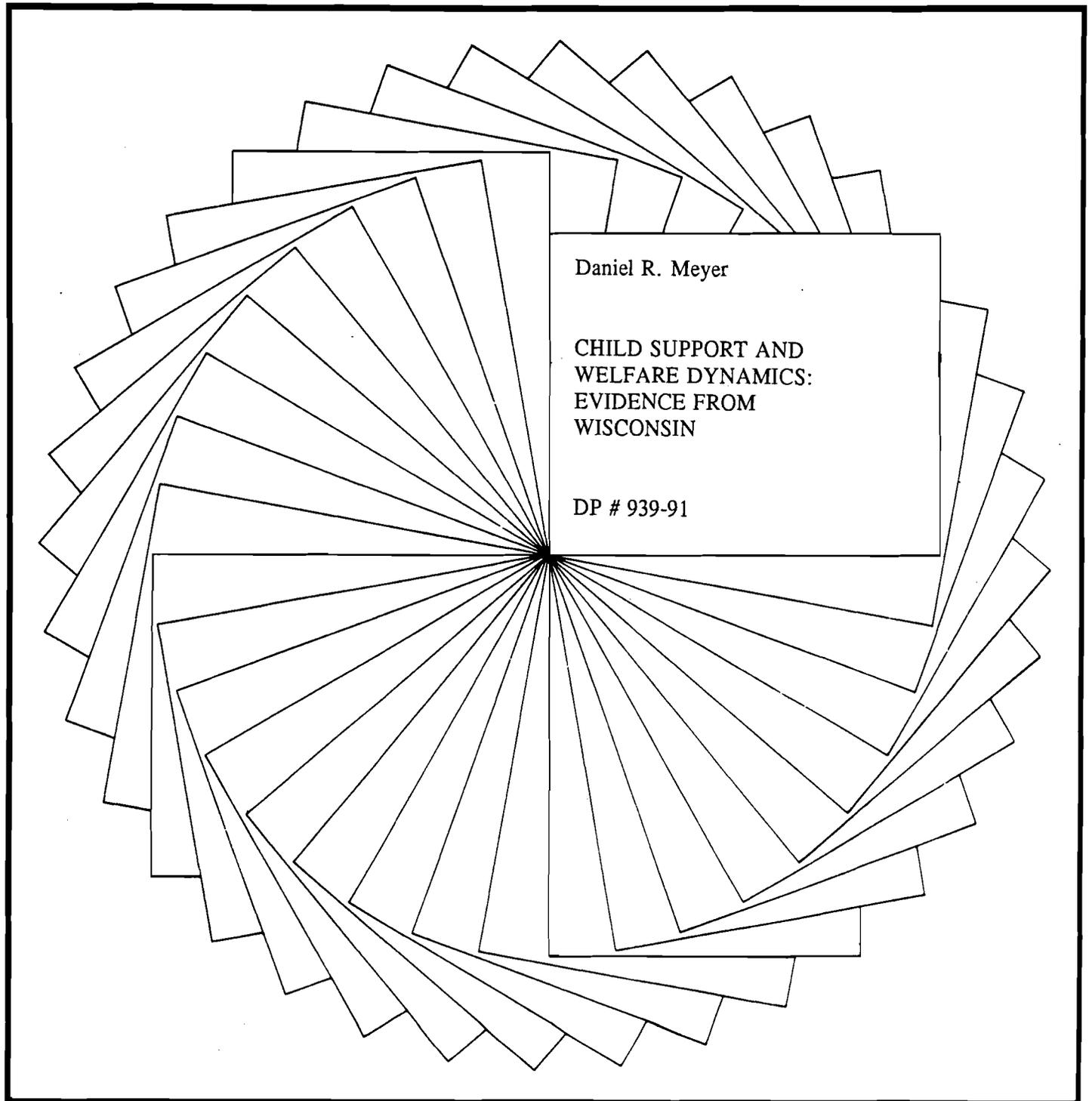




Institute for Research on Poverty

Discussion Papers



Daniel R. Meyer

CHILD SUPPORT AND
WELFARE DYNAMICS:
EVIDENCE FROM
WISCONSIN

DP # 939-91

CHILD SUPPORT AND WELFARE DYNAMICS: EVIDENCE FROM WISCONSIN

Daniel R. Meyer
Institute for Research on Poverty
and
School of Social Work
University of Wisconsin-Madison

February 1991

This research was supported in part by a grant from the U.S. Department of Health and Human Services to the Institute for Research on Poverty. Any opinions and conclusions expressed here are solely those of the author and should not be construed as representing the opinions or policy of the sponsoring institutions. The author would like to thank Irwin Garfinkel and Robert Haveman for valuable suggestions.

ABSTRACT

This paper uses event history analysis to estimate the effect of child support on exiting from welfare and reentering welfare on a sample of ever-married women in Wisconsin. The results lead us to conclude that child support does not have a large effect on exiting from welfare. The results from the reentry analysis suggest that while recidivism is even more serious than has been previously reported, receiving child support does significantly decrease the likelihood of returning to welfare. The results also suggest that a child support award is important in impeding reentry, even if nothing is received.

CHILD SUPPORT AND WELFARE DYNAMICS: EVIDENCE FROM WISCONSIN

INTRODUCTION

One focus of welfare reform since the 1960s has been to move women off welfare. The reforms within the major cash program for single parents, Aid to Families with Dependent Children (AFDC), have been somewhat varied—decreasing the economic disincentives to work, requiring women to work while receiving welfare, assisting in job searches, providing education or training, providing child care, allowing benefits to erode—but a goal has always been the same, encouraging women to exit.

And part of the impetus for child support reforms has been that increasing private child support may enable some women to leave welfare more quickly or not enter the welfare system at all. Yet in spite of these policy efforts, until the 1980s we knew very little about the factors that enabled women to exit from welfare, and we still know very little about the role of child support in causing exits. Furthermore, the real goal of welfare reform is not simply causing (or enabling) women to exit from welfare, but keeping women from welfare and enabling them to become economically secure. In spite of this, we know even less about the correlates of reentering welfare and almost nothing about the role of child support in preventing reentry.

In this paper, I will first provide a brief review of the theory that underlies the welfare reciprocity decision, then in Section II I will review the previous literature. In Section III I present the model and data that I will use to test the correlates of welfare exit and reentry, paying particular attention to the effect of private child support. Section IV presents and discusses the results.

I. THEORY OF THE WELFARE PARTICIPATION DECISION

The traditional model of the welfare participation decision has come from microeconomics and is an extension of labor supply theory. Individuals are assumed to consider the amount of income and leisure they would receive from all possible hours of work and select the amount of work that maximizes their well-being, given budget and time constraints (Deaton and Muellbauer, 1980). The welfare participation decision is typically seen as made by the individual simultaneously with the labor supply decision (see, for example, Levy, 1979; or, more recently, Graham and Beller, 1989; and Garfinkel et al., 1990). Single women with children are assumed to evaluate their well-being under two potential alternatives, welfare participation and nonparticipation, and they determine both whether or not they will receive welfare and the number of hours they will work.

The standard model also predicts the effect of child support on labor supply and welfare reciprocity. For some women, a small amount of child support will actually increase the attractiveness of AFDC. Since 1984, women receiving AFDC have been allowed to keep the first \$50/month of child support without any decrease in their grant. Any amount paid over \$50/month presumably reduces the AFDC grant dollar for dollar. This \$50 disregard effectively increases the AFDC guarantee by \$50/month for women receiving child support and may therefore increase the likelihood of receiving welfare.

But the possibility that child support increases reciprocity is offset by two opposing influences. For some women, child support may provide more income than does welfare, and thus will clearly decrease reciprocity. For others, the combination of child support and earnings will enable them to leave AFDC. So although increases in the amount of private child support are predicted to have ambiguous effects on AFDC use, I believe policymakers have assumed that increases in child support will decrease reciprocity.

Child support may have additional effects not typically covered in the traditional labor-leisure choice framework. In particular, child support may influence the decision to marry or remarry, both of which clearly affect AFDC reciprocity. My focus here, however, is a reduced-form model of the effect of child support on AFDC use. An attempt to separate out the specific effects of child support on remarriage and then remarriage on AFDC use is beyond the scope of this research.

II. LITERATURE REVIEW: WHAT WE KNOW AND WHAT WE DO NOT KNOW ABOUT AFDC DYNAMICS AND CHILD SUPPORT

Substantial research has been completed on exiting from AFDC, but the role of other income--in particular, the role of child support--has been given little attention. The relevant literature can be divided into three areas, with research suggesting (1) the correlates of the length of welfare spells (including information about the relative importance of various routes by which women exit from AFDC); (2) the correlates of returning to welfare; and (3) the probability of achieving significant reductions in AFDC reciprocity through increasing the amount of child support.

Research on Exiting from AFDC

Early analyses of the correlates of exiting AFDC were completed by Wiseman (1977), Coe (1981), Hutchens (1981), and Plotnick (1983). The probability of exiting (and/or entering) AFDC was assumed to be related to other income, potential wages, and AFDC program parameters (the guarantee, the breakeven point, and the set-aside). Although their findings differ somewhat, they show that unearned income was positively related to exiting (but the coefficient was never significantly different from zero); a woman's expected wage increased the probability that she would

exit; being black, young, or having a large family decreased the probability of exiting; and AFDC program variables (guarantee levels, tax rates, and administrative changes) all influenced the likelihood of exiting.

More recent work on AFDC exits has used the concept of an AFDC spell. The seminal work on welfare spells (Bane and Ellwood, 1983) uses event history analysis to estimate the probability of exiting welfare in each year since the beginning of a welfare spell.¹ They found substantial differences in expected spell lengths, with nonwhites, never-married women, those with low educations, those without previous earnings, and those with many children having longer spells. For women who exit from AFDC, they assign a reason for the exit using a hierarchical system that first checks for a change in family structure (either a marriage/reconciliation or the absence of an eligible child), then checks for an increase in income, and finally for some other change; their approach allows no combination of reasons for exiting. After decomposing the probabilities of exiting into the probabilities of exiting through various routes, they find the most common reason for both entrances and exits is a change in family structure.

