

Female Headship, Feminization of Poverty and Welfare*

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I. Introduction

It is now common knowledge that a strong relationship exists between family structure and the incidence of poverty. Specifically, female-headed households are at a much higher risk of slipping into poverty than male-headed households.¹ Today, sex and marital status of the head of household are the most important determinants of a family's poverty status in the United States. As a matter of fact, female-headed households have the highest poverty rates of all "high poverty" groups, including the aged and the disabled. Furthermore, the gap between the poverty rates of female-headed households and those of these other poverty groups has widened. Over the last three decades, poverty amongst female-headed households has been about three times that of all families. For example, in 1970 the poverty rate for female-headed households was 32.5 percent compared to 10.1 percent for all families. In 1991, female-headed households registered a poverty rate of 35.6 percent. The latter was significantly higher than the 11.5 percent for all families [18]. Of particular concern is the welfare of children in female-headed households. Although child poverty rates for both male- and female-headed households have declined considerably since the 1950s, child poverty rates in female-headed households have remained nearly five times as high as those in families with a male head. For example, in 1959 the child poverty rate in households of married couples was 22.4 percent, and by 1989, that rate had fallen to 10.4 percent. Although the poverty rate for children in female-headed households had fallen from 72.2 percent in 1959 to 51.1 percent in 1989, the latter rate was still significantly higher than the 1989 rate for children in the households of married couples [18]. It is the concentration of poverty amongst female-headed households that has led to the coining of the phrase *feminization of poverty*.²

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1. Family size also affects poverty. Households with more members have a higher probability of experiencing poverty than those with fewer members. It is also the case, however, that poverty can influence the household size. Specifically, poor households tend to have more children. See Cramer [6].

2. This term was first used by Diana Pearce [14] after observing that in 1976, almost two-thirds of poor persons over sixteen years of age were women and almost half of the poor families were headed by females.

The fight against poverty has become increasingly difficult because of the dramatic increase, within the last three decades, in the proportion of families headed by females. Critics of social welfare programs claim that the war on poverty has been lost because of the transformation of the American family into family types that are more susceptible to poverty.³ Liberal and conservative policy makers, and academics agree that one of the most important factors contributing to contemporary poverty has been the change in family structure from predominantly two-parent households to a large number of households headed by females. Because of the strong relationship between poverty and female headship, one aspect of the antipoverty debate focuses on the causes of female headship.

There are several routes to female headship. These include marital breakdown (divorce and separation), death of a spouse, and out-of-wedlock births.⁴ The most significant contributor to female headship, and one that is of serious concern to policy makers, is out-of-wedlock births. In 1950, there were only 17.5 out-of-wedlock births for every 1,000 births to white women. This number had increased by 1980 to 110.4 per 1,000 births and to 177 per 1,000 births in 1988. For nonwhites, the number of out-of-wedlock births was 179.6 per 1,000 live births in 1950, 485.5 in 1980, and 539 in 1988. In 1970, 6.5 percent of all female heads, 2.8 percent of all white female heads, and 15.1 percent of black female heads had never been married. In 1986, 14.8 percent of white and 49.2 percent of black female heads had never been married. By 1991, the percentage of white female heads that had never married had risen to 19.4 percent; the corresponding percentage for black female heads in 1991 was 54.2 percent [19].

Policies of the Great Society are cited as a primary cause of the transformation of the American family. Transfer payments, especially the Aid to Families with Dependent Children (AFDC) program, are blamed for contributing to increased marital instability and out-of-wedlock births. On purely theoretical grounds, there are various reasons why the availability of welfare benefits can be expected to lead to female headship. Transfer payments reduce the cost borne by a mother in rearing a child [15, 736; 22, 1590]. Thus, those who would otherwise have delayed having children because of their inability to take care of them are less financially constrained due to the availability of welfare benefits. Since some welfare programs require that a family unit be headed by a female (absent father or single parent), in addition to a dependent child, having a child out of wedlock satisfies the eligibility requirements to participate in those programs.

The fact that welfare benefits could lead to female headship is also consistent with the theory of marriage as formulated by Gary Becker [2; 3]. Becker suggests that traditional two-parent families were stable because both husband and wife benefitted from marital union. Males had a comparative advantage in earning market incomes while females had a comparative advantage in producing home services. As is the case with the theory of exchange, union between males and females with different comparative advantage is mutually beneficial and such a relationship is stable. The availability of welfare benefits to a female reduces the gains from being in a male-headed household. This is particularly the case if the male has low income. Thus, according to Becker's model of marriage, we expect the generosity of welfare benefits to be positively related to the number of households headed by females.

