

Mothers' Pensions and Female Headship

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Abstract

Longitudinal studies of white female headship over the past few decades do not find significant welfare effects but do find a positive relationship between state fixed effects and welfare benefit levels. In other words, although white female headship does not respond to the year-to-year changes in welfare benefit levels, states with the most generous welfare benefits tend to be the states with the highest rates of white female headship. This positive relationship does not exist, however, for blacks. The questions are: Why does a positive relationship exist for whites and when did it originate? and Why does this relationship not exist for blacks? This paper examines these questions by considering the relationship between female headship for blacks and whites and state mothers' pensions legislation enacted between 1910 and 1920. Mothers' pensions programs were the first public cash assistance programs targeted to single mothers and, like their successors, varied greatly across the states. The results indicate that welfare generosity preceded relatively high rates of white female headship. The positive relationship between welfare generosity and white female headship observed today was not embodied in the mothers' pensions legislation enacted in the 1910s. But these early welfare programs, like more recent programs, were not responsive to, and may in fact have been reactionary to, the experiences of black women.

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In 1970, 12 percent of families with children under the age of 18 were headed by single mothers. By 2000, that fraction had increased to 26 percent (U.S. Census Bureau, 2001). This dramatic change in American family structure has been cause for some concern. Families headed by single mothers have high rates of poverty, and children raised in such families are more likely to drop out of school, have children out-of-wedlock, and have difficulties in the labor market in their young-adult years (see McLanahan and Sandefur 1994). In the search to explain the increase in single-mother families in the past few decades, much of the attention has been focused on the relationship between female headship and the American welfare system. In most states, only families headed by single parents are eligible for cash assistance programs. Accordingly, some have argued that the welfare system encourages divorce and separation and discourages marriage.

Economists have attempted to examine this issue by estimating the relationship between female headship and the level of welfare benefits. Early analysis used cross-sectional data and relied on the variation in benefit levels across the states to identify the “welfare effects.”¹ These studies tended to find statistically significant welfare effects: as benefits increased, women were less likely to marry and more likely to head households. This evidence would seem to support the view that the welfare system discourages the formation of two-parent families. When the analysis was extended to repeated-cross-section and longitudinal data, however, a slightly different and more complicated story emerged. Moffitt (1994) and Hoynes (1997) found that controlling for state fixed effects causes the relationship between benefit levels and female headship for whites to disappear. As both authors document, this change occurs because state fixed effects are positively correlated with state benefit levels. In other words, states that offer high levels of benefits are those with high rates of female headship, and states that offer low levels of benefits are those with low rates of female headship. The disappearance of the benefit level effect when state fixed effects are included in the model indicates that white female headship does not respond to the year-to-year changes in the level of benefits. But the basic conclusion of these models is still that

¹ See Moffitt (1992) for a review of this literature. See also Schultz (1994).

states that offer the most generous welfare benefits have the highest rates of female headship among whites.

This correlation does not exist, however, for blacks. Both Hoynes and Moffitt found no correlation between benefit levels and state fixed effects for black female headship. Moreover, adding state fixed effects has no effect on the estimated relationship between welfare benefit levels and black female headship.

As Moffitt points out, this analysis “raises as many questions as it answers” (p. 634). To understand the relationship between the American welfare system and family structure, we must understand the origin of the state fixed effects and their relationship to state welfare benefits. One explanation focuses on the role of welfare migration. If single mothers migrate to the states with the highest benefit levels, this would explain the patterns observed. But Hoynes casts doubt on this explanation by simply pointing out that the net migration of white single mothers in the period of study was out of the high-benefit states of the Northeast and Midwest and to the low-benefit states of the South and West (p. 110). Hoynes’ preferred explanation is that the fixed effects capture differences across states in population composition and attitudes towards single motherhood. Such factors would influence both the rate of female headship and the relative support for the welfare system. The example that Hoynes uses is that a strong two-parent family tradition in a state will lead to fewer female heads and less support for welfare programs. But such explanations present other questions. How did the “strong two-parent family tradition” develop? Did this tradition precede and determine the limited support for welfare programs in the state? Or, did the limited support for welfare contribute to the development of this tradition?

Furthermore, any explanation must confront the issue of the lack of correlation between the state fixed effects for black female headship and welfare benefit levels. One explanation – that put forth by both Moffitt (p. 631) and Hoynes (p. 110) – is that regional patterns in social norms differ between blacks and whites and those of blacks do not influence policy. Moffitt also proposes another explanation:

discrimination. States may offer low levels of welfare benefits *in response to* high rates of black female headship.

This paper attempts to provide some insights into these issues by examining the relationship between mothers' pension programs and female headship in the early twentieth century. Mothers' pension programs were the first public cash assistance programs explicitly targeted to single mothers. Thirty-nine states enacted mothers' pensions laws between 1910 and 1920, and five more followed in the 1920s. These were the first programs to create disincentives for maintaining and forming two-parent families. They also laid the foundation for the spatial variation in welfare generosity. Eligibility requirements, maximum benefit levels, and funding provisions varied across the states. This variation is strikingly similar to that observed in AFDC benefits. States that enacted the most generous mothers' pension laws tended to go on to offer the most generous AFDC benefits. Hence, the origins of the relationship between female headship rates and welfare generosity may well lie in the history of mothers' pensions programs.

I seek to address two questions: (1) Did the rate of female headship in a state influence the timing and relative generosity of the state's mothers' pension legislation? (2) Did the relative generosity of the early mothers' pensions laws affect the rate of female headship? I address the first question by estimating state fixed effects for white and black female headship in 1910, before any state had enacted mothers' pension legislation, and examining how these state fixed effects were related to the timing and provisions of the state laws. Then, I estimate "difference-in-difference" models using data from 1910 and 1920. These models address both questions, revealing differences across states that existed before the laws were enacted as well as any "treatment effects" of these laws.

Mothers' Pensions

Public aid to single mothers had been discussed as early as 1898 when the New York state legislature passed a bill to provide grants to widows with dependent children in New York City. The governor refused to sign the bill, presumably on the advice of the mayor of New York (Leff 1973, 399).

The take-off point for the mothers' pensions movement, though, was the 1909 White House Conference on the Care of Dependent Children. Much of the discussion at the conference centered on the plight of single mothers who were separated from their children by poverty alone. In fact, many charitable organizations in the early twentieth century encouraged impoverished mothers to place their children in orphanages or foster care (Leff 1973, 399). The irony, noted by many conference participants, was that the cost for caring for children in institutions or foster families was frequently much greater than what it would have cost to care for these children in their own homes. At the end of the conference, the participants issued the following resolution:

Home life is the highest and finest product of civilization. It is the great molding force of mind and of character. Children should not be deprived of it except for compelling and urgent reasons. Children of parents of worthy character, suffering from temporary misfortune and children of reasonably efficient and deserving mothers who are without the support of the normal breadwinner, should as a rule, be kept with their parents, such aid being given as may be necessary to maintain suitable homes for the rearing of children (as quoted in Leff 1973, 400).

The resolution continued, however, by stating that such aid be given "preferably in the form of private charity rather than public relief." Nonetheless, this resolution served as the launching point for the drive for the public provision of aid to mothers with dependent children.

