Parental Leave Policies and Parents' Employment and Leave-Taking

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Abstract

We describe trends in maternal employment and leave-taking after birth of a newborn and analyze the extent to which these behaviors are influenced by parental leave policies. Data are from the June Current Population Survey (CPS) Fertility Supplements, merged with other months of the CPS, and cover the period 1987 to 1994. This time-span is one during which parental leave legislation expanded at both the state and federal level. We also provide the first comprehensive examination of employment and leave-taking by fathers of infants. Our main finding is that leave expansions are associated with increased leave-taking by both mothers and fathers. The magnitudes of the changes are small in absolute terms but large relative to the baseline for men and much greater for college-educated or married mothers than for their less-educated or single counterparts.

Keywords

parental leave; parental employment; leave-taking

The labor force participation of mothers has risen sharply in recent years, and women have become much more likely to work continuously over their lifecycle. For no group has the change been more dramatic than for women with newborns. In 1968, only 21 percent of mothers of infants were in the labor force (U.S. Bureau of the Census, 2001), but over half of such women participated in every year since 1986 (Dye, 2005; U.S. Department of Labor, 2007).[1]

The fact that mothers are employed does not mean that they are at work. In most countries, mothers with infants are entitled to take paid job-protected leave to recover from the birth and care for the newborn, and many nations have extended parental leave rights to fathers (Moss & Deven, 1999; Kamerman, 2000; Waldfogel, 2001a; Gornick & Meyers, 2003; Hantrais, 2004, 2007). Although the U.S. was long an exception, both federal and state parental leave laws have recently been enacted.

One intent of the federal and state laws is to provide mothers and fathers with the opportunity to take some time off work after the birth of a child, without the risk of job loss.[2] Even the most generous of U.S. laws guarantee leave for a relatively short period (typically, less than 3 months), and the limited previous research does not conclusively indicate how such legislation has influenced the leave-taking of either mothers or fathers.

This study utilizes data for 1987 to 2004 from the June Current Population Survey Fertility Supplement, merged with data from other months of the main CPS. We describe trends in parents' employment and leave-taking immediately following childbirth and analyze the extent to which changes in leave legislation have led more parents to take leave. Increased leave-

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[1] See Johnson (2008) for trends over time in the participation rate of first-time mothers.
[2] Some laws also permit work absences for other reasons, such as to care for sick relatives.

taking could have important implications for children, since it presumably increases the time that parents are able to spend with their infants. We also explore whether leave extensions have resulted in more mothers being employed post-childbirth, as opposed to leaving work altogether, which might have the opposite effect (reducing maternal time with young children).

Our primary finding is that expanded leave entitlements *are* associated with increased time on leave by both mothers and fathers but are *not* linked to changes in overall employment rates. These relationships vary by gender, education, and family structure. In particular, higher leave-taking by women in the birth month and the succeeding two months is confined to highly educated and married mothers, probably because these groups are most often covered by the laws and able to afford unpaid leave. Fathers, in contrast, typically take extremely short leaves (or none at all), and leave laws are correlated with increased leave-taking only during the birth month. As with mothers, significant associations are restricted to more educated men.

Background

Understanding how parental leave legislation affects employment and leave-taking is of more than academic interest. Parental (particularly maternity) leave has been viewed as an important mechanism for improving the job continuity of mothers – who would otherwise often be forced to terminate jobs in order to spend time with young children – and reducing the "family gap" in women's wages (Waldfogel, 1998), although excessively long leaves might undermine women's position in the labor market (Pettit & Hook, 2005; Gupta, Smith, & Verner, 2006). Previous studies indicate that paid parental leave entitlements increase female employment and mitigate the negative labor market consequences of childbearing (Ruhm, 1998; Jaumotte, 2004; Pettit and Hook, 2005), with limited research (e.g. Chatterji & Markowitz, 2005) raising the possibility that maternity leave additionally improves the health of mothers.

There is also evidence that expanded leave rights improve children's health. Cross-national studies find that extended parental leave entitlements are associated with lower infant mortality (Ruhm, 2000; Tanaka, 2005), and U.S. research indicates that infants are less likely to be breast-fed, taken to the doctor for well-baby visits, or up-to-date on their immunizations when mothers return to work in the first 3 months (Berger, Hill, & Waldfogel, 2005). A rapid return might also affect infant health through earlier enrollment in child care. Although parents often report a preference for having their infants cared for by the other parent or relatives (Riley & Glass, 2002), many newborns with working mothers are cared for by non-relatives, often in group settings.[3] Group child care in the first years of life does pose some health risks, although these are usually minor and short-lived (Meyers, Rosenbaum, Ruhm, & Waldfogel, 2004).

A large body of research examines how early maternal employment and non-maternal care affects children's later cognitive and emotional well-being. Common findings are that work during the first year of the child's life is associated with lower cognitive test scores at ages three through five (see, e.g., Desai, Chase-Lansdale, & Michael, 1989; Baydar & Brooks-Gunn, 1991; Blau & Grossberg, 1992; Han, Waldfogel, & Brooks-Gunn, 2001; Ruhm, 2004) and that long hours of maternal work or child care use during the first year of life are linked to increased behavior problems (NICHD ECCRN, 1998).

Many studies have examined parental leave laws in Europe (Ruhm, 1998; Moss & Deven, 1999; Jaumotte, 2004; Pettit & Hook, 2005), but only a few have investigated such laws in the United States. Klerman and Leibowitz (1997), using data from the 1980 and 1990 Census, find that state parental leave laws were correlated with a two week increase in maternity leave use

[3]Over a third of infants are in care with a non-relative as their primary arrangement when their mother is employed, and over half are with a non-relative at least part of the time (U.S. Bureau of the Census, 2008, Tables 1B and 2B).

(also see Klerman & Leibowitz, 1998, 1999). Waldfogel's (1999b) analysis of the March 1992–1995 CPS indicates that leave-taking by women with infants rose 23 percent after enactment of the FMLA. Using Survey of Income and Program Participation (SIPP) data, Ross (1998) showed that women took about six weeks more unpaid leave due to the FMLA. Han and Waldfogel (2003), also using the SIPP, found that longer entitlements corresponded to more leave-taking, but that these associations were often not significant when controlling for state fixed effects. Importantly, the latter two studies did not examine paid-leave taking (since the SIPP tracks unpaid leave only), and none of the preceding analyses investigate leave-taking for more than a few years after implementation of the FMLA.

There is also a lack of research on how parental leave laws affect fathers. If paternity leave facilitates fathers establishing relationships with newborns and being more involved with children subsequently, such entitlements have potentially important implications for child well-being. Yet, paternity leave is fairly new and rarely studied in the United States. Limited research suggests that men are reluctant to take leave, even when covered, fearing that doing so would hurt their careers (Conference Board, 1994; Malin, 1994, 1998). Moreover, men who do use leave typically take only a week or two (Commission on Family and Medical Leave, 1996; Hyde, Essex, & Horton, 1993; Pleck, 1993; Armenia & Gerstel, 2005). Neponmyaschy & Waldfogel (2007) find that around 90 percent of resident fathers of children born in 2001 take some leave after the birth, although most take two weeks or less, and that the small fraction of men taking longer leaves are more involved with their children at nine months of age. Fathers gained greater access to paternity leave following passage of the FMLA (Waldfogel, 1999a, 2001b; Cantor et al., 2001), but we know little about how this or other leave legislation affects their leave-taking.[4] This paper helps to fill that gap by providing an in-depth investigation of how such entitlements influence the leave-taking of fathers.

A third shortcoming is that, to our knowledge, no large-scale studies have specifically assessed the influence of leave policies on families headed by less-educated parents or single mothers. Although such families may most need the support provided by parental leave, prior research suggests that they are least likely to be eligible for or able to afford unpaid leave (Cantor et al., 2001; Waldfogel, 2001b).[5] We address this issue by examining how the effects of leave policies vary with parental education and martial status.

Finally, previous related analyses typically ignore other public policies that may have changed around the same time as parental leave legislation. The role of means-tested benefits is readily apparent, particularly for less-educated and single mothers. We address this by estimating models that hold constant the welfare reforms of the 1990s, which altered work requirements and rules affecting eligibility for cash welfare and other benefits. We also control for changes in the Earned Income Tax Credit (EITC), which is linked with female employment (e.g. Meyer & Rosenbaum, 2001) and may be spuriously correlated with leave entitlements.

Conceptual framework

Klerman and Leibowitz (1997) provide a useful framework for considering how parental leave policies are likely to affect employment and leave-taking.[6] Their model focuses on mothers and contains four key assumptions. First, the marginal utility of time at home and consequently the "reservation wage" (the lowest wage offer that would be accepted) decreases with infant age. Second, firms offer a fixed amount of leave (possibly none) in the absence of mandates.

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[4]Han and Waldfogel (2003) provide the only prior analysis of leave laws that included fathers, and they examined unpaid leave-taking only.
[5]A study of 153 working-class dual-earner families with newborns found that they use accrued leave time, take unpaid leave, or do not take time off at all (Perry-Jenkins, Bourne, & Meteyer, in press; see also Geertsma, 2007).
[6]Ruhm (1998) and Waldfogel (1999b) provide related discussions.

Third, mothers must choose either to take no more than the maximum leave offered by the employer or to quit their jobs in order to spend more time at home with their child. Finally, mothers changing jobs typically receive lower wages when reemployed.

This framework leads to useful predictions. In particular, although leave entitlements are expected to increase leave-taking – by permitting some parents additional time off work without having to quit their jobs – the overall effects on employment are ambiguous. First, some parents will choose the relatively short job-protected leave guaranteed by law rather than a longer absence that would require finding a new job. Second, some may increase labor supply prior to childbirth, so as to subsequently qualify for leave (although this is more likely for paid leaves). Conversely, parents who would have taken the short leave period offered by employers, in the absence of the laws, may extend time off work to the full duration of the entitlement and a longer period of leave might induce some parents to develop a taste for being at home and so to subsequently quit jobs.[7]

The model also suggests how the effects of leave rights may differ across groups. For instance, it seems reasonable that mothers will typically desire a longer period of leave than fathers (e.g. due to cultural norms, a desire to continue breast-feeding, or because they experience smaller wages losses than men during or after the leave). As such, they are likely to be more constrained, in the absence of entitlements, and so to experience larger increases in leave-taking when laws relaxing these constraints are enacted. On the other hand, employers may be more willing to provide short periods of informal leave to women than men, in which case legislation will increase the frequency and duration of very short leaves taken by fathers.

The effects may also vary with socioeconomic status (SES). Klerman and Leibowitz (1997) point out that parental leave laws are likely to result in larger increases in leave-taking for persons with large amounts of firm-specific capital, employed in "rare" jobs, and expecting to remain in their jobs for a lengthy period of time. Our interpretation of these predictions is that the effects of leave laws are likely to be more pronounced for "advantaged" workers – who are more likely to meet the qualifying conditions, have a harder time finding new jobs equivalent to their old ones, and may be more able to finance periods of unpaid leave. We do not attempt to provide an in-depth analysis of the roles of class or SES but do separately estimate specifications for subsamples stratified by education, to provide some indication of these differences.

