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Welfare as Maternity Leave? Exemptions from Welfare Work Requirements and Maternal Employment

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Abstract

In some states, the Temporary Assistance for Needy Families (TANF) program offers the equivalent of paid maternity leave without job protection to low-income, single mothers of infants. Age-of-youngest-child (AYC) exemptions waive work requirements for TANF recipients after the birth of a child, generally for 3–12 months, depending on the state. This study uses data from the Current Population Survey (1998–2008) to examine whether the availability and length of AYC exemptions are predictive of rates of employment, work, and full-time work among low-educated single mothers with infants. The analysis uses the difference-in-differences (DD) technique, a comparison of outcomes under different policy treatments and between treatment and comparison groups. The results suggest that AYC exemptions are not related to employment or work rates but that living in a state with no AYC exemption is strongly and positively associated with rates of full-time work among low-educated mothers with infants.

Parental leave policies in the United States are notoriously meager relative to the provisions in other industrialized nations. The Family and Medical Leave Act of 1993 (FMLA; 107 Stat. 6) requires most employers to offer 12 weeks of job-protected leave following the birth or adoption of a child. However, the benefit is unpaid and not available to approximately 50 percent of workers because they work in part-time jobs, are employed in small businesses, or have inconsistent work histories (Ruhm 1997; Waldfogel 1999). In striking contrast, the closest economic and political neighbors, Canada and the United Kingdom, respectively offer all workers 17 and 18 weeks of maternity leave with partial wage replacement (Waldfogel 2001).

Although not conventionally viewed as family leave policy, welfare cash assistance long served as a form of income support for low-income, single mothers caring for infants. A 1996 report to Congress indicates that 20 percent of poor mothers used welfare to support themselves while caring for an infant (Commission on Family and Medical Leave 1996). This purpose was dramatically reenvisioned in 1996 with the passage of federal welfare reforms (110 Stat. 2105), which made welfare receipt time-limited and contingent on work. However, the 1996 law gives states the discretion to exempt welfare recipients with infants and toddlers from the work requirements. Age-of-youngest-child (AYC) exemption policies specify the exact number of months for which a welfare recipient is exempt from the work requirements after a child's birth. During the implementation of the Temporary Assistance for Needy Families (TANF) program, most states set AYC exemptions at between 3 and 12 months. Others elected to offer no AYC exemption, and some made it as long as 60 months. In many states, therefore, mothers of infants became one of the only groups eligible for cash assistance that is not contingent on employment.

To the extent that AYC exemptions allow mothers to stay at home with young children, they are analogous to maternity leave policies, which are shown to benefit both parental employment stability and child well-being (Hofferth 1996; Joesch 1997; Glass and Riley 1998; Ruhm 2000; Berger and Waldfogel 2004; Berger, Hill, and Waldfogel 2005; Hofferth

and Curtin 2006). However, in contrast to the unpaid, employer-based leave guaranteed to workers through the FMLA, the leave provided by AYC exemptions may last for much longer periods but offers no job protection. This design has potentially offsetting effects. On the one hand, it creates a financial incentive for women to quit working during pregnancy and for some length of time after a birth, so the policy may be much more likely than maternity leave to produce employment instability. On the other hand, exemptions could promote child development by providing income support that allows mothers to stay home or to work part-time during a child's infancy. This policy and its behavioral effects are particularly relevant because women with low levels of education are more likely than other women to quit a job during pregnancy (Johnson and Downs 2005; Johnson 2008), and low-income children are most vulnerable to the family income fluctuations associated with changes in parental employment (Duncan et al. 1998; Mistry et al. 2002; Dearing, McCartney, and Taylor 2006).

The present study investigates whether the incentives created by AYC exemptions are large enough to affect maternal decisions about work following a birth and, if they do, by how much. The primary effects of this policy should be at the extensive margin; that is, mothers of infants in a state with an exemption of 12 or more months should be less likely to be employed and less likely to be working, if employed, than are those who live in a state with no exemption or a shorter exemption. In states with lengthy exemptions, the availability of cash assistance that is not contingent on employment could encourage low-income mothers to quit their job during pregnancy, to take unpaid leave from their employer while receiving welfare, or to extend the length of their job search after a child's birth. In addition, most states require full-time work hours (30 or more per week) to meet TANF work requirements, but the structure of AYC exemptions (and other welfare policies) in some states may allow mothers of infants to meet this requirement by combining welfare with part-time employment.

Using 6 years of data collected between 1998 and 2008 in the June Fertility Supplement of the Current Population Survey (CPS), this study estimates whether AYC exemptions from welfare work requirements are associated with the employment and work rates of low-educated single mothers with infants. The statistical approach takes advantage of policy variation across states and, to a lesser extent, over time, as well as of variation between the quasi-treatment group and a comparison group of low-educated married mothers. The approach attempts to isolate the behavioral effects of work requirement exemptions from those of individual differences and concurrent policy and economic changes.

Background

The employment outlook for single mothers changed dramatically in the late 1990s. In the latter half of the decade, the proportion of single mothers in the labor force rose steeply while the labor-force participation rate remained constant among married mothers. As figure 1 shows, the estimated rise was particularly steep for single mothers with infants and low education levels (treatment group): a 16 percentage point increase in employment rates between 1990 and 2000. The speed with which single mothers returned to work after giving birth also increased. From the early 1990s to the early 2000s, the estimated proportion of single women who began working within 11 months of a first birth increased from 48 to 61 percent. Among married mothers, this statistic remained stable at approximately 64 percent (Smith, Downs, and O'Connell 2001; Johnson and Downs 2005; Johnson 2008). Although estimated employment rates among single mothers decreased somewhat during the two recessions of the 2000s, they remain at historically high levels.

These shifts in maternal employment are consequential because infants are considered particularly vulnerable to the timing and extent of maternal employment, the quality of child care, and the sufficiency of family income (Duncan et al. 1998; Shonkoff and Phillips 2000; Thompson 2001). Substantial evidence suggests that maternity leave in the early months of a child's life benefits his or her health and well-being, particularly through positive effects on parent-child time and breastfeeding rates (Ruhm 2000; Berger et al. 2005). In addition, an increasingly large and rigorous set of studies indicates that full-time maternal employment in the first year of a child's life is associated with modest decreases in child cognitive ability measured into middle childhood (Baydar and Brooks-Gunn 1991; Ruhm 2004; Hill et al. 2005; Brooks-Gunn, Han, and Waldfogel 2010). This association is generally limited to children from advantaged backgrounds, however, and one recent study suggests that it is offset by maternal employment's beneficial relationships with the use of center-based child care and with maternal sensitivity (Brooks-Gunn et al. 2010).

The hastening of employment among single mothers after a birth occurred in the context of several major social policy reforms. One in particular, the AYC exemption from TANF work requirements, applies almost exclusively to single mothers of infants. This policy determines how long a mother may continue to receive welfare after a child's birth without fulfilling the TANF program's standard work requirements. Consistent with the so-called devolution of welfare policy to the local level, the length of AYC exemptions is left to state and, in a few cases, county discretion. Table 1 shows the frequency distribution of AYC exemption lengths over the study period. In 1998, exemption lengths ranged from 0 to 60 months and 43 percent of states offered an exemption of less than 12 months. By 2008, no state allowed exemptions to last more than 24 months and half had exemptions shorter than 12 months (Rowe and Roberts 2004; Rowe and Russell 2004; Rowe, Murphy, and Williamson 2006; Rowe and Murphy 2006, 2009). In each year of the study period, between two and five states changed their AYC exemption policy. Appendix table A1 shows the specific AYC exemption lengths in each state and year.