Ellwood (1986) reworked the earlier analysis with a different focus, this time looking not at expected spell lengths but at the expected number of years a woman will receive AFDC over 25 years following her first receipt. His new focus reveals that long-term use is about twice as common as was previously thought, with about one-quarter of those who were ever recipients receiving AFDC for ten or more years. He finds the most likely long-term users are never-married, nonwhite, young, and have little education. His reanalysis of the reasons for exiting (still using the hierarchical classification system but correcting a coding error in the earlier work) shows 35 percent exiting through marriage, remarriage, or reconciliation, 11 percent through the absence of an eligible child, 21 percent through earnings, and 14 percent through other income (including child support).

Other analyses of the correlates of exiting from welfare have also been completed (O'Neill

et al., 1984; Rank, 1984; Blank, 1986; Hoffman, 1988; Ruggles, 1988; Long, 1990). Findings across studies are generally similar, despite differences in samples (Hoffman includes only divorced or separated women, Blank only includes women in Denver and Seattle, and Rank only women in Wisconsin), in the unit of time observed (Blank, Ruggles, and Long use months, Rank uses six-month linked records, O'Neill and Hoffman use annual data), and in methodology (Blank is the only researcher to explicitly model heterogeneity). None of these analyses have explicitly examined child support, however, and few have examined unearned income of any kind other than the AFDC guarantee. (Blank and Long are exceptions in testing unearned income, and both find significant coefficients in the expected directions in at least one equation).

One study that has incorporated child support was conducted by Klawitter and Garfinkel (1988), who analyze those who exit from AFDC in Wisconsin from a sample of cases entering the Wisconsin courts between 1980 and 1986. They look at the first spell on AFDC and the first spell off AFDC following the court date. Their main interest is in the effect of routinely withholding child support from the income of the noncustodial parent, which they find does not have a significant effect on the lengths of AFDC spells.

Research on Returning to Welfare

Much less work has been done on the likelihood of reentering AFDC once an individual has exited. Bane and Ellwood (1983) estimated the hazard of returning to AFDC and found that more than one-third of those who exited eventually returned. Because they use annual data, however, they note that their figures could seriously underestimate recidivism, since many women who go off AFDC return within a year, and thus it appears in annual data as if they have not exited. They found that women were most at risk of returning to AFDC within the first two years; very few women returned

to welfare if they stayed off for two years. Surprisingly, recidivism was common among all those who left, regardless of the reason for exiting.

Ellwood (1986) performs the most thorough analysis of reentries, since his dependent variable--total time on AFDC--requires explicit estimates of the likelihood of reentering. His data on recidivism are the same as in his earlier work with Bane. He finds that those most likely to reenter are black, live in the Northeast, have two or three children, have a youngest child aged 3-6, and are disabled. The only income variable that he tested was the maximum AFDC benefit; this coefficient was not significantly different from zero.

Although we do not know if child support has any effect on reentering welfare, the work on exiting from welfare suggests only a small effect of child support on welfare use. Other types of analyses have also concluded that the number of women who could be expected to leave AFDC through increased child support is likely to be small.

Research on AFDC and Child Support

The states reported that child support was collected in about 220,000 of the 2.3 million families that exited from AFDC in fiscal 1989 (U.S. Department of Health and Human Services, 1990a; U.S. Department of Health and Human Services, 1990b). The number of cases in which child support caused the exit, of course, would be smaller.

Simulation models have also attempted to determine the relationship between child support and AFDC participation. Robins (1986), Garfinkel et al. (1990), and Meyer et al. (1990) developed simulation models that treat child support's effect on labor supply as the same as the effect of other unearned income. They predict that increased child support collections would have only modest effects on AFDC reciprocity. For example, Meyer et al. find that even under a "perfect" scenario, in

which every case has an award, the awards are based on the Wisconsin standard, and all that is due is collected, the decrease in the AFDC caseload would be 19 percent.

Even these modest results may overstate the link between child support and AFDC. Graham and Beller (1989) find that child support has less of an impact on labor supply than does other types of unearned income and suggest this may be because it is uncertain. The simulation research has not incorporated any explicit discounting for uncertainty.

Although it has not been emphasized in the simulation literature, one reason why child support is predicted to have small effects on AFDC use is that the noncustodial parents of children on AFDC are frequently poor themselves. Although a substantial increase in total collections from these noncustodial parents is possible (Meyer et.al. [1990] predict annual collections from this group could increase from \$858 million to \$1981 million for the nation), the amount of child support collected for any individual AFDC recipient is not large compared with the amount of AFDC she is receiving.

From this review of the relevant literature we can conclude that the women who are most likely to exit AFDC quickly are nonblack, older, have been married, have few children, and have little unearned income. Child support has only a small role in causing exits from AFDC (Ellwood found only 14 percent left from increased transfers, and some [perhaps most] of these were transfers other than child support). Although reentry to welfare is fairly common, we know less about its correlates, and we know nothing about the potential of child support for keeping women off AFDC. Simulation models have also shown a limited role played by child support in decreasing welfare recipiency, although models that allow for the possibility of child support and earnings working together show a larger potential for decreasing welfare use.

Although this review predicts that the direct effect of child support on AFDC exits is likely to be small, we do not know much about the indirect effects. Does increased child support work together with earnings or remarriage in helping women move off AFDC? If so, its role has been

seriously underestimated because these women would have been classified as "earnings exits" or as "remarriage exits." In addition, because the categorization of reasons for exiting has followed a hierarchical strategy and put "other income" low on the list, it is possible that if we look specifically at the role of "other income," it may have a larger effect on exits than has been estimated thus far. And it is possible that the largest effect of child support is not in inducing exits, but in keeping women from returning, and this effect has not been studied. This research, then, will focus specifically on the effect of child support on exiting from and reentering AFDC.

III. METHOD AND DATA

Event history analysis provides the best framework for studying exits from and reentries to welfare because it allows us to focus on the timing of events and because it provides for an explicit treatment of cases that have not experienced an event in the observation period (censored cases). In this section, I will (a) briefly describe event history analysis; (b) discuss the specific methodology chosen for this analysis; (c) describe the data; (d) discuss problems with this data; and then (e) discuss the major variables used.

Event History Analysis

There are two main types of event history analysis: discrete time and continuous time. I use a discrete time model for both substantive and pragmatic reasons. First, the welfare/nonwelfare decision is made on a monthly basis, and thus can only occur once per month rather than at any point in continuous time; second, discrete time models are computationally convenient when there are several time-varying covariates.

In the discrete time model, the dependent variable of interest is the rate of transition from one state to another in a given time frame. Independent variables can be either time-varying (X_t) or fixed over time (Z). Let P_{it} be the probability of individual i exiting in time period t , given that the individual has not yet exited (the discrete time hazard rate), and let α_t be a set of constants. If the effects of the independent variables do not change over time (i.e., β is not subscripted with a t), and if the effects of the variables are linear in the logistic, then

$$(1) P_{it} = 1/(1 + \exp(-\alpha_t - \beta_1'X_{it} - \beta_2'Z_i)),$$

or, equivalently,

$$(2) \log [P_{it}/(1-P_{it})] = \alpha_t + \beta_1'X_{it} + \beta_2'Z_i.$$

The model is computationally convenient, and it can be estimated through maximum likelihood procedures.²

Specific Methodological Issues

The data I will use (like almost all data) are left-censored; that is, we do not know anything about welfare use before January 1980. Other analysts have used simplifying assumptions to deal with these left-censored cases. I make the same assumption that Blank and Long do: I look only at the first observed spell. Thus for the exiting analysis, I look at the first spell of welfare use in which we observe the beginning of the AFDC spell; for the reentry analysis, I use the first spell of being off welfare that follows a spell of welfare use. I have not considered multiple spells, since in order to

model multiple spells strong assumptions are needed about welfare use prior to the first observed spell. Following almost all event history analyses, I assume the censoring mechanism is independent of the probability of exiting and reentering welfare.³

Because the number of periods is fairly large (more than 80 months), adding a dummy variable for each time period is not feasible; therefore, dummy variables have been constructed for the first three months of a spell, months 4-6, 7-12, 13-18, 19-24, 25-36, 37-48, and for a spell of more than 48 months. This assumes that the hazard is constant within these periods.

Researchers using event history analysis have become concerned about whether unmeasured heterogeneity affects the analysis (Heckman and Singer, 1982, for example). In the literature on welfare dynamics, only Blank (1986) has attempted to account for heterogeneity, and her stated purpose is to keep unmeasured variables from contaminating the estimates of duration. Following the bulk of the literature on welfare dynamics, I do not explicitly account for unmeasured heterogeneity in this analysis.

Because the data sets used do not provide full information on all variables, I am unable to assign a reason for exiting. This work should therefore be seen as similar to a reduced-form model in which child support's effects on welfare use are a combination of its effects on leaving through earnings, leaving through remarriage, and leaving for other reasons.

Data

The best data sets for studying the relationship between child support and AFDC use would include monthly data (since AFDC reciprocity occurs on a monthly basis) over a long period of time. The typical data, self-reported data, are not used here for two main reasons. First, AFDC amounts are seriously underreported in self-reported data.⁴ Marquis and Moore (1989) find that the more

serious errors are from individuals who do not report receiving any AFDC, rather than individuals who report an incorrect amount. Thus, if self-reported data are used to analyze AFDC participation, potentially serious errors will be made. Second, most surveys ask for self-reports of the amounts of various types of income. However, when an individual receives AFDC, the amount of child support received does not always equal the amount paid. All amounts of private child support collected from the noncustodial parents of AFDC recipients go through a public collection agency, and AFDC recipients receive up to \$50 per month of child support, with any remainder going to offset AFDC costs. Thus AFDC recipients may not know the amount of child support that is paid unless it is less than \$50 per month. Therefore an analysis that assumes that the amount of child support AFDC recipients report receiving is the same as the amount paid also injects error.⁵

One solution to these problems is to use administrative data on the amounts of AFDC and private child support. In Wisconsin, all amounts of child support are supposed to go through the courts, providing an administrative record of child support that can be merged with the administrative record of AFDC payments. These administrative data sets provide more accurate data on child support amounts and AFDC reciprocity.