We also examine whether the results for mothers differ by marital status (all fathers in our sample are married). Although the gains in job continuity facilitated by leave laws are likely to be particularly important for unmarried women, who are often the sole source of earnings for their families, married women are more likely to be covered by parental leave policies and may find it easier to finance unpaid or partially paid leaves.

Parental leave policies

We consider three types of leave policies: the federal FMLA; state parental leave laws; and state temporary disability insurance (TDI) programs. The FMLA, which was signed into law in February 1993 and took effect in August of that year, provides up to 12 weeks of unpaid leave for specified reasons, including the birth or assumption of care for a new child. The law applies only to workers meeting qualifying conditions, which include having worked for at least 12 months for an employer with 50 or more employees. The leave is unpaid, but employers providing health insurance must continue it during the leave. Because of the firm size and

[7]There are also indirect effects whose directions are ambiguous. For instance, some husbands may increase labor supply to offset leave-taking by wives, and the mandates could affect wages or fertility.

qualifying conditions, slightly fewer than half of private sector workers are estimated to be eligible under the FMLA (Ruhm, 1997), with slightly higher eligibility rates for men than women and lower coverage for single mothers and low income or less-educated workers (Commission on Family and Medical Leave, 1996; Cantor et al., 2001).. Since our data do not identify which new parents meet the FMLA qualifying conditions, we code any mother or father who had a child born on or after August 1993 as potentially eligible for 12 weeks of unpaid FMLA leave. This means that our analyses will understate the effects on workers actually made eligible by the laws. We provide estimates of this understatement below.

Several states enacted parental leave laws separate from the federal legislation. The earliest statute dates from October 1972 (in Massachusetts), and states have continued to pass laws even after the FMLA. Like the federal legislation, state laws apply only to qualifying workers, with small employers often exempt and some laws covering government but not private sector employees. Our data do not allow us to identify which individuals meet qualifying requirements under state laws, and we again code any parents with children born on or after enactment of such a law as being potentially covered under it. [8] Many state laws cover mothers but not fathers, in which case only mothers are coded as eligible under the law.

Five states offer *paid* leave to disabled workers through Temporary Disability Insurance (TDI) programs. These states and the dates on which their laws came into effect are Rhode Island (1942), California (1946), New Jersey (1948), New York (1949), and Hawaii (1969). TDI, while not originally designed for this purpose, provides mothers with a brief period of paid parental leave after giving birth because the 1978 federal Pregnancy Discrimination Act required TDI to cover pregnancy and maternity-related disability in the same way as other types of disability. Take-up of TDI programs for maternity leave purposes is substantial. Brusentsev and Vroman (2007) estimate that between 21 and 41 percent of families with a newborn in TDI states claim benefits. Since around half of new mothers are not employed prior to the birth (Han, Ruhm, Waldfogel, & Washbrook, in press) and so are ineligible for TDI, this suggests that 42 to 82 percent of new mothers eligible for TDI are claiming it. Typically mothers are entitled to 6 weeks of paid leave through TDI programs (8 weeks after a Caesarean section). Therefore, we classify mothers giving birth when TDI laws were in effect as being potentially eligible for 6 weeks of paid leave. We do not code fathers as eligible under TDI programs, since these laws apply only to mothers.

Parental leave entitlements became more widespread over the period examined.[9] In our sample, the share of new mothers potentially covered by a state or federal law rose from 26 percent in 1987 to 100 percent in 1994 (see Appendix Table A1). The increase for men was even sharper –from 3 percent in 1987 to 100 percent in 1994. Both figures are 100 percent in 1994 and thereafter since all new parents are potentially eligible under the FMLA, although as discussed earlier only about half are actually covered and eligible. There is variation in the duration of the entitlement after FMLA enactment, since some states guarantee more than 12 weeks of leave.[10]

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[8]We exclude laws that apply to state employees only, as these cover only a small minority of parents.
[9]Data on leave policies were obtained from Han and Waldfogel (2003), with updated information from the National Partnership for Women & Families (2002) and Stutts (2006).
[10]Some states cover more workers than the FMLA because they have lower job tenure or firm size requirements; we do not account for this as we lack data on individuals' tenure and firm size. California became the first state to pass a paid family and medical leave law, providing six weeks of paid leave. This law was passed in 2002 but took effect in mid-2004 (after the period we examine), and early evidence suggests that, as of 2004, many new parents were not yet aware of it (Appelbaum & Milkman, 2004). Washington became the second state to enact paid parental leave in 2007. The law takes effect in 2009 and will provide five weeks of paid leave. As of this writing, New Jersey has also passed a law, and similar legislation is under consideration in several other states.

Other policies

Other policies potentially affecting the employment and leave-taking of new parents changed over the period analyzed. Especially important are reforms to welfare and the EITC. Most welfare reforms during the 1990s were designed to increase parental employment, but the specific provisions enacted were diverse and may not have had uniform effects (Blank, 2002). Nor is it clear how these reforms should affect leave-taking. Our main focus is not to determine the impact of welfare reforms but rather to insure that our estimates of the effects of parental leave policies are not biased by omitting these potentially important covariates.

We control for three specific welfare system provisions. The first is a dichotomous variable indicating whether the state had an approved welfare waiver program prior to the 1996 enactment of the Temporary Assistance to Needy Families (TANF) program – this indicates whether welfare reform was underway in the state before 1996. Our second dummy variable is "turned on" in the month and year a state implemented TANF (we "turn off" the waiver variable, if applicable, at the same time).[11] The third variable measures the length, in months, of welfare work exemptions for mothers of infants. Prior to the reforms, women were exempt from work requirements until their youngest child was 36 months old. After the welfare reforms, these exemptions were shortened or eliminated. By 2000, 22 states had no exemption or required mothers to work by 3 months; 3 states required work by 6 months, and 20 others (and the District of Columbia) mandated work by 12 months (Brady-Smith, Brooks-Gunn, Waldfogel, & Fauth, 2001; Hill, 2007).[12] Mothers with young children are more likely to be employed in states that do not exempt them from work requirements (Hill, 2007) and these mothers breast-feed their infants for shorter durations (Haider, Jacknowitz, & Schoeni, 2003).

The generosity of EITC benefits is proxied by a variable measuring the natural log of the cash value of the maximum refundable benefit for a family with 2 or more children, combining benefits available under federal and state programs.[13] Although the welfare and EITC policies are expected to have particularly strong effects for single and less-educated mothers, who are most likely to be eligible for them, we control for these policies in all of our models.[14]

Data

Data on the month and year that mothers gave birth was obtained from the June supplements to the monthly Current Population Surveys (CPS), available in even numbered years between 1988 and 2004. Information on labor force status, number of children, and the age, education, marital status, and race/ethnicity of mothers and resident fathers was obtained from the regular monthly CPS. We use the CPS sampling structure –households are included for four months, out for the next eight, and then included for four additional months – to identify labor force status up to 12 months prior to and following the birth, although such information is available for only some of the time period for each respondent.

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[11]TANF was passed at the federal level in 1996 but became effective in states at varying dates from late 1996 to late 1998. Data on waivers and TANF effective dates are from the Council of Economic Advisors report on "The Effects of Welfare Policy and the Economic Expansion on Welfare Caseloads" and the TANF annual Reports to Congress from the U.S Department of Health & Human Services (http://www.acf.dhhs.gov/programs/opre/director.htm).

[12]Data on welfare work exemptions for mothers with infants are from various years of the Welfare Rules Databook compiled by the Urban Institute.

[13]Our EITC data are from Blau, Han, Kahn, & Waldfogel (2006). We do not include the non-refundable benefits (provided in a few states), since these do not reach all low-income families.

[14]We did not control for child care subsidies because they are unlikely to have strong effects on the labor supply of parents in the first few months of life (see, e.g., Hill, 2007) and because consistent data on them are not available.

Consider, a woman surveyed for the second time in June of 1998 and who has a child born in April of that year. In this case, we will have labor force data only for one through four months after the birth month (measured in May through August of 1998). Conversely, for a woman whose child is born in June, we would have data for the month prior to the birth, the birth month, and the next two months, as well as 11 and 12 months after the birth month. Finally, for a mother in her eighth survey month in June of 1998 and who gave birth in May of that year, we would be able to identify labor force status in the birth month and previous two months (from the April through June 1998 interviews) but also the 11th and 12th months prior to the birth month (from the surveys in May and June of 1997). The latter are important because we use women giving birth 11 or 12 months later as a control group in the difference-in-difference (DD) estimates emphasized below.

We are not able to identify the exact timing of births, since the June supplements give the month and year but not the day of birth. Labor force status is measured in the week prior to the CPS survey (the reference week) which, during the birth month, may occur before or after the child was born.[15] This matters for two reasons. First, our estimates refer to the birth month rather than the child's first month of life and similarly for later months. For ease of exposition, we will sometimes refer to results in terms of months of child age. For example, we may discuss leave-taking during the child's second month, when we really mean the second month following the birth month. Second, we will miss some short leaves that do not span the survey reference week. This is particularly relevant for men who generally take minimal amounts of leave. Thus, our estimates will accurately indicate the percentage of time parents are off work during a specified month, rather than the probability of their being on leave during that month.[16]

Three additional issues deserve mention. First, as discussed, we only have data on fathers married to and residing with the child's mother.[17] Although we cannot be certain, it seems probable that such fathers will take more leave than those not living with the mother (and possibly more than fathers cohabiting but not married), so that our estimates are likely to overstate the average amount of paternity leave used. Second, changes in the CPS preclude us from identifying cohabiters in a consistent manner. Third, we match individuals and families across survey months using the household identifier, household number, and personal line number (as recommended by the CPS user's guide), with information on the month in the sample used to match families across survey months. Average match rates were 85 percent or higher within three-month periods (e.g., the birth month merged with two months prior to or after birth), and about 50 percent for periods more than six months apart (e.g., birth month merged with 10 months prior to the birth).[18]

As discussed, we attach to the CPS data information on federal or state parental leave laws in effect during the specified month, the number of weeks of leave entitlement, and supplementary policy variables related to state welfare system characteristics, EITC benefits, as well as state monthly unemployment rates.[19]

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[15]Most CPS surveys occur during the third week of the month (US Department of Labor, 2002). Therefore, consider the plausible case where the child is born on June 23 and the survey occurred on June 19 (with labor force status measured for the previous week). This implies that the birth month will actually cover the period before the child was born and the data for the next month, obtained on or near July 19, will indicate employment behavior during the reference week of the child's first month of life.

[16]Consider the case where all men take exactly one week of leave following the birth of a child. This will occur during the reference week approximately one-quarter of the time. It would not be correct to interpret this to indicate that only one-quarter of men take leave. Instead, about 25 percent of male employment during the birth month involves leave-taking.

[17]We do not have data on non-resident fathers because the fertility questions are asked only of women.

[18]These rates refer to potentially matchable observations. The structure of the household identifiers changed in 1995 in ways that precluded matching observations from 1995 with those from either 1994 or 1996. For this reason, information from 1995 was excluded.

[19]The unemployment data come from the U.S. Department of Labor, Bureau of Labor Statistics, Local Area Unemployment Statistics database, which can be accessed at: http://www.bls.gov/lau.

