Multiple-Father Families and Welfare

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ABSTRACT

In this study, we explore the connection between welfare benefit levels and multiple-partner fertility. In contrast to past studies of welfare and family structure, most of which focus on a mother's marital status or the absence of a male partner, we focus on the biological relationships among the children in the household. We draw our data from the U.S. Census Bureau's Survey of Income and Program Participation (SIPP). By exploiting the information in SIPP's rarely used "household relationship matrix," we are able to ascertain the biological relationships between a woman and every child in her household, as well as the precise relationships among those children. This lets us determine the number of men who are biological fathers of a mother's resident children. While an examination of welfare rules suggests that they might encourage multiple-father fertility, this preliminary study finds only weak evidence of a relationship between welfare and multiple-father fertility.

Preliminary: Please do not cite.

I. Introduction

Multiple-partner fertility is common, rising, and appears to have negative implications for children's wellbeing. It also poses major challenges for policies aimed at child wellbeing, such as child-support laws and marriage initiatives. Despite this, relatively little attention has been paid to its root causes. This paper examines whether the welfare system contributes to its prevalence.

While the multiple-partner fertility of both women and men matters to child welfare and to policy, this paper examines only women's multiple-partner fertility, referred to henceforth as multiple-father fertility. The reasons for this are several. First, we are interested in welfare, and although welfare's eligibility rules are sex-neutral, women predominate among adult recipients. Second, the data favor this approach. Few datasets contain the data needed to measure multiple-partner fertility; the one we chose, the SIPP, gathers data on household members only. Given that most children reside with their mothers, surveys of mothers are more likely also to contain data on their children, such as whether a mother's children share the same father. Because men more often live apart from their children from prior relationships, it is harder to establish whether a man's children share the same mother. Furthermore, it appears that women's reports of how many children they have borne are more accurate than men's reports of the number of children they have fathered.

The more important question is why the potential influence of welfare on multiple-father fertility is worth exploring. While multiple-father fertility is observed at all socio-economic levels, it is especially common among welfare recipients. This may be the simple outcropping of an overlap between groups prone to welfare receipt and groups prone to multiple partner fertility (e.g., African-Americans or women who become mothers as teens). It may also be that, because of their family structure, multiple-father families are more likely to be eligible for benefits, and therefore more visible on the rolls. However, as we explain below, the welfare rules seem to contain significant incentives to form multiple-father families. In this paper, we undertake a preliminary investigation of whether those incentives actually affect behavior.

Section II explains how the rules of welfare programs favor the formation of multiple father families. Section III briefly reviews related research, and Section IV presents empirical evidence concerning the hypothesized relationships between welfare and family structure, based on data from the 1990 SIPP. Section V concludes.

II. Welfare's Incentives for Multiple-Father Family Formation

There are several avenues by which welfare could encourage the formation of multiple-father families. First, welfare appears to increase the odds of family breakup, which, in turn, opens the way for the formation of a multiple-father family. Second, just as child-support laws may treat the multiple-father family more generously than they do a one-father family [Meyer, Cancian and Cook, pp. 22-3], in some circumstances, welfare rules tend also to favor the multiple-father family over a family in which all the children share one father. This is the case when the father of some (or all) of the children cohabits with their mother.

Welfare's subsidy to family breakup is the result of conditioning eligibility on the absence of a biological parent. AFDC was originally created to support children whose fathers had died or abandoned them, and until the introduction of AFDC-UP (Unemployed Parent), the absence (or incapacity) of a parent was an eligibility requirement.[1] While this may have prompted the departure of some low-income fathers, mothers were discouraged from replacing them with boyfriends by so-

[1] Beginning in 1961, states could establish an AFDC-Unemployed Parent (UP) program. The 1988 Family Support Act required every state to have one by 1990. The aim was to allow poor two-parent families to receive AFDC benefits if they qualified. Eligibility was conditioned on past labor force attachment and current unemployment.

called “man-in-the-house” rules: The presence of any adult man in the household barred a family from aid. In some areas, welfare agencies even resorted to occasional “bedroom checks” to enforce the rule. Thus, in principle, a welfare mother cohabiting with a man risked losing her benefits.[2]

In 1968, the Supreme Court ruled that cohabitation *per se* does not automatically disqualify a welfare recipient from benefits. In 1970, the Court ruled further that, unless caseworkers can prove that a cohabitor is supporting a recipient’s family, the cohabitor’s income cannot be counted in determining the family’s benefit. States differ somewhat in their treatment of an unmarried cohabitor’s income, but those differences seem to matter little to cohabitation rates (Moffitt *et al.* 1994, 1998). As Moffitt *et al.* note, the standards of proof are difficult to meet in practice. Consequently, ferreting out the contributions of a recipient’s adult friends has generally been a very low priority for welfare bureaucracies (Rolston 2000). Independently of these legal and administrative changes, the social stigma attached to remarriage and unmarried cohabitation has declined.