Economic theory therefore predicts that the availability of AFDC benefits provides incentives for marital dissolution and for single women to have children out-of-wedlock. From a theoretic-

3. For example, Murray [12] attributes increased poverty amongst blacks as primarily due to the increased number of households headed by women.

4. For a detailed discussion of the causes of female headship, see Becker, Landes and Michael [4]; Preston and Richards [16]; Ross and Sawhill [17]; and Ellwood [8].

cal perspective, the more attractive the welfare benefits, the higher the birth rate to unmarried women is expected to be, *ceteris paribus*. The wide variations in the generosity of benefits across the 50 states and the District of Columbia provide a natural experimental setting for testing the validity of the welfare-female headship relationship. However, previous studies have produced mixed results. In a 1977 study, Moore and Caldwell [11] used data from 1971 and produced results that failed to support the hypothesis that generous welfare policies promote the production of out-of-wedlock children. In 1985, Ellwood and Bane [9, 167–68], using data from 1976, found that the existence of high AFDC benefit levels contributed significantly to increased female headship. They determined that “AFDC has a relatively strong effect on the number of independent female heads” [9, 142]. It is important to note that although the 1985 study by Ellwood and Bane suggests that AFDC contributes significantly to increased female headship, this is only because of changes in living arrangements. That is, young mothers live independently because of benefit levels. However, according to the same study [9], AFDC does not influence out-of-wedlock births [9, 145]. They remark that “[s]omewhat to our surprise our models show absolutely no evidence that births to young unmarried women are influenced by welfare benefits” [9, 179]. Thus, Ellwood and Bane found that while AFDC benefit levels have a large effect on living arrangements, they did not appear to have any impact on childbearing among unmarried women. The conclusions in this 1985 study are consistent with Ellwood’s statement in 1988 [8, 61] that “when the dust settles and researchers do everything they can to adjust for all these differences, they still find little relation between the level of benefits and the number of families headed by women.”⁵

In 1989, Ozawa [13] used state-by-state data to study the relationship between welfare benefits and out-of-wedlock child bearing among adolescent girls. She found the illegitimacy rate to be positively related to both the AFDC payment level and the AFDC acceptance rate for all women. Winegarden [22] used time-series data for the post-World War II period and performed several regression and Granger causality tests in an attempt to examine the relationship between AFDC and illegitimacy ratios. He found that about half of the increase in non-white illegitimacy ratios over the last two decades can be explained by what he calls an “AFDC effect.” Using data from the National Longitudinal Survey of Youth, Plotnick [15] employed logit and discrete hazard methods to determine if indicators of state welfare policies had any effect on out-of-wedlock child bearing during the 1979–84 period. He found state welfare policy to have a positive and significant impact on out-of-wedlock child bearing by blacks and whites.

The present paper examines the relationship between generosity of welfare benefits and the rate of births to unmarried women focusing on a simple but crucial error that researchers have made in estimating the welfare-female headship relationship. We demonstrate that the lack of a significant relationship between the generosity of welfare benefits and female headship using aggregate data is due to the fact that researchers treat the population joining the pool of female heads at any given time as equivalent. Specifically, researchers have failed to take into account the fact that there are differences in the propensity to establish mother-only households that are not captured when using aggregate data. Women who have children out-of-wedlock when benefits are low have a higher propensity to establish mother-only households than those who become head of families when benefits are high. Adjusting for differences in the propensity to establish mother-only households, we find that welfare benefits significantly influence female headship. The new estimates also provide credible support to the proposition that transfer payments do in fact contribute, not just to female headship, but also to the feminization of poverty.

5. See also Ellwood and Summers [10]. The data used in this study are obtained from standard government sources.

II. Welfare Benefits and Female Headship: Weighted Estimation

The present study is designed to show that the conflicting results obtained by previous researchers may be due to the fact that these studies ignore a key issue about the formation of female-headed households. If welfare benefits were not available, some females would still have children out-of-wedlock because of various other factors. Assume that welfare benefits are a primary determinant of out-of-wedlock births. In the absence of benefits, then, births to unmarried women would be considerably low. If benefits are made available to female heads, then some women will have children out of marriage. Consider a situation where the government starts providing low welfare benefits to female heads of households. Such a policy can be expected to induce some females to establish their own households. Females who establish their own families when benefits are low have a high propensity to establish mother-only households. This is the group of females who are likely to have lower labor market potential, have poor work habits, low education, and so on. In other words, those who are induced to establish mother-only households by low benefits have the highest probability of being poor even if welfare benefits were not available. Note that low benefits cannot be blamed for feminization of poverty because they only induce women who would have been poor to establish mother-only households.