In contrast to previously studied family leave policies, AYC exemptions provide paid leave without job protection, potentially creating an incentive for mothers to quit jobs leading up to the birth. Thus, although family leave policies increase the likelihood that women will take leave (decrease work) but maintain employment, exemptions from welfare work requirements are more likely than such policies to decrease employment rates in the months surrounding a birth. This might be particularly true for employment among low-educated mothers, who not only have disproportionately low rates of FMLA coverage and eligibility but also face financial circumstances that prevent them from taking the unpaid leave offered by the FMLA (Phillips 2002). Finally, although most employer-based leave policies are not designed to affect the intensity of maternal work, AYC exemptions could. Most states require full-time work hours of welfare recipients. Being exempt from those work requirements might allow mothers of infants to combine welfare with part-time employment. Inversely, states with no exemptions or relatively short exemptions might have higher rates of full-time employment among mothers of infants than have states with long exemptions.

Prior Studies

Considerable evidence suggests that welfare work requirements increase employment rates modestly, and there are indications that mothers of young children respond more to welfare reform policies than do mothers with older children (Michalopoulos, Schwartz, and Adams-Ciardullo 2000; Grogger and Michalopoulos 2003). In the 1990s, a set of experimental welfare programs mandated work without providing financial incentives. Participation in most of these programs is found to be positively associated with employment rates among

single mothers; employment increases range in size from 3 to 15 percentage points after 2 years, but rates decrease over time (Grogger and Karoly 2005). In a number of studies, the estimated association between work mandates and earnings gains, as well as that between time limits and reductions in welfare receipt, are both larger among parents of preschool-aged children than among parents of older children (Michalopoulos et al. 2000; Grogger and Michalopoulos 2003).

Evidence on the association between AYC exemption policy and maternal employment is less abundant and less conclusive. The proportion of the TANF caseload with a youngest child under 1 year old increased from 11 percent in 1998 to 16 percent in 2008 (author's calculations using data from the US Department of Health and Human Services [2000, 2003, 2004, 2009a, 2009b, 2009c]). This suggests that an increasing proportion of recipients may be using welfare as a type of maternity leave. New welfare applicants appear particularly likely to be caring for infants. The State of Wisconsin reports a doubling of the proportion of new Wisconsin Works applicants with infants between 1998 and 2004, from 18 to 37 percent (Wisconsin Works, or W-2, is the state's TANF program). The local agencies explicitly attribute this change to recipients "using W-2 as a form of paid maternity leave" (Wisconsin Legislative Audit Bureau 2005, 4). A 2001 study of 13 states also finds that about one-third of all new entrants to welfare provide care to an infant (Zedlewski and Alderson 2001).

Steven Haider, Alison Jacknowitz, and Robert Schoeni (2003) use AYC exemption length in a measure of the stringency of welfare work requirements for mothers with children under 6 months of age. They find that stringency is negatively associated with breastfeeding rates. The study does not examine employment rates directly but suggests that short exemptions (or the absence of an exemption) may be positively associated with employment, given that maternal employment is a known barrier to breastfeeding (Lindberg 1996; Roe et al. 1999; Kimbro 2006; Baker and Milligan 2008; Mandal, Roe, and Fein 2010). In a paper using data from 2001, Elizabeth Washbrook and associates (2011) find that a single mother's odds of working within 9 months of giving birth are substantially lower if she lives in a state with an AYC exemption of 12 or more months than if she lives in one with a shorter exemption. A working paper by Jonathan Pingle (2003) analyzes data from 1993 to 1999. In contrast to the findings by Washbrook and associates (2011), Pingle finds that AYC exemption length is not associated with employment rates among single mothers. No existing study examines the associations between AYC exemptions and work hours, though work hours may be an important behavioral outcome of the policy.

These divergent findings point to the difficulty of identifying the effect of AYC exemptions in complex policy and economic environments. Pingle (2003) examines AYC exemptions during their initial implementation in the late 1990s, a period of substantial transformation of welfare and other social policies, as well as historically low unemployment rates. The shortening of AYC exemptions was one small part of these larger forces, and the opportunity offered by the exemption may have been overwhelmed by the much greater pressures and incentives to work. In contrast, Washbrook and colleagues (2011) examine data from a single year, during which unemployment rates spiked for low-skilled workers, to identify the effect of the AYC exemptions exclusively from differences across states and between single and married mothers. They control for a set of other policies that might vary by state and treatment group, but this analytic strategy may lead to bias from unobserved differences between states and groups.

There are several other reasons why the effects of this policy might be muted or vary across data sources and identification strategies. First, the implementation of the policy may be less than perfect, which would lead to measurement error if the actual policy as it is experienced

by welfare recipients differs from the written policy used in research. Caseworkers have substantial discretion to determine how they apply work requirements in a given case, and several other policy options allow them to grant mothers a period of time to stay home with young children. Second, low take-up of specific welfare policy components, such as earnings disregards, is found to reduce the effects of those components on behavior (Matsudaira and Blank 2008). Low take-up of the AYC exemption might be expected because of the stigma associated with welfare receipt or because of the administrative burden associated with applying for welfare.

The present study improves on past approaches by combining data from multiple years after the implementation of TANF. These data encompass several business cycles and capture AYC exemption policy changes that occur within states and over time. The study also controls for the welfare and income support policies that changed differentially at the state level over the study period. In addition, it controls for state fixed effects to account for unobserved time-invariant factors that might confound the estimates. Finally, these analyses examine three separate measures of labor-force participation among mothers of infants: employment, work, and full-time work. The length of AYC exemption could conceivably affect all three.

Methods

Definition of Treatment and Comparison Groups

A difference-in-differences (DD) approach is employed to estimate the effects of AYC exemptions on maternal employment. This approach compares outcomes under different policy treatments (the first difference) as well as between treatment and comparison groups (the second difference). The DD technique is commonly used to study welfare and other policies (Meyer 1995; Meyer and Rosenbaum 2000, 2001; Kaushal and Kaestner 2001, 2005; Kaestner, Korenman, and O'Neill 2003; Acs and Nelson 2004; Hao and Cherlin 2004; Kaushal, Gao, and Waldfogel 2007). Such studies generally define the treatment group for welfare policies as either single mothers or single, low-educated mothers. Given the design and intent of AYC exemption policy, this study narrows the treatment group further to include single, low-educated mothers of infants. The category "low-educated" is defined here to include mothers who have no more than a high school diploma.

Ideally, the definition of the treatment group accurately identifies the subpopulation affected by AYC exemption policies without using data on welfare receipt, so that treatment group membership is not directly affected by the policy being tested. Only including women who are currently receiving welfare in the treatment group would bias the results by excluding women who decided not to apply for or to leave welfare based on existing welfare rules, including the AYC exemption policy. Thus, the subpopulation affected by the policy is all mothers who have infants and who are eligible for welfare in their states; marital status serves as a proxy for that eligibility.