The practical result of all these changes was that welfare became less unattractive and life with a child’s biological father more so. In the AFDC program’s early years, a jobless mother faced a stark choice: stay with her children’s father and depend on his good will and his income, or live all alone on welfare. The Supreme Court rulings, together with changed social attitudes, increased the appeal of a third option: living with another man. A mother could get the companionship and the

[2]In practice, the level of risk varied by locale and race, and probably declined over time. The man-in-the-house rule was enforced vigorously in only a few jurisdictions, notably the District of Columbia and Oakland, California. More common was the practice of ending the eligibility of mothers who conceived another child while on aid. In Louisiana, this was known as the “suitable home” rule, and in a notorious instance of its application, several thousand mothers were dropped from the rolls (95 percent of the children denied aid were black even though black children were only 66 percent of children on aid). See Bell (1965) for discussion of “man-in-the-house” rules. The California Supreme Court ruled “midnight raids” unconstitutional, but the U.S. Supreme Court (Wyman v. James) upheld the legality of unannounced daytime visits by caseworkers; see Davis (1993) for an overview of the welfare rights movement between 1960 and 1973. We thank Ellen Freese for these references.

household scale economies that come with cohabiting and still receive AFDC, a small but steady income that she neither had to work nor bargain for. The AFDC stipend also made her more attractive in the eyes of potential partners. Thus the finding by Moffitt *et al.* (1998) and London (1998) that a significant fraction of mothers on welfare were living with unrelated men, many of whom had significant earnings, should not have come as a complete surprise.

Neither the establishment of the AFDC-UP (Unemployed Parent) program nor the 1996 transformation of AFDC into the TANF program eliminated this incentive problem. The AFDC-UP program did mean that a subset of intact families—those meeting the income and employment criteria—were no longer categorically ineligible for welfare. But like the basic AFDC program, AFDC-UP taxed a biological father's income at an implicit marginal rate of virtually 100 percent, while the income of an unmarried, unrelated cohabitor was effectively untaxed.

Welfare's treatment of stepparent families falls somewhere between the treatment of two-parent households and that of unrelated cohabitors, and differs from state to state. Before 1981, states had discretion in counting stepparent income, and many seem to have ignored much or all of it. The Omnibus Budget Reconciliation Act (OBRA) of 1981 required all states to count stepparent income (except for specified disregards such as a self-support allowance, work expenses, or support to children in another household), and its impact was immediate. Between May 1981 and May 1982, stepfather households fell from 6.6 percent of the AFDC caseload to 3.4 percent (Rolston 2000). For the rest of the 1980s, all states applied the same income disregards. Then, in the early 1990s, a number of states received federal waivers to experiment with "wedfare" policies, allowing them to disregard much more of a stepparent's income.

Welfare's subsidy for replacing fathers with unrelated men is large enough to be relevant for many households. To see this, one can estimate the proportion of parents paying a "tax" for living together (by forgoing the subsidy). Rough estimates based on the 1990 SIPP suggest that, in the absence of child support, over half of all couple-headed households not already on AFDC would gain financially if the lower-earning parent were to stop working and start receiving welfare and the higher-earning parent were replaced by an unrelated adult with identical earnings.[3] Figure 1 depicts the distribution of that gain (measured in monthly 1990 dollars). Among households that would gain, the median gain of $540 would constitute a 59 percent increase in monthly household income. Restricting the calculation to families in which neither parent finished high school, 76 percent would gain. Restricting it instead to families in the bottom quarter of the income distribution, 90 percent of them would gain (see Figure 2).

Child support enforcement reduces the financial gain to such behavior. If a child's father is replaced by a man who is himself a father, part of the new man's earnings will go toward child support. This reduction in household income will not be offset by support received from the child's own father, however. In most states, a family's welfare benefit is reduced by any support payments collected on its behalf, which means that payments made by an absent father reduce *his* household income without raising that of his child.[4] Collecting more child support dollars on behalf of children on the welfare rolls reduces taxpayers' net subsidy to welfare recipients.

Child support is far from fully enforced, but even with perfect compliance, the financial incentive for biological parents to separate would remain relevant for many households. For example, if child support were set at 15 percent of the absent parent's income, 65 percent of parents without high school diplomas would gain by separating — a drop of only 10 percentage points. One could further refine these calculations,[5] but the conclusion would be the same: welfare's implicit

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[3]The potential gain is calculated as the difference between the state-specific AFDC/ Food Stamp benefits package for a family of four and the lower of a couple's two incomes.

[4]During the period covered by this analysis, most states allowed AFDC families to keep the first $50 of child support, and reduced their monthly benefit, dollar for dollar, for amounts collected above $50. In most states, the $50 pass-through has been eliminated.

[5]The potential gain is overstated by using the four-person benefit for all families, for example, and by ignoring the upward sloping time-profile of many workers' earnings potential. The gain is understated by ignoring Medicaid, work-related expenses saved when a parent stops working, and the disutility of work itself.

subsidy for replacing fathers with other men is relevant for large numbers of children.

Thus far, we have made the case only that welfare encourages family breakup, and thus may pave the way for the entry of an unrelated man. If that man then has a child with the children's mother, a multiple-father family is created.

However, a second and different incentive for multiple-father family formation is created if a multiple-father family is treated more generously by the welfare system than is a one-father family. Because it is possible to collect benefits for some members of the household even though other members are ineligible, an unmarried mother is entitled to higher benefits if her cohabitor is the father of only some of her children than if he is the father of all of them. The children whose father is absent remain categorically eligible for benefits. Thus, among unmarried cohabitors, welfare favors the multiple-father family over the one-father family. Other things equal, however, there is no advantage to increasing the number of fathers beyond two.

