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Duration of Public Assistance Receipt: Is Welfare a Trap?

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Abstract

This paper uses data from the National Longitudinal Survey of Youth to answer two questions about the effects of the Aid to Families with Dependent Children (AFDC) program: (1) Does the length of time that one receives AFDC affect the likelihood of permanently leaving AFDC? (2) What personal and family characteristics are associated with the long-term receipt of AFDC? The answer to the first question is that the likelihood of permanently leaving AFDC decreases with the length of time that individuals receive benefits, after adjustments for other measured and unmeasured attributes of individuals and their families. The answer to the second question is that not having a high school diploma, never having married, having more than two children, and having little work experience are associated with long-term receipt. Many of the recipients who will reach the five-year limit imposed by the new federal legislation are in situations that make it difficult for them to support themselves and their families without public assistance.

Duration of Public Assistance Receipt:
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The country has heatedly debated welfare programs and reforming welfare programs during the past several years. Most of this discussion has focused on the Aid to Families with Dependent Children program (AFDC), the major cash assistance program for the poor. The 1996 federal welfare reform legislation replaced AFDC with Temporary Assistance for Needy Families (TANF), which provides states with block grants and more flexibility on how to deliver aid to poor families with children. Critics of AFDC focused on the rise in the number of families receiving AFDC during the past few decades and the concern that some families used AFDC for very long periods of time. Further, critics argued that AFDC promoted out-of-wedlock childbearing and single-parent families, and that AFDC inhibited labor force participation. Some argued that welfare could become a "trap," i.e., participants could become dependent on welfare, unable to leave the system and take advantage of other opportunities to support themselves and their families (*Congressional Record*, July 30, 1996).

The federal Personal Responsibility and Work Opportunity Reconciliation Act, and many state waivers that preceded the passage of the federal legislation, were explicitly designed to deal with this possibility. These federal and state reforms attempt to prevent welfare from becoming a trap by, among other things, limiting the amount of time that individuals can receive welfare benefits. The federal legislation, for example, establishes a life-time limit of five years of financial assistance and a limit of two years of assistance without engaging in work activity (*Congressional Record*, July 30, 1996). States are free to establish more restrictive limits if they desire to do so.

As with many other contentious public policy discussions, the discussions of whether welfare is a trap have primarily involved moral and political posturing. Supporters of the "trap" thesis argued that an entitlement to public assistance encourages the creation and continuation of single-parent families and enables withdrawal from the labor market. Critics of the trap thesis argued that most recipients would prefer to work and be married if these were realistic possibilities.

In order to understand whether or not welfare may be a trap, it is important to go beyond the political and moral posturing prevalent on both sides and look more carefully at why some recipients use welfare for long periods of time. One possible explanation of long-term use of AFDC is that the ability or willingness to survive economically without welfare declines with the amount of time that individuals use AFDC. A second possible explanation is that the many long-term recipients of AFDC are individuals and families who have no real alternatives for supporting themselves without welfare. These explanations are not contradictory. In this paper, we assess these two possible explanations by addressing two basic questions: (1) Does the likelihood of leaving AFDC decline with the length of time that individuals and families receive AFDC, after controlling for other measured and unmeasured characteristics of the family? and (2) What characteristics of individuals and families are associated with long-term receipt of AFDC?

We address these questions by looking at the participation in the AFDC program of individuals during the period from late adolescence to young adulthood, following a group from ages 14–21 through ages 28–35. During this period, individuals are especially vulnerable to experiencing periods of poverty and to using public assistance programs. Young women are making transitions, e.g., leaving home, starting families, and beginning labor market activities, that make them particularly vulnerable to becoming poor and/or using public assistance programs.

POLICY ISSUES

The most heavily used cash public assistance program for the poor in the United States was the AFDC program. The recent federal welfare reform replaced this program with TANF. Although there are many differences in the two programs, they share some similarities. To receive benefits a family must have income below a specific level, which is determined separately in each state. Benefits are reduced as the recipient's income rises, according to a guaranteed overall income amount, which is also set

separately in each state. The major differences in the two programs are these: (1) TANF imposes an upper limit of five years on total receipt of cash assistance, and states can impose shorter limits if they wish; (2) TANF imposes a limit of two years on the receipt of cash assistance without working; and, (3) the new federal legislation does not require states to provide cash assistance to all eligible families that apply for it. All of these changes were designed to eliminate the supposed "trap" effect of AFDC. In the words of the Personal Responsibility and Work Opportunity Reconciliation Act, the purpose is to "end the dependence of needy parents on government benefits by promoting job preparation, work, and marriage"(*Congressional Record*, July 30, 1996, p. H8831).

The AFDC program generated much controversy in the ongoing public debate over the need for reform in U.S. welfare programs. Such debates have characterized discussions of welfare for many years. Bane and Ellwood (1983) pointed out that the debate in the mid-1980s over whether or not welfare was a trap was similar to a debate during the 1960s, when scholars widely discussed the "culture of poverty," a set of beliefs and attitudes that supposedly mired people in an impoverished state (Harrington, 1962). Handler (1995) demonstrates that these debates have an even longer history, going back to discussions in fourteenth-century England. At that time, the view that the poor were lazy and unwilling to take the initiative to care for themselves led to rules and regulations that prohibited public and private assistance to people who were physically capable of working—the "sturdy beggars" (Handler, 1995).

At this point in our history, arguments that the poor are in most cases responsible for their own poverty and that efforts to help them have instead harmed them, seem again to have prevailed. New state and federal policies are a response to a perception among some that welfare experience may lead to continued, long-term dependence on public assistance. Gottschalk, McLanahan, and Sandefur (1994) point out that such a perception is particularly strong among conservatives. Liberals often emphasize that only a small proportion of welfare recipients stay on welfare for long periods of time, while most only use welfare for short, temporary spells.

We have known since the work of Bane and Ellwood (1983) that both views have some merit. We also know that one gets a somewhat different picture of the length of use if one looks at single spells or at all the spells for individuals, and if one follows a group of individuals who begin using welfare or looks at a group of individuals who are using welfare at a particular point in time. Although it is clear that looking at multiple spells would lead to different conclusions than those reached by looking at single spells, it is not so intuitively obvious that looking at an entering cohort leads to a different picture than looking at the group of recipients at a particular point in time. The difference is due to the fact that a snapshot of the welfare caseload at a particular point contains a higher proportion of spells that last a long period of time than does an analysis of beginning spells.

