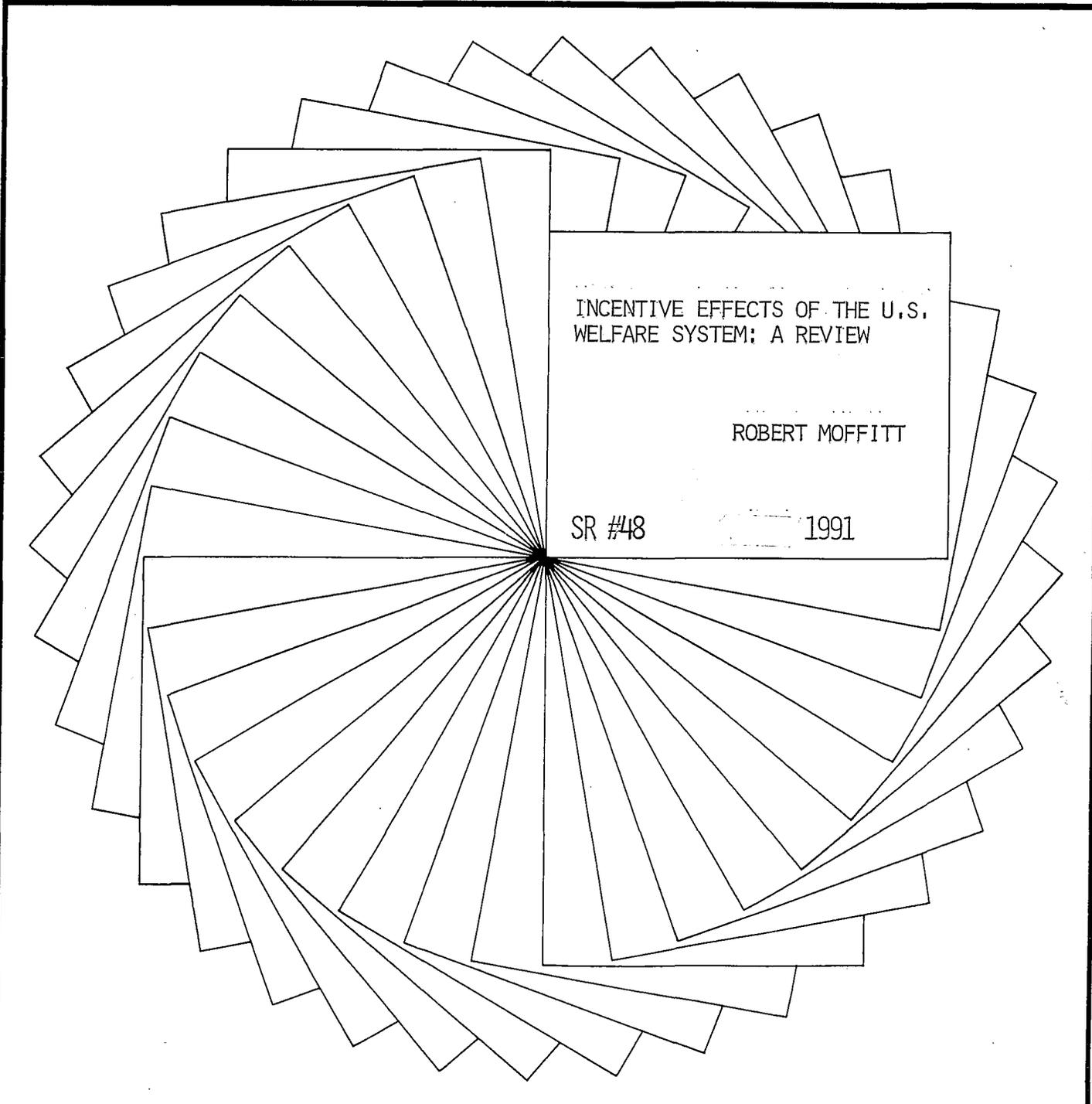


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INCENTIVE EFFECTS OF THE U.S.  
WELFARE SYSTEM: A REVIEW

ROBERT MOFFITT

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Incentive Effects of the U.S. Welfare System:

A Review

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## I. INTRODUCTION

The U.S. welfare system has been considered by many observers to be in a state of crisis since the late 1960s. Over the past two decades the welfare system has experienced an expansion unprecedented by historical standards and whose results are still being felt today. Between 1965 and 1985, the caseload in the Aid to Families with Dependent Children (AFDC) program, the best-known cash transfer program in the country, increased by 270 percent. Over the same time period, the Food Stamp program grew from a small commodity distribution program to a transfer program with twice as many recipients as AFDC. The caseload in the Medicaid program, which was introduced in 1965 and provides health benefits to low-income families, has grown to exceed even that of the Food Stamp program.

The first and foremost concern over this welfare "explosion," as it is generally termed, is with the high rates of public expenditure it has generated. From 1970 to 1987, real expenditures on income-conditioned, or welfare, programs grew by 224 percent, reaching 3.5 percent of GNP by FY 1987. Most of this growth arose from the Food Stamp and Medicaid programs, for expenditures on AFDC grew by only 50 percent. In a time of budget stringency in the public sector, this growth has been particularly troublesome.

An additional concern, however, is with the high caseloads themselves and with their implications for possible long-term welfare "dependency" and work disincentives. The extraordinarily low levels of work effort and earnings among welfare recipients have long been suspected as being partly the result of such disincentives. A further concern has arisen over the growth in the 1970s and 1980s of female

heads of family, the primary eligibility group for the programs. A high proportion of such families are poor by official government standards and have contributed to what some have termed the "feminization of poverty" in the United States. There has long been a suspicion that the growth of these families is in part a result of the welfare system. Since poverty among female-headed families is generally more severe than among husband-wife families, and since an increasing proportion of children are growing up in poverty in female-headed families, the trend has been regarded as particularly socially undesirable.

In this review I survey the results of research to date on the effects of the welfare system on work incentives, welfare dependency, family structure, migration, and intergenerational transmission of dependency. The research on work incentives is the largest in volume, for it is the issue with which economists have been traditionally concerned. The literature on work incentives and the welfare system dates at least to Milton Friedman and the discussions of a negative income tax in the 1960s (Friedman, 1962; Lampman, 1965; Tobin, 1965; Tobin, Pechman, and Mieszkowski, 1967). On the other hand, the volume of research on welfare "dependency"--that is, on the extent of long-term rather than short-term dependence on the welfare system--is more recent and considerably smaller in volume. There are a significant number of studies of the effect of the welfare system on family structure--childbearing, marriage, divorce, and living arrangements--including a demographic literature in the area which goes back many years. The literatures on migration effects and intergenerational transmission, on the other hand, are quite small.

Keeping the length of the review manageable requires selection in the programs surveyed. The review will cover only programs for the nonelderly, thereby leaving aside the Social Security retirement system and the Supplemental Security Income program; programs for the nondisabled, thereby leaving aside the panoply of U.S. disability programs; and welfare rather than social insurance programs, thereby leaving aside unemployment insurance. The programs remaining after these restriction are imposed--primarily AFDC, Food Stamps, Medicaid, and public housing--constitute the core of the transfer system for the low-income population in the United States.

The essay is organized around three sets of questions. The first set concerns the background to the problem. What are the major transfer programs for the poor, what demographic groups do they serve, and what have been their patterns of growth? Are the programs still growing or are we concerned only with the effects of past growth? We shall also inquire into the patterns of work and welfare receipt among those demographic groups served. Are work levels indeed low among recipients? Have they been dropping over time? Do their time-series trends correlate, even on a prima facie examination, with trends in the generosity of the welfare system? These questions are the subject of Section II.

The second set of questions is concerned with the available research evidence on the effects of existing programs on work effort, welfare receipt and turnover, family structure, migration, and intergenerational transmission. Does the available cross-sectional econometric evidence indicate that the welfare system seriously reduces

labor supply, encourages long-term dependency, increases marital breakup and illegitimacy, induces migration from low-benefit to high-benefit states, and produces succeeding generations of welfare recipients? The prior review by Danziger et al. (1981) is relied upon here, at least for labor supply. If there are such effects in the cross-sectional literature, are they in the correct direction and sufficiently large to explain the time-series trends? These issues are long-standing subjects of debate in the popular press, where the extensive research evidence reviewed here is almost completely ignored. These questions are the subject of Section III.

The third set of questions concerns the expected impact of policy measures that have been proposed for improving levels of employment and earnings. Would lowering the benefit reduction rate--for example, with a negative income tax--help solve the work incentive problem, as most economists propose? Would training programs for welfare recipients increase their human capital and permit them to leave the welfare rolls? Should we simply impose work requirements on all recipients, as now appears popular in some quarters? Would a reform of the child support system--for example, by making absent fathers pay more toward the support of their children--reduce dependency on AFDC? Would an extension of benefits to husband-wife couples reduce the incidence of female-headed families in the United States? These questions are the subject of Section IV. The last section of the paper draws final conclusions and makes suggestions for future research.

## II. BACKGROUND AND TIME-SERIES EVIDENCE

### A. Program Growth and Groups Served

The most widely known cash transfer program for the poor in the United States is the AFDC program. It is, for the most part, a program only for female heads--the term used throughout this paper to refer to female heads of family with children under 18 present. To be eligible for benefits a family must have income and assets below certain specified levels, levels set in each of the 51 states and jurisdictions in the United States. Benefits are paid according to a schedule which sets a "guarantee" amount for a family of a given size and which reduces benefits at a certain rate as recipient income rises. While the reduction rate is set federally, the guarantee amount is set by the individual states and varies widely across the country. For example, the guarantee for a family of four in January 1989 ranged from \$788 per month in California to \$144 per month in Mississippi (U.S. House of Representatives, 1989, p. 541). These differences are far greater than can be explained by differences in cost of living and hence represent real differentials.

Table 1 illustrates the growth of the AFDC caseload. The program saw its greatest growth in the decade 1965-1975, during which time the number of families on the rolls more than tripled. This phenomenal expansion was followed by a period of slow growth from 1975 to 1980 and a leveling-off after 1980. The leveling-off is attributable in part to the 1981 Omnibus Budget Reconciliation Act (OBRA), federal legislation which restricted eligibility for the program. The simple lesson of

Table 1

Average Monthly Caseloads of Major Income-Tested Transfer Programs,  
1960-1985  
(in millions)

	1960	1965	1970	1975	1980	1985
AFDC <sup>a</sup>						
Families	.8	1.0	2.2	3.5	3.7	3.7
Recipients	3.0	4.3	8.5	11.3	10.8	10.9
AFDC-UP						
Families	--	.06	.08	.10	.14	.26
Recipients	--	.36	.42	.45	.61	1.13
No. states with program	--	18	23	27	26	25
Food Stamp						
Recipients	--	.4	4.3	17.1	21.1	19.9
Medicaid Recipients						
Total <sup>b</sup>	--	--	15.5	22.0	21.6	22.2
Adults with dependent children	--	--	3.4	4.5	4.9	5.5
Dependent children	--	--	7.3	9.6	9.3	9.8

Sources: See Appendix.

<sup>a</sup>Includes AFDC-UP in the years 1965-85. This optional program was instituted in 1961.

<sup>b</sup>Includes blind, elderly, and disabled.

Table 1 is that the caseload explosion is long since over. Further, there are no signs of any second surge of caseload growth.

In approximately half of the states, husband-wife families who meet the income and asset conditions for AFDC and who have children under 18 are also eligible for benefits under the AFDC-UP program (UP for unemployed parent). However, the primary earner of the family (usually the husband) must be unemployed and must have a history of labor attachment and earnings similar to that required for eligibility for unemployment insurance. The AFDC-UP caseload (see Table 1) has always been extremely small because of its stringent eligibility requirements, although there has recently been a spurt of growth. However, even in 1985 the caseload was only 7 percent of AFDC and hence of no serious empirical consequence for the welfare system.

The most important development in the transfer system in the 1970s was the emergence of in-kind transfers. Begun in the mid-1960s, the Food Stamp program provides food coupons to families with low income and assets regardless of family type or marital status, and hence is closer to a universal transfer program than any other in the country. There is also widespread evidence that the coupons are equivalent to cash because coupon amounts are so low. Consequently, its in-kind nature is less important than the breadth of its eligibility requirements. The program is run by the federal government, which sets benefits at the national level. As Table 1 shows, the program was very small in 1965, shortly after its introduction, but grew rapidly in the 1970s. The rapid growth was largely the result of action by Congress in 1973 mandating that all counties in all states carry the program. In 1985 there were almost

twice as many Food Stamp recipients as AFDC recipients, even though expenditures were only about 50 percent greater because Food Stamp benefits are considerably lower than AFDC benefits. The caseload in the program has been essentially stationary for the last few years, if not declining, just as for AFDC.

The Medicaid program is the major source of health benefits for the poor, providing a basic set of free or subsidized medical services to eligible families. The program is federally subsidized and regulated but administered by the states, which have some leeway in defining the set of services offered. However, eligibility for the program is highly restricted in most states because eligibility is almost entirely based upon AFDC receipt, at least among the nondisabled and non-aged. As a consequence, poor husband-wife couples are generally not eligible for Medicaid.<sup>1</sup> Moreover, while 37 states allow some benefits for non-AFDC female-headed families, they provide assistance only to families with a major medical expense. To be eligible for benefits, such families must be willing to use up their private assets (to "spend them down," in the parlance) until they are, effectively, poor. Consequently, female heads not on AFDC are frequently ineligible for Medicaid, making the AFDC connection to the program even stronger.

As Table 1 indicates, the program was small until 1970--its enabling legislation was passed in 1965--but its growth leveled off after 1975. Although the total caseload is even greater than that of Food Stamps, this is largely the result of a high proportion of elderly and disabled recipients in the caseload. Female heads and their

children constitute about two-thirds of all Medicaid recipients, reflecting the close tie of the program to AFDC reciprocity.

These three programs constitute the largest components of the U.S. transfer system for the poor. The major remaining programs are those providing public housing and subsidized-rent payments to low-income families for private housing. Such housing is provided to families with low income and assets regardless of family type or composition, although a large fraction of AFDC recipients (20 percent) receive subsidies of this form (U.S. House of Representatives, 1989, p. 570). It is locally provided and usually rationed. However, expenditures on housing remain below those of all three programs we have thus far considered. Other programs for the poor which are even smaller are those providing free and reduced-price meals to children of low-income families, locally provided general assistance programs, and energy assistance (Burke, 1988).

The evidence in Table 1 immediately raises the question of the cause of the startling explosion of the AFDC caseload in the late 1960s and early 1970s. From its inception in 1935 to that time, the program had experienced only slow growth. Another question is whether this growth and the introduction of two major in-kind transfer programs resulted in reductions in labor supply and increases in marital instability.

Before examining the evidence on these questions, it is necessary to determine whether any demographic group other than female heads is likely to have been affected by the transfer system. The answer is essentially "no." As illustrated in Table 2, less than 20 percent of

Table 2

Benefit Receipt by Family Type, 1984  
(percentage distribution)

	Nonelderly Single-Parent Families	Nonelderly Two-Parent Families
No program	44.5	81.8
Food Stamps only	3.6	1.9
Medicaid only	1.1	0.9
AFDC and Medicaid only	2.3	0.6
Food Stamps and Medicaid only	0.5	0.3
AFDC, Medicaid, Food Stamps, only	15.4	1.2
AFDC, Medicaid, Food Stamps, and one or more other benefits	11.0	0.5
AFDC, Medicaid, and one or more other benefits (not Food Stamps)	1.0	0.3
Cash transfers only*	9.7	7.6
Housing assistance only	3.3	0.9
Other	<u>7.6</u>	<u>4.0</u>
Total	100.0	100.0

Sources: See Appendix.

\*Includes unemployment insurance, general assistance, and other cash programs.

two-parent families (i.e., husband-wife couples) received any type of benefit at all in 1984, and around half of those that did received cash transfers other than AFDC, Medicaid, and Food Stamps--primarily unemployment insurance. As a result, even though such families are eligible for AFDC-UP in some states and for Food Stamps in all states, their rates of recipiency are very low. This is to be contrasted with the patterns for single-parent families, more than half of whom receive at least one form of benefit and over 25 percent of whom receive AFDC, Food Stamps, and Medicaid. Table 2 thus constitutes prima facie evidence that any significant labor supply effects of the transfer system will be found only among female heads. One important possible exception to this conclusion will be discussed in Section III.

#### B. Time-Series Evidence on the Welfare System

An examination of the simple time-series evidence on trends in the generosity of benefits in AFDC, Food Stamps, and Medicaid should establish whether there is any straightforward explanation for the AFDC caseload explosion. An examination of the simple time-series evidence on labor supply and welfare participation rates should likewise establish whether any straightforward case for behavioral effects can be made.

A long-term perspective on the trend in benefit levels and the AFDC caseload is provided in Figure 1, which shows trends in both from the 1940s to 1985.<sup>2</sup> The trend in the AFDC caseload (annual average of families per month per capita) is consistent with that in Table 1,

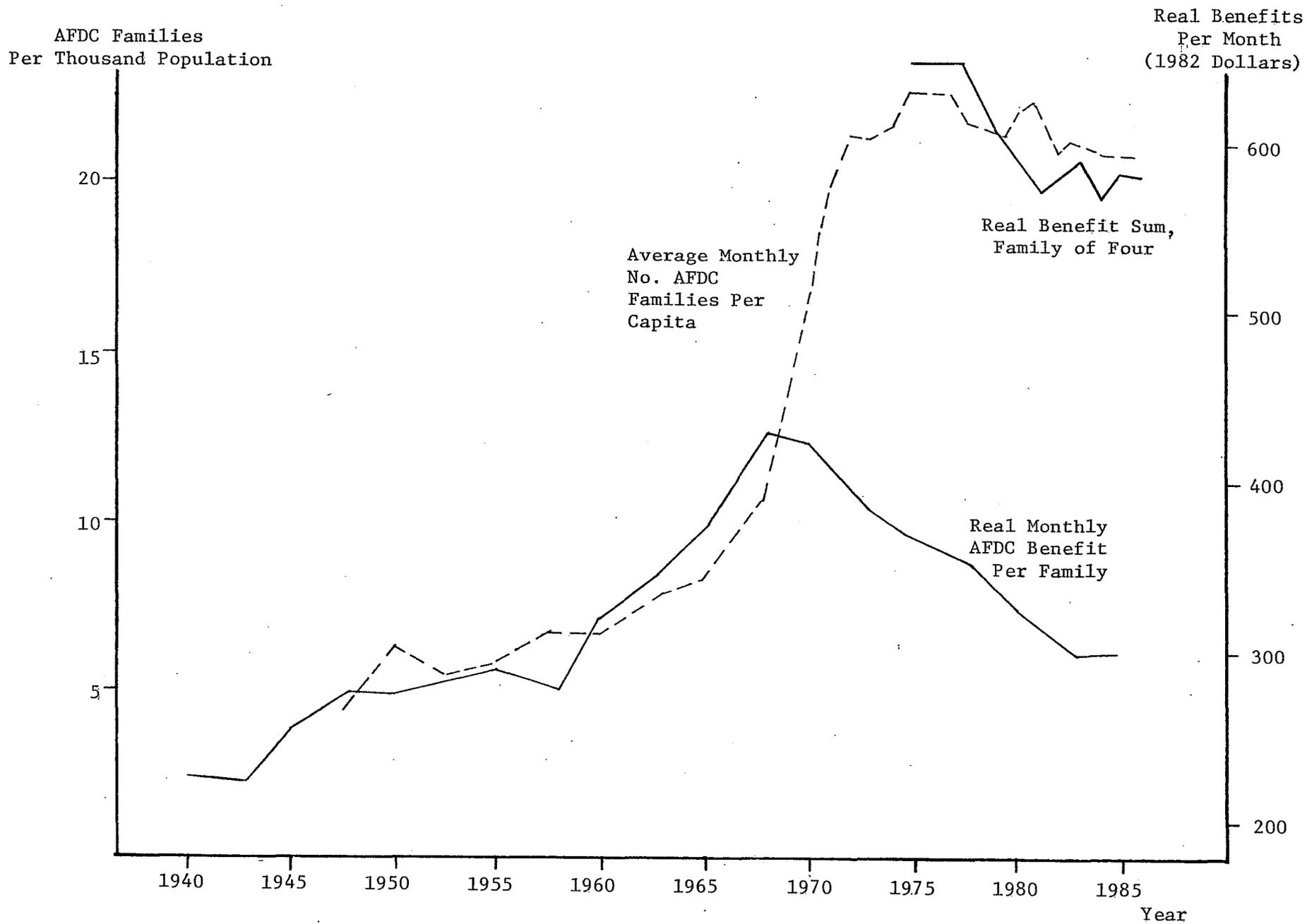


Figure 1. Caseload and Benefit Trends in the U.S. Welfare System  
 Sources: See Appendix.

showing gradual growth up until the explosion in the late 1960s, followed by a tapering off and then a slight decline. The more interesting trends in the figure are those for the real AFDC benefit and for the sum of real AFDC, Food Stamps, and Medicaid benefits. As the figure indicates, the AFDC benefit rose gradually over the 1950s, accelerated slightly in the early 1960s, but abruptly peaked around 1967 and took a sudden and rapid nosedive thereafter. It plummeted to such an extent that benefits in 1985 were slightly below those in 1960 in real terms. The decline in real AFDC benefits was, mechanically, a result of state legislatures failing to raise nominal benefit levels enough to keep up with inflation.