III. Previous research

A large literature in economics is devoted to the impact of welfare programs on family structure. To date, however, economists have written relatively little about multiple-partner fertility. A keyword search for "multiple-partner fertility" (and similar terms) in EconLit, the American Economic Association's electronic bibliography of economic literature, found one relevant citation: a theoretical paper that models marriage and fertility, and finds that if, "females are in excess supply and have sufficiently high incomes, a marriage market equilibrium may exist in which children are born within marriage to high-income parents, whereas in low-income groups men father children by multiple partners outside of marriage. (Willis 1999, S33).

In demography and sociology, there has been more attention paid to multiple-partner fertility. However, we know of no study that directly examines whether there is a causal effect of welfare programs on multiple-father fertility.

IV. Empirical evidence on multiple-father families

Many variables enter a mother's decision to have children with more than one man. Some, such as the men's qualities as companions or (step)fathers, a mother's own qualities as a companion, and the probability that the relationship will endure, are extremely difficult to measure. Ones more easily observed include the expected value of child support, the expected value of welfare benefits, the probability of being able to find a male companion in the future, the expected income of that future partner, and possibly local housing costs. Benefit levels and local housing costs can be measured directly, but a mother's net gain from working cannot be because of the endogeneity of her labor supply decision. Her potential net gain from working, however, is a function of her personal characteristics, conditions in the local labor and housing markets, and the level of welfare benefits. Similarly, the probability that she will find another male partner cannot be measured directly, but depends on her personal characteristics and on local demographics (e.g., incarceration rates, the sex ratio, and male unemployment rates).

Given the difficulty of observing determinants of family structure decisions, and given the many theoretically plausible interactions among observable factors, we estimate the following reduced-form model:

(1) $$FS_{ist} = \beta_0 + \beta_1 b_{st} + \beta_2 Z_i + \beta_3 MSA_{st} + \beta_4 S_{st} + u_{ist}$$

where the subscripts *i* and *s* denote woman *i* living in state *s* in year *t*, and FS_{ist} is our measure of family structure. FS_{ist} can take from two to five values, depending on the variant of the model being estimated. In the simplest case, we estimate a binary logit for whether or not the family is a multiple-father family. The parameter of particular interest is β_1, the coefficient on the state-specific AFDC benefit b_{st}. Variables $\boldsymbol{Z_i}$, $\boldsymbol{MSA_t}$, and $\boldsymbol{S_t}$ are vectors of maternal, MSA, and state characteristics.

Our measure of AFDC benefits, b_{st}, is the maximum state-specific value of the benefit for a four-person household (in 1990 dollars).[6]

Maternal characteristics include age, age at the time her oldest resident child was born, ethnicity, and education. The education variables indicate whether the parent dropped out of high school or has more than a high school education. It is important to control for both the mother's current age as well as her age at the birth of the oldest child in her household. The gap between those two ages tells us how long she has been exposed to the possibility of multiple-father fertility. Her current age captures cohort effects, country-wide trends in norms or expectations that could affect women's decisions. For instance, the stigma of welfare receipt or of multiple-partner fertility may have been different in 1972 than in 1996. Similarly, the increase between 1985 and 1996 in political hostility toward welfare spending may have altered expectations about the future value of welfare benefits.

MSA characteristics include a measure of housing costs, the sex ratio, the median wage for men and for women, the male unemployment rate, and an indicator for "not in an MSA."[7] Housing costs are proxied by the "Fair Market Rent" (40th percentile of local rents) determined annually for each MSA by the U.S. Department of Housing and Urban Development.[8] We assume a racially segmented partner market, and use 1990 Census data to compute the race-specific ratio of employed men per woman in each MSA. Median male and female wages and

[6]The AFDC benefit data are courtesy of Robert Moffitt.

[7]"Not in an MSA" is not equivalent to "rural." The Census Bureau randomly re-codes some SIPP respondents actually in MSAs as "not in an MSA."

[8]SIPP indicates residence in roughly 20 CMSAs (grouped MSAs) and 60 to 80 MSAs. Fair Market Rent (FMR) values for a CMSA are obtained by averaging the values for its constituent MSAs. Respondents not in a SIPP MSA are assigned the average FMR of all other MSAs in their state.

the male unemployment rate are based on the earnings and employment status of employed adults aged 22 to 50 in the SIPP sample. Following Moffitt (2000), wages enter the analysis as the sum of the male and female wages and also as the male-to-female wage ratio.

Because welfare benefits vary at the state level, it is particularly important to control for state characteristics to minimize omitted variable bias. ***S*** is a set of state-level controls for political or socioeconomic factors that might be determinants of both benefit levels and family structure. These include a 1998 measure of women's reproductive rights,[9] the state divorce rate, and an annual measure of the strictness of child support enforcement. Enforcement levels vary considerably by state and over time (see, for example, Nixon 1997, Bitler 2001, or Plotnick, Ku, Garfinkel, and McLanahan 2001). Our proxy for enforcement is the annual ratio of the number of paternities established by a state's child support enforcement agency to the number of non-marital births in that state.

IV.A The data: Survey of Income and Program Participation, 1985-1996

Our data are from the U.S. Census Bureau's Surveys of Income and Program Participation (SIPP). As mentioned above, a virtue of SIPP is that reports the relationship between every pair of individuals in a household.[10] Another virtue of SIPP is its size. Pooling nine cross-sections (1985-1988, 1990-1993, and 1996) yields observations on over 46,000 mothers. Designed to be nationally representative, SIPP includes respondents from every state, although state of residence is identified only for those in the 42 most populous states. Dropping

[9]The Institute for Women's Policy Research produced this composite index in 1998 by scoring each state on eight legislative or political indicators of women's reproductive autonomy.