The base data source for this analysis is the Institute for Research on Poverty's Court Record Data (CRD), a sample of divorce, separation, and paternity cases in which at least one child is potentially eligible for child support. The data come from the family court records of 21 Wisconsin counties between July 1980 and January 1987. In each year 30 to 150 cases were selected in each county, and if these cases came back to court, new information was collected. Because all child support payments are required to go through the courts in Wisconsin, this court record data base also includes monthly amounts of child support paid and owed. For cases that entered the courts after January 1984 (about half of my sample), child support payment information and amounts owed are available through June 30, 1988. Payment information and amounts owed through December 1983

are available for cases that entered the courts before July 1983. Although we have some data on custodial fathers, this analysis is limited to women. The court record also includes some demographic information at the time of the court hearings.

This file was matched to a second data base, Wisconsin's Computer Reporting Network Check History file (CRN-1), an administrative file that contains the amount of the AFDC check each month and the number of adults and children that the check was supposed to cover. After all possible matches had been made through names or social security numbers, 91 percent of all court cases either had been matched or we had a social security number and thus knew that the case did not receive AFDC. Cases that had no social security number and could not be matched (9 percent) were excluded, since we had no AFDC information. A third data base, the Computerized Reporting Network (CRN-2), contains fuller information from the case records of AFDC cases from January 1981 through December 1985; this file was used to provide information on race and education. A fourth administrative data base, from the Wisconsin Department of Revenue (DOR), provides information on taxable income from 1980 for individuals who filed a Wisconsin state income tax return.

In summary, four administrative data sources are merged that provide information on AFDC (CRN-1), child support payments (CRD), income (DOR), and family demographics (CRD and CRN-2). The sample size is 2075 for the analysis of exits (women for whom we observe the beginning of an AFDC spell) and 1695 for the analysis of reentries (women for whom we observe an AFDC exit).

Problems and Issues with the Data

These data sets are uniquely suitable for an analysis of the role of child support in welfare dynamics because they provide accurate amounts of AFDC and child support on a monthly basis. However, some problems arise from their use.

Perhaps the most damaging problem is that the sample is based on a group of women who have come to court, and thus is not representative of the entire AFDC caseload. In theory, every woman who applies for AFDC is assisted in obtaining a child support award and, in fact, is required as a condition of eligibility to cooperate with paternity establishment, noncustodial parent location, etc. If these requirements were implemented in most cases, then using a court sample would not be a problem, because almost all AFDC cases would come to court at some time. However, a nontrivial percentage of cases do not come to court for a variety of reasons: paternity could not be established, the noncustodial parent could not be found, the custodial parent did not cooperate, the IV-D agency (the child support agency) determined that little child support would ever be collected, or the IV-D agency did not have the resources to pursue every case in which there was some chance of payment.

What types of cases are most likely to be left out of a court sample? Divorce cases are required to come to court, so all AFDC recipients who have been divorced could be in this sample. Many women who are separated will eventually file for divorce, and thus could eventually be in the sample, or they may go to court for a child support award even if they never file for divorce. The cases least likely to come to court concern women who were never married (and, to a lesser extent, those who were separated for a short period of time). Some unmarried women come to court anyway to establish paternity and to pursue a child support award, and some unmarried women are brought to court by the IV-D agency, but these women are probably not representative of the AFDC caseload. About half of the national caseload in 1987 was never-married women (U.S. House of Representatives

Committee on Ways and Means, 1989, p. 563), so for half of the caseload our sample is probably not representative.

To handle this problem, I am analyzing welfare exits and reentries only for the ever-married women in the sample. Although the welfare patterns of never-married women are a serious policy concern (perhaps more serious than those of ever-married women, because their welfare spells appear to be longer), this may not be the best data set for studying them, so they are not analyzed in this research.⁶ The peculiar structure of the data base causes problems in other variables as well. We will not have complete child support information for any women who received child support from more than one noncustodial parent, since the data is by court case, not by individual. We will also not have a record of in-kind support or informal payments, since payments sent directly to a woman will not be recorded unless one of the parents notifies the court of a payment.⁷ Mobility within Wisconsin does not create problems for determining AFDC usage, but, unfortunately, women who move from Wisconsin may be treated as leaving AFDC, since information on mobility is not provided.⁸ Finally, using an administrative data base means that the researcher is not provided with all variables of interest but only what has been collected; in particular, information on wages, AFDC use before 1980, work experience, health status, etc., is not available.

This analysis differs from previous analyses of exits in that it explicitly analyzes the relationship between child support and exits. It uses administrative reports of child support and AFDC, an important advantage in its measurement of these two critical variables. It uses monthly data (differentiating it from Bane and Ellwood, O'Neill et al., Ellwood, and Hoffman) over a longer period than was available to Blank, Rank, Ruggles, or Long. Like Hoffman's research, it includes only ever-married women. In addition, it includes data only from Wisconsin, and thus the results may not be generalizable to the national population.

Variables

If the welfare decision is based on the microeconomic model that compares utility on welfare with utility off welfare (presumably in the labor market), then several variables should be important. Factors related to wages and reservation wages (education, experience, race, urban residence, family size, presence of young children, unearned income), to AFDC program parameters (expected grant sizes, expected eligibility), availability of other income, and the likelihood of getting a job should all be considered. Not all variables are available in this data set, however. Brief comments on some of the variables that have been used follow.

AFDC program parameters are predicted to affect AFDC use. I test the real amount of the maximum AFDC grant for four people as a time-varying covariate; it ranges from \$594 to \$709 (in 1986 dollars) during this period.⁹ I also enter a series of dummies for years to capture any programmatic changes in AFDC.¹⁰

Several demographic variables are expected to be correlated with welfare entries and exits: race, the number of children, the age of the youngest child, the age of the mother, and the mother's level of education may all be important.¹¹ Marital status is not used because it is not available and because AFDC is available in Wisconsin to women of all marital statuses through the AFDC-UP program. Not using marital status is equivalent to assuming that all women are at risk of reentering welfare (even if they are remarried) and that remarrying does not automatically cause one to exit.

The income of noncustodial parents affects the amount of child support paid and may also control for unmeasured socioeconomic variables. We do have the 1980 Wisconsin taxable income (and the 1980 AFDC income) of the father of the children listed in the court record for about 70 percent of the cases. Because we do not have the income for those who lived outside Wisconsin or all income for those who did not have enough taxable income to file, income variables are added to

only a few models, and should be regarded as a proxy for unmeasured socioeconomic variables, rather than a measure of income potentially available to the mother.¹²

The amount of child support is measured in several ways. The amount paid in one month is allowed to affect welfare status in the next month and is tested both as an amount and as a series of dummies.¹³ In addition to the amount paid in that one month, the number of months out of the last six in which child support was paid is included to account for both history and regularity.¹⁴ All amounts were translated into 1986 dollars.

The dependent variables in this formulation are whether a woman exited from welfare in a given month and whether she reentered. For the exit analysis, I only consider exits that last at least two months: a single month without welfare in the middle of a longer spell is ignored. Reentry occurs in the month a woman gets her first AFDC check on which children are listed, and by my definition can only occur after the woman has been off welfare for at least two months. A different definition of what constitutes an exit would of course provide different results.¹⁵

Appendix 1 lists the definitions of the variables. Descriptive statistics on the variables used are given in Table 1. Descriptive statistics on time-varying variables reflect all person-month spells. The average child support paid (which therefore includes many months in which nothing was due) is \$57 for women in the exiting analysis and \$73 in the reentry analysis. Although almost 90 percent of the cases had a child support award sometime during the 1980-1988 period, there was a payment in only 27 percent of the months of an AFDC spell and in 26 percent of the months when individuals were at risk of returning to welfare.

In summary, I am using a discrete time event history model on a merged set of Wisconsin administrative data bases. The data set is unique in having more reliable monthly data on AFDC and child support over a fairly long period.