Bane and Ellwood's initial results used **annual** data on AFDC participation from the Panel Study of Income Dynamics. More recent research has refined some of these estimates using **monthly** data on AFDC participation. Pavetti (1995), using a simulation model based on monthly data on AFDC participation from the National Longitudinal Survey of Youth and variables from the Survey of Income and Program Participation, found that 42 percent of all recipients who begin a spell of welfare have an expected length of receipt of two years or less and approximately 35 percent have an expected spell length of more than five years.[1] Pavetti also found that over 90 percent of recipients at a particular point in time could be expected to use it more than two years and over three-fourths of recipients at a particular point in time could be expected to use it more than five years (see also Pavetti, 1996). The important point is that many AFDC recipients use AFDC for less than the two-year limit imposed by some states,

[1]Pavetti (1995, 1996) constructs a model in which the length of use is the dependent variable and individual and family characteristics are independent variables. She uses the NLSY to estimate the coefficients in this model, since the NLSY follows participants for several more years than the SIPP. The NLSY, however, contains only young people and is not representative of all ages of AFDC recipients. She then uses individuals in the SIPP and their characteristics to simulate how long a more representative sample could be expected to use AFDC.

and the majority of recipients use AFDC for less than the five-year limit imposed by the federal legislation. Nonetheless, a sizable number of recipients will be affected by the new time limits.

If welfare is a trap for some women, what are the mechanisms through which this may occur? The discussions of welfare policy and welfare reform have focused on the effects of welfare use on labor market entry, childbearing, and marriage. Critics of AFDC argued that the availability of benefits discouraged women from searching for jobs or taking available jobs, provided incentives for women to have additional children, and prevented women from searching for a potential spouse or marrying. These critics assumed that women and their children would be better off in the long run if the mother worked and/or the mother was married.

In practice, it is difficult to assess empirically the gain to working and the gain to being on welfare for a specific woman and her family, or for poor women and their families on average. It is clear that the average working woman is better off, in terms of her own earnings, than the average AFDC recipient. Moffitt (1992) showed that in 1987, the ratio of the value of the average package of AFDC, Food Stamps, and Medicaid to the average earnings of working women was .57. Sandefur and Wells (1996) found that the ratio of the value of the average package of AFDC and Food Stamps to the average earnings of working women in 1992 was .50.

Women who received AFDC in 1987 and 1992 were not, of course, likely to be able to earn as much as the average working woman, since their levels of education, training, and experience are well below those of the average working woman. The work of Edin (1995), Harris (1996), and Spalter-Roth et al. (1994) illustrates these problems. Edin, for example, suggests that in 1991 the average mother who left welfare for full-time, low-wage work would need $1,194 per month in take-home pay to maintain the same standard of living that she had on welfare. But, she points out, research by Michalopoulos and Garfinkel (1989) shows that full-time, year-round, low-wage workers with meager qualifications earned

around $751 per month, about 63 percent of what they could receive on welfare. Thus, there do appear to be reasons for poorly qualified women to choose welfare over work, at least in the short run.

Perhaps the more important point, however, is that neither work nor welfare allows the most disadvantaged women to support themselves and their families in a minimally adequate fashion (Edin, 1995; Spalter-Roth, et al., 1994). In fact, many welfare recipients work to supplement their benefits at jobs that they do not report because this would reduce their benefits. Among those who exit welfare, some return because they lose jobs (see Harris, 1996), but others return because they find they are unable to support themselves at the same standard of living as they had on welfare. Some critics of AFDC argue that if women would just stick it out, they would eventually raise their economic position above what they could achieve on welfare. But Edin (1995) found that women became frustrated and returned to welfare because their entry-level jobs did not lead to better jobs later.

Another mechanism through which welfare might serve as a trap is by encouraging childbearing. Women with more children have higher child care costs that make it more difficult for them to afford to work. The "Findings" section of the Personal Responsibility and Work Opportunity Reconciliation Act summarizes the evidence on trends in out-of-wedlock childbearing and concludes: "Therefore, in light of this demonstration, it is the sense of Congress that prevention of out-of-wedlock pregnancy and reduction in out-of-wedlock birth are very important Government interests and the policy contained in part A of title IV of the Social Security Act (as amended by section 103(a) of this Act) is intended to address this crisis" (*Congressional Record*, July 30, 1996, p. H8831).

Policy makers were also concerned that AFDC might inhibit marriage. The same "Findings" section begins with two statements: "(1) Marriage is the foundation of a successful society. (2) Marriage is an essential institution of a successful society which promotes the interests of children." The fear then, was that AFDC encouraged out-of-wedlock childbearing and discouraged marriage by providing a way for women to support themselves and their children outside of marriage. In the view of the supporters of

the new federal legislation, long-term use could be reduced if women would have no or fewer children out of wedlock, and if more women married.

THEORETICAL ISSUES

Despite the importance of the length of welfare receipt, few analyses have addressed this directly. Further, the findings have been inconsistent. Bane and Ellwood (1983) and Ellwood (1986) found a significant negative relationship between length of use and exiting, while O'Neill, Bassi, and Wolf (1987) found no significant relationship. These three studies used annual data. Blank (1989) considered the distribution of AFDC receipt using six years of monthly data gathered in the Seattle and Denver Income Maintenance Experiments in the early 1970s. She found the evidence for duration dependence to be mixed, especially when unobserved heterogeneity—characteristics of the recipients that are not observed in the data—is taken into account. In fact, she found that "there appear to be two distinct groups that utilize welfare: one group, which has a very low probability of leaving welfare and whose rate of exit increases slowly over time; and a second group, which is more affected by time on the program" (p. 247). In addition, Blank found that older and more educated women have higher exit rates and shorter spells than younger, less educated women, and that nonwhite recipients have lower exit rates and longer spells. Blank's results are based on a six-year period during the 1970s, and results may be different using a longer observation period during a different historical period.

To understand how and why the length of welfare receipt may affect the rate of program exit, we consider the decision-making process of single women with children who are receiving AFDC. A single mother who has just begun to use AFDC compares her situation to the available alternatives. She can choose to remain on welfare with a fairly predictable set of benefits and expectations. Among her choices for leaving welfare are (1) marrying and improving the economic well-being of herself and her family so that she no longer needs or is eligible for AFDC; (2) working at a job or jobs that make it no longer

necessary for her to rely on welfare; and, (3) a combination of changes in household composition and employment that eliminate her need for AFDC. Other alternatives include choosing to be destitute or receiving a financial windfall, but these alternatives occur relatively infrequently and can be realistically ignored.

