	27*	55
Sample Size	615	172	340	103

Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

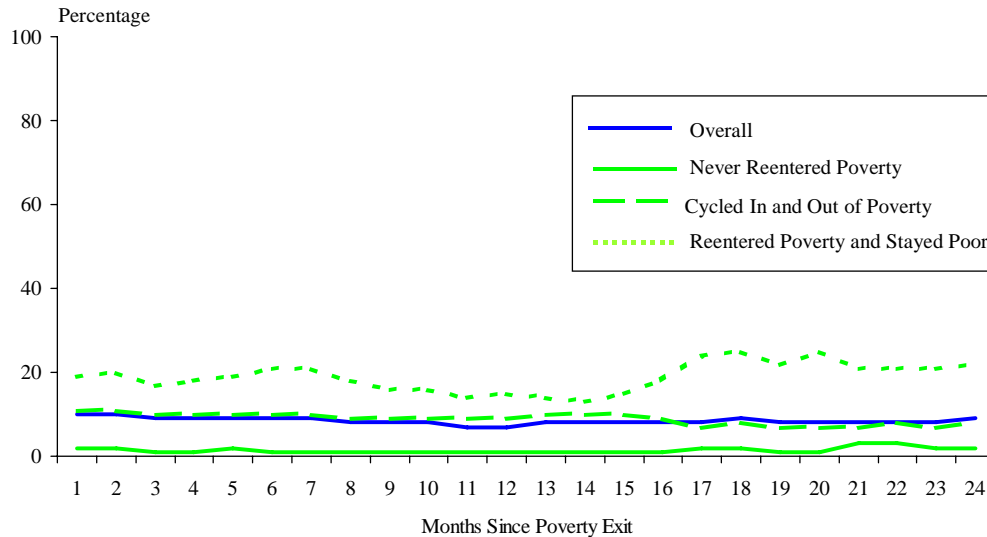
Note: Sample includes single mothers who exited poverty in the first year of the panel period. The follow-up period is two years. All figures are weighted.

*The difference in variable *means* between the indicated group and those who reentered poverty and stayed poor is statistically significant at the .05 level.

+The difference in variable *distributions* between the indicated group and those who reentered poverty and stayed poor is statistically significant at the .05 level.

FIGURE V.9

PERCENTAGE RECEIVING TANF BENEFITS, BY MONTH SINCE POVERTY EXIT



Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: The sample includes poor single mothers who exited poverty during the first panel year. The follow-up period is two years. All figures are weighted.

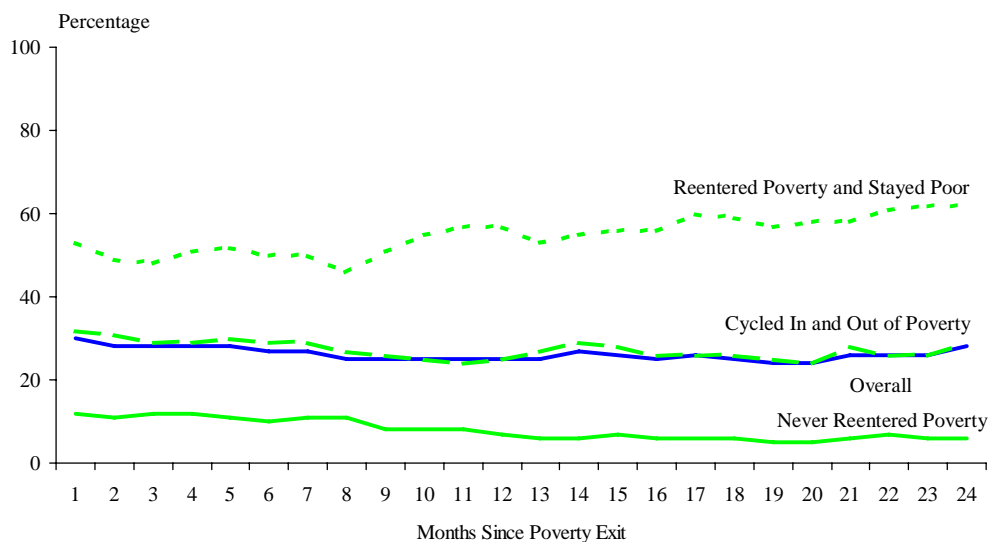
- ***Food stamp participation rates are low for the two more successful groups of single mothers that exit poverty, but are higher for poverty returners.***

Food stamp receipt was higher than TANF receipt for all three groups. Food stamp receipt was highest for poverty returners, which is not surprising, given they had the lowest income of the three groups. Nearly 60 percent of this group received food stamps for at least 12 months during the two years following their poverty exit (Table V.4). Thus, food stamps are an important means of support for the least successful group of single mothers who exit poverty. Their rate of food stamp receipt is much higher than that of the other two groups. About one-quarter of poverty cyclers received food stamps for at least half of the followup, while less than 10 percent of poverty leavers did so.