In 1911, Illinois passed the first statewide mothers' pension law authorizing county governments to provide grants to mothers with dependent children. Other states quickly followed. In 1913, mothers' pension legislation was discussed in 27 state legislatures and enacted by 17 (Leff 1973, 400). By the end of 1919, 39 states had enacted mothers' pension laws. The diffusion of these laws was not only rapid; it also proceeded in an unusual pattern. Table 1 lists the states by year of enactment of mothers' pension legislation. Some of the states which enacted legislation in the 1913 wave were small and predominantly rural and nonindustrial states such as Colorado, Nebraska, New Hampshire, Nevada, and South Dakota. Walker (1969), based on an examination of the diffusion of 88 different programs between the 1800s and 1965, argued that early innovators were typically wealthier, more industrial and more urban states.

According to Walker's "innovation scores," fourteen states enacted mothers' pensions legislation "too early." The names of these fourteen states are italicized in Table 1 (Skocpol et al. 1993).²

State legislation did not establish state programs. Instead, the legislation authorized local governments – usually county governments – to provide mothers' pensions. State legislation provided the general parameters under which these programs had to operate. These provisions varied to a fair extent across the states. Table 2 presents some of the provisions of mothers' pensions laws in effect in 1919. One of the areas of greatest variation was in the eligibility requirements. Some states such as New York and New Jersey only permitted grants to widows. Other states extended coverage to deserted or divorced mothers and to mothers with institutionalized and incapacitated husbands. Only Michigan and Nebraska explicitly allowed payments to unmarried mothers. But a number of states – Massachusetts, New Hampshire, Washington, Colorado, Pennsylvania, Maine, and Indiana – had legislation that covered "mothers of dependent children" without reference to marital status. Over time, states amended their laws to extend coverage. But even by 1931, only 20 states permitted aid to any needy mother, and two states – Connecticut and Utah – still only permitted aid to widows (U.S. Children's Bureau 1933, 3).

State legislation also typically specified the maximum monthly grant that could be provided to families of various compositions. These maximums too varied across the states. In 1919, the maximum grant specified for a family consisting of a mother and two children was \$14 (\$127 in 1996 dollars) in New Jersey and \$40 (\$363 in 1996 dollars) in Utah and Nevada (U.S. Women's Bureau 1919). The sources of funding also differed across states. In the majority of states, funding was entirely local. Some state laws allowed counties to levy special taxes while others just stated that the funds should come out of general revenue funds. However, some states, including Massachusetts, California, and Wisconsin, provided state funds for mothers' pension programs.

Mothers' pensions programs as implemented never lived up to their legislative success. Emma O. Lundberg in a report on mothers' pensions written for the Children's Bureau in 1926 commented that

² The movement for mothers' pension legislation is also notable for the prominent role played by women. For a thorough discussion this issue, see Skocpol (1992) and Gordon (1994). Both Skocpol and Gordon describe the role of women in shaping welfare policy more generally in the early twentieth century.

“Mothers’ aid administration offers the most obvious evidence of the seriousness of placing laws on the statute books, but failing to make them practically effective through adequate appropriations and proper administration” (U.S. Children’s Bureau 1926, 16). Many counties, most of them rural, refused to establish programs claiming that no eligible families lived within their boundaries (Leff 1973, 413). Table 3 reports for each state the number of counties authorized to provide mothers’ pensions and the number of counties actually providing mothers’ pensions in 1931. In some states, such as Washington, Wisconsin, and New Jersey, all authorized counties were paying mothers’ pensions in 1931. In other states, only small fractions of the authorized counties provided mothers’ pensions. Coverage was most limited in the Southern states. Only 3 of the 82 authorized counties in Mississippi and 23 of the 254 authorized counties in Texas paid out mothers’ pensions in 1931.

Mothers’ pensions programs, where they did exist, were generally under funded. The grants provided were generally very low and typically did not even cover the basic expenditure requirements of families. The Children’s Bureau did a survey of the standards of aid in eight jurisdictions in the early 1920s. Of the surveyed jurisdictions, Boston was the most generous, providing grants averaging \$17.49 per month per child (U.S. Children’s Bureau 1923, 141). But even this was inadequate to provide for a family’s basic needs. The administrators of the Boston program estimated that the food budget alone for a mother and one child, age 6 to 13, in Boston during this period was \$24.27 (U.S. Children’s Bureau 1923, 15). Mothers’ pension programs also served a very select population. Even as state laws were amended to extend eligibility to deserted and unmarried mothers, the pension rolls consisted primarily of widows. A survey of mothers’ pension programs in 1931 by the Children’s Bureau found that 82 percent of pension recipients were widows. More disturbing though was the racial composition of pension recipients: 96 percent were white, 3 percent were black, and 1 percent belonged to “other races.” Most of the black recipients, furthermore, were in two states – Ohio and Pennsylvania (U.S. Children’s Bureau 1933, 11-13).

Mothers’ pension programs fell far short of their proponents’ expectations. The problems inherent in the reliance on local funding and administration were aggravated by the Great Depression and

led eventually to the drive for a federal grants-in-aid program.³ Despite their limitations, however, these programs represented a dramatic change in the provision of relief to single mothers. Before mothers' pensions, single mothers could obtain aid from private charities or general poor relief. In general, though, the aid from these sources was even more meager than the aid available under mothers' pensions. A 1913 study conducted by the Massachusetts Commission on the Support of Dependent Minor Children of Widowed Mothers found that private charities typically provided grants of \$2 to \$3 per week (approximately \$4 to \$6 in 1920 dollars) regardless of the size of the family (Massachusetts 1913, 20). The New York Commission on Relief for Widowed Mothers found that in New York City in the same period the average *monthly* grant from charitable organizations was only \$2.49 (New York 1914, 566). Moreover, as discussed above, many charitable organizations encouraged women to place children in institutions or in foster care. Some even made such placements the prerequisite for aid.

Public poor relief was even less generous and less desirable. Many cities had abandoned outdoor relief by 1910. To receive aid, women, therefore, had to enter the almshouse or, again, place their children in institutions. In cities such as Chicago which had not abandoned outdoor relief, single mothers were disproportionately represented on the relief rolls (Goodwin 1997, 76).

Mothers' pension legislation did lead to a large transfer of funds to single mother families. This transfer was not as large as many would have hoped, but it still resulted in a dramatic change in the distribution of public relief expenditures. As early as 1919, mothers' pensions accounted for over half of the relief expenditures of the largest cities. In 1920, total expenditures on mothers' pensions in New York State were \$2.8 million; total expenditures on all public relief programs in the state were \$4.3 million (Works Progress Administration 1937, 10 and 23).

Moreover, mothers' pensions programs provided an important legacy for subsequent welfare programs. Gordon (1994) has discussed how state mothers' pension programs and their failings shaped the development of Aid to Dependent Children (which later became Aid to Families with Dependent Children). Although the federally-mandated program in many ways represented a sharp break with the

³ See Abbott (1934) for an example of how the case for a federal program was presented.

earlier state programs, some of the characteristics of mothers' pensions programs were replicated in AFDC. Most important among these is the substantial variation in welfare generosity across the states. The variation across states under AFDC, to a large extent, mirrored the variation experienced under mothers' pensions.

Table 2 presents the provisions of mothers' pensions laws in 1919 and AFDC maximum benefit guarantees in 1996. The states are ordered by the level of maximum AFDC benefits. The states with the most generous AFDC benefits in 1996 tended to have the most generous mothers' pension laws in 1919. Of the ten states with the highest AFDC benefit levels, seven provided state funds for mothers' pensions and four extended coverage to mothers of dependent children without reference to marital status. Likewise, the states with the least generous benefits in 1996 had the least generous mothers' pensions programs in 1919. Six of the ten states with the lowest AFDC benefits in 1996 had enacted no mothers' pension legislation by 1919.

