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# AFDC-UP, Two-Parent Families, and the Family Support Act of 1988: Evidence from the 1990 CPS and the 1987 NSFH 

Anne E. Winkler<br>Department of Economics<br>University of Missouri-St. Louis

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#### Abstract

What is the effect of the AFDC-Unemployed Parent (UP) program on two-parent families? This question has become particularly relevant following the passage of the Family Support Act (FSA) of 1988, effective October 1990, which extended the previously state-optional AFDC-Unemployed Parent program to all states. This study clarifies what is meant by "two-parent" family in the federal legislation and then empirically investigates whether AFDC-UP is pro-family by taking advantage of cross-state variation in the presence (or lack thereof) of an AFDC-UP program before the FSA. AFDC-UP's effect on two-parent families is examined using individual-level data from two sources: (1) the March 1990 Current Population Survey and (2) the 1987 National Survey of Families and Households. The availability of AFDC-UP is not found to provide a significant pro-family boost, as hoped for by Congress. Rather, UP is found to have a significant negative or insignificant effect on a woman's probability of marriage, depending on the model specification, and an insignificant effect on her probability of being in a "natural" two-parent family. Of particular note, findings regarding AFDC-UP and AFDC generosity appear sensitive to the inclusion of a variable reflecting community conservatism.


# AFDC-UP, Two-Parent Families, and the Family Support Act of 1988: Evidence from the 1990 CPS and the 1987 NSFH 

## I. INTRODUCTION

It is well known that the design of the Aid to Families with Dependent Children (AFDC) program has historically created horizontal inequities by treating single-parent and two-parent families differently. Specifically, prior to October 1990, two-parent families were ineligible for cash and medical assistance in twenty-two states. In the remaining states, benefits were available to two-parent families in which the principal earner was unemployed through the state-optional AFDC-Unemployed Parent (UP) program. Effective October 1990, the Family Support Act (FSA) of 1988 mandated that all states provide AFDC-UP benefits, a provision that was hailed as "pro-family" and "common sense" by members of the Senate Finance Committee. ${ }^{1}$ Using data from the period before the extension of AFDC-UP benefits to all states, this paper investigates whether AFDC-UP is, in fact, pro-family. Surprisingly little is known about AFDC-UP's incentive effects, despite the claims of politicians. Much of the early nonexperimental research utilized aggregate state or MSA-level data and obtained generally inconclusive results regarding UP, as discussed in Bishop (1980). In the 1980's Bane and Ellwood (1985), Danziger, Jakubson, Schwartz, and Smolensky (1982), and Moffitt (1990) used microdata to examine the effect of AFDC generosity on marriage and/or female headship. These studies, however, did not consider the role played by the presence of the UP program. ${ }^{2}$ Indeed, the lack of studies on UP's effect has been most recently noted in a Journal of Economic Literature survey article by Moffitt (1992).

In terms of experimental studies, findings from the Seattle-Denver Negative Income Experiment (SIME/DIME) regarding the effect of universal (family structure-neutral) income transfers on marital stability remain heavily debated (see Hannan and Tuma, 1990, and Cain and Wissoker, 1990). Putting the debate aside, evidence from the SIME/DIME cannot provide information about the
effect of such transfers on the marriage decision of all mothers, because it largely focused on marriedcouple families only.

While UP's incentive effects have been largely overlooked, one recent exception is Schram and Wiseman (1988). In their study, Schram and Wiseman evaluated Senator Russell Long's 1986 claim that welfare payments made to two-parent families break up marriages and his subsequent conclusion that AFDC-UP should not be extended to all states. Specifically, Schram and Wiseman critically examined three pieces of evidence cited by the Senator: (1) results from the SIME/DIME, (2) an earlier study by Wiseman on families in Alameda County, California, and (3) the observation that growth of single-parent caseloads was higher in states that provided UP. Schram and Wiseman concluded that the findings from the first two studies do not support Long's claim. Nevertheless, these authors did concur with Long on the third point--that in UP states the proportion of single-parent families receiving AFDC is higher. As they noted, however, this "evidence" must be regarded carefully because the direction of causality of these state-level variables could run either way. In sum, while this study provided an excellent synthesis of the relevant issues regarding UP, it also pointed to the need for further research.

Not only is there a question about UP's incentive effects, but the demographic group eligible for UP is not well understood. In the federal legislation, UP is termed a "two-parent" family program. An erroneous assumption made by a number of researchers is that two-parent families are synonymous with husband-wife families. ${ }^{3}$ In fact, AFDC-UP benefits are available to both married and unmarried two-parent families, provided that the family unit is comprised of a dependent child and both natural parents. A proper understanding of AFDC-UP eligibility is particularly important, given recent evidence on cohabitation among AFDC recipients and all single mothers by Edin (1991) and Winkler (1993a), respectively. In fact, even the Bureau of the Census has come to recognize unrelated opposite-sex partners living in the same household (cohabitors) as a distinct living arrangement.

This study empirically investigates AFDC-UP's effect on family structure, where family structure is broadly defined to include cohabitation with an unrelated male, marriage, independent household headship, and subfamily headship. The empirical analysis makes use of the cross-state variation in the generosity of AFDC benefits and the presence (or absence) of the AFDC-UP program prior to the effective date of the FSA of 1988. State-level AFDC data are matched with individuallevel data from two sources: (1) the March 1990 Current Population Survey and (2) the 1987 National Survey of Families and Households. The findings are then used to draw conclusions for the post-FSA period in which all states have an AFDC-UP program.

## II. BACKGROUND INFORMATION ON AFDC-UP

The AFDC-Unemployed Parent (UP) program was established in 1961 as a state-optional program to provide benefits to poor two-parent families in which the principal earner is unemployed. The initial intent of the program was to protect intact families in the event of recession. On the eve of the Family Support Act of 1988, which extended UP benefits to two-parent families in all states, twenty-nine states (including the District of Columbia) had already adopted a UP program, while twenty-two had not. Effective 1990, all states must provide this program, though states without such a program prior to October 1988 can limit benefits to six months in each twelve-month period. ${ }^{4}$

## UP Eligibility Rules

An institutional detail that has heretofore gone largely unnoticed by researchers is that AFDCUP benefits are available to both married and unmarried two-parent couples. In other words, it is the presence of two natural parents in the household, not the legal bond of marriage among the adults, that determines eligibility for AFDC-UP. This institutional detail was formally verified through a telephone survey of AFDC administrators in fifty states during July 1992. Besides surveying
administrators, documentation was received from about one-third of all states. In some documentation, the rules regarding AFDC-UP are quite explicit, as in the case of Missouri: For a child to be eligible for AFDC-UP, "the child must be living in the home with both of his natural or adoptive parents. The parents do not have to be married. ${ }^{5}$ Thus, AFDC-UP is available for the following two-parent family structures: children who live with two natural married parents and those who live with two cohabiting parents, where paternity has been acknowledged or formally established. ${ }^{6}$ These are referred to as "natural" two-parent families in the remainder of the study.

In cases in which a child lives in a household that does not contain both natural parents, a family unit comprised of a "single" parent and dependent child(ren) is entitled to cash and medical benefits via the well-known single-parent program, AFDC-Basic. Specifically, the following family structures are demographically eligible for AFDC-Basic: children who live with a single-parent only; those who live with married parents, where one is a (non-adoptive) stepparent; and those who live with cohabiting adults, where one adult is not a natural parent. ${ }^{7}$ In the latter two cases, where a stepparent or live-in partner is present, the AFDC grant to the "single parent" family may be reduced. ${ }^{8}$

Apart from the demographic eligibility requirement discussed above and financial criteria, eligibility for UP also requires that the principal earner, the earner with the greatest income in the twenty-four-month period before assistance is requested, have a demonstrated recent attachment to the labor force and be currently "unemployed." Specifically, the individual (1) must have a work history such that he/she has received or been eligible to receive unemployment compensation within the past twelve months or (2) must have been employed in six or more quarters of work in the last thirteen calendar-quarter period. To meet the "unemployed" criteria, the principal earner must have worked part-time (less than one hundred hours per month) or not at all in the last thirty days before requesting assistance. Since eligibility for AFDC-Basic, the single-parent program, does not have any such work requirements, a state's provision of the optional AFDC-UP program along with mandatory AFDC-

Basic benefits reduces but does not eliminate the differential treatment of single and natural two-parent families. Thus, benefits in states which have adopted a UP program may only be loosely termed "family structure-neutral."

## AFDC Benefits in UP and non-UP States

Table 1 identifies the twenty-nine UP states (including the District of Columbia) and the twenty-two non-UP states prior to October 1990, the effective date of the Family Support Act of 1988. In FY 1990, the year just prior to the effective date of the FSA, an average of 3.9 million families per month were served by the AFDC program. This figure is made up of single-parent families from all states as well as 230,000 two-parent families from the states which had an AFDC-UP program (U.S. House of Representatives, 1990).

In the states with a UP program, families receiving UP benefits comprised an average of 5.4 percent of all families on AFDC, with a range from 0.5 percent in North Carolina to 22 percent in West Virginia (U.S. House of Representatives, 1990). Not surprisingly, state unemployment rates are a significant determinant of UP caseloads, and statewide AFDC generosity levels and the length of time since the state adopted a UP program each have a positive (as expected), but insignificant, effect on UP caseloads. ${ }^{9}$ Besides identifying UP and non-UP states, Table 1 provides figures on monthly AFDC and Food Stamp benefits, adjusted for the cost of living, for a three-person family without income in January 1989. Specifically, nominal benefit levels, obtained from Background Material and Data on Programs within the Jurisdiction of the Committee on Ways and Means (U.S. House of Representatives, 1989), were adjusted by state-level cost-of-living figures computed by McMahon and

TABLE 1

> Cost-of-Living-Adjusted Maximum AFDC \& Food Stamp Benefits, by Presence of AFDC-UP Program (as of January 1989)

| With UP Program |  |  | Without UP Program |  |
| :---: | :---: | :---: | :---: | :---: |
| State | AFDC \& FS Benefit | Date UP Adopted | State | AFDC \& FS Benefit |
| VT | \$739 | 1968 | AK | \$804 |
| MI | 726 | 1964 | UT | 655 |
| WI | 695 | 1971* | SD | 639 |
| WA | 695 | 1983* | ND | 639 |
| MN | 689 | 1970 | NH | 629 |
| OR | 688 | 1986* | ID | 595 |
| HI | 680 | 1961 | OK | 588 |
| NY | 678 | 1961 | AZ | 582 |
| CA | 662 | 1963 | NV | 577 |
| KS | 661 | 1963 | CO | 568 |
| RI | 637 | 1961 | NM | 555 |
| IA | 625 | 1982* | FL | 549 |
| MT | 623 | 1985* | IN | 544 |
| NE | 609 | 1965 | GA | 537 |
| ME | 606 | 1984* | VA | 517 |
| WY | 601 | 1988 | AR | 495 |
| CT | 599 | 1975* | KY | 492 |
| PA | 596 | 1961 | LA | 468 |
| MA | 581 | 1961 | TX | 448 |
| OH | 565 | 1964 | TN | 440 |
| MD | 565 | 1961 | MS | 407 |
| IL | 549 | 1961 | AL | 391 |
| MO | 535 | 1983* |  |  |
| WV | 529 | 1961 |  |  |
| NC | 516 | 1988* |  |  |
| NJ | 515 | 1977* |  |  |
| DE | 510 | 1962* |  |  |
| SC | 493 | 1985 |  |  |
| DC | 481 | 1970 |  |  |
| Median | 606 |  | Median | 549 |
| Mean | 608 |  | Mean | 551 |

*UP program had been previously adopted and terminated at least once, as based on unpublished figures obtained from Family Support Administration.