Empirical strategy

We begin with descriptive analyses of trends in employment and leave-taking among parents of infants (aged 0 to 12 months). Using survey questions about each parent's activity during the prior week, we consider three outcomes: 1) employment (those with a job whether or not they were working); 2) leave (those with a job but not at work); and 3) leave for "other reasons" (those employed but not at work for reasons other than vacation, own illness, bad weather, labor dispute or layoff, or because they were waiting for a new job to begin). We lack a consistent explicit measure of maternity/paternity leave but believe this is generally best accounted for by work absences for "other reasons."[20]

The 1994 CPS redesign slightly increased reported employment rates for females (Polivka & Miller, 1995). This will hopefully be captured by the inclusion of year effects in our regression models but may make it difficult to estimate consequences of the FMLA, which took effect at roughly the same time as the redesign. In supplemental analyses, we estimate separate models for pre- and post-FMLA periods. These help to discern the effects of state policies before and after enactment of the FMLA but cannot shed light on the FMLA itself.

We estimate a series of econometric models taking the basic form:

$$Y_{it} = \alpha_{it} + \beta_1 \mathbf{X}_{it} + \beta_2 \mathbf{M}_{it} + \beta_3 L_{it} + \gamma \mathbf{M}_{it} \times L_{it} + \delta_1 \mathbf{S}_i + \delta_2 \mathbf{T}_t + \mu_{it}, \tag{1}$$

where the subscripts i and t indicate the survey respondent and time period, and Y_{it} is one of three dichotomous labor force status variables: employed, employed but not working, or employed but absent for "other reasons." The latter two outcomes are estimated for the subsample of employed individuals, and so indicate leave-taking conditional on employment. $\mathbf{X}_{it}$ is a vector of supplementary regressors that includes: parent's age, education, marital status, race/ethnicity, whether the child is a first-born, and the number of children in the household (all taken from the June CPS), as well as welfare policies, EITC benefits, and state monthly unemployment rates. $\mathbf{M}_{it}$ is a vector of four dummy variables, respectively, taking the value of one in the birth month and the three following months.[21] The reference group consists of mothers or fathers who will have a birth 11 or 12 months *after* the survey date. L_{it} controls for whether any parental leave law (whether federal, state, or TDI) was in effect during the survey month. $\mathbf{S}_i$ and $\mathbf{T}_t$ are vectors of state and year dummy variables and μ_{it} is an error term.

Several features of our estimation strategy deserve mention. First, we run separate models for mothers and fathers since their employment and leave-taking behavior are likely to differ dramatically and may be differentially affected by leave policies. Second, the state "fixed-effects" and general year effects control for all time-invariant state-specific determinants of employment (such as local attitudes or contextual factors), as well as those affecting all locations but differing across time periods (like national macroeconomic conditions). Third, because several of our variables are defined at the state level, standard errors are adjusted for non-independence within states (using the cluster function in STATA).[22]

There could be omitted variables bias, even when including extensive controls, if unobserved determinants of employment or leave-taking are correlated with changes in parental leave rights. For instance, more generous entitlements might be enacted in response to increased

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[20]The CPS contains questions about maternity or paternity leave starting in 1994. The percentages of parents stating "other reasons" for not working in years prior to 1994 are similar to those indicating "maternity or paternity leave" use in 1994 and later years.
[21]We do not consider later months because parental leave benefits provided under state or federal law in the United States almost never extend past three months. This might be interesting to explore in future work.
[22]Standard errors were similar when clustered by person (since individuals appear in our sample more than once).

maternal employment, to help parents balance family and work responsibilities. We address this by including a control group – men or women who will have a birth 11 or 12 months after the survey date – whose labor force behavior is expected to be affected by the confounding factors in similar ways as new parents but who are not subject to the leave legislation itself.

Specifically, equation (1) is a difference-in-difference (DD) model. The coefficients on M_{it} show estimated patterns of employment or leave-taking in the absence of parental leave rights for the control group. Similarly, the parental leave "main effects" refer to this reference group and indicate the influence of any remaining confounding factors. The interaction coefficients, which are of primary interest, show how parental leave entitlements differentially affect the employment and leave-taking of new parents. The key assumption of the DD model is that leave laws do not causally affect the labor market status of the reference group. This generally seems reasonable, although there could be small effects. For instance, some women might work more prior to childbirth to become eligible for maternity leave. If so, our estimates will understate (overestimate) the extent to which leave rights increase (decrease) employment.[23]

Although other econometric strategies (like instrumental variables estimation or propensity score matching) could have been implemented, the DD approach seems best-suited for this application, given the existence of policy variation and identification of a plausible control group. Of course, the DD model can not establish causality with certainty – for that we would need an experimental design – and so caution is needed in placing a strong causal interpretation on our results.

We report results of linear probability (LP) models, even though the labor force dependent variables are dichotomous and so probit or logit models might be more appropriate. The reason is that coefficients from the LP specifications are easier to interpret, particularly when including interaction terms, where marginal effects depend on values of the covariates and the associated probit or logit coefficients are often misleading.[24] However, before doing so, we estimated LP and probit models for specifications that included all covariates except the interactions. Magnitudes and statistical significance of the marginal effects were similar for both estimation methods, indicating that the LP estimates are informative.

We estimate several variants of the basic model. Some specifications control for the duration (number of weeks) of leave guaranteed by legislation, rather than using a dichotomous entitlement variable. We also estimate separate models for less- and more-educated parents, as well as for single versus married mothers. Finally, we provide stratified estimates for the pre- and post-FMLA periods, using either the main entitlement variable or variables distinguishing between paid leave (through TDI programs) and unpaid leave (through state parental leave laws).

Descriptive Findings

Table 1 displays average rates of employment and leave-taking. Women are much more likely to hold jobs before birth than following it – 66 percent of the control group is employed versus 46 to 49 percent of the treatment groups. Many females also take leave after childbirth – over half of employed mothers are not working during the birth month and first month thereafter, compared to just 7 percent of the control group. The data also provide suggestive evidence that leave for "other reasons" is a good proxy for maternity leave. Specifically, this accounts for less than 2 percent of employment for the control group, compared with 42 percent in the month

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[23]Such employment effects are likely to be small, since most leaves are unpaid. It also seems unlikely that leave rights will have much effect on leave-taking among the control group.
[24]For instance, Ai and Norton (2003) show that the coefficients may have the opposite sign as the predicted effect of the interaction on the dependent variable.

of birth and 55 percent in the following month.[25] Moreover, fully 82 (85) percent of work absences in the birth month (first month after it) occur for "other reasons", suggesting an important role of maternity leave during these periods. Consistent with prior evidence (e.g. Berger & Waldfogel, 2004), most maternity leaves appear to be brief – just 28 percent of employed mothers are absent for "other reasons" two months after the birth and 12 percent three months subsequent to it.[26]

Unlike women, relatively few fathers stop working after birth of a child: 92 percent are employed during the birth month and each of the subsequent three months, compared to 93 percent 11 or 12 months before the child was born. Paternity leave is also rare. Just 3 percent of employed fathers are absent for "other reasons" in the birth month and less than 1 percent in any of the following three months. Even using the more expansive definition of leave, just 7 percent of employed fathers report being off the job (for any reason) in the birth month and around 4 percent in subsequent months. This conforms to the commonly held belief that young children have a weaker impact on the labor supply of men than women. Recall also that our measure of leave will miss short work absences not occurring during the reference week. With men often taking leaves of just a week or two, this is a particular problem for fathers.

Most of the sample averages, displayed in Appendix Table A.2, are self-explanatory. Notice, however, that the demographic characteristic means are similar for the control and treatment groups, which is desirable since it suggests that the groups are comparable. It is also worth pointing out that 62 to 75 (45 to 63) percent of mothers (fathers) are potentially eligible under parental leave legislation, with average entitlements of 6 to 8 (5 to 8) weeks. As mentioned, the share of parents in states with (state or national) leave laws rose from 26 percent of mothers and 3 percent for fathers in 1987 to 100 percent of both groups beginning in 1994.[27] Figures 1 through 3 supply additional detail on time in maternal employment and leave-taking during the period surrounding the births (see Table A.3 for additional details). Dates refer to the year of the June CPS survey from which birth information was obtained, so that births could have actually occurred in this or the previous year.

There is a decline in maternal employment as a birth approaches, because some women leave the labor force, followed by an additional reduction in the birth month and (for most years) a gradual increase beginning three months or so after birth. Data for 1988 and 2004 are shown in Figure 1. (Results are similar for the other years.) Leave-taking also increases slightly at the end of pregnancy, rises dramatically after birth, and then rapidly declines after one month post-birth to reach pre-birth levels within a few months (see Figures 2 and 3).

To illustrate these patterns more fully, consider 2004, the latest period analyzed. (Detailed data for all years is shown in Appendix Table A.3). In that year, maternal employment fell from 55 percent in the third month prior to birth to 48 percent in the month before delivery and 44 percent in the birth month. It ranged from 45 to 46 percent during the next three months and then rose to 49 to 51 percent for the 4th through 12th months after delivery. Using the broad definition of leave-taking (all women employed but not working), 4 percent of employed mothers were on leave in the third month prior to birth, rising to 15, 45, and 69 percent in the month before birth, the birth month, and the month after it. Leave-taking declined to 40 and 19 percent over the next two months and ranged between 4 and 9 percent in the 4th through 12th months after delivery. Using our preferred narrower definition of leave-taking (employed

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[25]A small amount of maternity leave may be taken by the control group, following the birth of an earlier child.
[26]Higher shares of women are employed but not working or not working for "other" reasons one month after birth than in the birth month. This reflects the previously discussed issue, that the week in the birth month for which labor force information is obtained is not always post-birth, whereas the week documented in the next month is.
[27]Leave entitlements are higher in the treatment groups than the control group, reflecting evolution of these policies over time. For the same reason, the control group has more months of work exemptions and lower EITC benefits.

and absent from work for "other reasons"), 1, 3, and 11 percent of women were on maternity leave in the three months preceding delivery, 40 percent in the birth month, 34, 16, and 4 percent during the next three months, and between 1 and 3 percent during the 4th through 12th months after birth.