[10]The observations are almost all second-wave observations. Using observations from initial interviews would prevent attrition bias, but the detailed household relationship questions were asked in participants' second interview (fourth interview in the 1985 panel). They were not asked at all in the 1989 panel.

respondents from unidentified states shrinks the sample by three percent.

To determine the number of fathers represented among a mother's children, we use a two-step procedure. Using the detailed relationship information from the household relationship matrix, which lists the precise relationship of each person in a household to every other person in the household, we first identify every household member who is listed as a woman's biological child. We then restrict our attention to the interrelationships among her children. By counting the number of occurrences of "Full sibling" and "Half-sibling" among her children, we can infer the number of fathers represented among those children.

This method for measuring multiple-partner fertility has some limitations, apart from any errors in the data. We face a "window problem" in two respects. First, at the time of the survey, some mothers are not yet finished having children at the time. Second, a mother may not have all of her children living with her. Some may be living elsewhere (with their fathers or other relatives, for example, and some may have grown up and moved out). We can gauge the severity of this second problem by comparing our count of children present to the mother's self-reported total fertility. [NOT IN THIS DRAFT.] Both of these data problems mean that we are understating the incidence of multiple-partner fertility.

Table 1 summarizes the incidence of multiple-father families in our SIPP data, as a function of the number of children living with a mother. Mothers with children by only one man outnumber those with children by two different men more than tenfold. Similarly, mothers with children by two men outnumber those with children by three men more than tenfold, and those with children by three men outnumber those with children by four or more men by the same order of magnitude. Altogether, 8.61 percent of SIPP mothers have children by more than one man.

Table 2 summarizes the incidence of multiple-father families among families reporting welfare receipt and among families reporting none. In keeping with the findings of Guzzo and Furstenberg (2006), the frequency of multiple-father families is markedly higher among mothers receiving welfare (18.4 percent) than among other mothers (7.4 percent).

Many analyses of welfare and family structure analyze blacks and whites (or non-blacks) separately. Table 3 therefore presents separate tabulations for white, black, Hispanic, and Asian mothers. The incidence of multiple-father fertility is highest among black mothers (14.4 percent) and lowest among Asian mothers (3.8 percent)

In Table 4, we report regression results from four different versions of a logit model. In each version, the dependent variable takes the value of 0 if there is one father, and 1 if there are two or more fathers. In the first model, the welfare benefit is the only explanatory variable. In the second, we add some of the mother's personal characteristics as well as a set of year dummies. The third model includes some state and MSA characteristics. The fourth model adds three interacted terms, to test whether responsiveness to the level of benefits is a function of race or ethnicity. Rather than reporting logit coefficients or odds ratios, Table 4 reports a variable's marginal effect on the probability that an observation is in the "Two or more fathers" category, computed at the mean of that variable.

In the first regression (Table 4, Model 1), the welfare benefit is negatively correlated with multiple-father fertility. The estimated marginal effect of –0.0028 means that a $100 increase in the benefit is associated with a 0.28 percentage point decrease in the probability that a mother has children by more than one man.

With the addition of some personal characteristics of mothers (Table 4, Model 2), multiple father-fertility is no longer correlated with benefits. The mother's education level is clearly important, as is her current age as well as the age at which she became a mother (as proxied for by her age at the birth of the oldest of her resident children). Those correlations have the expected signs: more education reduces the likelihood of multiple-father fertility, as does each year by which childbearing is delayed, while the likelihood rises slightly with age. Compared to non-Hispanic white mothers, multiple-father fertility remains much more likely among black mothers and much less likely among Asian mothers.

Because welfare benefits are set at the state level, it is vital to control for other potential factors that vary geographically. Upon adding state and MSA characteristics (Table 4, Model 3), we see that the correlation between welfare benefits and multiple-father fertility is again statistically significant. This time, however, the correlation is positive. The point estimate of 0.0028 implies that an increase of $100 in the welfare benefit is associated with a 0.28 percentage point increase in a mother's probability of multiple-partner fertility (compare to the baseline probability of 8.60 percent). Among the regional variables, only two factors are significantly correlated with multiple-father fertility: the state divorce rate (positively) and the MSA-level measure of combined male and female wages (negatively).

To test for the existence of a racial or ethnic differential in responsiveness to welfare benefits, the fourth model (Table 4, Model 4) includes three interaction terms, in which the welfare benefit is interacted with the indicators for black, Hispanic, and Asian. The point estimates for the interacted terms are suggestive of differences, with the coefficients for blacks and Hispanics suggesting positive correlations between welfare and multiple-father fertility, and the coefficient for Asians suggesting a negative correlation. The interacted terms are not statistically significant, however, either individually or jointly.

To explore further the question of differential responsiveness, we also stratify the sample by race and ethnicity. For both the Hispanic sub-sample and the Asian sub-sample, we find no correlation between benefits and multiple-father fertility (regression results not shown). In contrast, in both the black and white sub-samples, benefits were positively correlated with multiple-father fertility.