In defining treatment group membership as a function of marital status, the author assumes that AYC exemption policy does not directly influence individuals' decisions about marriage and fertility. A large body of research on the relationships among welfare policies, marriage, and fertility behaviors produce mixed and inconclusive results on this point (Acs 1996; Grogger and Bronars 2001; Hu 2003; Bitler et al. 2004; Joyce et al. 2004; Ryan, Manlove, and Hofferth 2006). Notably, even family cap policies designed specifically to decrease fertility among single mothers are found to have no consistent effect on these behaviors (Grogger and Bronars 2001; Jagannathan, Camasso, and Killingsworth 2004a, 2004b; Ryan et al. 2006; Camasso and Jagannathan 2009). As a direct test of this identifying assumption, the author estimates models that predict the probability of single motherhood as

a function of the length of the exemption policy in a given state (analyses not shown here). Results in models with and without state fixed effects suggest that the length of AYC exemption is not associated with the probability of being a single mother.

It is important to note that some measurement error is inevitably introduced by using general population characteristics to define treatment. In most cases, this error would bias estimates toward zero because some number of treatment group members are not actually interested in or aware of welfare benefits.

The definition used to identify one or more comparison groups is also a key factor in the internal validity of DD estimates. The best comparison groups are as similar as possible to the treatment group but unaffected by the policy of interest. The present study compares single, low-educated mothers of infants (the treatment group) with married, low-educated mothers of infants (the comparison group). These two groups are quite similar in terms of employment rates and demographic characteristics, but married mothers are much less likely to receive welfare, and if they do receive welfare, they face two-parent policies that are distinct from the standard TANF rules. Figure 1 and table 2 offer support for the use of these particular treatment and comparison groups. Figure 1 shows the trend in work rates among the two. During the study period (1998–2008), the level of employment is quite similar for the treatment and comparison groups, although single mothers' work rates appear more reactive to the economic cycle, particularly the 2001 recession. Although not shown in the figure, the trends in work rates (working, if employed) and full-time hour rates (if working) are also very similar for the two groups.

Table 2 shows weighted population estimates for the measures used in this study. Results are presented separately for the treatment and main comparison groups. Consistent with results in figure 1, the table's estimates for overall work rates and the proportion working full-time hours (if working) do not differ substantially by marital status. There are some noteworthy differences between the two groups, however. Single mothers are younger, have slightly fewer children, and have younger children, on average. Single mothers are also more likely to be black, non-Hispanic, and native born. Table 2 also shows estimates from the measures of state policy and economic context, but there are no statistically significant differences between the treatment and comparison groups in these characteristics.

Two alternative comparison groups are used to test the sensitivity of these results: (1) single, high-educated (some college or more) mothers of infants; and (2) single, low-educated mothers of school-aged children (between 5 and 6 years old). The second group is composed of mothers who have children in an age group that is safely outside the range of any state's AYC exemption policy yet still relatively early in childhood. Both alternative comparison groups are close in size (980 and 1,874, respectively) to the 1,879-member treatment group, but their employment rates are less comparable to those of the treatment group than are the rates for the main comparison group (see fig. 1). All three comparison groups are similarly unlikely to be affected by AYC exemption policies.

Estimation

Descriptive statistics are used to compare the groups' employment rates as a function of the state AYC exemption policy and marital status. This type of descriptive DD analysis can reveal a relationship between policy setting and human behavior, but it can also obscure the true relationship by capturing state-policy or local labor-market characteristics that are correlated with both AYC exemption policies and employment rates. One of many plausible scenarios, for example, is that states with shorter exemption lengths will also have more stringent work requirements and time limits for TANF recipients. These types of omitted

variables may inflate or attenuate the descriptive DD estimates, depending on their relationship to AYC exemption policy length and work rates.

In order to control properly for covariates, the analyses next use a multivariate regression model to estimate the relationships of AYC exemption eligibility and length with employment among single mothers. The dependent variables are all binary, but the main analyses use ordinary least squares (OLS) regression to simplify the interpretation of the results. The analysis also tests the sensitivity of the results to logistic regression specifications. The estimation model is:

$$Y_{ist} = \alpha_1 + \text{AYC}_{st}\beta_{\text{AYC}} + \alpha_2 \text{SINGLE}_{ist} + (\text{AYC}_{st} \times \text{SINGLE}_{ist})\beta_{\text{AYC} \times \text{SINGLE}} + X_{ist}\beta_x + P_{st}\beta_p + S_{it}\beta_s + \epsilon_{ist}, \quad (1)$$

where i indexes individuals, s states, and t years. One of three dichotomous variables, Y_{ist} , captures whether individual i reports that she was employed, worked, and worked full-time hours in the week prior to the survey. A vector of dichotomous variables, AYC_{st} , indicates the length of the AYC exemption policy in state s and year t . The coefficients of primary interest are $\beta_{\text{AYC} \times \text{SINGLE}}$, a set of interactions among the AYC exemption length categories and marital status. The resulting coefficients quantify the effect of the exemption policy for the treatment group.

This analysis is conducted three times, each time with increasing levels of controls. The first model includes only X_{ist} , a vector of maternal characteristics (including age, number of own children, age of youngest child, race, ethnicity, and nativity). The second set of controls added, P_{st} , is a vector of state policies and unemployment rates. The final model also includes state fixed-effects, represented by the vector S_{it} , that effectively control for any unobserved time-invariant difference between states. The term ϵ_{ist} represents any remaining unobserved heterogeneity in the model.

It is important to note that the policies included as control variables in vector P_{st} are in no way exhaustive of all policies potentially affecting maternal work rates, and they need not be. Once state fixed effects are included in the model, the coefficients of interest are estimated using changes in AYC exemption policy within states over the study period. In this specification, only variables that changed over time remain in the model, and the greatest potential sources of bias are omitted variables that changed differentially by state and group (treatment and comparison) over time. For instance, unemployment rates are included separately as a control variable because they vary over the study period differentially by state and marital status. In contrast, state-mandated, paid maternity leave policies are not included as a control because they do not change substantially during this period.

All models use Huber-White corrected standard errors to account both for nonindependence of observations at the state level and for serial correlation of state characteristics over time (White 1980; Bertrand, Duflo, and Mullainathan 2004). In keeping with the recommendations of Marianne Bertrand and colleagues (2004), this adjustment is implemented using the “cluster” command in Stata statistical software; 50 states plus the District of Columbia are identified as clusters. As Bertrand and colleagues (2004) indicate, the concern about serial correlation in difference-in-differences estimates is reduced in studies like this one that use a relatively small number of time periods (six, in this case) and a policy that varies within states over time.

