Determinants of Welfare Entry and Exit by Young Women

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Abstract

Using data from the youngest cohorts of women in the National Longitudinal Survey of Youth, this study constructs AFDC histories starting at age 15. Most young women go on AFDC for the first time between ages 18 and 25 and do so in the first few years after the birth of their first baby. We use these histories to estimate models of the determinants of initial use of AFDC and of the rate of exit from the first AFDC spell. The models show little evidence that welfare benefits affect the likelihood and timing of AFDC use, except that higher Medicaid benefits are associated with slower rates of exit from an initial AFDC spell. Parental welfare receipt, the home educational environment, family structure, academic achievement, attitudes toward school, and race are significantly related to the likelihood of participating in AFDC and the rate of entry and exit.

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1.   INTRODUCTION

Once again welfare reform has moved to the top of the domestic policy agenda. Underlying the debate about welfare reform is concern about the effects of welfare programs on individual motivation and lifestyle and a belief in many quarters that welfare discourages work and marriage, induces recipients to remain on welfare for long periods and, thereby, creates "dependence."[1] Persistent welfare caseloads, a strong commitment to federal deficit reduction, tightening state budgets, concern about child poverty, and public frustration with past efforts to reduce caseloads are other sources of discontent.

In a study that dramatically affected the debate about welfare caseloads and dependence, Bane and Ellwood (1983) showed that although most people receive welfare payments for only a short period (2 years or less), there is a sizable group that remains on welfare for many years and accounts for most of the resources spent on welfare. These widely cited findings, and the methods Bane and Ellwood used to derive them, convinced researchers and policy makers that understanding the dynamics of the welfare caseload required analysis of spells of welfare use, and that understanding spells required analysis of how quickly persons entered and left welfare.

Their work (see also Ellwood, 1986, and Bane and Ellwood, 1994) and the series of welfare dynamics studies which soon followed made it clear that fundamentally there are two ways to reduce the welfare caseload and welfare dependence: to lower the rate at which families enter the welfare system, and to speed up the rate at which they leave it. Many families who leave welfare face precarious economic conditions and eventually return to the rolls. It follows as a corollary that reducing the rate of welfare recidivism and speeding exit from second and higher-order spells of welfare will also lower the size of the caseload at any point in time and reduce the extent to which families are

dependent on public aid. Understanding the determinants of welfare entry and exit is, therefore, critical for designing effective reforms and projecting their consequences.

Most research has examined the nature and determinants of exits from Aid to Families with Dependent Children (AFDC), the primary target for reform. Better knowledge of the determinants of entry and of how to delay it could also have a substantial impact on AFDC caseloads, costs, and long-term use. Yet there is hardly any research on the determinants of *entry* onto AFDC and, in particular, the determinants of the likelihood and timing of the *first spell* on AFDC. To improve our knowledge of welfare dynamics, this paper uses data from the youngest cohorts of women in the National Longitudinal Survey of Youth (NLSY) to construct AFDC histories starting at age 15. We are able to observe and model the process of initially entering AFDC. We also estimate models of exit from the first AFDC spell.

Most studies of welfare participation and turnover are based on an economic perspective in which the decision to participate in a welfare program and, by extension, entry to and exit from welfare are modeled as functions of the benefits of receiving aid and the alternatives to aid (Moffitt, 1992). The net benefits of aid depend on the amount of aid available, the process and costs of applying for aid, and the possible stigma attached to receiving aid. Employment opportunities or income from a spouse or partner provide alternatives to welfare. The studies control for a range of individual characteristics that are usually interpreted as indicators of tastes or earnings ability. This paper expands the standard economic approach to include possible social-psychological determinants of AFDC use as well as an extensive set of family background and personal characteristics, and thereby provides an interdisciplinary analysis of welfare dynamics.

2.   RELATED STUDIES OF WELFARE USE AND DYNAMICS

There are few multivariate analyses of entry onto AFDC based on micro-data.[2] Hutchens (1981) and Plotnick (1983) find that higher AFDC benefits increase the rate of entry. Hutchens also shows that better economic alternatives, as measured by nonwage income and the average wage rate, lower entry. Both studies include a small set of demographic and regional variables. The data sets they use do not allow them to distinguish first spells of welfare from higher-order spells.

McLanahan (1988) uses a discrete-time hazard model to examine initial transitions onto AFDC among young women in the Panel Study of Income Dynamics (PSID). Her study focuses on the role of family structure, economic status, and welfare history while the young woman was growing up and reports significant effects of each of these on the likelihood of going on AFDC as a teenager or young adult. She does not include economic variables. Gottschalk and Moffitt (1994) find that the rate of entry into an initial spell of welfare is sensitive to cyclical conditions and has risen over the 1974–1987 period. This secular trend does not appear to be related to trends in benefit levels relative to earnings. Gottschalk (1995) uses discrete time hazard models to analyze first spells of AFDC among young women in the PSID. He focuses on estimating the correlation between welfare use among these women and their mothers and developing methods to separate spurious correlation from real behavioral links. Demographic and family background variables are significantly related to daughters' AFDC use, but local labor market conditions and the state need standard are not.

These three studies are the only ones that model entry into the initial spell of welfare use. Those of McLanahan and of Gottschalk concentrate on the role of key specific characteristics such as family structure or parental use of welfare, while Gottschalk and Moffitt only examine age, calendar time, and spell duration. None explores the impact of a wide range of explanatory variables.

The emerging literature on welfare recidivism analyzes determinants of entry into a second or higher-order spell of welfare (Bane and Ellwood, 1994; Blank and Ruggles, 1994; Brandon, 1995;

Gleason et al., no date; Harris, 1994; Lane and Stevens, 1995). Since the samples for studies of

recidivism necessarily consist of former welfare recipients, a small and endogenously selected subset of

all women who might initially enter welfare, determinants of recidivism are likely to differ from those

that determine an initial spell of AFDC.

The literature on children's socioeconomic outcomes has analyzed the determinants of whether

a woman uses welfare at some time as a teenager or young adult, but has not considered the dynamics

of such use. Duncan and Hoffman (1990) utilize the PSID to examine the joint outcome of becoming a

teenage unwed mother and going on AFDC. They find that black teenage women from low income

families, from families that received AFDC, and with low predicted incomes at age 26 are more likely

to experience this joint outcome. Higher AFDC benefits, though, are not associated with this outcome.

This study, too, includes a limited number of explanatory variables in the final model.[3] In a similar

study of both black and nonblack young women in the PSID, Haveman and Wolfe (1994) find that

unwed teenage mothers from low-income families are more likely to go on AFDC, and that higher

AFDC benefits are not associated with AFDC use. Haveman and Wolfe include a range of parental and

neighborhood characteristics in their model of welfare use. Gottschalk (1992) provides a similar

analysis for white, black, and Hispanic women in the NLSY and finds diverse patterns of relationships

among the three groups.[4]

Studies of who receives welfare at a point in time—static welfare participation—consistently

find that the benefit structure and expected wages are significant predictors of participation (see

Moffitt, 1992, for a review and references). This pattern supports the economic theory that welfare

participation is a utility-maximizing choice based on labor supply considerations. Since these studies

apply cross-section methods to broad samples of female heads of families, they provide little

information on determinants of initial welfare use among young women, but they suggest that

economic considerations play an important role.

Most research on dynamic welfare participation looks at the nature and determinants of exit.[5] This stream of research generally finds that welfare spells tend to be longer for women who are younger, disabled, or black; who have never married; who have more children, younger children, low expected wages, poor education, or little work experience; and who live where AFDC benefits are higher and labor market conditions are poorer. Data limitations usually do not allow investigators to know whether an observed spell of AFDC is a woman's first, second, or of higher order. If determinants of exit differ depending on the spell number, analyses which combine all spells may yield biased estimates of the determinants of exiting each specific spell. Also, unlike recent analyses of entry (Gottschalk, 1995; McLanahan, 1988), exit studies have not considered the impact of family background characteristics on spell length.