Rates of food stamp receipt were fairly steady throughout the followup for all three groups (Figure V.10). The rate of food stamp receipt for the most successful group remained between 6 and 12 percent in each month of the followup, while the rate for poverty cyclers remained between 26 and 32 percent. The rate for poverty returners increased somewhat, from about 50 percent at the beginning of the followup to about 60 percent two years later.

FIGURE V.10

PERCENTAGE RECEIVING FOOD STAMP BENEFITS, BY MONTH SINCE POVERTY EXIT



Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: The sample includes poor single mothers who exited poverty during the first panel year. The follow-up period is two years. All figures are weighted.

E. WHAT FACTORS ARE ASSOCIATED WITH SINGLE MOTHERS ACHIEVING SUCCESSFUL ECONOMIC OUTCOMES DURING THE TWO YEARS FOLLOWING A POVERTY EXIT?

Results presented so far in this chapter emphasize the varied experiences of single mothers who exit poverty during the two years following poverty exits. Poverty leavers have relatively high levels of income and earnings, and low levels of public assistance receipt. Poverty cyclers remain out of poverty for the majority of the followup, but tend to have incomes that are near the poverty threshold and to have earnings that are much lower than those of poverty leavers. Poverty returners have less labor force attachment, steadily declining earnings, and more reliance on public assistance, particularly food stamps.

Given these divergent experiences, it is important to assess which factors may be associated with single mothers being in each of the three poverty profile groups, or with attaining other broad measures of economic success. In this section, we present results from multivariate analysis that allows us to identify these factors. In particular, we use a multinomial logistic regression to assess factors associated with being a poverty leaver, a poverty cyler, or a poverty returner. We examine a diverse set of factors, including demographic and family characteristics, state characteristics (economic conditions, poverty levels, and welfare rules), reasons for leaving poverty, and initial job characteristics.

Table V.5 presents key findings from this analysis. In particular, it provides the predicted probability of being in each of the three groups that is associated with possessing different characteristics. Consistent with the strong relationship between employment outcomes and poverty pattern group, we find that human capital and job characteristics are the factors most associated with achieving economic success after leaving poverty.⁴ Most other variables, such as demographic and state characteristics, are not significantly associated with successful outcomes.

- ***Initial job quality, education, and health status are strongly associated with poverty experiences during the followup.***

Initial job characteristics are among the most important factors associated with poverty patterns following poverty exit. Sample members who were able to find a job that provided health insurance coverage were nearly 60 percent more likely to remain non-poor than otherwise similar sample members who did not. Similarly, those who were able to find a job offering hourly wages greater than \$10 were over 50 percent more likely to remain non-poor than those who did not.

When initial job characteristics are included in the model, none of the reasons for leaving poverty (trigger events) had a significant association with being in a better or worse group. However, when job characteristics are not included, experiencing an earnings-related trigger event is significantly and positively related to remaining non-poor throughout the followup (not shown). Thus, employment is important in achieving success following a poverty exit, but the type of employment is even more important.

Other factors associated with poverty patterns following a poverty exit are education and health. Compared to sample members with no high school degree, those with a high school degree are nearly twice as likely to remain non-poor following a poverty exit. Those with health limitations are significantly less likely to be poverty cyclers and are more likely to return to poverty and remain poor.

⁴We also use logistic regression to look at other broad measures of success, such as remaining out of poverty for three-quarters of the followup or remaining non-poor for the majority of the followup. The factors associated with these outcomes are similar to those associated with poverty patterns following a poverty exit.