Previous research provides somewhat conflicting evidence on the likelihood of women leaving welfare through these three routes. Bane and Ellwood (1983) reported that approximately 21 percent of exits from welfare occurred through work and that the majority of welfare exits occurred through marriage (see also O'Neill et al., 1984). More recent research using monthly data from the Panel Study of Income Dynamics (PSID) and from the National Longitudinal Survey of Youth (NLSY) suggests that exiting through work is much more common than exiting through marriage. Harris (1993), for example, found in the PSID that most exits from welfare occur by means of work—either through working while on welfare and then going off welfare, or being unemployed while on welfare and finding a job that enables a person to leave welfare. Results from the NLSY suggest that exits through working are much more common than exits through marriage (Pavetti, 1993). Both sets of results suggest that less than 10 percent of exits from welfare are due to marriage.[2]

In practice, it is difficult with existing data to identify the mechanisms responsible for women leaving welfare, since most data contain no information on eligibility and how this changes with events. The standard approach has been to examine the changes in recipients' lives that occur near exits from welfare and attribute the reasons for this exit to these changes.[3]

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[2]The connections between marriage and leaving welfare are not the only connections with which critics of AFDC were concerned. Although marriage may be only a minor factor in leaving welfare, divorce and out-of-wedlock childbearing may be more important as reasons for beginning to use AFDC.

[3]We chose not to analyze the different types of exits because of these ambiguities in attributing the reasons for exit. We did examine events associated with exiting welfare and found that between 40–50 percent of the exits were associated with finding a new job or continuing to work. Only a small percentage, 5–6 percent, seemed to be associated with marriage, and the remainder occurred for other reasons that could not be identified in the data.

Why Length of Welfare Use May Affect Leaving AFDC

If the length of time that an individual has used welfare affects the likelihood of leaving, it must do so through its effects on the availability of opportunities other than welfare or through its effects on the search process itself. As Moffitt (1992) points out, researchers have given little consideration to these processes. We therefore should consider the ways in which time on welfare might affect (1) out-of-wedlock childbearing, (2) marriage, (3) the likelihood of finding a job or working off welfare, and (4) the willingness to search for alternatives to welfare.

In regard to out-of-wedlock childbearing, we can observe whether or not women on welfare have additional children, and we cab control for the number of children as a changing covariate in models of leaving welfare.

It is difficult to identify ways in which the length of welfare use might affect a woman's attractiveness to potential marital partners. It is not, however, hard to see how length of welfare use may affect a woman's attractiveness to potential employers. The literature on unemployment and job searching suggests a number of factors that might be important (Moffitt, 1992). First, a woman's job skills might deteriorate over time if she is not working or if she works very little. That is, as an individual spent month after month on AFDC, her skills could become less sharp and her productivity could go down. Second, the attractiveness of an individual to employers might decline with her time on AFDC. Many employers use previous work experience and continuous work experience as criteria for hiring decisions. The longer an individual is out of a job and receiving AFDC, the more difficulty she may have in convincing employers that she is a productive worker.

Length of welfare use may have an effect on the job search process as well. Women may search diligently for alternatives to welfare in the first few months of receipt, but if their search is futile they may gradually spend less and less time searching. This could lead the likelihood of leaving welfare to decrease with the length of welfare receipt.

Since we do not have measures of employers' reactions to individuals or information on the diligence of the search for alternatives to welfare, it is difficult to evaluate whether it is the availability of alternative opportunities, the reactions of potential spouses, the reactions of potential employers, or the individual's attitudes that are the most powerful explanation of the effects of duration.

An alternative explanation is that duration results from heterogeneity in the population under observation. If part of the population has high exit probabilities, as time goes by the population will be increasingly composed of people with low probabilities, thereby lowering the rate of welfare departure. Some women, for example, may reside in local labor markets in which there are few opportunities for individuals with their set of skills or in areas in which child care is not readily available. Or some women may suffer from mental health or health problems, such as depression, alcoholism, or drug dependency, that make it difficult for them to obtain or keep steady employment.

In this paper we examine the effects of measured individual and family characteristics, unmeasured heterogeneity, and length of participation on the likelihood of leaving welfare. We also examine the sensitivity of the results to alternative specifications of the effects of duration, and to alternative definitions of what constitutes an exit from AFDC. The principal research question is: Is there reason to believe that the likelihood of leaving welfare declines with the length of time that people receive it?

Other Factors Affecting Exits

Within the context of this job search process, it is clear that individual and contextual characteristics other than the length of use of welfare will influence the ability of recipients to leave welfare. These characteristics can affect the ability of women to marry or to change their household structure in other ways, or affect the ability of recipients to work, or affect their eligibility for the program.

Factors Affecting Marriage

Many factors affect the ability of women receiving AFDC to marry, some of which are not under the control of the women or related to their observable characteristics. Women cannot, for example, choose the pool of partners available to them. Previous research has shown that a number of observable characteristics of women are related to their ability to marry or remarry (Bennett, Bloom, and Miller, 1995). Among the most important of these are previous marital history and the presence and number of children. Never-married women are less likely to become married than divorced women are to remarry. Women who bear a child out of wedlock are less likely to marry, and divorced women with children are less likely to remarry than divorced women with no children. Further, the likelihood that a woman will marry decreases with the number of children that she has. Since marriage is one route off welfare, we would expect that the likelihood of leaving welfare would be lower for never-married women, and to decrease with the number of children.

Factors Associated with Labor Market Opportunities

As with marriage, the labor market opportunities available to women on welfare depend on the characteristics of the women and on the availability of employment opportunities (Harris, 1993). A number of characteristics of women influence their productivity on the job and their attractiveness to potential employers. These include previous work experience and level of education. The likelihood of finding employment and leaving AFDC should increase with the amount of work experience and with education. Other characteristics of women affect their ability to work. The costs of child care increase with the number of children, so it is easier for women with one child to work than for women with several children. Finally, it is easier to measure some characteristics of the labor market than it is to measure the marriage market. Hoynes (1996), using California administrative data on welfare spells and information on county labor market conditions, found that higher unemployment rates, lower employment growth, lower employment-to-population ratios, and lower wage growth were associated

with longer welfare spells. We use the unemployment rate of the county in which a woman resides as a summary measure of labor market conditions. The likelihood of finding a job and leaving AFDC should decrease as the county's unemployment rate increases.[4]

Factors Associated with the Attractiveness of Welfare Relative to Other Options

One of the major measures of the attractiveness of welfare relative to work or marriage is the benefits available to women on AFDC. The higher the benefits available to a woman, the more she will have to make at a job to match what she is receiving in her package of AFDC/Food Stamps/Medicaid benefits and the more a potential husband would have to make in order for the new household to exceed the standard of living of the old household. Consequently, the likelihood of leaving welfare should decrease with the benefits available to women.