Our review of related research points to several ways in which this paper advances the analysis of welfare dynamics. Because we have complete welfare histories starting at a young age, we can observe and model the process of entering AFDC over time, readily match up a woman's time of entry into a spell with her age, and readily distinguish initial spells of AFDC from higher-order ones. We therefore can be confident that we are modeling determinants of initial AFDC use and of the length of a woman's first AFDC spell. The richness of the NLSY allows us to examine the effect of a large set of personal and family background characteristics on entry and exit behavior. The data provide indicators of a broad set of psychosocial factors as well. We use attitude measures collected at relatively early ages—prior to demographic and economic events, such as teen pregnancy and birth, finding and losing jobs, divorce, or AFDC participation, which may affect attitudes. Thus, we are able to distinguish the exogenous effects of psychosocial and other characteristics on welfare use from the effects of welfare on those same characteristics. Last, monthly AFDC participation data in the NLSY allow better estimates of welfare dynamics than is possible in studies that use annual measures of welfare use (Gritz and MaCurdy, 1991).

3.   SAMPLE AND VARIABLES

The data are from the National Longitudinal Survey Youth Cohort (NLSY), a nationally

representative sample of young men and women who were aged 14–21 in 1979. Sample members have

been reinterviewed every year since 1979, providing longitudinal data on many aspects of their lives.

The NLSY is particularly appropriate for this study because of the large number of very young

respondents and the availability of data on welfare participation, family background, and personal

characteristics.

We limit the sample to women who were 14–16 years old in 1979. The age restriction allows us

to analyze the time until welfare participation without losing many observations because of very early

childbearing and welfare participation. We use data through the 1992 survey, when our respondents

were 27–29 years old. By using the youngest members of the NLSY, we can assess the effects of

economic factors, family background, and psychosocial measures at ages 14–16 on welfare

participation until sample members reach their late twenties. Before cases were dropped because of

missing data, the sample size was 2,153.

Dependent variables. This study investigates 3 dimensions of welfare use. The first analysis

examines the likelihood of any AFDC participation between age 15 and 25 among all women in the

sample. About 15 percent of the sample have received AFDC by age 25. This dependent variable

ignores the duration and the timing of AFDC participation, and simply considers whether there was any

participation during a woman's adolescence and early adult years. Differences in the likelihood of

participation could arise through differences in premarital childbearing or childbearing followed by

divorce, in labor market success or assets levels, and, given categorical and financial eligibility, in

willingness to participate. We also conduct a similar analysis in which we limit the sample to women

who have had a child by age 25. Among such women, 30 percent have participated by age 25.

The second analysis examines the timing of initial AFDC participation. We again consider two outcomes. The first is the number of months between the month a respondent turned age 15 and either the first month of AFDC participation or, for nonparticipants, the end of continuous data collection. Duration analysis of this outcome shows the effects of explanatory variables on the likelihood of participation conditional on no previous participation. Second, for a sample restricted to women who have a child prior to 1992, we examine the time until AFDC participation starting from 4 months prior to the birth of her child, when she can enroll in AFDC if she is otherwise eligible.[6]

Third, for women who go on AFDC, we study the duration of the first continuous spell of AFDC. This analysis shows the determinants of the likelihood of ending a spell of AFDC participation conditional on participation for a given length of time.

Explanatory variables. The explanatory models for all three outcomes include welfare benefit levels, family background variables, psychosocial characteristics, religion and religiosity, race, academic achievement, and contextual factors. The sum of the AFDC and food stamp benefits for a family with no other sources of income and average state spending on Medicaid per eligible family serve as proxies for the economic benefits of AFDC participation.[7]

Family background may affect the likelihood and duration of welfare participation by serving as a proxy for the economic resources available to a young woman or by influencing her preferences regarding work, education, marriage, childbearing or welfare use. Indicators of educational materials in the house for the year the respondent was 14 years old include whether the family had magazine or newspaper subscriptions, or possessed a library card. Another proxy for the childhood educational environment is the highest grade completed by the respondent's mother. We also include a dummy indicating whether or not the respondent knew the grade. A dummy variable for foreign language use within the family may reflect differences in cultural assimilation. Family structure during the respondent's childhood is indicated by variables measuring the number of years between birth and age

15 spent living with both natural parents, mother only, or mother and stepfather. (The reference

category is years living with any other set of adults.) The number of siblings of the respondent further

characterizes family structure. A dummy variable for whether the female adult in household was

employed in the year the respondent was 14 years old may indicate differences in economic role

models or adult supervision. The models also include dummy variables for family poverty status when

the respondent was age 14 and family welfare receipt in 1978 (the first year of detailed income

information in the survey). A significant coefficient on the latter would indicate either that parental

receipt leads via some behavioral mechanism to a higher likelihood of child receipt, or that welfare

receipt is indicative that daughters and their parents share characteristics that make them both more

likely to have low earnings ability and, hence, qualify for welfare (Gottschalk, 1995).

Psychosocial characteristics may influence welfare participation by affecting preferences,

perceptions of opportunities, or perceptions of community norms. Two global psychosocial measures,

locus of control and self-esteem, gauge the respondent's sense of self-efficacy and self-worth.[8] An

index of attitudes toward school may reflect the sense of achievement in school and commitment to

educational goals.[9] Work commitment is measured by an index of willingness to work at various jobs

for $2.50 an hour in 1979.[10] Another index indicates willingness to participate in food stamps or

AFDC.[11] One would expect respondents with greater work commitment and lower willingness to

participate in welfare to be less likely to go on welfare and to participate for shorter periods. Two

variables measure attitudes toward women's employment: an index of the respondent's assessment of

an influential person's reactions to nontraditional employment and an index of her own attitudes toward

work for married women.[12] To the degree that higher values on these two variables reflect more

positive attitudes toward paid work and nontraditional work roles for women and less commitment to

staying home to care for children, they may tend to reduce the likelihood and duration of AFDC use.

With the exception of the self-esteem index, these variables were measured in 1979. The self-esteem index was measured in 1980.

Religion and religiosity may affect welfare participation by influencing personal values or by affecting the material resources available through a religious community. The model includes dummy variables for upbringing as Baptist, Protestant, Catholic, or Jewish or other. "No religious affiliation" is the reference group. Frequency of attendance at religious services in 1979 is categorized as often (1 or more times per week), occasional (1–3 times per month), or rare (less than once a month), with never as the reference category.

The two final personal characteristics in the models are race, indicated with dummies for black, Asian/Pacific Islander, American Indian, and Hispanic, and the respondent's score on the Armed Forces Qualifying Test (AFQT). The score serves as a measure of academic achievement and ability and as a crude indicator of earnings capacity. Last, we include 3 indicators of local labor market opportunities: dummies for urban or southern residence at age 14, and the county unemployment rate.[13]

Table 1 provides means and standard deviations of the explanatory factors for the entire sample and separately for women who participate in AFDC before age 25 and those who do not. Several variables significantly differ between recipients and nonrecipients. Women who were never on AFDC by age 25 have mothers with more education and more educational resources (magazines, newspapers, and library cards) at home. Women never on AFDC have fewer siblings and have spent more time with both parents and less with a single mother or a stepfather. Their families are much less likely to have been poor (10 percent vs. 34 percent) or on welfare (6 percent vs. 27 percent). Compared to nonrecipients, recipients' psychosocial characteristics show less self-esteem, poorer attitudes about school, more traditional attitudes towards women's employment and, surprisingly, greater work commitment. The proportion of Catholics is higher, and the proportion of Baptists lower