Data and Measures

The primary source of data for this study is the June Fertility Supplement of the Current Population Survey (CPS). The US Census Bureau fields the CPS once a month on a nationally representative sample of approximately 48,000 households. Standard monthly questions focus on employment status and characteristics (e.g., hours worked, occupation, wage), as well as on such demographic measures as race, sex, and marital status. The June CPS, which has been conducted on a semiregular basis since 1971, includes additional questions on historical and planned fertility for women of childbearing age. The principal advantage of the June Fertility Supplement for the present study is that it collects both the birth month and year of the respondent's youngest child, making it possible to precisely calculate the child's age in months.

The analysis uses a stacked cross-sectional data set of mother-level observations from the 6 biennial years in which the Census Bureau fielded the CPS June Fertility Supplement between 1998 and 2008: 1998, 2000, 2002, 2004, 2006, and 2008. The analytic sample includes female respondents who are 18–44 years old, have a youngest child less than 12 months of age, and have no more than a high school diploma (the article refers to this group as “low-educated mothers of infants”). The resulting sample of 4,243 includes 1,879 single mothers and 2,364 married mothers.

Maternal employment—The three dependent variables, respectively, indicate whether the mother was employed, working, and working fulltime hours in the week prior to the survey. In the Current Population Survey, the main labor-force status question determines whether the respondent is “working” or “with job, not at work” (other categories include “unemployed” and “not in labor force”). In this study, a respondent is coded as employed in either case but is coded as working only if he or she reported the former. In a separate question, the survey ascertains the respondent's work hours in the week prior to the survey. Working full-time hours is defined for the purposes of this study as working more than 30 hours per week and is conditioned on reporting working in the labor-force status question.

AYC exemption policy—The welfare rules databooks compiled by the Urban Institute are used to determine the exemption policy for TANF recipients with young children in a given state and year (Rowe and Roberts 2004; Rowe and Russell 2004; Rowe and Murphy 2006, 2009; Rowe et al. 2006). The databooks catalog state welfare rules in effect during July of each year. The current analysis uses individual-level data from June and assumes that the state policy did not change between June and July of the same year. Because it is possible that policies did change between these 2 months, and because one might expect mothers to base their work decisions on the policy they know of during their pregnancy, the analysis also tests the sensitivity of the results to the use of a lagged measure of state AYC exemption policy. This measure captures the policy in effect in the year prior to the individual-level data. The welfare rules databooks cover policy conditions from 1999; values for 1998 are drawn from historical tables in the *Databook* for 2004 policies (Rowe et al. 2006).

Over the study period and across states, the length of AYC exemptions ranges from 0 to 60 months. A set of dichotomous indicators is used to group exemption policies into three categories: none (length of exemption is zero), 3–9 months, and 12 or more months. These categories encompass all possible lengths of state AYC exemption policy during the study period (i.e., there are no 2- or 10-month exemptions). In two states, California and Colorado, AYC exemption policy is set at the county level. Each of these states sets a standard and then allows counties to decrease or increase the length within limits. The analysis uses the coding provided by the welfare rules databooks. That coding reflects the policy in the largest

counties (Los Angeles and Denver). A test considers whether the results are sensitive to the exclusion of these states. Table 1 shows the distribution of AYC exemption policy over time, and appendix table A1 shows the policy in each state and year.

Maternal characteristics—The models include controls for the following set of maternal characteristics: age (years), age squared, number of births, age of youngest child (months), age of youngest child squared, race, ethnicity, and nativity. Race is measured with a set of three variables: black, white (reference group), and other. Ethnicity is captured by an indicator for whether the respondent reports that she is Hispanic. Nativity is captured by a measure that indicates whether the respondent reports that she is native born (i.e., born in the United States). Note that the number of births serves here as a proxy for the number of children in the household, as the June supplement does not measure the number of children in the household.

State policies and economic context—The analyses also control for a set of state policies and unemployment rates. Three key welfare policy measures capture the stringency of work requirements in a state. Values for these measures are compiled from the welfare rules databooks (Rowe and Roberts 2004; Rowe and Russell 2004; Rowe and Murphy 2006, 2009; Rowe et al. 2006). A dichotomous variable indicates whether the state had a full-family sanction policy; that is, a family's TANF cash assistance benefit can be reduced to zero if the adult recipient fails to comply with work requirements. Also included is the percentage of a state's welfare recipients required by the federal government to participate in work activities and a dichotomous variable equal to one if the state's time limit on welfare cash assistance is shorter than the federal limit of 60 months. In addition to these measures of stringency, a dichotomous variable indicates whether the state had a refundable (partially or fully) earned income tax credit. This measure is based on tables produced by the Tax Policy Center (2010). To control for local labor-market conditions, the analysis includes yearly, seasonally adjusted, state unemployment rates extracted on June 1, 2010, from the Local Areas Unemployment Statistics compiled by the Bureau of Labor Statistics (<http://www.bls.gov/lau/>). The rates reflect a new modeling approach and reestimation employed by the bureau as of March 2005. All of the state policy and economic control variables are also interacted with marital status because the variables either target single mothers directly or are indicators that would vary by marital status over the study period.

Results

Descriptive Analysis

Table 3 shows the proportions that report being employed, working, and working full-time hours in the week prior to the survey. Those proportions are displayed separately by marital status (columns) and AYC exemption length (rows). The differences by exemption length, within marital status groups, are shown in the lower panel. The difference-in-differences (DD) estimates are shown in the third, sixth, and ninth columns.

One might expect that, among single mothers of infants (but not their married counterparts), the policy design would predict higher rates of employment, work, and full-time hours in states with shorter (or no) AYC exemptions. However, this descriptive analysis provides little evidence that AYC exemptions affect employment or work rates. Neither the differences by exemption length within marital status groups nor the difference between the marital status groups are estimated to be statistically significant. The results for working full-time hours are quite different, however. Those estimates suggest that single mothers in states with no exemption are far more likely to work full-time hours than are single counterparts in states with exemptions of 3–9 or 12 or more months. This difference,

between 13 and 17 percentage points, depending on the point of comparison (mothers in states with exemptions of 3–9 months or those in states with exemptions of 12 or more), is statistically significant and not observed among the comparison group of low-educated married mothers with infants. The DD estimates are also large and statistically significant. From this first look, AYC exemptions appear to reduce full-time work rates in the treatment group of low-educated single mothers with infants by as much as 22 percentage points.

Regression Estimates

Table 4 shows estimated OLS regression coefficients and standard errors for models that predict employment, work, and full-time hours. Results from three models are presented for each outcome (the first model includes controls for maternal characteristics, the second model for state policies and unemployment rates, and the third model for state fixed effects). In keeping with results from table 3, these models estimate differences in employment as a function of AYC exemption length and marital status. The interactions between AYC exemption length and marital status (first three rows of table 4) capture the DD estimates for the policy. The next three rows show estimates of the main effects of the length of state AYC exemptions. Results in these rows should be interpreted as estimates of the relationship between AYC exemption length and employment among the comparison group of low-educated married mothers of infants.

The results from estimates of the interactions seem to confirm the DD estimates suggesting that AYC exemption length has no discernible effect on maternal employment or work rates but a substantial association with the likelihood of working full-time hours. Across the three models predicting employment and working in the week prior to the survey, the coefficients for the interactions between AYC exemption length and marital status are small and not statistically significant. The main effect of AYC exemptions of 3–9 months is surprising; they are associated with an 11 percentage point increase in the probability of work among the comparison group of married mothers relative to that among mothers living in states with longer exemptions. This unlikely finding raises concern that time-variant state differences may be predictive of married mothers' work rates during this period and that the models fail to control properly for those differences.