TABLE 1

Descriptive Statistics of the Variables Used
to Measure the Effect of Child Support on AFDC Exit and Reentry

	<u>Exiting Analysis</u>				<u>Reentry Analysis</u>				
	Mean	Std	Min	Max	Mean	Std	Min	Max	
<u>Fixed variables</u>									
NONWHITE	0.076	0.265	0.00	1.00	0.085	0.279	0.00	1.00	
MISSING RACE	0.095	0.291	0.00	1.00	0.104	0.305	0.00	1.00	
2 CHILDREN ^a	0.361	0.480	0.00	1.00	0.327	0.469	0.00	1.00	
3 CHILDREN ^b	0.226	0.418	0.00	1.00	0.182	0.386	0.00	1.00	
ED LESS THAN 12	0.304	0.460	0.00	1.00	0.301	0.459	0.00	1.00	
ED GREATER THAN 12	0.138	0.346	0.00	1.00	0.136	0.343	0.00	1.00	
MISSING ED	0.077	0.261	0.00	1.00	0.081	0.274	0.00	1.00	
SMSA	0.546	0.498	0.00	1.00	0.560	0.496	0.00	1.00	
MILWAUKEE	0.115	0.319	0.00	1.00	0.119	0.323	0.00	1.00	
EXTRA ADULT	0.196	0.398	0.00	1.00					
LOW DAD INCOME	0.152	0.359	0.00	1.00	0.167	0.373	0.00	1.00	
MEDIUM DAD INCOME	0.274	0.446	0.00	1.00	0.261	0.439	0.00	1.00	
MISSING DAD INCOME	0.345	0.475	0.00	1.00	0.343	0.475	0.00	1.00	
JOINT CUSTODY	0.090	0.286	0.00	1.00	0.093	0.291	0.00	1.00	
<u>Time-varying variables</u>									
MOM TEENAGER	0.045	0.206	0.00	1.00	0.081	0.273	0.00	1.00	
MOM 20S	0.593	0.491	0.00	1.00	0.498	0.500	0.00	1.00	
YOUNGEST 0-3	0.466	0.499	0.00	1.00	0.338	0.473	0.00	1.00	
UNEMPLOYMENT RATE	8.563	2.689	2.63	19.40	8.278	2.783	2.63	19.40	
AFDC AMOUNT	651.550	27.610	571.00	704.00	643.710	30.657	571.00	704.00	
CHILD SUPPORT	0.575	1.290	0.00	44.02	0.731	1.597	0.00	26.99	

(table continued)

TABLE 1, continued

Descriptive Statistics of the Variables Used
to Measure the Effect of Child Support on AFDC Exit and Reentry

	<u>Exiting Analysis</u>				<u>Reentry Analysis</u>			
	Mean	Std	Min	Max	Mean	Std	Min	Max
AWARD, NO CHILD SUPPORT					0.189	0.392	0.00	1.00
CHILD SUPPORT \$1-100/MONTH	0.068	0.252	0.00	1.00	0.030	0.169	0.00	1.00
CHILD SUPPORT \$101-200/MONTH	0.090	0.287	0.00	1.00	0.076	0.265	0.00	1.00
CHILD SUPPORT \$201-300/MONTH	0.056	0.231	0.00	1.00	0.065	0.247	0.00	1.00
CHILD SUPPORT \$301-500/MONTH	0.043	0.204	0.00	1.00	0.057	0.232	0.00	1.00
CHILD SUPPORT \$501+/MONTH	0.014	0.116	0.00	1.00	0.030	0.170	0.00	1.00
1 OR 2 MONTHS OF CHILD SUPPORT	0.101	0.301	0.00	1.00	0.066	0.249	0.00	1.00
3 OR 4 MONTHS OF CHILD SUPPORT	0.084	0.277	0.00	1.00	0.062	0.241	0.00	1.00
5 OR 6 MONTHS OF CHILD SUPPORT	0.164	0.371	0.00	1.00	0.171	0.376	0.00	1.00
1980	0.050	0.219	0.00	1.00	0.029	0.167	0.00	1.00
1981	0.154	0.361	0.00	1.00	0.094	0.292	0.00	1.00
1982	0.180	0.384	0.00	1.00	0.186	0.389	0.00	1.00
1983	0.205	0.403	0.00	1.00	0.211	0.408	0.00	1.00
1984	0.089	0.285	0.00	1.00	0.093	0.291	0.00	1.00
1985	0.113	0.316	0.00	1.00	0.093	0.291	0.00	1.00
1986	0.113	0.317	0.00	1.00	0.108	0.311	0.00	1.00

Notes: Number of unpooled observations: 2075 for the exiting analysis, 1695 for the reentry analysis. Number of pooled observations: 37,402 for the exiting analysis, 26,156 for the reentry analysis. For time-varying covariates, the person-month mean, standard deviation, minimum and maximum are reported.

^a This variable is time-varying in the exiting analysis, fixed in the reentry analysis.

^b This variable is time-varying in the exiting analysis, fixed in the reentry analysis.

IV. RESULTS AND DISCUSSION

Descriptive data on the risk of exiting and reentering AFDC are given in the form of a simplified life table in Tables 2 and 3, respectively. Table 2 shows that we observed the beginning of an AFDC spell for 2075 cases, which constitute the sample of those who could exit. In the first six months, 600 women exited from welfare, and another 28 cases were censored. The survival rate shows the percentage of those who entered who are still at risk at the beginning of each period, and from it we see that 8 percent of the cases would not have exited by the end of 84 months. More than half (64 percent, from one minus the survival rate of .36) of the sample exits within the first two years, results higher than Hoffman's (45 percent) and Ellwood's (47 percent), but lower than Long's (who found 64 percent exiting by month 18). The probability of remaining on AFDC for seven years or longer is 8 percent, lower than O'Neill et al.'s 12 percent and Ellwood's 15 percent. The hazard rate shows the probability of exiting from AFDC for women who are still at risk at the beginning of the period. The hazard rate declines over the first four years, then holds basically constant (with some fluctuations that may be related to the small sample sizes).

Table 3 shows that we observed exits from AFDC for 1695 women, the sample of those who could reenter. Reentry is quite common: only 15 percent of the women at risk of reentry would not have done so by the 84th month. The percentage of cases that reenter AFDC is slightly higher than that reported by Long (1990)¹⁶ and much higher than that reported by Ellwood. Ellwood's results show 27 percent returning within two years and 42 percent within seven years, compared with 64 percent and 85 percent in this data. Most of this difference is probably due to Ellwood's use of annual data, which tends to underestimate recidivism.¹⁷ The hazard rate is highest in the first six months, then basically declines, suggesting that women who will reenter AFDC are most likely to do so early.

TABLE 2

Descriptive Data on the Risk of Exiting AFDC

From Month	Women on AFDC	Censored Cases	Women at Risk of Exiting	Women Who Exited	Survival (Standard Error)	Hazard (Standard Error)
1-6	2075	28	2061	600	1.000 (.014)	0.057 (.002)
7-12	1447	58	1418	305	0.709 (.010)	0.040 (.002)
13-18	1084	71	1049	221	0.556 (.011)	0.039 (.003)
19-24	792	75	755	134	0.439 (.011)	0.033 (.003)
25-36	583	138	514	138	0.361 (.011)	0.026 (.002)
37-48	307	121	247	61	0.264 (.011)	0.024 (.003)
49-60	125	38	106	26	0.199 (.011)	0.023 (.005)
61-72	61	15	54	12	0.150 (.012)	0.021 (.006)
73-84	34	14	27	8	0.116 (.013)	0.029 (.010)
85-98	12	10	7	2	0.082 (.014)	0.024 (.016)

Source: Ever-married women receiving AFDC from the Institute for Research on Poverty's Court Record Data and Wisconsin's Computer Reporting Network.

Note: Figures for the number of women on AFDC are for the beginning of each month-to-month period and are obtained by subtracting the number of censored cases and the number of women who exited during the previous period.

TABLE 3

Descriptive Data on the Risk of Reentering AFDC

From Month	Women off AFDC	Censored Cases	Women at Risk of Reentering	Women Who Reentered	Survival (Standard Error)	Hazard (Standard Error)
1-6	1695	87	1652	523	1.000 (.017)	0.063 (.003)
7-12	1085	102	1034	240	0.683 (.011)	0.044 (.003)
13-18	743	80	703	132	0.525 (.013)	0.035 (.003)
19-24	531	98	482	71	0.426 (.013)	0.027 (.003)
25-36	362	124	300	66	0.363 (.013)	0.021 (.003)
37-48	172	67	139	44	0.284 (.013)	0.032 (.005)
49-60	61	8	57	6	0.193 (.014)	0.009 (.004)
61-72	47	12	41	3	0.173 (.015)	0.006 (.004)
73-84	32	19	23	1	0.160 (.016)	0.004 (.004)
85-98	12	11	7	1	0.153 (.017)	0.012 (.012)

Source: Ever-married women who exited from AFDC from the Institute for Research on Poverty's Court Record Data and Wisconsin's Computer Reporting Network.

Note: Figures for the number of women off AFDC are for the beginning of each month-to-month period and are obtained by subtracting the number of censored cases and the number of women who returned during the previous period.

But these life tables do not take other variables into consideration. The multivariate model estimating the probability of exiting from AFDC is shown in Table 4. Four different equations are shown, each taking one column for coefficients and one for standard errors.

The first two equations look at various background and control variables and at the amount of child support paid. Several variables are not significantly correlated with the probability of exiting, including race, having young children, living in an urban area, the dollar amount of the AFDC guarantee, having joint legal custody, and dummies for the years 1980-1986. As expected, women with more children, those who are younger, those with less than a high school education, and those in counties with high unemployment rates are less likely to exit. Having an extra adult in the home makes one more likely to exit, which may be related to extra earnings potential in the home. The dummy variables that show the probability of exiting for the length of a spell show that women are more likely to exit in the first eighteen months on AFDC than they are after they have been on for four years or more (the omitted category).

The amount of child support paid shows a strong pattern. From the first equation, we learn that, in general, child support is associated with an increased rate of exiting, but the second equation provides a much more detailed picture. Here it is clear that those who receive a small amount of child support (between \$1 and \$100 per month) are less likely to exit than those who receive nothing at all (the omitted category). As child support increases, women become more and more likely to exit, but we cannot state that a woman is significantly more likely to exit from welfare, unless she is receiving more than \$500 per month.