This dramatic and unexpected decline in real AFDC benefits has been widely noted by analysts in the field and has often been taken to imply that transfer benefits have grown less generous over the 1970s and 1980s. However, the introduction of Food Stamps and Medicaid in the late 1960s and early 1970s largely offsets the decline in AFDC. Data on real benefits in the two in-kind programs are unavailable from their introduction in 1965 to 1974, so the benefit sum is shown in the figure only for the period after 1974. As the figure indicates, the real benefit sum in 1975 was naturally much higher than AFDC alone but also much higher than AFDC alone in 1965; there was consequently a large increase in the total transfer. In addition, the figure shows that the total transfer increased just as did the per capita caseload over the period 1965-1975. The benefit sum subsequently declined in real terms after 1975, as did the caseload (see Garfinkel and McLanahan, 1986, pp. 124-127 for similar results).<sup>3</sup>

The explanation for the decision of state legislatures to let the real AFDC benefit decline so drastically is the subject of a separate literature and will not be discussed here in any detail. There is some evidence that states did so because of the federal introduction of Food Stamps and Medicaid, and that the real benefit sum of all three has grown directly in line with national income (see Orr (1979) and Moffitt (1990b) for supporting evidence and Gramlich (1982) and Plotnick and Winters (1985) for opposing evidence). In any case, for present purposes the question is whether the caseload explosion can be explained by benefit growth of either AFDC or the benefit sum, and for this question Figure 1 suggests strongly that it was the result of benefit growth of AFDC in the early 1960s and of the benefit sum later.

Observers of the AFDC system have noted that there were institutional changes in the late 1960s and early 1970s that reinforced the effects of the benefit increase. For example, during this period the U.S. Supreme Court ruled unconstitutional two eligibility restrictions commonly used by the states, one the requirement that a family reside in a state for at least a year before eligibility can be established and the other a requirement that there be no male in the household even if he is not providing support to the family (Michel, 1980). It is also sometimes argued that there was a reduction in the stigma of welfare receipt over this period as AFDC came to be viewed as a "right." However, such a change could be endogenous and merely a result of benefit increases and the relaxation of eligibility restrictions.

Table 3 provides more detailed evidence for the period from 1967 onward, when microdata from the Census Bureau's Current Population Survey became available. The first row shows the trend in the participation rate in the AFDC program, defined as the percent of all female heads with children under 18, both those who are income-eligible and those who are not, who are on AFDC. As the table indicates, this participation rate rose dramatically from 1967 to 1973, from 36 percent to 63 percent, thus following the same general pattern as the caseload. However, unlike the caseload, AFDC participation rates have declined more or less continuously since 1973. The arithmetic reason for the difference is simply that the number of female heads per capita in the United States rose over the 1970s, keeping the caseload relatively high. But the fact that AFDC participation rates declined is evidence that the propensity to participate in the AFDC program, conditional upon being a female head, has declined, and this requires an explanation.

To provide such an explanation requires an understanding of the rudimentary theory of participation rates in a transfer program. Figures 2 and 3 show conventional income-leisure diagrams with transfer programs added. In Figure 2, the non-welfare constraint is ABEFH while the welfare constraint with guarantee  $G$  and benefit-reduction rate (or "tax rate")  $t$  appears as ABCEFG. Non-participation in transfer programs of this type arises from two sources: first, individuals above the income eligibility point,  $E$  (also called the "breakeven point"), do not participate, and, second, individuals who locate along segment  $BE$  do not participate. The fact that there are many individuals of the latter type--that is, non-participating eligibles--has been the subject of

**Table 3**  
**Welfare Participation Rates and Related Variables, 1967-1987**

	1967	1969	1971	1973	1975	1977	1979	1981	1982	1983	1984	1985	1986	1987
AFDC Participation Rates of Female Heads with Children <sup>a</sup>	36	42	62	63	62	57	52	53	44	45	44	43	44	42
Real Monthly Benefits <sup>b</sup>														
AFDC <sup>c</sup>	n.a.	515	513	485	490	485	448	410	394	387	387	396	401	391
Food Stamps <sup>c</sup>	n.a.	233	214	218	247	246	233	221	233	244	234	237	234	227
Medicaid <sup>d</sup>	n.a.	n.a.	n.a.	n.a.	169	187	180	185	200	212	184	184	181	n.a.
Sum <sup>e</sup>	n.a.	n.a.	n.a.	n.a.	652	654	613	576	582	593	573	582	581	n.a.
Benefit/Earnings <sup>f</sup>														
AFDC	n.a.	66	60	53	55	52	46	42	41	39	39	40	39	n.a.
Sum	n.a.	n.a.	n.a.	n.a.	73	70	63	59	61	60	58	59	57	n.a.
Other AFDC Parameters <sup>g</sup>														
BRR (%)	100	67	67	67	67	67	67	67	100 <sup>h</sup>					
BE	n.a.	769	766	724	731	724	669	612	394	387	387	396	401	391

Sources: See Appendix.

<sup>a</sup>Adjusted for CPS subfamily coding errors.

<sup>b</sup>In 1982 dollars (personal consumption expenditure deflator).

<sup>c</sup>Maximum amount paid for a family of four with no other income.

<sup>d</sup>Insurance value for a family of four, equal to average AFDC adult Medicaid expenditures plus three times the average dependent child Medicaid expenditures divided by the number of AFDC adults. Deflated by a state-specific medical-care price index tied to the medical care component of the CPI.

<sup>e</sup>Food Stamp benefit plus 70 percent of AFDC benefit plus 36.8 percent of Medicaid. See text.

<sup>f</sup>Multiplied by 100. Earnings are real weekly earnings of working females times 4.33.

<sup>g</sup>BRR = benefit reduction rate. BE = breakeven level = benefit divided by BRR.

<sup>h</sup>After four months.

n.a. = not available.

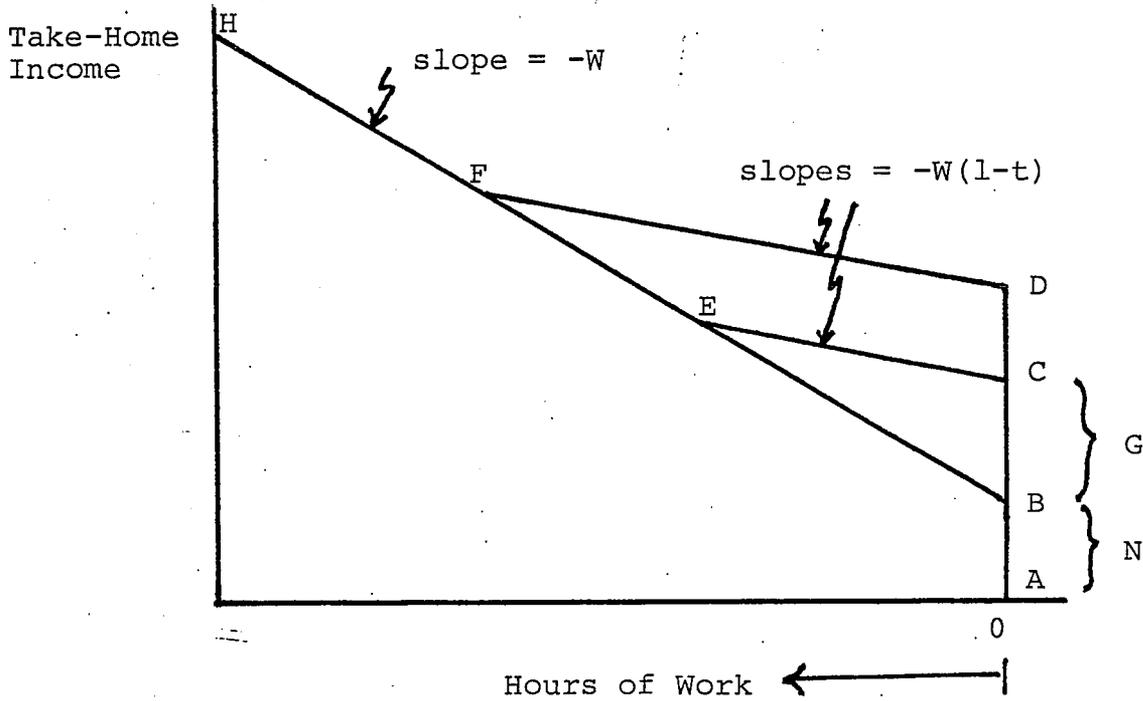


Figure 2. Increase in Guarantee.  
 G=guarantee, t=benefit reduction rate, W=hourly wage rate,  
 N=nontransfer nonwage income (assumed untaxed)

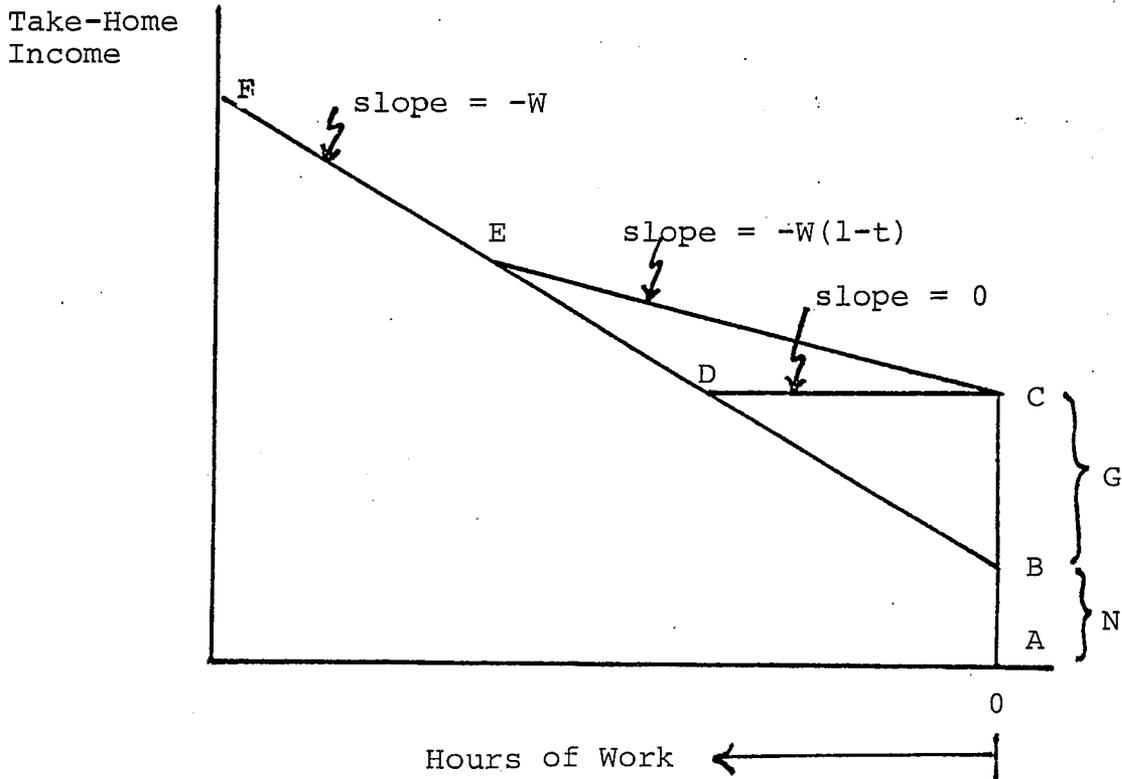


Figure 3. Decrease in Benefit Reduction Rate.

considerable attention in the research on welfare participation, and has been hypothesized to result from the stigma of welfare receipt (Moffitt, 1983), from the transactions costs of participation, from lack of information on eligibility, and even from mismeasurement in the data.

The econometric literature on the determinants of participation will be discussed in detail below, but for present purposes it is important to note that participation rates will change with  $G$  and  $t$  for what Ashenfelter (1983) has termed "mechanical" reasons as well as "behavioral" ones. As shown in Figure 2, an increase in  $G$  will raise the breakeven point from  $E$  to  $F$  and will therefore make all individuals initially located in that range eligible for benefits "mechanically." Likewise, as shown in Figure 3, a decrease in the benefit-reduction rate from  $t=1$  (segment  $CD$ ) to  $t<1$  (segment  $CE$ ) will make individuals between  $D$  and  $E$  "mechanically" eligible. In addition to changes in participation rates that result from such mechanical changes in eligibility, the rates will change (1) because some individuals will respond to the  $G$  or  $t$  alteration by moving from above-breakeven to below-breakeven, and (2) because some individuals initially along segments  $BE$  (Figure 2) and  $BD$  (Figure 3) will decide that the higher potential benefit outweighs the stigma cost, transaction cost, or whatever inhibition they have for joining the welfare rolls.<sup>4</sup>

Returning to the question of explaining the quadratic time-series pattern of AFDC participation rates, it would appear that the similar quadratic pattern in the pattern of the total benefit could easily have generated such a pattern of rates. As shown in Table 3, the AFDC benefit alone in 1969 was considerably lower than the benefit sum in the

mid-1970s, but that the sum declined thereafter, as was also seen in Figure 1.<sup>5</sup> The benefit also rose and fell relative to earnings. A natural question is whether the participation rate movements were solely a result of mechanical changes in eligibility or from behavioral changes. The answer is that it was a result of both, for not only did the fraction of eligibles rise and fall with the benefit but participation rates among eligibles have been shown to have risen and fallen in the same pattern, rising from 45 percent in 1967 to 91 percent in 1973 and falling thereafter (Michel, 1980).

As for the benefit-reduction rate (BRR), it has been altered twice in the history of the AFDC program. The nominal BRR was 100 percent until 1967, when Congress lowered it to 67 percent to provide work incentives to AFDC recipients. Congress increased the BRR again to 100 percent in 1981, where it currently stands (see Table 3).<sup>6</sup> The breakeven level thus jumped in 1967-1969, when the 1967 federal legislation was implemented, but gradually fell over the 1970s (see Table 3) because the real AFDC guarantee declined. The breakeven level then fell precipitously in 1982 following the 1981 legislation. Thus, these BRR alterations reinforced the changes in the benefit level, increasing participation in the earlier years and decreasing it in the later years. Once again, the evidence suggests that both mechanical and behavioral responses occurred.

It should be noted that these participation rate and breakeven level trends imply that there has been a redistribution of AFDC benefits within the population of female heads. The real AFDC breakeven level was lower in 1985 than it had been in 1969, implying that benefits are

concentrated in a smaller portion of the lower tail of the earnings distribution of female heads than was the case in the 1960s. Put differently, many female heads with moderate earnings levels who would have been eligible in the 1960s are not eligible currently.

It may also be noted that the apparent stabilization of the real benefit level and of the AFDC participation rate over the last few years implies that the growth of the AFDC caseload has been, and perhaps will continue to be in the future, driven by the growth in the female-headed population even more than in the 1970s, when, as mentioned before, it was only that growth that kept the caseload from falling. As a matter for future research, studying the determinants of female-headedness itself would therefore appear to be of particular importance for understanding caseload growth.

While the evidence thus far provides a prima facie case that participation rates have been heavily influenced by potential benefit levels and the benefit-reduction rate, it provides no direct information on labor supply. (Throughout the paper, the terms "labor supply," "work effort," and "hours of work" are used interchangeably.) This information is offered in Table 4, which shows trends in the work levels of female heads since 1968. Among female heads on AFDC, an extraordinarily low percentage work--never more than 18 percent over the entire period and only 6 percent in 1987. Thus the AFDC program has consisted almost entirely of nonworkers, a result with important implications for welfare reform policy because it implies that, at least to date, work and welfare have been almost mutually exclusive alternatives (see Section IV). However, of those who work, more than 50

Table 4

Labor Force Indicators for Female Heads with Children under 18 and Other Women in United States, 1968-1987

	1968	1969	1971	1973	1975	1977	1979	1981	1982	1983	1984	1985	1986	1987
AFDC Female Heads														
Percentage working	16 <sup>a</sup>	15	17	18	18	15	16	14	7	5	5	n.a.	6	6
Percentage working full time <sup>b</sup>	50 <sup>a</sup>	67	59	61	67	60	56	57	29	31	25	n.a.	28	33
Real monthly earnings <sup>c</sup>	358 <sup>a</sup>	495	487	497	485	480	428	429	240	228	226	n.a.	231	236
All Female Heads with Children under 18														
Percentage working	52	51	49	49	48	50	56	55	53	49	53	53	55	54
Percentage working full time <sup>b</sup>	71	73	71	71	69	71	75	74	72	74	73	73	75	74
Hours of work per week <sup>d</sup>	19	19	18	18	17	18	21	20	19	18	19	19	20	20
Employment Rates of Women, 16+														
All	40	41	40	42	42	44	47	48	48	48	49	50	51	52
Single	48	48	48	51	50	52	57	55	54	54	56	58	58	58
Married, spouse present	37	38	38	40	41	43	47	48	48	48	50	51	52	53
Divorced or separated	n.a.	n.a.	55	58	58	60	63	64	63	61	63	64	66	65
Unemployment Rate	3.6	3.5	5.9	4.9	8.5	7.0	5.8	7.6	9.7	9.6	7.5	7.2	7.0	6.2

Sources: See Appendix.

<sup>a</sup>October-December 1967.<sup>b</sup>Of those working.<sup>c</sup>In 1982 dollars; workers only.<sup>d</sup>Includes nonworkers.

n.a. = not available.

percent have worked full time, at least until 1982. But monthly earnings of workers are very low and indicate that hourly wage rates are at or below the minimum wage for many.

All these measures of labor supply and earning power for AFDC recipients rose slightly in the mid-1970s, gradually declined in the late 1970s, and dropped precipitously in 1982. This pattern can be largely explained by movements in the income breakeven level in the program. The increase in the breakeven in 1967-1969 allowed more relatively high-earning female heads onto the rolls, thereby raising the average level of labor supply and earnings in the caseload purely from a change in its composition (this should be clear from Figures 2 and 3). The 1981 OBRA legislation had the opposite effect, increasing the benefit-reduction rate and reducing maximum allowable income in the program, thereby eliminating many earners from the rolls and lowering the average earnings and labor supply levels observed among remaining recipients. Consequently, the trends in labor supply and earnings of AFDC recipients cannot be taken as evidence of any true behavioral responses to changes in the AFDC program, but must instead be considered as statistical artifacts whose movement is largely determined by changes in the composition of the caseload.