Table 3 presents data on average monthly benefits per family under mothers' pensions in 1931 and AFDC in 1996. Again states are placed in descending order by AFDC benefit levels. For the most part, states that paid the highest benefits in 1996 were also those that paid the highest benefits in 1931. Massachusetts paid the highest average benefits under mothers' pensions in 1931 and the second highest average benefits under AFDC in 1996. New York was third in 1931 and first in 1996. The correlation between average benefits in 1931 and 1996 is 0.58. The data on the number of counties paying mothers' pensions in 1931 further confirms the continuity of relative welfare generosity across the states. States with the greatest geographic coverage in 1931 were among the most generous in 1996, and those with the most limited geographic coverage in 1931 were among the least generous in 1996.

State Fixed Effects in 1910

Tables 2 and 3 show that state variation in welfare generosity is a legacy of the mothers' pensions programs. This suggests that the origins of the relationship between welfare generosity and female headship may be found in the history of mothers' pensions programs. The first method I use to explore

this is to estimate state fixed effects for white and black headship in 1910 and consider how these fixed effects vary with the timing and provisions of state mothers' pension legislation.

I use household level data from the 1910 federal census available as part of the Integrated Public Use Microdata Series (IPUMS).⁴ The IPUMS contain a 1-in-250 national random sample of households drawn from the census schedules as well as an oversample of blacks in the South. I define a female head as a woman living with an own child under the age of 16 and with no spouse present. This definition corresponds to that used in studies of female headship in the current period. Following Moffitt (1994), I limit the sample to women ages 20 to 44.

The basic methodology is quite straightforward. I consider how the probability a woman was a female head was related to her characteristics, including her state of residence. Due to the large number of variables necessitated by including state fixed effects, I use a linear probability model and an otherwise very parsimonious specification, controlling only for age, age-squared, nativity, illiteracy, and urban residence.⁵

Table 4 presents the means of the variables used in the analysis and the results of the linear probability models. Female headship was much less common in the early twentieth century than it is today. In 1910, only 3.5 percent of white women and 11 percent of black women were family heads. In contrast, in 1988, the corresponding percentages were 8.5 and 29.1. Nonetheless, for both blacks and whites, the probability of being a family head varied with a woman's characteristics and place of residence. The strongest effects were those of illiteracy. Illiterate women were much more likely than literate women to be family heads. Family headship was also more common among the native- than the foreign-born and more prevalent in urban than rural areas.

Most importantly for the analysis here, family headship varied substantially across the states. To provide a more useful representation of the state fixed effects, I converted the state fixed effects to

⁴ Information on the IPUMS data is available online at: <http://www.ipums.umn.edu>.

⁵ Although parsimonious, this model is similar to those used by Hoynes (1997) and Moffitt (1994). Hoynes and Moffitt also include state-level variables on unemployment and occupational distribution. Since I am estimating state fixed effects using a single cross-section, I cannot include such state-level variables in the estimated models.

predicted probabilities of family headship for a literate woman age 30 living in a rural area. For whites, these probabilities ranged from 0.4 to 10.9 percent. For blacks in Southern states, the range was 6.9 to 13.5 percent. The question is: how does this variation correspond to the variation in the timing and provisions of state mothers' pension legislation?

First, let's consider the relationship between state fixed effects and the timing of mothers' pensions legislation. Figure 1 shows the scatter plot of the predicted level of white female family headship and the year of enactment of mothers' pension legislation. This figure provides some insight into the "atypical" diffusion of these laws across the states. Some of the states that enacted mothers' pensions laws "too early" according to Walker (1969) were states that had fairly high rates of white female headship. The two states with the highest white female headship rates in 1910 were Nevada and Arizona, both sparsely populated, non-industrial states that enacted laws in the first few years of the movement. Tennessee and Utah, also early enactors, were ranked fifth and sixth, respectively. But Figure 1 also shows that many of the early enactors had relatively low rates of white female headship in 1910. The mean probability of female headship across the states was 3.4 percent. Many of the states that enacted mothers' pension legislation before 1915, including Illinois which was the first state to enact such legislation, had predicted levels of family headship below the mean. Moreover, a number of states with predicted probabilities above the mean did not enact mothers' pension legislation until after 1920. Georgia and South Carolina had predicted probabilities of 5.4 and 4.8 percent, respectively, and did not establish any program for cash assistance to single mothers until the advent of the federally-mandated ADC.

It is notable that most of the states with high levels of white family headship and late enactment dates were in the South. In these states, the enactment of mothers' pension legislation may have been influenced by the rate of family headship among black women. Figure 2 presents the scatter plot of the predicted level of black female family headship and the year of enactment for Southern states with a black population share of at least 20 percent. Here, a fairly straightforward story emerges. The date of enactment of mothers' pension legislation was negatively related to the rate of black female headship in

1910. This supports the voter discrimination theory put forward by Moffitt. States where black female headship was the highest were the slowest to enact mothers' pensions. Looking back at Table 3, we also see that the mothers' pensions programs that were eventually enacted in those states were also the least generous.

Were the most generous mothers' pensions programs in the states with the highest rates of white female headship? The answer seems to be "no." Figure 3 plots the white state fixed effects and the maximum benefit levels specified by state legislation. The states with the highest rates of female headship – Nevada, Arizona, Florida, and Utah – did have fairly high maximum benefits. But otherwise, the plot shows no clear pattern. Of the five states with no legislated maximum benefit level, only Maine had a higher than average predicted rate of female headship (3.6 versus 3.4). The correlation coefficient for the state fixed effects and the maximum benefit levels is only 0.02.

Another way to classify the relative generosity of state mothers' pensions is by the eligibility requirements and funding. I define the "most generous" states as those states that in 1919 (1) covered unmarried mothers, (2) covered 'mothers of dependent children' without reference to marital status, or (3) provided state funds for mothers' pensions. Table 5 presents the state fixed effects for these states. Only three of these states – California, Indiana, and Maine – had higher than average state fixed effects. Many of the other "most generous" states had rather low rates of white female headship in 1910. The predicted rate was only 2.2 percent for Wisconsin and 2.5 percent for Massachusetts.

Mothers' pension programs as implemented were also not strongly related to white female headship in 1910. Figure 4 plots the state fixed effects and the average benefits per family paid in 1931. The scatter plot reveals no obvious pattern and the correlation is only 0.04.

Difference-in-Differences

I use difference-in-differences to probe deeper into the relationship between female headship and the mothers' pensions programs enacted in the 1910s. Difference-in-differences is a methodology

designed to reveal the “treatment effects” of a given policy. But it also can reveal differences that existed before that policy was enacted.

Most commonly, difference-in-differences takes the form of examining the differences in an outcome variable in states that enacted a particular policy and in states that did not. But here, the more interesting issue is how female headship varied with the provisions of state legislation. Mothers’ pension legislation had many different types of provisions. I focus on the four that I believe best capture the relative generosity of the state legislation: the eligibility of deserted and/or divorced mothers (DESDIV), the eligibility of unmarried mothers (UNMARR), general legislative language covering mothers with dependent children without reference to marital status (MOMS), the provision of state funds (STFUNDS), and the maximum grant for a family with two children (MAXBEN). Five states did not have a legislated maximum benefit level in 1919: Colorado, Connecticut, Maine, Massachusetts, and New York. To account for this, two variables are used to capture the effects of the maximum benefit provisions. The first is an indicator variable equal to one if a state had a maximum benefit level (LIMIT). The second is an interaction between that indicator variable and the level of the maximum benefit (LIMIT*MAXBEN).