TABLE 1
Descriptive Statistics for Entire Sample and by AFDC Participation

| | | | AFDC Status at Age 25 | | | |
| | Entire Sample | | Never on AFDC | | Ever on AFDC | |
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Any Children	0.51	0.5	0.42*	0.49	1.0	0.0
AFDC & food stamps	557.68	110.64	556.49	110.91	559.16	112.71
Medicaid Payments	192.25	69.01	191.71	69.33	191.17	65.42
Family Background						
Mother worked	0.6	0.49	0.61	0.49	0.56	0.5
Magazines in home	0.7	0.46	0.74*	0.44	0.47	0.5
Newspapers in home	0.8	0.4	0.83*	0.37	0.66	0.47
Library card in home	0.76	0.43	0.77*	0.42	0.71	0.46
Mother's grade	11.54	2.62	11.77*	2.6	10.59	2.34
Knows mother's grade	0.96	0.2	0.96*	0.18	0.94	0.25
Foreign language	0.12	0.33	0.12	0.32	0.1	0.3
Number of siblings	3.25	2.24	3.04*	2.09	4.24	2.7
Years with both parents	12.18	4.98	12.71*	4.54	9.59	5.99
Years with mother only	1.33	3.3	1.07*	2.94	2.62	4.51
Years with mother & stepfather	0.7	2.42	0.56*	2.16	1.37	3.21
Family received welfare in 1978	0.09	0.29	0.06*	0.24	0.27	0.45
Poor at age 14	0.15	0.35	0.10*	0.31	0.34	0.47
Psychosocial Measures						
Locus of control	9.18	2.38	9.15	2.41	9.45	2.27
Self-esteem	31.44	4.05	31.58*	4.06	30.7	4.01
School attitudes	31.85	3.91	32.0*	3.8	31.11	4.25
Missing school attitude	0.04	0.2	0.03*	0.16	0.11	0.31
Work commitment	2.88	2.03	2.84*	2.01	3.27	2.05
Welfare attitude	3.33	0.81	3.33	0.8	3.23	0.84
Influential gender roles	16.4	3.02	16.47	3.02	16.23	2.86
Missing influential roles	0.07	0.26	0.06	0.25	0.1	0.3
Gender/work attitudes	17.85	3.04	17.98*	3.01	17.21	3.05
Religious Variables						
Baptist	0.26	0.44	0.23*	0.42	0.36	0.48
Protestant	0.27	0.45	0.28	0.45	0.26	0.44
Catholic	0.32	0.46	0.34*	0.47	0.18	0.38
Jewish or other	0.12	0.32	0.11	0.31	0.15	0.35
Rarely attend	0.21	0.41	0.2	0.4	0.22	0.41
Occasionally attend	0.19	0.39	0.18	0.39	0.23	0.42
Often attend	0.46	0.5	0.48*	0.5	0.39	0.49

(table continues)

TABLE 1, continued

| | Entire Sample | | AFDC Status at Age 25 | | | |
| | | | Never on AFDC | | Ever on AFDC | |
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Black	0.14	0.35	0.10*	0.3	0.37	0.48
Asian/Pacific Islander	0.01	0.11	0.02	0.12	0.0	0.03
American Indian	0.04	0.19	0.04	0.19	0.04	0.19
Hispanic	0.05	0.23	0.05	0.21	0.08	0.27
Armed Forces Test	68.61	18.36	71.5*	16.96	54.52	18.7
Urban residence at age 14	0.77	0.42	0.77	0.42	0.76	0.43
Southern residence at 14	0.34	0.47	0.34	0.48	0.3	0.46
Unemployment rate in 1980	6.84	2.65	6.68*	2.52	7.57	3.12
Age at birth (mothers only)			22.12	2.96	18.58	2.03
Unweighted N	1506		1081		326	

Notes: * Indicates difference in means significant at 5% level.
Data are weighted to reflect survey sampling. Combined sample size for AFDC samples is smaller than for entire sample because not all respondents have data for all years prior to age 25. Reference categories are: years lived apart from mother, white, no religion, never attend services.

among nonrecipients. Women never on AFDC are less likely to be black, and have higher AFQT test scores. The results for the comparisons of means for explanatory variables foreshadow the results of many of the multivariate analyses.

4.   DESCRIPTIVE DATA ON INITIAL AFDC PARTICIPATION AND SPELL LENGTH

To examine the timing of initial participation, we first consider simple life tables that estimate the proportion of the sample starting AFDC participation in each year and account for censoring of observations. The next section then presents the multivariate analyses.

Table 2 presents a life table for AFDC participation in each year following age 15 for all women. Figure 1 shows the associated survival function—the estimated proportion of women who had never received AFDC by the end of each year after age 15. Few young women participate in AFDC before age 18: about 98 percent of women younger than 18 had not been on AFDC. Between 18 and 21, almost 10 percent go on AFDC, so that 89 percent have never been on before age 22. After age 24, few women who have not already received AFDC enter the program for the first time. The hazard rate is very low and the survival rate flattens out again. About 85 percent of women have not been on AFDC by age 25. First-time AFDC participation is most likely for women between 18 and 24.

To separate the timing of births and of AFDC participation, we limit the sample to women who have had a child and study the time between AFDC eligibility (fifth month of pregnancy) and AFDC participation. Table 3 shows the life table for the time until mothers go on AFDC. The associated survival function (Figure 2) plots the proportion of mothers not yet on AFDC by the number of months after their pregnancy. The largest group of participants enters AFDC in the first year of their baby's life. About 18 percent of mothers participate in AFDC in the first year. In the first 3 years after eligibility, 30 percent have participated, leaving 70 percent who have not. The

TABLE 2

Life Table of Time until AFDC Participation after Age 15

Start of Interval (Age)	Proportion Terminating	Proportion Surviving	Monthly Hazard Rate	Cumulative Survival
15	0.002	0.998	0.000	1.00
16	0.008	0.992	0.001	0.99
17	0.013	0.987	0.001	0.98
18	0.030	0.971	0.003	0.95
19	0.022	0.978	0.002	0.93
20	0.021	0.979	0.002	0.91
21	0.019	0.981	0.002	0.89
22	0.022	0.978	0.002	0.87
23	0.020	0.980	0.002	0.85
24	0.010	0.990	0.001	0.85
25	0.009	0.991	0.001	0.84
26	0.012	0.989	0.001	0.83
27	0.008	0.992	0.001	0.82
28	0.007	0.993	0.001	0.82

Notes: Data are weighted to reflect sampling. N=2087.

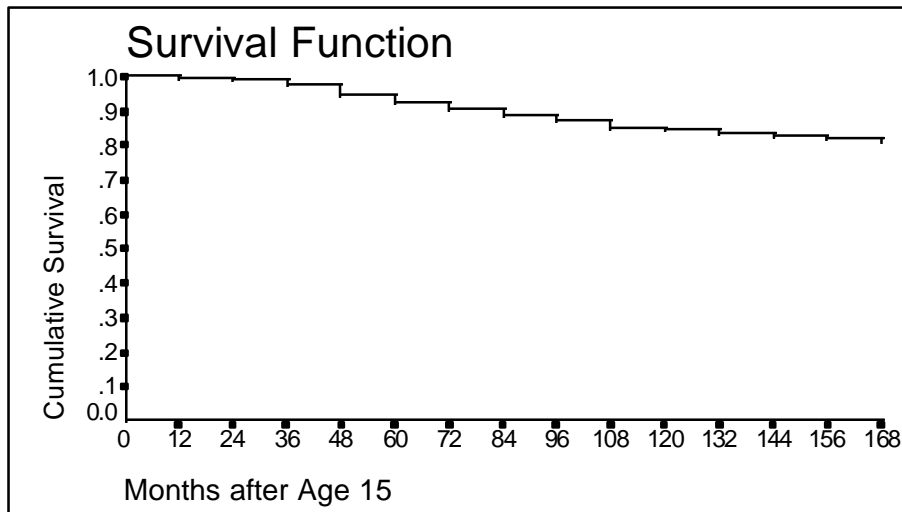Figure 1: Proportion Not on AFDC Since Age 15

TABLE 3

Life Table of Time until AFDC Participation after 5th Month of Pregnancy

Start of Interval (Years)	Proportion Terminating	Proportion Surviving	Monthly Hazard Rate	Cumulative Survival
0	0.181	0.820	0.017	0.82
1	0.063	0.937	0.005	0.77
2	0.042	0.958	0.004	0.74
3	0.052	0.948	0.004	0.70
4	0.029	0.971	0.003	0.68
5	0.039	0.961	0.003	0.65
6	0.007	0.993	0.001	0.65
7	0.034	0.966	0.003	0.62
8	0.009	0.991	0.001	0.62
9	0.030	0.970	0.003	0.60
10	0.026	0.975	0.002	0.59
11	0.067	0.933	0.006	0.55
12	0.000	1.000	0.000	0.55

Notes: Data are weighted to reflect sampling. Sample is limited to women with children. N=1208.