When the benefits are increased, another group of females joins the pool of female heads. But this new group of female heads has a lower propensity of establishing female-headed households; they require more generous benefits to establish mother-only households. Thus, more attractive benefits draw females who have a higher labor market potential and who have a more negative attitude about mother-only households into the pool of female heads. As welfare benefits become more and more attractive, females with increasingly lower propensities of establishing their own households join the pool of female heads. Note that, higher benefits induce people who are likely to be successful in the labor market into the pool of the poor. Thus, high benefits induce women who would not have been poor to establish mother-only households, and thus significantly increase their probability of being poor. In this case, welfare benefits contribute to feminization of poverty.

Assume that, in time t_0 , the birth rate to unmarried women in state A was 10 births for every 1,000 live births and that in state B the rate was 40 births for every 1,000 live births. Because of increases in the generosity of welfare benefits, the birth rate to unmarried women increases in both states, say, by 1% between time t_0 and time t_1 . The standard approach in the literature considers the increase in the two states as equivalent. Here lies the error. A 1% increase in births to unmarried women in state A is not comparable to a 1% percent increase in births to unmarried women in state B. The 1% increase in births to unmarried women in state B is comprised of a population that has lower propensities to establish mother-only households as compared to the population that enters the pool of female heads in state A.

A point of clarification is essential. We assume that if benefits do not change from one year to the next, then if all other things are held constant, the birth rate to unmarried women would also remain constant. In other words, women who are induced to have children out-of-wedlock in year 1 have the same characteristics as those induced to have children out-of-wedlock in year 2. If benefits increase from year 1 to year 2, more women are induced to have children out of wedlock. Some of these women have similar characteristics as those who had children out-of-wedlock in year 1. That is, they would have established mother-only households even if benefits had not increased. However, there is an additional group of female heads whose characteristics are different. These are the ones who joined the pool of female heads because benefits were marginally

higher in year 2 than in year 1. The new group of female heads has a lower propensity to establish mother-only households.

The argument presented above is particularly important when discussing feminization of poverty. Meaningful estimates of the impact of welfare benefits on the change in the rate of births to unmarried women require that a weighting scheme be used. If initially the birth rate of unmarried women was low in a particular state (e.g., state A), then a low weight should be given to the change in births to unmarried women as compared to a state with a high initial rate of births to unmarried women (state B). When the birth rates to unmarried women are low, then the women who enter this pool because of increases in benefits are those with a high propensity to be female heads and whose probability of being poor was high in the first place. Those who become female heads when the birth rate to unmarried women is already high are those with lower propensities of becoming female heads and who otherwise would not have been poor. This ability of welfare benefits to induce women who have low propensities to establish mother-only households to become female heads is the reason welfare benefits are said to contribute to the feminization of poverty.

To control for differences in the propensities to establish mother-only households, we classified the observations into three categories depending on the rate of birth to unmarried women in 1970 and assigned weights as follows: low (weight = 1), medium (weight = 2), and high (weight = 3). The cutoffs for the weights were set such that there were approximately an equal number of states in each category. This weighting scheme takes into account the fact that propensities to establish mother-only households are not constant. We estimated the regression model using weighted changes in birth rates to unmarried women. The weighted variable was obtained by multiplying the rate of change of births to unmarried women by the weight ($WDBUW = DBUW \cdot WEIGHT$).⁶

If welfare benefits influence the formation of mother-only households, then we expect states that provide more generous benefits to have higher birth rates to unmarried women than those states that have lower benefits, *ceteris paribus*. But, as mentioned above, this relationship lacks empirical support. The new model to be tested in the present paper is given as follows:

$$WDBUW = f(BENEFITS, BLACK, URBAN, INCOME, REGION, UNEMP);$$

where,

$WDBUW$ = weighted change in birth rate to unmarried women from 1970 to 1980;

$BENEFITS$

$AFDC80$ = average monthly AFDC benefits by state in 1980; and

$AFDC87$ = ratio of average monthly benefits in 1980 to average monthly benefits in 1970.