Chang (1991). These adjusted figures, which accurately reflect the purchasing power of benefits across states, are appended to 1990 Current Population Survey data in the empirical analysis. What is perhaps most striking about Table 1 is the dramatic cross-state variation in benefit levels, even after adjusting for cost-of-living differences. For instance, adjusted benefits ranged from $\$ 804$ in Alaska to $\$ 391$ in Alabama. In addition, Table 1 shows that states with a UP program generally provided more generous benefits than non-UP states. Median combined AFDC and Food Stamp benefits were $\$ 549$ in non-UP states versus $\$ 606$ in UP states.

## III. HYPOTHESES REGARDING AFDC'S INCENTIVE EFFECTS

Prior to the effective date of the FSA of 1988, AFDC's program structure had at least three potential effects on family structure. These effects are illustrated in Table 2, by showing the value of the combined AFDC and Food Stamp benefit for a mother and her children, by living arrangement in UP and non-UP states. Possible living arrangements include female head; "natural" two-parent married-couple family; married-couple family, where the male is a stepparent; unmarried-couple family, in which the male is not the biological/adoptive parent of the children; and unmarried-couple family, in which both parents are the biological/adoptive parents of the children. For simplicity, each scenario assumes the mother's earnings are zero and she has two children. Also, for illustrative purposes, benefits in UP and non-UP states are assumed to be identical; however, as discussed in Section II, benefits are typically higher in UP states.

First, the provision of AFDC benefits exclusively to single-parent families should discourage the formation of two-parent families, all else equal. Thus, in states without a UP program, greater levels of AFDC generosity are expected to negatively affect a woman's probability of being in a two-parent family. This hypothesis is illustrated in Case 1 of Table 2, where monthly AFDC benefits of $\$ 596$ are available for "single" mothers only. ${ }^{10}$

TABLE 2

## Combined AFDC and Food Stamp Benefits, by Living Arrangement

|  | Benefits Received if Eligible for |  |
| :---: | :---: | :---: |
|  | AFDC-Basic | AFDC-UP |
| Case 1: States with no AFDC-UP program |  |  |
| Cohabitation |  |  |
| Male is not father | \$596 ${ }^{\text {a }}$ | NA |
| Male is father | NA | NA |
| Married couple |  |  |
| Both natural parents ${ }^{\text {b }}$ | NA | NA |
| Male is stepparent | \$596 ${ }^{\text {a }}$ | NA |
| Female head | \$596 ${ }^{\text {a }}$ | NA |
| Case 2: States with AFDC-UP program |  |  |
| Cohabitation |  |  |
| Male is not father | \$596 ${ }^{\text {a }}$ | NA |
| Male is father | NA | \$736 ${ }^{\text {c }}$ |
| Married couple |  |  |
| Both natural parents ${ }^{\text {b }}$ | NA | \$736 ${ }^{\text {c }}$ |
| Male is stepparent | \$596 ${ }^{\text {a }}$ | NA |
| Female head | \$596 ${ }^{\text {a }}$ | NA |

Source: Author's own computations based on figures from the U.S. House of Representatives (1990).
Notes: In each situation, the time is prior to FSA enactment; the mother has two children and zero income; the combined AFDC and Food Stamp benefit (mean) for a family of three $=\$ 596$, for a family of four, $\$ 736$ (Medicaid is also provided with AFDC receipt); and the male partner (if present) is "unemployed," as defined by AFDC rules. NA = not applicable.
${ }^{a}$ When there is a stepparent or cohabitor, AFDC benefits may be reduced because of the income of the male stepparent or the cash contribution of the male cohabitor to the family. In the case of subfamily heads, benefits may be reduced due to shared living arrangements.
${ }^{\mathrm{b}}$ Natural parents include adoptive parents.
${ }^{\text {c }}$ Natural father is included in the assistance unit and thus the grant is larger but is assumed to provide the same level of economic well-being.

Second, in states with a UP (two-parent) program, a woman's likelihood of being in a twoparent family should be higher than an identical woman living in a non-UP state, by virtue of access to benefits. This can be seen by comparing Case 1 to Case 2 , where all family structures receive AFDC benefits regardless of composition. AFDC-UP's presence, as depicted in Case 2, clearly increases the likelihood of being in a two-parent family, all else equal, by making benefits available to two-parent families (in the case in which the male is unemployed) as well as to single-parent families. ${ }^{11}$

Third, in states which provide UP along with single-parent benefits, higher benefit levels (for each family size) may either increase or decrease a woman's probability of living in a natural twoparent family. On the one hand, greater levels of generosity should have a positive influence if more income is "stabilizing," leading to less stress and tension in the two-parent household. On the other hand, greater generosity may decrease the likelihood of being in a natural two-parent family, by providing the woman and her children with the means to live alone, independent of the natural father's direct support. Whether the independence or stabilizing effect of AFDC transfer income dominates in a UP state can be determined only through empirical study. ${ }^{12}$ Thus, in terms of Case 2 of Table 2, the impact of an increase in benefits (across all family types/sizes) on family structure is unknown a priori. There is also an alternative way of thinking about AFDC's income effect: given the potentially stabilizing effect of AFDC generosity in a UP state, AFDC generosity is expected to have a less negative effect on a woman's likelihood of being in a two-parent family in a UP state than in a non-UP state. In other words, a state's optional provision of AFDC-UP, along with the mandatory provision of single-parent benefits, should reduce the implicit marriage/two-parent penalty of the welfare system.

## IV. EMPIRICAL SPECIFICATION

The empirical analysis assumes that a woman chooses the family structure that maximizes her well-being, given her potential AFDC benefits, her own demographic characteristics, and prevailing cultural mores and attitudes in her state. Unfortunately, this formulation of the decision-making process, which is also assumed by Moffitt (1990) and Danziger et al. (1982), ignores the male's role. Nonetheless, it is the best that can be done, given that there is no information on the potential male's characteristics for single mothers. In this framework, any factor that increases the indirect utility of a particular family structure, all else equal, is expected to increase the probability that a woman will choose that given arrangement. For instance, the presence of the AFDC-UP program (UP) is expected to increase the indirect utility of being in a two-parent family and thus the likelihood of being in such a family, all else equal. This utility-maximizing framework is embodied in the following reducedform empirical family structure model which incorporates the AFDC-UP program:

$$
\begin{align*}
& \mathrm{FS}_{\mathrm{ij}}^{*}= \mathrm{B}_{0}  \tag{1}\\
&+\mathrm{B}_{1} \mathrm{AFDC}_{\mathrm{j}} * \mathrm{UP}_{\mathrm{j}}+\mathrm{B}_{2} \mathrm{AFDC}_{\mathrm{j}}^{*}\left(1-\mathrm{UP}_{\mathrm{j}}\right) \\
&+\mathrm{B}_{3} \mathrm{UP}_{\mathrm{j}}+\mathrm{C} \text { ATTITUDE } \\
& \mathrm{j}
\end{align*}+\mathrm{DLMKT}_{\mathrm{ij}}+\mathrm{FIND}+\varepsilon_{\mathrm{ij}} .
$$

where $\mathrm{FS}_{\mathrm{ij}}^{*}$ is a latent underlying response variable, $\mathrm{FS}_{\mathrm{ij}}$ is observed (actual) family structure status, $\mathrm{i}=$ individual, and $\mathrm{j}=$ state.

The family structure choice model set forth in (1) is empirically estimated by matching state and/or county-level variables with individual-level variables (as reflected in the vector IND) from two data sources: (1) the March 1990 Current Population Survey (CPS) and (2) the 1987 National Survey of Families and Households (NSFH). The major advantage of the CPS is that it is large $(60,000$ households surveyed) and contains individuals living in all states. However, a drawback of the CPS data is that paternity cannot be directly assessed. ${ }^{13}$ As discussed earlier, this is a potentially
important flaw since AFDC-UP is a "natural" two-parent program. The NSFH data, on the other hand, contain detailed information on family structures and identify the parentage of children within a household. The limitation of this data set is that it is much smaller than the CPS (13,017 total observations) and does not include individuals from all states. These individual-level data sets are discussed in much more detail in Sections V and VI.

In most of the estimations, the dependent variable is MARRIED, where MARRIED $=1$ if married with spouse present; 0 otherwise. Since the defining difference between UP and AFDC-Basic eligibility is actually the presence of two natural parents, not marriage, UPELIGIBLE will serve as the dependent variable in selected models estimated using the more detailed data from the NSFH. Specifically, UPELIGIBLE $=1$ if live in a "natural" two-parent family; 0 otherwise. These binomial models are estimated using probit.

The aggregate-level variables appended to the CPS and NSFH data sets are given in Table 3. Specifically, the presence of the AFDC-UP program in twenty-nine states (including the District of Columbia) is captured by an indicator variable ( $\mathrm{UP}=1$, if available). The variable AFDC in equation (1) is defined as combined AFDC and Food Stamp benefits for a family of three without income, adjusted for cost of living. Figures for each state for 1989, for example, were provided in Table 1. State-level measures rather than actual benefits received serve as the independent variable to ensure exogeneity. ${ }^{14}$

Prevailing cultural and moral attitudes that vary by state may also be an important determinant of family structure decisions. To take explicit account of this issue, two proxies of conservatism are examined: the percentage of Christian Fundamentalists in a state (PFUND) and the percentage of church members in a state (PCHURCH). Thomas and Cornwall (1990) note that church attendance is not necessarily synonymous with a "commitment" to religion. Rather, to assess the impact on family life, they point out that the focus should be on specific denominational affiliations, not on a broad

TABLE 3
Definition of Statewide and Countywide Variables Appended to CPS and NSFH Data

| Variable | Definition |
| :--- | :--- |
| AFDC | Maximum combined AFDC and Food Stamp benefit <br> for a family of three with no income; benefit levels <br> are adjusted for cost of living using figures from <br> McMahon and Chang (1991). |
| UP | UP =1 if AFDC-Unemployed Parent program (UP) <br> present in state; 0 otherwise. |
| PCHURCH | Church members as percentage of state population, in |
|  | 1980. Defined as "all members, including full <br> members, their children and the estimated number of <br> other regular participants who are not considered as <br> communicant, confirmed or full members." |
| PFUND | Christian Fundamentalists as percentage of state <br> population in 1980. Christian affiliates include: |
| Churches of Christ, Church of God, Latter-Day Saints, |  |
| STATE UNEMP RATE | Nazarene, Free Methodists, Mennonites, Seventh Day <br> Adventists, Southern Baptists, Pentecostal Holiness, <br> and Lutheran-Missouri Synod. Figures are for "all <br> members, including full members, their children and <br> the estimated number of other regular participants who <br> are not considered as communicant, confirmed or full |
| members." |  |

Note: Sources for variables appended to CPS and NSFH and years of data utilized are provided in Appendix A.
measure like church attendance that includes all religious views. Thus, church attendance is regarded here as a "weaker" measure of community conservatism. The measures PFUND and PCHURCH, reflected by the variable ATTITUDE in equation (1), were compiled from figures in Quinn et al. (1982) using definitions provided by Morgan and Meier (1980). ${ }^{15}$ Across fifty states (and the District of Columbia), PFUND has a mean of 13.8 percent (standard deviation of 13.3 percent), while PCHURCH has a mean of 50.7 percent (standard deviation of 11.6 percent).