Figure 2: Proportion Not on AFDC Since Pregnancy

Survival Function
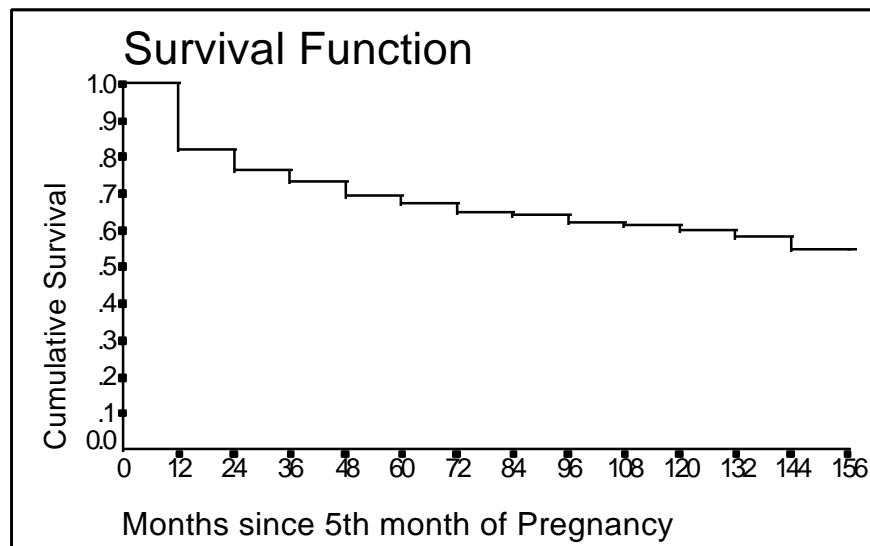
cumulative participation rate increases more slowly in later years, so that by 10 years following the baby's birth 40 percent have been on AFDC. The high initial rates of participation most likely reflect higher participation for younger first-time mothers and the greater burden of caring for very young children.

Table 4 shows the life table for the length of initial AFDC spells.[14] Figure 3 plots the proportion of women still on AFDC over ten years. Consistent with earlier work using monthly data (Pavetti, 1993), this table shows a substantial proportion of short-term spells. Almost 40 percent of first-time recipients left AFDC within one year; 60 percent left within two years. Only 14 percent of all initial spells last longer than 5 years. The monthly hazard rate tends to decrease as spells get longer.

Overall, the life tables show little AFDC participation among very young women, but more among women in their twenties. Many young women who have children receive AFDC in the few years following a birth. The patterns of exiting AFDC for these young recipients are similar to patterns for samples of the general AFDC population found in other studies. The next section further explores the determinants of participation with multivariate methods.

5.   DETERMINANTS OF EARLY AFDC USE

Table 5 shows logit estimates of the probability of participating in the AFDC program at any time before age 25. The sample for model 1 includes all women with complete data for the time period. Model 2's sample is further limited to women who gave birth before age 25.

Benefit levels for AFDC and food stamps and Medicaid spending are not significantly related to AFDC participation in either model. The signs of the coefficients suggest that women were more likely to participate in states with higher benefit levels, consistent with economic theory.

TABLE 4

Life Table of Length of First AFDC Participation Spell

Start of Interval (Years)	Proportion Terminating	Proportion Surviving	Monthly Hazard Rate	Cumulative Survival
0	0.370	0.630	0.038	0.63
1	0.369	0.631	0.038	0.40
2	0.322	0.678	0.032	0.27
3	0.260	0.740	0.025	0.20
4	0.302	0.698	0.030	0.14
5	0.104	0.896	0.009	0.12
6	0.122	0.878	0.011	0.11
7	0.215	0.785	0.020	0.09
8	0.080	0.920	0.007	0.08
9	0.076	0.924	0.007	0.07

Notes: Data are weighted to reflect sampling. Sample is limited to women who go on AFDC. N=481.
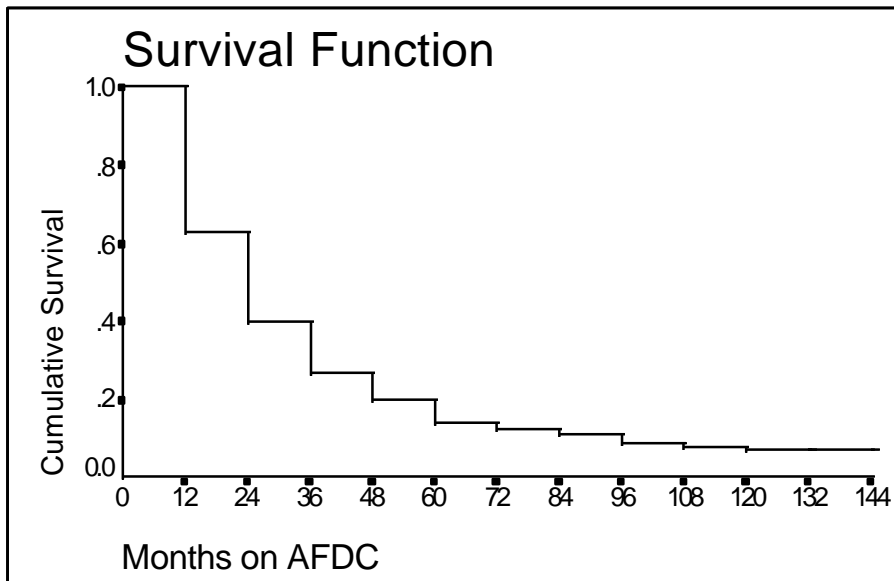
Figure 3: Proportion Still on AFDC in First Spell

Survival Function

TABLE 5
Logit Analysis of Probability Ever Participated in AFDC by Age 25

Variables	Model 1 Since Age 15		Model 2 Since Birth of Baby	
	Coefficient	Standard Error	Coefficient	Standard Error
AFDC & food stamps	0.0005	0.0012	0.0003	0.0015
Medicaid payments	0.0002	0.0014	0.0039	0.0025
Family Background				
Mother worked	0.126	0.1626	-0.2869	0.2415
Magazines in home	-0.3747**	0.1678	-0.1579	0.25
Newspapers in home	-0.0237	0.1731	-0.18	0.2602
Library card in home	0.1869	0.1703	0.6494**	0.2559
Mother's grade	-0.0369	0.0322	0.0262	0.0516
Knows mother's grade	-0.3253	0.32	0.0292	0.4724
Foreign language	-0.5225	0.3448	-0.6302	0.5496
Number of siblings	0.0664**	0.0298	0.1377**	0.0474
Years with both parents	-0.058**	0.0248	-0.034	0.0399
Years with mother only	-0.0382	0.0297	0.0084	0.0469
Years with mother & stepfather	0.0113	0.0374	0.0335	0.0584
Family received welfare in 1978	0.7874**	0.2038	0.2473	0.3074
Poor at age 14	-0.0216	0.1879	-0.218	0.2773
Psychosocial Measures				
Locus of control	-0.0027	0.0324	-0.0115	0.0505
Self-esteem	0.0031	0.0201	0.0431	0.0312
School attitudes	-0.0372*	0.0193	-0.0458	0.0284
Missing school attitude	1.0046**	0.2931	0.9075**	0.4182
Work commitment	0.0653*	0.0371	0.0419	0.0541
Welfare attitude	0.0909	0.0911	-0.0416	0.137
Influential gender roles	-0.0009	0.0258	-0.0189	0.0384
Missing influential roles	-0.0123	0.2692	-0.6055	0.4239
Gender/work attitudes	-0.0024	0.0265	0.073*	0.0397
Religious Variables				
Baptist	-0.2735	0.4017	-0.4897	0.5715
Protestant	-0.1538	0.4123	-0.2366	0.5863
Catholic	-0.8002*	0.4253	-1.1694**	0.6052
Jewish or other	-0.2838	0.4306	-0.3497	0.6217
Rarely attend	0.2905	0.2685	0.9788**	0.4129
Occasionally attend	0.0572	0.2661	0.1515	0.3998
Often attend	-0.0993	0.2502	0.0868	0.3769