MODELS, DATA, AND MEASURES

We use a model of leaving AFDC that permits the inclusion of time-varying covariates, alternative specifications of the effect of duration, and the consideration of possible unmeasured heterogeneity. We specified the hazard function for the transition from state *i* (i.e., receiving AFDC) to state *j* (i.e., no longer receiving AFDC) as follows:

$$h_{ij}(t_{ij}|\{x(u)\}_0^{\infty},\theta) = e^{\left\{\gamma_{ij0} + \mathbf{Z}(t_{ij}+\tau)b_{ij} + \sum_{k=1}^{K}\frac{\gamma_{ijk}(t_{ij}^{\lambda_{ijk}}-1)}{\lambda_{ijk}} + c_{ij}\theta\right\}}$$

[4]We would prefer to use more sophisticated measures of local labor market conditions, such as the availability of jobs for women with few skills and little education, and the availability and cost of child care. Unfortunately, the measures of labor market conditions available in the geocode data for the NLSY are very limited. We explored some alternative measures of local labor market conditions and found that the county unemployment rate was an effective summary measure.

where,

t_{ij} = duration in state I before exiting to state j,

τ = calendar date of entry into state I,

Z = vector of exogenous fixed and time-varying covariates,

θ = person-specific unobserved heterogeneity component,

$(\gamma_{ij},\lambda_{ij},b_{ij},c_{ij})$ = transition-specific parameters to be estimated.

This form for the conditional hazard function allows us to impose different assumptions about the underlying hazard rate. The trap thesis simply asserts that the hazard rate will decrease over time; it does not assert that this decrease will take any particular parametric form. There is no other theoretical or policy reason to expect a particular form for the hazard rate. Tuma and Hannan (1984, pp. 220 and 230) discuss a number of alternative specifications. Of these, we use three alternative forms that allow us to test for the presence of duration dependence. A conventional Weibull specification, which assumes that the rate of leaving welfare increases or decreases monotonically over time, can be estimated by restricting K = 1 and $\lambda_{ij1} = 0$. A quadratic specification, which allows the hazard rate to be nonmonotonic (e.g., to drop and then rise, or vice versa) can be estimated by restricting K = 2, $\lambda_{ij1} = 1$, and $\lambda_{ij2} = 2$. A piecewise exponential baseline specification also allows the hazard rate to be non-monotonic. It assumes that the hazard rate is constant within a time period (of any length), but may go up or down from one time period to the next. It can be estimated by restricting $\gamma_{ijk} = 0$ for k = 1,...,K. As Blank (1989) points out, the piecewise exponential model imposes the fewest assumptions about the underlying hazard rate, so we rely primarily on it to interpret the effects of duration.

In addition, this form allows us to include parameters in the model to reflect unobserved heterogeneity in the model, and to specify a nonparametric distribution for the unobserved heterogeneity component (Heckman and Singer, 1984). As we have no reason to assume any specific parametric distribution for the unobserved component, this seems the appropriate specification.

Since all of these models are nested as special cases of the unrestricted hazard function, it is possible to use conventional likelihood ratio methods to test the validity of these conventional specifications against unrestricted alternatives and against nested versions of specific models. However, since the various baseline assumptions which we impose are not nested versions of each other, we are not able to use likelihood ratios to test the appropriateness of these specifications. Instead, we use t-tests of the duration-specific terms in the models to determine the effect of duration dependence. We are particularly interested in whether the γ_{ijk} terms in the Weibull and quadratic models are significantly different from zero, and whether the parameters for the time period terms in the piecewise exponential model are significantly different from the reference category, which is the first time period.

We are interested in looking at permanent exits from AFDC. That is, the two-year, five-year, and other limits proposed in the federal legislation and various state initiatives refers to limits on total welfare use, not on the length of a particular spell. Determining whether an individual has permanently exited AFDC is difficult in that people may return after being off for several months. Most people who return to AFDC, however, do so within a fairly short period of time. Pavetti (1993) found that approximately 90 percent of the individuals who leave AFDC and then return do so within two years. Consequently, we define a permanent exit as one which is followed by two years or more of not using AFDC. Most of our discussion below focuses on permanent exits, but we also discuss exits from first spells and multiple spells for those individuals who have more than one spell of AFDC participation.

Since some individuals have multiple spells, it is important to include a measure of the use of AFDC prior to the current spell in an analysis of permanent or other exits based on multiple spells. A straightforward way of doing this is to include a measure of the months of AFDC use prior to the current spell. This measure is 0 if the spell under analysis is the first spell.

Z includes both time-varying and time-invariant variables. In our analysis, the time-varying variables are location, education, residence with relatives or not, number and ages of children, work

limitations, the county unemployment rate, and the state's maximum AFDC benefit for a family of four. The time-invariant variables are race, AFQT percentile score (measured in 1980), never married versus ever married (measured at the beginning of the spell), whether or not the individual worked in the previous year (measured at the beginning of the spell), whether or not the individual used AFDC as a teenager, and the number of months that the individual used AFDC prior to the current spell.

Most previous analyses of exits from AFDC have relied on the Cox proportional hazards model, which does not estimate the effects of duration (see, for example, Harris, 1993) or discrete time models (see for example, Pavetti, 1996, and Hoynes, 1996). One of the few analyses that has taken our approach is that of Blank (1989). She used data from the Seattle/Denver Income Maintenance Experiments (SIME/DIME), whereas we use the NLSY. Other differences are that (1) we observe welfare use over a 14-year period (1979–1993), whereas she observed it over a six-year period; (2) we analyze multiple spells of welfare use, whereas she analyzed first spells only; (3) we adjust for unmeasured heterogeneity in several models, whereas she adjusted for unmeasured heterogeneity in only one model, the log-logistic model; (4) we observe welfare use during the 1980s and early 1990s, whereas she observed welfare use during the 1970–75 period in Seattle and the 1971–76 period in Denver; and (5) we are able to include marital status, location, and employment experience in our analysis in addition to the variables that Blank had available to her, i.e. , age, race (white/nonwhite only), years of education, number and ages of children, the unemployment rate, and the maximum benefit.