The estimated relationships between AYC exemptions and the probability that single mothers report working full-time hours hold up as controls are added. In fact, the size of the difference between single mothers working full-time in states with no exemption and those doing so in states with an exemption of 12 or more months is larger in the multivariate models than in the original descriptive estimate and grows with the addition of controls. The final estimate (model 3) suggests that the estimated probability of working full-time hours is 23 percentage points greater among low-educated single mothers with infants if they live in states with no exemption than if they live in states with an exemption of 12 or more months. Note that the length of the exemption makes very little difference in the probability of working full-time hours. This suggests that the estimated effect is due largely to a difference between states with no exemption and states with some exemption of varied lengths. That fact is confirmed by results from a model in which the measure of AYC exemption policy is dichotomous (coded as any exemption or no exemption; results not shown). In this specification, the estimated coefficient from the interaction between treatment group and living in a state with no AYC exemption is nearly identical in size to the final estimate in model 3.

The coefficients on maternal characteristics are generally in the expected directions. For instance, the number of children is estimated to be negatively and statistically significantly associated with the likelihood of employment. Also, there is a nonlinear relationship between the age of the mother's youngest child and her likelihood of employment, such that

each additional month of age is estimated to increase the probability that she will be employed. The likelihood increases to a point and then plateaus (the coefficient on the quadratic term is statistically significant and negative, but very small). Few of the state policy and economic condition variables are estimated to predict employment or full-time work among the treatment group, particularly in results from the model (model 3) that also controls for state fixed effects. The state unemployment rate and the state having a full-family sanction are both associated with a lower likelihood that an employed single mother is working (indicated by the coefficients on the interactions between these factors and single).

Sensitivity Tests

Table 5 presents estimates from tests of the sensitivity of the main results (table 4, model 3) to a number of alternative specifications. Because the dependent variables are dichotomous and do not meet the assumption of normality, logistic regression models and odds ratios are estimated first. Second, the regression results are weighted to account for the complexity of the survey design of the CPS. Third, observations from California and Colorado are excluded because the AYC exemption policy in those states can vary by county. In every state, there is a concern that AYC exemption policies may not be implemented as they are written into law. This is an important limitation of the current study and cannot be addressed easily. However, the discretion is likely to be greatest in the two states where authority over the policy is exercised at the county level. Fourth, tests are conducted with two alternative comparison groups: single, high-educated (some college or more) mothers with infants and single, low-educated mothers with school-aged children (ages 5–6 years). The final sensitivity test uses a lagged measure of state AYC exemption policy to account for the fact that mothers might make decisions during pregnancy based on their knowledge of state policy at that time. The results for all sensitivity tests are estimated in models that include the full set of controls.

Table 5 shows the results of these tests. The coefficients shown are on interactions between AYC exemption length and marital status. They can be interpreted as estimates of the associations between exemption length and the outcome measures for the treatment group after the association with the comparison group is differenced. Consistent with the main results, these estimates offer almost no evidence that AYC exemptions affect the probability of employment or of working; neither the presence nor length of an exemption is found to affect those outcomes in these tests. The finding of a relationship between having no exemption and the probability of working full-time hours is robust to all model specifications, although the magnitude of the association does decrease slightly in several of the alternative specifications. As the result from the logistic regression suggests, the odds that a low-educated single mother will work full-time hours are 1.14 times as large in a state with no exemption as in a state with an exemption of 12 or more months.

The one aberrant finding in these alternative models is that, when comparison group 2 (low-educated single mothers with 5- or 6-year-olds) is used, living in a state with no AYC exemption is associated with lower employment rates relative to living in a state with a longer AYC exemption among the treatment group. The direction of this effect is counterintuitive and inconsistent with the null results of every other specification predicting employment. A close look at the raw differences in employment rates between the treatment and comparison groups (not shown) suggests that this difference-in-differences estimate is the result of no difference in treatment group employment rates as a function of AYC exemption policy (all are around 45 percent). Rather, the estimate seems to stem from a large difference in comparison group employment rates in states with no exemption (78 percent) and in states with an exemption of 12 or more months (66 percent). Thus, this result should not be interpreted as an effect of AYC exemption policy but rather as a statistical

artifact of using a comparison group with substantially different employment patterns than the treatment group.

Subgroup Analysis

The final step in the analysis is to estimate the effects of AYC exemption length for specific subgroups of mothers with infants. Employment and welfare take-up rates are estimated to differ substantially by maternal race, ethnicity, nativity, age, and the age of youngest child. For instance, many women return to work within 3 months of giving birth. For this reason, one might expect the AYC exemption to have a larger effect when a child is less than 3 months old than it has later in the child's first year. The effect of AYC exemption policy is estimated separately for the following subgroups: white and nonwhite race, Hispanic and non-Hispanic ethnicity, native-born and nonnative, mother's age under 25 and mother's age 25 or older, and child's age 0–3 months and child age 4–11 months. Ideally, one would also examine subgroup differences by the mother's labor force attachment prior to the child's birth. Unfortunately, the June CPS does not offer information on the mother's employment prior to her child's birth. Although most June CPS observations can be linked to information from earlier CPS waves, the timing of those waves relative to the birth of sample mothers' child can be expected to vary greatly.

To ease the interpretation of the results of these subgroup analyses, separate regressions are estimated to predict each of the dependent variables for each subgroup. This approach allows the coefficients on the control variables to differ by group (similar to a fully interacted model). Because the subgroup models have smaller samples than the main models, the subgroup models have less power to identify the precise effects of the policy. For this reason, and because the inclusion of state fixed effects is estimated to make little difference in the main models, the subgroup models do not control for state fixed effects. The consistency of the results are also tested by using pooled models that estimate a full set of two- and three-way interactions among each demographic characteristic, marital status, and AYC exemption length. This specification allows the intercept to vary by group but does not allow the effect of individual control variables to do so. The pooled models examine not only the size and statistical significance of the three-way interactions but also Wald tests of joint significance for both of the three-way interactions that capture the policy effects.

Results (not presented) suggest that there are only a few statistically significant differences across subgroups in AYC exemption length's associations with on the measured outcomes. Although AYC exemption length is not estimated to affect non-Hispanic mothers in the treatment group, living in a state with a short exemption (3–9 months rather than 12 or more months) is associated with a decrease in employment rates among Hispanic mothers in the treatment group. This counterintuitive difference in employment rates is large, approximately 28 percentage points, and statistically significant in results from both separate subgroup regressions and pooled regressions. In the pooled regression, the Wald F -statistic is marginally significant, allowing the author to reject the null hypothesis that both three-way interactions are equal to zero ($F = 2.99$; $p < .10$). The direction of this effect is the opposite of what one would expect. This may suggest that some unobserved heterogeneity among states with short exemptions is particularly relevant to the work decisions of Hispanic mothers and that these models do not properly control for that influence.