Morgan and Meier (1980) further contend that conservative attitudes are more prevalent among rural residents, thereby suggesting that the level of urbanization may affect a mother's likelihood of being married. Thus, in the analysis using Current Population Survey data, a set of residence dummy variables is included. (These are defined in Table 4.) The extent of urbanization is even better captured in the analysis based on NSFH data, since it was possible to append county-level figures on urbanization (PURBAN) to that data set.

Job prospects may also influence family structure choices and outcomes, as argued by Wilson and Neckerman (1986). For this reason, LMKT is included in equation (1) to reflect area labor markets. Specifically, state-level unemployment rates were appended to both the CPS and NSFH data sets. Also, county-level unemployment rates were appended to the NSFH data set for comparison purposes.

At this point, it is useful to explain the specification in equation (1) in light of the hypotheses set forth earlier. Equation (1) permits the influence of the generosity of AFDC benefits on family structure to be conditioned by the presence (or absence, as the case may be) of UP to test differential hypotheses regarding AFDC generosity's influence on a woman's behavior in a UP relative to a nonUP state. Specifically, $\mathrm{B}_{2}$ (AFDC generosity's effect in a non-UP state) is expected to be negative, while the sign on $B_{1}$ (AFDC generosity's effect in a UP state) is not known a priori. Regardless of

TABLE 4
Definitions of Variables for 1990 CPS

| Variable | Definition |
| :--- | :--- |
| AGE | Age of female respondent |
| \# KIDS < 18 | Number of own kids of female younger than 18 |
| COHABITOR | 1 if woman cohabits with an unrelated male; 0 otherwise. |
| MARRIED | 1 if woman is married; 0 otherwise. |
| FEMALE HEAD | 1 if woman is independent or subfamily head; 0 otherwise |
| EDUCATION | 1 Number of years of education completed |
| WHITE | 1 if race is Asian; 0 otherwise |
| ASIAN | 1 if race is black; 0 otherwise |
| BLACK | 1 if race is not white, Asian, or black; 0 otherwise |
| OTHER | 1 if Hispanic; 0 otherwise |
| HISPANIC | 1 if lives in central-city portion of MSA; 0 otherwise |
| CENTRAL CITY | 1 if lives in non-central-city portion of MSA; 0 otherwise |
| NON-CENTRAL-CITY MSA | 1 if lives outside MSA; 0 otherwise |
| OUTSIDE OF MSA | 1 if residence not identified; 0 otherwise |
| RESIDENCE NOT IDENTIFIED |  |

$B_{1}$ 's sign, $B_{1}-B_{2}$ should be positive, since greater AFDC income is expected to promote two-parent families in a UP state relative to its effect in a non-UP state. ${ }^{16}$ The sign on $B_{3}$ is not known a priori. UP's overall effect, which is expected to be positive, depends on $\mathrm{B}_{1}, \mathrm{~B}_{2}, \mathrm{~B}_{3}$ and the level of AFDC.

## V. DESCRIPTION OF 1990 CURRENT POPULATION SURVEY AND FINDINGS

## Description of CPS

Data were extracted from the Current Population Survey (CPS): Annual Demographic File, March 1990. Demographic data are as of the survey date, while income data are provided for the prior calendar year (1989). The analysis is based on 11,295 young mothers, defined as women under age thirty-six with at least one natural (or adopted) child under eighteen. Cohabitors (unmarried couples) are formally defined as unrelated males and females over age fifteen who live in the same housing unit. ${ }^{17}$ Table 4 provides variable definitions while Tables 5 and 6 describe the CPS sample. Table 5 shows that weighted and unweighted CPS figures are quite close. Specifically, of the 11,295 women in the unweighted sample, 73 percent are married. The remaining 27 percent of unmarried women includes 360 mothers in unmarried couples (assumed by necessity to be "single" parents), 2,016 independent female household heads, and 635 female subfamily heads. Table 6 provides sample statistics for the individual-level variables included in the estimations based on the unweighted sample: race, ethnicity, age, education, metropolitan residence, and number of own children. A detailed breakdown by family structure is provided in Appendix B. Table 6 also provides statistics for two subsamples which are also examined in the empirical analysis: mothers with a high school education or less, and mothers with less than a high school education.

As mentioned earlier, the presence (or absence) of two natural parents cannot be determined from the CPS data. Thus, the assumption made in the empirical analysis based on the CPS data is that married-couple families are synonymous with "natural" two-parent families. In fact, figures from

TABLE 5
Living Arrangements of Young Women with Dependent Children: 1990 CPS

|  | Unweighted | Weighted |
| :--- | :---: | :---: |
| Married couple | $73.3 \%$ | $72.5 \%$ |
| Cohabitors | 3.2 | 3.4 |
| Female heads | 23.5 | 24.1 |
| $\quad$ Independent heads | 17.8 | 18.3 |
| $\quad$ Subfamily heads | 5.6 | 5.8 |
| Sample total | 11,295 | $17,650,790$ |

Note: Weighted CPS figures provide national totals.

TABLE 6
Variable Means and Standard Deviations: Young Women with Dependent Children (1990 CPS)

|  | Full Sample | With $\leq$ HS Education | With < HS Education |
| :---: | :---: | :---: | :---: |
| MARRIED | 0.73 | 0.69 | 0.58 |
| AGE | $\begin{gathered} 29.16 \\ (4.38) \end{gathered}$ | $\begin{gathered} 28.54 \\ (4.6) \end{gathered}$ | $\begin{gathered} 27.23 \\ (5.19) \end{gathered}$ |
| EDUCATION | $\begin{gathered} 12.39 \\ (2.44) \end{gathered}$ | $\begin{gathered} 11.13 \\ (1.82) \end{gathered}$ | $\begin{gathered} 8.97 \\ (2.24) \end{gathered}$ |
| \# KIDS < 18 | $\begin{aligned} & 1.95 \\ & (.98) \end{aligned}$ | $\begin{gathered} 2.02 \\ (1.02) \end{gathered}$ | $\begin{gathered} 2.20 \\ (1.19) \end{gathered}$ |
| Race and ethnicity |  |  |  |
| WHITE | 0.83 | 0.83 | 0.79 |
| BLACK | 0.13 | 0.14 | 0.17 |
| ASIAN | 0.02 | 0.02 | 0.02 |
| OTHER | 0.01 | 0.02 | 0.02 |
| HISPANIC | 0.16 | 0.2 | 0.35 |
| Residence variables |  |  |  |
| CENTRAL CITY | 0.24 | 0.25 | 0.34 |
| NON-CENTRAL-CITY MSA | A 0.26 | 0.28 | 0.25 |
| OUTSIDE OF MSA | 0.31 | 0.29 | 0.25 |
| RESIDENCE NOT IDENTIFI | FIED 0.19 | 0.18 | 0.16 |
| State-level variables |  |  |  |
| AFDC | \$583.04 | \$580.68 | \$575.58 |
|  | (86.8) | (86) | (88.9) |
| UP | 0.62 | 0.62 | 0.6 |
| STATE UNEMP RATE | 5.29 | 5.33 | 5.41 |
|  | (1.2) | (1.2) | (1.2) |
| PFUND | 12.6 | 12.67 | 12.89 |
|  | (12.1) | (11.9) | (11.2) |
| PCHURCH | 49.97 | 49.87 | 48.45 |
|  |  | (10.4) | (10.1) |
| Observations <br> As \% of total | 11,295 | 7,381 | 2,121 |
|  | 100.0 | 65.3 | 18.8 |

Notes: Standard deviations of continuous variables are in parentheses. Figures are based on unweighted sample.
the NSFH suggest that 8.9 percent of "natural" two-parent families are improperly assigned whenmarital status serves as a proxy for natural two-parent families. This margin of error is discussed in more detail in Section VI.

## Results Based on CPS

The general conclusion reached using the CPS data, based on the full set of results reported in Tables 7,8 , and 9 , is that a state's provision of UP does not significantly encourage marriage, contrary to expectations.

Table 7 provides the results of probit estimations for the full sample of young mothers with dependent children described in Table 6. Model (1), in particular, provides estimates for the model specification set forth in equation (1). For the sample of all young mothers, UP is found to have no overall influence on a mother's probability of marriage. This conclusion stems from a likelihood ratio test based on Models (1) and (2), where (2) constrains UP's coefficient to be zero and constrains AFDC generosity's effect to be the same in UP and non-UP states. ${ }^{18}$ An alternative model specification, Model (3), was also examined in which AFDC generosity's effect is constrained to be the same in UP and non-UP states, but UP is permitted to have a constant effect on a woman's probability of marriage. In this model, the coefficient on UP, which reflects UP's overall influence, is insignificant. ${ }^{19}$

Perhaps the UP program was found to have no discernable effect on marriage (Table 7) because the sample of young mothers with dependent children is quite broad. It includes women with relatively high skill levels (and thus good labor market opportunities) whose behavior is less likely to be influenced by the presence of the welfare system. To get at this issue, a second set of models was estimated over two narrower samples of mothers who are more likely to take advantage of the welfare system: (1) mothers with a high school education or less and (2) mothers with less than a high school education. These results are reported in Tables 8 and 9. Among mothers with a high school

TABLE 7
Marital Status Models Estimated Using 1990 CPS Data:
Sample = Young Women with Dependent Children

|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ | $(5)$ | $(6)$ | $(7)$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| UP | 0.201 |  | -0.032 | 0.233 |  | 0.208 |  |
|  | $(0.91)$ |  | $(-0.95)$ | $(1.06)$ |  | $(0.94)$ |  |
| AFDC*UP/1000 | -0.531 |  |  | -0.38 |  | -0.492 |  |
|  | $(-2.06)$ |  |  | $(-1.44)$ |  | $(-1.88)$ |  |
| AFDC*(1-UP)/1000 | -0.133 |  |  | 0.07 |  | -0.081 |  |
|  | $(-0.51)$ |  |  | $(0.03)$ |  | $(-0.3)$ |  |
| AFDC/1000 |  | -0.396 | -0.332 |  | -0.182 |  | -0.357 |
|  |  | $(-2.41)$ | $(-1.87)$ |  | $(-0.98)$ |  | $(-2.05)$ |
| PFUND |  |  | 0.003 | 0.003 |  |  |  |
|  |  |  |  | $(2.29)$ | $(2.48)$ |  |  |
| PCHURCH |  |  |  |  |  | 0.001 | 0.001 |
|  |  |  |  |  |  | $(.76)$ | $(.68)$ |
| Log-likelihood | -5651.7 | -5652.7 | -5652.2 | -5649 | -5649.6 | -5651.4 | -5652.5 |

Notes: Models estimated using probit. Married $=1 ; 0$ otherwise. t -statistics appear beneath coefficients. Observations $=11,295 ; \log$-likelihood $($ slopes $=0)=-6549.1$. See Table 11 for the included control variables.