In equation three (columns 5 and 6) the variables reflecting the history and regularity of child support (the number of months out of the previous six in which a positive amount of child support was paid) are added. The coefficients for control variables and child support amounts are similar to the ones for the previous equations. The coefficient on one new variable, 3 OR 4 MONTHS OF

TABLE 4

Selected Variables and How They Affect the Likelihood of Exiting AFDC

	Coeff. Std.Err. (1)	(2)	Coeff. Std.Err. (3)	(4)	Coeff. Std.Err. (5)	(6)	Coeff. Std.Err. (7)	(8)
NONWHITE	0.073	0.11	0.056	0.11	0.044	0.11	0.100	0.11
MISSING RACE	0.467	0.18 *	0.440	0.19 *	0.432	0.19 *	0.447	0.19 *
2 CHILDREN	-0.238	0.06 **	-0.251	0.06 **	-0.249	0.06 **	-0.259	0.06 **
3 CHILDREN+	-0.407	0.08 **	-0.429	0.08 **	-0.425	0.08 **	-0.444	0.08 **
MOM TEENAGER	-0.362	0.15 *	-0.358	0.15 *	-0.354	0.15 *	-0.298	0.15 *
MOM 20S	-0.188	0.06 **	-0.178	0.06 **	-0.173	0.06 **	-0.165	0.06 *
YOUNGEST 0-3	-0.111	0.06	-0.118	0.06	-0.122	0.06	-0.097	0.06
ED LESS THAN 12	-0.132	0.06 *	-0.145	0.07 *	-0.151	0.06 *	-0.139	0.07 *
ED GREATER THAN 12	0.101	0.08	0.097	0.08	0.099	0.08	0.121	0.08
MISSING ED	-0.459	0.21 *	-0.433	0.21 *	-0.429	0.21 *	-0.407	0.21
SMSA	-0.029	0.06	-0.038	0.06	-0.039	0.06	-0.066	0.06
MILWAUKEE	-0.185	0.10	-0.205	0.10 *	-0.209	0.10 *	-0.238	0.10 *
UNEMPLOYMENT RATE	-0.037	0.01 **	-0.036	0.01 **	-0.035	0.01 **	-0.041	0.01 **
EXTRA ADULT	0.382	0.07 **	0.345	0.07 **	0.330	0.07 **	0.369	0.07 **
AFDC AMOUNT	0.002	0.00	0.002	0.00	0.002	0.00	0.002	0.00
JOINT CUSTODY	0.172	0.10	0.180	0.10	0.183	0.10	0.161	0.10
MONTHS 1-3	0.745	0.18 **	0.716	0.18 **	0.696	0.18 **	0.656	0.18 **
MONTHS 4-6	1.072	0.18 **	1.060	0.18 **	1.052	0.18 **	1.014	0.18 **
MONTHS 7-12	0.592	0.17 **	0.585	0.17 **	0.577	0.17 **	0.549	0.17 **
MONTHS 13-18	0.529	0.18 **	0.524	0.18 **	0.517	0.18 **	0.498	0.18 **
MONTHS 19-24	0.346	0.18	0.346	0.18	0.343	0.18	0.330	0.18
MONTHS 25-36	0.110	0.18	0.103	0.18	0.100	0.18	0.094	0.18
MONTHS 37-48	-0.017	0.20	-0.032	0.20	-0.038	0.20	-0.035	0.20
LOW DAD INCOME							-0.241	0.10 *
MEDIUM DAD INCOME							-0.189	0.08 *
MISSING DAD INCOME							-0.364	0.08 **

(table continued)

TABLE 4, continued

Selected Variables and How They Affect the Likelihood of Exiting AFDC

	Coeff.	Std.Err.	Coeff.	Std.Err.	Coeff.	Std.Err.	Coeff.	Std.Err.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CHILD SUPPORT	0.077	0.02 **						
CHILD SUPPORT \$1-100/MONTH			-0.552	0.14 **	-0.457	0.16 **	-0.580	0.14 **
CHILD SUPPORT \$101-200/MONTH			-0.093	0.10	-0.004	0.12	-0.147	0.10
CHILD SUPPORT \$201-300/MONTH			-0.019	0.12	0.067	0.14	-0.101	0.12
CHILD SUPPORT \$301-500/MONTH			0.169	0.13	0.256	0.15	0.046	0.13
CHILD SUPPORT \$501+/MONTH			0.802	0.17 **	0.886	0.19 **	0.707	0.17 **
1 OR 2 MONTHS OF CHILD SUPPORT					-0.129	0.11		
3 OR 4 MONTHS OF CHILD SUPPORT					-0.318	0.13 *		
5 OR 6 MONTHS OF CHILD SUPPORT					-0.073	0.12		
1980	-0.309	0.23	-0.416	0.23	-0.442	0.23	-0.396	0.23
1981	-0.088	0.17	-0.177	0.17	-0.190	0.17	-0.169	0.17
1982	0.160	0.16	0.081	0.16	0.069	0.16	0.088	0.16
1983	-0.039	0.16	-0.109	0.16	-0.120	0.16	-0.105	0.16
1984	-0.038	0.18	-0.134	0.18	-0.157	0.18	-0.125	0.18
1985	-0.360	0.19	-0.422	0.19 *	-0.431	0.19 *	-0.403	0.19 *
1986	-0.201	0.15	-0.221	0.15	-0.219	0.15	-0.201	0.15
INTERCEPT	-4.410	1.02 **	-4.359	1.02 **	-4.348	1.02 **	-3.958	1.02 **
Log Likelihood		-6069.8		-6058.5		-6054.9		-6047.8

Source: Ever-married women receiving AFDC from the Institute for Research on Poverty's Court Record Data, Wisconsin's Computer Reporting Network, and the Wisconsin Department of Revenue.

Notes: Number of unpooled observations, 2075; number of pooled observations, 37,402.

Omitted categories: White, one child, mother over age 30, youngest child over 3, 12 years of education, living in a rural area, one adult on the AFDC grant, not having joint legal custody, 1987, spell of more than 49 months, high father's income, no child support paid, no months out of prior six in which child support was paid.

** Significantly different from 0, .01 level

* Significantly different from 0, .05 level

CHILD SUPPORT, is significantly different from zero, showing that those who received some amount of child support in three or four of the previous six months are less likely to exit than those who received no child support in the previous six months (the omitted category). However, this result may only indicate that those who received low amounts regularly are less likely to exit.¹⁸

Columns 7 and 8 show the results if we add in father's income in 1980, a proxy for socioeconomic status. Here we can see that those with low and medium father's incomes are less likely to exit, consistent with expectations. The coefficients on child support do not change much when we include this additional control for socioeconomic status.

Table 5 shows the results for the probability of reentering welfare. The first two columns show the results of the control variables and the amount received. Women with three or more children are more likely to reenter, as are younger women, those with young children, those with less than a high school education, and those in rural areas. Those with joint legal custody were less likely to reenter, but this may be a proxy for socioeconomic status, rather than a finding with policy implications. The dummy variables on the length of the spell show that women who are able to stay off for four years or more (the omitted category) are much less likely to return. Reentry rates were lowest in 1987 (the omitted category), perhaps because the economy was strongest in 1987 (and this was not fully captured by the unemployment rate), or perhaps because a workfare program implemented in Wisconsin in 1986 had begun to show an effect.

The coefficient on the amount of child support received is negative and significantly different from zero in column one. Columns three and four show the results when the amount received is divided into dummy variables. An additional dummy variable was created that represents those who were supposed to receive some child support but received nothing (AWARD, NO CHILD

TABLE 5

Selected Variables and How They Affect the Likelihood of Reentering AFDC

	Women With Awards Only						Women With Awards Only Coeff. Std.Err. (9) (10)		
	Coeff. Std.Err. (1) (2)	Coeff. Std.Err. (3) (4)	Coeff. Std.Err. (5) (6)	Coeff. Std.Err. (7) (8)	Coeff. Std.Err. (9) (10)				
NONWHITE	0.222	0.12	0.201	0.12	0.200	0.12	0.157	0.278	0.13*
MISSING RACE	0.216	0.20	0.225	0.21	0.226	0.21	0.234	0.277	0.21
2 CHILDREN	0.046	0.08	0.059	0.08	0.059	0.08	0.073	0.027	0.08
3 CHILDREN+	0.207	0.09*	0.212	0.09*	0.209	0.09*	0.218	0.206	0.10*
MOM TEENAGER	0.234	0.12	0.255	0.12*	0.247	0.12*	0.190	0.204	0.13
MOM 20S	0.220	0.08**	0.239	0.08**	0.236	0.08**	0.221	0.214	0.09*
YOUNGEST 0-3	0.242	0.07**	0.167	0.07*	0.164	0.07*	0.143	0.197	0.08*
ED LESS THAN 12	0.316	0.07**	0.280	0.07**	0.283	0.07**	0.269	0.335	0.08**
ED GREATER THAN 12	-0.173	0.10	-0.164	0.10	-0.160	0.10	-0.214	-0.214	0.12
MISSING ED	-0.494	0.24*	-0.506	0.24*	-0.507	0.24*	-0.541	-0.516	0.25*
UNEMPLOYMENT RATE	0.023	0.02	0.024	0.02	0.023	0.02	0.027	0.032	0.017
SMSA	-0.160	0.07*	-0.164	0.07*	-0.166	0.07*	-0.139	-0.203	0.08**
MILWAUKEE	-0.047	0.11	-0.089	0.11	-0.089	0.11	-0.074	-0.070	0.12
AFDC AMOUNT	0.002	0.00	0.002	0.00	0.002	0.00	0.002	0.003	0.00
JOINT CUSTODY	-0.260	0.12*	-0.306	0.12**	-0.307	0.12**	-0.244	-0.333	0.12**
MONTHS 1-3	1.518	0.32**	1.559	0.32**	1.527	0.32**	1.476	1.756	0.37**
MONTHS 4-6	1.682	0.32**	1.718	0.32**	1.709	0.32**	1.641	1.916	0.37**
MONTHS 7-12	1.302	0.32**	1.331	0.32**	1.331	0.32**	1.262	1.549	0.37**
MONTHS 13-18	1.163	0.32**	1.181	0.32**	1.181	0.32**	1.125	1.381	0.37**
MONTHS 19-24	0.960	0.33**	0.963	0.33**	0.965	0.33**	0.913	1.207	0.38**
MONTHS 25-36	0.686	0.33*	0.671	0.33*	0.669	0.33*	0.631	0.964	0.38*
MONTHS 37-48	1.191	0.34**	1.170	0.34**	1.164	0.34**	1.144	1.348	0.40**
LOW DAD INCOME							0.224	0.11*	
MEDIUM DAD INCOME							0.093	0.10	
MISSING DAD INCOME							0.388	0.10**	