Table 5 reports the results of two regressions, one for blacks and the other for non-Hispanic whites. These regressions allow for three possible outcomes: one father, two fathers, or three or more fathers. For white mothers, the link between benefits and the probability of having children by two men is statistically insignificant, while for black mothers, a $100 rise in benefits is associated with an estimated 0.74 percentage point increase in that probability (given a baseline probability of 12.29 percent). The probability of having children by three men, however, is correlated with benefits for black and white mothers alike. In proportional terms, the effects are comparable: for black mothers, the estimated effect is a 0.22 percentage point change given a baseline of 2.34 percent, and for whites, a 0.04 percentage point change compared to a baseline of 0.56 percent).

Table 5 also points to several other potentially interesting differences between white and black mothers, and between mothers with children by two men and those with children by more than two men. The state divorce rate, for example, is positively correlated with the probability that a white mother has children by two men, but it uncorrelated with the probability that she has children by more than two men. And for black mothers, the divorce rate is uncorrelated with either outcome. This may partly reflect the fact that the fraction of mothers who were ever married in the first place is lower among blacks than whites.

The failure to finish high school is another factor with an inconsistent effect. Among black mothers, being a dropout is uncorrelated with having children by two men, but positively correlated with having children by more than two men. By contrast, among white mothers both outcomes are positively correlated with not having finished high school.

Two additional factors with inconsistent effects are the state-level male unemployment rate and the MSA-level ratio of male to female wages. Among white mothers, both factors are correlated with having children by more than two men, but uncorrelated with having children by two men. Among black mothers, both factors are uncorrelated with either outcome.

As a check on the plausibility of the effects in Table 5, we exclude mothers with more than a high-school education and repeat the analysis. Our rationale for excluding the most educated mothers is that they are the ones for whom the level of welfare benefits should be the least relevant to fertility decisions. Unless the correlations with welfare benefits are spurious, one would expect them to become more pronounced when the most educated mothers are excluded. This is precisely what we see in Table 6: when the most educated mothers are excluded, the correlation between benefits and having children by two fathers become larger for both white and black mothers, and is statistically significant for both groups. The correlation with having three or more fathers also becomes larger for each group (although for black mothers, it is no longer significant at the 5-percent level, probably reflecting the decreased sample size).

A final test of our results is to add state fixed effects, to control for omitted state characteristics that are correlated with benefits and with multiple-father fertility. The inclusion of state fixed effects robs the benefit variable of its effect. However, a look at the figure on the final page would lead one to expect this. Were it the case that benefits were unchanging over time, they would be collinear with state fixed effects. As the figure shows, real benefits change somewhat, falling over time (largely due to inflation) in almost every state, but there is fairly little variation, and in only a few cases is it enough to change the ranking of states' benefit levels. Because of this, one cannot tell whether the apparent effect of benefits on multiple-father fertility is a real one, made to disappear by the inclusion of collinear variables, or whether, instead, it is a spurious one, the result of a correlation, at the state level, between norms that tolerate multiple-father fertility and norms that favor higher benefits. In short, this test is inconclusive.

All in all, our SIPP data do not permit us to reject the hypothesis that the level of welfare benefits is linked to the prevalence of multiple-father families, at least among blacks and white. If the effects are real, however, they are small.

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Table 1
Number of fathers represented among a mother's children, by number of children

Number of children living with mother	**1 father**	**2 fathers**	**3 fathers**	**4+ fathers**	**Total**
1	15,776				*15,776*
2	17,654	1,786			*19,440*
3	7,524	1,300	206		*9,030*
4	2,264	476	103	24	*2,866*
5	635	107	37	16	*794*
Totals	*43,853*	*3,668*	*346*	*40*	*47,653*

Notes: Data are from the 1985-1988, 1990-1993, and 1996 SIPP, and are weighted. Women with 6 or more children present—1.06 percent of SIPP mothers—are excluded.

Table 2
Number of fathers represented among a mother's children, by welfare status

Number of fathers	**Family not receiving welfare**	**Family receiving welfare**	**Totals**
1	40,181	3,671	*43,853*
2	3,007	661	*3,668*
3	199	146	*346*
4+	18	22	*40*
Totals	*43,406*	*4,500*	*47,906*

Notes: Data are from the 1985-1988, 1990-1993, and 1996 SIPP, and are weighted. Women with 6 or more children present—1.06 percent of SIPP mothers—are excluded.

Table 3
Number of fathers represented among a mother's children, by race/ethnicity

Number of fathers	**White**	**Black**	**Hispanic**	**Asian**	**Totals**
1	32,761	6,117	3,952	1,408	*43,853*
2	2,429	867	388	51	*3,668*
3	181	130	35	5	*346*
4	6	25	4	0	*34*
5	0	5	0	0	*5*
Totals	*35,377*	*7,144*	*4,375*	*1,463*	*47,906*

Notes: Data are from the 1985-1988, 1990-1993, and 1996 SIPP, and are weighted. Women with 6 or more children present—1.06 percent of SIPP mothers—are excluded. Discrepancy between column totals and overall total reflects overlap between Black and Hispanic categories.