Data

To estimate these models we use data from the National Longitudinal Survey of Youth (NLSY), collected between 1979 and 1993. Individuals aged 14–21 in 1979 have been re-interviewed each year and were aged 28–35 in 1993. The data contain a variety of information on family background and educational attainment.

One important feature of the data for this project is the monthly information on AFDC participation. At each interview, individuals are asked about their receipt of AFDC benefits during each month of the previous year. This permits analyses of monthly entry and exit from participation in the program. Since individuals enter and exit these programs on a monthly basis rather than a yearly basis, analyses using monthly data are more appropriate than are analyses using yearly data.

Of the 6,283 women in the NLSY, 1,436 were observed to receive AFDC benefits during the survey period; 668 (46.3 percent) of the women who received AFDC benefits experienced only one spell, while 768 (53.7 percent) experienced multiple spells. Of these we selected 1,268 women who received income from AFDC for at least one month and who began at least one spell on AFDC during the time period of the survey. This eliminates 168 cases who were on AFDC at the beginning of the survey but had no subsequent spells with observed starts (i.e., left-censored cases). This is necessary, since the NLSY provides no information about the women's experiences before the survey. This may have the effect of eliminating some very long spells from the sample. Among the 2,706 non-left-censored spells on AFDC observed over the 14 years of the survey, 2,202 were completed during the period of observation, while 504 were ongoing when the individuals ceased being observed; 1,268 of these were the first observed spells of the women.[5]

[5]We should note that the spell-length data from the NLSY do show rather significant heaping on lengths which are multiples of 12 months. This is likely due to the fact that the survey asked each respondent their AFDC participation for all 12 months of the previous year in the subsequent year's questionnaire. Whether due to poor recall, or the convenience of answering, many respondents seem to have neglected short spells on or off of AFDC and answered that they were, or were not, receiving AFDC benefits all 12 months. In all likelihood, many of those who responded this way actually had fewer than 12 months experience. This to some extent nullifies our advantage in having monthly data, but we have selected intervals of analysis in the following models which should ameliorate any biasing effects of this heaping.

Measures of Independent Variables

Most of the measures of the variables are fairly straightforward. The racial and ethnic classification is based on self-identification, and individuals are grouped into a Hispanic category, a black non-Hispanic category, and an other category. The latter category is predominantly white, but does include some Asians and other nonwhites.[6] We include indicators of whether individuals lived in urban areas and the region of the country in which they were located.

We categorized an individual's level of education as being less than high school completion, a high school diploma, or a GED. We also include the individual's percentile test score on the Armed Forces Qualifying Test (AFQT) in 1980.

Our measures of the individual's family situation include a variable indicating whether or not she has ever married, a variable indicating whether or not she lives with relatives, a variable indicating whether or not she has two or more children, and a set of dummies indicating the age of the youngest child.

The measures of work experience included a variable indicating whether or not an individual worked in the previous year and a variable indicating whether the individual reports a physical limitation on her ability to work. We also include the unemployment rate of the county in which she resides.

Our measures of AFDC experience include a variable indicating whether or not an individual first received AFDC while a teenager and the maximum benefit for 4 persons in her state of residence. In addition, we include a measure of months of AFDC use prior to the current spell of AFDC use.

[6]Blacks and Hispanics were explicitly oversampled; Asians and other nonwhites were not oversampled, so only a few are included in the other category.

RESULTS

The Characteristics of Spells of AFDC and Recipients of AFDC

Table 1 permits us to look at the amount of time that different groups of recipients have used AFDC. One should keep two caveats in mind in looking at these figures. First, because these figures are based on women who were 28–35 in 1993, when last observed, they do not reflect the experiences of women at older ages. Second, these percentages are based on the observed use of AFDC in the NLSY. Some women will eventually use AFDC for longer periods of time than are reflected in the table. Consequently, one should not look at the table as estimates of the length of time of receipt for all users of AFDC. The figures do, however, give us a rough idea of the length of welfare use.[7]

Using the observed lengths of time for these fairly young women, we find that almost 48 percent of them have used AFDC for two years or less. This is higher than Pavetti's (1995) projection that 42 percent of recipients of all ages will use AFDC for two years or less. In our sample, we observe that approximately one-fourth of recipients have a total length of receipt of more than five years (10.6 + 14.8) compared with slightly over one-third of women of all ages in Pavetti's projections. The general picture from either of these sets of estimates is essentially the same. More than half of the women who use AFDC are likely to be affected by a two-year limit, and one-fourth to one-third will be affected by the five-year limit.

Table 1 also shows that the length of use of AFDC varies considerably with race and ethnicity. Over 60 percent of blacks and almost 60 percent of Hispanics have used welfare for more than two years, and well over one-third of blacks and almost one-third of Hispanics have used AFDC for more than five

[7]Projections of future use based on observed patterns, such as those done by Pavetti (1995, 1996), require assumptions about the connections between observed and future use. Another alternative is to follow a group of women throughout their period of exposure to the risk of using AFDC, but the data for doing this are not currently available.

TABLE 1

The Percentage of Recipients Who Receive AFDC for Selected Amounts of Time
(N = 1,268)

Time on AFDC	All Recipients	White/Other	Black	Hispanic
1–3 months	10.1	14.4	4.7	5.0
4–12 months	22.4	24.7	19.2	20.5
13–24 months	15.5	16.4	14.0	15.7
25–36 months	12.4	13.9	10.0	12.4
37–60 months	14.1	13.6	14.6	15.0
61–84 months	10.6	7.9	14.6	11.6
85+ months	14.8	9.1	22.9	19.9
Total	99.9	100.0	100.0	100.1

Source: Authors' computations with weighted data from the National Longitudinal Survey of Youth, 1979–1993.

years. Thus, the time limits are more likely to have an effect on black and Hispanic than on white recipients.

It is useful to compare the characteristics of those who use AFDC to women in general, and among those who use AFDC, to look at the characteristics of women who use it for more than two years and for more than five years. Table 2 displays the characteristics of these groups of women when they were 22 years old. As one would expect, black and Hispanic women are overrepresented among those who receive AFDC, and black and Hispanic long-term recipients are overrepresented relative to their representation in the general population. In addition, the levels of education and scores on the AFQT decline as one moves from left to right across the four columns in Table 2.