(table continued)

TABLE 5, continued

Selected Variables and How They Affect the Likelihood of Reentering AFDC

	Coeff. (1)	Std.Err. (2)	Coeff. (3)	Std.Err. (4)	Coeff. (5)	Std.Err. (6)	Coeff. (7)	Std.Err. (8)	Women With Awards Only Coeff. (9)	Std.Err. (10)
CHILD SUPPORT	-0.115	0.03**								
AWARD, NO CHILD SUPPORT			-0.461	0.11**	-0.502	0.11**	-0.486	0.11**	-0.511	0.11**
CHILD SUPPORT \$1-100/MONTH			-0.838	0.28**	-0.881	0.30**	-0.834	0.28**	-0.891	0.28**
CHILD SUPPORT \$101-200/MONTH			-0.612	0.17**	-0.608	0.22**	-0.580	0.17**	-0.673	0.18**
CHILD SUPPORT \$201-300/MONTH			-0.665	0.19**	-0.648	0.24**	-0.640	0.19**	-0.708	0.19**
CHILD SUPPORT \$301-500/MONTH			-0.680	0.21**	-0.642	0.26*	-0.596	0.21**	-0.721	0.21**
CHILD SUPPORT \$501+/MONTH			-0.580	0.26*	-0.566	0.30	-0.501	0.26	-0.598	0.26*
1 OR 2 MONTHS OF CHILD SUPPORT					0.375	0.17*				
3 OR 4 MONTHS OF CHILD SUPPORT					-0.225	0.23				
5 OR 6 MONTHS OF CHILD SUPPORT					-0.118	0.21				
1980	0.614	0.27*	0.289	0.28	0.308	0.28	0.355	0.28	0.045	0.31
1981	0.517	0.21*	0.246	0.21	0.249	0.21	0.296	0.21	0.062	0.23
1982	0.562	0.18**	0.355	0.19	0.356	0.19	0.409	0.19*	0.198	0.20
1983	0.424	0.19*	0.268	0.19	0.272	0.19	0.307	0.19	0.065	0.21
1984	1.136	0.20**	0.866	0.21**	0.861	0.21**	0.911	0.21**	0.699	0.23**
1985	0.802	0.22**	0.619	0.22**	0.613	0.22**	0.656	0.22**	0.541	0.24*
1986	0.211	0.20	0.174	0.20	0.168	0.20	0.194	0.20	0.115	0.22
INTERCEPT	-6.532	1.26**	-6.584	1.26**	-6.470	1.26**	-6.758	1.26**	-7.320	1.36**
Log Likelihood		-4171.1		-4154.6		-4149.6		-4144.3		-3628.9

Source: Ever-married women who have exited from AFDC from the Institute for Research on Poverty's Court Record Data, Wisconsin's Computer Reporting Network, and the Wisconsin Department of Revenue.

Notes: Number of unpooled observations, 1695; number of pooled observations, 26,156. For columns 9 and 10: number of unpooled observations, 1517; number of pooled observations, 23,098.

Omitted categories: White, one child, mother over age 30, youngest child over 3, 12 years of education, living in a rural area, not having joint legal custody, 1987, spell of more than 49 months, high father's income, no child support due, no months out of the prior six in which child support was received.

** Significantly different from 0, .01 level

* Significantly different from 0, .05 level

SUPPORT); this makes the omitted category those who were not supposed to receive anything. The coefficient on AWARD, NO CHILD SUPPORT is negative and significant, so those with awards who did not receive any child support are less likely to reenter than those without awards. All positive amounts of child support have negative coefficients that are significantly different from zero, so receiving child support is associated with a decreased likelihood of reentering welfare. Surprisingly, the coefficients are not ordered, so receiving a large amount does not make one less likely to return than receiving a small amount.

Columns five and six add the variables for regularity and history. Women who had received child support for three or more of the previous six months are less likely to reenter, but the coefficients are not significantly different from zero. In contrast, those who received child support in only one or two of the previous six months are more likely to reenter than those who did not receive child support in any of the months (the omitted category). This may suggest that regularity is important, that only regular child support is effective in keeping women off welfare.¹⁹

Columns seven and eight add the variables for father's income and show that those with a low socioeconomic status are more likely to reenter than those with a high status (the omitted category). Even after controlling for father's income, child support payments are still associated with a decreased likelihood of reentering welfare.

One conclusion from these results is that those with child support awards are less likely to return to welfare than those without awards, perhaps because those who achieve an award have different values on unobserved variables than those who do not. If this is true, then the results only reveal this unobserved heterogeneity rather than show a substantive relationship between child support and reentry. One straightforward test of this hypothesis is to rerun equation 2 on a restricted sample, those women who ever received awards.²⁰ If child support continues to be associated with a decreased likelihood of reentry, this would imply that the relationship is substantive rather than

spurious. The results, shown in columns nine and ten, suggest that the relationship is not spurious: the patterns continue, and any amount of child support or even having an award without receiving anything makes one less likely to reenter AFDC.²¹

Tables 4 and 5 suggest that a large amount of child support can increase the likelihood of exiting and that any amount of child support can decrease the likelihood of reentering. But the results so far tell us little about the magnitude of the changes in likelihood. Table 6 uses the results of Tables 4 and 5 to estimate the effects of the child support variables.

Probabilities of exiting are presented in the first column. The probability of exiting for a woman who has the mean value on all independent variables is .036. If a spell is in its sixth month, the probability of exiting varies from .038 to .131, which is higher than the overall mean because the likelihood of exiting is higher in the beginning of a spell. Those who receive the most child support have the highest probability of leaving (.131), more than three times as high as those receiving between \$1 and \$100 (.038), and more than twice as high as those receiving nothing (.063). The probability of leaving is much lower toward the end of a longer spell, regardless of the amount paid.

Probabilities of reentering welfare are shown in the second column, with a mean probability of .031. The probability of reentering welfare is higher in the sixth month (ranging from .029 to .064) than in the 48th month (ranging from .017 to .038), just as it was for exiting welfare. In the sixth month, receiving any amount of child support makes one less likely to reenter, with a probability of .029 to .037, compared with .064, the probability when no support is due.

TABLE 6

Effects of Child Support Variables on the Probability of Exiting
and Reentering AFDC

	Probability of Exiting ¹	Probability of Reentering ²
Using mean values for all independent variables	.036	.031
Using mean values for all except:		
Spell in 6th month and:		
\$0 child support paid	.063	
\$0 child support due		.064
\$0 paid, positive amount due		.042
\$1-100 child support paid	.038	.029
\$101-200 child support paid	.058	.036
\$201-300 child support paid	.062	.034
\$301-500 child support paid	.074	.034
Over \$500 child support paid	.131	.037
Spell in 48th month and:		
\$0 child support paid	.022	
\$0 child support due		.038
\$0 paid, positive amount due		.024
\$1-100 child support paid	.013	.017
\$101-200 child support paid	.020	.021
\$201-300 child support paid	.022	.020
\$301-500 child support paid	.026	.020
Over \$500 child support paid	.048	.021

¹ Coefficients for the exiting figures come from Table 4, column 3.

² Coefficients for the reentry figures come from Table 5, column 3.

CONCLUSION

Does child support have a large potential for decreasing the length of welfare spells? The evidence from the exiting analysis suggests that it would take a large amount of child support to increase the likelihood of exiting welfare. In fact, a small amount of child support makes one less likely to leave welfare. One reason is the effect of the child support disregard, which makes welfare more attractive for women who receive small amounts of child support. The data do not fully support this conclusion, however. When child support is allowed to have a different effect for the spells before July 1985 (the date the disregard was implemented in Wisconsin) and after July 1985, a small amount of child support is associated with a decreased likelihood of exiting, even in the period when the disregard was not in effect (results not shown here). Another possibility is that these small amounts are generally irregular, which may cause some women to remain on AFDC until they are more certain of the level of income they could expect off welfare. A final possibility is that unobserved heterogeneity is affecting the results. In particular, the group of women with zero child support is really a diverse group, including some who have not been to court yet (who might be "better-off" women), others who have been to court and were not awarded child support, and still others who have an award but received no payment. The comparison is between women whose partners pay only small amounts and a diverse group of women whose partners are not paying in this period, and thus the women whose partners pay only small amounts may have lower values on some unmeasured variables than the others.

As a whole, the results for the exiting analysis are broadly consistent with the previous literature and lead us to conclude that child support--in modest amounts--does not have a large effect on exiting. It would take substantial amounts of child support to enable women to leave AFDC in

Wisconsin. In states with lower AFDC benefits, modest amounts of child support may have more effect.

The results from the reentry analysis are more encouraging. It appears that child support does make reentering welfare less likely. The results also suggest that a child support award is important in impeding reentry, even if nothing is received. There are several possible reasons for this. First, a child support award may include medical coverage for the children. This may have a large effect on reentry, since some evidence suggests that Medicaid may be very important to women considering welfare (Moffitt and Wolfe, 1990). Second, some observers of the court process suggest that there may be incentives that encourage women to appear to have few economic resources before a child support award is set, in the hopes that they will receive a higher award; after the award is established, this incentive to look "needy" is diminished, and thus these women may be less likely to return to welfare after an award is established. Third, the child support award itself may have an important psychological effect in that it may mark the end of a transition period. If some women use welfare while they are adjusting to the economic shock of a separation, the award marks the end of the transition and the start of a new era. Finally, it is possible that there is an interaction between welfare reentry, child support, and remarriage. If having a child support award increases the likelihood of remarriage (because a woman with an outside source of income may be a more attractive marriage candidate), and if remarriage decreases the likelihood of reentering welfare, then the effect of remarriage may be influencing these reentry rates. In addition, if remarriage decreases the likelihood of a child support payment for those with awards, this would tend to generate the result that having an award but no payment is associated with a decreased likelihood of reentry.