Living in a state with no exemption is estimated to be associated with an increase in employment rates among mothers 25 years and older but not among younger mothers. In the subgroup regression for the older mothers (age 25 or older), the coefficient on the two-way interaction between being single and having no AYC exemption (relative to an exemption of 12 or more months) is .39 and marginally significant. In the pooled regression, the estimate

for the three-way interaction is statistically significant, as is the Wald F -test ($F = 4.35$; $p < .05$). Understanding the precise reason for this effect on older (but not younger) mothers is beyond the scope of this study, but one plausible explanation is that the older mothers may receive less financial support from parents or other family members than younger mothers do. For this reason, the incentive offered by AYC exemptions may be more compelling to older mothers in their decision to work following the birth of a child.

Discussion

Prior descriptive analysis of welfare caseloads in multiple states suggests that welfare is increasingly used as a form of maternity leave by single, low-educated mothers, many of whom do not have access to leave through their employers (Zedlewski and Alderson 2001; Wisconsin Legislative Audit Bureau 2005). However, this study does not find strong evidence that AYC exemptions influence the employment and work decisions of welfare-eligible mothers of infants. The bulk of the findings suggest that AYC exemptions have no effect on the likelihood of being employed or working in the week prior to the survey; neither the presence nor length of exemptions is found to affect those outcomes. However, the probability that single, low-educated mothers of infants report working full-time hours is substantially higher in states with no AYC exemption than in states with one. This relatively large difference, 23 percentage points, is robust to the inclusion of state policies and fixed-effects as well as to the use of several alternative specifications.

Although analyses control for a set of state policies, state unemployment rates, and state fixed effects, the results may be biased by still unobserved differences among states with no exemptions and other states. Because AYC policies changed very little within states over the study period, the most likely culprits for omitted variable bias are between-state differences (e.g., policies, demographic composition, and aspects of the economic climate) that are correlated with both AYC exemption length and maternal work decisions. Thus, one should be cautious in interpreting this relationship between AYC exemption policies and full-time work rates as more than an association.

The mostly null findings are somewhat surprising but not entirely so. The costs of welfare receipt, including stigma and administrative burden, may be too great to make the AYC exemption attractive as an option for paid maternity leave. Because welfare assistance is time-limited, mothers may weigh the benefits of taking an AYC exemption against the cost of expending finite months of allowable welfare receipt. Although many low-educated and low-income mothers are not covered by or eligible for FMLA, those with access to FMLA may prefer to remain employed and take unpaid family leave rather than quit a job to receive welfare and have to search for employment again later. In addition, the study defines the treatment group as single, low-educated mothers of infants; this relatively broad definition may include women who were not attached to the labor force prior to the birth as well as those who are not aware of or interested in welfare benefits. This type of measurement error might also bias the estimates toward zero by washing out the effects on the true treatment population. Unfortunately, the design of the June CPS data does not allow for precise identification of a mother's work status prior to the birth of her youngest child or her current welfare receipt.

The effects of this policy may also be dulled by less than perfect implementation. Welfare caseworkers have considerable discretion over the administration of work requirements and exemptions. This discretion can benefit families by shaping the program requirements and supports to individual needs, but it can also impede efforts to observe the effects of written policy. In a study of welfare-to-work transitions among parents of infants, Gretchen Kirby, Christine Ross, and Loren Puffer (2001) document several examples of this type of

caseworker influence on AYC exemption policy implementation. They cite the case of a Milwaukee welfare agency that refers recipients with a child under the age of 3 months (the exemption length) to a set of specialized services for parents of infants. The services include home visiting and parenting classes. At the end of 3 months, the hours that mothers continue to spend participating in those services can be counted toward welfare's work requirements. Under such a scenario, it would not be surprising to find that exemption length is not predictive of employment status.

Early maternal employment, particularly at full-time levels, is associated with detriments to child cognitive development, although these effects are often limited to children from advantaged backgrounds (Baydar and Brooks-Gunn 1991; Ruhm 2004; Hill et al. 2005). In low-income families, maternal employment can benefit the cognitive and socioemotional development of preschool children if it increases family income (Vandell and Ramanan 1992; Morris, Duncan, and Clark-Kauffman 2005; Dearing et al. 2006). Yet, most welfare-eligible women are employed in the low-skilled labor market, which is characterized by low pay, limited benefits, and few opportunities for advancement.

If AYC exemptions were associated with reduced employment or work among single mothers of infants, there could be short-term benefits for children; however, one might worry that the long-term effects could be negative if the time a mother spends away from the labor market ultimately decreases her employability and earning potential. This study suggests instead that AYC exemptions allow low-income mothers to work part-time while their children are young. Perhaps they combine earnings with welfare receipt that is not contingent on full-time employment. The findings propose a compelling argument for why states should offer AYC exemptions and encourage eligible mothers to take them up (if they do not already): the policy appears to encourage mothers of infants to remain connected to the labor market but to work less intensely while caring for young children. Such a combination may have net short- and long-term benefits for both children and society. Welfare and other safety net programs have become increasingly linked to employment, and they are designed primarily for workers. Thus, it is all the more important that states use discretion over program policies and administrative rules to make those programs flexible and accommodating to the realities of low-wage workers' life demands. The AYC exemptions are an example of a rule that warrants additional attention from researchers, policy makers, and program administrators if the policy is to be effective in promoting the dual goals of family self-sufficiency and child well-being.

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Appendix

Appendix:

Table A1

State AYC Exemption Policy, 1998–2008

State	1998	2000	2002	2004	2006	2008
Alabama	12	3*	3	3	3	3
Alaska	12	12	12	12	12	12

State	1998	2000	2002	2004	2006	2008
Arizona	0	0	0	0	0	0
Arkansas	3	3	3	3	3	3
California [†]	12	12	12	12	12	12
Colorado [†]	12	0	0	0	0	0
Connecticut	12	12	12	12	12	12
Delaware [‡]	3.25	3.25	3.25	3.25	3.25	12 [*]
District of Columbia	36	12 [*]	12	12	12	12
Florida	3	3	3	3	3	3
Georgia	12	12	12	12	12	12
Hawaii	6	6	6	6	6	6
Idaho	0	0	0	0	0	0
Illinois	12	12	12	12	12	12
Indiana	6	3 [*]	3	3	12 [*]	3 [*]
Iowa	0	0	0	0	0	0
Kansas	12	12	12	12	12	6 [*]
Kentucky	12	12	12	12	12	12
Louisiana	12	12	12	12	12	12
Maine	12	12	12	12	12	12
Maryland	12	12	12	12	12	12
Massachusetts	24	24	24	24	24	24
Michigan	3	3	3	3	3	3
Minnesota	12	12	12	3 [*]	3	3
Mississippi	12	12	12	12	12	12
Missouri	12	12	12	12	12	12
Montana	0	0	0	0	0	0
Nebraska	3	3	3	0 [*]	0	0
Nevada	12	12	12	12	12	12
New Hampshire	24	24	24	24	24	24
New Jersey	3	3	3	3	3	3
New Mexico	12	12	12	12	12	12
New York	3	3	3	3	3	3
North Carolina	60	12 [*]	12	12	12	12
North Dakota	4	4	4	4	4	4
Ohio	12	12	12	12	12	12
Oklahoma	3	3	3	3	3	3
Oregon	3	3	3	3	3	3
Pennsylvania	12	12	12	12	12	12
Rhode Island	12	12	12	12	12	12
South Carolina	12	12	12	0 [*]	12 [*]	12
South Dakota	3	3	3	3	3	3
Tennessee	4	4	4	4	4	4
Texas	48	36 [*]	12 [*]	12	12	12

State	1998	2000	2002	2004	2006	2008
Utah	0	0	0	0	0	0
Vermont	18	18	24 *	24	24	24
Virginia	18	18	18	18	18	18
Washington	4	4	4	4	4	4
West Virginia	12	12	12	12	12	12
Wisconsin	3	3	3	3	3	3
Wyoming	3	3	3	3	3	3

SOURCES.—Rowe and Roberts 2004; Rowe and Russell 2004; Rowe and Murphy 2006, 2009; Rowe et al. 2006.