These results indicate that childbirth is associated with substantially reduced maternal employment and increased leave-taking. Whereas a portion of the employment decline lasts for a year or more, most maternity leaves are of short duration. These findings largely accord with analysis of CPS data for 1979–1988, by Klerman & Leibowitz (1994), except that they find a faster recovery of post-birth employment for the earliest (1979–1982) portion of their data.[28]

Whether maternal leave-taking has increased over time is difficult to determine from Figures 2 and 3. Leave-taking was lowest in 1988 and higher in 2004 than in most years, but with relatively elevated rates also observed in 1992 and 1994. This can be seen more clearly in Figure 4, which shows the share of employed mothers absent from work for "other reasons" in the birth month and succeeding three months. The figure demonstrates that leave-taking in the birth month and first month after it rose from 1988 to 1994, fell in 1998, and then grew slightly. The dips occurring between 1994 and 1998 are not fully explained but may reflect changes in the sampling strategy and household identification approach carried out between 1994 and 1996, as well as the CPS redesign implemented at the beginning of 1994.[29]

The patterns for fathers are quite different. First, there is no consistent employment trend when moving from three months before the birth to 12 months after it (see Appendix Table A.3 for details). Second, leave-taking increases during the birth month – 2 to 5 percent of fathers are employed but not working three months before birth, compared to 4 to 10 percent in the birth month – but returns to or near pre-birth levels within a month (figure 5). This suggests that a small but growing fraction of fathers take paternity leaves, usually of very short duration. Interestingly, leaves for "other reasons" in the birth month have increased over time, suggesting that parental leave legislation may be having a noticeable impact. This is demonstrated in Figure 6, where we see that 1.1, 2.3, 3.0, and 2.7 percent of employed fathers were absent for "other reasons" in the birth month in 1988, 1990, 1992, and 1994, compared with 4.5, 4.2, 5.0, and 6.1 percent in 1998, 2000, 2002 and 2004. The very low prevalence of such absences in most months for fathers implies that it will be difficult to obtain precise econometric estimates when using this narrow definition of leave-taking.[30]

Leave Rights Increase Leave-Taking But Not Employment

Table 2 presents our first econometric estimates. The sample includes parents 11 or 12 months prior to a birth (the control group), in the birth month, or one to three months after it. The main effects show relationships for the control group and the interaction coefficients show differential associations for treatment groups, relative to the control group. The table shows predicted percentage point changes in the dependent variable resulting from a one unit change in the associated regressor. When interpreting the results, remember that not all new parents are covered by the leave policies, implying that our results are likely to understate the effects for those made eligible under the laws.

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[28]For instance, in 1983–1985, employment rates for mothers with 1, 3, 6, and 12 month old children were 38, 38, 37, and 40 percent, with 71, 20, 13, and 7 percent of these mothers being on maternity leave.
[29]Data on many of persons surveyed in June of 1994 actually came from 1993, before the CPS redesign: for example, the birth month occurred in 1993 in 55 percent of such cases.
[30]Also, given their short duration, it seems likely that many paternity leaves would be covered by accrued vacation, sick leave or personal time and so would not fall into the "other reasons" category.

Mothers are less likely to be employed in the birth month and the next three months, with employment rates predicted to fall 16 to 19 percentage points from the base rate of 66 percent for the control group (column 1). However, parental leave entitlements are never substantially or significantly related to maternal employment.

Conversely, leave rights predict higher rates of leave-taking for women. This is less apparent in column (2), where the dependent variable is with a job but not working (and the interaction terms are positive but not significant), than when using our preferred definition of leave-taking as employed but not at work for "other reasons" (column 3). Here leave laws are associated with a significant 5.4 percentage point increase in leave-taking in the birth month (a growth of 13 percent relative to the base rate of 41.5 percent), a significant 8.7 point rise in the month after birth (16 percent above the base rate), and a marginally significant 5.6 point increase (20 percent above the base rate) in the second month.

In contrast to mothers, we find little sensitivity of fathers' employment or leave-taking to leave laws. The important exception occurs in the birth month, where fathers are predicted to be 3.9 percentage points more likely to be on leave if covered by legislation (column 5); this is a 54 percent increase relative to the base rate of 7.2 percent. Narrowing our focus to job absences for "other reasons", fathers are 2.5 percentage points more likely to be on leave if a mandate exists (column 6), an 83 percent increase relative to the base rate of 3 percent.[31]

We also estimated models corresponding Table 2, except controlling for weeks of parental leave entitlement, rather than the dichotomous leave rights variable. The results (not shown) are consistent with those previously obtained. In particular, we find no predicted effects on employment but do uncover increases in leave-taking in specific months. For women, rights to 10 additional weeks of leave are associated with 4, 5, and 6 percentage point increases in the likelihood of being employed but not at work for "other reasons" in the birth month and two subsequent months, although two of these coefficients are only marginally significant. For men, 10 extra weeks of leave entitlement are predicted to increase leave-taking in the birth month by 3 (2) percentage points using the broad (narrow) definition of leave.

Leave Laws Have Stronger Effects for Highly Educated Parents

As discussed, the estimates above may be attenuated because not all parents are covered by leave laws. Although our data do not identify eligibility, highly educated parents are more often covered and also more likely to take advantage of the unpaid leave guaranteed under most laws. We examined this by estimating models separately for those with no college and the college educated (some college, a college degree, or more).

The results summarized in Table 3 conform to these expectations. We do not uncover significant positive associations for leave rights among women with no college – most estimates are negative and insignificant. Conversely, the leave laws have uniformly positive predicted effects for college educated mothers, and these are significant when examining job absences for "other reasons" in the birth month and the two succeeding months (see column 3). The full sample coefficients are small and generally imprecisely estimated for men but we do find associations in the birth month, and these predicted effects are larger and more precisely estimated for the college educated.

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[31]Results for the full set of covariates (available for women in Appendix Table A.4), indicate that the welfare reform policies and more generous EITC benefits are not significantly associated with maternal employment or leave-taking, except for a small positive association between leave-taking and more generous welfare-related work exemptions. As expected, the welfare reform variables have no links with men's employment or leave-taking.

Leave Laws Increase Leave-Taking for Married but Not Single Mothers

Single mothers are less likely than their married counterparts to be covered by leave laws and, when eligible, will typically be less able to afford unpaid leave. Thus, we expect to find weaker associations between leave laws and leave-taking among single than married mothers. Table 4 confirms this prediction. We find no significant relationships between leave laws and leave-taking for single mothers but sizable and often significant effects for married mothers.[32] For example, leave laws predict 7.3, 12.6, and 6.2 percentage point increases in work absences for "other reasons" for married mothers in the birth month and next two months.

Estimates for the Pre- and Post-FMLA Periods

As a further robustness check, we estimated separate models for women during the pre- and post-FMLA periods. These analyses are useful in that they focus in on state laws, holding the FMLA constant, and examine samples before and after the CPS redesign. We expected the state laws to have relatively strong effects pre-FMLA, as they would be the only source of government mandated coverage. However, the former might still be influential post-FMLA if they cover more workers (because of less restrictive firm size or work hours requirements), mandate longer leave periods, or guarantee paid leave (as TDI programs do).[33]

The results in Table 5 indicate that state leave laws are associated with increased leave-taking by mothers both pre- and post-FMLA. Prior to the FMLA, the state laws have significant and sizable correlations with both the broad and narrow definitions of leave in each of the three months subsequent to the birth month (although not for the birth month itself). Results are similar following enactment of the FMLA, except that state legislation is also significantly associated with leave-taking in the birth month. These results suggest that state leave laws continue to play an important role, even after enactment of the FMLA.[34]

Conclusions

The expansion of leave laws, particularly implementation of the federal FMLA in 1993, dramatically increased the share of new parents potentially eligible for a job-protected parental leave. Although the state and federal leave laws typically guarantee only unpaid absences (with the exception of the TDI laws in place prior to 1987 and paid leave laws implemented in California, Washington, and New Jersey after the period analyzed), we find that these leave expansions were associated with increases in parents' leave-taking by amounts that varied with gender, education, and family structure.

The most robust results for women are for job absences for "other reasons" in the birth month and the succeeding two months. Using this definition, leave laws are predicted to raise the share of mothers on maternity leave by 5 to 9 percentage points (13 to 20 percent of the baseline level). For men, we obtain significant associations but only for the birth month, where parental leave laws are predicted to increase job absences by 4 percentage points and the fraction absent for "other reasons" by 2.5 points. Although these effects are small in absolute magnitude, they represent increases of 54 and 83 percent, relative to baseline rates.

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[32] We do not conduct similar estimates for men because, as noted, we do not have single fathers in our sample. Coefficients on the other policy variables are as expected. In particular, we find no significant associations between the welfare or EITC policies and married women's employment or leave-taking but single mothers' employment is predicted to be significantly higher when TANF is in effect. (Associations with the other welfare policies and the EITC are not significant.)

[33] We do not conduct a similar analysis for fathers because relatively few are eligible under state parental leave laws and none are covered for paid leave under TDI laws. We also did not control for paid leave laws recently implemented in California, Washington, and New Jersey, since these took effect after the end of our sample period.

[34] We also estimated models controlling separately for TDI laws (providing paid leave) and other state leave laws (mandating unpaid leave). Both types were associated with leave-taking during the pre- and post-FMLA periods.

U.S. leave laws do not cover the whole workforce. For instance, due to firm size and job tenure requirements, less than half of the private sector workforce is eligible under the FMLA. State leave laws also typically include restrictions that reduce coverage. Assuming that half of parents are eligible under these laws, our predicted effects would need to be approximately doubled to indicate the changes expected for a worker newly receiving leave rights. Doing so implies that leave laws are associated with increases in leave-taking of 10 to 18 percentage points in the birth month and two succeeding months among mothers obtaining coverage, and 5 percentage points for newly covered fathers in the birth month.

Since highly educated workers are more likely than their less educated peers to be covered by current federal and state laws, we expected and found larger associations between leave laws and leave-taking for educated parents. In particular, the legislation correlates with relatively large increases in leave-taking for college-educated women but with insignificant effects for less educated mothers. The associations are small in absolute terms and confined to the birth month for men, but the same pattern holds across education groups. We also found evidence of stronger effects for married than single mothers, as expected since married women are more likely to be eligible under the laws and able to afford a period of unpaid leave.

Although we uncovered no evidence that leave laws significantly predict employment rates, two caveats should be noted. First, as discussed, our results may understate the effects of leave laws since not all new parents were covered by them. Second, our analysis focuses on the first few months subsequent to birth and so will not capture longer-term effects.

Many factors, other than parental leave laws, changed over the period examined and there are likely to be differences between states that did and did not enact parental leave legislation. We used several strategies to account for this heterogeneity. First, all of the econometric models control for state and year fixed effects, parents' demographic characteristics, and state unemployment rates. Second, we included regressors for key policies including welfare waivers, TANF implementation, welfare work exemptions, and state and federal EITC benefits, since these might affect parents' employment and leave-taking and vary by state and over time. These policies were generally not strongly associated with the dependent variables in our data, except when confining analysis to single mothers, and their inclusion did not alter the main results.

Another potential concern is that the largest change in leave laws, the federal FMLA, occurred close to the time of the CPS re-design. However, our main findings are unchanged when we estimate our models separately for the pre- and post-FMLA period. Specifically, we find that leave laws are associated with increased parental leave-taking by mothers in the birth month and two succeeding months during both periods.

While we can not be sure that our estimates have uncovered causal effects – an experimental design would be needed to guarantee this – our results do strongly suggest that extensions of parental leave rights are associated with increased leave-taking by mothers in the months following a birth. Whether these changes are large enough to substantially influence maternal or child health is at this point unknown, and firm conclusions must await studies directly examining these outcomes. What is noteworthy is that current laws appear to primarily benefit highly educated and married mothers, implying that other measures (such as paid leave) may be needed to provide similar benefits to their less educated and single counterparts.