TABLE V.5

SINGLE MOTHERS' PREDICTED PROBABILITIES OF REMAINING NON-POOR FOLLOWING
A POVERTY EXIT, CYCLING IN AND OUT OF POVERTY, AND REENTERING
POVERTY AND REMAINING POOR, BY CHARACTERISTIC

	Never Reentered Poverty	Cycled In and Out of Poverty	Reentered Poverty and Stayed Poor
Education			
<i>Less than high school</i>	0.173	0.628	0.199
High school	0.324*	0.540	0.136
Some college, no degree	0.311	0.554	0.135
Associates or vocational degree	0.250	0.588	0.162
College degree	0.402	0.487	0.111
Health Limitation			
<i>No</i>	0.283	0.587	0.130
Yes	0.361	0.357*	0.282*
Food Stamp Participation			
<i>No</i>	0.329	0.565	0.107
Yes	0.185*	0.575	0.240*
Reason for Leaving Poverty			
Own employment or earnings	0.282	0.571	0.147
Other family member's earnings	0.372	0.436	0.192
Family composition change	0.308	0.559	0.133
Combination of earnings and family composition changes	0.418	0.478	0.104
<i>Other changes</i>	0.221	0.600	0.179
Initial Job Characteristics			
Full-time			
<i>No</i>	0.292	0.563	0.145
Yes	0.292	0.552	0.156
Provides health insurance coverage			
<i>No</i>	0.239	0.592	0.169
Yes	0.380*	0.512	0.108
Hourly wage greater than \$10			
<i>No</i>	0.253	0.589	0.158
Yes	0.395*	0.481	0.124

Source: Calculations from 2001 SIPP data conducted by Mathematica Policy Research, Inc.

Note: Sample includes single mothers who exited poverty in the first year of the panel. The follow-up period is two years. The figures presented in this table are based on multinomial logistic regression and represent the predicted probabilities of having a particular poverty profile given a characteristic. For example, the first cell in the first row shows the predicted probability that a single mother who has less than a high school degree will remain nonpoor for the two years following poverty exit. Please see the appendix for more description of the methodology used for deriving these estimates. The multinomial logistic model controls for demographic characteristics (age, race/ethnicity, educational attainment, whether in school, age of youngest child, number of adults in the family, whether ever married, cohabitation, TANF receipt, food stamp receipt, whether lives in public or subsidized housing, income to poverty ratio before exiting poverty, and region), state economic conditions and welfare policy parameters (unemployment rate, poverty rate, TANF earnings disregard, TANF sanction type, and length of TANF time limit), main trigger event (own employment or earnings, other adult's employment or earnings, family composition change, and combinations of these three events), and initial job characteristics (provides health insurance coverage, offers hourly wages greater than \$10, and is full-time). All figures are weighted.

*Statistically significant at the .05 level. Italics indicate the reference group for significance tests.

REFERENCES

- Acs, G., and P. Loprest. "Final Synthesis Report of Findings from ASPE's Leavers Grants." Washington, DC: Urban Institute, November 2001.
- Bane, M., and D. Ellwood. "Slipping Into and Out of Poverty: The Dynamics of Spells." *Journal of Human Resources*, vol. 21, no. 1, winter 1986, pp. 1–23.
- Blank, Rebecca M., and Lucie Schmidt. "Work, Wages, and Welfare." In *The New World of Welfare*, edited by Rebecca M. Blank and Ron Haskins. Washington, DC: Brookings Institution, 2001.
- Burstein, Nancy R. "Dynamics of the Food Stamp Program as Reported in the Survey of Income and Program Participation." Report submitted to the U.S. Department of Agriculture, Food and Nutrition Service. Cambridge, MA: Abt Associates, January 1993.
- Citro, C.F., and R.T. Michael. *Measuring Poverty: A New Approach*. Washington, DC: National Academy Press, 1995.
- Eller, T.J. "Who Stays Poor? Who Doesn't?" *Current Population Reports. Dynamics of Economic Well-Being: Poverty 1992–1993*. 1996. [www.census.gov/hhes/www/prevsipp.html].
- Gleason, Philip, Anu Rangarajan, and Peter Schochet. "The Dynamics of AFDC Receipt Among Teenage Parents in Inner Cities." *Journal of Human Resources*, vol. 33, no. 4, fall 1998.
- Gleason, Philip, Peter Schochet, and Robert Moffitt. "The Dynamics of Food Stamp Program Participation in the Early 1990s." Report submitted to the U.S. Department of Agriculture, Food and Nutrition Service. Princeton, NJ: Mathematica Policy Research, Inc., April 1998.
- Hoynes, H.W., M.E. Page, and A.H. Stevens. "Poverty in America: Trends and Explanations." National Bureau of Economic Research Working Paper 11681. Cambridge, MA: NBER, 2004.
- Iceland, J. "Urban Labor Markets and Individual Transitions Out of Poverty." *Demography*, vol. 34, no. 3, August 1997a, pp. 429–441.
- Iceland, J. "The Dynamics of Poverty Spells and Issues of Left-Censoring." Research report no. 97-378. Ann Arbor, MI: University of Michigan-Ann Arbor, Population Studies Center, 1997b.
- Johnson, R., and M. Corcoran. "The Road to Economic Self-Sufficiency: Job Quality and Job Transition Patterns After Welfare Reform." *Journal of Policy Analysis and Management*, vol. 22, no. 4, 2003, pp. 615–639.
- McKernan, S., and C. Ratcliffe. "Transition Events in the Dynamics of Poverty." Washington, DC: Urban Institute, September 2002.