(table continues)

TABLE 5, continued

Variables	Model 1 Since Age 15		Model 2 Since Birth of Baby	
	Coefficient	Standard Error	Coefficient	Standard Error
Black	0.8309**	0.2129	0.9321**	0.3202
Asian/Pacific Islander	-1.0883	1.0859	-4.0221	9.3572
American Indian	0.1452	0.4309	0.086	0.5768
Hispanic	0.9015**	0.3771	0.8239	0.5783
Armed Forces Test	-0.0338**	0.0054	-0.0319**	0.0081
Urban residence at age 14	-0.1185	0.1955	-0.3185	0.2873
Southern residence at 14	-0.694**	0.258	-0.4157	0.3484
Unemployment rate in 1980	0.0448	0.0294	0.0691	0.047
Age at birth			-0.5384**	0.052
Constant	2.1458	1.3801	9.6559	2.374
-2 Log Likelihood	1180.52		547.02	
Chi-square	354.42		378.77	
N	1411		739	

Notes: Includes cases with complete data until age 25. Reference categories are: years lived apart from mother, white, no religion, never attend services.
* Indicates 10% significance level; ** indicates 5% significance level.

Model 1 indicates that women whose parents had been on welfare (in 1978) are much more likely to use AFDC themselves. Women who spent more of their childhood living with both parents are less likely to use AFDC relative to those living in any family structure that does not include the mother. Both effects appear to operate by changing birth rates during adolescence and the early twenties because neither variable is a significant determinant of welfare use conditional on having a child (model 2). Time living with mother only or mother and stepfather does not significantly affect the chance of AFDC participation relative to the reference family structure. The importance of family structure also appears in the positive relationship between number of siblings and the likelihood of going on AFDC. This may result from parental resources of time and money being divided among a larger group of children, which may adversely affect a daughter's early development and chances for future economic success, or later, the ability of the family to help out financially with the daughter's child.

Two proxy variables for the household educational environment, availability of magazines and newspapers, are associated with lower use of AFDC, though only the coefficient on magazines in model 1 is significant. The other proxy, having a library card, is unexpectedly positively related to AFDC participation but significant only in model 2. Other family background variables, including family poverty status, are not statistically related to the probability of AFDC participation.

Only a few of the psychosocial variables are significantly related to the probability of participation. Women with more positive school attitudes are less likely to go on AFDC, though the effect is not quite significant in model 2 ($p = .11$). The indicator for missing school attitude data, an indication of connection to school, is significant in both models. Thus, young women who were not going to school early in the survey are more apt to go on AFDC. The work commitment results present a puzzle. Work commitment is significant in model 1 only. This suggests that women with a greater commitment to work had higher rates of cumulative participation because of higher birth rates.

Conditional on having a child, gender role attitudes seem to affect participation. Women with less traditional attitudes toward women's work are more likely to participate in AFDC.

Although few of the religion variable coefficients are statistically significant, the pattern is consistent. Women with a stated childhood religious affiliation are less likely to go on AFDC than those with no affiliation. On the other hand, women who attended religious services are generally more likely to go on AFDC, though many of the coefficients are insignificant.

After controlling for other characteristics, black and Hispanic women are much more likely to participate in AFDC than white women (the reference group) among all women and among those who have babies. For Hispanic women, this is most clearly due to a greater chance of having a baby. In model 2 the coefficient on the Hispanic dummy is positive and large, but not significantly different from zero (p= .15). Relative to whites, Asian/Pacific Islanders have a lower participation rate and American Indians a higher rate, but the differences are not statistically significant.

Women who live in urban areas and those in the south are less likely to go on AFDC than others. The differences are significant only for southern residents in model 1, suggesting the effects operate through rates of child birth. Local unemployment rates do not have a significant effect on these probabilities.

Higher scores on the AFQT are associated with lower probabilities of AFDC participation.[15] Because the model 1 and model 2 coefficients are both significant, test scores are related to both childbearing and to AFDC use conditional on having a child. Women who were older when they became mothers have much lower rates of AFDC participation (model 2). Older mothers are more likely to be married or have stable jobs.

Duration Analysis of Time until First AFDC Spell

Benefit levels, family background, psychosocial characteristics, and other factors may affect the timing of participation as well as whether any participation occurs. The timing of participation is

important because women who go on welfare earlier may stay on longer and have a harder time avoiding recidivism. Table 6 presents duration analyses of the time until AFDC participation. Model 1 shows the effects of factors on the number of months between age 15 and a woman's first month on AFDC. This model captures the explanatory variables' effects on the timing of both births and participation. Model 2 is limited to women who had children, and shows determinants of the time between the fifth month of pregnancy and the first month on AFDC. We estimate both models with a Cox proportional hazard partial-likelihood. The coefficients show the effects of explanatory factors on the monthly probability of participation (leaving nonwelfare) conditional on not having yet participated.[16]

Since an analysis of participation prior to age 25 is a simplified version of analyzing duration until participation, results from the two kinds of analyses are similar. As in the participation models, AFDC and food stamp benefits and medical spending are insignificant. Almost the same pattern of family background effects appears in tables 5 and 6. Again, having more siblings is associated with earlier participation in both models, while time spent living with both parents and family welfare participation affect the daughter's participation only by affecting birth rates. We again find that having magazines in the home is associated with lower participation and, since this variable is insignificant in model 2, that this effect operates by affecting childbearing. Having a library card in the home again is unexpectedly associated with faster entry onto AFDC. In contrast to the logit models, the hazard analysis implies that women with more educated mothers are less likely to go on welfare in each month. This relationship operates by affecting childbearing because the coefficient is small and insignificant in model 2.

The effects of psychosocial factors in the duration analyses closely mirror those in the logit models. Positive school attitudes lower the probability of participation in each time period and, conditional on pregnancy, less traditional gender attitudes increased the probabilities. Respondents

TABLE 6
Hazard Analysis of Time until First AFDC Participation

Variables	Model 1 Since Age 15		Model 2 Since Birth of Baby	
	Coefficient	Standard Error	Coefficient	Standard Error
AFDC & food stamps	0.0004	0.0009	0.0001	0.0009
Medicaid payments	-0.0008	0.0010	0.0010	0.0014
Family Background				
Mother worked	0.0416	0.1164	-0.1057	0.1352
Magazines in home	-0.2744**	0.1259	-0.1658	0.1442
Newspapers in home	-0.0051	0.1249	0.0380	0.1490
Library card in home	0.1577	0.1217	0.2702*	0.1399
Mother's grade	-0.0377*	0.0226	0.0080	0.0283
Knows mother's grade	-0.0593	0.2176	0.1769	0.2754
Foreign language	-0.1335	0.2436	0.0803	0.2848
Number of siblings	0.0428**	0.0197	0.088**	0.0243
Years with both parents	-0.0283*	0.0172	-0.0206	0.0231
Years with mother only	-0.0206	0.0197	-0.0171	0.0262
Years with mother & stepfather	0.0254	0.0258	0.0228	0.0332
Family received welfare in 1978	0.4959**	0.1403	0.2238	0.1667
Poor at age 14	0.0398	0.1365	-0.0728	0.1609
Psychosocial Measures				
Locus of control	0.0177	0.0238	0.0368	0.0285
Self-esteem	-0.0093	0.0148	-0.0098	0.0181
School attitudes	-.0336**	0.0142	-0.032*	0.0171
Missing school attitude	0.5454**	0.1838	0.2694	0.2037
Work commitment	0.0290	0.0266	-0.0071	0.0318
Welfare attitude	0.0186	0.0656	-0.0898	0.0762
Influential gender roles	0.0167	0.0189	0.0210	0.0214
Missing influential roles	-0.0643	0.1854	-0.3963*	0.2236
Gender/work attitudes	0.0043	0.0196	0.0564**	0.0245
Religious Variables				
Baptist	-0.3092	0.2763	-0.2222	0.3093
Protestant	-0.2314	0.2873	-0.1445	0.3282
Catholic	-0.7001**	0.3014	-0.7482**	0.3475
Jewish or other	-0.3043	0.3011	-0.2674	0.3548
Rarely attend	0.1966	0.1953	0.5661**	0.2327
Occasionally attend	0.0870	0.1943	0.4083*	0.2319
Often attend	-0.0654	0.1843	0.2177	0.2264