NOTE.—AYC = age-of-the-youngest-child exemption; reflects state policies in July of each year.

* Indicates timing of state policy changes.

† Counties have some discretion in expanding or reducing this exemption.

‡ Thirteen weeks prior to 2008.

Biography

Heather D. Hill is an assistant professor at the University of Chicago's School of Social Service Administration and the co-principal investigator of EINet: The Employment Instability, Family Well-Being, and Social Policy Network (<http://ssascholars.uchicago.edu/einet>). Her research examines the effects of social policy on family economic circumstances and on child health and development.

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Fig. 1.

Maternal employment rates by marital status, education, and age of youngest child, 1990–2008. Source: Current Population Survey, June Fertility Supplement, 1990–2008. Low-educated = no more than a high school diploma; high-educated = more than a high school diploma. The bordered region from 1998 to 2008 indicates the study period. The treatment group includes low-educated single mothers with infants. The comparison group includes low-educated married mothers with infants. Alt. (alternative) comparison group 1 includes high-educated single mothers with infants; alt. comparison group 2 includes low-educated single mothers with 5- or 6-year-olds.

Table 1

Frequency Distribution of State AYC Exemption Policy, 1998–2008

Year	Range	State AYC Exemption Length						No. of States with Change
		No Exemption		3–9 Months		12 or More Months		
		No.	%	No.	%	No.	%	
1998	0–60	5	10	17	33	29	57	
2000	0–36	6	12	18	35	27	53	5
2002	0–24	6	12	18	35	27	53	2
2004	0–24	8	16	18	35	25	49	3
2006	0–24	7	14	17	33	27	53	2
2008	0–24	7	14	18	35	26	51	4

SOURCES.—Rowe and Roberts 2004; Rowe and Russell 2004; Rowe et al. 2006; Rowe and Murphy 2006, 2009.

NOTE.—AYC = age-of-the-youngest-child exemption; reflects state policy in July of each year.

Table 2

Weighted Population Characteristics of Low-Educated Mothers of Infants, by Marital Status

		Mean or Proportion		
	Range ^a	Single Mothers	Married Mothers	Sig ^b
Maternal employment (week prior to survey):				
Employed	0–1	.43	.40	+
Working, if employed	0–1	.88	.88	
Working full-time hours, if working	0–1	.69	.68	
Maternal characteristics:				
Age (years)	18–44	23.91	27.78	**
Number of own children	1–11	2.06	2.27	**
Age of youngest child (months)	0–11	5.73	5.97	*
Race:				**
White	0–1	.67	.87	
Black	0–1	.29	.08	
Other	0–1	.04	.05	
Hispanic	0–1	.26	.35	**
Native born	0–1	.86	.68	**
Eligible for AYC exemption in state ^c	0–1	.69	.69	
State policy and economic context:				
Length of TANF AYC exemption:				
No exemption	0–1	.06	.06	
3–9 months	0–1	.41	.40	
12 or more months	0–1	.53	.54	
TANF full family sanction	0–1	.71	.69	
Short time limit on TANF	0–1	.13	.15	
Required TANF work participation rate for state (%)	0–50	7.76	7.43	
State has refundable EITC	0–1	.19	.20	
Unemployment rate	2.2–8.3	5.09	5.03	
<i>N</i>		1,879	2,364	

SOURCE.—Current Population Survey, June Fertility Supplement, 1998–2008.

NOTE.—AYC = age-of-the-youngest-child exemption; TANF = Temporary Assistance for Needy Families program; EITC = earned income tax credit. Sample includes mothers 18–44 years of age who have no more than a high school diploma and a youngest child under 12 months of age.

^aVariable ranges do not differ for the single and married subgroups.^bTwo-sided *t*-tests (scale variables) and chi-square tests (categorical variables) were used to test differences between the characteristics of single and married mothers.^cYoungest child's age < exemption length.⁺*p* < .10.^{*}*p* < .05.

**
 $p < .01$.

Table 3

Employment among Low-Educated Mothers with Infants, by Exemption Length and Marital Status

	Employed			Working (if Employed)			Working FT Hours (if Working)		
	DD			DD			DD		
	Single	Married	Single-Married	Single	Married	Single-Married	Single	Married	Single-Married
AYC exemption policy:									
No exemption	.44 (.05)	.38 (.03)		.82 (.06)	.85 (.04)		.83 (.05)	.62 (.05)	
3–9 months	.44 (.02)	.43 (.02)		.89 (.03)	.89 (.02)		.66 (.03)	.65 (.03)	
2 or more months	.42 (.02)	.39 (.02)		.89 (.02)	.87 (.02)		.69 (.02)	.70 (.02)	
Difference by policy:									
No exemption, 3–9 months	.00 (.05)	-.05 (.04)	.05 (.06)	-.07 (.06)	-.04 (.04)	-.03 (.08)	.17** (.06)	-.03 (.06)	.20* (.08)
No exemption, 12 or more months	.02 (.05)	-.01 (.04)	.03 (.06)	-.07 (.06)	-.02 (.04)	-.05 (.07)	.13* (.05)	-.08 (.06)	.22** (.08)
3–9 months, 12 or more months	.02 (.03)	.04+ (.03)	-.03 (.04)	.00 (.03)	.02 (.02)	-.02 (.04)	-.03 (.04)	-.05 (.04)	.02 (.05)
N	1,879	2,364		827	976		793	899	

SOURCE.—Current Population Survey, June Fertility Supplement, 1998–2008.

NOTE.—AYC = age-of-the-youngest-child exemption; DD = difference-in-differences. Standard errors are in parentheses. Sample includes women 18–44 years of age with a youngest child under 12 months of age and no more than a high school diploma.

* $p < .05$.