The probability that a woman, i , living in state s is a female head (FHEAD = 1) is estimated using a probit model. The basic empirical specification is as follows:

$$\begin{aligned}
 (1) \text{ Probability (FHEAD}_{is} = 1) = & \Phi[\alpha + \beta_1 * \text{DESDIV}_s + \beta_2 * \text{UNMARR}_s + \beta_3 * \text{MOMS}_s + \beta_4 * \text{STFUNDS}_s \\
 & + \beta_5 * \text{LIMIT}_s + \beta_6 * \text{LIMIT}_s * \text{MAXBEN}_s \\
 & + \gamma_1 * \text{YR1920}_{is} * \text{DESDIV}_s + \gamma_2 * \text{YR1920}_{is} * \text{UNMARR}_s \\
 & + \gamma_3 * \text{YR1920}_{is} * \text{MOMS}_s \\
 & + \gamma_4 * \text{YR1920}_{is} * \text{STFUNDS}_s + \gamma_5 * \text{YR1920}_{is} * \text{LIMIT}_s \\
 & + \gamma_6 * \text{YR1920}_{is} * \text{LIMIT}_s * \text{MAXBEN}_s + \delta * \text{YR1920}_{is} + x_{is}' \eta]
 \end{aligned}$$

where $\Phi(\cdot)$ represents the normal cumulative distribution function.

The coefficients on the un-interacted legislative provisions, the β 's, capture the variation in the probability of female headship that was related to the provisions of state laws both before and after the

laws were enacted. These coefficients will indicate if there was any correlation between the female headship in a state in 1910 and the provisions of the mothers' pension legislation that state enacted between 1910 and 1920. If states with higher rates of female headship in 1910 enacted more generous mothers' pension legislation, then β_1 , β_2 , β_3 , β_4 , and β_6 would be positive. The presence of a legislated maximum benefit most likely indicated less generosity than the absence of such a limit. Accordingly, we would expect β_6 would be negative. Of course, as the previous section suggests, states with higher rates of female headship could have enacted *less* generous laws, implying the opposite signs for the coefficients.

The coefficients on the interactions between the legislative provisions and the variable indicating the year 1920 (YR1920), the γ 's, represent the treatment effects. These coefficients capture the variation in the probability of female headship that was related to the provisions of state laws only *after* the laws were enacted. The hypothesis that more generous welfare provisions encouraged female headship implies that the probability of female headship should have been higher in states with more inclusive eligibility rules and states that provided state funding for mothers' pensions, and should have been positively related to the maximum benefit level. In other words, we would expect γ_1 , γ_2 , γ_3 , γ_4 , and γ_6 to be positive and γ_5 to be negative.

The model described in equation (1) is not, however, complete. The discussion so far has ignored another dramatic legislative movement of the 1910s that may have also been related to female headship rates. Over the same period that states were enacting mothers' pension legislation, they were also enacting workers' compensation legislation. This legislation established guaranteed payments of benefits to workers injured on the job and the families of workers killed in job-related accidents. Like mothers' pension laws, workers' compensation laws diffused rapidly across the states. Between 1910 and 1920, 40 states enacted workers' compensation legislation. Since workers' compensation guaranteed widows of men killed in industrial accidents a set level of benefits, these laws too could have been related to female headship rates. So also included among the law variables is a measure of the level of fatal benefits

available under a state's workers' compensation program and its interaction with the year 1920 indicator variable. The measure used is the ratio of the present value of fatal benefits to annual earnings as found in Fishback and Kantor (2000, 209-210).

I use data from the 1910 and 1920 IPUMS datasets. Again, I limit the sample to women ages 20 to 44, but for this analysis, I consider two definitions of female headship. The first is that used in the analysis above: a woman is defined as being a female family head if she was living with an own child under the age of 16 and had no spouse present. I refer to this definition as *family headship* because it includes women who headed sub-families in larger households. For instance, a woman who lived with her children in the household of her brother or father would be designated as a female head by this definition. I also examine what I refer to as *household headship*: a woman is defined as a household head if she is living with an own child under the age of 16, had no spouse present, and was not living in a household with a male adult relative.⁶ This allows me to consider how the living arrangements of single mother families were related to mothers' pension legislation. Today, the likelihood single mothers live in the households of their parents is negatively related to the level of welfare benefits (London 2000). The likelihood a single mother family lived as a sub-family in the household of relatives in the early twentieth century may likewise have been correlated with the availability and generosity of mothers' pensions.

The control variables included in the estimated models are similar to those used by Moffitt (1994). The personal characteristic variables include a woman's age and her age-squared and indicators for whether she was illiterate or foreign-born. Like Moffitt, I also include variables capturing the sectoral distribution of employment in the state of residence.⁷ The distribution of employment in a state likely was related to the labor market opportunities of women. Moreover, it may have been related to the political climate in the state and hence, also influenced the type of mothers' pension legislation enacted. I also include indicator variables for size of place.

⁶ This definition allows women who were living as boarders or employees to be defined as female heads.

⁷ These data come from U.S. Bureau of the Census (1914) and (1923).

Table 6 presents the means and standard deviations of the variables used in the analysis. The rate of female headship among whites was very low and remained constant between 1910 and 1920. Only 3.5 percent of white women were female family heads and only 2 percent female household heads in both years. Female headship was more prevalent among black women, but the levels were still low. In 1910, 9 percent of black women were family heads and 6 percent were household heads. Black female headship fell between 1910 and 1920. By 1920, only 7 percent of black women were family heads and only 4 percent were household heads.

Table 7 presents the marginal effects from the difference-in-difference probit models. The effects of the un-interacted provision variables do indicate that the relative generosity of mothers' pensions laws was related to the rate of white female headship in 1910, but the relationship was negative: states that would go on to enact the most generous mothers' pension laws had the lowest rates of female headship in 1910. White female family headship was 0.4 percentage points lower in 1910 in states that would go on to provide state funds for mothers' pensions than states that would leave the funding to the counties. Female headship was also lower in states that would enact legislation covering divorced, deserted, or unmarried mothers than in states that would enact legislation covering only widows. These results confirm the finding of the previous section that the positive relationship between welfare generosity and white female headship did not originate with the enactment of mothers' pensions legislation but rather must have developed over time.

Perhaps surprisingly given the problems of implementation discussed above, Table 7 indicates that mothers' pensions programs may have contributed to this development. The data reveal "treatment" effects of mothers' pension legislation on white female headship. The effect of the interaction between the year 1920 indicator variable and the eligibility of unmarried mothers is positive in both the family and household head specifications. This indicates that white female headship increased more between 1910 and 1920 in states that extended eligibility to unmarried mothers than in states that did not. Likewise, family headship increased in states that provided state funds for mothers' pensions programs. Relatively

generous mothers' pensions law provisions do, therefore, seem to have increased rates of white female headship.