To examine behavioral changes, all female heads must be examined instead. As shown in Table 4, about 50 percent of all female heads with children under 18 work for pay. With a 50 percent AFDC participation rate and a 15 percent employment rate among AFDC recipients, this implies that employment rates among non-AFDC female heads are approximately 85 percent, much higher than those of AFDC female heads

(the difference is not an accurate measure of the disincentive effect of AFDC on labor supply--see Section III). About 70 percent of working female heads work full time and average hours of week (including zeros for nonworkers) are about 20.

Do the trends in labor supply of AFDC female heads over the 1960s, 1970s, and 1980s appear to be influenced by program benefit levels or the BRR? No consistent connection is apparent. Their labor supply by all measures fell over the late 1960s and early 1970s, rose in the mid-1970s, and then began declining again in the late 1970s, leveling off in the 1980s. The early declines in labor supply are consistent with the rising benefit levels in those years and the subsequent slight rise in labor supply is consistent with falling benefit levels. But some other explanation is required for the decline in labor supply thereafter. That decline could have resulted from work disincentives in the 1981 legislation, hiking the benefit-reduction rate back to 100 percent, but the difficulty with this explanation is that the labor supply decline began in the late 1970s.<sup>7</sup> Moreover, the fall in the benefit-reduction rate in 1967 appears to have had no detectable effects on labor supply whatsoever, since labor supply actually declined thereafter, although this may have simply been a result of stronger income effects of the benefit increase than substitution effects from the BRR decrease.

In any case, the most surprising feature of Table 4 is the extreme inelasticity of the labor supply of female heads, for the employment rates and hours of work of female heads have been extraordinarily stable over the entire period despite major changes in benefit levels, benefit-reduction rates, benefit-earnings ratios, and unemployment rates.

Between 1968 and 1981, the employment rates of AFDC recipients varied only from 14 percent to 18 percent and those of all female heads varied only from 48 percent to 56 percent. Hours of work of all female heads varied only between 17 and 21 per week. In fact, their labor supply was about the same in 1987 as it had been in 1968, despite a virtual transformation in the nature and scope of the U.S. transfer system. This extreme inelasticity does not augur well for the prospect of increasing work effort by any change in benefits or benefit-reduction rates, a point to which I shall return later in the essay.

If we adopt the working hypothesis that the low levels of labor supply of female heads are not a result of transfers, to what can they be attributed? Does female headship per se lead to such low levels of work effort? Some perspective on the latter question is lent by the employment rates of women as a whole, shown at the bottom of Table 4. Interestingly, female heads with children under 18 have higher employment rates than women as a whole, although this is partly because the latter group includes many widows and many female heads without children. But female heads work about the same amount as single (never-married) women, a fairly surprising finding given their greater child care responsibilities; slightly less than divorced and separated women; and, again surprisingly, even more than married women, most of whom also have children. It is also the case that female heads have higher real earnings than all women, even among workers only (not shown in the table). Thus we find that female heads of family with children under 18--a very low-income group, of whom 40 percent are below the poverty line, half are on AFDC, and more than half receive Medicaid benefits--

work about the same, on average, as all other women, generally earn more than all other women, and sometimes work more than many of those women who also have children. An explanation for this finding may be that it is simply a result of income effects on labor supply, for female heads have lower family income, on average, than women as a whole and than married women.<sup>8</sup>

The implication of these comparisons is that it is not obvious that there is a "problem" with low work effort among female heads. Likewise, their earnings levels do not obviously imply there is any problem with their levels of human capital. Female heads seem to be at no particular disadvantage with respect to these features of labor market performance than are married women, for example. A major difference between them is, of course, the absence of a male with income to help support the children and the absence of any other sources of non-transfer income in female-headed families. Indeed, among all female heads, only 20 percent of family income is constituted by unearned nontransfer income and the earnings of family members other than the female head. The earnings of the female head constitute the largest part of family income (60 percent), while AFDC and other transfers account for the remaining 20 percent (Moffitt, 1986b, Table B-1).

This finding obviously raises the question of why policy efforts have focused so heavily on increasing the earnings and employment of female heads and not that of married women (and men). It also raises the issue of whether the high poverty rates of female heads are not a result of their female-headedness itself. If they are, it follows that research on the types of welfare reform best suited to reducing poverty

should concentrate less on labor supply models of female heads, where most of the research has been conducted to date (see the next section of the essay) and more on the determinants of female-headedness. This coincides with the expectation, mentioned previously, that future trends in the AFDC caseload are more likely to be driven by growth in female-headedness than by trends in AFDC participation rates or benefit levels.<sup>9</sup>

Some qualifications to the apparent time-series inelasticity of the labor supply of female heads and to the comparison with women as a whole are necessary. For example, employment rates of married women grew steadily over the entire period, while those of female heads essentially stagnated, implying that the labor supply of female heads may have failed to increase because of the growth of the transfer system. Also, earnings of female heads seem to have suddenly stagnated after 1980, while those of all women have continued to grow. The 1981 federal legislation raising the BRR may have been responsible for the slower growth of earnings of female heads. Whether these time-series differences can be explained by benefits or benefit-reduction rates should be deferred until the econometric evidence on these issues is examined.<sup>10</sup>

### III. INCENTIVE EFFECTS OF THE EXISTING SYSTEM

#### A. Labor Supply

The well-known static model of labor supply implies unambiguously that transfer programs will reduce hours of work in the eligible low-

income population. A transfer program provides a "guarantee"--a payment provided to families whose head does not work--and simultaneously imposes a "tax rate," or, more commonly in the transfer program literature, a "benefit-reduction rate" on work effort--payments are reduced by some amount if the recipient earns wages in the labor market. The income and substitution effects of the guarantee and the benefit-reduction rate operate in the same direction (unlike, say, the effect of a change in the hourly wage rate) and hence hours of work must fall. The major goal of the empirical work on the labor supply effects of transfers is to determine whether hours of work are indeed reduced by transfer programs and, if so, to determine the magnitude of the reduction.

As noted in Section II, the most well-known transfer program is the AFDC program, and its recipient group is primarily female heads of family. Unfortunately, prior empirical work in the literature on labor supply in the absence of transfer programs is of little direct use in forming expectations of how large the labor supply reductions of AFDC are likely to be. While that literature is enormous (see Pencavel, 1986; Killingsworth and Heckman, 1986; and Killingsworth, 1983; for reviews), it has by and large been concerned only with men and with married women. Single women have occasionally been examined, but female heads only rarely. On an a priori basis, it should be expected that income and substitution elasticities for female heads will lie somewhere in between the relatively high elasticities usually found for married women and the relatively low elasticities found for men. Like many married women, female heads must care for children but, like many men,

they often have no source of private income other than earnings and must support their children by themselves.

The literature on the labor supply effects of AFDC is of moderate size, consisting of approximately ten studies over the past twenty years. A reader of these studies would find that many have been concerned with econometric issues, especially the articles of the last ten years, but those issues will not be discussed here.<sup>11</sup> Most studies have been cross-sectional in nature, providing estimates of the effects of AFDC benefit parameters--guarantees and tax rates--on measures of the labor supply of a sample of female heads at a point in time. The major source of variation in AFDC benefits used to estimate effects is the tremendous cross-state variation discussed in Section II.

The research prior to 1981 is well summarized in a review by Danziger, Haveman, and Plotnick (1981). Since there has been little additional work since then, I will rely on their survey and will not review the individual studies.<sup>12</sup> As the Danziger et al. study indicates, the available research unequivocally shows that the AFDC program generates nontrivial work disincentives. This should not be surprising when it is recognized that the benefit levels shown in Table 3 are approximately equivalent to the earnings a woman would receive if she worked full-time at the minimum wage. Unfortunately, however, as is frequently the case, the estimates of effects vary considerably across the available studies for reasons usually difficult to explain (see Danziger et al.). As a consequence, there is still considerable uncertainty regarding the magnitude of the effects. Danziger et al. estimate the reduction in work effort to range from 1 hour to 9.8 hours

of work per week, corresponding to percentage reductions of 10 to 50 percent of non-transfer labor supply levels.<sup>13</sup> Since AFDC recipients work approximately 9 hours per week on average, this implies that they would work between 10 and 19 hours per week in the absence of AFDC, not a high level in any case. A midpoint disincentive estimate of 5.4 hours per week would imply a 30 percent reduction in work effort; at the 1989 minimum wage (\$3.35 per hour) this in turn implies a reduction in annual earnings of about one thousand dollars.<sup>14</sup>

It should be noted that an additional thousand dollars of earnings will not necessarily make a major dent in the poverty rate of female heads. For example, the mean earnings of female heads (see Figure 2) are more than a thousand dollars below the official U.S. government poverty level for a family of four. Of course the distribution of families around the mean would have to be determined to estimate the exact degree of poverty-rate reduction from such an increase.

The labor supply disincentive estimates can also be related to the "leaky bucket" of Okun (1975). Part of Okun's leaky bucket arises from the degree to which a dollar transferred to an AFDC recipient is lost in the form of her reduced earnings. According to the above estimates of work disincentives, the AFDC bucket is moderately leaky. For every dollar transferred to female heads, about 37 percent leaks out in the form of reduced earnings. Put differently, about \$1.60 must be spent on female heads to raise their income by \$1.00.<sup>15</sup> Of course, the source of this leakage is partly leisure and partly the time spent in child care by the mother--and allowing the mother to take care of her children was the original purpose of the program. Valuing these goods and counting

them would generate a lower value of deadweight loss than the figures just given.

An additional important finding in this literature is that very little of the labor supply reduction arises from initially ineligible female heads who lower their hours of work below the breakeven point to become eligible for AFDC. That is, virtually all AFDC recipients would have sufficiently low hours of work even if they were off the program to retain eligibility for benefits (i.e., to be below the breakeven level). The evidence indicates that the disincentives arising from women initially above the breakeven level increase the caseload by 5 percent at most, or about 3 to 4 percentage points in the participation rate (Moffitt, 1983). Put differently, 95 percent of those on the AFDC rolls would, if off the program, retain eligibility for benefits. Many would, therefore, presumably have participated in the program even in the absence of any reductions in labor supply. This finding implies that the work disincentives of the program have little effect on the size of the caseload itself, although clearly benefits and costs are affected by such disincentives. Thus the problem of welfare "dependency" (i.e., participation in AFDC) cannot be ascribed to the work disincentives of the program.

Consistency with Time-Series Trends. None of the existing studies of the labor supply disincentives in the AFDC program has addressed their ability to explain the time-series trends in the labor supply of female heads given in Table 4. The objects of explanation in that table are the trends in the hours of work of all female heads, which, as discussed previously, appear to be quite inelastic in response to

changes in the levels of the guarantee and the BRR.<sup>16</sup> To determine whether these trends are consistent with the econometrically estimated AFDC disincentive effects requires that those estimates--and the guarantee and BRR elasticities underlying them--be transformed from estimates for AFDC recipients alone to estimates for all female heads. To do so requires merely multiplying the disincentive estimate by the fraction of the population of female heads that participates in AFDC, since disincentive estimates for nonrecipients are zero by definition.

Table 5 provides such transformed estimates for the U.S. female-head population as a whole at different guarantees and levels of the BRR. Estimates are provided at a set of low guarantee and BRR elasticities as well as a set of high elasticities drawn from the econometric literature. For example, at a guarantee of 75 percent of the poverty line--corresponding approximately to that of the 1975 benefit sum--and a BRR of 75 percent--close to the 67 percent BRR in the 1970s--disincentive effects are estimated to range from 1.08 to 4.99 hours worked per week among all female heads. The corresponding AFDC participation rates, shown in the lower half of the table, range from 54 to 60 percent (close to those in the current system) and imply reductions among AFDC recipients alone of 2.00 to 8.32 hours per week, which fall in the range given previously by the econometric studies.

Perhaps surprisingly, the figures in Table 5 are quite consistent with the time-series patterns of hours of work among all female heads in Table 4. For example, the increase in the guarantee from \$515 to \$652 from 1969 to 1975 (see Table 3) should have generated a reduction in weekly hours of work in the range of 0.65 to 2.96, and the actual

Table 5

Effect of AFDC on Mean Weekly Hours of Work  
of All U.S. Female Family Heads

	Benefit-Reduction Rate			
	1.00	0.75	0.50	0.25
<b>Low Elasticities</b>				
G = 0.50	-0.81	-0.49	-0.35	-0.33
G = 0.75	-2.18	-1.08	-0.68	-0.55
G = 1.00	-4.02	-1.74	-1.00	-0.64
<b>High Elasticities</b>				
G = 0.50	-2.06	-2.22	-2.02	-2.26
G = 0.75	-4.62	-4.99	-4.29	-3.87
G = 1.00	-7.34	-7.92	-6.50	-5.31

Sources: Moffitt (1985a).

Notes: G = Guarantee as a percentage of the official U.S. government poverty line for each family size.

Low wage and total income elasticities are 0.05 and -0.02, respectively; high elasticities are 0.20 and -0.25, respectively.

reduction was 2.0 hours.<sup>17</sup> In addition, the decrease in the benefit sum from 1977 to 1986 coupled with an increase in the BRR from 67 percent to 100 percent should have generated an increase in weekly hours of work in the range of 0.88 to 1.38, a bit below the actual two-hour increase. Thus the cross-sectional econometric elasticities are roughly consistent with the time-series trends; both imply relatively inelastic labor supply responses among female heads.<sup>18</sup>

Other Programs. Unfortunately, there has been too little work on the labor supply effects of the other major transfer programs--Food Stamps, Medicaid, and housing assistance--to be able to draw reliable conclusions. Theoretically, in-kind transfers should have disincentive effects on labor supply just as cash transfers do, though which has the larger effect is ambiguous (Leonesio, 1988; see also Murray (1990)). The one completed study of Food Stamps, which examined the effects of Food Stamps in combination with AFDC on the labor supply of female heads (Fraker and Moffitt, 1988) found the Food Stamp program to have modest disincentive effects on female heads, lowering weekly hours of work from 10 to 9. For the Medicaid program, Blank (1989) found, surprisingly, no effect of a state-specific value for Medicaid benefits on AFDC participation of female heads, while Winkler (1989) found the same variable to have disincentive effects on female head labor supply. More recently, Moffitt and Wolfe (1990) constructed a family-specific valuation of Medicaid benefits that depended upon the health conditions of the family, and found significantly negative effects of the variable on employment rates and significantly positive effects on AFDC participation rates.

The lack of research on the effects of in-kind transfer programs is a serious problem in light of the critical role such transfers have played in the development of the transfer system in the 1970s and 1980s. It is doubtful that a full understanding of the incentive effects of the U.S. welfare system can be understood without such studies. The importance of these programs is increased when it is recalled, as indicated in Table 2, that multiple program participation is the rule rather than the exception. The implication is that the various programs must be studied simultaneously rather than individually.

Unfortunately, there are difficult modeling problems associated with studying multiple program participation, since the programs often interact in complicated ways. Medicaid benefits are lost in their entirety a few months after AFDC eligibility ends; the Food Stamp program taxes AFDC benefits at a 30 percent rate but not vice versa; the benefits of AFDC recipients in public housing are counted as income by the housing agency; and so on. As a result of these interactions, cumulative benefit-reduction rates are not the simple sum of the individual program reduction rates. There have been no econometric studies of these issues.

#### B. Participation and Turnover

In addition to the literature on labor supply, a sizable literature has grown up on static welfare participation--that is, participation at a point in time--and on dynamic welfare participation--that is, turnover and movement on and off a welfare program. Indeed, the study of turnover in welfare programs began in earnest somewhat later than the

study of labor supply, for the number of labor supply studies has (as noted previously) been scant since 1981. Virtually all turnover studies, on the other hand, have been conducted in the 1980s.

The basic choice model of welfare participation posits that individuals choose whether to participate by comparing utility on and off the program. As noted previously, the existence of non-participating eligibles requires that the model include some non-monetary inhibiting factor such as stigma or non-monetary transactions costs (time costs, hassle, etc.) as well. Participation then takes place if the utility gain as measured by conventional income-leisure functions outweighs this inhibiting factor. It is easy to establish formally in such a model that the probability of participation is positively affected by the guarantee level and negatively affected by the BRR, the hourly wage rate, and private nontransfer nonwage income.

Table 6 summarizes the available static studies of welfare participation.<sup>19</sup> Most studies have not estimated the participation model in its structural form (exceptions are Moffitt, 1983, and Butler, 1984), but have instead estimated reduced forms by entering  $G$ ,  $t$ ,  $Wt$ , and/or squared terms and interactions between them. Nevertheless, the results across the studies are remarkably uniform. Almost universally, guarantee effects are positive and significant and BRR effects are negative and significant. Wage effects are generally negative, but significant in only about half of the studies. This is a strong confirmation of the simple theory of welfare participation as an economic decision based upon labor supply considerations.<sup>20</sup>

Table 6  
Static Models of Welfare Participation<sup>a</sup>

Study	Data Set	Population	Dependent Variable	Program Regressors	Results		
					G	t	W
<u>AFDC</u>							
Willis (1980)	1976 SIE	AFDC-eligible female heads	1 = on AFDC 0 = not	G, t	(+), sig.	(-), Sig.	Insig.
Barr-Hall (1981)	1967 SEO 1967 AFDC survey	Female heads	Ratio of benefit to sum of benefit and earnings	G, t	(+) <sup>b</sup>	(-) <sup>b</sup>	(-) <sup>b</sup>
Moffitt (1983)	1975 PSID	Female heads	1 = on AFDC 0 = not	G, Wt <sup>c</sup>	(+) <sup>b</sup>	(-) <sup>b</sup>	(-) <sup>b</sup>
Moffitt (1986b)	1975 PSID	Female heads	1 = on AFDC 0 = not	G, t	(+), Sig. <sup>d</sup>	(-), Sig. <sup>d</sup>	Insig.
Robins (1986)	1982 CPS	Female heads	Fraction of year on AFDC	G, Wt, and squared terms	(+), Sig.	(-), Sig.	(-), Sig.
Robins (1987)	CPS in 1979, 1983, 1984	Female heads	1 = on AFDC 0 = not	G, Wt, and squared terms	(+), Sig.	(-), Sig.	Insig.
Blank (1989a)	1980 NMCUES	Female heads	1 = on AFDC 0 = not	G, M	(+), Sig. <sup>e</sup>	n.a.	n.a.
<u>AFDC-UP</u>							
Hosek (1980)	1976 CPS 1977 AFDC survey	Married couples	1 = on AFDC-UP 0 = not	G <sub>A+F</sub>	(+), Sig.	n.a.	(-), Sig. <sup>f</sup>

Table 6, continued

Study	Data Set	Population	Dependent Variable	Program Regressors	Results		
					G	t	W
<u>Food Stamps</u>							
Butler (1984)	Survey of elderly in 6 cities	Elderly food-stamp-eligible families	1 = on FSP 0 = not	G, Wt <sup>c</sup>	(+), Sig. <sup>d</sup>	(-), Sig. <sup>d</sup>	n.a.
Fraker-Moffitt (1988)	1979 ISDP	Female heads	1 = on FSP 0 = not	G, Wt	(+), Sig.	Insig.	(-), Sig.

<sup>a</sup>Abbreviations: AFDC-UP = AFDC Unemployed Parent programs; FSP = Food Stamp program; G = guarantee, t = BRR; W = hourly wage rate; M = Medicaid benefit; G<sub>A+F</sub> = sum of AFDC and Food Stamp guarantee; SEO = Survey of Economic Opportunity; SIE = Survey of Income and Education; PSID = Panel Survey of Income Dynamics; CPS = Current Population Survey; NMCUES = National Medical Care Utilization and Expenditure Survey; ISDP = Income Survey Development Program.