TABLE 8
Marital Status Models Estimated Using 1990 CPS Data: Sample $=$ Young Women with Dependent Children and with a High School Education or Less

|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ | $(5)$ | $(6)$ | (7) |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| UP | 0.294 |  | -0.043 | 0.352 |  | 0.287 |  |
|  | $(1.11)$ |  | $(-1.08)$ | $(1.32)$ |  | $(1.08)$ |  |
| AFDC*UP/1000 | -0.716 |  |  | -0.483 |  | -0.746 |  |
|  | $(-2.32)$ |  |  | $(-1.51)$ |  | $(-2.36)$ |  |
| AFDC*(1-UP)/1000 | -0.136 |  |  | 0.098 |  | -0.179 |  |
|  | $(-0.43)$ |  |  | $(0.3)$ |  | $(-.55)$ |  |
| AFDC/1000 |  | -0.523 | -0.431 |  | -0.185 |  | -0.565 |
|  |  | $(-2.64)$ | $(-2.00)$ |  | $(-0.81)$ |  | $(-2.68)$ |
| PFUND |  |  | 0.006 | 0.005 |  |  |  |
|  |  |  |  | $(2.94)$ | $(3.1)$ |  |  |
| PCHURCH |  |  |  |  |  | -0.008 | -0.001 |
|  |  |  |  |  |  | $(-.48)$ | $(-.6)$ |
| Log-likelihood | -3977.7 | -3979.1 | -3978.6 | -3973.3 | -3974.2 | -3977.6 | -3979 |

Notes: Models estimated using probit. Married $=1 ; 0$ otherwise. t -statistics appear beneath coefficients. Observations $=7,381 ; \log$-likelihood $($ slopes $=0)=-4559.8$. See Table 11 for the included control variables.
education or less, UP is found to have no overall influence on marriage probabilities, as determined by a likelihood ratio test based on Models (1) and (2) in Table 8.

Quite interestingly, for the sample of "most-likely" AFDC recipients, mothers with the least education, UP is found to significantly and negatively influence marital probabilities (see Table 9). Specifically, a likelihood ratio test based on Models (1) and (2), the unrestricted and restricted models, respectively, indicates that these models are significantly different at the 10 percent level, though not at the 5 percent level. Similarly, note that the coefficient on UP in Model (3), which captures UP's overall effect, is statistically significant and negative. ${ }^{20,21}$

Clearly, the significant findings obtained for the sample of least-educated mothers require explanation. In fact, note that a similar pattern of results is obtained for the broader samples in Tables 7 and 8. Estimates reported in Model (1) show that greater levels of AFDC generosity in UP states (as reflected by AFDC*UP) significantly reduce a mother's probability of marriage, while AFDC generosity in non-UP states (AFDC*(1-UP)) is found to have no influence. ${ }^{22}$ One possible interpretation of the negative finding on AFDC*UP in Model (1) across all three samples is that in states with benefits available to single-parent and two-parent families, the independence effect of higher benefits, which allows a mother and her children to live separately, outweighs (in absolute value) the stabilizing effect of greater income. The insignificant effect of AFDC generosity in non-UP states is more puzzling, since the provision of more generous AFDC benefits to single-parent families should unambiguously discourage two-parent families. Possibly, AFDC is found to have no influence in these states because benefit levels are lower.

The estimates obtained in Model (1) also shed light on the negative coefficient estimate on UP in Model (3) of Tables 7, 8, and 9. Specifically, when AFDC generosity's impact is not allowed to vary across UP and non-UP states, the coefficient on UP in Model (3) reflects both UP's constant positive
(though insignificant effect) on marriage plus AFDC generosity's differential (more negative) effect on marriage in UP relative to non-UP states.

Some selected predictions based on the estimations are provided in Table 10. For instance, as expected, an increase in AFDC generosity is found to have its largest impact, in terms of magnitude, on those most likely to be eligible--less-educated mothers. ${ }^{23}$ Specifically, for a young mother with average characteristics, a $\$ 100$ increase in AFDC generosity is predicted to reduce her likelihood of marriage by 1.24 percentage points (base $=.76$ ), as compared with a 3.6 percentage-point reduction $($ base $=.58)$ for an average mother from the least-educated sample, using results from Model (2). ${ }^{24}$ Also, predictions were obtained for Model (1) of Table 9, in which UP is found to have a statistically significant effect on marriage among mothers with less than a high school education. Specifically, a mother with average sample characteristics living in a UP state is predicted to have a likelihood of marriage of 55 percent, 7.8 percentage points lower than her identical counterpart living in a state that does not provide UP benefits, holding AFDC levels in UP and non-UP states at their median (but not identical) levels. ${ }^{25}$ If benefit levels are set equal at $\$ 549$ (median benefits in non-UP states) in UP and non-UP states, the difference in the predicted likelihood of marriage across UP and non-UP states is 5.4 percentage points. While this predicted difference appears large, readers should be forewarned that the significant finding regarding UP obtained for the sample of least-educated mothers is sensitive to model specification, as discussed in the next subsection.

## Sensitivity of CPS Findings

Given that prevailing attitudes as well as AFDC policy may affect marital status choice, Models (4) through (7) of Tables 7, 8, and 9 include such measures. The results obtained clearly demonstrate that the findings regarding AFDC policy are sensitive to the inclusion of a proxy for conservatism--the percentage of Christian Fundamentalists in a state (PFUND). Specifically, women

## TABLE 9

Marital Status Models Estimated Using 1990 CPS Data: Sample $=$ Young Women with Dependent Children and with Less than a High School Education

|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ | $(5)$ | $(6)$ | (7) |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| UP | 0.202 |  | -0.166 | 0.396 |  | 0.191 |  |
|  | $(.40)$ |  | $(-2.21)$ | $(.78)$ |  | $(.38)$ |  |
| AFDC*UP/1000 | -0.919 |  |  | -0.339 |  | -0.965 |  |
|  | $(-1.6)$ |  |  | $(-.57)$ |  | $(-1.63)$ |  |
| AFDC*(1-UP)/1000 | -0.279 |  |  | 0.455 |  | -0.349 |  |
|  | $(-.46)$ |  |  | $(.70)$ |  | $(-.54)$ |  |
| AFDC/1000 |  | -1.0 | -0.614 |  | -0.043 |  | -1.1 |
|  |  | $(-2.79)$ | $(-1.53)$ |  | $(-.1)$ |  | $(-2.8)$ |
| PFUND |  |  | 0.013 | 0.014 |  |  |  |
|  |  |  |  | $(3.39)$ | $(3.92)$ |  |  |
| PCHURCH |  |  |  |  |  | -0.001 | -0.002 |
|  |  |  |  |  |  | $(-.31)$ | $(-.68)$ |
| Log-likelihood | -1240.7 | -1243.4 | -1240.9 | -1234.8 | -1235.5 | -1240.6 | -1243.2 |

Notes: Models estimated using probit. Married $=1 ; 0$ otherwise. t -statistics appear beneath coefficients. Observations $=2,121 ; \log$-likelihood $($ slopes $=0)=-1443$. See Table 11 for the included control variables.

## TABLE 10

## Selected Predicted Effects on Probability of Marriage, Based on CPS Results (in percentage-point terms)

Effect of $\$ 100$ increase in AFDC generosity on young mother with average characteristics: ${ }^{\text {a }}$
For young mother from full sample -1.24 percentage points (from Model (2), Table 7):
(base =.76)
For young mother from least-educated -3.6 percentage points sample (from Model (2), Table 9): (base $=.58)$

Overall effect of presence of UP program on probability of marriage of average woman drawn from least-educated sample, as compared with identical woman in a non-UP state: ${ }^{\text {a }}$

Assuming AFDC level in UP and non-UP states -7.8 percentage points held at median (but not identical levels):
(base $=.63)^{b}$
Assuming AFDC level in UP and non-UP states held at median level in non-UP states (\$549):
-5.4 percentage points (base $=.63)^{\text {b }}$
${ }^{\text {a }}$ Note that these findings are not robust to the inclusion of a community measure of conservatism.
${ }^{b}$ Note that the base (.63) here is somewhat lower than the base (.58) above because .63 is the base for the sample of least-educated women in non-UP states, while .58 is the "average" for women in UP and non-UP states.
with less than a high school education are no longer significantly less likely to marry if they live in a UP state. When PFUND is included in the analysis, UP is found to have no overall influence on marriage probabilities, as determined by a likelihood ratio test based on Models (4) and (5) of Table 9. Similarly, UP is found to have no discernable effect on marriage probabilities among mothers in the other two samples either, as shown by Models (4) and (5) of Tables 7 and $8 .{ }^{26}$

A particularly striking finding is that when PFUND is included along with AFDC generosity, AFDC generosity is found to have a statistically insignificant effect on marriage, as evaluated at the 10 percent level. This finding holds true across all model specifications (see Models (4) and (5) of Tables 7 through 9). At the same time, the estimated coefficient on PFUND is statistically significant at any conventional level considered. One explanation for this finding is that the estimated coefficient on AFDC generosity is "picking up" PFUND's effect when PFUND is omitted from the analysis. ${ }^{27}$ Indeed, to the extent community attitudes, as reflected in PFUND, is an important omitted variable, this puts into question the magnitudes obtained in earlier studies, such as Moffitt (1990), which exclude such a measure. On the other hand, note that when a weaker measure of conservatism is included--the percentage of churchgoers in a state (PCHURCH)--the finding that AFDC generosity significantly influences a mother's likelihood of marriage is maintained (see Models (6) and (7)).

Before turning to the NSFH data, some of the other variables included in the estimations deserve brief mention. As shown in Table 11, a woman's race, age, residence in a central city (relative to living in the non-central-city portion of the MSA), education level, and number of own children were each found to be statistically significant determinants of her probability of being married. A variable reflecting state unemployment rates, which was included as a proxy for the effect of overall joblessness, was found to be insignificant. This latter finding is brought up again at the end of Section VI when the NSFH results are discussed.

TABLE 11

## Control Variables from Selected Models

Estimated Using 1990 CPS Data

|  | Model (2), <br> Table 7 | Model (2), <br> Table 8 | Model (2), <br> Table 9 |
| :--- | :---: | :---: | :---: |
| AGE | 0.031 | 0.036 | 0.035 |
|  | $(9.53)$ | $(9.91)$ | $(5.72)$ |
| CENTRAL CITY | -0.226 | -0.327 | -0.357 |
|  | $(-5.67)$ | $(-6.87)$ | $(-4.18)$ |
| OUTSIDE OF MSA | 0.033 | -0.176 | -0.057 |
|  | $(0.89)$ | $(-.4)$ | $(-.67)$ |
| RESIDENCE NOT IDENTIFIED | -0.087 | -0.137 | -0.268 |
|  | $(-2.12)$ | $(-2.58)$ | $(-2.85)$ |
| EDUCATION | 0.085 | 0.05 | -0.04 |
|  | $(13.96)$ | $(5.27)$ | $(-2.68)$ |
| BLACK | -1.159 | -1.17 | -1.23 |
|  | $(-28.94)$ | $(-23.85)$ | $0.135)$ |
| ASIAN | 0.253 | 0.228 | $(.754$ |
|  | $(2.54)$ | $(1.80)$ | -0.572 |
| OTHER | -0.659 | -0.635 | $(-2.93)$ |
|  | $(-6.28)$ | $(-5.13)$ | 0.078 |
| HISPANIC | -0.004 | 0.005 | $(1.09)$ |
| STATE UNEMP RATE | $(-0.09)$ | $(.11)$ | 0.022 |
|  | -0.004 | 0.0053 | $(.83)$ |
| \# KIDS < 18 | $(-0.39)$ | $0.38)$ | 0.084 |
|  | 0.164 | 0.141 | $(3.13)$ |
| Constant | $(10.89)$ | $(8.21)$ | 0.256 |
|  | -1.105 | -0.772 | $(.71)$ |

Notes: t-statistics appear in parentheses beneath coefficients. WHITE is the omitted variable among race variables. Among residence variables, NON-CENTRAL-CITY MSA is the omitted category.