Had the positive relationship between white female headship and welfare generosity emerged by 1920? Note that the states that experienced increases in female headship between 1910 and 1920 were those that had had the lowest rates of female headship in 1910. To get a clearer picture of the relationships between the various provisions and white female headship, it is useful to consider the predicted rates of female headship for states with different combinations of provisions. The results of such an exercise are presented in Table 8. The predicted rates are calculated using the family headship probit model results and setting all variables other than the law provisions to their sample means. The baseline case is a state like Illinois that had a mothers' pensions law that covered widows only. In such states, predicted female headship starts relatively high (4.1 percent) and, if anything, decreases slightly between 1910 and 1920. States that extended eligibility to deserted/divorced and/or unmarried mothers or provided state funding for mothers' pensions have lower predicted rates of female headship for 1910. The predicted rate of white female headship for states like Michigan and Nebraska that covered deserted/divorced and unmarried mothers is only 3.0 percent in 1910. These states experience an increase of 0.6 percentage points, or 20 percent, in predicted female headship by 1920. But this increase still leaves white female headship lower in these states than in states like Illinois that had less generous mothers' pensions laws. For states like California and Pennsylvania that provided state funding but covered only widows, the predicted rate of female headship increased about 14 percent from 3.6 to 4.0 percent. But this only brings the predicted rate in line with that of the less generous states. As the various cases show, generous mothers' pensions laws increased white female headship between 1910 and 1920, but even in 1920, the positive relationship between headship and relative welfare generosity observed in data from the 1970s-1990s had yet to emerge.

Table 7 shows a negative relationship between workers' compensation fatal benefits and white female headship. This relationship, however, shows up in the effect of the un-interacted variable. White

female headship in 1910 was lower in the states that would enact higher fatal benefits between 1910 and 1920.

The results for black women are very different than those for whites. Black female headship in 1910 and 1920 was, for the most part, unrelated to the provisions of mothers' pension legislation. Black female headship appears not to have influenced, or to have been influenced by, the relative generosity of mothers' pension laws.

The lack of a relationship between black female headship and the relative generosity of state mothers' pension legislation is consistent with the findings of Moffitt (1994) and Hoynes (1997) for the current period. Today, while white female headship is highest in the states with the highest welfare benefits, black female headship is not. But as shown in Figure 2, the link between black female headship and mothers' pension legislation may be in the timing of enactment.

Table 9 presents of results of a more standard difference-in-difference specification using data for only the Southern states. The variables of interest are an indicator for whether a state enacted any mothers' pension legislation between 1910 and 1920 and the interaction of that variable with the indicator for the year 1920. White female headship was unrelated to both variables. But black female headship was negatively related to the un-interacted variable. The Southern states that did not enact mothers' pension legislation between 1910 and 1920 were indeed those with the highest rates of black female headship.

Discussion

Do these results help us interpret the state fixed effects found in empirical models of female headship in the current period? I believe they at least provide some insight. The results indicate, for instance, that mothers' pensions programs – the first public assistance programs targeted to single mothers – were not responsive, and in fact appear to have been reactionary, to the experiences of black women. The lack of a relationship between the state fixed effects for blacks and the generosity of state welfare benefits today is perhaps the continuation of relationship. The results for whites, however,

indicate that welfare generosity preceded high rates of female headship. The positive relationship between welfare generosity and white female headship observed by Hoynes (1997) and Moffitt (1994) was not embodied in the mothers' pensions legislation enacted in the 1910s. The question then remains, when did this relationship emerge? The evidence in this paper suggests that female headship increased at a higher rate in "more generous" states. Did this pattern continue into the 1920s and 1930s and the positive relationship exist at the beginning of the federally-mandated Aid to Dependent Children program? Or did the positive relationship emerge in the 1960s as female headship began its dramatic rise? These are questions for future research.

Another question that remains is, why did the provisions of mothers' pensions laws vary so greatly across the states? Given the links between mothers' pensions programs and later welfare programs, an answer to this question would provide insights in the variation in welfare generosity observed today. The literature on the movement for mothers' pension legislation, unfortunately, provides few clues as to what determined the provisions of different state laws. The focus of the movement was to get mothers' pensions laws enacted, and contemporary accounts devote little discussion as to why the provisions of the laws varied from state to state. Understanding this variation will likely require in-depth study of the legislative histories of these laws in several states.

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Table 1.—Year of Enactment of Mothers’ Pension Legislation

1911	<i>Illinois</i>	1916	Maryland
1913	California	1917	Arkansas
	Colorado		Delaware
	<i>Idaho</i>		Maine
	<i>Iowa</i>		Missouri ^b
	Massachusetts		Texas
	Michigan		Vermont
	Minnesota	1918	Virginia
	<i>Nebraska</i>	1919	Connecticut
	<i>New Hampshire</i>		Florida
	New Jersey		Indiana
	<i>Nevada</i>	1920	Louisiana
	Ohio	1923	North Carolina
	Oregon		Rhode Island
	Pennsylvania	1926	Washington, D.C.
	<i>South Dakota</i>	1928	Kentucky
	<i>Utah</i>		Mississippi
	Washington	1931	Alabama
	Wisconsin		New Mexico
1914	<i>Arizona</i> ^a	1937	Georgia
1915	Kansas		South Carolina
	<i>Montana</i>		
	New York		
	North Dakota		
	<i>Oklahoma</i>		
	<i>Tennessee</i>		
	<i>West Virginia</i>		
	<i>Wyoming</i>		

^a Arizona passed a mothers’ pension law by referendum in 1914. This law was declared unconstitutional in 1916. Arizona enacted another mothers’ pension law in 1917.

^b Missouri enacted mothers’ pension legislation for Jackson County (Kansas City) in 1911 and for St. Louis in 1912 but did not enact statewide legislation until 1917.

Notes: States which enacted legislation earlier than predicted by Walker (1969 and 1971) are italicized.

Table 2.—Provisions of State Mothers' Pension Laws, 1919 and AFDC Maximum Benefits, 1996

	Mothers Pensions Laws in 1919				AFDC max. mthly benefit 3-person family (1996 \$)	
	Eligible mothers include:			Max. mthly benefit 3-person family (1996 \$)		
	Des./div.	Unmarr.	'Mothers' ^a	State funds		
Vermont	X			X	156	656
Connecticut				X	No maximum ^b	636
California				X	181	607
New York					No maximum ^c	577
Massachusetts			X	X	No maximum	565
Rhode Island	-----No law by 1919-----					554
New Hampshire			X	X	136	550
Washington			X		181	546
Minnesota	X			X	227	532
Wisconsin	X			X	227	517
Oregon					159	460
Michigan	X	X			234	459
North Dakota	X				272	431
South Dakota	X				200	430
Kansas	X				227	429
Iowa					156	426
Utah					363	426
Montana					227	425
New Jersey					127	424
Colorado			X		No maximum	421
Pennsylvania				X	272	421
Maine			X	X	No maximum	418
New Mexico	-----No law by 1919-----					389
Illinois					227	377
Maryland					200	373
Nebraska	X	X			181	364
Wyoming	X				272	360
Virginia					163	354
Nevada	X				363	348
Arizona					317	347
Ohio	X				200	341
Delaware	X			X	127	338
Idaho					136	317
Oklahoma					136	307
Florida	X				299	303
Missouri ^d	X				363	292
Indiana			X		299	288

Table 2.—Continued

	Mothers Pensions Laws in 1919			AFDC max. mthly benefit 3-person family (1996 \$)
	Eligible mothers include: Des./div. Unmarr. 'Mothers' ^a	State funds	Max. mthly benefit 3-person family (1996 \$)	
Georgia	-----No law by 1919-----			280
North Carolina	-----No law by 1919-----			272
Kentucky	-----No law by 1919-----			262
West Virginia	X		136	253
Arkansas	X		136	204
South Carolina	-----No law by 1919-----			200
Louisiana	-----No law by 1919-----			190
Texas			163	188
Tennessee			136	185
Alabama	-----No law by 1919-----			164
Mississippi	-----No law by 1919-----			120

^aLegislation covers “mothers of dependent children” without reference to marital status.