- Meyer, Bruce, and Dan Rosenbaum. "Making Single Mothers Work: Recent Tax and Welfare Policy and Its Effects." *National Tax Journal*, vol. 53, no. 4, part 2, 2000, pp. 1027–1062.
- Naifeh, M. "Trap Door? Revolving Door? Or Both?" *Current Population Reports. Dynamics of Economic Well-Being: Poverty 1993–1994*. 1998. [www.census.gov/hhes/www/poverty.html].
- Rank, M., and T. Hirschl. "The Occurrence of Poverty Across the Life Cycle: Evidence from the PSID." *Journal of Policy Analysis and Management*, vol. 20, no. 4, 2001, pp. 737–755.
- Ruggles, P. *Drawing the Line: Alternative Poverty Measures and Their Implications for Public Policy*. Washington, DC: Urban Institute Press, 1990.
- Ruggles, P., and R. Williams. "Transitions In and Out of Poverty: New Data from the SIPP." Publication no. 8716. Washington, DC: U.S. Department of Commerce, Bureau of the Census, December 1987.
- Sawhill, I. "Poverty in the U.S.: Why Is It So Persistent?" *Journal of Economic Literature*, vol. 26, no. 3, September 1988, pp. 1073–1119.
- Stevens, A. "Climbing Out of Poverty, Falling Back In: Measuring the Persistence of Poverty over Multiple Spells." *Journal of Human Resources*, vol. 34, no. 3, summer 1999, pp. 557–588.
- Stevens, A. "The Dynamics of Poverty Spells: Updating Bane and Ellwood." *AEA Papers and Proceedings*, vol. 84, no. 2, May 1994, pp. 34–37.
- Wood, R., A. Rangarajan, and A. Gordon. "WFNJ Clients and Welfare Reform: A Final Look at an Early Group." Princeton, NJ: Mathematica Policy Research, Inc., September 2004.
- Wu, C., M. Cancian, and D. Meyer. "Standing Still or Moving Up? Evidence from Wisconsin on the Long-Term Employment and Earnings of TANF Participants." Prepared for the 2005 APPAM Research Conference, Washington, DC, October 2005.

APPENDIX

DATA, SAMPLES, AND ANALYTIC APPROACH

In this Appendix, we describe the data sources (Section A), provide key sample and poverty definitions (Section B), and describe our analytic approach (Section C).

A. DATA

Our data come from the 2001 SIPP, a large, multipanel, longitudinal survey that collected demographic and socioeconomic information on a nationally representative sample of U.S. households. The data cover the period from late 2000 through 2003. SIPP provides detailed monthly measures on labor force participation (for those age 15 and older), income, participation in public programs, and household composition.

Adults followed in the SIPP panel come from a nationally representative sample of households in the civilian, noninstitutionalized population of the United States. Sample members were interviewed once every four months during the 36-month panel period. If original (*primary*) sample members older than age 14 moved from their original residences, they were interviewed at their new addresses. *Secondary* sample members—those who were not part of the original sample but who lived with primary sample members after the first interview—were interviewed if they were in the same household as primary sample members.

The Census Bureau used multistage sampling techniques to select a representative set of households for the 2001 SIPP panels. The first interviews for the panel began in February 2001 with a sample of about 36,700 households and oversampling of low-income households. Sample households were divided into four “rotation groups” of roughly equal size, and one group was interviewed each month. Thus, each household was interviewed in four-month intervals, called “waves.” The 2001 SIPP contains 9 waves that provide 36 months of data for each person in the sample. The 2001 SIPP interviews were administered using computer-assisted interviewing (CAI) to increase data quality.

At each interview, sample members provided information about their experiences during the preceding four-month period, called the “reference period.” For example, people in rotation group 1 whose wave 1 interviews were conducted in February 2001 (the earliest interviews) were asked about their experiences between October 2000 and January 2001. Similarly, people in rotation group 4 whose wave 9 interviews were conducted in January 2004 (the latest interviews) were asked about their experiences between September 2003 and December 2003. Thus, the 9 reference periods for the 2001 SIPP panel cover October 2000 through December 2003.