Table 4. Four binary logit models: "One father" versus "Two or more fathers"

	Model 1 No controls	***Model 2*** Personal characteristics	***Model 3*** Geographic and personal variables	***Model 4*** Race & AFDC interactions
AFDC benefit *(in $100s of 1990 $)*	**-.0028** *(.000)*	.0002 *(.717)*	**.0028** *(.003)*	**.0022** *(.042)*
AFDC benefit * Black				.0020 *(.198)*
AFDC benefit * Hispanic				.0016 *(.394)*
AFDC benefit * Asian				-.0030 *(.491)*
------- ***Personal characteristics*** -------				
Age *(years)*		**.0026** *(.000)*	**.0026** *(.000)*	**.0026** *(.000)*
Age at birth of oldest child present		**-.0071** *(.000)*	**-.0070** *(.000)*	**-.0070** *(.000)*
Less than high school education		**.0214** *(.000)*	**.0211** *(.000)*	**.0210** *(.000)*
More than high school education		**-.0336** *(.000)*	**-.0330** *(.000)*	**-.0330** *(.000)*
Black		**.0454** *(.000)*	**.0476** *(.000)*	**.0365** *(.000)*
Hispanic		-.0001 *(.979)*	.0003 *(.939)*	-.0072 *(.467)*
Asian		**-.0297** *(.000)*	**-.0286** *(.000)*	-.0154 *(.507)*
-------- ***MSA characteristics*** -----------				
Race-specific sex ratio *(employed men/woman)*			-.0026 *(.521)*	-.0028 *(.495)*
Sum of median male and median female wage			**-.0005** *(.010)*	**-.0005** *(.008)*
Ratio of median male to median female wage			.0019 *(.325)*	.0019 *(.311)*
Male unemployment rate			-.0002 *(.562)*	-.0002 *(.570)*
Rent *(40^{th} percentile, in $100s of 1990 $)*			-.0007 *(.589)*	-.0007 *(.599)*
-------- ***State characteristics*** ----------				
Intensity of child support enforcement			.0094 *(.143)*	.0092 *(.149)*
Divorce rate			**.0036** *(.002)*	**.0036** *(.002)*
Index of woman-friendly legislation *(0-6)*			-.0018 *(.160)*	-.0018 *(.154)*
Year dummies	No	Yes	Yes	Yes
Proportion of obs in the "2+ fathers" category	0.0861	0.0860	0.0860	0.0860
Sample size	46,148	45,436	45,436	45,436
Pseudo-R^2	0.001	0.050	0.054	0.054

Notes: Omitted outcome category is "One father." Table reports change in outcome's probability for 1-unit change in variable (p-value of underlying logit coefficient in parentheses). Bold font indicates significance at the 5-percent level or better. Omitted racial/ethnic group is "Non-Hispanic white." Omitted education category is "High school education." Family structure data from 1985-88, 1990-93, and 1996 SIPP surveys.

Table 5. Multinomial logit model, with sample stratified by race

	Blacks		*Non-Hispanic whites*	
	Two fathers	**Three or more fathers**	**Two fathers**	**Three or more fathers**
AFDC benefit *($100s, in 1990 $)*	**.0074** *(.027)*	**.0022** *(.052)*	.0019 *(.060)*	**.0004** *(.039)*
------- ***Personal characteristics*** -------				
Age *(years)*	**.0038** *(.000)*	**.0006** *(.009)*	**.0018** *(.000)*	**.0002** *(.000)*
Age at birth of oldest child present	**-.0089** *(.000)*	**-.0015** *(.000)*	**-.0058** *(.000)*	**-.0006** *(.000)*
Less than high school education	.0043 *(.540)*	**.0135** *(.000)*	**.0200** *(.000)*	**.0040** *(.000)*
More than high school education	**-.0275** *(.018)*	**-.0159** *(.004)*	**-.0297** *(.000)*	**-.0018** *(.017)*
-------- ***MSA characteristics*** -----------				
Race-specific sex ratio *(employed men/woman)*	-.0200 *(.285)*	-.0081 *(.223)*	.0019 *(.643)*	.0001 *(.860)*
Sum of median male and median female wage	-.0010 *(.106)*	-.0001 *(.811)*	**-.0007** *(.000)*	.0001 *(.092)*
Ratio of median male to median female wage	-.0034 *(.639)*	-.0006 *(.778)*	.0023 *(.229)*	**.0009** *(.011)*
Male unemployment rate	-.0012 *(.227)*	-.0001 *(.195)*	-.0001 *(.832)*	**-.0002** *(.009)*
Rent *(40^{th} percentile, in $100s)*	-.0003 *(.998)*	.0021 *(.197)*	-.0014 *(.345)*	-.0003 *(.312)*
Not in an MSA	**-.0269** *(.021)*	.0049 *(.165)*	.0041 *(.280)*	.0005 *(.456)*
-------- ***State characteristics*** ----------				
Intensity of child support enforcement	.0281 *(.210)*	-.0017 *(.875)*	.0009 *(.887)*	.0011 *(.385)*
Divorce rate	.0034 *(.403)*	-.0000 *(.980)*	**.0032** *(.006)*	.0003 *(.196)*
Index of woman-friendly legislation *(0-6)*	-.0058 *(.154)*	**.0044** *(.001)*	-.0011 *(.417)*	.0002 *(.458)*
Year dummies	Yes	Yes	Yes	Yes
Proportion of observations in category	0.1229	0.0234	0.0710	0.0056
Sample size	6,700		33,491	
Pseudo-R^2	0.040		0.048	

Notes: Omitted outcome category is "One father." Table reports change in outcome's probability for a 1-unit change in each variable (p-value of the underlying logit coefficient in parentheses). Bold font indicates significance at the 5-percent level or better. Omitted education category is "High school education." Family structure data are from the 1985-88, 1990-93, and 1996 SIPP surveys.