^bThe Connecticut legislation specified the amounts that could be provided for food, fuel and clothing per week, but allowed for a “reasonable monthly allowance” for rent and “special allowances” for sickness and death.

^cNew York’s legislation stated that the benefits paid “must not exceed what it would cost to care for child in an institutional home.”

^dThe mothers’ pensions programs in Jackson County (Kansas City) and St. Louis operated under separate legislation. In both jurisdictions, divorced, deserted, and unmarried mothers were not eligible for grants. The maximum grant for a family with 3 children was \$136 in Jackson County and \$273 in St. Louis.

Sources: U.S. Women’s Bureau, *Mothers’ Pension Laws in the United State*, (Washington, D.C.: Government Printing Office, 1919); U.S. House of Representatives, *Background Materials and Data on Programs within the Jurisdiction of the Committee on Ways and Means* (Washington, D.C.: Government Printing Office, 1996).

Table 3.—Mothers' Pensions, 1931 and AFDC Benefits, 1996

	Mothers Pensions Programs, 1931				AFDC ave. mthly benefit per family 1996 (1996 \$)
	Counties		Ave. monthly benefits per family (1996 \$) [rank]		
	Total authorized	No. with programs			
New York	58	49	477.20	[3]	593.73
Massachusetts	a	a	628.61	[1]	564.19
California	58	57	284.78	[8]	556.73
Vermont	a	a	191.46	[25]	509.75
Connecticut	a	a	416.34	[5]	506.07
Rhode Island	a	a	499.62	[2]	490.33
New Hampshire	a	a	179.31	[28]	490.18
Washington	39	39	178.30	[29]	489.63
Minnesota	87	85	266.22	[11]	471.98
Oregon	36	27	188.01	[27]	460.50
Kansas	105	32	119.62	[36]	445.54
Wisconsin	71	71	196.47	[24]	430.77
Utah	29	15	106.74	[38]	412.78
Michigan	83	75	335.89	[7]	389.68
Maine	a	a	273.54	[10]	385.69
New Mexico	0	0	0.00	[45]	377.34
Pennsylvania	67	57	339.67	[6]	357.14
North Dakota	53	44	207.99	[21]	356.92
Montana	56	46	224.74	[17]	346.21
New Jersey	21	21	209.41	[20]	339.70
Iowa	99	98	142.14	[34]	339.22
Maryland	24	7	276.81	[9]	337.02
South Dakota	69	63	190.66	[26]	327.70
Ohio	88	88	196.61	[23]	325.15
Nebraska	93	82	161.53	[30]	322.06
Arizona	14	14	156.46	[31]	321.39
Wyoming	23	10	204.54	[22]	307.38
Colorado	63	42	240.35	[14]	302.31
Illinois	102	91	236.28	[16]	301.13
Nevada	17	13	224.56	[18]	298.21
Oklahoma	77	48	57.32	[43]	282.90
Florida	67	41	86.01	[42]	279.30
Delaware	3	3	214.82	[19]	276.46
Idaho	44	38	119.33	[37]	276.12
Indiana	92	70	242.45	[13]	263.48
Missouri	115	11	237.87	[15]	263.11
Virginia	124	3	149.78	[33]	254.89
Georgia	0	0	0.00	[45]	244.92
Kentucky	120	1	420.80	[4]	243.06
West Virginia	55	17	138.57	[35]	226.92

Table 3.—Continued

	Mothers Pensions Programs, 1931 Counties				AFDC average benefit per family 1996 (1996 \$)
	Total authorized	No. with programs	Average benefits per family (1996 \$) [rank]		
North Carolina	100	81	150.87	[32]	221.69
South Carolina	0	0	0.00	[45]	205.33
Arkansas	75	13	39.27	[44]	182.20
Tennessee	95	4	242.92	[12]	176.15
Texas	254	23	105.78	[39]	171.75
Alabama	0	0	0.00	[45]	160.76
Louisiana	64	7	91.20	[41]	152.86
Mississippi	82	3	100.77	[40]	131.12

^a In New England states, the unit of jurisdiction was the city or town rather than county.

Sources: U.S. Children's Bureau, *Mothers' Aid, 1931. Bureau Publication No. 220* (Washington, D.C.: U.S. Government Printing Office, 1933); Social Security Administration, *Social Security Bulletin: Annual Statistical Supplement 1998* (Washington, D.C.: U.S. Government Printing Office, 1998).

Table 4.—Linear Probability Models of Female Headship, 1910

	Whites		Blacks	
	Means	LPM coef.	Means	LPM coef.
Female headship	0.035 [0.183]		0.110 [0.313]	
Age	30.667 [7.092]	0.0032 (0.0011)	29.754 [6.859]	0.0128 (0.0045)
Age-squared	990.742 [447.768]	-1.59E-5 (1.72E-5)	932.355 [427.482]	-1.66E-4 (7.26E-5)
Illiterate	0.051 [0.220]	0.0107 (0.0037)	0.297 [0.457]	0.0514 (0.0073)
Foreign-born	0.200 [0.400]	-0.0070 (0.0022)		
Urban 2,500 to 24,999	0.169 [0.374]	0.0074 (0.0023)	0.135 [0.342]	0.0379 (0.0096)
Urban 25,000 +	0.377 [0.485]	0.0064 (0.0020)	0.219 [0.413]	0.0157 (0.0089)
Intercept		-0.0497 (0.0179)		-0.0885 (0.1016)
Number of observations	54,742	54,742	10,138	10,138

Notes: Standard deviations in brackets; standard errors in parentheses.

Table 5.—1910 Fixed Effects for the “Most Generous” Mothers’ Pension States

State	Estimated fixed effect
California	0.036
Colorado	0.034
Connecticut	0.032
Delaware	0.004
Indiana	0.039
Maine	0.036
Massachusetts	0.025
Michigan	0.023
Minnesota	0.023
Nebraska	0.023
New Hampshire	0.029
North Dakota	0.033
Pennsylvania	0.030
Vermont	0.023
Washington	0.027
Wisconsin	0.022
Average all states	0.034

Notes: “Most generous” states defined as those states that in 1919 (1) covered unmarried mothers, (2) covered ‘mothers of dependent children’ without reference to marital status, or (3) provided state funds for mothers’ pensions.