The SIPP questionnaire is made up of the core questions and the topical modules. The core questions, asked in every wave interview, provide information on (1) demographic

characteristics and (2) work behavior, income, and program participation for each of the four months preceding the interview date.

In addition to data from the SIPP, we used state-level data that included information on states' economic conditions, poverty levels, and welfare rules. We merged this state-level information to the SIPP data file using information on the state in which each sample member lived.¹ We used this information to explore the relationship between state characteristics and poverty dynamics in the multivariate analysis. State-level data includes the unemployment rate from the U.S. Department of Labor's Bureau of Labor Statistics [BLS], poverty rate from the Statistical Abstract of the United States, and state TANF policy parameters (Blank and Schmidt 2001; Rangarajan, Castner and Cark 2005).

B. DEFINING POVERTY, SINGLE MOTHERS, THE UNIT OF ANALYSIS, AND POVERTY SPELLS

This section describes our approach to defining poverty, single mothers, the unit of analysis, and poverty spells.

1. Selecting the Poverty Measure

A large literature explores alternative definitions of poverty (see Sawhill 1988 and Ruggles 1990). Some of the major sources of debate in defining poverty are whether to use an absolute, relative or subjective poverty standard, whether to include wealth and in-kind transfers as available assets, how to adjust poverty standards across time, whether to measure poverty at a particular point in time or across a longer period of life, how to account for family size, family need, and different needs at different life stages, how to deal with non-family members of a household, among others.

Despite the detailed debate on the most conceptually appropriate poverty standard, no consensus has developed on a "best" poverty definition. As a result, the majority of the literature that investigates general questions related to the dynamics of poverty relies on the federal poverty standard or some close variant (e.g., Hoynes et al. 2004; Bane and Ellwood 1986; Stevens 1994; Stevens 1999; Rank and Hirschl 2001; Iceland 1997a; Ruggles and Williams 1987; Eller 1996; Naifeh 1998; McKernan and Ratcliffe 2002). This measure has been criticized for its lack of connection to consumption, for the arbitrariness of the threshold, for changing little over the past 30 years despite large changes in relevant public policy, among other reasons (Citro and Michael 1995; Sawhill 1988). However, its use has been justified based on its ease of application, comparability to other studies, and the arbitrariness of any absolute standard.

We used the official U.S. Census Bureau poverty measure as the primary one for the study. Despite its shortcomings, it is the one most commonly used in research examining poverty-

¹For nine states with relatively few SIPP respondents, the data do not identify the state individually but rather in three groups: (1) Maine and Vermont; (2) Iowa, North Dakota, and South Dakota; and (3) Alaska, Idaho, Montana, and Wyoming. For these groups, we used the mean characteristics across all states in the group.

related issues, and it offers a straightforward and easily understood method for gauging poverty. Thus, the use of the official measure will facilitate comparisons of our study results with those of previous research.

Under the official measure, a family is “poor” if its total family income is less than its poverty threshold (based on the Office of Management and Budget’s Statistical Policy Directive 14). Income includes earnings, cash assistance (such as TANF benefits, unemployment compensation, SSI), child support, educational assistance, pension income, and interest and dividends. Income does not include noncash benefits such as food stamps, Medicaid, public housing subsidies, and Special Supplemental Nutrition Program for Women, Infants, and Children [WIC]. There are 48 possible poverty thresholds that vary according to the size of the family and the ages of its members.² These thresholds do not vary geographically, but they are updated annually for inflation using the Consumer Price Index for All Urban Consumers (CPI-U). Originally developed in 1963–1964, the thresholds are calculated by dividing the cost of food needs for families under economic stress (using the Economy Food Plan priced by the U.S. Department of Agriculture) by the proportion of after-tax income spent on food (one-third for families of three or more).

One commonly suggested revision to the federal poverty definition is to include food stamp benefits as income, since this benefit is generally considered “near cash.” We implemented this change and found little difference in the size of our poverty exit sample; only 32 women were added to the sample by including food stamp income. This result is consistent with the food stamp literature’s finding that those who participate in the Food Stamp Program tend to be selected from the most needy. Because including food stamp income did not lead to major changes in the number of single mothers that leave poverty, we focused our analysis on the more commonly used official poverty measure.