<sup>b</sup>No significance level provided.

<sup>c</sup>G, Wt embedded in a structural utility-difference specification.

<sup>d</sup>In most specifications.

<sup>e</sup>M insig.

<sup>f</sup>Husband's wage.

<sup>g</sup>Only effect of benefit simulated. Holding eligibility constant.

A number of additional variables are included in the studies. A few include nontransfer nonwage income, whose coefficient is generally negative but often weak in significance. Also, it is generally found that participation rates are higher among older individuals, those with less education, those with poorer health and greater disability, and in families with greater numbers of children (even holding constant the guarantee, which varies with family size). Black families are more likely to participate than white families, and participation rates are lower in the South, probably because more stringent eligibility conditions are applied there. The participation rate also appears to be countercyclical, as should be expected.

The major studies estimating dynamic models of welfare participation are shown in Table 7 along with their characteristics and findings.<sup>21</sup> Most of the studies have been concerned with estimating the determinants of exit rates from the AFDC rolls, although a few have also studied the determinants of entry rates. As can be seen from the table, virtually all studies have found the level of the benefit to be negatively and significantly related to the probability of leaving AFDC and, when estimated, positively and significantly related to the probability of entry onto the AFDC rolls. Both of these findings are as expected. Although not shown, other results also indicate that exit rates are higher for women with higher wage rates, higher educational levels, greater levels of nontransfer nonwage income, and for those with fewer children. Black women have lower exit rates as do women who have never been married. These correlates are almost identical to those found for the studies of static AFDC participation. This should not be

Table 7

Dynamic Models of Welfare Participation<sup>a</sup>

Study	Data Set	Population	Dependent Variable	Control for Unobserved Heterogeneity?	Results		
					G	Duration Dependence	Median Spell Length
Hutchens (1981)	PSID, 1970-71	Female head in 1970	Prob. of entry and exit from AFDC by year	No	Exit: (-), Sig. Entry: (+), Sig.	n.a.	n.a.
Plotnick (1983)	DIME controls, 1971-1974	Low-income female heads	Prob. of entry and exit from AFDC by month	No	Exit: (-), Sig. Entry: (+), Sig.	(-)	21 months
O'Neill et al. (1984)	NLS young women, 1968-1980	Female heads and subheads 14-24 in 1968 with a new AFDC spell	Prob. of exit from AFDC or other welfare by year	No	(-), Sig.	(-)	n.a.
	PSID, 1968-1981	Female heads with a new AFDC spell	Prob. of exit from AFDC by year	No	(-), Sig.	(-)	n.a.
	AFDC Surveys, 1967-1982	AFDC recipients with a new spell, 1967-1982	Prob. of exit from AFDC by month	No	(-), Sig.	(+) then (-)	12-18 months
Blank (1989b)	SIME-DIME controls, 1970-1976	Low-income female heads with a new AFDC spell	Prob. of exit from AFDC by month	Yes	Insignificant in most specifications	0 or (+) in early months; (-) in later months	19-22 months
Ellwood (1986) <sup>b</sup>	PSID, 1968-1982	Female AFDC recipients with a new spell, 1971-1982	Prob. of exit from AFDC or other welfare by year	No	(-), Sig.	Mildly (-)	2-3 years

(table continues)

Table 7, continued

Study	Data Set	Population	Dependent Variable	Control for Unobserved Heterogeneity?	G	Results	
						Duration Dependence	Median Spell Length
Fitzgerald (forthcoming)	SIPP, 1984-1986	Female heads with a new AFDC spell	Prob. of exit from AFDC by month	No	(-), Sig.	(+) in early months (-) in later months	24 months

<sup>a</sup>Abbreviations in addition to those listed in Table 6: NLS = National Longitudinal Survey; DIME = Denver Income Maintenance Experiment; SIME = Seattle Income Maintenance Experiment; SIPP = Survey of Income and Program Participation.

<sup>b</sup>Supersedes Bane and Ellwood (1983).

surprising, for the AFDC participation rate at a point in time is, definitionally, a function of exit and entry rates in the past.

Several new issues are raised in the turnover literature that do not arise in the static literature. One concerns the shape of the distribution of completed spells of AFDC receipt. Taking a cue from the literature on unemployment spells, where the relative magnitudes of the short-term and long-term unemployed have been extensively discussed (e.g., Clark and Summers, 1979), several studies in the AFDC turnover literature have constructed estimates of the distribution of the lengths of spells on welfare. One of the better-known of these estimates is that of Bane and Ellwood (1983), updated by Ellwood (1986) and shown in column (1) of Table 8. As the table indicates, Ellwood estimates that almost one-half (47.4 percent) of new AFDC spells last no more than two years, where a year of "AFDC receipt" is defined as receiving at least one month of benefits sometime during the year. However, over 10 percent of new spells last at least 10 years. This is an extremely large number of long-term recipients and is a very disturbing finding. Ellwood argues that the situation is even worse than this if reentry ("recidivism") onto the rolls is taken into account, for many of those who exit quickly return for additional spells and additional time on AFDC. Column (2) of Table 8, which shows his estimates for the distribution of the "total time" on AFDC in a 25-year window, indicates that about one-quarter of new recipients will spend 10 or more years in total on the AFDC rolls.<sup>22</sup> This is a shockingly high percentage of long-term recipients.

Table 8

## Percentage Distribution of AFDC Spell Durations and Time on AFDC

	Single-Spell Durations	Total Time on AFDC*
1 Year	27.0	15.7
2 Years	20.4	14.1
3 Years	10.0	9.4
4 Years	12.3	10.9
5 Years	2.4	5.1
6 Years	8.9	8.3
7 Years	4.9	5.9
8 Years	2.1	3.8
9 Years	1.8	3.3
10 or more years	10.2	23.5

Source: Ellwood (1986, Tables I.1, II.3).

Distributions are for women with a new spell in the period 1971-1982.

\*Refers to total time on AFDC in a fixed 25-year period; includes all spells.

These results must be qualified in at least two respects. First, as mentioned before, the distributions are based upon data which only permitted measurement of receipt of AFDC at least once during a year. Since such receipt could constitute only a small part of the year, median spell lengths measured in months are certainly shorter and total times on AFDC are less than they would appear from a superficial interpretation of the distribution of "years" on AFDC. When monthly data are examined (O'Neill et al., 1984, Chapter 4; Blank, 1989b; Fitzgerald, forthcoming), spell lengths are found to be considerably shorter (see Table 7). Second, many AFDC recipients work part of the year and are on AFDC part of the year. There can be no presumption from Table 8 that AFDC benefits constitute a large part, much less the majority, of annual income for those who are on the rolls for either short or long periods of time.

A second issue with which the dynamic literature has been concerned is whether "negative duration dependence" exists in the distribution of spells. Negative duration dependence is said to occur when the exit rate from AFDC falls as the welfare spell lengthens (the reader unfamiliar with the econometric literature on turnover should consult reviews by Kiefer (1988) or Lancaster (1990)). Once again, this issue is drawn from the unemployment literature, where it has been found that the probability of leaving unemployment often becomes lower as the unemployment spell grows longer. In the AFDC literature, this finding also generally appears, as indicated in Table 7. The falling exit rate with the length of the spell is one reason for the rather long right-

hand tail of the spell distribution (i.e., the high percentage of long spells).

The finding of negative duration dependence is subject to more than one interpretation. Such dependence could arise from the deleterious effects of AFDC receipt itself, as might happen if human capital deteriorates from lack of use as the spell progresses and hence the potential market wage declines. It could also arise if long-term AFDC receipt is a negative signal to employers, at least if employers can obtain information on individual AFDC histories. Yet another explanation is that the finding of negative duration dependence is a spurious statistical result arising from the existence of "unobserved heterogeneity" in the population. For example, if different AFDC recipients have different (unobserved) levels of human capital and hence different market potentials, those with high potential would be more likely to exit the AFDC rolls early. As a consequence, those recipients observed to be still on the rolls at a later time would have lower exit rates, on average, than those on the rolls at an early point in time. The observed negative duration dependence would be spurious in this case because it could arise even if each individual recipient has a constant exit rate, though one that differs across persons. In any case, these different explanations for the presence of negative duration dependence have not been much examined in the literature to date. One exception is Blank (1989b), who found negative duration dependence to remain even after unobserved heterogeneity was controlled.

The literature on dynamic welfare participation would appear to suffer from a lack of theoretical content and from a failure adequately

to construct testable hypotheses from theory. Most of the literature is concerned with estimating the distributions of welfare spells and time on AFDC and not with constructing alternative explanations for those distributions. Perhaps most important, there has been little attempt to construct models based on search theory to explain exit from and entry onto AFDC along the lines of such models in the unemployment-insurance literature.<sup>23</sup> Indeed, one of the most interesting "facts" from the AFDC literature suggests that the standard job-search model may indeed be a poor one for describing AFDC turnover. Bane and Ellwood (1983) and Ellwood (1986), as well as O'Neill et al. (1984) and Tienda (1990), find that most exits from AFDC are not a result of an increase in earnings by the female head, but are instead the result of a change in marital status that results in the loss of AFDC eligibility. For example, no more than one-fifth of AFDC exits are a result of earnings increases (Ellwood, 1986, p. xv). In addition, Fitzgerald (forthcoming) finds that exit rates are significantly affected by the availability of employed males, at least for whites. These results suggest that a model of marital search would be a more accurate descriptor of AFDC entry and exit than a wage-search model of the type employed in the job-search literature. What is required to determine the relative importance of the two search processes is a model in which both are nested and which have different testable implications.

The need for more theoretical content and structure is even more apparent when it is realized that much AFDC turnover can be purely mechanical and not the result of any changed behavior. For example, an increase in the guarantee level raises the breakeven point and hence

makes women with medium levels of earnings eligible for AFDC. A randomly fluctuating earnings path would therefore result in higher participation probabilities and longer spells, independent of any behavioral response.

The literature on dynamic welfare participation has also failed to establish a connection between the labor supply effects of AFDC and AFDC turnover. There is a presumption, sometimes made explicit and sometimes not, that short spells are "good" and long spells are "bad." Just as in the unemployment-spell literature, the utility basis for this judgment is rarely spelled out. On the one hand, to the extent that those with long spells are also those with low wages, poor marriage-market prospects, and poor opportunities of all kinds, the distribution of spells is just a proxy for the distribution of lifetime income. If this is the case, it would presumably be preferable to examine the distribution of lifetime income itself. On the other hand, to the extent that those with long spells are presumed to exhibit greater labor supply disincentives than those with short spells, there is a presumption of greater efficiency losses of AFDC, the higher the fraction of long-term recipients. But it is just as likely that labor supply disincentives are greater for short-term recipients, for they have greater market opportunities than do long-term recipients--the latter would presumably have low levels of labor force attachment even in the absence of AFDC. Put differently, AFDC may serve as a form of unemployment insurance to short-term recipients, with consequent efficiency effects similar to those found in the empirical unemployment-

insurance literature. These issues have not been considered, much less empirically examined, in the literature.

C. Family Structure

The study of the effects of the welfare system on family structure has only recently emerged as a field in economics. Research in the area can be partly traced to the development of economic models of the family by Gary Becker and to the specialized field in labor economics that has grown up as a result. It can also be partly traced to the growing recognition by economists of the intrinsic importance of family-structure issues to the study of the welfare system. While the possibly deleterious effects of AFDC on marital status have long been discussed and continue to be studied, family structure has become important in other respects as well. As noted earlier, any growth of the AFDC caseload is now a result of growth of the number of female-headed families in the United States rather than of growth in AFDC participation, conditional upon female headship (participation rates are, in fact, declining); the empirical evidence suggests that female headship does not cause low levels of labor supply; and most exits from and entrances to the AFDC rolls are associated with changes in family structure and not with changes in labor supply or earnings. All these considerations suggest that the study of the determinants of female headship deserves considerably more research attention relative to labor supply than it has been granted in the literature.

The issue with which research thus far has been most concerned is whether the welfare system encourages female headship. Since benefits

are paid primarily to female heads of family with children but with no spouse present, as discussed in Section II, the program provides an obvious incentive to delay marriage, increase rates of marital dissolution, delay remarriage, and have children outside of a marital union, all of which will lower the percentage of the population that is married. Virtually any model of marital status and childbearing behavior will have these implications.

Just as in the case of labor supply, it may be useful first to ask whether the crude time-series evidence is consistent with this hypothesis and second to consider the econometric evidence that has been gathered to test the hypothesis. Figure 4 shows the trends since 1960 in various demographic measures and in the welfare benefit, the latter shown at the bottom of the figure. The top section of the graph demonstrates the steady growth in female headship discussed previously, which can be seen to have proceeded considerably faster for blacks than for whites. The figure also shows an upward trend in the divorce rate as well as upward trends in illegitimacy rates, which have again been stronger for nonwhites than for whites.

The simple visual evidence in the figure provides mixed signals on the prima facie support for the hypothesis of transfer effects. Real benefits grew from 1960 into the mid-1970s, as discussed earlier, as did most of the demographic variables. It is the simultaneous growth of benefits and deterioration in these social indicators in this time interval that provides most of the evidence in support of a welfare effect in lay discussions. However, the decline in the real benefit sum after 1975 does not accord so well with the hypothesis. Of the trends

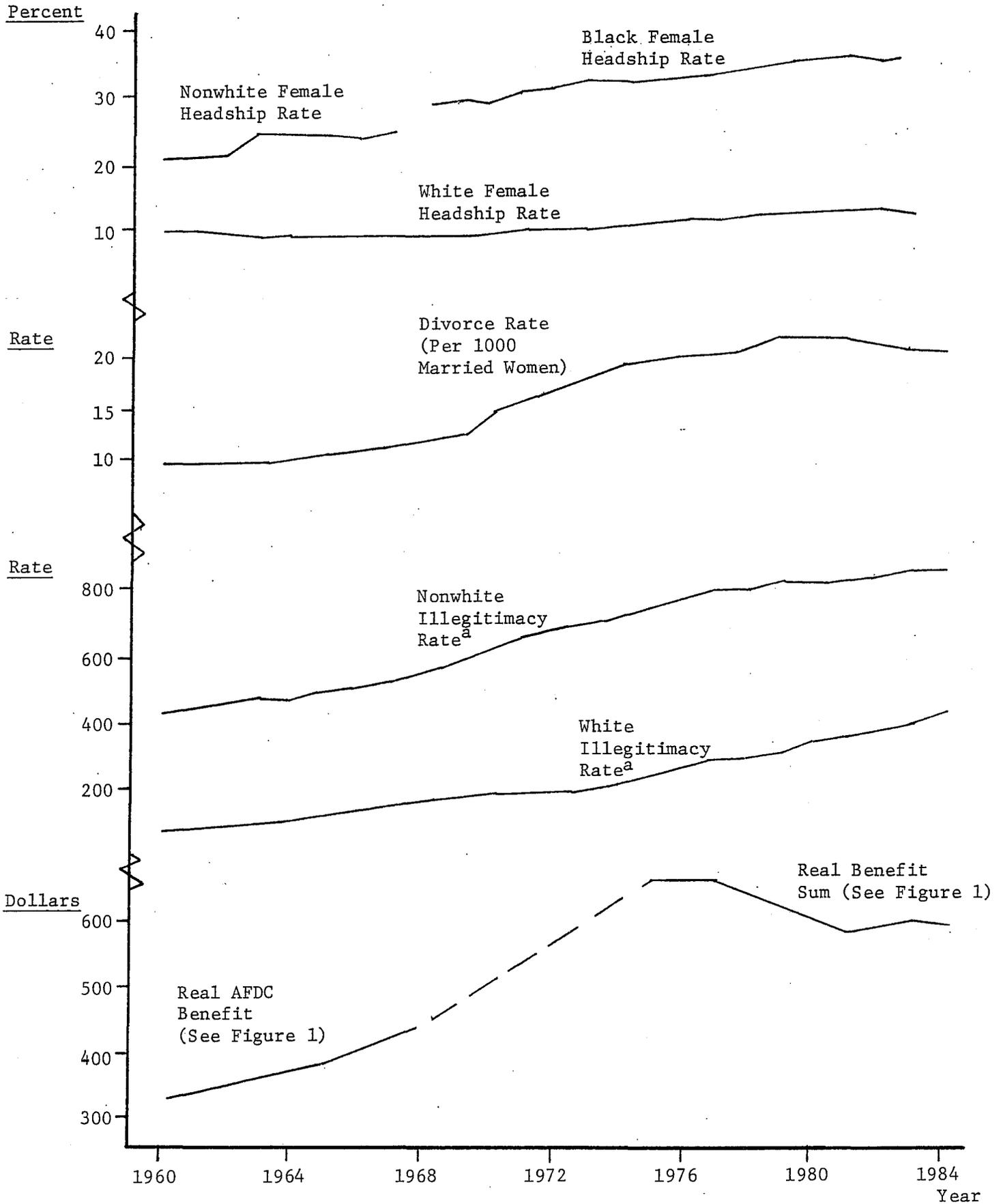


Figure 4. Demographic and Benefit Trends, by Race  
Sources: See Appendix.

<sup>a</sup>Illegitimate births per thousand live births, ages 15-19.

in the demographic variables in the figure, only that for the divorce rate turns down in the post-1975 period. However, that variable is the least related to AFDC because it is based upon the whole population, not just low-income families, and is most likely to have been strongly affected by other economic and social forces. In addition, while the growth rate of nonwhite illegitimacy is slightly lower after 1975 than before, the lack of a strong similar slowdown in female headship or in the white illegitimacy growth rate (if not an acceleration) makes the evidence on nonwhite illegitimacy not very convincing. For these reasons, the evidence does not support the hypothesis that the welfare system has been responsible for the time-series growth in female headship and illegitimacy.

It has also been noted that birth rates for women in general, both low-income and high-income and both welfare and non-welfare, have been secularly declining for approximately thirty years. What has increased is, instead, the proportion of such births that are illegitimate. This suggests that it is not fertility behavior that has changed but rather marital behavior; marriage is simply less likely to take place prior to a birth.

The more important evidence should come from econometric analyses that are based upon rigorous economic models and which control for other determinants of female headship. The underlying theoretical model most commonly used to analyze headship is based loosely on the Becker model of marriage (see Becker (1981)). In that model marital unions form when there are utility gains to both parties to doing so and unions dissolve when utility gains disappear. Utility gains arise not only from

nonpecuniary utility gains but also from gains from division and specialization of labor, from trade when the two individuals have different endowments or preferences, and from the advantages of shared consumption goods.

The simple comparative statics in such a model imply that increases in forms of nonwage income that are available only outside the union, such as AFDC payments, will unambiguously reduce the probability that unions will form and increase the probability that they will dissolve. However, without any restrictions on the form of preferences and on the relation of utility inside and outside the union, the impacts of the female hourly wage rate and the male hourly wage rate are theoretically ambiguous because each increases utility both inside and outside the union. Nevertheless, specific hypotheses regarding wage effects have played a major role in attempts to explain time-series changes in female headship.