Among AFDC recipients, never-married women are overrepresented among the longer-term recipients. The percentage who have two or more children is higher among recipients than among non-recipients. Further, longer-term recipients are more likely to have two or more children than are all recipients. Those who use welfare longer are more likely to have had very young children at age 22. There are few differences in the percentage of women who live with relatives across the four classifications.

The descriptive statistics on work experience show that women who received AFDC are less likely to have reported working during the past year.[8] There are few differences in self-reported physical limitations on the ability to work or county unemployment rates.

The final set of characteristics has to do with AFDC use. Longer users are more likely to have begun receiving AFDC during their teen years, and to have had longer periods of use by age 22. The groups do not vary in terms of the maximum benefits in the states in which they live.

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[8]Research based on qualitative interviews with AFDC recipients indicates that the extent of work experience is probably underreported in secondary data sets such as the NLSY (Edin, 1995).

TABLE 2
Mean Characteristics of Women in the NLSY at Age 22

Characteristics at Age 22	All Women	All AFDC Recipients	Were Recipients for Two or More Years Over Entire Period	Were Recipients for Five or More Years Over Entire Period
Race/Ethnicity				
Black	.14	.35	.42	.51
Hispanic	.06	.09	.10	.11
White/other	.80	.57	.48	.38
Location				
Urban	.80	.80	.79	.79
Northeast	.20	.14	.13	.12
North central	.28	.33	.36	.46
South	.35	.32	.29	.24
West	.17	.21	.22	.18
Education				
No high school diploma	.13	.35	.40	.46
High school diploma	.82	.54	.49	.45
GED	.05	.11	.11	.09
AFQT score[a]	47.67	27.45	23.94	20.55
Family Characteristics				
Never married	.58	.49	.55	.61
Lives with relatives	.35	.32	.32	.33
2 or more children	.12	.34	.41	.48
Youngest child 0–1	.17	.35	.38	.38
Youngest child 2–3	.10	.26	.30	.35
Employment Characteristics				
Worked last year	.83	.64	.52	.43
Work limits[b]	.05	.08	.09	.07
County unemployment rate	.086	.092	.093	.097
AFDC Factors				
Teen use	.06	.32	.40	.53
Maximum benefit[c]	$491	$490	$506	$507
Total months used by age 22	1.84	10.06	15.58	21.88

Source: Weighted computations using data from the National Longitudinal Survey of Youth, 1979–1993.
[a]Percentile scores.
[b]Physical limitations on ability to work, self-reported.
[c]Mean dollar value over all women at age 22.

In general, these descriptive statistics suggest that the long-term recipients of AFDC are among the most disadvantaged women in our society with low levels of education, a higher likelihood of having never married by age 22, and large families.

Does the Length of Time on AFDC Affect the Likelihood of Leaving AFDC?

As we indicated above, we have no theoretical or policy reason to prefer one parametric form for the underlying hazard rate. Further, figures of the hazard rates for first spells and multiple spells indicate only that the rate seems to decline monotonically over time, suggesting that any of the three forms—piecewise, Weibull, and quadratic—might fit well, but that the squared term in the quadratic might be insignificant. Visually inspecting these figures, however, is not a reliable way of choosing the appropriate form. In the absence of theoretical or empirical guidance, we prefer to rely on the piecewise hazard model since it allows the most flexibility in how the hazard rate varies over time. We also report results from the Weibull and quadratic models.

Table 3 shows tests of goodness-of-fit for models of all spells with any exits and all spells with permanent exits. The goodness-of-fit statistics allow us to determine whether the results indicate that unobserved heterogeneity might be present. For all baseline specifications, we estimated unobserved heterogeneity models with two points of support for the nonparametric unobserved heterogeneity component. We attempted to estimate models with more points of support, but these resulted in singular matrices, an indication that this is an inappropriate specification (Yi, Honore, and Walker, 1986; Heckman and Singer, 1984). The results for permanent exits (Panel A) indicate that estimation using the Weibull model indicates the presence of unobserved heterogeneity, while the results for the piecewise and quadratic models do not. The results for all exits (Panel B) indicate that estimation using the Weibull and quadratic models indicates the presence of unmeasured heterogeneity, while the results for the piecewise models do not.

TABLE 3

Tests of Goodness-of-Fit of Models with and without Unobserved Heterogeneity

Models	Negative Log-Likelihood Statistic	Chi-Squared Statistic	Probability with 2 Degrees of Freedom
A. Permanent Exits			
Piecewise			
Without unobserved heterogeneity	5211.996		
With unobserved heterogeneity	5212.258	-0.262	None
Weibull			
Without unobserved heterogeneity	5303.731		
With unobserved heterogeneity	5282.029	21.702	<.001
Quadratic			
Without unobserved heterogeneity	5260.223		
With unobserved heterogeneity	5259.009	1.214	.545
B. All Exits			
Piecewise			
Without unobserved heterogeneity	10345.805		
With unobserved heterogeneity	10346.171	-0.366	None
Weibull			
Without unobserved heterogeneity	10429.933		
With unobserved heterogeneity	10434.849	58.084	<.001
Quadratic			
Without unobserved heterogeneity	10438.195		
With unobserved heterogeneity	10424.058	14.137	.001

Source: Computations using data from the National Longitudinal Survey of Youth, 1979–1993.

In addition to the results in Table 3, we also attempted to test for the presence of unmeasured heterogeneity in models of first spells, but these models would not converge. This suggests that using first spells only with these data do not provide enough information to permit testing for unobserved heterogeneity. We also estimated models of multiple spells among all exits and multiple spells among permanent exits that included only the duration parameters and unobserved heterogeneity, i.e., models that did not include any of the measured covariates. These results indicated the presence of unmeasured heterogeneity in all of the models with no measured covariates. This suggests that controlling for the measured covariates accounts for what would otherwise have been unmeasured heterogeneity in the piecewise models. Although we would prefer to have consistency across the models in terms of whether or not unobserved heterogeneity appears to be present, inconsistency seems to occur frequently in analyses of duration dependence with other types of events (Hoem, 1989; Petersen, 1995; Trussell and Richards, 1985).

Table 4 displays the results of estimating the piecewise exponential model for permanent exits. Since the results for the piecewise models found no evidence of the presence of unmeasured heterogeneity, we report only the results from the model that did not include the unobserved heterogeneity parameters. The effects of duration and the other variables were almost identical in the two models. The rate of exiting declines fairly steadily with each year of receipt. The rate of leaving AFDC during the second year of receipt is .533 ($e^{-.629}$) of the rate during the first year, and the rate during the third year of receipt is .419 ($e^{-.870}$) of the rate during the first year. By the time recipients are in their ninth year of receipt, the rate of leaving permanently has fallen to .061, or approximately 6 percent of the rate during the first year.