## VI. DESCRIPTION OF 1987 NSFH DATA AND RESULTS

## Description of NSFH

The family structure decision outlined in Section IV is also investigated using data from the 1987 National Survey of Families and Households (NSFH) compiled by the Center for Demography and Ecology at the University of Wisconsin. ${ }^{28}$ The NSFH is a national sample survey of 13,017 respondents that was conducted from 1986 through 1987. An important advantage of using NSFH data over other data sets is that the NSFH data provide detailed information on cohabitation arrangements and stepparent families. Specifically, the survey oversampled cohabitors, families with stepchildren, and single-parent families. In each household, in either the main sample or oversample, a randomly selected adult (over age nineteen) was interviewed. Weights are provided in the data set to calibrate the sample to the Current Population Survey. One potential disadvantage of the NSFH data relative to the CPS is that all states are not included in the sample. In fact, due to confidentiality rules, state, MSA, and county identifiers are not provided in the data set and thus are unknown to the researcher. ${ }^{29}$

The analyses conducted here focus on the set of female respondents age nineteen to thirty-five who have a dependent child. Table 12 provides variable definitions while Table 13 provides both weighted and unweighted descriptive statistics on this sample. A detailed breakdown of characteristics by family structure is provided in Appendix C. As can be seen from the weighted sample figures in Table 13, 5.7 percent of such women live with a male partner, 71.5 percent are married, and 22.8 percent head single-parent families (as either a household head or subfamily head.) Also, due to intentional oversampling, note that cohabitors and female heads are overrepresented in the unweighted sample (see column (1) of Table 13).

Table 14 provides specific figures on the error that arises when marital status is incorrectly assumed to be the defining demographic characteristic for UP eligibility, rather than the presence of

TABLE 12
Definitions of Variables for 1987 NSFH Data Set

| Variable | Definition |
| :---: | :---: |
| WOMAN'S AGE | Age of female respondent |
| \# OWN KIDS<18 | Number of own kids of female respondent younger than 18 |
| UPELIGIBLE | 1 if both natural parents present for at least one dependent child of female respondent; 0 otherwise |
| COHABITOR | 1 if woman cohabits with an unrelated male; 0 otherwise |
| MARRIED | 1 if woman is married; 0 otherwise |
| FEMALE HEAD | 1 if woman is independent or subfamily head; 0 otherwise |
| ELEMENTARY | 1 if completed less than elementary school; 0 otherwise |
| LESS THAN HS | 1 if completed at least grade 6 and no higher than grade 11; 0 otherwise |
| HS | 1 if completed high school only; 0 otherwise |
| COLLEGE | 1 if completed 1 to 4 years of college; 0 otherwise |
| POST GRADUATE | 1 if completed > 16 years of school; 0 otherwise |
| ED UNKNOWN | 1 if level of education unknown; 0 otherwise |
| WHITE | 1 if race is white; 0 otherwise |
| ASIAN | 1 if race is Asian; 0 otherwise |
| BLACK | 1 if race is black; 0 otherwise |
| HISPANIC | 1 if race is Hispanic; 0 otherwise |
| OTHER | 1 if race is not white, Asian, black, or Hispanic; 0 otherwise |
| METRO RESIDENCE | 1 if live in metropolitan statistical area; 0 otherwise. |

TABLE 13
Variable Means and Standard Deviations:
Female Respondents with Dependent Children (1987 NSFH)

| Own Demographic Characteristics |  |  | State \& County-Level Variables |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Unweighted <br> Figures | Weighted <br> Figures |  | Unweighted Figures | Weighted <br> Figures |
| WOMAN'S AGE | $\begin{gathered} 28.558 \\ (4.43) \end{gathered}$ | $\begin{gathered} 28.592 \\ (3.76) \end{gathered}$ | PFUND | $\begin{gathered} 13.414 \\ (12.32) \end{gathered}$ | $\begin{gathered} 13.693 \\ (11.04) \end{gathered}$ |
| \# OWN KIDS<18 | $\begin{array}{r} 1.947 \\ (1.01) \end{array}$ | $\begin{gathered} 1.935 \\ (0.83) \end{gathered}$ | PCHURCH | $\begin{gathered} 49.951 \\ (9.17) \end{gathered}$ | $\begin{gathered} 50.054 \\ (8.01) \end{gathered}$ |
| Family structure |  |  |  |  |  |
| COHABITOR | $\begin{array}{r} 0.059 \\ (0.24) \end{array}$ | $\begin{aligned} & 0.057 \\ & (0.2) \end{aligned}$ | AFDC | $\begin{gathered} 522.689 \\ (81.64) \end{gathered}$ | $\begin{gathered} 524.853 \\ (68.69) \end{gathered}$ |
| MARRIED | $\begin{aligned} & 0.554 \\ & (0.5) \end{aligned}$ | $\begin{gathered} 0.715 \\ (0.38) \end{gathered}$ | UP | $\begin{array}{r} 0.615 \\ (0.49) \end{array}$ | $\begin{gathered} 0.605 \\ (0.41) \end{gathered}$ |
| FEMALE HEAD | $\begin{gathered} 0.386 \\ (0.49) \end{gathered}$ | $\begin{gathered} 0.228 \\ (0.35) \end{gathered}$ | PURBAN | $\begin{gathered} 70.152 \\ (28.31) \end{gathered}$ | $\begin{gathered} 69.958 \\ (23.92) \end{gathered}$ |
| Race (WHITE $=$ omitted | category) |  | CTY UNEMP | 7.569 | 7.431 |
| BLACK | $\begin{gathered} 0.24 \\ (0.43) \end{gathered}$ | $\begin{gathered} 0.165 \\ (0.31) \end{gathered}$ | RATE | (3.25) | (2.65) |
| HISPANIC | $\begin{gathered} 0.106 \\ (0.31) \end{gathered}$ | $\begin{gathered} 0.099 \\ (0.25) \end{gathered}$ | STATE UNEMP RATE | $\begin{array}{r} 7.259 \\ (1.98) \end{array}$ | $\begin{gathered} 7.203 \\ (1.62) \end{gathered}$ |
| ASIAN | $\begin{gathered} 0.011 \\ (0.11) \end{gathered}$ | $\begin{gathered} 0.016 \\ (0.11) \end{gathered}$ |  |  |  |
| OTHER | $\begin{gathered} 0.006 \\ (0.08) \end{gathered}$ | $\begin{gathered} 0.008 \\ (0.07) \end{gathered}$ |  |  |  |
| Education completed ( $\mathrm{HS}=$ omitted category) |  |  |  |  |  |
| ELEMENTARY | $\begin{gathered} \hline 0.047 \\ (0.21) \end{gathered}$ | $\begin{gathered} 0.044 \\ (0.17) \end{gathered}$ |  |  |  |
| LESS THAN HS | $\begin{gathered} 0.148 \\ (0.36) \end{gathered}$ | $\begin{gathered} 0.128 \\ (0.28) \end{gathered}$ |  |  |  |
| COLLEGE | $\begin{gathered} 0.321 \\ (0.47) \end{gathered}$ | $\begin{aligned} & 0.345 \\ & (0.4) \end{aligned}$ |  |  |  |
| POST GRADUATE | $\begin{gathered} 0.026 \\ (0.16) \end{gathered}$ | $\begin{gathered} 0.033 \\ (0.15) \end{gathered}$ |  |  |  |
| ED UNKNOWN | $\begin{gathered} 0.004 \\ (0.06) \end{gathered}$ | $\begin{gathered} 0.005 \\ (0.06) \end{gathered}$ |  |  |  |
| METRO RESIDENCE | $\begin{gathered} 0.755 \\ (0.43) \end{gathered}$ | $\begin{aligned} & 0.776 \\ & (0.35) \end{aligned}$ |  |  |  |
| UPELIGIBLE | $\begin{gathered} 0.55 \\ (.5) \end{gathered}$ | $\begin{gathered} 0.713 \\ (.45) \end{gathered}$ |  |  |  |

Notes: Raw sample size $=2,221$. Weighted sample size $=1,577$ (out of 13,017 ). Standard deviations are in parentheses.

TABLE 14

## Comparison of Two-Parent Families vs. <br> UP-Eligible Two-Parent Families: <br> Young Female Respondents with Dependent Children (1987 NSFH)

|  |  |  |  |  | Error Commited in <br> Absolute Value if Assume |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | All Two-Parent |  |  |  |  |  |
| Families |  |  |  |  |  |  |

Notes: $1,218=77.2 \% \times 1,577$, where $77.2 \%=$ the percentage of married couples and cohabitors out of 1,577 , the weighted sample total of female respondents (see Table 13). The total NSFH sample is 13,017 .
natural (or adoptive) parents. As Table 14 shows, 60 percent (52/90) of all cohabitors should be included among UP-eligibles, ${ }^{30}$ while 5 percent of married couples ( $56 / 1128$ ) should be excluded because either the husband or the wife is not the natural parent of the dependent child in the household. Overall, 8.9 percent of two-parent families are incorrectly assigned when marital status rather than the presence of two natural parents is the assumed criteria for UP eligibility.

## Results Based on the 1987 NSFH Data

The findings based on the NSFH data, ${ }^{31}$ which are reported in Tables 15 and 16, can be summarized as follows: UP is not found to be pro-marriage or pro-two-parent family. Rather, UP is found to have either a significant negative overall effect on marital status or no influence, when a measure of deep community conservatism, PFUND, is included. Also, contrary to expectations, a state's provision of a UP program is found to have no influence on a mother's probability of being in a natural two-parent family. These findings are discussed in detail below.

Marital Status Models. For comparison purposes with the CPS findings, Table 15 reports results for the marital status model estimated over the full sample of young female respondents with dependent children from the NSFH data. The results obtained are strikingly similar to those obtained using 1990 CPS data, as reported in Tables 7, 8, and 9. Specifically, a likelihood ratio test based on Models (1) and (2) of Table 15, the unrestricted and restricted models, respectively, indicates that these specifications are statistically different at all conventional levels. Similarly, note the negative and statistically significant estimated coefficient on UP in Model (3), reflecting UP's overall negative effect. These findings are similar to those obtained for the leasteducated sample in the CPS data. In fact, the findings regarding UP based on the NSFH data might be regarded as "stronger" since UP is found to have an overall effect on the full sample of mothers, while this was not the case with the CPS data. ${ }^{32}$

TABLE 15
Marital Status Models Using 1987 NSFH Data:
Sample = Young Female Respondents with Dependent Children

|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| UP | $\begin{gathered} -0.028 \\ (-0.06) \end{gathered}$ |  | $\begin{gathered} -0.253 \\ (-3.39) \end{gathered}$ | $\begin{gathered} -0.056 \\ (-0.11) \end{gathered}$ |  | $\begin{gathered} -0.072 \\ (-0.14) \end{gathered}$ |  |
| AFDC*UP/1000 | $\begin{aligned} & -0.316 \\ & (-0.6) \end{aligned}$ |  |  | $\begin{gathered} -0.174 \\ (-0.32) \end{gathered}$ |  | $\begin{gathered} -0.129 \\ (-0.24) \end{gathered}$ |  |
| AFDC*(1-UP)/1000 | $\begin{gathered} 0.143 \\ (0.17) \end{gathered}$ |  |  | $\begin{gathered} 0.069 \\ (0.08) \end{gathered}$ |  | $\begin{gathered} 0.257 \\ (0.3) \end{gathered}$ |  |
| AFDC/1000 |  | $\begin{gathered} -1.089 \\ (-2.98) \end{gathered}$ | $\begin{gathered} -0.19 \\ (-0.42) \end{gathered}$ |  | $\begin{gathered} -0.468 \\ (-1.12) \end{gathered}$ |  | $\begin{gathered} -0.979 \\ (-2.6) \end{gathered}$ |
| PFUND |  |  |  | $\begin{gathered} 0.005 \\ (1.49) \end{gathered}$ | $\begin{gathered} 0.009 \\ (3.14) \end{gathered}$ |  |  |
| PCHURCH |  |  |  |  |  | $\begin{gathered} 0.005 \\ (1.49) \end{gathered}$ | $\begin{gathered} 0.004 \\ (1.26) \end{gathered}$ |
| Log-likelihood | -1351.6 | -1357.5 | -1351.7 | -1350.5 | -1352.4 | -1350.5 | -1356.7 |

Notes: Models estimated using probit. Married $=1 ; 0$ otherwise. $t$-statistics appear beneath estimated coefficients. Observations $=2,221$; log-likelihood $($ slopes $=0)=-1526.4$. See Table 17 for included control variables.