(table continues)

TABLE 6, continued

Variables	Model 1 Since Age 15		Model 2 Since Birth of Baby	
	Coefficient	Standard Error	Coefficient	Standard Error
Black	0.6415**	0.154	0.5409**	0.1794
Asian/Pacific Islander	-0.4907	0.7279	-0.1338	1.0237
American Indian	0.0063	0.3152	-0.0300	0.3304
Hispanic	0.3409	0.2728	0.0637	0.3290
Armed Forces Test	-0.0273**	0.0040	-0.0203**	0.0049
Urban residence at age 14	-0.0345	0.1445	0.0202	0.1652
Southern residence at 14	-0.4594**	0.1864	-0.2128	0.1941
Unemployment rate in 1980	0.0335	0.0214	0.0442*	0.0247
Age at birth			-0.1611**	0.0257
-2 Log Likelihood	4953.091		3232.527	
Chi-square	426.34		256.77	
N	1510		780	

Notes: Model 1 includes all cases with complete data; Model 2 includes mothers only. Reference categories are: years lived apart from mother, white, no religion, never attend services.
* Indicates 10% significance level; ** indicates 5% significance level.

who lack the school attitude measure (often because of not attending school) are more likely to go on AFDC, though the effect is significant only in model 1.

Although most of the religion variables again are insignificant, a consistent pattern again associates being raised with a stated religious affiliation with a lower hazard of participation. Women raised as Catholic again have a significantly lower participation probability in each period. The insignificance of more frequent religious service attendance in the model that does not condition on childbearing, coupled with its positive and significant relationship to participation in the post-childbearing model (though not for the highest category of attendance), suggests that more frequent attendance reduces early childbearing among women otherwise eligible for AFDC.

As in the logit models, the duration analysis shows that black women are likely to participate sooner than white women, both after age 15 and after childbearing. Other race and ethnic groups show no significant differences in the timing of participation. Women in the South are less likely to go on AFDC, but the effect is not significant in the post-childbearing model. Conditional on childbearing, a higher local unemployment rates is associated with a higher hazard of participation.

Women with higher AFQT test scores are less likely to go on AFDC in each period, even conditional on having a baby. Women who are older at the time of their first child are less likely to go on AFDC in any period. These results, too, are consistent with the logit models.

Although there are important differences in specification between our models of participation and time until first spell and earlier ones,[17] the findings in Tables 5 and 6 may be compared to those from the entry analyses by Hutchens (1981), Plotnick (1983), McLanahan (1988) and Gottschalk (1995), and the welfare use studies of Duncan and Hoffman (1990), Gottschalk (1992) and Haveman and Wolfe (1994). Age at birth and mother's education are negatively associated with welfare use in most models that include these variables. There are significant effects of family structure in McLanahan's and our studies, the only ones that include such variables in the welfare receipt equations.

Like McLanahan, Duncan-Hoffman, and both studies by Gottschalk, but unlike Haveman-Wolfe, we find important impacts of prior family receipt of welfare. The literature is less consistent about the impact of welfare benefits or other program parameters. In accord with Gottschalk (1995), Duncan-Hoffman and Haveman-Wolfe, which examined similar populations in overlapping time periods, we find no effect of such variables or other program parameters. Work by Hutchens and Plotnick using much older data from the early 1970s and on a broader age range of women did show significant effects.

Duration Analysis of Exit from First AFDC Spell

Among women who go on AFDC, personal and contextual characteristics partly determine how long they stay in their first continuous spell. Table 7 shows results from a Cox proportional hazard analysis of the number of months in the first AFDC spell. The coefficients show the effects of explanatory factors on the probability of exiting the AFDC spell in any given month, conditional on having stayed until that month.

Higher Medicaid benefits are associated with lower rates of AFDC exit. In contrast to many earlier studies, the combined AFDC and food stamp guarantee is not statistically significant. Whereas five family background variables are associated with timing of entry into the first AFDC spell, only two are related to the speed of exit. Women raised in families using languages other than English or in families that received welfare have longer spells of AFDC. Family structure does not appear to affect length of time on welfare, though it does affect participation.

More positive school attitudes are associated with faster exit rates from AFDC, in addition to lower participation chances. Unexpectedly, women who say they are more willing to use welfare are more likely to exit AFDC. Less traditional work attitudes of the respondent and an influential person are associated with a higher exit rate, though the coefficient is significant only for the influential person variable. These latter psychosocial characteristics are not associated with the entry rate.

TABLE 7

Hazard Analysis of Length of First AFDC Spell

Variables	Coefficient	Standard Error
AFDC & food stamps	0.0007	0.0009
Medicaid payments	-0.0037**	0.0014
Family Background		
Mother worked	-0.0865	0.1453
Magazines in home	0.0832	0.1540
Newspapers in home	-0.1229	0.1323
Library card in home	0.0610	0.1463
Mother's grade	-0.0428	0.0300
Knows mother's grade	0.0561	0.2536
Foreign language	-0.5561*	0.3299
Number of siblings	0.0103	0.0253
Years with both parents	0.0080	0.0212
Years with mother only	0.0241	0.0236
Years with mother & stepfather	0.0075	0.0308
Family received welfare in 1978	-0.4309**	0.1582
Poor at age 14	-0.0709	0.1545
Psychosocial Measures		
Locus of control	0.0132	0.0289
Self-esteem	0.0058	0.0166
School attitudes	0.0397**	0.0160
Missing school attitude	0.3111	0.2139
Work commitment	0.0207	0.0304
Welfare attitude	0.1577**	0.0774
Influential gender roles	0.0516**	0.0226
Missing influential roles	-0.2997	0.2262
Gender/work attitudes	0.0333	0.0227
Religious Variables		
Baptist	0.6826**	0.3195
Protestant	0.5612	0.3446
Catholic	0.6184*	0.3661
Jewish or other	0.7669**	0.3579
Rarely attend	0.2337	0.2211
Occasionally attend	0.1050	0.2111
Often attend	0.2050	0.2019

(table continues)

TABLE 7, continued

Variables	Coefficient	Standard Error
Black	-0.6432**	0.1825
Asian/Pacific Islander	0.6720	1.1242
American Indian	0.4360	0.3655
Hispanic	0.0768	0.3755
Armed Forces Test	-0.0027	0.0044
Urban residence at age 14	-0.0037	0.1753
Southern residence at 14	0.1264	0.2033
Unemployment rate in 1980	-0.0247	0.0234
Age at birth	-0.0210	0.0260
-2 Log Likelihood	3087.285	
Chi-square	82.86	
N	378	

Notes: Model includes women with initial AFDC spell and no missing values for explanatory variables. Reference categories are: years lived apart from mother, white, no religion, never attend services.

* Indicates 10% significance level; ** indicates 5% significance level.

Women who indicated a childhood religious affiliation tend to exit AFDC more quickly than women who did not and, in contrast to the entry models, most of the coefficients are significant. Attendance at religious services is not significantly related to the chance of exiting.

Black women are less likely than white women to exit AFDC in each period. As in the other models, other racial and ethnic groups had exit rates insignificantly different from those of whites. Urban residence, southern residence, and unemployment rates do not significantly affect time on AFDC in the first spell, nor does a woman's age at the birth of her first child. Academic achievement, as measured by the AFQT score, is not related to the amount of time spent in the first spell of AFDC, despite its strong association with the probability and timing of participation.