Table 6.—Descriptive Statistics, Variables Used in “Difference-in-Difference” Analysis

	Whites		Blacks	
	1910	1920	1910	1920
Female head – family	0.034 (0.180)	0.034 (0.180)	0.093 (0.291)	0.069 (0.253)
Female head – household	0.018 (0.134)	0.018 (0.134)	0.057 (0.231)	0.043 (0.203)
Provisions of state laws:				
Deserted/divorced mothers	0.260 (0.439)	0.258 (0.438)	0.240 (0.427)	0.263 (0.440)
Unmarried mothers	0.054 (0.225)	0.058 (0.233)	0.003 (0.054)	0.020 (0.146)
‘Mothers’	0.137 (0.343)	0.128 (0.334)	0.028 (0.165)	0.034 (0.182)
Maximum benefit –indicator	0.772 (0.420)	0.782 (0.413)	0.944 (0.230)	0.923 (0.267)
Maximum benefit –indicator*level	17.984 (11.196)	17.852 (10.765)	19.054 (7.671)	19.162 (8.126)
State funds	0.286 (0.452)	0.281 (0.450)	0.078 (0.268)	0.106 (0.308)
Workers’ comp. fatal benefits	3.361 (1.711)	3.355 (1.706)	2.368 (1.597)	2.505 (1.685)
Age	30.725 (7.106)	31.012 (7.013)	29.827 (6.826)	30.449 (6.907)
Illiterate	0.045 (0.208)	0.041 (0.199)	0.200 (0.400)	0.117 (0.322)
Foreign-born	0.219 (0.413)	0.196 (0.397)		
% of labor force in agricultural occupations	0.259 (0.165)	0.215 (0.148)	0.441 (0.187)	0.320 (0.178)
% of labor force in manufacturing	0.316 (0.110)	0.332 (0.109)	0.213 (0.105)	0.266 (0.110)
% of labor force in service sector	0.191 (0.038)	0.183 (0.035)	0.170 (0.040)	0.180 (0.038)
Urban 2,500 to 24,999	0.174 (0.379)	0.172 (0.377)	0.141 (0.348)	0.121 (0.326)
Urban 25,000 +	0.401 (0.490)	0.449 (0.497)	0.330 (0.470)	0.475 (0.499)
Number of observations	48,720	154,853	4,998	9,776

Table 7.—Estimated Marginal Effects of Mothers’ Pensions Provision from Probit Models of Female Headship

	Whites		Blacks	
	Family headship	Household headship	Family headship	Household headship ^a
Provisions of state laws:				
Deserted/divorced mothers	-0.0038 (0.0020)	-0.0015 (0.0013)	-0.0220 (0.0113)	-0.0045 (0.0092)
Unmarried mothers	-0.0061 (0.0035)	-0.0049 (0.0022)	0.0262 (0.0930)	
‘Mothers’	0.0022 (0.0026)	0.0026 (0.0018)	-0.0067 (0.0262)	-0.0200 (0.0160)
Maximum benefit –indicator	0.0006 (0.0043)	-0.0007 (0.0030)	-0.0183 (0.0343)	-0.0096 (0.0270)
Maximum benefit –indicator*level	-5.16E-5 (1.49E-4)	2.74E-5 (9.89E-5)	7.47E-4 (7.69E-4)	3.78E-4 (5.90E-4)
State funds	-0.0044 (0.0019)	-0.0014 (0.0013)	-0.0185 (0.0156)	0.0024 (0.0142)
Workers’ comp. fatal benefits	-0.0010 (0.0006)	-0.0002 (0.0004)	-0.0012 (0.0035)	-0.0012 (0.0027)
(Year 1920)*(Deserted/divorced mothers)	-0.0006 (0.0024)	-0.0005 (0.0016)	0.0125 (0.0156)	-0.0058 (0.0103)
(Year 1920)*(Unmarried mothers)	0.0089 (0.0057)	0.0084 (0.0047)	-0.0492 (0.0345)	
(Year 1920)*('Mothers')	-0.0027 (0.0027)	-0.0023 (0.0017)	-0.0150 (0.0277)	0.0113 (0.0336)
(Year 1920)*(Max. benefit –indicator)	-0.0014 (0.0050)	0.0007 (0.0032)	0.0018 (0.0322)	-0.0217 (0.0279)
(Year 1920)*(Max. benefit –ind.*level)	-5.24E-5 (1.69E-4)	-7.79E-5 (1.12E-4)	-2.76E-4 (8.46E-4)	3.49E-5 (6.49E-4)
(Year 1920)*(State funds)	0.0053 (0.0023)	0.0025 (0.0015)	0.0019 (0.0212)	-0.0084 (0.0134)
(Year 1920)*(Workers’ comp. benefits)	3.95E-4 (6.38E-4)	-7.38E-5 (4.20E-4)	-0.0009 (0.0041)	-0.0017 (0.0032)
Year 1920	0.0008 (0.0041)	0.0013 (0.0026)	-0.0098 (0.0344)	0.0182 (0.0238)
Predicted probability at sample means	0.0312	0.0146	0.0740	0.0444
Log likelihood	-29,357.17	-17,837.74	-3,953.38	-2,781.14

^aDue to the small number of black women living in states with mothers’ pensions laws covering unmarried mothers and the limited variation in the dependent variable, this model could not be estimated when UNMARR and (UNMARR)*(Year 1920).

Table 8.—Predicted Rates of White Female Family Headship by Mothers’ Pensions Law Provisions 1910 and 1920

	1910	1920	Change
Case 1: Widows only (IL)	4.13% (0.28)	3.91% (0.17)	-0.22 % (0.32)
Case 2: Deserted/divorced mothers (KS, ND, SD)	3.67 (0.30)	3.40 (0.17)	-0.27 (0.33)
Case 3: Deserted/divorced & unmarried (MI, NE)	2.97 (0.39)	3.56 (0.25)	0.58 (0.45)
Case 4: ‘Mothers’ (WA, IN)	4.41 (0.39)	3.83 (0.21)	-0.58 (0.43)
Case 5: State funds (CA, PA)	3.60 (0.25)	3.98 (0.16)	0.38 (0.29)
Case 6: Deserted/divorced & state funds (VT, MN, WI)	3.18 (0.27)	3.46 (0.17)	0.28 (0.30)
Case 7: ‘Mothers’ and state funds (NH)	3.84 (0.33)	3.90 (0.20)	0.06 (0.37)
Case 8: ‘Mothers’, state funds, & no maximum (MA, ME)	3.91 (0.41)	4.31 (0.27)	0.40 (0.47)

Notes: Predictions based on probit model results. Standard errors in parentheses. For cases 1-7, the maximum benefit limit was set to \$25, the maximum benefit limit in effect in Illinois in 1919. (The mean maximum benefit limit conditional on having such a limit was \$23.34.) All other variables were set to their sample means.

Table 9.—Estimated Marginal Effects from Probit Models of Female Headship: Difference-in-Differences Model, Southern States

	Whites		Blacks	
	Family headship	Household headship	Family headship	Household headship
State mothers’ pension law	-0.0009 (0.0033)	0.0019 (0.0020)	-0.0133 (0.0059)	-0.0095 (0.0047)
(Year 1920)*(State mothers’ pension law)	0.0015 (0.0038)	0.0004 (0.0023)	0.0047 (0.0078)	0.0036 (0.0062)
Year 1920	-0.0050 (0.0031)	-0.0018 (0.0019)	-0.0217 (0.0053)	-0.0097 (0.0041)
Predicted probability at sample means	0.0373	0.0155	0.0939	0.0570
Log likelihood	-8,949.38	-5,025.49	-8,192.59	-5,886.50

Figure 1.—State Fixed Effects for White Female Headship in 1910 and the Timing of Enactment of Mothers’ Pensions Legislation