For example, the hypothesis that net gains are negatively affected by the female wage is the basis for the major economic theory of divorce--that it is a result of the increase in that wage. More recent and more germane to the low-income population is the additional hypothesis that net gains are positive in the male wage, and that the increases in female headship in the 1980s have resulted from a decline in the real wages of unskilled males. A number of recent studies have indicated that the variance of male earnings in the United States increased significantly in the 1980s, partly as a result of an increased upper tail of the wage distribution but partly from an increased lower tail as well (see Burtless (1990) and Moffitt (1990a) for example). A

related hypothesis of Wilson and Neckerman (1986), states it in terms of male employment rates rather than wage rates--that is, as the hypothesis that the increases in male youth unemployment have contributed to the growth of female headship. Wilson and Neckerman also postulate that the relative supply of young black males has fallen, leading to a lack of available partners for females. In this hypothesis, the growth of female headship has resulted from an increasing scarcity of economically suitable male partners (see Sawhill (1988) for additional discussion). As already mentioned, these hypotheses are not necessarily implied by the theory and, in addition, they both assume a type of asymmetry between male and female wage effects that is not present in the simple model.<sup>24</sup>

In any case, even this simple formal model of female headship has rarely been estimated in the empirical work in this area, although some studies embody its features closely (see below). The most common difficulty arises from the necessity to impute the characteristics of potential spouses for those who are not in a union and the characteristics of single individuals for those in a union. Imputing such unobserved variables introduces well-known problems of selection bias, and most studies to date have therefore only estimated the model in reduced form by substituting a linear combination of exogenous socioeconomic characteristics for the missing wage and nonwage incomes (however, the AFDC benefit is always imputed, even for married individuals). Unfortunately, wage effects cannot generally be identified in such reduced-form models and hence some of the important alternative hypotheses for the rise in female headship cannot be tested.

The available empirical studies can be usefully divided into those conducted in the 1970s and those conducted in the 1980s. The findings from approximately ten or twenty studies in the 1970s are well summarized by Groenvelde et al. (1983). The studies were usually drawn from cross-sectional or panel data sets covering the late 1960s or early 1970s, and generally related the probability that a woman was a female head or the probability that a marriage would dissolve to levels of AFDC benefits and participation. The findings from this early literature are extremely mixed and show no consistent pattern of effect ("These studies...cannot be summarized easily", Groeneveld et al., 1983, p. 266).

Table 9 summarizes those conducted in the 1980s.<sup>25</sup> Their results show something of a change in the findings, for there is more consistent evidence of an effect on female headship (Danziger et al., Ellwood-Bane, Moffitt) and remarriage (Hoffman-Duncan). There is also some evidence of an effect on the probability that a female head lives independently rather than as a subfamily within a larger family (Ellwood-Bane, Hutchens et al.), though still mixed evidence of an effect of the welfare system on illegitimacy (Ellwood-Bane, Plotnick, Duncan-Hoffman, Lundberg-Plotnick). Although the studies of the 1980s show slightly stronger effects than the earlier studies, the effects are still generally small in magnitude. In particular, insofar as it is possible to determine, none of the studies finds effects sufficiently large to explain, for example, the increase in female headship in the late 1960s and early 1970s. If this result continues to hold up, research in this

Table 9

Recent Studies of the Effect of Welfare on Family Structure<sup>a</sup>

Study	Data Set	Population	Dependent Variable <sup>b</sup>	Welfare Variable(s)	Estimated Effect of Welfare
<u>Static</u>					
Danziger et al. (1982)	1975 CPS	Married women and female heads, 25-54	Female head	G; t; Set-aside <sup>c</sup>	(+), Sig. <sup>d</sup>
Ellwood-Bane (1985)	1976 SIE	All women, 18-44	Independent female head <sup>e</sup>	$\bar{G}$ <sup>f</sup>	(+), Sig.
		Same	Single mother <sup>g</sup>	Same	(+), Sig. for whites
		Single mothers, 18-44	Independent female head	Same	(+), Sig. for young women
		Ever-married mothers, 18-44	Divorced or separated in last year <sup>g</sup>	Same	Insig.
		Same	Currently divorced or separated <sup>g</sup>	Same	(+), Sig. for white and young black women
		Women not married in 1976, 18-44	Had a child in last year <sup>g</sup>	Same	Usually insig.
Hutchens et al. (1989)	1984 CPS	Never-married women, 18-44	Have children <sup>g</sup>	Same	Usually insig.
		Single mothers less than 36	Independent female head	G if indep. G if indep. minus G if subfamily	Insig. (+), Sig.
Plotnick (1990)	1979-84 NLSY	Never-married childless women 14-15 in 1979	Have had a out-of-wedlock birth by age 19	$\bar{G} + \bar{F}$ ; administrative variables	Some (+) Sig. effects of $\bar{G} + \bar{F}$ and admin. vars. for whites. Some sig. effects of admin. vars. for blacks Insig. effects for hispanics.
Moffitt (1990c)	1969, 1977, 1985 CPS	Men and Women 16-55	Married	$\bar{G} + \bar{F} + \bar{M}$	Usually (-) and sig. in 1985 but not earlier
	Same	Women 16-55	Female head	$\bar{G} + \bar{F} + \bar{M}$	Same but (+) effect

(table continues)

Table 9, continued

Study	Data Set	Population	Dependent Variable	Welfare Variable(s)	Estimated Effect of Welfare
<u>Dynamic</u>					
Hoffman-Duncan (1988)	1968-82 PSID	Divorced or separated women less than 45	Not remarried and on AFDC at later date <sup>l</sup>	G	(+), Sig. in some models and insig. in others
Plotnick (1990)	1979-84 NLSY	Never-married childless women 14-15 in 1979	Had a out-of-wedlock birth in year t if one had not occurred prior to t	$\bar{G} + \bar{F}$ ; administrative variables	Stronger effects of all variables for whites than blacks or hispanics
Duncan-Hoffman (1990)	1968-85 PSID	Black women 14-19	Had an out-of-wedlock birth and was in a AFDC household	$\bar{G}_2$	Insig.
Lundberg-Plotnick (1990)	1979-86 NLSY	Never-married childless women 14-16 in 1979	Had a premarital birth <sup>l</sup>	$\bar{G} + \bar{F}$	(+), Sig. for whites but insig. for blacks

<sup>a</sup>Acronyms: CPS = Current Population Survey; SIE = Survey of Income and Education; PSID = Panel Study of Income Dynamics; NLSY = National Longitudinal Survey of Youth; G = Guarantee varying by family size;  $\bar{G}$  = Guarantee for a family of four;  $\bar{G}_2$  = Guarantee for a family of two; F = Food Stamp guarantee for a family of four; M = Medicaid benefit for family of four; t = AFDC tax rate.

<sup>b</sup>Dependent variable equals 1 if in the indicated category and 0 otherwise.

<sup>c</sup>Variables entered into equation are income if married; income if female head; labor force participation if married; and labor force participation if female head. Welfare variables shown are used to instrument the two female head variables.

<sup>d</sup>Coefficients on female head income and labor force participation. See note c.

<sup>e</sup>"Single mothers" are women with children but no spouse present. They are either "independent," defined as living in own household, or "subfamily heads," defined as living within a larger household.

<sup>f</sup>Variable is interacted with dummy for AFDC participation and instrumented using variables for number of children and number of children under three years of age.

<sup>g</sup>Models are partly dynamic.

<sup>h</sup>Variable sometimes interacted with lagged instrumented AFDC participation dummy.

<sup>i</sup>Three-category dependent variable: remarried, not remarried and on AFDC, not remarried and off AFDC.

<sup>j</sup>Broken down into probabilities of becoming pregnant, of not aborting, and of not marrying prior to the birth.

area would better direct itself toward a search for the other causes presumably generating the increases in female headship.

The failure to find strong benefit effects is the most notable characteristic of this literature. However, there are a number of methodological issues and issues of specification in the studies which have not yet been adequately addressed. One is the proper source of exogenous variation for the AFDC benefit variable, for while most studies use cross-sectional variation in the benefit, some use within-state variation in participation rates to identify the effect (Ellwood-Bane) and others implicitly use other, non-welfare sources of income as well as welfare income for identification inasmuch as all income types are constrained to have the same coefficient (Danziger et al.). Indeed, there is some question as to whether cross-sectional variation per se is a proper source of exogenous variation, for family structure differs across states and regions for many unmeasured religious and cultural differences that may be confounded with the effects of state-specific benefits (Cherlin, 1979). Addressing this issue requires the use of panel data or data on individuals in the same states over time in order to estimate models with fixed state effects.<sup>26</sup> Another specification issue is the implausibility of a static model in which the current level of the benefit is assumed to affect current family structure. Female headship in a given cross-section may have occurred at some prior time when benefits were different, requiring the specification of lags in the benefit.<sup>27</sup>

An additional topic deserving more research in this area concerns possible effects on the welfare system on family structure of males.

While any effect on female marital status must translate into an effect on male marital status, the same does not apply for female headship. Moreover, there could be effects of the system on male labor supply that work through marital status, as the simple illustrative model discussed above implies. Indeed, one hypothesis for the decline in male labor force attachment in the low-skilled population is that it is at least a partial result of the welfare system. This hypothesis has not yet been rigorously tested.

#### D. Migration

The possible effects of cross-sectional variation in the generosity of welfare benefits on migration decisions of low-income families has long been discussed in lay circles and among students of the welfare system. As noted previously, benefits vary tremendously across states and regions of the U.S., even after controlling for variations in the cost-of-living. Thus the intuitive basis for expecting a migration response is clear, especially since most long-distance migration is motivated by economic rather than non-economic considerations.

The literature on migration effects divides up into an early literature using data from the late 1960s and early 1970s, and a set of more recent studies using both more recent data and more sophisticated techniques of analysis. The early literature, summarized in Cebula (1979) and Weinberg and Germanis (1988), found rather weak or inconsistent effects of benefits on migration. However, as the two summaries discuss, the early literature is severely hampered by a high level of data aggregation and by a consequent inability to disaggregate

by individual characteristics, often even by female headship and AFDC receipt. The more recent studies are shown in Table 10. Using a variety of data sets, covering periods up to 1985, the studies all show positive and significant effects of welfare on residential location and geographic mobility. Whether the difference in findings between these later studies and those from the earlier period are a result of differences in analytic techniques rather than a true change in the strength of the underlying relationship over time has not been investigated to date.

Many of the issues in this literature are econometric and methodological. One of the difficulties, only partially addressed by the studies in Table 10, is the development of a truly exogenous source of variation in the set of welfare opportunities facing an individual potential migrant. In the various literatures on welfare discussed in prior sections, as well as in the literature on intergenerational effects discussed in the next section below, the major source of variation in welfare parameters used in the analyses is the presumed exogenous variation in those parameters across states (i.e., cross-sectional variation), which is in turn a result of cross-sectional variation in individual residential location. Unfortunately, the use of this source of variation in the study of migration is problematical, if not untenable, because residential location itself is the object of choice. Thus, for example, a female-headed family considering location in one of the 51 U.S. states and jurisdictions faces a fixed price structure of relative benefits--heuristically, the migration equation could be thought of as requiring 51 benefit variables as regressors.

Table 10  
Recent Studies of the Effect of Welfare on Migration

Study	Data Set <sup>a</sup>	Population	Dependent Variable	Independent Variable(s)	Estimating Technique	Results
Gramlich and Laren (1984)	Pooled aggregate state-level data by year, 1974-1981	U.S. population	Per capita AFDC reciprocity rate by state and year	Lagged value of average AFDC benefit in other states	OLS with state fixed effects	Benefit variable significant in expected direction in 2 out of 6 specifications
	Pooled 1980 Census and PSID data, 1971-1981	Female heads on AFDC in each year	Prob. of living in a high, medium, or low benefit state in year t	Prob. of living in a high, medium, or low benefit state in year t-5	Crosstabulations	Mobility rates higher from low-benefit states to high-benefit states than vice versa
Blank (1988)	CPS, 1979	Female heads in 1979	Dummy variables for regional location and AFDC receipt	Expected income and hours worked by region and AFDC status	Multinomial Logit	Welfare income has pos. and sig. effect on location
Peterson and Rom (1989)	Pooled aggregate state-level data, 1970-1985	U.S. population	Change in state poverty rate from t-1 to t	Product of AFDC benefit at t-1 and change in AFDC benefits	OLS and 2SLS	Benefit variable pos. and sig.
Clark (1990)	SIPP	Low-income female heads in 1984	Changed state of residence, 1984-1985	Dummy for living in low-benefit or high-benefit state in 1984 <sup>b</sup>	Logit	More likely to move if from a low-benefit state

<sup>a</sup>Acronyms: PSID = Panel Study of Income Dynamics; CPS = Current Population Survey; SIPP = Survey of Income and Program Participation.

<sup>b</sup>Interacted with AFDC participation status in 1984.

The relative price structure is constant at a given point in time, for the benefit for a family of given income and size is state-specific, and hence changes only over time, suggesting the need for a time-series analysis instead.<sup>28</sup>

Some of the studies in Table 10 address this problem instead by utilizing cross-sectional variation in initial residential location or location at a prior point in time. Implicitly, prior residential location is used to avoid the problem of a fixed relative benefit structure for all individuals. Thus, for example, the second part of the Gramlich-Laren study as well as the Clark study examine the difference in mobility rates between those who are initially in low-benefit and high-benefit states. Yet initial residential location is presumably a function of the relative benefit structure as well, and also a function of the unobservables affecting mobility patterns. The first part of the Gramlich-Laren study uses variation in the average benefits of other states (defined variously as all other states in the U.S. or only contiguous states) to obtain cross-sectional variation in their state-level study, but this procedure implicitly uses cross-sectional variation in benefits directly to identify the model. Blank identifies the effects of cross-state relative incomes by predicting those variables from first-stage regressions which include some individual characteristics not included in the migration equation, thus implicitly assuming exogenous cross-sectional variation within cells defined by those identifying variables.<sup>29</sup> Peterson and Rom do not use relative benefits at all in their model, only the benefit in each state

by itself. Thus it would appear that the proper source of benefit variation to use in migration studies deserves further investigation.

Aside from the direct interest in whether the welfare system induces migration, this research area is of additional interest because it bears importantly on the reliability of the estimates obtained in the other literatures discussed in this review. As noted previously, those literatures primarily use cross-sectional variation in residential location to identify estimates of welfare effects. Yet if residential location is endogenous, cross-state variation in benefits is as well and therefore the studies which use such variation may yield biased and inconsistent parameter estimates.

#### E. Intergenerational Transmission

An issue with which the literature on the welfare system has been recently concerned is whether there is any intergenerational transmission of welfare receipt. Such transmission could operate in a number of ways both direct and indirect. Direct effects could arise if growing up in a welfare household either directly affects preferences for welfare receipt (e.g., by lowering its stigma) or, by providing additional information on the rules of the system, lowers the transaction costs of participating that a child will later face as an adult. Indirect effects could arise if the receipt of AFDC income by the parental family affects family income, the labor supply of its family members (including the child), or investments in the human capital made by the family in the child or undertaken voluntarily by the child. If these variables are affected, they may later lead to changes

in the probability of welfare receipt on the part of the child after she grows to adulthood.

The available studies are shown in Table 11. All have utilized panel data and have measured the presence of welfare income in the parental family and have correlated this presence with later behavior of the children, either through simple cross-tabulations or multivariate statistical analyses. Although later welfare receipt on the part of the child has been the most common outcome variable, some studies have also examined child-bearing behavior on the part of daughters and, in two cases, the labor market performance of sons.

The results show consistent evidence of strong correlations between parental welfare receipt and later behavior of daughters. Daughters from welfare families are much more likely to participate in the welfare system themselves at a later date, and are more likely to have births in general and premarital births in particular. The evidence is weaker for the studies that examined the effect of parental welfare receipt on sons' later labor market performance (Hill-Ponza, Lerman).

Unfortunately, the reduced-form nature of most of the studies renders their findings essentially non-informative on the main issue at hand, which is whether AFDC receipt "causes" later AFDC receipt or other behaviors. Since most studies do not attempt to control in any systematic fashion for the many omitted variables that may be responsible for the observed correlation--the human capital characteristics of the parental family, to name the most obvious--the interpretation of the observed correlations is highly ambiguous, and can paragraph of this section. At most, some studies have entered a

Table 11

## Studies of Intergenerational Effects

Study	Data Set <sup>a</sup>	Population	Dependent Variable	Independent Variable(s)	Estimating Technique	Results
Levy (1980)	PSID, 1968-76	Women 10-17 in 1968 living at home	Single and on welfare	Parental family on welfare in 1968	Logit	Weak pos. effect
Hill-Ponza (1983)	PSID, 1968-81	Children 12-17 in 1968 and living at home	Daughters: ratio of welfare income to total income after leaving home Sons: Hours of work after leaving home	Ratio of welfare income to total income of parental family prior to leaving home	Probit, Adjusted OLS	Daughters: generally (+) but weak effect on prob. of receiving any welfare Sons: Weak and mixed
Lerman (1986)	NLSY 1979-81	Black sons living at home	Earnings in 1980; 16-23 in 1980, school and work	Family received whether out of	OLS, welfare in 1980	(-), Sig. earnings Probiteffects (+) Sig. non-school-work effects Effects weaken or disappear if predicted family variable used
McLanahan (1988)	PSID 1968-82	Daughters 17-26 in 1982	Received welfare at age t if not receiving at t-1	Family ever received welfare; no. years received welfare	Logit	(+), Sig. effects
Antel (1988a)	NLSY 1979-86	Daughters 14-18 and at home in 1979	Had a birth by age 21; had a premarital birth by age 21	Family on AFDC in 1978	ML adj. for endogeneity of family AFDC receipt	(+), Sig. effects
Antel (1988b)	NLSY 1979-86	Daughters 14-18 and at home in 1979	No. months on AFDC in 1985	Family on AFDC in 1978	ML adj. for endogeneity of family AFDC receipt	(-), Sig. effects
Solon et al. (1988)	PSID 1968-83	Sisters 12-17 in 1968 who were heads or spouses in 1983	Ever received welfare between time sisters left home and 1983	Family ever received welfare between 1968 & time sisters left home	Cross-tabulations	Sister's receipt prob 22 percentage-points higher if from welfare family
Hill-Ponza (1989)	PSID, 1968-85	Women 11-15 living at home	Five measures of welfare dependence when 20-24	Same five measures for family when daughters were 11-15	Probit, Tobit	All effects (+) but strongest on prob. of receiving any welfare at all
Gottschalk (1990a)	NLSY 1979-85	Daughters 14-22 in 1979, living at home	Had a birth at age t if none by t-1; went on AFDC after birth	Family received welfare when daughter at home; proportion of time received	Logit	Mixed pattern of coefficients; overall (+) effect

<sup>a</sup>Acronyms: PSID = Panel Study of Income Dynamics; NLSY = National Longitudinal Survey of Youth.

miscellaneous set of regressors in the equations for the child's welfare receipt or other behavior (Lerman, McLanahan, Antel, Gottschalk), but the set included is still quite primitive (parental wage rates, for example, are not included). Put more generally, there has been little attempt to model the intergenerational transmission of poverty and low income itself, which should logically precede the modeling of the transmission of welfare participation.<sup>30</sup>

Econometrically, the difficulty with most existing studies is that the potential endogeneity of the variable or variables measuring parental welfare participation has rarely been addressed. Omitted variables that affect the transmission of low income status will be included in the error term but will be correlated with parental welfare status as well. Lerman (1986) and Antel (1988) have addressed the problem by using instruments for parental welfare status--in the case of Lerman, most effects disappeared when instruments were used but in the case of Antel, who did not estimate OLS versions, even the instrumental-variable estimates were significant.<sup>31</sup> Nevertheless, there is a rather severe identification problem that is not faced up to in these studies, for many parental variables included in the instrumenting equation are excluded from the child's equation, variables which may be related to other income transmission mechanisms (e.g., the education, age, and assets of the parents). Indeed, it is unlikely that any characteristic of the parental family itself could be excluded on an a priori basis from the child's equation; rather, the best candidate for identification is likely to be the cross-sectional variation in the parameters of the

AFDC benefit formula (facing the parent) that are generally used to identify AFDC effects in the other literatures discussed in this review.