$BLACK$ = percentage of state population that is black, 1980;

$URBAN$ = percentage of state population that is urban, 1980;

$INCOME$

$MEDY80$ = median income of state, 1980; and

6. Regressions on the model with an unweighted dependent variable fail to show any significant relationship between AFDC and female headship. We caution that the weighting scheme used in this study is relevant when using aggregate data. When using data that contain information about individuals in a sample, personal characteristics such as age, education, labor market status, work experience, and so on, are sufficient indicators of differences in propensities to establish female headed households. When using aggregate data, however, such information is not available and standard estimation procedures fail to capture differences in propensities to establish female headed households. The weighting scheme used in this study serves as a proxy to the information concealed by aggregation.

$MEDY87$ = ratio of median income in 1980 to median income in 1970.

REGION

$SOUTH$ = 1 if southern state, and zero (0) otherwise; and

$UTAH$ = 1 if state is Utah, and zero (0) otherwise.

$UNEMP$ = male unemployment rate, 1980.

This study focuses on the weighted changes in birth rates to unmarried women (per 1,000 live births) from 1970–80. This period was marked by rapid growth in benefit levels and also in families headed by females. Nevertheless, there were wide variations across states in the increases in both the benefit levels and birth rates to unmarried women. We include two measures of benefits: the ratio of average monthly AFDC benefits per family in 1980 to the average of monthly AFDC benefits per family in 1970, and the average monthly AFDC benefits in 1980. It is important to note that the present study examines the relationship between *births to unmarried women* and AFDC benefit levels and not the effects of AFDC *on living arrangements*.

It is well established that demographics, especially the racial composition of the population do influence birth rates to unmarried women. The race dummy $BLACK$ is included to account for racial differences in birth rates to unmarried women. We expect the coefficient for this variable to be positive. Explanations for the racial difference key on the economic status of black males and the concentration of poverty amongst minorities. Specifically, because a large proportion of blacks live in areas of high concentration of poverty, it is possible that a culture of poverty has emerged amongst these groups. One outcome of a culture of poverty is early initiation to sex. Societies that exhibit a culture of poverty are more tolerant of teen pregnancies than the mainstream culture. Recently, the sex-ratio disequilibrium argument first discussed by Cox [5] as a probable cause for the prevalence of female-headed households amongst blacks has been supported empirically [7]. The idea is that the pool of marriageable black males has continued to shrink making it increasingly difficult for black females to get suitable spouses. Another factor that is associated with female headship is urbanization. The transition from rural to urban communities has been accompanied by changes in traditional living arrangements and attitudes about female headship. We expect states that are more urbanized to have higher out-of-wedlock birth rates than states that are less urbanized.

In addition to racial composition and urbanization, economic factors are important in influencing female headship. We have included measures of state income and unemployment. A growing economy raises the expectations of the residents and increases the opportunity cost of having children. On the other hand, high unemployment rates for males suggest that their comparative advantage is eroded and they have been rendered less attractive as marriage partners. This suggests that women are likely to have children out-of-wedlock in economies characterized by high unemployment rates.

As mentioned by Ellwood [8], differences in births to unmarried women across states can be explained by differences in attitudes. We have included regional dummies $SOUTH$ and $UTAH$ to capture possible differences in attitudes across states. Female headship is less acceptable in the southern states as compared to the rest of the country probably because of religion.⁷ We have also included a dummy for the state of Utah whose welfare institutions have been influenced by

7. The states classified as southern are: Alabama, Arkansas, Louisiana, North Carolina, South Carolina, Georgia, Mississippi, Florida, Tennessee, Oklahoma, and Texas. These states comprise the region commonly referred to as the Bible Belt.

Table I. Descriptive Statistics: Means and Standard Deviations

Variable	Mean	Standard Deviation
<i>WDBUW87</i>	68.51	30.71
<i>BLACK</i>	10.33	12.50
<i>URBAN</i>	67.58	14.98
<i>MEDY80</i>	22013.73	2484.43
<i>MEDY87</i>	2.14	0.12
<i>AFDC80</i>	249.72	84.32
<i>AFDC87</i>	1.54	0.26
<i>UNEMP</i>	6.50	1.85

Note: The variables are defined as follows: *WDBUW87* = weighted change in birth rate to unmarried women, from 1970 to 1980; *BLACK* = percentage of state population classified as black, 1980; *URBAN* = percentage of state population that is urban, 1980; *MEDY80* = median income of state, 1980; *MEDY87* = ratio of median income in 1980 to median income in 1970; *AFDC80* = average monthly AFDC benefits by state in 1980; *AFDC87* = ratio of average monthly benefits in 1980 to average monthly benefits in 1970; *UNEMP* = male unemployment rate, 1980.