The results also suggest that increasing the regularity of child support (through withholding the child support amount from noncustodial income or guaranteeing the amount of child support) may be important in decreasing the likelihood of reentering welfare. Additional research on this possibility

may produce significant results. The results also suggest that recidivism is even more serious in this sample from Wisconsin than has been reported in the literature. The likelihood that a woman will stay off welfare after an exit is very small, giving new evidence that policies are needed that can keep women off welfare.

The results also provide some new evidence on possible effects of policy interventions intended to decrease time on AFDC. Women with low education levels are significantly less likely to exit from AFDC and, once they have exited, are significantly more likely to reenter. This suggests that policies that improve the educational level of AFDC recipients may be effective in decreasing welfare use. Having young children is not associated with lower rates of exiting but is associated with higher rates of reentry, suggesting that low-cost child care programs might need to be available, not only to welfare recipients but to all low-income families.

In conclusion, these results show that child support, while not important in increasing the probability of exiting from AFDC, may be important in decreasing the probability of returning to AFDC. Prior statistics have suggested that increases in the amount of child support paid may be important in increasing the economic status of middle- and upper-class women and in decreasing AFDC costs. These results suggest that it may also be important in decreasing time on welfare.

APPENDIX 1

**Definitions of Variables Used in Measuring the Effects
of Child Support on Exiting and Reentering AFDC**

- NONWHITE, a dummy variable, 1 for nonwhite women. (fixed)
- MISSING RACE, a dummy variable, 1 for women of unknown race. (fixed)
- 2 CHILDREN, a dummy variable, 1 for women having two children in the home.
For the exiting analysis this varies over time; for the reentry analysis it is fixed at time of exit.
- 3 CHILDREN+, a dummy variable, 1 for women having more than two children in the home. For the exiting analysis this varies over time; for the reentry analysis it is fixed at time of exit.
- MOM TEENAGER, a dummy variable, 1 for women aged less than 20. (time-varying)
- MOM 20S, a dummy variable, 1 for women aged 20-29. (time-varying)
- YOUNG 0-3, a dummy variable, 1 for women whose youngest child is less than three years old. (time-varying)
- ED LESS THAN 12, a dummy variable, 1 for women with less than 12 years of education. (fixed at time of first AFDC spell)
- ED GREATER THAN 12, a dummy variable, 1 for women with more than 12 years of education. (fixed at time of first AFDC spell)
- MISSING ED, a dummy variable, 1 for women with unknown education.
- SMSA, a dummy variable, 1 for women living in a Standard Metropolitan Statistical Area, with Milwaukee, Minneapolis-St. Paul, Madison, Wausau, Appleton-Oshkosh, Sheboygan, and Racine represented. (fixed at time of court date)
- MILWAUKEE, a dummy variable, 1 for women living in Milwaukee County (fixed at time of court date)
- UNEMPLOYMENT RATE, the average quarterly unemployment rate in that county. (time-varying, not lagged)
- EXTRA ADULT, a dummy variable, 1 for women living in households with more than one adult. (fixed at beginning of AFDC spell)
- AFDC AMOUNT, the dollar amount of the maximum AFDC grant for a family of four, in 1986 dollars. (time-varying)
- JOINT CUSTODY, a dummy variable, 1 for cases with joint legal custody. (fixed)
- MONTHS 1-3, a dummy variable, 1 during months 1-3 of a spell.
- MONTHS 4-6, a dummy variable, 1 during months 4-6 of a spell.
- MONTHS 7-12, a dummy variable, 1 during months 7-12 of a spell.
- MONTHS 13-18, a dummy variable, 1 during months 13-18 of a spell.
- MONTHS 19-24, a dummy variable, 1 during months 19-24 of a spell.
- MONTHS 25-36, a dummy variable, 1 during months 25-36 of a spell.
- MONTHS 37-48, a dummy variable, 1 during months 37-48 of a spell.
- LOW DAD INCOME, a dummy variable, 1 for women whose court-case partners had annual income of less than \$7000 in 1980.
- MEDIUM DAD INCOME, a dummy variable, 1 for women whose court-case partners had annual income of between \$7000 and \$18,000 in 1980.
- MISSING DAD INCOME, a dummy variable, 1 for women for whom we have no income information on their court-case partners.

APPENDIX 1, continued

**Definitions of Variables Used in Measuring the Effects
of Child Support on Exiting and Reentering AFDC**

CHILD SUPPORT, dollar amount of child support paid that month for exiting analysis, amount received for reentry analysis. (time-varying)

AWARD, NO CHILD SUPPORT, a dummy variable, 1 for women who had a positive amount of child support due, but nothing was paid that month. (time-varying)

CHILD SUPPORT \$1-100/MONTH, a dummy variable, 1 for women whose partner paid between \$1 and \$100 that month in child support. (time-varying)

CHILD SUPPORT \$101-200/MONTH, a dummy variable, 1 for women whose partner paid between \$101 and \$200 that month in child support. (time-varying)

CHILD SUPPORT \$201-300/MONTH, a dummy variable, 1 for women whose partner paid between \$201 and \$300 that month in child support. (time-varying)

CHILD SUPPORT \$301-500/MONTH, a dummy variable, 1 for women whose partner paid between \$301 and \$500 that month in child support. (time-varying)

CHILD SUPPORT \$501+/MONTH, a dummy variable, 1 for women whose partner paid more than \$500 that month in child support. (time-varying)

1 OR 2 MONTHS OF CHILD SUPPORT, a dummy variable, 1 for women whose partner paid child support in 1 or 2 of the previous 6 months. (time-varying)

3 OR 4 MONTHS OF CHILD SUPPORT, a dummy variable, 1 for women whose partner paid child support in 3 or 4 of the previous 6 months. (time-varying)

5 OR 6 MONTHS OF CHILD SUPPORT, a dummy variable, 1 for women whose partner paid child support in 5 or 6 of the previous 6 months. (time-varying)

1980, a dummy variable, 1 for months in 1980.

1981, a dummy variable, 1 for months in 1981.

1982, a dummy variable, 1 for months in 1982.

1983, a dummy variable, 1 for months in 1983.

1984, a dummy variable, 1 for months in 1984.

1985, a dummy variable, 1 for months in 1985.

1986, a dummy variable, 1 for months in 1986.

Note: All CHILD SUPPORT variables are in 1986 dollars; amounts refer to amounts paid for the exiting analysis and to amounts received in the reentry analysis.

APPENDIX 2

Descriptive Data on the Risk of Reentering AFDC
Using Three Months as the Definition of Exit

From Month	Women off AFDC	Censored Cases	Women at Risk of Reentering	Women Who Reentered	Survival (Standard Error)	Hazard (Standard Error)
1-6	1643	101	1593	375	1.000 (.014)	0.045 (.002)
7-12	1167	114	1110	258	0.765 (.011)	0.044 (.003)
13-18	795	92	749	144	0.587 (.013)	0.036 (.003)
19-24	559	102	508	74	0.474 (.013)	0.026 (.003)
25-36	383	130	318	70	0.405 (.014)	0.021 (.002)
37-48	183	74	146	45	0.316 (.014)	0.030 (.004)
49-60	64	9	60	6	0.219 (.016)	0.009 (.004)
61-72	49	14	42	3	0.196 (.016)	0.006 (.004)
73-84	32	19	23	1	0.182 (.017)	0.004 (.004)
85-98	12	11	7	1	0.174 (.018)	0.012 (.012)

Source: Ever-married women who exited from AFDC from the Institute for Research on Poverty's Court Record Data and Wisconsin's Computer Reporting Network.

Note: Figures for the number of women off AFDC are for the beginning of each month-to-month period and are obtained by subtracting the number of censored cases and the number of women who returned during the previous period.

NOTES

1. Note that the event history spells approach implicitly assumes that the welfare system is in steady state. If there are cohort effects or if there is a major change in eligibility, this assumption is violated (see MaCurdy, 1989).
2. The specific methodology involves treating each individual as a separate observation during each month in which she is at risk of exiting (or reentering) (Allison, 1982). This methodology assumes that these person-month observations are independent and generates substantial sample sizes.
3. The following types of censoring appear in the data: (a) cases censored because the data collection time period ended; (b) cases in which the youngest child turned 18 (which I treat as censored because I am interested in AFDC use when the recipient is at risk of continuing to receive AFDC); and (c) cases transferred out of Wisconsin (which I have treated as censored when they could be identified).
4. In the Current Population Survey, for example, the amount of AFDC reported is only 76 percent of the amount of AFDC that was paid, according to administrative records (U.S. Bureau of the Census, 1989, p. 178). Even the Survey of Income and Program Participation (SIPP), while much better than the CPS, has serious underreporting (Marquis and Moore, 1989, and Vaughan, 1989). When this underreporting is combined with the relatively short time period available in SIPP, I do not believe SIPP provides enough advantages over the data sets chosen.
5. Unfortunately, using the amount paid adds a different type of error. Part of the amount paid may be for arrears, and arrears incurred while the custodial parent was receiving AFDC are not available to the individual when off AFDC.
6. Unfortunately, determining marital status in this sample is sometimes difficult because information is limited. I have excluded all women from divorce and separation cases when the end of the welfare spell occurred prior to the marriage date in the court record. I have also excluded all paternity cases that were unmarried at the court date.