It is difficult to compare results of our exit model to most others. Other studies generally model the exit rate as a function of welfare benefits, local economic conditions and a woman's characteristics at the time she begins a spell (e.g. number of children, educational attainment, recent work experience or wages, marital status, disability). Though our model includes benefits at the time a spell begins, it otherwise focuses on family background and personal characteristics observed at an earlier age. Since these variables partly determine a recipient's labor market and demographic characteristics at the start of a spell, we estimate a more reduced-form model than found in other work.[18]

6.   CONCLUSION

This study is one of few to address the timing and determinants of initial AFDC participation and the only one which isolates first spells of AFDC for analysis of both entry and exit. Inclusion of extensive family background, personal and psychosocial characteristics, as well as economic variables, helps provide a fuller picture of the determinants of participation decisions.

The findings offer a mixed message to policy makers. An obvious policy lever is changing cash and food stamp benefits. Our models as well as other recent analyses show little evidence that such

action affects the likelihood and timing of initially participating in AFDC and the length of spells. However, the negative impact of Medicaid benefits on rate of exit suggests that severing eligibility for Medicaid from receipt of AFDC to eliminate the Medicaid "notch" (as reforms in the late 1980s helped accomplish) can contribute to shorter spells of welfare use.

Our failure to find an effect of the combined cash AFDC and food stamp guarantee on entry and exit rates and on participation by age 25 is consistent with other recent work that examines welfare use only among young women (Duncan and Hoffman, 1990; Gottschalk, 1995; Haveman and Wolfe, 1994). It is, however, inconsistent with evidence from the cross-section static participation literature, using broader samples of women, that higher guarantees increase AFDC use (Moffitt, 1992). In an effort to resolve this inconsistency we experimented with a variety of alternative specifications. None of the experiments produced a significant effect of the benefit level in either the logit or hazard models.[19] It may be, therefore, that younger women are less sensitive to welfare's financial incentive effects on entry and exit.[20]

Parental welfare receipt is strongly associated with daughters' higher likelihoods of participation in AFDC, faster entry rates and slower exit rates. Whether these intergenerational linkages arise because children learn welfare dependence from observing their parents and neighbors (and from a "welfare culture"), or because such children and their parents share characteristics that make them all more likely to qualify for welfare, is a critical, unresolved question.

School-related factors figure prominently among the significant variables and may provide the best path for lower welfare participation rates and brighter future economic outcomes. Women still in school and with better school attitudes are generally less likely to go on AFDC and will get off AFDC sooner. Women who score higher on the AFQT are less likely to go on AFDC. Policies aimed at keeping young women in school might provide alternatives to early childbearing and skills that allow older mothers to earn enough to support their families.

Family structure, important in the political debate on welfare, is related to the chances of going on welfare for young women. Women who lived with both parents for longer periods in childhood are less likely to go on welfare, though the substantive difference between years living with both parents and years living with a single mother is small. Having more siblings influences a women's chances for welfare participation, perhaps by stretching parental resources. The proxies for the home educational environment (mother's schooling and household educational materials) appear to affect welfare participation. Regardless of their connections to welfare use, family structure and home environment are not easily influenced by public policy.

Although the most efficient path of policy intervention is not clear, the timing is. Most young women go on AFDC for the first time between ages 18 and 25 and do so in the first few years after the birth of their first baby. These facts at least define the window of opportunity for early policy intervention.

Notes

[1]Concern that welfare induces out-of-wedlock childbearing and other demographic behaviors is another major motivation behind reform efforts.

[2]There are also studies of caseload entry and exit based on aggregate case data from administrative sources (e.g. Albert, 1988). Such studies can not analyze the role of individual characteristics or, since they generally use state level data from one state, local economic conditions.

[3]They include a wide range of background characteristics in the model to predict family income at age 26, but omit them from the final model, so any influence of such variables is assumed to act only by affecting future economic opportunities.

[4]Solon et al. (1988) analyze whether a woman ever received some form of income tested aid between the time she left home and age 27. They focus on determining sibling and intergenerational correlations in welfare use but do not estimate which specific individual and family characteristics are responsible for the estimated correlations.

[5]See Moffitt (1992) for a review of pre-1992 work. Bane and Ellwood (1994), Blank and Ruggles (1996), Fitzgerald (1995), Harris (1993), Hoynes and MaCurdy (1994), Pavetti (1993), and Petersen (1995) are more recent studies.

[6]When the sample includes all women, the entry and participation-by-25 models provide reduced-form estimates since each explanatory variable's coefficient reflects its net impact on childbearing, marital, and labor market decisions, and on participation conditional on categorical and financial eligibility. When the samples condition on having a child, the estimates are semi-reduced form, since coefficients reflect impacts on marital and labor market decisions as well as participation. Since these outcomes may well be jointly determined, the fully reduced-form model is less likely to be biased.

[7]Benefit levels are for a family of four set at the state level for the first month of period (i.e.,

age 15 or 4 months before birth). Benefit values are adjusted with the Consumer Price Index with 1982 as base year. We thank Robert Moffitt for providing data on welfare benefits.

[8]The self-esteem index is a sum of a 4-point Likert scale on 10 items: "I feel that I am a person of worth, at least on an equal basis with others," "I have a number of good qualities," "I am inclined to feel that I am a failure," "I am as capable as others," "I feel I do not have much to be proud of," "I have a positive attitude," "I am satisfied with myself," "I wish I had more self-respect," "I feel useless at times," and "I sometimes think I am 'no good' at all." The index can range from 10 to 40, higher values indicating higher self-esteem. Cronbach's alpha, a measure of reliability, is .82.

The Rotter's locus of control index combines the results from comparison of 4 pairs of statements: "What happens to me is my own doing" or "Sometimes I feel that I don't have enough control over the direction my life is taking"; "When I make plans, I am almost certain that I can make them work" or "It is not always wise to plan too far ahead, because many things turn out to be a matter of good or bad fortune anyhow"; "In my case, getting what I want has little or nothing to do with luck" or "Many times we might just as well decide what to do by flipping a coin"; and "Many times I feel that I have little influence over the things that happen to me" or "It is impossible for me to believe that chance or luck plays an important role in my life." The index could range from 4 to 16, with higher values reflecting more external locus of control (less control for the individual). This index shows a very low level of internal reliability—Cronbach's alpha is .22.

[9]The school attitude index combines Likert scale responses to 10 items: "It's easy to make friends at this school," "Most of the teachers are willing to help with personal problems," "Most of my classes are boring," "I don't feel safe at school," "Most of my teachers really know their subjects well," "You can get away with almost anything at this school," "My schoolwork requires me to think to the best of my ability," "At this school, a person has the freedom to learn what interests him or her," "This school offers good job counseling," and "How satisfied are you with your school?" The index ranges

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from 10 to 40, with a reliability alpha of .66. Some young women did not answer the school attitude questions. Most of these nonrespondents were not in school during the survey in 1979. We add an indicator for missing school attitudes to our models to control for these differences.

[10]The minimum wage in 1979 was $2.90. The work commitment index is the sum of 7 yes/no responses to hypothetical job offers "If next summer you were offered a full-time job at $2.50 an hour do you think you would accept it" for washing dishes, working in a factory, working as a cleaning person, working at a check-out counter in a supermarket, cleaning up neighborhoods, making hamburgers, and working in a national park. The index could range form 0 to 7; high values indicate greater willingness to work. The reliability alpha is .73.

[11]The welfare participation index is the sum of responses to 2 items: "Suppose at age 35 you and your (husband/wife) could not earn enough money by working to support your family; please tell me whether you probably would or probably would not do each of the following things..." "Go on welfare" or "apply for food stamps." The range is 2 to 4 with a reliability alpha of .52.

[12]The index of attitudes of an influential person to nontraditional jobs are the combined responses to "We would like to ask you what your (relationship) would think if you decided to: a. be a carpenter, b. join the armed forces, c. be an accountant, d. become an electrical engineer, e. never have children, and f. pursue a full time career and delay starting a family." The index ranges from 6 to 24. Higher values indicate more support for nontraditional work. The reliability alpha is .64.

The index of respondent attitudes about women's work roles is the sum of a 4-point Likert scale for 6 items: "A women's place is in the home, not in the office or shop," "A wife who carries out her full family responsibilities doesn't have time for outside employment," "The employment of wives leads to more juvenile delinquency," "It is much better for everyone concerned if the man is the achiever outside the home and the woman takes care of the home and family," "Men should share the work around the house with women, such as doing the dishes, cleaning and so forth," "Women are

much happier if they stay at home and take care of their children." The index ranges from 6 to 24, higher values indicating more nontraditional attitudes. The reliability alpha is .72.