Table II. Determinants of the Weighted Change in Birth Rate to Unmarried Women, 1970–1980
(Dependent variable: *WDBUW*)

Variable	1	2	3	4
Intercept	179.01 (3.48)	35.19 (0.266)	-122.12 (-1.084)	-100.96 (-0.848)
<i>AFDC87</i>	62.34** (2.203)	58.18** (2.106)	41.50* (1.76)	44.01* (1.820)
<i>BLACK</i>	6.910*** (12.50)	6.928*** (12.89)	8.088*** (15.20)	8.053*** (14.910)
<i>URBAN</i>	1.34** (2.58)	1.333** (2.650)	0.853* (1.951)	0.904** (2.012)
<i>MEDY87</i>		-95.988* (-1.749)	-8.04 (-0.159)	-0.752 (-0.14)
<i>SOUTH</i>			-74.73*** (-4.25)	-73.46*** (-4.110)
<i>UTAH</i>			-44.83 (-1.17)	-48.89 (-1.247)
<i>UNEMP</i>				1.889 (0.603)
<i>ADJ. R-SQUARED</i>	0.825	0.832	0.890	0.889
<i>F</i>	62.621***	50.414***	54.71***	46.049***

Note: *t*-statistics are given in parentheses below the coefficients. *F* is the *F*-ratio. Asterisks denote significance at the (*) 10%, (**) 5%, and (***) 1% levels. For a definition of the variables, see Table I.

the Mormon doctrine [1]. As with the case in the “Bible belt” of the southern states, the Mormon church which is quite dominant in the state of Utah, strongly objects to out-of-wedlock sex.

Table I provides the descriptive statistics of the variables. All variables are available for the 50 states and the District of Columbia. However, birth rates to unmarried women for 1970 were only available for 40 states and the District of Columbia. The data sources are given in the appendix. The regression results obtained using the weighted variable, *WDBUW*, as the dependent variable are reported in Tables II and III. Data for births to unmarried women are from *Cur-*

Table III. Determinants of the Weighted Change in Birth Rate to Unmarried Women, 1970-1980
(Dependent variable: *WDBUW*)

Variable	1	2	3	4
Intercept	-1.952 (-0.075)	67.82 (1.334)	58.65 (1.121)	45.15 (0.92)
<i>AFDC80</i>	0.121 (1.619)	0.201** (2.260)	0.246** (2.49)	0.218** (2.367)
<i>BLACK</i>	5.130*** (10.59)	5.183*** (10.89)	5.009*** (10.39)	4.950*** (11.073)
<i>URBAN</i>	0.289 (0.73)	0.268 (0.689)	0.418 (1.064)	0.338 (0.924)
<i>MEDY80</i>		-0.0040 (-1.584)	-0.0046* (-1.813)	-0.0053* (-2.22)
<i>SOUTH</i>			12.60 (0.83)	9.99 (0.714)
<i>UTAH</i>			-49.31 (-1.52)	-40.64 (-1.347)
<i>UNEMP</i>				6.215** (2.544)
<i>ADJ. R-SQUARED</i>	0.803	0.810	0.816	0.842
<i>F</i>	54.123***	42.919***	29.90***	30.811***

Note: *t*-statistics are given in parentheses below the coefficients. *F* is the *F*-ratio. Asterisks denote significance at the (*) 10%, (**) 5%, and (***) 1% levels. For a definition of the variables, see Table I.

rent Population Reports and County and City Data Book [18; 20]. Data for AFDC benefit levels are from the *Social Security Bulletin* (various issues) [21]. For all other variables, the data were obtained from the *Statistical Abstract of the United States* (various issues) [19].

The various specifications explain over 80 percent of the variation in birth rates to unmarried women. The coefficient on the benefit variable is positive and statistically significant to at least 10 percent in seven specifications, and almost significant in the eighth specification. Thus, contrary to the claim by Ellwood [8] that there is little relationship between welfare benefits and female headship, the results demonstrate that generosity of benefits affect births to unmarried women.

III. Concluding Comments

The purpose of this paper was to re-examine the role of welfare benefits in influencing female headship. Preliminary results using standard estimation procedures confirm the claim that transfers do not influence female headship (as measured by birth rates to unmarried women) significantly. The discussion in this paper has shown that standard estimation procedures are erroneous because they ignore differences in propensities to establish mother-only households. Adjusting for differences in the propensities to establish female-headed households, we find that the generosity of welfare benefits is an important factor in explaining the variation in the changes in the birth rates to unmarried women. The use of a weighted measure suggests that welfare benefits, by increasing female headship of women who otherwise have low propensities to be female heads, has played a significant role in the feminization of poverty.

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