#### IV. EFFECTS OF REFORM MEASURES

Much of the research on the United States welfare system is concerned with determining the effects of different welfare reform measures. There have been many proposals for reform of the existing welfare system over the past twenty years, ranging from the negative income tax to the imposition of work requirements to the "reform" of simply cutting benefits or eliminating the system. It is a truism among experts in the field that "welfare reform" means different things to different people because each reform proposal defines the welfare problem in a different way. Nevertheless, there are two types of goals that most major reform proposals attempt to address in one way or another: (1) the goal of reducing the caseload and reducing welfare participation rates in some way other than merely cutting benefits, preferably by raising earnings and reducing the incidence of female-headed families; and (2) the goal of minimizing work disincentives and of increasing the employment and earnings of those who are currently welfare recipients. Unfortunately, although the two goals may appear to go together, they often conflict. This will be amply illustrated in the review of the effects of four major reform measures provided in this section: the effect of lowering the benefit reduction rate as, for example, by the introduction of a negative income tax; the effect of imposing work requirements or of instituting work or training programs

for recipients; the effect of reforming the child support system; and the effect of extending benefits to husband-wife couples.

A. Lowering the Benefit-Reduction Rate

Lowering the benefit-reduction rate (BRR) is the most popular policy prescription among academic economists for increasing the earnings and labor supply of welfare recipients. The proposal gained widespread attention in the 1960s and 1970s during discussions of the merits of a negative income tax. As noted earlier, the nominal BRR in the AFDC program is currently 100 percent and has never been lower than 67 percent, itself a high tax rate. An individual participating in programs in addition to AFDC may face cumulative marginal BRRs in excess of 100 percent. A lowering of the BRR permits a recipient to "keep" a higher percentage of her earnings--that is, her benefit is not reduced by as great an amount if she earns more. Thus a direct financial inducement to additional work is provided.

At the outset, it should be noted that this method of increasing labor supply and earnings among program recipients is not also a method of reducing the caseload; in fact, it is a method of increasing the caseload, thus illustrating an example of conflict in the two welfare reform objectives just discussed. Financial incentives are provided precisely by paying benefits to families in situations in which they would otherwise have been ineligible--that is, if they have sufficiently high earnings. Lowering the BRR is designed to increase work incentives by keeping families on the rolls, not off them, even if they work.<sup>32</sup>

Nevertheless, the static model of labor supply does not unambiguously predict that labor supply will increase following a reduction in the BRR (Levy, 1979). If the rate is lowered, the income breakeven level will rise, thereby drawing new recipients onto the rolls whose labor supply will fall (see Figure 3). A reduction in the BRR will increase labor supply on net only if the increased work effort of those initially on the rolls is large enough to outweigh the labor supply reductions of new recipients. It could just as easily be the case that the net labor supply change is negative. The net effect, in general, depends upon the relative numbers of old and new recipients and cannot be predicted a priori. Note that the same arguments go in reverse for an increase in the BRR--if those made ineligible work sufficiently longer hours, labor supply could increase.<sup>33</sup>

The econometric evidence on the issue now strongly suggests that the labor supply effects of old and new recipients essentially cancel each other out, at least in the relevant range of guarantees and BRRs, and that there is no significant effect of changes in the BRR on labor supply in either direction (Levy, 1979; Moffitt, 1985a, 1986a, 1986b).<sup>34</sup> This phenomenon can be seen in Table 5, considered earlier, where a reduction in the BRR from 1.00 to 0.75 induces a reduction in labor supply if income and substitution elasticities are high. Reductions in the BRR at other elasticity levels often generate only small changes in work effort among the population of female heads as a whole. This cross-sectional finding is also fully consistent with the time-series evidence on the effects of the 1967 reduction in the BRR and the 1981

increase in the BRR, neither of which had any major influence on hours of work among female heads.<sup>35</sup>

These econometric results, together with the time-series evidence, make it extremely unlikely that the BRR can be used to achieve significant gains in work effort in the low-income population. Also in need of revision is the presumption that there is a trade-off between work incentives and program costs--that is, that lowering the BRR is desirable to increase work incentives, but would raise caseloads and hence costs. In fact, no trade-off of any serious magnitude exists.

The ineffectiveness of changes in the BRR is one of the reasons for the failure of a negative income tax to gain a serious hearing in Washington for over ten years. Policymakers often point to the failure of the 1967 legislation as evidence against the use of the BRR as a panacea for solving the work incentive problem in the welfare system. Nevertheless, the 1981 increase in the BRR generated considerable public comment on its purported work disincentives when it was passed, and there are still frequent proposals at the state level, if not the federal level, to use the BRR as a tool for increasing earnings.

The failure of the negative income tax to provide work incentives has also led some analysts to conclude that work and welfare are inevitably essentially mutually exclusive alternatives--that is, that it is not true that "work and welfare go together," as was once hoped, but that the object of reform should be to get women into the workforce by getting them off welfare altogether. This position is reinforced by the finding, discussed in Section II above, that very few women have ever

worked while on AFDC, even during the period of its lowest BRR.

Although it is possible that the BRR has simply not been low enough to induce women to work while on the rolls, it may be that the benefit formula, and the average BRR embedded in it, is too complex for women to understand or too variably applied and enforced to generate sufficient certainty regarding the actual benefit reduction that would be faced in any particular case. There is also some evidence that women cycle on and off AFDC, combining periods of work-and-no-welfare with welfare-and-no-work, behavior that could be induced by the nonconvexity of the budget set. In any case, for whatever reason, low-income female heads appear to choose to go on AFDC only if they are not working and to go off AFDC if they plan to work, as a general rule.

It is worth emphasizing that the BRR may be reduced for reasons of distribution rather than work incentives--that is, it may be desired to extend benefits higher up in the income distribution than does a program with a high BRR. It remains the case that families among the "working poor," as they are generally deemed, will often be ineligible for a program with a 100 percent BRR. At the current average AFDC guarantee, for example, a female head working full time for the entire year at the minimum wage is not eligible for benefits in the current 100 percent BRR regime, but would still fall below the official poverty line for a family of four. Thus the BRR should be set to allocate expenditures over different income groups in whatever proportion is socially desired and without particular regard for work incentives or disincentives.

## B. Instituting Training and Other Work-Related Programs

Currently, the most popular type of reform measure in both Washington and state governments is the institution of some type of work requirement or training program for welfare recipients. The policy movement in this direction has gathered strength in the past few years, particularly at the state level with the encouragement of the federal government, and culminated in federal legislation in 1988 mandating training programs and various forms of work requirements for all the states. This movement is generally interpreted as the result of an increasingly conservative political climate over the 1970s and 1980s, but it is also partly a result of a gradual recognition of the ineffectiveness of financial incentives, as discussed in the last section. If the carrot of lowering the BRR fails to increase work effort among recipients, it is natural to try the stick of work and training requirements instead. However, this characterization turns out to misrepresent the programs that have actually been implemented to some extent, for most, as discussed below, contain strong carrot elements as well.

Theoretical Effects. In its purest form, a work requirement in a transfer program such as AFDC requires that recipients work at a suitable job for some minimum number of hours per week in order to retain program eligibility and hence to continue to receive benefits. Those working less than the minimum are denied benefits. The effect of such a "workfare" program on labor supply is unambiguously positive in the standard static model, for any recipient working less than the minimum hours prior to the imposition of the requirement must increase

her hours of work to retain benefits. Some recipients will choose to leave the rolls and work less than the minimum number of hours, so the caseload will therefore be unambiguously reduced as well. Of course, the increase in labor supply and reduction in the caseload is achieved by effectively eliminating the program altogether over some range of hours worked, and hence is similar in spirit to a cut in the benefit (both reduce utility).<sup>36</sup>

The welfare employment programs that have actually been implemented or proposed over the last twenty years have often been very different than this for two reasons. First, while many programs have indeed simply required recipients to work for a limited or unlimited period of time, perhaps at a public or private nonprofit organization (this is usually called "work experience") and usually at the minimum wage, many programs have required recipients instead to engage in job-search activities, education, classroom training, or on-the-job training. While requiring recipients to engage in these activities still imposes a time cost (or an "obligation," as it is often called), there is clearly a possibility that such activities may be more productive than mere work at a public job and may result in more long-lasting increases in earnings. This is especially true of education and training, which may increase the stock of human capital, and may be true of job search if it is intensive and designed to lead to work at a higher wage than the minimum (if job-search is just a substitute for a work-experience job, on the other hand, it is closer to a workfare program). It should be expected that recipients will be more likely to voluntarily participate in activities of this sort than in a pure workfare program.

Second, some programs have been voluntary rather than mandatory, and others have not imposed benefit penalties as severe as the pure workfare example implies. In voluntary programs (e.g., the Massachusetts "ET" program) an attempt is made to offer a program sufficiently attractive in terms of job search, education and training, or merely support services such as child-care subsidies, as to induce significant participation from the caseload voluntarily. In addition, penalties in mandatory programs (called "sanctions") are often only temporary or only partial.

The expected effects on the long-run caseload of education and training programs (henceforth "training programs" for short)--as opposed to pure workfare programs--are not immediately apparent. While any program that increases future wage rates or earnings of AFDC women will reduce the probability that they will be on the welfare rolls in the future, it is also the case that offering to anyone who is on AFDC a new training program with a positive net present value, where there was none before, is likely to make welfare more attractive and hence draw some women onto the rolls or make them less likely to leave the rolls.<sup>37</sup> Whether the caseload-increasing or caseload-reducing effect dominates in the long run is ambiguous a priori. The importance of the caseload-increasing effect depends upon whether the net present value of the new training program is positive and upon whether the program is voluntary or mandatory. If the program is voluntary, no recipient can be made worse off and hence the gain to being on AFDC must increase.<sup>38</sup> Alternatively, if the training program is mandatory but its net present value is sufficiently high to induce voluntary participation among all

AFDC recipients (i.e., to compensate them for their time costs), it must inevitably make the value of being on AFDC higher for those initially off, especially those who are already working and for whom no incremental time costs would be incurred. If the program is mandatory and some recipients would be made worse off by receiving the training (because their time costs are not compensated), some will indeed leave the rolls.<sup>39</sup>

A related issue is whether it is possible to achieve net government savings in expenditure with these types of programs. Net savings are more likely to be achieved if the program is mandatory than if it is voluntary, for the immediate reduction in the caseload in the mandatory case, arising from the departure of those who would be worse off on AFDC than not on it, would reduce AFDC expenditures.<sup>40</sup> Otherwise, the possibility of net savings will depend upon the relative magnitudes of the caseload-reducing and caseload-increasing effects mentioned earlier. For net savings to occur, the net earnings payoff to the training and the consequent future caseload reductions must be sufficiently high as not only to pay for the direct costs of the program (which will often include the child care costs of the trainees as well) but also to compensate for the fact that earnings increases above the breakeven level yield no marginal welfare savings. If the probability of finding such a program is low, work-requirement and training programs should not be thought of as money-saving devices but instead as programs that may result in increases in earnings and reductions in caseloads from a net increase in governmental expenditure.

Econometric Evidence. The empirical literature on training programs has not addressed most of these issues, concentrating instead on the issue of whether the programs that have been tested or implemented have any earnings effects in the first place. This is obviously an issue which must be determined at the beginning, for if no earnings payoffs exist, then the programs become mere workfare or work-subsidy programs. Nevertheless, as a result, the literature to date has not addressed the potential effects of the programs on the entry rate onto welfare and hence on the long-run caseload.<sup>41</sup>

The econometric literature on the effects of work-related programs on the earnings of recipients is quite large and diverse, and is consequently difficult to summarize. The diversity is clear in Table 12, which lists the major studies that have focused on welfare recipients.<sup>42</sup> Some programs, such as those under the Comprehensive Employment and Training Act (CETA) and the AFDC Work Incentive (WIN) program, have provided a wide variety of services (Public Service Employment, PSE; Job Search Assistance, JSA; Work Experience, WEP; On the Job Training, OJT; etc.) for recipient groups with different types of employment problems. Others, such as Supported Work and the Employment Opportunity Pilot Project (EOPP), both of which were tests of new programs, offered a single type of program thought to be particularly innovative. The largest evaluation effort, that of state work programs in the 1980s summarized recently by Gueron (1987, 1990) and conducted by the Manpower Demonstration Research Corporation (MDRC), studied programs in eight different states, each of which offered a different type of program or program mix. In one sense, this diversity

Table 12

## Studies of the Effects of Work and Training Programs on Welfare Recipients

Study	Program	Services Provided	Sample	Voluntary vs. Mandatory	Evaluation Method	Estimated Effects	
						Annual Earnings	Annual Welfare Benefits
Ketron (1980)	WIN	PSE, WEP, CT, OJT, JSA	AFDC WIN registrants, 1974-1975	Mand. if no child < 6	Comparison group drawn from WIN waiting list	\$258 after 2 years; \$168 after 3 years; \$1478 for PSE after 2 years	(+) after 2 years
Bassi et al. (1984)	CETA	PSE, WEP, CT, OJT	AFDC recipients 1976-1979	Vol.	CPS comparison group	\$556-\$949 \$1558-1673 for PSE	--*
Hollister et al. (1984)	SW	Subsidized employment in sheltered environment	Long-term AFDC recipients with no child < 6 and low recent work history, 1977-1979	Vol.	Experiment	\$924 after 19-27 mos.	(-) after 19-27 mos.
Grossman et al. (1985)	SW	Same	Same but longer follow-up data	Same	Same	\$492 after 10 quarters	(0) After 10 quarters
Grossman et al. (1985)	EOPP	JSA only or JSA followed by SET	AFDC recipients, 1979-1981	Vol.	Comparison group of non-participants	-\$33 if JSA only; \$444 if JSA and SET. Both after 7 quarters	(+) if JSA only; (-) if JSA and SET; both after 7 quarters
Center for Human Resources (1986)	Food Stamp Work Registration Demonstration	New work-req. rules and JSA	Food Stamp work registrants	Mand.	Experiment	\$116-\$832 after 6 mos.	(-) after 6 mos.
Bell et al. (1987)	AFDC Homemaker-Home Health Aide Demonstration	CT, SET	AFDC recipients in 7 states, 1983-1986	Vol.	Experiment	\$132-\$1932 After 2 years	(-) in 4 out of 7 states after 2 years

(table continues)

Table 12, continued

Study	Program	Services Provided	Sample	Voluntary vs. Mandatory	Evaluation Method	Estimated Effects	
						Annual Earnings	Annual Welfare Benefits
Gueron (1987, 1990) Gueron and Pauly (forthcoming) <sup>b</sup>	Arkansas	JSA, WEP	WIN-mand., AFDC applicants and recipients with no child < 3	Mand.	Experiment	\$337 after 3 years	(-), after 3 years
	California-I	JSA only or JSA and WEP	WIN-mand., AFDC and AFDC-UP applicants	Mand.	Same	\$443 after 1 year	(-) after 1 year
	California-II	JSA, WEP, E, T	WIN-mand. AFDC and AFDC-UP applicants and recipients	Mand.	Same	\$658 after 2 years	(-) after 2 years
	Illinois	JSA only or JSA and WEP	WIN-mand. AFDC applicants and recipients	Mand.	Same	\$10 after 1 year	(-) after 1 year
	Maine	CT, WEP, OJT	Long-term AFDC recipients	Vol.	Same	\$941 year 3 years	(+) after 3 years
	Maryland	JSA, T, OJT, WEP, E	WIN-mand. AFDC and AFDC-UP applicants and recipients	Mand.	Same	\$511 after 3 years	(-) after 3 years
	New Jersey	OJT	WIN-mand. and vol. AFDC recipients	Vol.	Same	\$591 after 2 years	(-) after 2 years
	Virginia	JSA, WEP, E, T	WIN-mand. AFDC applicants and recipients	Mand.	Same	\$268 after 3 years	(-) after 3 years
	West Virginia	Unlimited WEP	WIN-mand. AFDC and AFDC-UP applicants and recipients	Mand.	Same	\$16 after 1 year	(0) after 1 year

Note: Acronyms: CETA = Comprehensive Employment and Training Program; WIN = Work Incentive Program; SW = Supported Work Program; EOPP = Employment Opportunity Pilot Project; PSE = Public Service Employment; WEP = work experience; CT = classroom training; OJT = On-the-Job Training; JSA = Job Search Assistance; SET = subsidized employment and training (usually PSE, WEP, or OJT); T = multiple types of training; E = education; CPS = Current Population Surveys.

<sup>a</sup>Welfare benefit data collected irregularly.

<sup>b</sup>Evaluation of eight AFDC work-related programs developed by states after passage of Omnibus Budget Reconciliation Act of 1981.

is advantageous because a successful type of program is more likely to be found if a wide variety of types is studied. But the diversity is so great that the number of dimensions along which the different programs vary exceeds the actual number of programs studied, making it virtually impossible to rigorously determine the effects of particular program characteristics. Instead, each program essentially represents a unique bundle of program characteristics and hence each effectively constitutes a sample size of one, with consequent deleterious implications for the level of uncertainty about the true effects of each.<sup>43</sup>

Most of the programs studied have not been simple workfare programs, but have also included job-search, education, or training components. One exception is the West Virginia program studied by MDRC, which was designed only to require work on the part of recipients. The programs also differ in the degree to which they were mandatory or voluntary. Some of the programs (Supported Work, EOPP) were voluntary because they were tests of new programs outside the conventional AFDC system, so only volunteers were asked to participate; others (e.g., CETA) were voluntary because they were also independent of AFDC. Some of the programs evaluated by MDRC were also voluntary. However, most programs in place in the existing AFDC system, most of which are related to the WIN program, were mandatory, at least for women without very young children. Given that the types of participants observed in a voluntary program are likely to be rather different from those observed in a mandatory program, there is no a priori reason to expect earnings effects to be the same across such programs.

Much of the econometric discussion in these studies, as well as studies in the literature on manpower training in general, has been concerned with issues related to evaluation methodology. As the table indicates, some studies obtained estimates of program effects by comparing the earnings of participants with those of a comparison group of individuals who were not in the program. The danger in such an approach is that the two groups of individuals may not be comparable, for either the program participants may self-select themselves into the program or the program operators may select trainees on the basis of their potential employability in the first place. The most common supposition is that program operators "cream" from the eligible pool by accepting those who are the most employable to begin with, which would tend to bias estimates of program effect upward. This is additionally the case when participants who receive different types of services (PSE, JSA, etc.) are compared with one another, for the offer of different service types is intended precisely to accommodate diversity in types of employment problems in the eligible population.

For this reason, many of the studies have employed traditional randomization techniques to develop a control group that can be presumed to be identical to the group receiving program services in all respects other than the program treatment. If the randomization is properly performed and if the experiment can maintain its integrity in the hurly-burly of a real-world environment, this method can go a considerable distance toward eliminating the biases that may arise in nonexperimental evaluations. However, aside from the practical difficulties of maintaining integrity in the field (i.e., keeping all else equal between

the two groups), experimental methods have the disadvantage of providing estimates that apply only to the population upon which the randomization is conducted. For example, the Supported Work experiment randomized from a population of individuals who had volunteered for the program or who were referred by other agencies with which they had had contact. The estimates of earnings effects obtained from the experiment would thus not be generalizable to the entire AFDC population, as would be of interest if the program were implemented nationwide and made mandatory (once again, volunteers are probably those most likely to benefit from the program in the first place).

In fact, the problem of the usefulness of experimental estimates is even deeper than this if it is thought that the permanent implementation of a program--as opposed to its experimental testing on a small group--would change the nature of the AFDC caseload. The permanent, nationwide implementation of a pure workfare program would certainly change the types of women applying for AFDC--those who expect to get little from the program may no longer apply, for example. This would, in turn, make the estimates of earnings effects obtained from a randomized experiment on the existing caseload of questionable relevance.<sup>44</sup>

Despite the diversity of programs studied and evaluation methods employed, there are several patterns in the results of the studies in Table 12. First, there is a clear indication of positive earnings effects in the table across the studies from different programs and in different years. This constitutes a rather new finding, for the conventional wisdom in this area for many years was that "nothing works," that is, that no training program has significant effects on

earnings. There has been a reversal of this wisdom in the literature on the effects of work programs for welfare recipients, largely because of the results shown in Table 12.