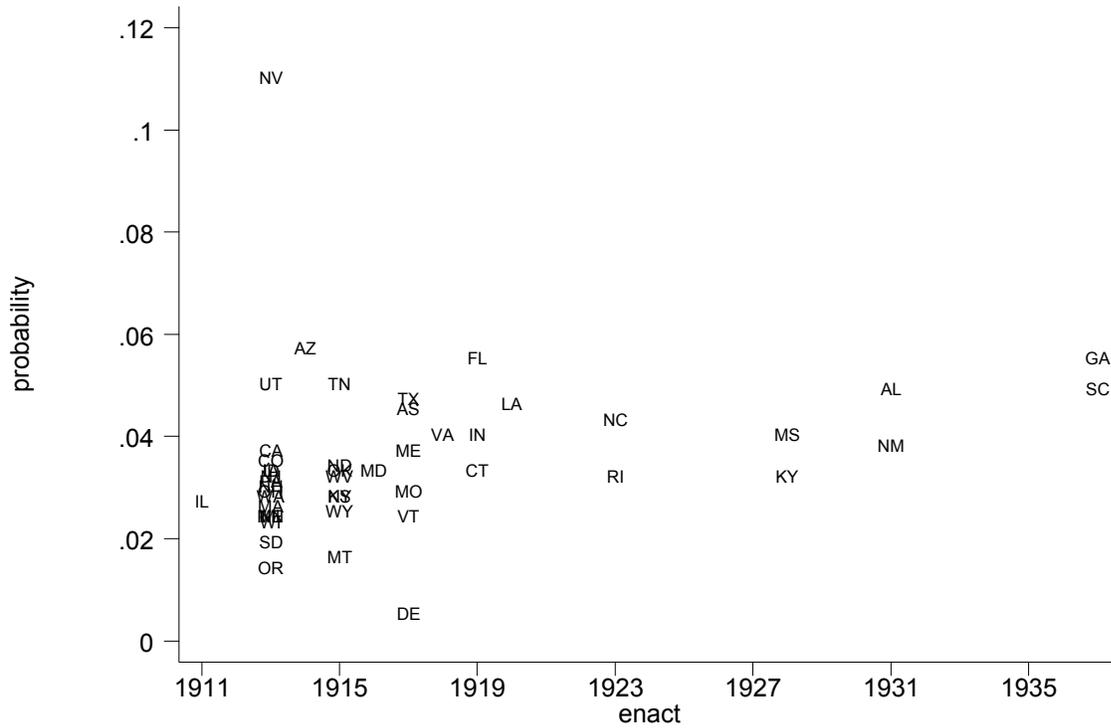


Figure 2.—State Fixed Effects for Black Female Headship in 1910 and the Timing of Enactment of Mothers’ Pensions Legislation

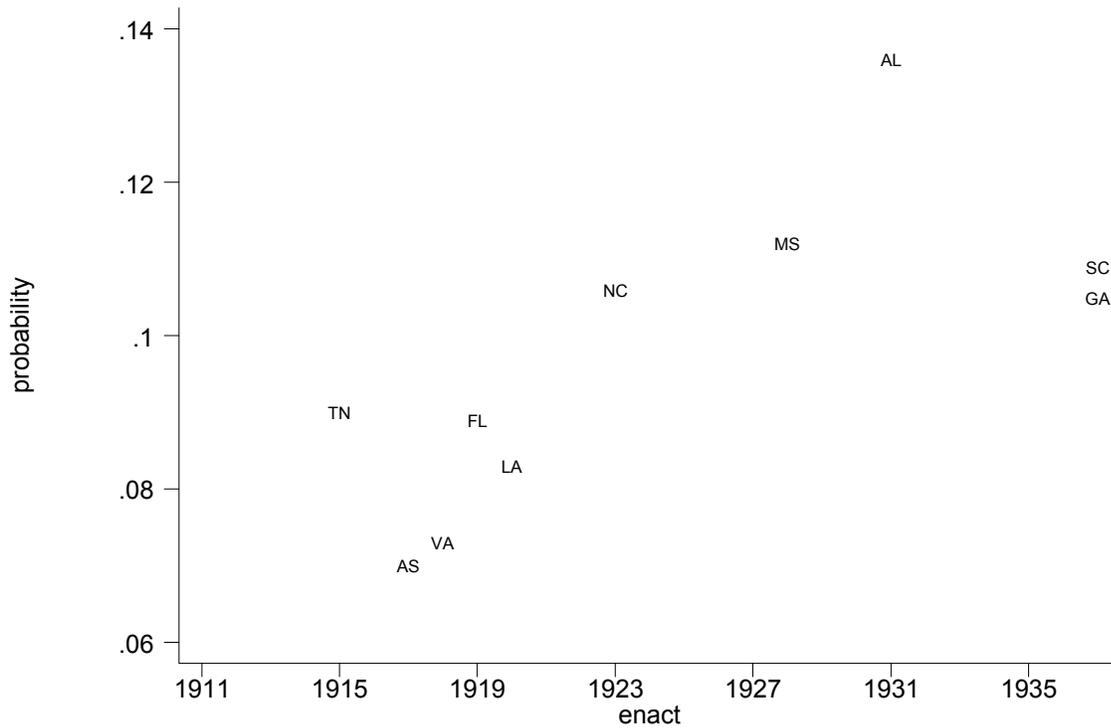


Figure 3.—State Fixed Effects for White Female Headship in 1910 and Maximum Benefit Levels (3-person family) in 1919

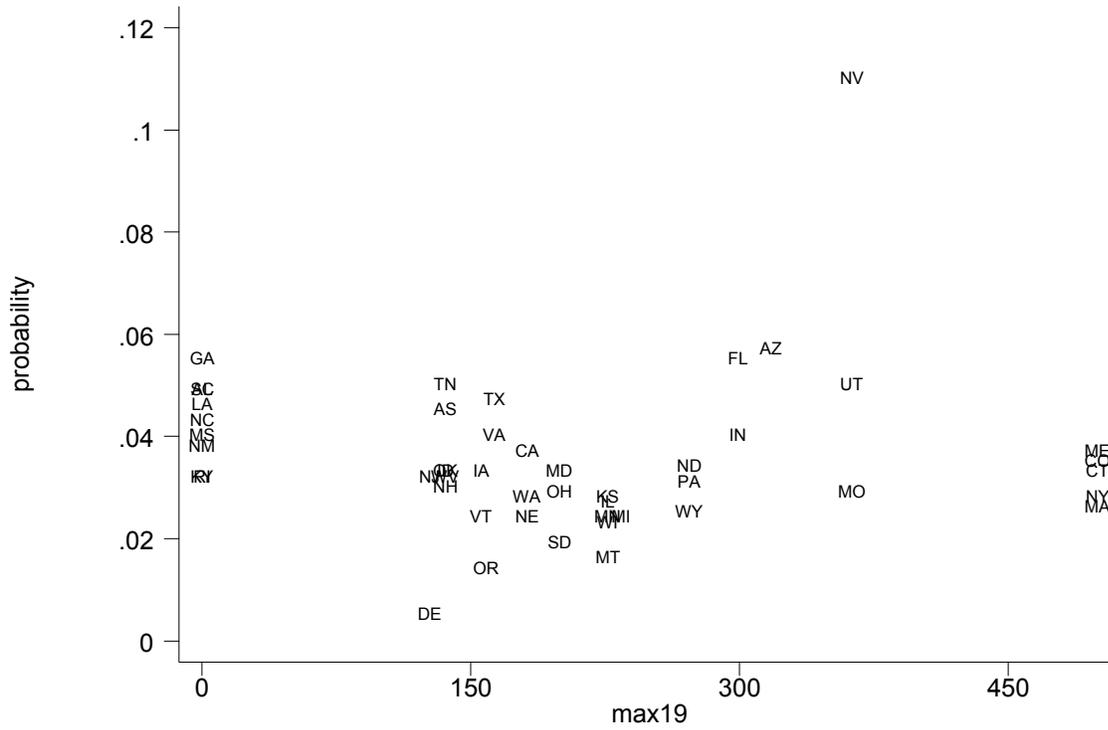


Figure 4.—State Fixed Effects for White Female Headship in 1910 and Average Benefits per Family in 1931