2. Defining “Single Mothers”

We defined single mothers as those who, during the month before spell exit, were (1) older than 15 (so that employment information is available), (2) living with a child younger than 18, and (3) unmarried.³ We included single mothers who were cohabiting with a partner, whose spouses were absent, or who were in school during the panel period. Our decision to include single mothers with a cohabiting partner was based on our focus on family-level poverty, rather than household-level poverty (since cohabiters are not members of the family). Consistent with this approach, we did not include cohabiters in constructing poverty thresholds, nor did we

²These thresholds are annual measures. In order to convert them into monthly measures, the annual measures were divided by 12 and then adjusted for monthly changes in the Consumer Price Index.

³In order to do this, we first used SIPP variables EFREFPER (denotes family reference person) and ESEX (gender) to identify female family heads. We then used SIPP variables ERRP (household relationship), EPNMOM (person number of mother), ETYPMOM (type of child to mother), and TAGE (age) to identify the relationship of each child in the family to the female head. Based on this relationship, we defined a female head as a “single mother” if she is unmarried (based on SIPP variable EMS [marital status]), older than 15 (based on SIPP variable TAGE), and she lived with her own child, her grandchild (without the child’s parent), her younger sibling (without the sibling’s parent), or her niece, nephew, or cousin (without the child’s parent).

include their income as available family resources. This strategy is equivalent to assuming that cohabiters consume only their own resources and do not contribute toward or consume the resources of the family.

An important characteristic of our definition of a “single mother” is the inclusion of all single female family heads with related children under 18 in the family, rather than only single female family heads living with their *own* children under age 18. Thus, our sample includes single grandmothers living with their grandchildren, whereas a more literal definition of single mother would not. Because a considerable fraction of TANF families are non-parent families, it would be of interest to examine all female-headed families with children under 18 in them. However, this more inclusive approach adds few additional women to our analysis sample compared to using only unmarried women living with their own children. In particular, counting all SIPP single female family heads with children under 18 as “single mothers” increases our sample size by 47. Of these, 31 were grandmothers living with their grandchildren, 5 were female heads living with their younger siblings, and 8 were women living with their nieces or nephews. Because this group of non-parent single female heads is small, we did not conduct formal subgroup analysis using this group. However, we found that this group did not have dramatically different poverty dynamics than more narrowly defined single mothers.

3. Examining Poverty at the Family or Subfamily Level

We measured poverty at the *family* level rather than the subfamily level, largely because the family is the basis for the official definition of poverty.⁴ However, we experimented with using the subfamily, rather than the family, in defining poverty since the subfamily may more closely represent a TANF household. We found that this change made little difference in the size of our sample; only 36 SIPP respondents were added to our sample by considering subfamilies. This finding further supports the use of the SIPP family as our poverty family unit.

4. Changes in Family Composition

Another issue for our analysis was dealing with changes in family composition. For example, a woman might move out of the family she is living in and move in with others, or other people might join her family. In our analysis, we treated the *single mother* as the unit of analysis and tracked her poverty status in whatever family she was in during any given month using the income of that family, even if its members changed from month to month. Thus, our analyses focused on obtaining estimates of, for example, the duration of nonpoverty spells of single mothers who exited poverty rather than the duration of nonpoverty spells of families that contained these women.

⁴A SIPP family is a group of two or more persons related by birth, marriage, or adoption and living together; a SIPP family does not include cohabiters. A SIPP subfamily is a nuclear family unit.

5. Defining Poverty Spells and Nonpoverty Spells

Another critical issue for the study was defining poverty spells. Two key decisions related to this issue were how to deal with censored spells and how to smooth “transitional” poverty spells.

Censored Spells. An important methodological consideration related to defining spells is dealing with spells that begin or end outside of the analysis period, i.e., dealing with censored spells. Spells that continue beyond the end of the sample period are easily accommodated in a life-table approach and thus pose no methodological problem. However, inclusion of left-censored spells represents a greater issue since the length of ongoing spells is not known; eliminating such spells could represent a form of selection bias since those who have made one poverty transition are more likely to make another (Stevens 1999). Iceland (1997b) argues that when concerned with poverty transitions, rather than the precise duration of poverty spells, omitting left censored spells could introduce greater bias than including them. As such, Iceland (1997a) does not omit left-censored spells. However, he finds that in practice, there are small differences in his results regardless of whether left censored spells are omitted. Stevens (1999) also finds little difference when left censored spells are included in a duration specification. McKernan and Ratcliffe (2002) include left-censored spells, but identify such spells with a dummy variable in their duration model.