The results for fathers, who have been the subject of little previous research, are also intriguing. We cannot precisely identify the duration of many of the very short leaves that men take (if they use leave at all), because our data cover only the week prior to the monthly survey and so miss many short work absences. We can, however, calculate the percentage of weeks that men are on leave in given months. Doing so, we find that leave laws are associated with increased

male leave-taking. The estimated associations are small in absolute but large in relative terms – a parental leave law is predicted to increase the percentage of the birth month employed fathers spend on leave from 7 to 11 percent, representing approximately two extra days off work. Since only around half of men are covered and eligible under the FMLA, the increase associated with actually gaining leave rights would be approximately twice as large. As for women, we do not know the impact of this increased leave-taking for the well-being of fathers or their children. This certainly merits further research.

Acknowledgements

Appendix

Appendix Table A.1

Number of Weeks of Leave Available to Parents under State or Federal Laws,

	1987	1988	1989	1990	1991	1992	1993	199
Alabama	0	0	0	0	0	0	0/12	
Alaska	0	0	0	0	0	0	0/12	
Arizona	0	0	0	0	0	0	0/12	
Arkansas	0	0	0	0	0	0	0/12	
California	12 (0)	12 (0)	12 (0)	12 (0)	12 (0/12)	12	12	
Colorado	0	0	0	0	0	0	0/12	
Connecticut	6 (0)	6 (0)	6 (0)	6 (0)/12	12	12	12	
Delaware	0	0	0	0	0	0	0/12	
District of Columbia	0	0	0	0	0/16	16	16	
Florida	0	0	0	0	0	0	0/12	
Georgia	0	0	0	0	0	0	0/12	
Hawaii	6 (0)	6 (0)	6 (0)	6 (0)	6 (0)	6 (0)	6 (0)/12	
Idaho	0	0	0	0	0	0	0/12	
Illinois	0	0	0	0	0	0	0/12	
Indiana	0	0	0	0	0	0	0/12	
Iowa	0	0	0	0	0	0	0/12	
Kansas	0	0	0	0	0	0	0/12	
Kentucky	0	0	0	0	0	0	0/12	
Louisiana	0	0	0	0	0	0	0/12	
Maine	0/10 (0)	10 (0)	10 (0)	10 (0)	10 (0)	10 (0)	10 (0)/12	
Maryland	0	0	0	0	0	0	0/12	
Massachusetts	8 (0)	8 (0)	8 (0)	8 (0)	8 (0)	8 (0)	8 (0)/12	
Michigan	0	0	0	0	0	0	0/12	
Minnesota	0/6	6	6	6	6	6	6/12	
Mississippi	0	0	0	0	0	0	0/12	
Missouri	0	0	0	0	0	0	0/12	
Montana	0	0	0	0	0	0	0/12	
Nebraska	0	0	0	0	0	0	0/12	
Nevada	0	0	0	0	0	0	0/12	

	1987	1988	1989	1990	1991	1992	1993	19
New Hampshire	0	0	0	0	0	0	0/12	
New Jersey	6 (0)	6 (0)	6 (0)	6 (0)	6 (0)	6 (0)	6 (0)/12	
New Mexico	0	0	0	0	0	0	0/12	
New York	6 (0)	6 (0)	6 (0)	6 (0)	6 (0)	6 (0)	6 (0)/12	
North Carolina	0	0	0	0	0	0	0/12	
North Dakota	0	0	0	0	0	0	0/12	
Ohio	0	0	0	0	0	0	0/12	
Oklahoma	0	0	0	0	0	0	0/12	
Oregon	0	0/12	12	12	12	12	12	
Pennsylvania	0	0	0	0	0	0	0/12	
Rhode Island	6 (0)	6 (0)	6 (0)	6 (0)	6 (0)	6 (0)	6 (0)/12	
South Carolina	0	0	0	0	0	0	0/12	
South Dakota	0	0	0	0	0	0	0/12	
Tennessee	0/16 (0)	16 (0)	16 (0)	16 (0)	16 (0)	16 (0)	16 (0/12)	
Texas	0	0	0	0	0	0	0/12	
Utah	0	0	0	0	0	0	0/12	
Vermont	0	0	0	0	0	0	0/12	
Virginia	0	0	0	0	0	0	0/12	
Washington	6 (0)	6 (0)	6 (0)/12	12	12	12	12	
West Virginia	0	0	0	0	0	0	0/12	
Wisconsin	0/6	6	6	6	6	6	6/12	
Wyoming	0	0	0	0	0	0	0/12	
United States	2.13 (0.22)	2.32 (0.35)	2.81 (0.54)	2.97 (0.98)	3.67 (1.61)	2.94 (2.26)	5.40 (4.95)	
% of mothers at birth month with state or federal leave laws	25.85	27.66	36.11	33.85	43.00	31.91	55.48	
% of fathers at birth month with state or federal leave laws	2.97	3.17	7.78	9.90	18.50	18.42	45.16	

Note. Whenever the number of weeks leave is different between mothers and fathers, the numbers in parentheses are for the fathers.

Appendix Table A.2

Demographic Characteristics of Mothers and Fathers

Demographic Variable	Control group	Birth month	One-month after birth	Two-months after birth	Three-months after bir
Characteristics of Mother/Child					
Age (years)	27.74 (0.130)	27.72 (0.096)	27.57 (0.091)	27.51 (0.091)	27.47 (0.089)
<High School Graduate	0.130 (0.008)[***]	0.161 (0.006)	0.166 (0.006)	0.175 (0.006)	0.179 (0.006)
High School Graduate	0.264 (0.010)[***]	0.315 (0.007)	0.321 (0.007)	0.329 (0.007)	0.330 (0.007)
Some College	0.177 (0.009)[***]	0.214 (0.006)	0.221 (0.006)	0.218 (0.006)	0.229 (0.006)
College Graduate	0.302 (0.010)[***]	0.268 (0.007)	0.269 (0.007)	0.264 (0.006)	0.258 (0.006)
Married	0.759 (0.010)	0.746 (0.007)	0.730 (0.007)[*]	0.715 (0.007)[***]	0.705 (0.007)[***]

Demographic Variable	Control group	Birth month	One-month after birth	Two-months after birth	Three-months after birth
Non-Hispanic White	0.737 (0.007)	0.711 (0.005)	0.707 (0.005)	0.705 (0.005)	0.695 (0.005)
Non-Hispanic Black	0.094 (0.007)	0.108 (0.005)	0.112 (0.005)	0.114 (0.005)	0.120 (0.005)
Hispanic	0.119 (0.007)	0.123 (0.005)	0.127 (0.005)	0.130 (0.005)	0.133 (0.005)
Other Race	0.050 (0.005)	0.058 (0.004)	0.054 (0.003)	0.050 (0.003)	0.052 (0.003)
Child is First-Born	0.340 (0.011)***	0.369 (0.008)	0.379 (0.007)	0.385 (0.007)	0.385 (0.007)
Number of children	2.18 (0.028)**	2.10 (0.020)	2.08 (0.018)	2.06 (0.017)	2.07 (0.018)
Characteristics of Father					
Age (years)	32.01 (0.188)	31.87 (0.118)	31.64 (0.113)	31.88 (0.113)	31.80 (0.114)
<High School Graduate	0.096 (0.008)	0.100 (0.006)	0.098 (0.005)	0.096 (0.005)	0.109 (0.005)
High School Graduate	0.248 (0.012)	0.302 (0.008)	0.292 (0.008)	0.298 (0.008)	0.312 (0.008)
Some College	0.183 (0.010)	0.221 (0.008)	0.206 (0.007)	0.224 (0.007)	0.225 (0.007)
College Graduate	0.345 (0.013)	0.354 (0.009)	0.357 (0.008)	0.354 (0.008)	0.350 (0.008)
Non-Hispanic White	0.801 (0.007)	0.786 (0.005)	0.787 (0.005)	0.794 (0.005)	0.783 (0.005)
Non-Hispanic Black	0.050 (0.007)	0.050 (0.005)	0.054 (0.005)	0.052 (0.005)	0.050 (0.005)
Hispanic	0.107 (0.007)	0.107 (0.005)	0.110 (0.005)	0.108 (0.005)	0.118 (0.005)
Other Race	0.042 (0.005)	0.057 (0.004)	0.049 (0.003)	0.046 (0.003)	0.048 (0.003)
Child is First-Born	0.340 (0.011)***	0.370 (0.008)	0.378 (0.007)	0.384 (0.007)	0.382 (0.007)
Number of children	2.19 (0.028)**	2.10 (0.020)	2.09 (0.018)	2.07 (0.018)	2.08 (0.018)
State/Federal Characteristics & Policies					
State Unemployment Rate	5.64 (0.038)**	5.54 (0.026)	5.51 (0.024)	5.53 (0.023)	5.54 (0.023)
Any State/Federal Maternity Leave Entitlement	0.621 (0.011)***	0.708 (0.007)	0.726 (0.007)	0.740 (0.006)	0.745 (0.006)
Weeks of State/Federal Maternity Leave Entitlement	6.28 (0.128)***	7.28 (0.088)	7.56 (0.082)	7.83 (0.079)	7.95 (0.078)
Any State/Federal Paternity Leave Entitlement	0.458 (0.011)***	0.575 (0.008)	0.601 (0.007)	0.621 (0.007)	0.637 (0.007)
Weeks of State/Federal Paternity Leave Entitlement	5.39 (0.134)***	6.74 (0.094)	7.12 (0.088)	7.36 (0.085)	7.56 (0.084)
State infant exemption (child's age in months)	31.88 (0.517)***	26.50 (0.262)	25.36 (0.236)	24.30 (0.224)	23.72 (0.216)
State providing waiver program	0.038 (0.004)	0.036 (0.003)	0.032 (0.003)	0.032 (0.002)	0.035 (0.003)
TANF	0.121 (0.007)	0.122 (0.005)	0.127 (0.005)	0.132 (0.005)*	0.134 (0.005)**
Federal and state max. refundable EITC (log)	7.69 (0.011)***	7.74 (0.51)	7.76 (0.008)	7.78 (0.007)	7.80 (0.007)

Note: See note on Table 1. Asterisks in the control-group column indicate significant differences between the control group and all of the treatment groups.
Asterisks in the individual treatment-group column indicate significant differences between the control and that individual treatment group.

*
  $p < .05$,
**
  $p < .01$,
***
  $p < .001$).