[13]Models not reported here also included median earnings for women in the respondent's state of residence. This additional contextual variable was insignificant in all models and had no effect on the substantive findings for the other variables.

[14]We have assumed that AFDC recipients ended AFDC participation if they reported 2 consecutive months of no AFDC payments. We ignored 1-month gaps in AFDC receipt because these are probably reporting, administrative errors or one-time receipt of substantial nonwelfare income which would not affect long-term participation patterns.

[15]Since many of the other personal characteristics we include are significant determinants of the AFQT score, we also ran the models without this variable. Results were virtually identical to those reported in Tables 5–7. The main differences were that the magnitude of the coefficient on black increased substantially in the participation and entry rate models (but not the exit model), and that self-esteem and work commitment became significant in the "from age 15" entry-rate model.

[16]In the Cox proportional hazard model, the explanatory factors shift the level of the hazard function, but the underlying shape of the function over time is assumed to be stable and is not estimated. Yamaguchi (1991, p.107) shows the partial likelihood function. Sample sizes for these models are slightly higher than for the logit models because they do not require complete data through age 25.

[17]Several studies include current region and location variables, which are usually insignificant, but we do not. Only our study examines psychosocial characteristics, AFQT, and religious affiliation and attendance.

[18]It is the only one to include AFQT, religious affiliation and attendance, and a range of family background and psychosocial characteristics. (O'Neill et al. 1987 looks only at self-efficacy.) Also, we

analyze first spells, while other studies analyze the first observed spell for a woman, which may not be her first-ever spell of welfare.

[19]We (1) interacted the benefit variables with poverty status to see if benefits had a stronger effect on women from economically disadvantaged families and, hence, more likely to be financially eligible; (2) ran separate models restricted to the subsample of women for whom the poverty status dummy equaled one; (3) adjusted the benefit measures for differences in states' cost of living (McMahon and Chang, 1991), and 4. dropped the Medicaid benefits variable.

[20]Further experimentation showed that if we omit the dummy variable for residence in the South at age 14, but otherwise use the same specification as in Tables 5–7, at least one of the two welfare variables is significant with the expected sign in both logit models and the "since age 15" entry hazard model (as well as in the exit model, as before). Since welfare benefits are much lower in the south, this finding may not be surprising. We believe it is appropriate to include the dummy, which we interpret as a proxy for social and cultural influences on welfare use, and conclude that benefit levels do not affect participation by age 25 or the rate of entry onto AFDC. Note that the dummy is negative and significant in the models which do not condition on having a birth, but insignificant in those which do. If the dummy was a weak proxy for low welfare benefits, we would expect it to be significant in both types of models. Results on the benefit variables were not sensitive to inclusion of the urban and unemployment contextual variables.

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References

Albert, Vicky N. 1988. *Welfare Dependence and Welfare Policy : A Statistical Study*. New York: Greenwood Press.

Bane, Mary Jo, and David T. Ellwood. 1983. *The Dynamics of Dependence: The Routes to Self-Sufficiency.* Report to the U.S. Department of Health and Human Services. Urban Systems Research and Engineering, Cambridge, Mass.

——————. 1994. *Welfare Realities*. Cambridge, Mass.: Harvard University Press.

Blank, Rebecca M. 1989. "Analyzing the Length of Welfare Spells." *Journal of Public Economics* 39: 245-273.

Blank, Rebecca M., and Patricia Ruggles. 1994. "Short-Term Recidivism among Public-Assistance Recipients." *American Economic Review* 84 (2): 49–53.

——————. 1996. "When Do Women Use Aid to Families with Dependent Children and Food Stamps? The Dynamics of Eligibility versus Participation." *Journal of Human Resources* 31: 57–89.

Brandon, Peter D. January 1995. "Vulnerability to Future Dependence among Former AFDC Mothers." Discussion Paper no. 1055-95, Institute for Research on Poverty, University of Wisconsin–Madison.

Duncan, Greg, and Saul Hoffman. 1990. "Welfare Benefits, Economic Opportunities, and Out-of-Wedlock Births among Black Teenage Girls." *Demography* 27: 519–536.

Ellwood, David. 1986. "Targeting 'Would Be' Long-Term Recipients of AFDC." Princeton, N.J.: Mathematica Policy Research, Inc.

Fitzgerald, John. 1995. "Local Labor Markets and Local Area Effects on Welfare Duration." *Journal of Policy Analysis and Management* 14: 43–67.

Gleason, Phillip, Anu Rangarajan, and Peter Schochet. No Date. "The Dynamics of AFDC Spells among Teenage Parents." Princeton, N.J.: Mathematica Policy Research, Inc.

Gottschalk, Peter. 1992. "The Intergenerational Transmission of Welfare Participation: Facts and Possible Causes." *Journal of Policy Analysis and Management* 11: 254–272.

——————. 1995. "Is the Correlation in Welfare Participation across Generations Spurious?" Boston College, Department of Economics.

——————, and Robert Moffitt. 1994. "Welfare Dependence: Concepts, Measures and Trends," *American Economic Review* 84(2): 38–42.

Gritz, R. Mark, and Thomas MaCurdy. 1991. "Patterns of Welfare Utilization and Multiple Program Participation among Young Women." Report to the U.S. Department of Health and Human Services.

Harris, Kathleen M. 1993. "Work and Welfare among Single Mothers in Poverty." *American Journal of Sociology* 99: 317–352.

——————. 1994. "Life after Welfare: Women, Work, and Repeat Dependency." Unpublished Paper, University of North Carolina–Chapel Hill.

Haveman, Robert, and Barbara Wolfe. 1994. *Succeeding Generations: On the Effects of Investments in Children*. New York: Russell Sage Foundation.

Hoynes, Hilary, and Thomas MaCurdy. 1994. "Has the Decline in Benefits Shortened Welfare Spells?" *American Economic Review* 84(2): 43–49.

Hutchens, Robert. 1981. "Entry and Exit Transitions in a Government Program: The Case of Aid to Families with Dependent Children." *Journal of Human Resources* 16: 217–237.

Lane, Julia, and David Stevens. 1995. "Family, Work, and Welfare History: Work and Welfare Outcomes." *American Economic Review* 85(2): 266–270.

McLanahan, Sara. 1988. "Family Structure and Dependency: Early Transitions to Female Household Headship." *Demography* 25: 1–17.

McMahon, Walter, and Shao-Chung Chang. 1991. "Geographical Cost of Living Differences: Interstate and Intrastate." Center for the Study of Educational Finance, Illinois State University, Normal, Ill.

Moffitt, Robert. 1983. "An Economic Model of Welfare Stigma." *American Economic Review* 73: 1023-1035.

——————. 1992. "Incentive Effects of the U.S. Welfare System: A Review." *Journal of Economic Literature* 30: 1–61.

O'Neill, June A., Laurie J. Bassi, and Douglas A. Wolf. 1987. "The Duration of Welfare Spells." *Review of Economics and Statistics* 69: 241-248.

Pavetti, LaDonna. 1993. "The Dynamics of Welfare and Work: Exploring the Process by Which Young Women Work Their Way Off Welfare," Ph.D. dissertation, Malcolm Wiener Center for Social Policy, Kennedy School, Harvard University.

Petersen, Carol. 1995. "Female-Headed Families on AFDC: Who Leaves Welfare Quickly and Who Doesn't?" *Journal of Economic Issues* 29: 619–628.

Plotnick, Robert. 1983. "Turnover in the AFDC Population: An Event History Analysis." *Journal of Human Resources* 18: 65-81.

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Solon, Gary; Mary Corcoran, Roger Gordon, and Deborah Laren. 1988. "Sibling and Intergenerational Correlations in Welfare Program Participation." *Journal of Human Resources* 23: 388–396.

Yamaguchi, Kazuo. 1991. *Event History Analysis*. Newbury Park, Calif.: Sage Publications.