We can also examine the effect of the previous use of AFDC. The effect for each month of previous use is -.011—i.e., the rate of exiting AFDC declines with the amount of time that individuals have used AFDC prior to the current spell. Thus, if one accepts the specification of the underlying hazard

TABLE 4
Stepwise Hazard Model of Permanently Leaving AFDC (without Unobserved Heterogeneity)

Variable	Coefficient	Standard Error
Intercept	-2.846	.228
Duration Terms		
Year 2 (Reference = Year 1)	-0.629	.088
Year 3	-0.870	.121
Year 4	-0.947	.153
Year 5	-1.123	.201
Year 6	-1.675	.301
Year 7	-1.546	.330
Year 8	-1.870	.458
Year 9	-2.410	.736
Year 10 or higher	-2.794	.713
AFDC months prior to current spell	-.011	.002
Race/Ethnicity		
Black (reference = white/other)	-0.475	.084
Hispanic	-0.353	.100
Location		
Urban (reference = nonurban)	0.177	.082
North central (reference = NE)	-0.408	.108
South	0.066*	.136
West	-0.234	.105
Education		
High school diploma (reference = LT HS)	0.372	.073
GED	0.334	.105
AFQT score, 1980	-0.016*	.045
Family Characteristics		
Never married	-0.384	.075
Lives with relatives	-0.064*	.077
Two or more children	-0.276	.074
Youngest child 0–1 (reference = youngest child over 3)	-0.229	.083
Youngest child 2–3	-0.127*	.083
Employment Characteristics		
Worked last year	0.456	.067
Work limitations	-0.126*	.135
County unemployment rate	-0.028	.010
AFDC Factors		
Teen use	0.043*	.071
Maximum benefit	-0.030*	.025

Source: Computations with data from the National Longitudinal Survey of Youth, 1979–1993.
*Not significant at the .05 level or below in a two-tailed test.

model and the other independent variables in Table 4, one concludes that there is strong evidence of duration dependence.

On the other hand, the results for the Weibull models in Table 5 show that the duration parameter and the effect of previous AFDC use become insignificant after adjusting for unmeasured heterogeneity. The unmeasured heterogeneity parameters suggest that approximately 40 percent of the sample belong to a group whose rate of permanently exiting AFDC is .19 ($e^{-1.674}$) of the rate for the other group. Unfortunately, this technique does not allow us to identify who is in which group. The results for the quadratic model in Table 6 provide no evidence of unmeasured heterogeneity, and suggest that the rate declines monotonically; i.e., the squared term is not significant.

The body of results in Tables 3–6 provides some evidence of both unmeasured heterogeneity and duration effects. The results for all exits from multiple spells also provide some evidence for both unmeasured heterogeneity and duration effects in the quadratic and Weibull models. The rate of exiting declines with duration in the quadratic model of all exits, and the effect of the squared term is not significant. The rate of exiting increases with duration in the Weibull model that adjusts for unmeasured heterogeneity. These results are not reported in tables of this paper, but are available from the authors. To reiterate, given the fact that the piecewise model makes the fewest assumptions about the nature of duration dependence, we are inclined to put the most confidence in results from that model. Perhaps the safest conclusion for public policy, however, is that one should look for both duration dependence and unmeasured heterogeneity among the recipients of AFDC. That is to say, a group of people who have particular characteristics that are barriers to employment—e.g., their skills are not in demand in the local labor market, or they suffer from depression or drug dependence—may be among the long-term recipients. Nonetheless, not all of the apparent effects of duration are due to such unmeasured characteristics or to the characteristics that we have measured. The likelihood of leaving AFDC does

TABLE 5

Weibull Hazard Model of Permanently Leaving AFDC

Variable	Coefficient, No Unmeasured Heterogeneity	Standard Error	Coefficient, Unmeasured Heterogeneity	Standard Error
Intercept	-3.007	.228	-2.559	.292
Duration Term				
Gamma	-0.157	.029	0.011*	.040
AFDC months prior to current spell	-0.007	.002	-0.001*	.002
Unobserved Heterogeneity				
Effect of being in group 2			-1.674	.165
Proportion in group 2			.406	.075
Race/Ethnicity				
Black (reference = other)	-0.515	.076	-0.742	.108
Hispanic	-0.384	.091	-0.507	.127
Location				
Urban	0.215	.076	0.265	.095
North central (reference = NE)	-0.491	.098	-0.617	.139
South	0.151*	.126	0.166*	.172
West	-0.297	.096	-0.412	.137
Education				
High school diploma (reference = LT HS)	0.356	.068	0.443	.089
GED	0.316	.097	0.362	.129
AFQT score, 1980	-0.054*	.047	-0.015*	.048
Family Characteristics				
Never married	-0.496	.068	-0.622	.090
Lives with relatives	-0.002*	.074	-0.005*	.087
Two or more children	-0.474	.069	-0.598	.086
Youngest child 0–1 (reference = youngest child over 3)	0.007*	.080	0.007*	.090
Youngest child 2–3	-0.005	.081	0.021*	.089
Employment Characteristics				
Worked last year	0.499	.062	0.557	.075
Work limitations	-0.138*	.130	-0.112*	.149
County unemployment rate	-0.023	.010	-0.029	.012
AFDC Factors				
Teen use	-0.056*	.064	-0.112	.088
Maximum benefit	-0.012*	.023	-0.021*	.030

Source: Computations with data from the National Longitudinal Survey of Youth, 1979–1993.
*Not significant at the .05 level or below in a two-tailed test.

TABLE 6

Quadratic Hazard Model of Permanently Leaving AFDC (without Unmeasured Heterogeneity)

Variable	Coefficient	Standard Error
Intercept	-2.935	.225
Duration Terms		
Gamma 1	-0.018	.004
Gamma 2	-0.00004*	.0001
AFDC months prior to current spell	-0.010	.002
Race/Ethnicity		
Black (reference = other)	-0.483	.081
Hispanic	-0.356	.096
Location		
Urban	0.189	.079
North central (reference = NE)	-0.424	.104
South	0.105*	.131
West	-0.246	.101
Education		
High school diploma (reference = LT HS)	0.366	.071
GED	0.333	.101
AFQT score, 1980	-0.007*	.046
Family Characteristics		
Never married	-0.423	.072
Lives with relatives	-0.045*	.076
Two or more children	-0.343	.072
Youngest child 0–1 (reference = youngest child over 3)	-0.149*	.081
Youngest child 2–3	-0.115*	.082
Employment Characteristics		
Worked last year	0.465	.065
Work limitations	-0.130*	.133
County unemployment rate	-0.029	.010
AFDC Factors		
Teen use	0.016*	.068
Maximum benefit	-0.024*	.024

Source: Computations with data from the National Longitudinal Survey of Youth, 1979–1993.
*Not significant at the .05 level or below in a two-tailed test.

decrease with the amount of time that individuals have spent on the program, independent of characteristics.