This conclusion requires several qualifications. Some of the studies showing positive effects use nonexperimental comparison groups that probably yield biased estimates of program effect--for example, the Ketrone comparison group, drawn from recipients on the waiting list created by rationing of WIN training slots, is biased if there is creaming. Nevertheless, the experimental estimates in the table also show positive earnings effects. In addition, however, the magnitudes of the estimates vary tremendously, ranging from estimates insignificantly different from zero to estimates as high as \$1500 per year. Some of the outliers can be plausibly ascribed to particular factors: the low West Virginia estimate may be a result of the workfare program tested there, which was not intended to raise earnings;<sup>45</sup> the high estimates for PSE in the CETA and WIN studies may be a result of self-selection into PSE; the MDRC estimates may be lower, on average, than those in other studies partly because the MDRC estimates include some nonparticipants in the experimental group; and so on. Unfortunately, it is difficult to go very far in this direction, given the small number of studies.

One pattern that does appear in the table is the consistently larger-sized effects of PSE, and of subsidized employment or OJT services, as compared with JSA.<sup>46</sup> However, whether the former two would have a higher benefit-cost difference than the latter two is not so clear, for JSA is far less expensive than actual job creation such as required by PSE. It is not surprising, in a sense, that the more direct

and expensive treatment have the larger effects on earnings (see Friedlander and Gueron, 1990, for further discussion of this issue).

As the table indicates, benefit payments were generally reduced by the programs and hence transfer-payment costs to the government fell. However, since there were costs to implementing the program as well, the net cost to the government is not clear. In the MDRC experiments, government net costs did indeed fall in two-thirds of the sites (Weinberg and Germanis, 1988). Perhaps more important, calculations of net monetary social benefits--which include the value of the output produced by the recipients and exclude changes in taxes and transfers--generally show positive effects, although often quite sensitive to the choice of discount rate and assumed decay rate of earnings impacts (Hollister et al., 1984; Weinberg and Germanis, 1988; Bell et al., 1987). Nevertheless, some of the studies indicate that sometimes participants are worse off in terms of the present value of net income (Hollister et al., 1984; Weinberg and Germanis, 1988), and would be presumably even worse off if the value of lost leisure and possible utility of own child-care were included.<sup>47</sup> As noted previously, this should decrease the attractiveness of AFDC.

Despite the overall finding of consistently positive earnings effects, it is also clear from the table that these programs are not a panacea for the problem of low incomes among female heads. Even taking the relatively optimistic view that the programs can consistently increase earnings by \$1000 per year for AFDC female heads, a large change in the poverty rate of female heads is not likely to result from implementation of the programs. In fact, the \$1000 earnings increase is

about the size of the labor supply disincentive of AFDC in the first place, which, as noted in Section III.A above, does not by itself greatly increase the poverty rate. Consequently, while work-related programs are likely to increase earnings, their magnitudes imply that the scale of the effort must be much higher than that in the programs tested thus far to have a large effect on the poverty rate and AFDC caseload. Short of this, such programs cannot be relied upon as the sole tool in the effort to reduce poverty among female heads.

Finally, it should be noted that these programs address the problem of low earnings among female heads but are not intended to address the problem of female-headedness itself. Indeed, since increases in the female wage rate have ambiguous, and possibly negative, effects on the probability of the formation of a marital union, the programs may have a side effect in this direction. Work programs for AFDC recipients appear instead to be implicitly based on the presumption that such women will be more or less permanently on their own, so that making them more economically independent is the best way to improve their lot.

#### C. Child Support Reform

A relatively recent method of welfare reform is that based on reform of the child support system. Child support in the United States is determined by local judges who set award amounts, abiding by the laws of their jurisdictions and taking into account the circumstances of father and mother. Awards are made to the custodial parent, often nowadays the mother, and are payable by the noncustodial parent, usually the absent father. Awards can be made to mothers with children from a

marriage or to mothers of illegitimate children. In the context of a properly functioning child support system, the role of AFDC should be to provide income to custodial parents for whom child support is insufficient to bring the family up to some socially desired minimum level of income. It should be expected that a program such as AFDC will be needed, for child support will be small in magnitude, if not zero, for children of absent fathers who have low earnings or are not employed.

The evidence does indeed indicate that the amount of support provided by low-income absent fathers is indeed extremely small, but it is small among absent fathers in general as well. Moreover, the amount of support payments actually made is much smaller than the courts appear to think appropriate in their award amounts. For example, only 18 percent of the mothers in the AFDC caseload received any child support at all in 1983. In part this is because most women (60 percent) on the AFDC rolls had no court-ordered award. However, of those that had an award and who were due a payment, 40 percent received nothing and only 5 percent received payment (Lerman, 1989, p. 228) in the full amount of the award--the remainder received only partial payment. The situation is similar in the population as a whole, although less severe--of all women with children from an absent father, 39 percent had no award in 1985 and, of those due a payment, 26 percent received none and only two-thirds received the full amount (U.S. House of Representatives, 1989, p. 633).

The major impetus for reform of the system is the widespread support among the public and government officials for increasing the

amounts paid by absent fathers for simple and obvious equity reasons. From the point-of-view of the AFDC system, redistributing the burden of support for children in AFDC female-headed families from the general taxpayer to absent fathers also has wide support. There are many questions of equity, of cost, of the amount of income that can be gained from low-income absent fathers, and of other issues that have been studied in this connection. But for the purposes of this review these will not be discussed. Instead, the focus will be on the side effects of such redistribution of the child support burden, in particular, the side effects on labor supply of female heads and on AFDC caseloads.

Figure 5 illustrates the effect of child support on the budget constraint in the simple static model of labor supply and AFDC participation. An increase in child support acts as an increase in nonwage income, since it is independent of her earnings, and is shown to shift the non-transfer constraint from BFH to the dotted line shown as CEI.<sup>48</sup> The amount of take-home available to a woman who is on AFDC is unchanged (segment DE) because the child support is taxed at a 100-percent rate by the AFDC system. In reality, the system imposes such a rate only for child support above \$50 per month, but this is ignored for purposes of illustration.

Since the increase in child-support has no effect on take-home income while on AFDC, the change unambiguously reduces the AFDC caseload. Some women will move above breakeven, from segment DF to segment EI (the breakeven level also drops) and some women will move from segment DE to segment CE, recognizing the existence of non-participating eligibles as discussed previously in this review.

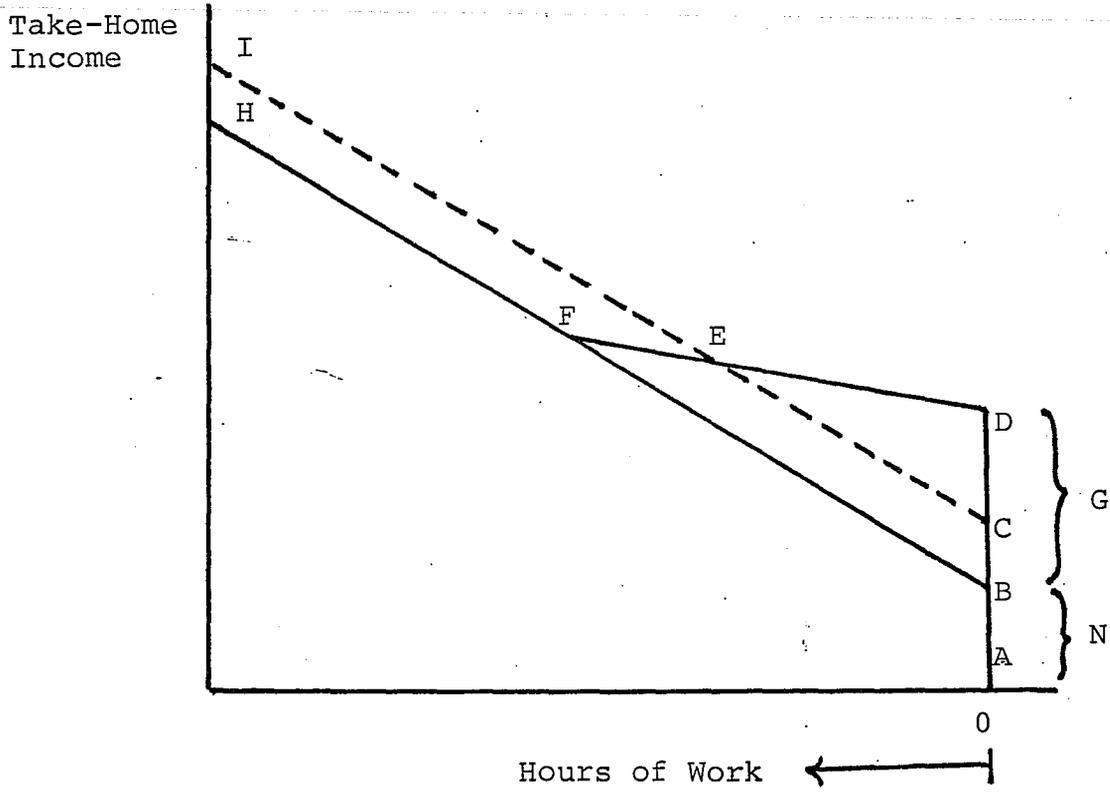


Figure 5. Increase in Child Support.

However, the direction of change in labor supply is ambiguous. While women initially on AFDC will unambiguously increase this labor supply if they go off the program (assuming that the AFDC guarantee dominates the child support amount), women who are initially off AFDC (along segment BFG) will reduce their labor supply because of the increased child support, assuming leisure is a normal good. This ambiguity is similar in many respects to that arising from a change in the BRR, for both ambiguities result from opposing labor supply effects for women initially on and initially off AFDC (there is no reason for the ambiguity to be resolved in the same way in the two cases, of course).

To economists an advantage of child support reform is that it offers the possibility that the caseload can be reduced at the same time that labor supply is increased, assuming the ambiguity is resolved in that direction. This stands in contrast to some other reforms like the negative income tax, as noted previously. This is possible because child support reform aims to alter the welfare caseload not by altering any characteristic of welfare programs but by altering the situation of women off welfare, just as any improvement in the wage rate or other income characteristic in the non-AFDC state would do. Thus child support reform is not welfare reform but rather "nonwelfare" reform.

There have been only two studies that directly address the empirical determination of the labor supply and caseload effects of child support reform.<sup>49</sup> Evidence on the caseload effect was provided by Robins (1986), who used data on female heads from the 1982 Current Population Survey to estimate AFDC participation equations as a function of the net wage rate and nonwage income on and off AFDC (his study is

reported in Table 6). Child support was included in nonwage income off AFDC. Robins used his results to estimate the change in AFDC participation that would result if all child support awards were paid in full to all mothers who had such awards. Surprisingly, his results showed that the probability of AFDC participation fell by only a small amount, approximately two percentage points. Robins provided two explanations for this result. First, since child support awards rarely dominate the AFDC guarantee, a nonworking AFDC recipient is less likely to change her labor supply after an increase in child support (since it is taxed at 100 percent by the AFDC system) than is a recipient who has earnings and is therefore closer to the program breakeven point. But since virtually all AFDC recipients do not work, very few recipients respond. Second, and relatedly, Robins pointed out that the award amounts to AFDC recipients are only about 60 percent of AFDC payments on average, not large enough to have a significant effect even if fully paid. Robins speculated that a higher award rate and higher award amounts might have larger effects.

Garfinkel et al. (1990) have provided evidence on whether this would be so. Using data on female heads in the state of Wisconsin, the authors predicted the AFDC participation and labor supply effects of various child support reforms, applying substitution and income elasticities drawn from a labor supply study by Johnson and Pencavel (1984). The results are shown in Table 13. As shown in the first row, an increase in the magnitude of existing awards by setting them equal to a higher percentage of absent father income would reduce AFDC participation probabilities by 2 percent, equal to about one percentage

Table 13

Predicted Effects of Child Support Reform on AFDC Participation  
and Labor Supply of Female Heads<sup>a</sup>

	Change in AFDC Participation <sup>b</sup> (percentage)	Change in Labor Supply (percentage of group base)		
		AFDC Recipients	Non-AFDC Recipients	All
Uniform percentage- of-income standard <sup>c</sup>	-2	8	-2	-2
Medium improvement in award rate	-2	11	-3	-2
Medium improvement in collection rate	-3	14	-3	-2
Guaranteed child support of \$3000/yr. <sup>d</sup>	-3	16	-4	-2

Source: Garfinkel et al. (1990), Table 5. All reforms are cumulative (moving down the leftmost column) and assume implementation of the prior reform.

<sup>a</sup>State of Wisconsin, 1985. Labor supply = hours worked per year.

<sup>b</sup>Base = 46 percent of eligible women, in absence of reform. Numbers represent change in caseload divided by initial, base caseload.

<sup>c</sup>Award amounts set as a percentage of absent father income: 17 percent for one child, 25 percent for two children, 29 percent for three children, 31 percent for four children, and 34 percent for five or more children.

<sup>d</sup>Government-guaranteed amount if child support to custodial parent falls below this amount. Custodial parent income taxed at rates shown in prior footnote until subsidy is phased out.

point in the participation rate. This is not a large amount, and reflects the low levels of absent father income. But this change would also reduce female-head labor supply, on net, by 2 percent. This effect arises from reductions in work effort among initial nonrecipients which outweigh the increases in work effort among initial recipients.

As also shown in the table, an improvement in the award rate (i.e., in the probability of an award) would have no additional significant effect on AFDC participation probabilities or net labor supply effects, but an improvement in the collection rate (i.e., in the probability of a full payment) would lower the caseload by one more percent, or about one-half a percentage point. This effect is in the same neighborhood as the Robins estimate.<sup>50</sup> Finally, the table shows the effect of guaranteeing a minimum child support level by providing custodial families with a subsidy should the absent father's payment fail to reach \$3000 per year. As the results show, this reform would have modest additional effects on caseloads and net labor supply of female heads.<sup>51</sup> However, note that each reform increases both the positive and negative labor supply effects from recipients and nonrecipients, respectively, although they cancel out.

These estimates should be viewed as tentative because of the numerous assumptions upon which they are based, the most important of which are assumptions regarding the levels of absent father incomes (they must be estimated because there is no direct information in the data on such incomes). In addition, the estimates appear quite sensitive to the labor supply elasticities assumed (see Table 7 of Garfinkel et al.).<sup>52</sup> Nevertheless, the estimates shown in Table 13,

those preferred by the authors, provide little evidence that child support reform will greatly reduce the AFDC caseload and no evidence that it will have any positive effects on female labor supply--indeed, negative effects are shown.

While these studies as well as most of the discussion in the literature have focused on the effects of increased child support on AFDC participation and on the labor supply of the custodial parent, there are several other incentive effects that have not been adequately addressed either theoretically or empirically. The most important ones relate to the behavior of the absent father. For example, an increase in child support, particularly one tied to absent father earnings on a percentage basis, represents a tax and hence may reduce his labor supply and hence award amounts and collections. This would partly depend upon whether the award were set as a lump-sum amount or as an amount that would change as earnings changed subsequent to the award, though even if the award were not changed, there is the possibility that labor supply prior to the award might be altered in anticipation of it.

More fundamentally, a major change in the child support system mandated by the courts could have an effect on the implicit contracts formed in marital unions and hence on the probabilities of the formation and dissolution of those unions. Child support reform of the type generally considered--increasing the obligations of the absent father to the custodial mother--increases the incentive for marital dissolution on the part of the mother but decreases it for the father. However, if divorce is efficient in the sense of Becker (i.e., if only the total combined real incomes outside the union matter), then there may simply

be a redistribution within the marital unit to offset the changed child support structure, with no consequences for divorce rates.<sup>53</sup>

Complicating matters further are the possibly new disincentives for marriage (and for childbearing) in the first place, as well as the newly lowered probabilities of remarriage for the (worse-off) absent father and increased probabilities of remarriage for the (better-off) custodial mother--absent fathers must continue payments if they remarry and custodial mothers can keep receiving child support payments if they remarry.

#### D. Extending Benefits to Husband-Wife Families

As discussed in Section III, one of the emerging issues in the study of the welfare system is the phenomenon of growing female headship. Although the evidence reviewed in that section reveals thus far relatively weak incentive effects of AFDC on family structure, the extension of AFDC benefits remains an active area of discussion in welfare reform. Indeed, the most important piece of legislation in this respect since 1962 was recently included in the Family Support Act passed by Congress in 1988--legislation mandating that all states adopt, by 1992, the AFDC-UP (Unemployed Parent) program, for which husband-wife families are eligible.<sup>54</sup>

For present purposes, it is important to recognize the theoretical implications of the simple model of marital unions explicated in Section III for the extension of benefits to husband-wife families. Most critically, that model implies that female labor supply will fall, not

increase, with such an extension. Division and specialization of labor within the family results in lower labor supply levels for married women than for female heads in principle, a prediction that is consistent with the evidence on labor supply levels for married women and female heads (see Section III). However, for similar reasons it may be expected that there would be positive forces on male labor supply, inasmuch as unmarried males have lower levels of labor supply than do married men.<sup>55</sup> This effect would be countered by the more direct disincentive effect of transfers on male labor supply. In any case, it has been pointed out that the effects of extension of benefits to the poor population in general would actually have ambiguous effects even on marital status, because unmarried men would thereby gain eligibility, whereas they currently are without it (Cain, 1986; Keeley, 1987). Finally, it should be noted that this reform, regardless of any favorable efficiency effects on marital status, achieves its ends by increasing, not decreasing, the caseload.

Unfortunately, the empirical importance of these factors has yet to be examined in the research literature and hence there is virtually nothing that can be said about the effects of benefit extension at the current time. The family structure studies reviewed in Section III have not yet articulated joint models of marital status and labor supply of husbands and wives sufficiently to permit even the crudest sort of prediction of extension. Moreover, despite the fact that the AFDC-UP program is the only existing cash program providing benefits to husband-wife couples in some states, and despite its increasing future importance given the 1988 legislation, it is nevertheless the case that

there have been no studies of its effect on labor supply and little research attention paid to the program in general.<sup>56</sup>

Some evidence on the effect of transfer benefits on the labor supply levels of husbands and wives is available from the negative income tax experiments. The results indicated significant negative effects for both husbands and wives (Burtless, 1986; Moffitt and Kehrer, 1981; SRI International, 1983). However, these estimates are not reliable indicators of effects that would result from AFDC-UP benefit extension and, in addition, the programs tested in the experiments are so different from programs such as AFDC-UP that their relevance to future benefit extension policy in the United States is quite limited.

## V. CONCLUSIONS

The literature on the incentive effects of the U.S. welfare system reviewed in this survey has shown unequivocal evidence of effects on labor supply, participation in the welfare system, and on some aspects of family structure. Mostly these effects arise for female heads of family, the major recipient group under the current system. The econometric studies show that labor supply is reduced by the AFDC and Food Stamp programs, that higher potential benefits induce greater participation in these programs, and that the programs affect family structure though usually weakly. The evidence on program effects on interstate migration and intergenerational transmission is suggestive but inconclusive at the present as a result of methodological difficulties; these two areas are therefore good candidates for additional research.

Yet the review has also shown that the importance of these effects is limited in many respects. The labor supply effects, while statistically significant, are not large enough to explain the high rates of poverty among female heads; most AFDC women would, apparently, be poor even in the absence of the AFDC program. Also, the labor supply estimates do well in explaining the time-series trends in work effort of female heads, but this is primarily because female head labor supply has been very stable over the past twenty years and appears to be relatively unresponsive to changes in benefit levels and work incentives in the welfare system. Indeed, changes in the AFDC benefit-reduction rate have little net effect on labor supply, with consequent unfavorable implications for the efficiency effects of a negative income tax. In addition, the econometric estimates of family structure effects are not large enough to explain long-run declines in marriage rates and, in any case, are incapable of explaining recent upward trends in female headship because welfare benefits have been declining. Thus the welfare system does not appear to be capable of explaining most of the long-term trend or any of the recent trend of increasing numbers of female-headed families in the United States.