Appendix Table A.3

Parental Employment Before and After Birth

	1988	1990	1992	1994	1998	2000	2002	2004
MOTHERS								
3 months prior	54.24%	58.33%	67.10%	59.99%	56.80%	60.97%	58.06%	54.77%
2 months prior	48.13%	53.70%	62.98%	60.16%	53.01%	60.97%	59.37%	53.98%
1 months prior	46.42%	49.39%	59.24%	54.04%	52.77%	52.42%	58.55%	47.98%
Birth month	45.62%	41.76%	50.94%	47.58%	48.21%	51.30%	51.22%	44.21%
1 months after	45.08%	42.31%	50.09%	44.70%	47.74%	44.35%	44.57%	45.28%
2 months after	47.11%	45.33%	43.24%	45.32%	52.12%	46.61%	47.15%	44.88%
3 months after	47.30%	49.07%	46.73%	46.50%	50.34%	49.15%	47.00%	45.83%
4 months after	47.48%	46.67%	42.48%	48.03%	52.81%	46.90%	51.69%	50.80%
5 months after	46.32%	49.27%	45.28%	48.32%	53.33%	52.55%	52.41%	48.89%
6 months after	45.88%	49.19%	47.74%	48.56%	57.11%	49.00%	51.29%	49.27%
7 months after	47.13%	52.64%	49.23%	49.26%	56.89%	53.77%	51.52%	49.73%
8 months after	43.77%	52.45%	48.77%	50.93%	54.27%	56.07%	49.76%	49.71%
9 months after	46.57%	53.07%	48.28%	50.94%	56.33%	56.16%	50.19%	48.07%
10 months after	46.37%	52.64%	51.46%	51.67%	57.25%	56.46%	48.93%	50.76%
11 months after	45.81%	50.23%	50.14%	49.22%	57.29%	56.56%	52.48%	49.51%
12 months after	46.53%	54.23%	53.11%	47.09%	59.39%	55.47%	52.87%	51.00%
FATHERS								
3 months prior	92.28%	96.17%	97.35%	92.47%	96.76%	93.26%	92.96%	91.73%
2 months prior	90.22%	94.67%	96.33%	91.87%	95.28%	95.95%	90.47%	92.09%
1 months prior	90.12%	93.91%	92.00%	91.90%	94.22%	96.56%	93.40%	87.93%
Birth month	90.12%	90.95%	92.87%	92.16%	92.69%	94.81%	90.57%	91.23%
1 months after	91.88%	92.71%	91.34%	90.26%	93.43%	94.47%	91.77%	88.75%
2 months after	95.50%	91.83%	91.41%	90.30%	93.92%	94.10%	90.60%	89.41%
3 months after	94.30%	92.87%	90.94%	89.82%	92.31%	92.43%	87.98%	91.86%
4 months after	93.79%	95.23%	92.22%	90.11%	93.40%	92.11%	88.66%	92.06%
5 months after	94.52%	93.01%	91.67%	90.07%	90.86%	94.08%	85.67%	89.84%
6 months after	94.92%	94.37%	91.37%	89.51%	93.42%	93.22%	88.79%	91.06%
7 months after	93.08%	96.12%	93.58%	89.24%	93.40%	93.49%	88.47%	89.73%
8 months after	92.57%	95.16%	91.93%	86.94%	93.98%	93.07%	92.06%	89.63%
9 months after	91.88%	95.66%	91.03%	86.97%	92.21%	91.42%	92.33%	89.19%
10 months after	93.87%	95.33%	94.15%	87.69%	91.59%	93.57%	93.65%	90.22%
11 months after	95.31%	93.80%	91.59%	89.00%	94.02%	95.66%	92.86%	88.39%
12 months after	95.57%	94.09%	91.58%	89.14%	93.06%	93.55%	91.65%	89.54%

Note: Analysis uses *Current Population Survey* data from 1988, 1990, 1992, 1994, 1998, 2000, 2002 and 2004.

Appendix Table A.4

Regression Estimates for Maternal Employment and Leave-Taking in Birth Month and Subsequent Months

	EMPLOYED	WITH JOB BUT NOT AT WORK (AMONG EMPLOYED)	ABSENT FROM WORK DUE TO "OTHER" REASONS (AMONG EMPLOYED)
Birth month	−0.176 (0.027)***	0.416 (0.030)***	0.352 (0.026)***
One-month after	−0.191 (0.025)***	0.559 (0.033)***	0.469 (0.031)***
Two-month after	−0.181 (0.029)***	0.223 (0.035)***	0.220 (0.031)***
Three-month after	−0.158 (0.030)***	0.088 (0.028)**	0.088 (0.025)***
Any leave provided by state and federal	−0.020 (0.032)	−0.051 (0.030)+	−0.073 (0.026)**
Birth month & Any leave	0.024 (0.032)	0.033 (0.033)	0.054 (0.027)*
One-month after & Any leave	0.015 (0.027)	0.031 (0.032)	0.087 (0.028)**
Two-month after & Any leave	0.027 (0.032)	0.070 (0.043)	0.056 (0.032)+
Three-month after & Any leave	0.020 (0.034)	0.018 (0.033)	0.006 (0.023)
Year of 1988	0.026 (0.034)	0.054 (0.043)	0.060 (0.041)
Year of 1989	0.021 (0.042)	0.164 (0.048)***	0.182 (0.044)***
Year of 1990	0.047 (0.041)	0.103 (0.053)*	0.118 (0.045)**
Year of 1991	−0.345 (0.187)+	−0.001 (0.238)	0.020 (0.202)
Year of 1992	−0.405 (0.256)	0.023 (0.329)	0.022 (0.286)
Year of 1993	−0.530 (0.302)+	−0.036 (0.397)	−0.046 (0.346)
Year of 1994	−1.254 (0.745)+	−0.181 (0.962)	−0.154 (0.831)
Year of 1997	−1.692 (1.013)	−0.320 (1.307)	−0.340 (1.120)
Year of 1998	−1.702 (1.018)	−0.283 (1.322)	−0.311 (1.133)
Year of 1999	−1.669 (1.007)	−0.255 (1.316)	−0.295 (1.105)
Year of 2000	−1.704 (0.997)+	−0.253 (1.297)	−0.265 (1.105)
Year of 2001	−1.700 (1.007)+	−0.232 (1.303)	−0.271 (1.105)
Year of 2002	−1.730 (1.019)+	−0.233 (1.322)	−0.257 (1.132)
Year of 2003	−1.677 (1.012)	−0.281 (1.306)	−0.290 (1.116)
Year of 2004	−1.727 (1.009)+	−0.221 (1.310)	−0.234 (1.126)
State infant exemption (in child's age in month)	0.000 (0.001)	0.003 (0.001)**	0.002 (0.001)**
State providing waiver program	0.002 (0.023)	0.022 (0.027)	0.026 (0.028)
TANF	0.030 (0.024)	−0.005 (0.020)	−0.022 (0.021)
Log of Federal/State maximum refundable EITC credit	1.540 (0.914)+	0.419 (1.165)	0.482 (1.000)
Mother's age	0.011 (0.001)***	0.005 (0.001)***	0.005 (0.001)***
Mother's education < 12	−0.310 (0.021)***	−0.096 (0.024)***	−0.048 (0.019)**
Mother's education = 12	−0.127 (0.014)***	−0.056 (0.012)***	−0.004 (0.013)
Mother's education > 12 & <16	−0.028 (0.020)	−0.057 (0.016)***	−0.016 (0.013)
Mother divorced/separated	0.004 (0.014)	−0.090 (0.017)***	−0.081 (0.017)***
Mother never married	−0.061 (0.028)*	−0.089 (0.026)***	−0.062 (0.025)*
Non-Hispanic Black	−0.017 (0.018)	0.027 (0.023)	0.032 (0.022)
Hispanic	−0.084 (0.016)***	−0.035 (0.016)*	−0.036 (0.018)*

	EMPLOYED	WITH JOB BUT NOT AT WORK (AMONG EMPLOYED)	ABSENT FROM WORK DUE TO "OTHER" REASONS (AMONG EMPLOYED)
Other race/ethnicity	−0.083 (0.026)[**]	−0.027 (0.030)	−0.012 (0.021)
Baby is firth born	0.053 (0.014)[***]	0.017 (0.014)	0.026 (0.017)
Number of children	−0.038 (0.006)[***]	−0.034 (0.007)[***]	−0.032 (0.007)[***]
State monthly unemployment rate	−0.006 (0.007)	−0.002 (0.007)	−0.001 (0.007)
R-square	0.1437	0.2307	0.2183
Number of Observations	19423	9600	9600

Note. Analysis uses *Current Population Survey* data from 1988, 1990, 1992, 1994, 1998, 2000, 2002 and 2004. Table shows unstandardized coefficients with robust standard errors, clustered by state, in parentheses. The control group is composed of women at 12- and 11-months prior to the birth. The models also control for state dummy variables.

[+] $p < .10$.

[*] $p < .05$.

[**] $p < .01$.

[***] $p < .001$.

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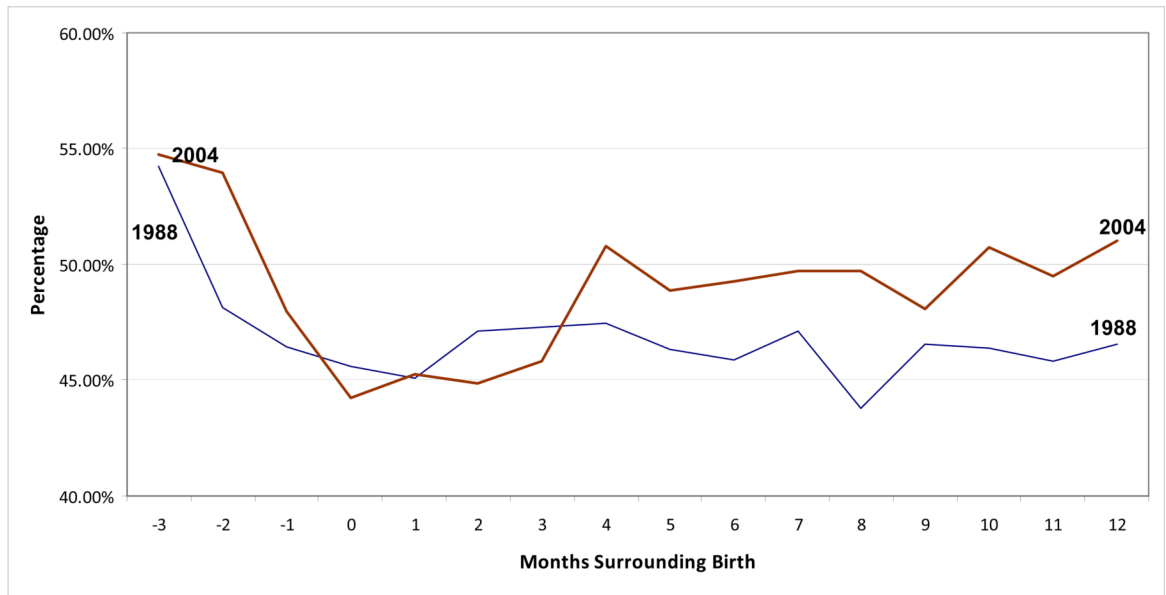Waldfogel J. Family and medical leave: Evidence from the 2000 surveys. Monthly Labor Review 2001b September;:17–23.