Do Characteristics of the Women and Their Families Affect the Likelihood of Leaving AFDC?

We are also interested in the characteristics of women and their families that are associated with exiting AFDC. The results in Tables 4–5 indicate that the effects of most of these characteristics are robust across different specifications of the underlying hazard rate and across the two Weibull models, one of which adjusts for unmeasured heterogeneity.[9] Race, location, education, marital status, the number of children, previous work experience, and the county unemployment rate have significant effects in all four models reported in the tables. The AFQT percentile score, living with relatives, work limitations, teen use of AFDC, and the maximum benefit for a family of four have insignificant effects in all four models. The effect of having a child age 1 or younger is significant in the stepwise hazard model, but not in the other models; the effect of having a child age 2–3 is significant in the Weibull model that does not adjust for unmeasured heterogeneity, but not in the other models.

The results show that families headed by black or Hispanic women are less likely to leave AFDC permanently than are families headed by other women. Those who live in urban areas are more likely than those who do not to exit AFDC, and those who live in the north central and western regions of the United States are less likely to exit AFDC than are those who live in the northeastern and southern regions of the United States. The reasons for the effects of race and ethnicity and geographical location are undoubtedly very complex. They are proxies for a number of unobserved factors, including the characteristics of local labor markets and welfare policies and programs that are not measured in our data.

[9]The effects of these covariates are also very consistent across the models of exits from first spells and all exits from multiple spells.

The results for education and test scores indicate that test scores do not have significant effects on leaving AFDC, after controlling for education. On the other hand, those with a high school diploma or with a GED are more likely to exit AFDC permanently than are those who have no high school credential. This is consistent with other research (Harris, 1993; Pavetti, 1993) and indicates the importance of educational programs for AFDC recipients and other poor women.

Among the family factors, never being married and number of children emerge as consistently significant factors: those who are never married at the beginning of a spell are much less likely to exit AFDC than those who have been married. The number of children is a changing covariate, the results suggesting that women who have two or more children before or after they begin receiving welfare are much less likely to exit welfare. Whether or not women ever marry is outside the realm of most public policies, but family planning efforts can be used to help poor women avoid unintended pregnancies that can lead to unplanned increases in the number of children.

Among the work variables, two have significant effects: the variable indicating whether the woman worked in the year preceding the spell and the county unemployment rate. Limitations on their ability to work are not related to exiting welfare permanently. Women who worked in the year preceding their current spell of welfare are more likely to exit permanently, and the rate of exiting decreases with the unemployment rate of the county in which they live.

SUMMARY AND CONCLUSION

We posed two questions in this paper: (1) Does the likelihood of leaving AFDC decline with the amount of time that one remains on AFDC? (2) What characteristics of individuals and families are associated with the long-term receipt of AFDC? We estimated the effects of family background and individual and area characteristics that might be associated with exiting AFDC. We explored the sensitivity of these estimates to alternative specifications of the underlying hazard and to the inclusion of

unmeasured heterogeneity. In addition, we explored alternative definitions of exiting AFDC and examined different types of exit from AFDC. Most of the estimates are robust across these different specifications and definitions.

The results suggest that the likelihood of permanently leaving AFDC does decline with the amount of time that individuals use the program. Further, an individual's education, marital history, number of children, and previous work experience have large influence on whether or not the individual permanently exits the program.

These findings have important implications for current efforts to reform welfare. Some women remain on AFDC for long periods because they have personal characteristics or a personal situation that makes it very difficult for them to leave welfare via work or other means. Women without a high school diploma, few job-related skills, and little employment experience have few alternatives to welfare for supporting themselves and their children. As Edin (1995) has demonstrated, many of these women try to support themselves in the labor market, but find they cannot do so. The federally imposed time limits and the more restrictive time limits of some states make no distinctions between women who can and cannot support themselves and their families. Although the federal legislation permits states to grant hardship exceptions to some recipients, it limits the number of exceptions that can be requested, and it does not require states to grant exceptions. Efforts to remove very disadvantaged women from the welfare rolls will reduce the number of recipients of public assistance under the TANF block grants, but these efforts are likely to be ineffective in helping these women and their children. Another way to put this is that for some women and children, the only viable means of support is welfare.

On the other hand, for those women who have skills that make the labor market a realistic alternative and who live in areas where employment opportunities are present, there is some danger in remaining on welfare for long periods of time. The broader literature on unemployment and job search suggests that this may be because their work skills deteriorate or they become less desirable to employers

with the amount of time they spend on welfare and/or out of the labor force. A major issue for welfare reformers in the long run is how to distinguish among women who can escape through changes in behavior and those who cannot survive economically without welfare. Replacing welfare with work will be effective for only some of the long-term recipients; it may not be effective for many. To determine who is a good candidate for employment requires a good deal of intensive work with individual women and their families. Such intensive work will be difficult if case workers are responsible for working with large numbers of families.

The results of our analysis also suggest a number of questions that are in need of additional research. First, the longitudinal data in the NLSY, PSID, Survey of Income and Program Participation, other national data sets, and state administrative data sets such as that from California used by Hoynes (1996) now permit more serious study of long-term participation in AFDC, Food Stamps, and other programs. Methods for the analysis of duration dependence and the incorporation of unmeasured heterogeneity create opportunities to look more carefully at the timing of participation in public programs. Second, the work of Edin (1995) illustrates the ways in which qualitative research can be used to complement findings from quantitative research on these issues. Her work has, for example, taught us that women carefully consider the alternatives available to them in making decisions about work and welfare. Finally, one can use the insights from qualitative research and quantitative research to develop more rigorous models of the search process used by recipients of public assistance. Although these search models have been most widely used in economics, especially in the study of unemployment, they can be modified to include components of sociological theories and the results of sociological research on poverty and welfare.

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