Some of the evidence assembled in the review suggests that family structure issues appear to be at least as important in understanding the economic status of low-income female heads as labor supply issues. There is some indication, for example, that levels of labor supply and earnings among female heads are not abnormally low, at least compared with those of married women. If so, policy measures such as the negative income tax and other programs offering financial inducements to

work, as well as work and training programs for AFDC recipients, may be based upon an incorrect assumption of what the "problem" is among low-income female heads, or least on the incorrect assumption that female heads are any worse off with respect to labor market performance than married women. Indeed, such reforms could even have deleterious effects on family structure. Unfortunately, the research on family structure remains in its infancy compared to the voluminous research on labor supply.

The review also revealed important remaining research questions on the major reform measures currently under discussion. While research on the effects of work and training programs for welfare recipients on earnings is actively being pursued, the effects of such programs on the long-run equilibrium caseload has not been given sufficient attention. Child-support reform, perhaps one of the most important new policy areas, is in need of research on the broader incentive effects on absent father labor supply and family structure, as discussed in the review. Research on the effect of extending benefits to two-parent families through the AFDC-UP program is badly needed, as that program has scarcely been touched by the research community. These research issues provide a full and fascinating agenda for future work.

## Notes

<sup>1</sup>However, there have been major expansions in recent years in coverage of children in poor families in general.

<sup>2</sup>The definition of the real benefit in the figure is discussed in note 6, below.

<sup>3</sup>Food Stamp benefits are indexed to inflation by Congress and have remained approximately constant in real terms. But neither Medicaid nor AFDC benefits are so indexed and both have declined in real terms. See Table 3. It may also be of interest to note that cross-state variability of the benefit package is reduced by the Food Stamp program but increased by the Medicaid program. Combined with a decline in the variability of AFDC benefits alone, the net effect has been a secular decline in the cross-state variation of the benefit package.

<sup>4</sup>Ashenfelter assumed that all individuals below the breakeven level participated; therefore he defined the "behavioral" response only as that resulting from movements around the breakeven level. The mechanical-behavioral distinction loses some of its sharpness when the existence of non-participating eligibles is recognized, for there is no longer anything "automatic" about participation given eligibility.

<sup>5</sup>The careful reader may note that there is a slight inconsistency in the real AFDC benefit values in Figure 1 and Table 3. Those in Figure 1 are averaged over all family sizes and all recipient income levels, whereas those in Table 3 are for a fixed income level (namely, zero) and a fixed family size. The latter is preferred because its trend reflects shifts in the benefit formula set by state legislatures and not changes

in income and family size. However, only the former is available from published data prior to 1960.

<sup>6</sup>To be precise, before 1981 AFDC recipients could deduct \$30 per month and one-third of their earnings from their income prior to the benefit calculation. Currently, recipients can deduct \$30 for up to 12 months but one-third of earnings for only four months. It should also be noted that "effective" BRRs are considerably lower than nominal ones because of the presence of earnings-related deductions. However, both have followed the same general time series patterns.

<sup>7</sup>There are clearly business-cycle effects in labor supply, as can be seen from the unemployment rates shown in the table. But regressions of the labor supply figures on a trend, the unemployment rate, and a post-1981 dummy show a significant downward shift after 1981.

<sup>8</sup>It would be desirable to examine the dispersion of labor supply among female heads as well, for the lower tails of the distributions of labor supply, earnings, and other variables may be larger for female heads than for, say, married women. Unfortunately, such data have not been tabulated though they are available.

<sup>9</sup>Bane (1986) has argued that many, if not most, poor female heads would still be in poor families if married. More research is needed on this issue.

<sup>10</sup>The trends in female-head labor supply and earnings could also be affected by a shift in the types of women who are female heads--for example, a shift toward the less skilled. Microdata would be required to control for such factors.

<sup>11</sup>These issues are not discussed for brevity. Although some of the econometric issues are common to other areas of research in labor economics and other fields (e.g., the development of methods for estimating equations with limited dependent variables), the most important developments for the welfare literature have been those addressing the endogeneity of welfare reciprocity itself and the relation of this endogeneity to what are now termed "selection bias" problems. For example, women observed to be on AFDC have lower hours of work than do women observed off AFDC, but this is a biased measure of the true effect of the program because women observed on AFDC would probably have lower hours of work even if they were off the program. Women with low hours of work prior to joining the program are more likely to have low earnings and high potential benefits and hence are more likely to apply for welfare. The development of econometric techniques for controlling for this self-selection into the program has been critical in obtaining reliable estimates of program impact.

<sup>12</sup>That review did not cover the negative income tax (NIT) experiments, nor will this one. The NIT experiments provided no direct estimates of the effect of AFDC, but provided instead estimates of only the incremental effect of replacing AFDC by an NIT with more generous benefits. Surveys of the NIT experiment results can be found in Burtless (1986), Moffitt and Kehrler (1981), and SRI International (1983).

<sup>13</sup>These estimates are drawn from note 38 of Danziger et al. and assume a 50 percent employment rate. The lower bound of one hour per week cited by Danziger et al. was taken from an unpublished study whose

estimates were later revised for publication (Moffitt, 1983). The revised estimates indicate reductions of six hours per week. Nevertheless, the important question is how large a range of disincentives would be generated by a reasonable range of income and substitution elasticities. In a later simulation study (Moffitt, 1985a), I simulated the disincentives using a range of elasticities and found that the effects ranged from one to six hours per week. Relative to those simulations, at least, the 10-hour reduction cited by Danziger et al. appears to be an outlier.

<sup>14</sup>Of course, these estimates are only averages across different women in different situations. AFDC benefits vary tremendously across states, for example, and the disincentive effects are consequently considerably larger in some states than in others.

<sup>15</sup>The leaky-bucket fraction is the ratio of the loss in earnings to the AFDC benefit, or one minus the Lerman ratio (the ratio of increased income to the benefit). Taking the estimate of 5.4 hours per week given in the text together with 1975 values of the hourly wage (\$3.27) and the average AFDC benefit (\$208 per month) as given in the latest study cited by Danziger et al. (Moffitt, 1983) gives a loss fraction of .37.

<sup>16</sup>Recall that the trends in the labor supply of AFDC recipients in Table 4 are meaningless because the composition of the caseload changes whenever the guarantee or BRR changes.

<sup>17</sup>The estimate of .65 to 2.96 is obtained by interpolating the figures in Table 5 across different guarantee levels for different elasticities. The estimates given below are obtained with similar interpolation.

<sup>18</sup>Of course, no other changes are being controlled for here. For example, the unemployment rate shown in Table 4 could have contributed to the hours reduction between 1969 and 1975. Also, there is no apparent explanation for some of the year-to-year changes in hours of work between 1969 and 1975 and between 1977 and 1986 except for the unemployment rate.

<sup>19</sup>Only studies conducting multivariate analyses are included. However, studies conducting only tabular analyses generally find similar results to those shown in the table.

<sup>20</sup>However, as Ashenfelter (1983) has stressed, these estimates do not separate the "mechanical" participation response from the "behavioral" response, where the former is defined as the change in participation induced simply by a change in the breakeven level and without any change in labor supply. However, when that separation is made with a structural model, the theory is still confirmed (Moffitt, 1983). A similar issue arises in the dynamic models discussed below--see note 31.

<sup>21</sup>Table 7 includes only those studies which provide an estimate of the effect of the AFDC guarantee controlling for other variables. A number of studies are excluded by this criterion, including studies of data from only one state (e.g., Harris, 1989; Tienda, 1990) and studies which used only tabular (not regression) methods.

<sup>22</sup>The number of long spells may be even higher because these estimates are based only on those with "new" spells, i.e., not with a spell in-progress at the beginning of the data. Those not on AFDC at the beginning may have shorter mean spells than other recipients. Bane and Ellwood (1983) and Ellwood (1986) also stress that the distribution

of spells at a given point in time shows even more long-term spells than those in Table 8. For example, 56 percent of women on AFDC at a given time are in the midst of a 25-year period in which they are on AFDC for 10 or more years. The difference in the two estimates arises from the well-known phenomenon of length-biased sampling discussed extensively in the unemployment-spell literature. A survey of those on AFDC at a point in time contains a disproportionately high number of long-termers and a disproportionately low number of short-termers, because the latter are less likely to be on the rolls in the first place.

<sup>23</sup>An exception to this generalization is the paper of Gottschalk (1988), who applies the standard search model to the AFDC case.

<sup>24</sup>The model used for these hypotheses is clearly only partial-equilibrium in nature, for it ignores the considerations that would be introduced if equilibrium in the marriage market were modeled. Relatively little empirical research has been conducted on such equilibrium models, however.

<sup>25</sup>Sawhill (1988) has recently summarized some of these studies as well, although Table 9 contains some studies completed after the Sawhill article. Table 9 also excludes studies of an experimental negative income tax; as for labor supply, this review is restricted to studies of the existing welfare system.

<sup>26</sup>The same issue arises with labor supply, but there estimates of state fixed effects models are consistent with cross-sectional estimates (Moffitt, 1986b).

<sup>27</sup>Although panel data, unlike cross-sectional data, at least permit

the identification of the date of transition; lags in the benefit effect would still be likely.

<sup>28</sup>This problem is identical to that faced in many other literatures. In the literature on the decision to become a union member, estimation of the effect of the relative union-nonunion wage requires that some variation in that relative wage be present (e.g., across local labor markets or industries); in the job mobility-literature, the effect of relative wages on the probability of changing jobs requires some variation in that relative wage; and so on. More generally, as in all models that are structurally equivalent to a hedonic model, some variation in the price locus facing the individual is required to be able to estimate the effects of changing that locus.

<sup>29</sup>Blank also enters some variables based upon knowledge of residential location in 1975, but these variables are not necessary to identify the model.

<sup>30</sup>There is an old and large economic and sociological literature on the transmission of income and socioeconomic status which could be usefully brought to bear on this question. In addition, economists have developed many models of intergenerational transmission of human capital as well as, of course, intergenerational monetary transfers.

<sup>31</sup>See also preliminary work by Gottschalk (1990b). The technique used by Antel was a full-information maximum likelihood method for jointly estimating the child's equation with an equation for the parent's welfare status, and thus its description as an instrumental variable technique is terminologically loose.

<sup>32</sup>It is sometimes argued that inducements to work while still on the rolls will increase human capital and hence lead to lower future AFDC participation. Whether the human capital returns are sufficiently large for this to be an important factor remains to be seen. No such human capital effect appeared after the reduction in the BRR from 100 percent to 67 percent in the 1967 Amendments, for example.

<sup>33</sup>The breakeven point could be held constant by lowering the guarantee at the same time as the BRR is lowered or raising the guarantee when the BRR is increased. Labor supply effects would be unambiguously positive and negative, respectively, in these cases.

<sup>34</sup>Levy's study suggested that the "new recipient" effect actually dominates, resulting in a significant decline in labor supply following a reduction in the BRR. However, there may have been an error in the computations involved; see Moffitt and Rangarajan, forthcoming.

<sup>35</sup>It should be noted that these conclusions do not necessarily extend to men and married women. For those groups, it is more likely that the perverse effect will occur--that is, that labor supply will be positively correlated with the level of the BRR. See Moffitt (1985a).

<sup>36</sup>However, any given recipient could be held harmless in a utility sense by a compensating increase in the benefit paid to those working the minimum hours. If such a compensating benefit increase were offered, the net effect of the program would be to distort the recipient's consumption-leisure choice in the direction of more consumption and less leisure, just as in the textbook analysis of in-kind and other "tied" transfers.

<sup>37</sup>Most existing programs also allow recipients who have received training and have left the rolls to return and receive additional training repeatedly, as long as a minimum calendar period elapses between training episodes.

<sup>38</sup>It is possible that a recipient can be made worse off if the program has just begun and its payoff is unknown or if there is uncertainty at the individual level regarding the payoff. But the former source of uncertainty will disappear over time and, despite the latter source of uncertainty, the recipient is better off in an ex ante sense.

<sup>39</sup>These caseload-increasing effects could be avoided if the training program were offered to the entire disadvantaged population, including those off AFDC. This would raise wage rates at the lower end of the wage distribution in general and would no doubt reduce the AFDC caseload. A related issue is whether there is a market failure for the training of disadvantaged individuals that would justify such a universal program. In the absence of such failure, a universal program must be justified on the basis of redistributive considerations of an in-kind nature.

<sup>40</sup>Unfortunately, the distributional implications of cost savings of this type are likely to be unfavorable inasmuch as those most likely to leave the rolls are those with the best alternative opportunities.

<sup>41</sup>Two very recent exceptions are the econometric studies of the impact of the Massachusetts programs on the AFDC caseload by Gerasky (forthcoming) and O'Neill (1990).

<sup>42</sup>A more detailed, excellent survey has recently been compiled by Greenberg and Wiseman (1990).

<sup>43</sup>Training effects thus take place inside a "black box". This problem is of immediate policy importance because, as mentioned previously, 1988 federal legislation mandated a new set of work-related programs for all the states beginning in 1989. It cannot be known with any degree of certainty that any of the studies in Table 12 will have any bearing on the new programs. The programs summarized by Gueron in the table are closest to those outlined in the legislation, but there are significant differences of unknown empirical consequence between them as well.

<sup>44</sup>These brief comments do not do justice to what is a complex issue. Unfortunately, there is insufficient space here to discuss in adequate detail the relative advantages and disadvantages of experimental and nonexperimental evaluation methods. For an introduction to the large literature on the subject, see Ashenfelter (1978), Burtless and Orr (1986), and Heckman and Hotz (1989).

<sup>45</sup>However, the West Virginia program took place in a higher unemployment-rate environment than any of the other programs studied by MDRC. With an effective sample size of one, alternative explanations such as this cannot be tested.

<sup>46</sup>A similar pattern was noted by Barnow (1987) in a review of the general literature on CETA effects and by Grossman et al. (1985) in a reanalysis of the data from several prior studies.

<sup>47</sup>The one study to examine the issue (Bell et al., 1987), found that inclusion of an estimate of the value of leisure and of home production lowered net social benefits substantially, sometimes changing them from positive to negative.

<sup>48</sup>Philip Robins has pointed out to me that this assumes that the level of the mother's earnings has no effect on the probability that the absent father will pay the amount of child support due, and that the courts will not take the mother's earnings into account when setting or updating the award amount.

<sup>49</sup>Graham and Beller (1989) estimate labor supply functions containing child support conditional on AFDC participation, and find it to have a negative effect. This provides support for believing leisure to be a normal good, but it does not provide direct evidence on the resolution of the labor supply ambiguity.

<sup>50</sup>However, recall that the Robins estimate reflected the change following a full, rather than partial, collection of all existing awards. The estimates are also not comparable because the estimates in Table 13 assume that the uniform percentage and award improvement reforms have already been put in place.

<sup>51</sup>The subsidy amount is phased out by taxing the income of the custodial parent. Thus it represents an additional transfer program overlaid on AFDC rather than an increase in nonwage income (i.e., child support). However, because the subsidy guarantee is below the AFDC guarantee and its BRR is considerably lower than that in AFDC, its breakeven point is above the AFDC breakeven. Hence it acts similarly to an increase in child support in the sense that it affects income off AFDC only, including regions of the constraint above the AFDC breakeven point. See Figure 1 in Garfinkel et al.

<sup>52</sup>The simulations also apply only to the Wisconsin population. The authors are currently extending their simulations to the national level.

<sup>53</sup>Peters (1986) has found no effect on dissolution rates of no-fault divorce laws, which play a similar role to child support mandates.

Peters did find that no-fault divorce affected the size of settlements.

<sup>54</sup>The 1988 act only requires that states offer benefits for at least six months per year, however.

<sup>55</sup>The empirical difference may be a result of self-selection, for men observed to be married may have higher productivities even if they were not married. Nevertheless, the simple theoretical model of division of labor within the household implies that there should be a true difference of some magnitude.

<sup>56</sup>Hosek (1980) estimated participation functions for the program but not labor supply functions. Also, many of the studies reviewed in Table 9 did include state AFDC-UP dummies in their models, but the results were not explored in detail because the studies were not focused on that program.

## APPENDIX: DATA SOURCES FOR FIGURES AND TABLES 1-4

Figure 1:

No. AFDC Families: U.S. Social Security Administration (1966, p. 113), 1936-1959; U.S. Social Security Administration (1988, p. 334), 1960-1986.

Monthly AFDC Benefit per Family: obtained by multiplying monthly AFDC benefit per recipient times the ratio of recipients to families. Data on all variables obtained from U.S. Social Security Administration sources just cited.

Benefit Sum: See Table 3.

Figure 4:

Female Headship: U.S. Bureau of the Census, Current Population Reports, Series P-20, various issues, 1960-1969; Wilson and Neckerman (1986, Table 10.1), 1970-1983.

Divorce Rate: U.S. National Center for Health Statistics (1986, Table 1).

Illegitimacy Rates: Murray (1984, p. 262), 1960-1980; U.S. National Center for Health Statistics, Advance Report of Final Natality Statistics, 1981-1984.

Real Benefits: See Figure 1.

Table 1:

AFDC: U.S. Social Security Administration (1988, p. 334).

AFDC-UP: U.S. National Center for Social Statistics (1965, Table 8), 1965; U.S. House of Representatives (1989, p. 559), 1970-1985. No. states from National Center for Social Statistics (1965, 1970a, 1975), 1965-1975; U.S. Social Security Administration (1980), 1980; unpublished data from the Office of Family Assistance, U.S. Department of Health and Human Services, 1985.

Food Stamps: U.S. Social Security Administration (1988, p. 336).

Medicaid: U.S. National Center for Social Statistics (1970b, Table 1), 1970; U.S. House of Representatives (1989, p. 1141), 1975-1985.

Table 2:

Weinberg (1986, Tables 3 and 4) and unpublished data provided by D. Weinberg.

Table 3:

AFDC Participation Rate: No. AFDC Families from U.S. Social Security Administration (1988, p. 334), 1968-1986; U.S. House of Representatives (1989, p. 559), 1987. No. AFDC-UP families from Michel (1980, p. 58), 1967-1969; U.S. House of Representatives (1989, p. 559), 1971-1987. No. female-headed families with children under 18 computed by author from Current Population Surveys. Participation rate calculated by dividing difference between total AFDC and AFDC-UP by no. female heads, and scaling results down by CPS subfamily adjustments shown in Ruggles and Michel (1987).

AFDC Benefits: Kasten and Todd (1983, unpublished appendix, from the authors), 1969; unpublished data, Office of Family Assistance, 1971-1987.

Food Stamp Benefits: Personal communication from Dr. Thomas Fraker, 1969-1971; U.S. House of Representatives (1989, p. 1126), 1973-1987.

Medicaid Benefits: Unpublished data from U.S. Health Care Financing Administration.

Weekly Earnings of Female Heads: Computed by author from Current Population Surveys.

Table 4:

AFDC Female Heads: Moffitt (1985b, Table IV.3) and Moffitt (1986b, Tables 3, B-1), 1968-1982; U.S. House of Representatives (1986, p. 397) and U.S. House of Representatives (1989, pp. 563, 566), 1983-1987.

All Female Heads: Computed by author from Current Population Surveys (see Moffitt, 1986b, Table 3).

Other Women: U.S. Department of Labor (1985, Tables 1, 50, 51), 1968-1983; U.S. Department of Labor (1988, Table C-9), 1984-1987.

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