Table 6. Multinomial logit model, with sample stratified by race and college-educated mothers excluded

	Blacks		*Non-Hispanic whites*	
	Two fathers	**Three or more fathers**	**Two fathers**	**Three or more fathers**
AFDC benefit *($100s, in 1990 $)*	**.0079** *(.034)*	.0028 *(.069)*	**.0027** *(.046)*	**.0007** *(.021)*
------- ***Personal characteristics*** -------				
Age *(years)*	**.0038** *(.000)*	**.0008** *(.013)*	**.0019** *(.000)*	**.0003** *(.000)*
Age at birth of oldest child present	**-.0093** *(.000)*	**-.0019** *(.001)*	**-.0065** *(.000)*	**-.0007** *(.000)*
Less than high school education	.0040 *(.536)*	**.0178** *(.000)*	**.0255** *(.000)*	**.0051** *(.000)*
-------- ***MSA characteristics*** -----------				
Race-specific sex ratio *(employed men/woman)*	-.0159 *(.446)*	-.0099 *(.280)*	.0037 *(.501)*	.0000 *(.988)*
Sum of median male and median female wage	-.0010 *(.148)*	-.0001 *(.852)*	**-.0007** *(.003)*	.0001 *(.208)*
Ratio of median male to median female wage	-.0116 *(.170)*	-.0000 *(.928)*	.0028 *(.270)*	**.0014** *(.007)*
Male unemployment rate	-.0012 *(.227)*	-.0006 *(.172)*	-.0002 *(.591)*	**-.0003** *(.010)*
Rent *(40^{th} percentile, in $100s)*	.0012 *(.746)*	.0029 *(.197)*	-.0021 *(.320)*	-.0002 *(.658)*
Not in an MSA	-.0203 *(.116)*	.0064 *(.193)*	.0052 *(.304)*	.0014 *(.205)*
-------- ***State characteristics*** ----------				
Intensity of child support enforcement	.0329 *(.197)*	-.0007 *(.993)*	.0074 *(.404)*	.0020 *(.303)*
Divorce rate	.0024 *(.593)*	-.0004 *(.843)*	**.0050** *(.002)*	.0005 *(.171)*
Index of woman-friendly legislation *(0-6)*	-.0064 *(.151)*	**-.0056** *(.003)*	-.0017 *(.328)*	.0002 *(.605)*
Year dummies	Yes	Yes	Yes	Yes
Proportion of observations in category	0.1299	0.0269	0.0888	0.0103
Sample size	5,684		25,101	
Pseudo-R^2	0.032		0.032	

Notes: Omitted outcome category is "One father." Table reports change in outcome's probability for a 1-unit change in each variable (p-value of the underlying logit coefficient is in parentheses). Bold font indicates significance at the 5-percent level or better. Omitted education category is "High school education." Family structure data are from the 1985-88, 1990-93, and 1996 SIPP surveys.