As in the case of the findings based on the CPS data, the findings regarding UP (and AFDC generosity) obtained using NSFH data are sensitive to the inclusion of conservative community values. Specifically, Models (1) and (2) of Table 15 are not found to be statistically different when the measure of community conservatism, as reflected by PFUND, is included (see Models (4) and (5) of Table 15). Note, however, that the significant finding regarding UP's overall effect is maintained when a weaker measure of conservatism, PCHURCH, is included in the model specification. This conclusion is based on a likelihood ratio test of Models (6) and (7) of Table 15. Findings for the least-educated sample drawn from the CPS data yield the same conclusion (see Table 9).

UP-Eligible Models. The detailed nature of the NSFH data further permits examination of UP's effect on those truly demographically eligible: natural two-parent families. Table 16 reports results for the UP-eligible/"natural" two-parent model, where the dependent variable, UPELIGIBLE, takes on the value 1 if the woman lives in a natural two-parent family and 0 otherwise. A priori, the findings regarding UP's overall effect are expected to be stronger in the UPELIGIBLE models since the dependent variable, demographic eligibility, is properly measured. Inspection of the findings based on the UP-eligible models in Table 16 reveals, however, that this is not the case. UP is found to have no influence on a mother's probability of being in a natural two-parent family. This conclusion is based on a likelihood ratio test of the unrestricted and restricted models, Models (1) and (2). Moreover, AFDC generosity, included as the sole AFDC policy variable, is found to have no influence on a woman's probability of being in a natural two-parent family (see Model (2)). However, in Model (3), the estimated coefficient on UP is significant at the 10 percent level in a two-tailed test. ${ }^{33}$

Possibly, the results regarding AFDC and UP's effects on the probability of being in a twoparent family are weaker than the marital status results previously discussed because while eligibility for "natural" two-parent families, especially for cohabitors, may be on the books, it may not be

TABLE 16

## UP-Eligible Models Using 1987 NSFH Data: Sample = Young Female Respondents with Dependent Children

|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| UP | $\begin{gathered} 0.14 \\ (0.28) \end{gathered}$ |  | $\begin{aligned} & -0.125 \\ & (-1.69) \end{aligned}$ | $\begin{gathered} 0.13 \\ (0.26) \end{gathered}$ |  | $\begin{gathered} 0.1 \\ (0.2) \end{gathered}$ |  |
| AFDC*UP/1000 | $\begin{gathered} -0.138 \\ (-0.26) \end{gathered}$ |  |  | $\begin{gathered} -0.01 \\ (-0.19) \end{gathered}$ |  | $\begin{gathered} 0.017 \\ (0.03) \end{gathered}$ |  |
| AFDC*(1-UP)/1000 | $\begin{aligned} & 0.4 \\ & (0.47) \end{aligned}$ |  |  | $\begin{gathered} 0.377 \\ (0.44) \end{gathered}$ |  | $\begin{gathered} 0.49 \\ (0.57) \end{gathered}$ |  |
| AFDC/1000 |  | $\begin{aligned} & -0.435 \\ & (-1.2) \end{aligned}$ | $\begin{gathered} 0.013 \\ (0.03) \end{gathered}$ |  | $\begin{aligned} & -0.175 \\ & (-0.43) \end{aligned}$ |  | $\begin{aligned} & -0.335 \\ & (-0.9) \end{aligned}$ |
| PFUND |  |  |  | $\begin{gathered} 0.001 \\ (0.41) \end{gathered}$ | $\begin{gathered} 0.004 \\ (1.35) \end{gathered}$ |  |  |
| PCHURCH |  |  |  |  |  | $\begin{gathered} 0.004 \\ (1.23) \end{gathered}$ | $\begin{gathered} 0.004 \\ (1.13) \end{gathered}$ |
| Log-likelihood | -1377.7 | -1379.2 | -1377.8 | -1377.6 | -1378.3 | -1376.9 | -1378.6 |

Notes: Models estimated using probit. UP eligible $=1 ; 0$ otherwise. t -statistics appear beneath estimated coefficients. Observations $=2,221$; log-likelihood (slopes $=0)=-1528.7$. See Table 17 for included control variables.
widely understood. ${ }^{34}$ In other words, individuals may behave on the incorrect premise that AFDCBasic is a single-parent program and AFDC-UP is a married-couple program, rather than thinking of the key demographic difference as "single-parent" vs. "natural two-parent" programs.

Other NSFH Findings. Consistent with the CPS findings, number of dependent children, education, and race are each found to significantly influence family structure choice. Also, as expected, greater levels of unemployment, measured using county-level unemployment rates, are found to reduce a mother's probability of marriage. Specifically, the estimated coefficient on CTY UNEMP RATE is significant at the 10 percent level or better in a lower one-tailed test (see Table 17). The findings regarding county-level unemployment rates also appear robust to the inclusion of statewide measures of conservatism (PFUND, PCHURCH), as can be seen by looking at column 2 of Table 17. The findings reported in Table 17 regarding the relationship between area unemployment rates and marriage probabilities are much stronger than in Table 11, where the estimated coefficient on STATE UNEMP RATE was insignificant. As it turns out, the reason for these statistically different findings does not appear to be due to the fact that state unemployment rates inadequately proxy for countylevel unemployment rates. Rather, PURBAN, a county-level, continuous measure of urbanization, appears to be an important omitted variable in the analysis based on the CPS data. Or put differently, the set of MSA dummies included in the CPS analysis appears to inadequately control for level of urbanization. ${ }^{35}$

## VII. DISCUSSION OF OVERALL FINDINGS REGARDING UP

Contrary to expectations, UP is not found to be pro-marriage or pro-two-parent family. Rather, the findings indicate that mothers living in UP and non-UP states do not have significantly different probabilities of marriage, particularly when a measure of community conservatism, as proxied by PFUND, is accounted for in the model specification. Several institutional features of the

TABLE 17
Control Variables from Selected Models
Estimated Using 1987 NSFH Data

|  | Model (2), <br> Table 15 | Model (5), <br> Table 15 | Model (2), <br> Table 16 |
| :--- | :---: | :---: | :---: |
| WOMAN'S AGE | -0.004 | -0.004 | -0.026 |
|  | $(-0.63)$ | $(-0.65)$ | $(-3.77)$ |
| ELEMENTARY | -0.23 | -0.227 | $(-1.32)$ |
| LESS THAN HS | $(-1.63)$ | $(-1.61)$ | -0.429 |
|  | -0.535 | -0.534 | $(-5.01)$ |
| COLLEGE | $(-6.22)$ | $(-6.2)$ | 0.229 |
|  | 0.231 | 0.231 | $(3.48)$ |
| POST GRADUATE | $(3.48)$ | $(3.48)$ | 1.155 |
|  | 0.997 | 1.022 | $(5.12)$ |
| ED UNKNOWN | $(4.43)$ | $(4.53)$ | -0.158 |
|  | -0.145 | -0.15 | $(-0.34)$ |
| \# OWN KIDS<18 | $(-0.31)$ | $(-0.32)$ | 0.165 |
|  | 0.094 | 0.091 | $(5.36)$ |
| BLACK | $(3.09)$ | $(2.99)$ | -0.936 |
|  | -1.013 | -1.018 | $-0.01)$ |
| HISPANIC | $-13.97)$ | $(-14.02)$ | -0.049 |
|  | -0.065 | -0.063 | $(-0.47)$ |
| ASIAN | $(-0.63)$ | $(-0.61)$ | 0.338 |
|  | 0.161 | 0.158 | $(1.2)$ |
| OTHER | $(0.58)$ | $(0.57)$ | -0.305 |
| PURBAN | -0.339 | -0.355 | $(-0.86)$ |
|  | $(-0.97)$ | $(-1.02)$ | -0.003 |
| CTY UNEMP RATE | -0.003 | -0.002 | $-0.0)$ |
|  | $(-2.43)$ | $(-2.06)$ | $(-1.85)$ |
| Constant | -0.014 | -0.016 | 1.315 |
|  | $(-1.49)$ | $(-1.69)$ | $(4.47)$ |

Notes: t-statistics appear in parentheses beneath estimated coefficients. WHITE is the omitted variable among race/ethnicity variables. HS is omitted among education variables.

UP program may explain the lack of a pro-family finding. First, for UP eligibility, the principal earner of a two-parent family must have a demonstrated attachment to the labor force and meet the definition of "unemployed," each criteria rigidly specified by state and federal guidelines as discussed in Section II. Thus, two-parent families are ineligible if the principal earner works too many hours at a low-wage job or if the principal earner is currently unemployed and fails to have a recent work history. These restrictions necessarily limit the pool of eligibles and thus reduce UP's potential impact on marriage. Also, failure to meet these work requirements may force financially strapped married couples to live separately (and possibly divorce) to gain access to welfare through the AFDC-Basic/"single-parent" program. Indeed, to eliminate the burden of these work requirements, the state of Wisconsin recently was granted a waiver for a demonstration project focused on married AFDC-UP eligible recipients. Under this demonstration project, "employment history requirements, the 100 hour per month work rule and the thirty day unemployment criteria will be waived" for married-couple families who are financially eligible for AFDC-UP. ${ }^{36}$

There are at least two other possible reasons for the lack of a pro-two-parent family finding regarding AFDC-UP. First, anecdotal evidence based on discussions with social workers suggests that families in UP states may not be aware of two-parent (UP) eligibility. In addition, although UP may be on the books, states may avoid publicizing this program when confronting tight state budgets. ${ }^{37}$

## VIII. CONCLUDING REMARKS

This study investigated the effect of a state's provision (or lack thereof) of an AFDCUnemployed Parent Program on a woman's probability of being in a two-parent family before the expansion of UP benefits to two-parent families in all states through the Family Support Act of 1988. The central finding of this study, based on an examination of both CPS and NSFH data, is that the provision of an AFDC-UP program does not provide the "pro-family" boost anticipated by Congress.

Specifically, using CPS data, the provision of UP is found to have an insignificant effect on marriage probabilities, with one exception. For the sample of mothers with less than a high school education, UP is found to have a significant negative influence on the likelihood of marriage. This finding is not robust, however; UP's effect is rendered insignificant when a measure for conservative attitudes (defined as the percentage of Christian Fundamentalists in a state) is included in the model specification. The results obtained using the NSFH data are quite similar. For the full sample of mothers under age thirty-six, UP is found to have a significant negative overall effect on a woman's probability of marriage. Nonetheless, when the same measure of conservative attitudes is included in the marital status model, UP's influence is not found to be statistically significant. Also, a state's provision of a UP program is not found to influence a mother's probability of being in a natural twoparent family.