The issue of left-censoring is somewhat different when considering post-poverty-exit non-poverty spell dynamics. Without observing a poverty exit preceding a non-poverty spell, there is no way of distinguishing whether poverty entry represents poverty recidivism or a first time poverty entry. Since we were interested in patterns following poverty exits, we determined that left-censored non-poverty spells should be omitted from our spell analyses.

Poverty Smoothing. In data sets that try to capture monthly income, “transitional” poverty spells are sometimes observed—that is, in a given month, a family can have an income spike or dip due either to real changes in income or to measurement error. Such dips can lead to more people being “ever” poor than “consistently” poor. It is also possible that for those with incomes near the poverty threshold, small deviations in income could lead to frequent changes in poverty status which exaggerate the “true” volatility experienced by single mothers. Ideally, a smoothing procedure should reflect a poverty concept that eliminates noise, leaving only “real” poverty transitions.

Most studies using SIPP data have smoothed poverty transitions by eliminating one month poverty entries and exits. Justification for this convention has been elimination of random fluctuations in income data (Eller 1996; Naifeh 1998), and reduction of seam bias problems in the SIPP (McKernan and Ratcliffe 2002). A similar approach has been used in the literature examining program participation spells using SIPP data (Burstein 1993; Gleason, Rangarajan, and Schochet 1998; Gleason, Schochet, and Moffitt 1998).

We explored this issue using four different smoothing procedures. These methods include (1) not using any smoothing techniques, (2) smoothing poverty volatility by eliminating “near-threshold” poverty spells, (3) smoothing poverty volatility by eliminating one-month poverty spells, and (4) smoothing poverty volatility by using a moving average of family income.

Because of its intuitive appeal, we decided to smooth poverty volatility by eliminating “near threshold” poverty spells. We defined a near-threshold spell as a spell in which income is within 10 percent of the poverty threshold for the duration of the spell. We first recoded near-threshold poverty spells as nonpoverty months. Next, we recoded near-threshold nonpoverty spells as poverty months. The implicit assumption of this approach is that when single mothers have income that only slightly exceeds the poverty threshold, they don’t experience nonpoverty in a meaningful way. Similarly, when single mothers have income that is only slightly less than the poverty threshold, they don’t experience poverty in a meaningful way.

Implementing this smoothing technique resulted in 115 fewer initial nonpoverty spells compared to implementing no smoothing techniques. We found that, regardless of the smoothing method used, transitions into and out of poverty were common and spells were quite short. Therefore, the high levels of poverty volatility observed for single mothers appear to be “real.”

C. ANALYTIC METHODS

This study relies on descriptive analysis, life table methods, and multivariate analysis. This section provides details on the implementation of each of these analyses.

1. Descriptive Analysis

Our analysis was primarily based on descriptive analysis where we tabulated means and distributions of variables of interest. The primary sample for the descriptive analysis consists of single mothers who, during the 12 months of the panel period, were *in poverty* in one month and *exited poverty* during the following month. If a sample member had more than one poverty exit during the one-year window, we used the first exit for the analysis. As discussed earlier, we defined single mothers as unmarried, female family heads older than 15 and living with a child younger than 18, we defined poverty using the official poverty measure, and we smoothed near-threshold poverty and nonpoverty spells. This approach yields a total sample size of 615 women. All figures were calculated using longitudinal sample weights in SIPP to make the findings representative of the U.S. civilian population in April 2001.

Descriptive methods were used in analyses (1) to calculate poverty rates and poverty exit rates among single mothers in 2001; (2) to profile single mothers who exited poverty in 2001 and how they compare to other single mothers; (3) to profile the three groups of single mothers who exited poverty based on their poverty and non-poverty spells during the two-year follow-up period; and (4) to compare the income, poverty, and job experiences of the three groups over the follow-up period. Where relevant, we conducted t-tests or chi-square tests to gauge whether or not observed differences in variable distributions across different groups of single mothers are statistically significant. All standard error estimates used in these tests account for clustering and stratification in the SIPP design.

Our descriptive analysis also examined events that lead to sample members’ initial poverty exits and subsequent poverty re-entries. In most trigger analysis, we considered five mutually exclusive types of trigger events: (1) changes in sample members’ own employment or earnings, (2) earnings changes of other family members, (3) family composition changes (including

becoming married, changes in the number of adults in the family, changes in the number of children in the family, and changes in the number of children under age 6), (4) combinations of the first three types of changes, and (5) changes other than the first four types of changes. Where appropriate we also examined triggers that were not mutually exclusive.