Figure 1. Gain from father replacement
All couples

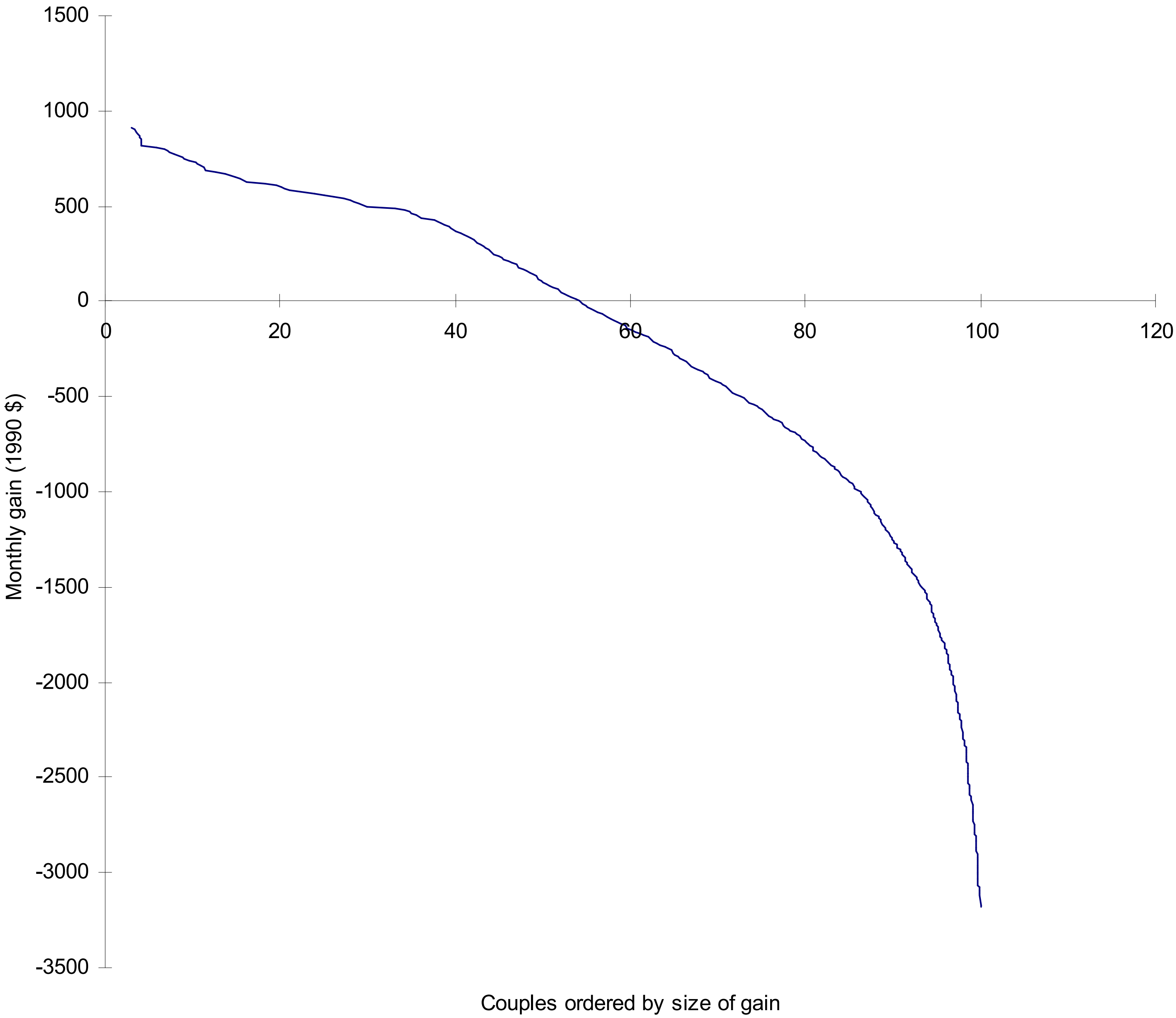
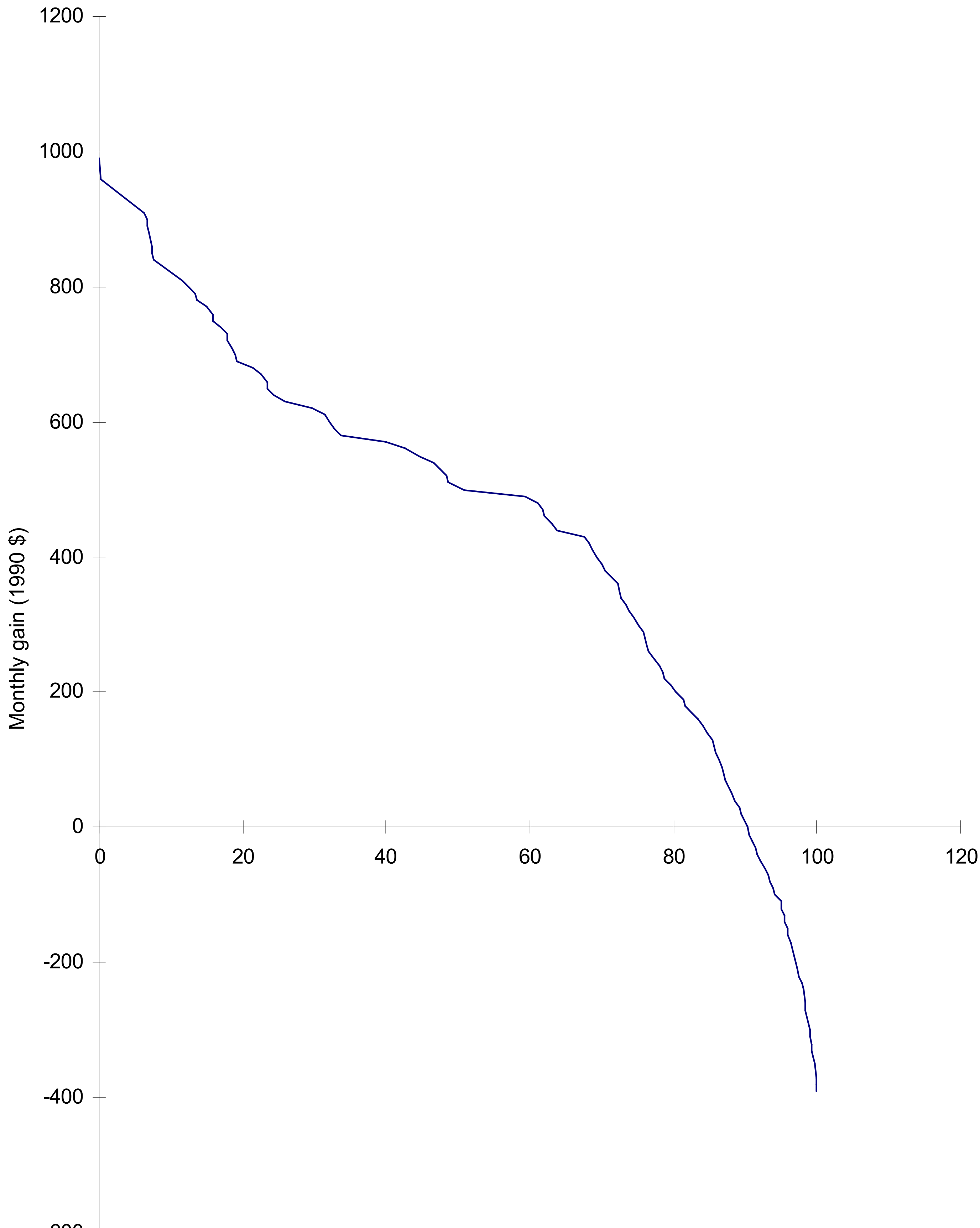


Figure 2. Gain from father replacement
Poorest quartile of couples



1985-1996 Trends in AFDC Benefits, Selected States