The findings based on both the CPS and NSFH data also suggest that the role of community attitudes is important in influencing family structure decisions. Indeed, conservative attitudes in a community (state), as measured by percent Christian Fundamentalist, are found to significantly affect a woman's probability of marriage. In addition, the inclusion of such a measure substantially weakens any findings regarding the incentive effects of AFDC policy--either via the level of AFDC generosity or the presence of the UP program.

The general conclusion that can be drawn from this study for the period following the enactment of the Family Support Act of 1988 is that while the federal government has taken a giant step toward treating poor single-parent and two-parent families similarly, the expansion of the UP program to all states is not anticipated to have a positive effect on an average mother's likelihood of being in a natural two-parent family. Stated differently, this study suggests that if the government's goal is to strengthen or encourage two-parent families, it most likely needs to consider other policy options. Still, for completeness, three caveats should be noted.

First, besides extending UP benefits to two-parent families in all states, the FSA of 1988 mandated that adults in AFDC-Basic families and AFDC-UP families participate in the JOBS program. For UP participants, in particular, one or both spouses are required to participate in a "work experience program (workfare)" for sixteen to forty hours per week. ${ }^{38}$ Quite possibly, this work obligation will influence outcomes in the post-FSA period, but the net effect is not yet clear since states are not required to meet the first federally mandated participation rate target, enrollment of 40 percent of the UP caseload in a work program, until 1994. ${ }^{39}$ For instance, participation in a work program may stabilize intact families by providing the adult(s) with productivity-enhancing skills. ${ }^{40}$ On the other hand, it is possible that the community work obligation, which is associated with UP participation only, may make participation in this program relatively less attractive than participation in the singleparent program. Also, to the extent that UP participants engage in training and counseling activities beyond meeting their work obligation, these experiences may increase their expectations and potentially destabilize families. ${ }^{41}$

A second issue that must also be considered in any extrapolation of the findings obtained in this study is that a number of states, including Wisconsin, have recently obtained waivers to modify some of AFDC-UP's work rules, as well as other features of the program. Thus, in these states, the "modified" UP program may have a very different effect (presumably more pro-family) on family structure. Finally, Schram and Wiseman (1988) note that in cases in which the male has positive earnings, the degree of child support enforcement has potentially important implications for family structure decisions. Specifically, to the extent there is greater enforcement as mandated by the FSA of 1988, this should reduce the financial advantage of a family breakup. ${ }^{42}$

From the perspective of future research, a natural extension of this study is to examine UP's influence using panel data spanning the period before and after the FSA of 1988. Indeed, the 1992 NSFH, which is currently in progress, is an excellent candidate for such an analysis since it will
include information on the same set of individuals in 1987 and 1992, years sufficiently before and after the year in which the FSA took effect (1990). In addition, a real advantage of these data over other panel data like the PSID or SIPP is that these data are specifically designed to permit the identification of detailed family structures like natural two-parent families.

## APPENDIX A

## Sources of State and County-Level Data

\(\left.$$
\begin{array}{ll}\text { AFDC, UP: } & \begin{array}{l}1989 \text { figures appended to } 1990 \text { CPS. Figures taken from U.S. House } \\
\text { of Representatives (1989). }\end{array}
$$ <br>
1986 figures appended to 1987 NSFH. Figures taken from U.S. House <br>

of Representatives (1986).\end{array}\right]\)| Figures derived from data in Quinn et al. (1982). Definition of |
| :--- |
| fundamentalist from Morgan and Meier (1980). |
| STATE UNEMP RATE: |
|  |
| 1989 figures appended to 1990 CPS. Figures taken from U.S. Bureau |
| of the Census (1990). |

## APPENDIX B

Variable Means and Standard Deviations,
By Detailed Family Structure:
Young Women with Dependent Children (1990 CPS)

|  | All <br> Mothers | Married <br> Mothers | Unmarried Mothers | Unmarried Mothers |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Male-Female Cohabitor | Female H'hold Head | Female Subfam. Head |
| MARRIED | 0.73 | NA | NA | NA | NA | NA |
| AGE | $\begin{gathered} 29.16 \\ (4.38) \end{gathered}$ | $\begin{gathered} 29.65 \\ (4.03) \end{gathered}$ | $\begin{gathered} 27.83 \\ (4.98) \end{gathered}$ | $\begin{gathered} 27.96 \\ (4.7) \end{gathered}$ | $\begin{gathered} 28.82 \\ (4.46) \end{gathered}$ | $\begin{aligned} & 24.6 \\ & (5.33) \end{aligned}$ |
| EDUCATION | $\begin{aligned} & 12.39 \\ & (2.44) \end{aligned}$ | $\begin{aligned} & 12.62 \\ & (2.48) \end{aligned}$ | $\begin{gathered} 11.76 \\ (2.19) \end{gathered}$ | $\begin{gathered} 11.66 \\ (1.9) \end{gathered}$ | $\begin{gathered} 11.86 \\ (2.27) \end{gathered}$ | $\begin{gathered} 11.51 \\ (2.1) \end{gathered}$ |
| \# KIDS < 18 | $\begin{aligned} & 1.95 \\ & (.98) \end{aligned}$ | $\begin{gathered} 2.00 \\ (0.96) \end{gathered}$ | $\begin{gathered} 1.80 \\ (1.0) \end{gathered}$ | $\begin{gathered} 1.68 \\ (0.92) \end{gathered}$ | $\begin{gathered} 1.93 \\ (1.04) \end{gathered}$ | $\begin{gathered} 1.45 \\ (0.81) \end{gathered}$ |
| Race and ethnicity |  |  |  |  |  |  |
| WHITE | 0.83 | 0.9 | 0.64 | 0.77 | 0.64 | 0.59 |
| BLACK | 0.13 | 0.06 | 0.32 | 0.19 | 0.33 | 0.37 |
| ASIAN | 0.02 | 0.03 | 0.01 | 0.01 | 0.01 | 0.01 |
| OTHER | 0.01 | 0.01 | 0.02 | 0.03 | 0.02 | 0.02 |
| HISPANIC | 0.16 | 0.16 | 0.17 | 0.12 | 0.17 | 0.19 |
| Residence variables |  |  |  |  |  |  |
| CENTRAL CITY | 0.24 | 0.2 | 0.35 | 0.26 | 0.37 | 0.36 |
| NON-CENTRAL-CITY |  |  |  |  |  |  |
| MSA | 0.26 | 0.33 | 0.23 | 0.24 | 0.24 | 0.26 |
| OUTSIDE OF MSA | 0.31 | 0.27 | 0.24 | 0.27 | 0.22 | 0.23 |
| RESIDENCE NOT |  |  |  |  |  |  |
| Observations | 11,295 | 8,284 | 3,011 | 360 | 2,016 | 635 |
| As \% of total | NA | 73.3 | 26.7 | 3.2 | 17.8 | 5.6 |

Notes: Standard deviations of continuous variables are in parentheses. Based on unweighted sample.

APPENDIX C
Variable Means and Standard Deviations, by Detailed Family Structure: Female Respondents with Dependent Children (1987 NSFH)

|  | All <br> Mothers | Married <br> Mothers | Unmarried Mothers | Unmarried Mothers |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Cohabitor | Female H'hold Head | Female Subfam. Head |
| WOMAN'S AGE | 28.56 | 28.79 | 28.28 | 26.8 | 28.88 | 25.32 |
|  | (4.4) | (4.3) | (4.5) | (4.5) | (4.4) | (4.4) |
| ELEMENTARY | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.04 |
|  | (0.2) | (0.2) | (0.2) | (0.2) | (0.2) | (0.2) |
| LESS THAN HS | 0.15 | 0.1 | 0.21 | 0.3 | 0.2 | 0.2 |
|  | (0.4) | (0.3) | (0.4) | (0.5) | (0.4) | (0.4) |
| COLLEGE | 0.32 | 0.36 | 0.27 | 0.2 | 0.28 | 0.26 |
|  | (0.5) | (0.5) | (0.4) | (0.4) | (0.4) | (0.4) |
| POST GRADUATE | 0.03 | 0.04 | 0.01 | 0 | 0.01 | 0 |
|  | (0.2) | (0.2) | (0.1) | (0) | (0.1) | (0) |
| ED UNKNOWN | 0 | 0 | 0.01 | 0 | 0 | 0.03 |
|  | (0.1) | (0.1) | (0.1) | (0) | (0.1) | (0.2) |
| \# OWN KIDS<18 | 1.95 | 1.94 | 1.95 | 2.05 | 1.99 | 1.45 |
|  | (1) | (1) | (1) | (1.3) | (1) | (0.8) |
| BLACK | 0.24 | 0.12 | 0.39 | 0.29 | 0.39 | 0.52 |
|  | (0.4) | (0.3) | (0.5) | (0.5) | (0.5) | (0.5) |
| HISPANIC | 0.11 | 0.11 | 0.11 | 0.08 | 0.12 | 0.04 |
|  | (0.3) | (0.3) | (0.3) | (0.3) | (0.3) | (0.2) |
| ASIAN | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0 |
|  | (0.1) | (0.1) | (0.1) | (0.1) | (0.1) | (0) |
| OTHER | 0.01 | 0.01 | 0.01 | 0.01 | 0 | 0.03 |
|  | (0.1) | (0.1) | (0.1) | (0.1) | (0.1) | (0.2) |
| PURBAN | 70.15 | 67.68 | 73.23 | 71.34 | 73.78 | 71.31 |
|  | (28.3) | (29.2) | (26.9) | (27) | (26.5) | (30) |
| CTY UNEMP RATE | 7.57 | 7.54 | 7.61 | 7.1 | 7.69 | 7.66 |
|  | (3.3) | (3.3) | (3.2) | (3.2) | (3.2) | (3.6) |
| STATE UNEMP RATE | 7.26 | 7.24 | 7.28 | 6.9 | 7.35 | 7.29 |
|  | (2) | (1.9) | (2.1) | (2) | (2.1) | (2) |
| UPELIGIBLE | 0.55 | 0.93 | 0.08 | 0.58 | 0 | 0 |
|  | (0.5) | (0.3) | (0.3) | (0.5) | (0) | (0) |
| AFDC | 522.69 | 523.02 | 522.28 | 525.2 | 523.13 | 510.85 |
|  | (81.6) | (82) | (81.2) | (76.6) | (81) | (89) |
| UP | 0.62 | 0.59 | 0.65 | 0.67 | 0.65 | 0.59 |
|  | (0.5) | (0.5) | (0.5) | (0.5) | (0.5) | (0.5) |
| PFUND | 13.41 | 14.06 | 12.62 | 11.56 | 12.53 | 14.85 |
|  | (12.3) | (13.3) | (11) | (11) | (10.9) | (11.8) |
| PCHURCH | 49.95 | 50.23 | 49.61 | 50.03 | 49.71 | 48.13 |
|  | (9.2) | (9.4) | (8.9) | (9.2) | (8.9) | (8.4) |
| Unweighted sample As \% of unweighted sample | 2,221 | 1,231 | 990 | 132 | 91 | 132 |
|  | 17.1 | 9.5 | 7.6 | 1.0 | 0.7 | 1.0 |

Note: Standard deviations appear in parentheses beneath means.