Figure 1.
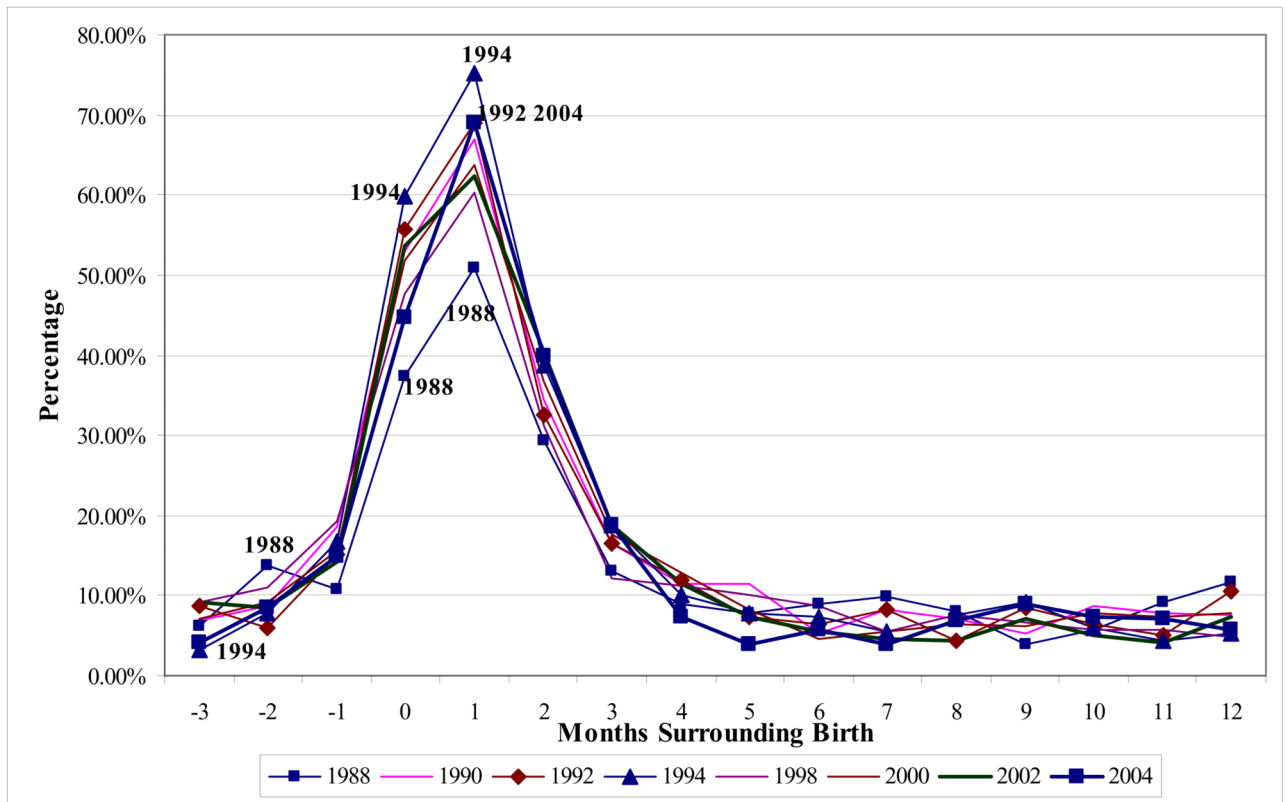Maternal Employment Before and After Birth

Figure 2.
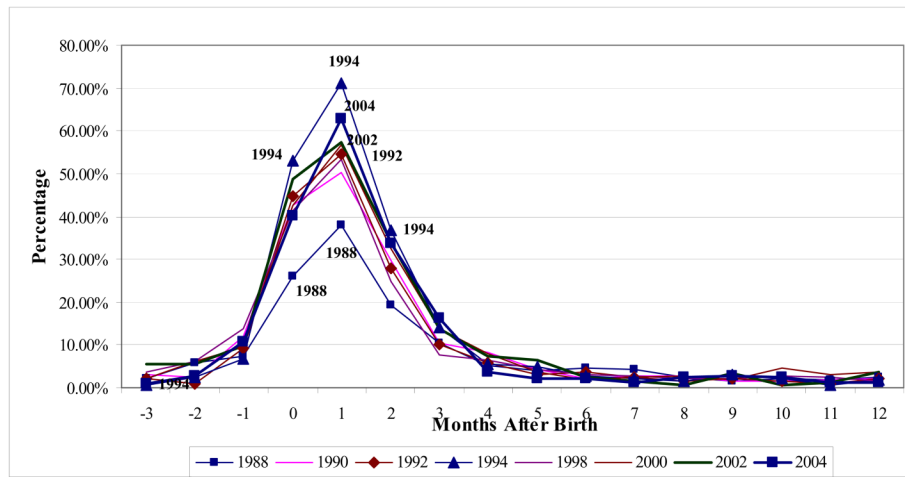Mothers Employed but Not at Work Before and After Birth

Figure 3.
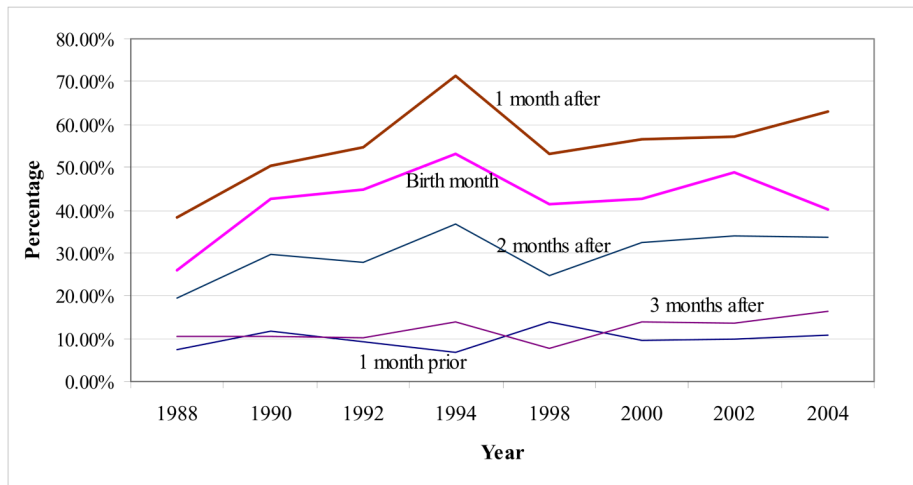Maternal Leave-Taking Before and After Birth

Figure 4.
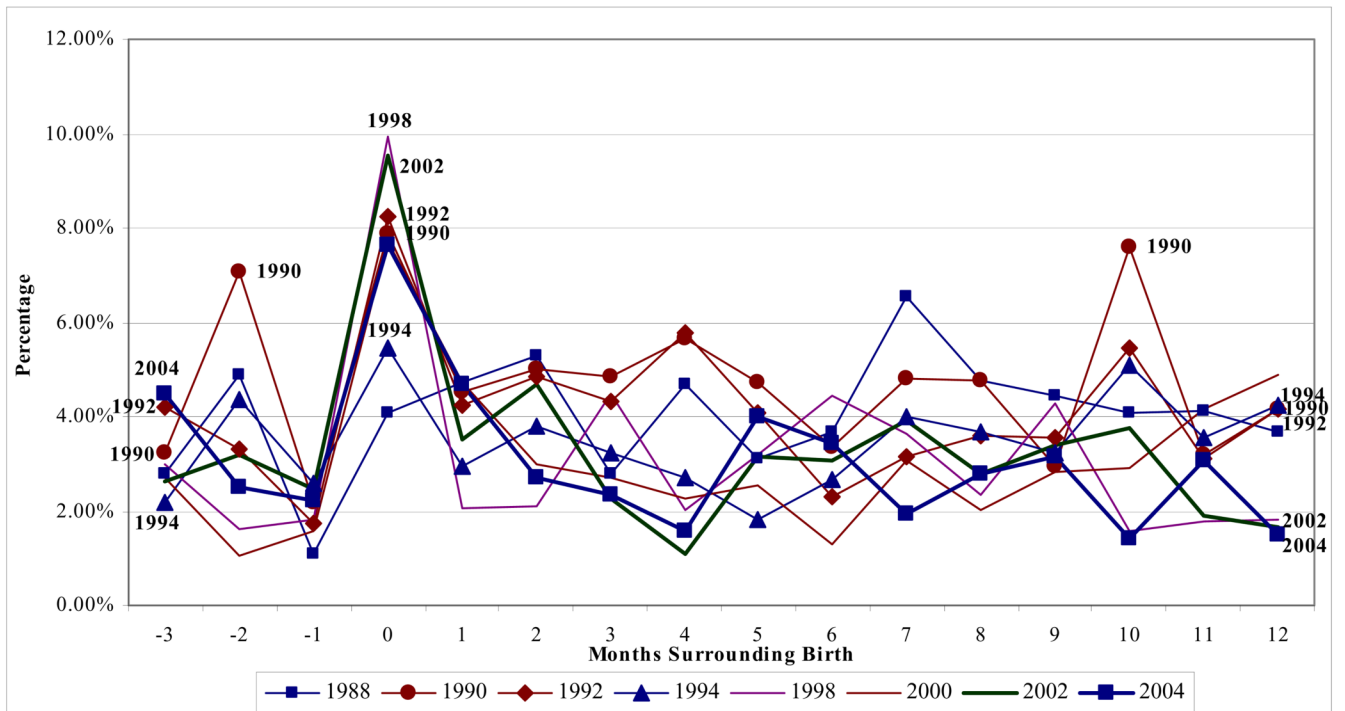Mothers Absent from Work Before and After Birth for "Other Reasons"

Figure 5.
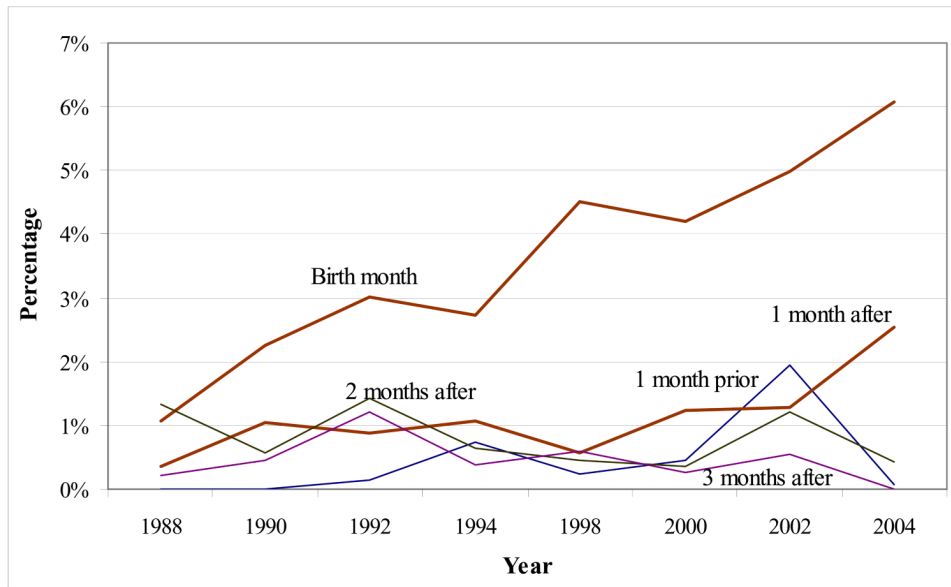Fathers Employed but Not at Work Before and After Birth

Figure 6.
Fathers Absent From Work Before and After Birth for "Other Reasons"

Table 1

Employment and Leave-Taking by Mothers and Fathers Before and After Birth

Labor Force Status	Control group (11/12 months before birth)	Birth month	One-month after birth	Two-months after birth	Three- months after birth
Mothers					
Employed	0.656 (0.011)	0.486 (0.008)	0.461 (0.007)	0.473 (0.007)	0.489 (0.007)
With a job but not at work among all population	0.046 (0.005)	0.246 (0.007)	0.299 (0.007)	0.161 (0.005)	0.080 (0.004)
With a job but not at work among employed	0.069 (0.007)	0.508 (0.011)	0.649 (0.010)	0.341 (0.010)	0.164 (0.008)
Employed, Absent due to "other" reasons	0.016 (0.004)	0.415 (0.011)	0.553 (0.011)	0.284 (0.010)	0.115 (0.007)
N	1865	3873	4401	4587	4697
Fathers					
Employed	0.933 (0.011)	0.921 (0.008)	0.916 (0.007)	0.921 (0.007)	0.916 (0.007)
With a job but not at work among all population	0.021 (0.003)	0.066 (0.004)	0.039 (0.002)	0.042 (0.002)	0.036 (0.002)
With a job but not at work among employed	0.030 (0.005)	0.072 (0.005)	0.043 (0.004)	0.045 (0.004)	0.039 (0.003)
Employed, Absent due to "other" reasons	0.005 (0.002)	0.029 (0.003)	0.008 (0.002)	0.009 (0.002)	0.006 (0.001)
N	1406	2799	3135	3182	3220

Note: Analysis uses *Current Population Survey* data from 1988, 1990, 1992, 1994, 1998, 2000, 2002 and 2004. Observations are weighted to be nationally representative. Standard errors are shown in parentheses.