We identified trigger events over a two-month window and a four-month window prior to the poverty exit. We defined our triggers by considering month-to-month changes in status. For example, we considered the sample member to have experienced a gain in employment during a two-month window if they were employed in the month before the poverty exit but not in the previous month, or if they were employed in the month of the poverty exit but not in the month before the poverty exit. Similarly, we considered a sample member's own earnings to have increased during a two-month window if the earnings in the month before the poverty exit were higher than they were in the previous month, or if the earnings in the month of the poverty exit were higher than they were in the previous month.

Since there were two possible months during which an earnings or employment event may have occurred, we had to select one of these two months when examining the magnitude of earnings increases or changes in job characteristics that were associated with experiencing the event. For these purposes, we selected the month during which the earnings increase was largest. Consider a situation in which there is a small earnings increase in the month before the poverty exit (compared to the previous month) and a larger earnings increase in the month of the poverty exit (compared to the previous month). In this case, we would refer to the month of the poverty exit as the "month of the trigger event" and the month before the poverty exit as the "base month." Changes in job characteristics and in earnings would be based on differences between these two months.

We examined trigger events using different window lengths because using a longer window allowed us to consider events that may have a delayed effect on poverty transitions. However, using longer windows also limits the sample to those for whom we observe a period at least as long as the window before their initial spell. For instance, in assessing whether a change in family composition was associated with a poverty transition within a four-month window, we can only observe the full four-month period before the poverty exit for sample members who began their first nonpoverty spell in the fifth month or later of the sample period.

2. Life Table Methods

To examine the duration of spells, we used life table methods. For each month, the life table displays the estimated hazard rate and cumulative exit rate. The *hazard* rate is the probability that a spell ended in a particular month, given that the spell lasted at least until the beginning of that month. The *cumulative exit* rate, obtained from the estimated hazard rates, is the unconditional probability that a spell ended within a given number of months. The cumulative exit rate enables policymakers to answer such questions as (1) Of the next 100 single mothers who exit poverty, how many will reenter poverty within one year? and (2) Of those who reenter poverty, how many will again escape poverty within 6 months?

A major advantage of using life table methods is that they can treat right-censored spells (that is, spells still in progress at the end of the observation period) effectively. Right-censored

spells contribute information to the life table up to the month in which they are right-censored (that is, up to the time we no longer have information on them). For example, if a spell is right-censored 12 months after it started, then it is included in the hazard rate calculations (that is, it enters the denominator of the calculations) for months 1 to 12 but not afterward. However, because post-poverty exit spells tended to be quite short, right-censoring is not common for our sample.

3. Multivariate Analysis

In order to assess which factors may be associated with membership in each of the three poverty profile groups, we estimated a multinomial logistic model to assess factors associated with being a poverty leaver, a poverty cyler, or a poverty returner. We examined a diverse set of covariates in each of these models, including demographic and family characteristics, state economic conditions and welfare rules, reasons for leaving poverty, and initial job characteristics. Included demographic characteristics, which were all measured at the month before the poverty exit, were age, race/ethnicity, educational attainment, school enrollment, whether had a work-limiting health condition, age of youngest child, number of adults in the family, whether ever married, cohabitation status, TANF participation, food stamp participation, whether live in public housing, poverty ratio, and region of residence. State characteristics include unemployment rate, poverty rate, level of TANF earnings disregard, severity of TANF sanction, and length of TANF time limits. We also included a set of dummy variables that correspond to the reason for poverty exit (trigger events), namely own employment or earnings changes, other family member's employment changes, family composition changes, combinations of earning and family composition changes, or other changes. Finally, we included measures related to the job quality of the job held in the first month of the nonpoverty spell, including whether the job was full-time, whether it provided health insurance coverage, and whether it offered an hourly wage greater than \$10.

Our presentation of findings from these models focuses on the predicted probability of having a particular outcome given a each characteristic, rather than on coefficient estimates. Predicted probabilities are easier to interpret than coefficient estimates due to the nonlinearity of the models. We calculated predicted probabilities using parameter estimates from our multivariate models. This was done by evaluating the estimated model after assigning each sample member the particular value for the characteristics in question (e.g. age category), but then assigning them their own values for all other characteristics. These individual predicted probabilities were then averaged across all sample members. We also tested whether the predicted probability associated with each dummy variable was statistically different from that of the relevant omitted category.