## Endnotes

${ }^{1}$ Congressional Quarterly Weekly Report, pp. 1068-1070.
${ }^{2}$ Moffitt examined AFDC's impact on the likelihood of marriage versus all other statuses for a full sample of women, regardless of the presence of children. Danziger et al. considered female headship versus marriage for a sample of women with dependent children. In both studies, single-parent AFDC benefits were found to discourage marriage. Bane and Ellwood examined several decisions, including female household headship and single motherhood. They found that AFDC has its strongest effect on living arrangements, but also that AFDC has a significant positive influence on single motherhood relative to all other statuses for white women ages twenty-five to thirty-four.
${ }^{3}$ Moffitt (1992) refers to AFDC-UP as a "husband-wife" program (page 55) while Cain (1986) refers to AFDC-UP as a program for "poor married couples" (footnote 4). Hosek (1980) focuses on married-couple families only.
${ }^{4}$ In fact, thirteen states have time limits on benefits: Arizona, Arkansas, Florida, Colorado, Georgia, Idaho, Louisiana, Nevada, South Dakota, Texas, Utah, Virginia, and Wyoming. (Unpublished Report by Family Support Administration, Department of Health and Human Services.)
${ }^{5}$ Chapter I, Section II, page 76, 5/92, AFDC Manual. (Missouri Department of Social Services, Division of Family Services.)
${ }^{6}$ The survey revealed that if the natural father is living in the household and paternity is not currently established, the family will be placed on the AFDC-UP rolls and the state will actively pursue the establishment of paternity.
${ }^{7}$ In seven states (Nebraska, New Hampshire, Oregon, South Dakota, Utah, Vermont, and Washington) stepparents are assumed to bear legal responsibility for the children and are included in the assistance unit. In the remaining states, the stepparent's income is taken into account in determining the mother's eligibility and benefits.
${ }^{8}$ Specifically, for married-couple families the grant may be reduced based on the income of the
stepparent, while in cohabitation units where the male is not the natural parent of a child present, the grant may be reduced by any cash contributions made by the male cohabitor.
${ }^{9}$ These findings are available from the author.
${ }^{10}$ If the male of an unmarried couple with a dependent child is employed, this family unit can do best financially if the male does not acknowledge paternity. Thus, the unit can collect benefits via AFDC-Basic and the male can keep his earnings. However, this course of action requires lying, as discussed by Jencks (1992). Also, note that the grant will be reduced by the male's contribution to the woman and her child. An alternative, as noted by Jencks, is for the woman to "hide" the male and claim that she is living alone, but this would still require perjury.
${ }^{11}$ Two-parent benefits are naturally larger, since they include the extra adult in the assistance unit, but both are assumed to yield the same level of economic well-being for the family unit.
${ }^{12}$ In fact, note that if all family structures were eligible for AFDC, without any differences in work requirements etc., AFDC transfer income would have a pure income effect only.
${ }^{13}$ In fact, the ideal data set for this study does not exist. The Survey of Income and Program Participation (SIPP) does ask detailed questions on family relationships, including paternity, but it is difficult to properly identify cohabiting couples. Also, SIPP does not sample all fifty states.
${ }^{14}$ As discussed by Albin and Stein (1968), apart from ADFC generosity, receipt/eligibility of AFDC is also likely to be affected by the behavior of the caseworker. Unfortunately, this factor, which may also vary by state, cannot be readily measured. Another issue is that recipients really get a "package" of benefits via AFDC receipt, including Medicaid as well as Food Stamps. Because of the difficulty of accurately measuring the in-kind Medicaid benefit, it is not included as part of AFDC generosity in this analysis.
${ }^{15}$ Previously, Feigenbaum, Karoly, and Levy (1988) used these definitions. The figures I computed are available upon request.
${ }^{16} \mathrm{An}$ equivalent parameterization of the AFDC program variables is given by:
$\mathrm{C}_{1} \mathrm{AFDC}_{\mathrm{j}} * \mathrm{UP}_{\mathrm{j}}+\mathrm{C}_{2} \mathrm{AFDC}_{\mathrm{j}}+\mathrm{C}_{3} \mathrm{UP}_{\mathrm{j}}$, where $\mathrm{C}_{1}=\mathrm{B}_{1}-\mathrm{B}_{2}, \mathrm{C}_{2}=\mathrm{B}_{2}$, and $\mathrm{C}_{3}=\mathrm{B}_{3}$. The specification in the text is preferred, for the purposes of this paper, since it addresses the specific hypotheses set forth.
${ }^{17}$ However, it is also quite possible that some of the identified households may contain platonic same-sex roommates. The data do not allow for a distinction to be made. Even if a distinction is made in the survey, couples hesitant to admit to being live-in partners may report themselves as roommates.
${ }^{18}$ The likelihood ratio test statistic is given as -2 (log-likelihood from the restricted model (Model (2)) - log likelihood from the unrestricted model (Model (1)). Model (2) contains two restrictions: $\mathrm{B}_{3}$ $=0$ and $B_{1}=B_{2}$. This test statistic is distributed as a $\chi^{2}$, with two degrees of freedom, where two is equal to the number of restrictions.
${ }^{19}$ To examine the sensitivity of the findings to model specification, a number of models not reported here were also estimated. The results in Table 7 are maintained when benefits are adjusted using an alternative cost-of-living series based on American Chamber of Commerce Researcher's Association (ACCRA) data provided in McMahon and Chang (1991). Model (1) was also reestimated under the restriction that the UP indicator variable has a zero effect, thereby allowing AFDC to have a differential effect across UP and non-UP states only. The results for this model specification are not significantly different from those of Model (1). Also, I expanded the sample to women of all age groups, though I believe UP is likely to have its largest effect on young women, with less labor market experience, etc. The results regarding UP's effect on a woman's probability of marriage, in terms of statistical significance, are the same as those obtained for the sample restricted to young women.
${ }^{20}$ The results obtained for mothers with less than a high school education were examined to see if they are sensitive to the fact that some of the mothers are under age eighteen and, for this reason, have not completed high school. First, Models (1) and (2) were reestimated using a sample of mothers over age nineteen. Also, they were reestimated using the full sample of least-educated mothers, with the
variable for woman's education excluded. In both cases, Models (1) and (2), as defined in Table 9, were found to be statistically different.
${ }^{21}$ Some states (Wyoming, North Carolina) adopted UP very close to the CPS survey date. Individuals in these states might not have had sufficient time to learn about the program and so it is not clear whether these states should be included among the set of "UP" states or not. As it turns out, UP's effect is still negative and significant regardless of the treatment of these states.
${ }^{22}$ To be precise, the estimated coefficient on AFDC*UP in Model (1) is significant at the 10 percent level in the results reported in Tables 7 and 8, but is only marginally significant in Model (1) of Table 9.
${ }^{23}$ Moffitt (1990), on the other hand, found that when he restricted his sample to those most eligible, the results weakened. He argues that the gains to targeting were outweighed by the loss in efficiency due to the reduced sample size.
${ }^{24}$ These predictions are based on estimates from Model (2) because Model (1) was not found to be statistically different from Model (2) for the two most broadly defined samples.
${ }^{25}$ Note from Model (1) that UP's overall effect on a woman's probability of marriage is given as: $\left(B_{1}-B_{2}\right) f(B Z) * A F D C+B_{3} * f(B Z)$, where $B_{1}, B_{2}$, and $B_{3}$ are defined in equation (1), and $f(B Z)$ is a standard normal density function evaluated at some given level of the Z's. In the computations here, Z is computed at the sample means (see Table 6).
${ }^{26}$ For the sample of mothers with a high school education or less, the estimated coefficient on UP does become statistically significant at the 10 percent level in a one-tailed test (see Model (4), Table 8). It is misleading, however, to focus on the positive sign and significance of this estimated coefficient alone because UP's overall impact also depends on the differential effect of AFDC generosity in UP and non-UP states, as detailed in the equation in the prior footnote.
${ }^{27}$ Specifically, note that AFDC and PFUND have a correlation across all states of -.40. In other words, more generous states tend to also be those with a smaller percentage of Christian Fundamentalists. Given this negative correlation and the fact that PFUND positively affects marriage,
the omission of PFUND causes the estimated coefficient on AFDC generosity in model specifications (1), (2), and (3) to be "too large" in absolute value.
${ }^{28}$ The NSFH was funded by a grant from the Center for Population Research of the National Institute of Child Health and Human Development. The survey was designed and carried out at the Center for Demography and Ecology at the University of Wisconsin-Madison under the direction of Larry Bumpass and James Sweet. The field work was done by the Institute for Survey Research at Temple University.
${ }^{29}$ The public use portion of the NSFH data set does not contain state, county, or metro identifiers as a result of the confidentiality rules. Thus, the state and county-level variables gathered by the author were physically merged with the NSFH data by Dr. Vaughn Call, Center for Demography and Ecology, University of Wisconsin.
${ }^{30}$ Nevertheless, while the exclusion of cohabitors appears to be a serious omission in percentage terms, it is important to note that cohabitors, as a group, make up only 7.4 percent of all two-parent families (weighted sample).
${ }^{31}$ Readers should note that the conclusions reached are the same, whether the weighted or unweighted sample from the NSFH serves as the basis for analysis and statistical testing. The weighted results can be obtained from the author upon request.
${ }^{32} \mathrm{~A}$ number of specifications not reported here were also examined to test the sensitivity of the findings. The NSFH models were reestimated using nominal data. The conclusions reached regarding UP were unchanged.
${ }^{33}$ As discussed in footnote 21, some states adopted UP very close to the survey date and so it is not clear whether these states (Montana, South Carolina, and Oregon) should be included among the set of UP states or not. As in the case of the CPS findings, the treatment of these states does not influence the results. Specifically, when Montana, South Carolina, and Oregon are treated as non-UP states, UP is found to have a significant negative effect on a woman's probability of being in a
married-couple family and a marginally significant negative effect on a woman's probability of being in a natural two-parent family.
${ }^{34}$ Also, the models in Table 16 were reestimated, assuming that all cohabitors are "single." In other words, the dependent variable equals 1 if the woman lives in a married-couple family and she and her husband are the natural parents of at least one child, and equals 0 otherwise (including all cohabitors). The findings of these models are similar to those obtained in Table 15, for the sample of married-couple families.
${ }^{35}$ These results can be obtained from the author upon request. They are discussed in detail in Winkler (1993b).
${ }^{36}$ Parental and Family Responsibility (PFR) Demonstration Project, 3/13/92, submitted by Wisconsin Department of Health and Social Services to U.S. Department of Health and Human Services.
${ }^{37}$ In fact, a tight state budget is one reason that Utah eliminated its UP program in the early 1980 's (Janzen and Taylor, 1991).
${ }^{38}$ This particular work obligation cannot be met by attending an education program unless the parent is under age twenty-five and has not completed high school.
${ }^{39}$ States must enroll 40 percent of the UP caseload in a work program by FY 1994, 50 percent in FY 1995, 60 percent in FY 1996, and 75 percent in FY 1997 and 1998.
${ }^{40}$ It is important to keep in mind, however, that a study of Utah's Emergency Work Program for two-parent families (WEP) shows that community work experience is only effective at getting people off the rolls if work experience is combined with other employment activities, like adult education, skills training, and job search (Janzen and Taylor, 1991).
${ }^{41}$ This point was originally raised by Schram and Wiseman (1988) in their evaluation of the findings from SIME/DIME.
${ }^{42}$ Specifically, with child support enforcement, the father's financial status is taken into consideration in determining the amount of the AFDC grant, whether he lives with the mother and her
children or lives separately. On the other hand, in the extreme case that there is no enforcement, the family can do better economically by separating because the male can retain his full earnings (without garnishment) and the woman's grant is not reduced.

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