** $p < .01$.

Table 4
OLS Regression Results Predicting Employment among Low-Educated Mothers of Infants

	Employed			Working (if Employed)			Working FT Hours (if Working)		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Exemption policy $\times$ marital status:									
No exemption $\times$ single	.033 (.039)	.018 (.047)	.017 (.047)	.004 (.064)	-.008 (.057)	.011 (.050)	.211** (.078)	.218** (.074)	.230** (.077)
3–9 months $\times$ single	-.023 (.035)	-.043 (.042)	-.046 (.041)	.012 (.033)	.002 (.035)	.007 (.036)	.028 (.052)	.009 (.053)	.014 (.054)
12 or more months $\times$ single (referent)									
Exemption policy:									
No exemption	-.002 (.032)	-.013 (.033)	-.024 (.127)	-.042 (.040)	-.024 (.035)	.142 (.120)	-.100+ (.057)	-.106 (.064)	-.096 (.087)
3–9 months	.040 (.027)	.043 (.026)	.105* (.047)	-.009 (.022)	.004 (.022)	.019 (.053)	-.047 (.034)	-.042 (.035)	.015 (.112)
12 or more months (referent)									
Maternal characteristics:									
Marital status:									
Single	.038* (.019)	.102 (.078)	.103 (.075)	-.001 (.023)	.228** (.071)	.214** (.068)	.018 (.035)	.000 (.113)	-.024 (.119)
Married (referent)									
Age	.026** (.009)	.026** (.009)	.026** (.009)	-.020* (.008)	-.018+ (.009)	-.018+ (.009)	.068** (.018)	.069** (.019)	.071** (.019)
(Age) ²	-.000+ (.000)	-.000+ (.000)	-.000+ (.000)	.000* (.000)	.000+ (.000)	.000+ (.000)	-.001** (.000)	-.001** (.000)	-.001** (.000)
Number of own children	-.043** (.009)	-.043** (.009)	-.045** (.009)	.008 (.007)	.008 (.006)	.010 (.006)	-.005 (.010)	-.005 (.010)	-.008 (.010)
Age of youngest child	.022* (.008)	.023** (.008)	.024** (.008)	.168** (.011)	.168** (.011)	.166** (.011)	-.022+ (.013)	-.022+ (.013)	-.025+ (.013)
(Age of youngest child) ²	-.001 (.001)	-.001+ (.001)	-.001+ (.001)	-.011** (.001)	-.011** (.001)	-.011** (.001)	.001 (.001)	.001 (.001)	.001 (.001)
Race:									
Black	.015 (.030)	.019 (.029)	.036 (.029)	-.015 (.017)	-.008 (.016)	-.027+ (.016)	.093** (.031)	.091** (.032)	.088* (.034)

	Employed			Working (if Employed)			Working FT Hours (if Working)		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Other	.007 (.033)	.002 (.036)	.011 (.042)	.042 (.026)	.036 (.028)	.048 (.031)	.048 (.036)	.052 (.036)	.055 (.044)
White (referent)									
Hispanic ethnicity	-.052* (.020)	-.041* (.019)	-.035 (.022)	-.015 (.017)	-.015 (.016)	-.024 (.021)	.066* (.033)	.068* (.033)	.056 (.039)
Native born	.108** (.025)	.104** (.026)	.100** (.026)	-.020 (.020)	-.018 (.020)	-.016 (.020)	-.038 (.035)	-.036 (.035)	-.027 (.037)
State policy and economic context:									
Short time limit on TANF receipt		-.048* (.023)	-.078 (.052)		-.064+ (.034)	-.134* (.051)		.027 (.045)	-.002 (.092)
TANF full family sanction		.032 (.021)	-.022 (.028)		.024 (.018)	.069* (.026)		-.013 (.035)	.005 (.040)
TANF work rate		.001 (.001)	.000 (.001)		.002* (.001)	.002** (.001)		.002 (.001)	.002 (.001)
Refundable EITC		-.014 (.035)	-.039 (.042)		-.004 (.020)	-.072** (.025)		-.007 (.037)	.037 (.049)
Unemployment rate		-.022* (.010)	-.004 (.011)		.009 (.007)	.011 (.010)		.005 (.013)	.000 (.017)
Single × short time limit		.070 (.042)	.069+ (.041)		.069 (.054)	.065 (.053)		-.034 (.064)	-.052 (.064)
Single × full family sanction		-.032 (.029)	-.031 (.029)		-.074* (.032)	-.073* (.034)		.033 (.061)	.035 (.062)
Single × work rate		-.001 (.001)	-.000 (.001)		-.001 (.002)	-.001 (.002)		-.002 (.002)	-.002 (.002)
Single × EITC		.026 (.043)	.035 (.041)		-.020 (.038)	-.014 (.039)		.078 (.059)	.057 (.058)
Single × unemployment rate		-.008 (.014)	-.009 (.013)		-.034* (.013)	-.032* (.013)		.002 (.018)	.007 (.018)
State fixed effects included			X			X			X
Observations	4,243	4,239	4,239	1,803	1,800	1,800	1,692	1,690	1,690
R ²	.036	.041	.033	.282	.291	.289	.036	.04	.036

SOURCE.—Current Population Survey, June Fertility Supplement, 1998–2008.

NOTE.—OLS = ordinary least squares; AYC = age-of-the-youngest-child exemption; TANF = Temporary Assistance for Needy Families program; EITC = state earned income tax credit; FT = full-time. Robust standard errors in parentheses. Sample includes women 18–44 years of age with a youngest child less than 12 months of age and no more than a high school diploma.

⁺ $p < .10$.
^{*} $p < .05$.
^{**} $p < .01$.

Hill

Table 5

Results of Sensitivity Tests

Model Specification	Employed		Working (if Employed)		Working Full-Time (if Working)	
	No	3-9 Months	No	3-9 Months	No	3-9 Months
	Exemption	Exemption	Exemption	Exemption	Exemption	Exemption
OLS results from table 4, model 3	.017 (.047)	-.046 (.041)	.011 (.050)	.007 (.036)	.230** (.077)	.014 (.054)
Logistic regression (odds ratios shown)	.071 (.200)	-.193 (.173)	.200 (.737)	.169 (.582)	1.136** (.370)	.062 (.250)
Weighted for survey design	.01 (.065)	-.29 (.041)	-.028 (.060)	-.019 (.036)	.197* (.086)	.036 (.060)
Excluding CA and CO due to county-level discretion	.02 (.054)	-.047 (.041)	.025 (.057)	.007 (.037)	.193* (.077)	.012 (.058)
Alternative comparison groups:						
Group 1: High-educated single mothers with infants	.047 (.059)	.053 (.047)	.024 (.079)	.009 (.043)	.154+ (.081)	-.034 (.052)
Group 2: Low-educated single mothers with 5- or 6-year-olds	-.125** (.045)	-.011 (.036)	-.057 (.047)	.000 (.027)	.150+ (.080)	-.041 (.050)
Lagged policy measure	.063 (.040)	-.033 (.037)	-.036 (.055)	-.007 (.041)	.249** (.081)	.020 (.052)

SOURCE.—Current Population Survey, June Fertility Supplement, 1998–2008.

NOTE.—OLS = ordinary least squares regression. Robust standard errors in parentheses. Sample includes women 18–44 years of age with a youngest child less than 12 months of age and no more than a high school diploma. All models include full set of controls, including mother's characteristics, state policies and unemployment rate, policy-by-treatment interactions, and state fixed effects. Coefficients should be interpreted relative to low-educated single mothers with infants in states that have exemptions of 12 or more months.

+ $p < .10$.

* $p < .05$.

** $p < .01$.