7. Four percent of the cases in the full Wisconsin sample had agreements that payments were not supposed to go through the courts. These cases were deleted.
8. Mobility also causes some problems for other variables: county characteristics (metropolitan status, unemployment rates) are assigned to each woman based on the county in which the court case was heard, rather than the county of residence each month.
9. Because I am entering family size directly, I have not used the guarantee appropriate to that family's size.
10. An alternative approach would be to divide the time frame into the four sets of AFDC rules: pre-OBRA (\$30 per month plus one-third of earned income was disregarded); post-OBRA and pre-DEFRA (the earned income disregards were limited to four months); post-DEFRA and pre-child support disregard (the earned income disregards were limited to twelve months); and post-child support disregard (the twelve-month earned income disregards continue but a new child support disregard of \$50 per month is added). Results from this formulation are as follows. In the exiting analysis, individuals were most likely to leave during the post-OBRA, pre-DEFRA period, consistent with expectations, and were also more likely to leave in the post-DEFRA, pre-disregard period. In the reentry analysis, none of the coefficients for time frame are significantly different from zero, but the AFDC amount becomes positive and significantly different from zero at the .001 level. I have chosen to focus on the results that use the year dummies, since the exact date of the implementation of the rule change in each county is difficult to determine.
11. Note that one reason for exiting from AFDC is that all children may have gone to live with their father. Unfortunately, this cannot be detected in this data. Cases in which there is joint legal custody have been denoted with a dummy variable, since these cases may be more likely to have physical custody changes over time.

12. Additional control variables include three dummy variables that are related to the county of the court case (mobility out of this county is ignored). Dummy variables denote residence in a Standard Metropolitan Statistical Area and living in Milwaukee County, the only large urban area in Wisconsin. The quarterly unemployment rate in the county is allowed to vary over time, and, because it is assumed to serve as a proxy for general business conditions, is not lagged. The length of the current spell is broken into a series of dummies. A dummy variable for cases with joint legal custody is included.

13. For the exiting analysis, the amount paid, rather than the amount received, is assumed to be important to the woman, since that is the amount that she would receive if off welfare. For the reentry analysis, the amount received is used. Amounts of alimony are not counted because of frequent errors in the alimony data and because alimony is conceptually different from child support.

14. The average amount of child support paid in the last six months, the standard deviation of these amounts, and the amount paid in each of the two prior months were also tested, but the coefficients for these variables were never significantly different from zero and so are not reported here.

15. The conclusions from the reentry analysis are not substantially different if the definition of exit is not receiving AFDC for three months, rather than for two.

16. Even though Long uses a similar definition of exit (off for two months) and has monthly data from the SIPP, her analysis of reentry is not directly comparable with mine because she is analyzing multiple program participation. Thus, she considers a move from no welfare receipt to receiving food stamps only as a reentry. Individuals that move from food stamps only to receiving both AFDC and food stamps (which I would count as a reentry) cannot be identified in her survival estimates. In addition, her unit of analysis is a child, rather than a family. She reports that 46 percent of her sample would return to either food stamps or AFDC within 18 months (Table 9), a result loosely comparable to my figure of 57 percent.

17. The definition of exit has an obvious effect on estimates of the rate of reentry. Appendix 2 is a table corresponding to Table 3 except that its definition of exit is not receiving AFDC for three months in a row. The results are not substantially different and continue to show a markedly higher rate of reentry than Ellwood's. Ellwood's work is roughly similar to requiring at least twelve months off welfare for a valid exit.

18. An equation that included both the average amount received in the last six months and the standard deviation of these amounts (not reported here) did not show a detectable pattern; neither did an equation using both the month dummies and the average amount received.

19. In an equation not reported here, the coefficient on the standard deviation of the amounts received in the previous six months is positive, but not significantly different from zero, also suggesting that regularity may be important.

20. Note that because we are looking at the period of time when a woman is at risk of reentering welfare, she may not have an award for part of the period and then, during a later part of the spell, she may have an award. The women in this final estimation are those who ever had an award, so it is possible that they did not have an award at any time in this first observed spell.

21. In other results not shown here, the length of the spell prior to the observed spell (that is, the spell off AFDC for the exiting analysis and the spell receiving AFDC for the reentry analysis) was not significantly related to exit or reentry rates. Dividing the sample by the number of children in an attempt to have child support amounts more consistently relate to potential AFDC amounts did not lead to a different conclusion. Testing the average amounts received in the prior seven months and dividing those amounts into those received regularly and those received irregularly gave some evidence that, holding the amount received constant, regular child support decreases the likelihood of reentries more than irregular child support.

REFERENCES

- Allison, Paul. 1982. "Discrete-Time Methods for the Analysis of Event Histories." In S. Leinhardt, ed., Sociological Methodology. San Francisco, Calif.: Jossey-Bass.
- Bane, Mary Jo and David T. Ellwood. 1983. "The Dynamics of Dependence: The Routes to Self-Sufficiency." Report prepared for the U.S. Department of Health and Human Services. Cambridge, Mass.: Urban Systems Research and Engineering, Inc.
- Blank, Rebecca M. 1986. "How Important is Welfare Dependence?" Institute for Research on Poverty Discussion Paper 821-86, University of Wisconsin-Madison.
- Coe, Richard D. 1981. "A Preliminary Empirical Examination of the Dynamics of Welfare Use." In Greg J. Duncan and James N. Morgan, eds., Five Thousand American Families: Patterns of Economic Progress. Vol 3. Ann Arbor, Mich.: University of Michigan.
- Deaton, A. and J. Muellbauer. 1980. Economics and Consumer Behavior. New York, N.Y.: Cambridge University Press.
- Ellwood, David T. 1986. "Targeting Would-Be Long-Term Recipients of AFDC." Report prepared for the U.S. Department of Health and Human Services. Princeton, N.J.: Mathematica Policy Research, Inc.
- Garfinkel, Irwin, Philip K. Robins, Pat Wong, and Daniel R. Meyer. 1990. "The Wisconsin Child Support Assurance System: Estimated Effects on Poverty, Labor Supply, Caseloads, and Costs." Journal of Human Resources 25: 1-31.
- Graham, John W. and Andrea H. Beller. 1989. "The Effect of Child Support Payments on the Labor Supply of Female Family Heads: An Econometric Analysis." Journal of Human Resources 24: 665-688.
- Heckman, James J. and Burton Singer. 1982. "Population Heterogeneity in Demographic Models." In K. Land and A. Rogers, eds., Multidimensional Mathematical Demography. New York, N.Y.: Academic Press.
- Hoffman, Saul D. 1988. "Utility-Maximizing Models of AFDC Entry and Exit: Evidence from the AFDC Experience of Divorced or Separated Women." Paper prepared for the 1988 Small Grants Workshop. Institute for Research on Poverty, University of Wisconsin-Madison.
- Hutchens, Robert M. 1981. "Entry and Exit Transitions in a Government Transfer Program: The Case of Aid to Families with Dependent Children." Journal of Human Resources 16: 217-37.
- Klawitter, Marieka and Irwin Garfinkel. 1988. "Effects of Immediate Withholding on AFDC Costs and Caseloads." Unpublished.

- Levy, Frank. 1979. "The Labor Supply of Female Household Heads, or AFDC Work Incentives Don't Work Too Well." Journal of Human Resources 14: 76-97.
- Long, Sharon. 1990. "Children and Welfare: Patterns of Multiple Program Participation." Report prepared for the U.S. Department of Health and Human Services. Washington, D.C.: The Urban Institute.
- MaCurdy, Thomas. 1989. "Measures of Welfare Dependency: An Evaluation." Working Papers in Economics E-89-10. Stanford, Calif.: Stanford University.
- Marquis, Kent H. and Jeffrey C. Moore. 1989. "Some Response Errors in SIPP--with Thoughts about their Effects and Remedies." Paper presented at the 1989 American Statistical Association.
- Meyer, Daniel R., Irwin Garfinkel, Philip K. Robins, and Donald T. Oellerich. 1990. "The Costs and Effects of a National Child Support Assurance System." Unpublished.
- Moffitt, Robert and Barbara Wolfe. 1990. "The Effect of the Medicaid Program on Welfare Participation and Labor Supply." Institute for Research on Poverty Discussion Paper 909-90, University of Wisconsin-Madison.
- O'Neill, June A., Laurie J. Bassi, and Michael T. Hannan. 1984. "An Analysis of Time on Welfare." Report prepared for the U.S. Department of Health and Human Services. Washington, D.C.: The Urban Institute.
- Plotnick, Robert. 1983. "Turnover in the AFDC Population: An Event History Analysis." Journal of Human Resources 18: 65-81.
- Rank, Mark R. 1984. "The Dynamics of Welfare Utilization: A Longitudinal Analysis of Households Receiving Public Assistance." Doctoral dissertation, University of Wisconsin-Madison.
- Robins, Philip K. 1986. "Child Support, Welfare Dependency, and Poverty." American Economic Review 76: 768-788.
- Ruggles, Patricia. 1988. "Welfare Dependency and Its Causes: Determinants of the Duration of Welfare Spells." Paper presented at the 1988 annual meeting of the American Economic Association.
- U.S. Bureau of the Census, Current Population Reports, Series P-60, No. 163. 1989. Poverty in the United States: 1987. Washington, D.C.: U.S. Government Printing Office.
- U.S. Department of Health and Human Services, Family Support Administration. 1990a. Quarterly Public Assistance Statistics: Fiscal Year 1989. Washington, D.C.: U.S. Department of Health and Human Services.

U.S. Department of Health and Human Services, Office of Child Support Enforcement. 1990b. Fourteenth Annual Report to Congress for the Period Ending September 30, 1989. Volume II. Draft August 1990. Washington, D.C.: U.S. Department of Health and Human Services.

U.S. House of Representatives Committee on Ways and Means. 1989. Background Material and Data on Programs within the Jurisdiction of the Committee on Ways and Means. Washington, D.C.: U.S. Government Printing Office.

Vaughan, Denton R. 1989. "Reflections on the Income Estimates from the Initial Panel of the Survey of Income and Program Participation." Survey of Income and Program Participation Working Paper Number 8906. Washington, D.C.: U.S. Department of Commerce, Bureau of the Census.

Wiseman, Michael. 1977. "Change and Turnover in a Welfare Population." Institute of Business and Economic Research, University of California-Berkeley.