Table 2

Regression Estimates for Parental Employment and Leave-Taking in Birth Month and Subsequent Months

	MOTHERS			FATHERS		
	EMPLOYED	WITH JOB BUT NOT AT WORK (AMONG EMPLOYED)	ABSENT FROM WORK DUE TO "OTHER" REASONS (AMONG EMPLOYED)	EMPLOYED	WITH JOB BUT NOT AT WORK (AMONG EMPLOYED)	ABSENT FROM WORK DUE TO "OTHER" REASONS (AMONG EMPLOYED)
Birth month	−0.176 (0.027)***	0.416 (0.030)***	0.352 (0.026)***	−0.014 (0.018)	0.026 (0.011)**	0.011 (0.007)
One-month after	−0.191 (0.025)***	0.559 (0.033)***	0.469 (0.031)***	−0.013 (0.019)	0.002 (0.013)	−0.002 (0.007)
Two-month after	−0.181 (0.029)***	0.223 (0.035)***	0.220 (0.031)***	−0.013 (0.020)	−0.000 (0.017)	0.000 (0.008)
Three-month after	−0.158 (0.030)***	0.088 (0.028)**	0.088 (0.025)***	−0.009 (0.023)	−0.003 (0.014)	−0.004 (0.008)
Any leave provided by state and federal	−0.020 (0.032)	−0.051 (0.030)	−0.073 (0.026)**	0.000 (0.020)	−0.012 (0.020)	−0.003 (0.010)
Birth month & Any leave	0.024 (0.032)	0.033 (0.033)	0.054 (0.027)*	0.009 (0.021)	0.039 (0.018)*	0.025 (0.010)**
One-month after & Any leave	0.015 (0.027)	0.031 (0.032)	0.087 (0.028)**	0.005 (0.024)	0.011 (0.017)	0.005 (0.009)
Two-month after & Any leave	0.027 (0.032)	0.070 (0.043)	0.056 (0.032)+	0.008 (0.023)	0.014 (0.019)	−0.003 (0.008)
Three-month after & Any leave	0.020 (0.034)	0.018 (0.033)	0.006 (0.023)	−0.002 (0.025)	0.012 (0.017)	−0.000 (0.009)
R-square	0.1437	0.2307	0.2183	0.0636	0.0200	0.0180
Number of Observations	19423	9600	9600	13742	12680	12680
	(1)	(2)	(3)	(4)	(5)	(6)

Note. Analysis uses *Current Population Survey* data from 1988, 1990, 1992, 1994, 1998, 2000, 2002 and 2004. Table shows unstandardized coefficients with robust standard errors, clustered by state, in parentheses. The control group is composed of people (women for mothers' sample and men for fathers' sample) at 12- and 11-months prior to the birth. The models also control for mother's (father's) age, education, marital status, race/ethnicity, whether the child is first-born, the number of children, state and year dummy variables, and state unemployment rates in the survey month. The models also controls for whether the state had an approved welfare waiver had implemented TANF, the length in months of welfare work exemptions for mothers with infants and (the natural log of) federal and state EITC refundable benefits, in dollars.

+
 p < .10.

*
 p < .05.

**
  p < .01.

***
  p < .001.

Table 3

Regression Estimates for Parental Employment and Leave-Taking, By Parental Education

A. Less Than College	MOTHERS			FATHERS		
	EMPLOYED	WITH JOB BUT NOT AT WORK (AMONG EMPLOYED)	ABSENT FROM WORK DUE TO "OTHER REASONS" (AMONG EMPLOYED)	EMPLOYED	WITH JOB BUT NOT AT WORK (AMONG EMPLOYED)	ABSENT FROM WORK DUE TO "OTHER REASONS" (AMONG EMPLOYED)
Birth month & Any leave	0.042 (0.047)	−0.014 (0.045)	−0.015 (0.038)	−0.007 (0.032)	0.022 (0.019)	0.022 (0.014)
One-month after & Any leave	0.038 (0.041)	−0.075 (0.044)+	−0.053 (0.048)	−0.010 (0.040)	−0.006 (0.020)	−0.001 (0.012)
Two-month after & Any leave	0.040 (0.046)	0.011 (0.062)	−0.020 (0.048)	−0.007 (0.034)	0.002 (0.019)	−0.003 (0.013)
Three-month after & Any leave	0.027 (0.047)	−0.041 (0.041)	−0.068 (0.030)*	−0.024 (0.038)	−0.011 (0.018)	−0.002 (0.011)
R-square	0.1383	0.2540	0.2327	0.0812	0.0255	0.0293
Number of Observations	10006	3763	3763	5943	5274	5274
B. Some College or More						
Birth month & Any leave	0.023 (0.041)	0.060 (0.045)	0.099 (0.036)**	0.032 (0.029)	0.047 (0.025)+	0.031 (0.014)*
One-month after & Any leave	0.006 (0.042)	0.086 (0.048)+	0.167 (0.043)***	0.028 (0.030)	0.022 (0.026)	0.013 (0.012)
Two-month after & Any leave	0.034 (0.043)	0.080 (0.053)	0.084 (0.039)*	0.034 (0.028)	0.024 (0.028)	0.003 (0.012)
Three-month after & Any leave	0.029 (0.048)	0.044 (0.043)	0.047 (0.034)	0.031 (0.030)	0.027 (0.026)	0.005 (0.013)
R-square	0.0652	0.2277	0.2241	0.0549	0.0314	0.0240
Number of Observations	9417	5837	5837	7799	7406	7406
	(1)	(2)	(3)	(4)	(5)	(6)

Note. Analysis uses *Current Population Survey* data from 1988, 1990, 1992, 1994, 1998, 2000, 2002 and 2004. Table shows unstandardized coefficients with robust standard errors, clustered by state, in parentheses. The control group is composed of people (women for mothers' sample and men for fathers' sample) at 12- and 11-months prior to the birth. The models also control for mother's (father's) age, education, marital status, race/ethnicity, whether the child is first-born, the number of children, state and year dummy variables, and state unemployment rates in the survey month. The models also controls for whether the state had an approved welfare waiver had implemented TANF, the length in months of welfare work exemptions for mothers with infants and (the natural log of) federal and state EITC refundable benefits, in dollars.

+ *p* < .10.

*
$p < .05$.

**
$p < .01$.

***
$p < .001$.

Table 4

Regression Estimates for Maternal Employment and Leave-Taking, By Mother's Marital Status

A. Married Mothers	EMPLOYED	WITH JOB BUT NOT AT WORK (AMONG EMPLOYED)	ABSENT FROM WORK DUE TO "OTHER REASONS" (AMONG EMPLOYED)
Birth month & Any leave	0.031 (0.035)	0.053 (0.035)	0.073 (0.033)[*]
One-month after & Any leave	0.026 (0.032)	0.062 (0.036)[+]	0.126 (0.031)[***]
Two-month after & Any leave	0.039 (0.038)	0.076 (0.047)	0.062 (0.037)[+]
Three-month after & Any leave	0.036 (0.037)	0.032 (0.038)	0.018 (0.030)
R-square	0.1164	0.2334	0.2216
Number of Observations	14105	7609	7609
B. Single Mothers			
Birth month & Any leave	0.028 (0.058)	−0.089 (0.075)	−0.049 (0.050)
One-month after & Any leave	−0.011 (0.068)	−0.092 (0.076)	−0.075 (0.074)
Two-month after & Any leave	0.010 (0.066)	0.078 (0.070)	0.063 (0.051)
Three-month after & Any leave	−0.012 (0.070)	−0.054 (0.044)	−0.060 (0.042)
R-square	0.2164	0.2635	0.2628
Number of Observations	5318	1991	1991
	(1)	(2)	(3)

Note. Analysis uses *Current Population Survey* data from 1988, 1990, 1992, 1994, 1998, 2000, 2002 and 2004. Table shows unstandardized coefficients with robust standard errors, clustered by state, in parentheses. The control group is composed of women at 12- and 11-months prior to the birth. The models also control for mother's age, education, marital status, race/ethnicity, whether the child is first-born, the number of children, state and year dummy variables, and state unemployment rates in the survey month. The models also controls for whether the state had an approved welfare waiver had implemented TANF, the length in months of welfare work exemptions for mothers with infants and (the natural log of) federal and state EITC refundable benefits, in dollars.

[+] $p < .10$.

[*] $p < .05$.

[**] $p < .01$.

[***] $p < .001$.

Table 5

Regression Estimates for Maternal Employment and Leave-Taking, Before and After FMLA Enactment

A. Pre-FMLA	EMPLOYED	WITH JOB BUT NOT AT WORK (AMONG EMPLOYED)	ABSENT FROM WORK DUE TO "OTHER REASONS" (AMONG EMPLOYED)
Birth month & Having State law	0.009 (0.029)	0.053 (0.032)	0.046 (0.028)
One-month after & Having State law	0.020 (0.020)	0.074 (0.039)[+]	0.090 (0.039)[*]
Two-month after & Having State law	0.034 (0.028)	0.202 (0.044)[***]	0.149 (0.038)[***]
Three-month after & Having State law	0.045 (0.026)[+]	0.118 (0.040)[**]	0.076 (0.025)[**]
R-square	0.1495	0.2500	0.2145
Number of Observations	8753	4304	4304
B. Post-FMLA			
Birth month & Having State law	−0.023 (0.046)	0.101 (0.042)[*]	0.118 (0.043)[**]
One-month after & Having State law	−0.031 (0.043)	0.077 (0.040)[+]	0.102 (0.036)[**]
Two-month after & Having State law	−0.066 (0.044)	0.174 (0.038)[***]	0.155 (0.043)[***]
Three-month after & Having State law	−0.056 (0.046)	0.113 (0.044)[**]	0.106 (0.048)[*]
R-square	0.1562	0.2396	0.2344
Number of Observations	10670	5296	5296
	(1)	(2)	(3)

Note. Analysis uses *Current Population Survey* data from 1988, 1990, 1992, 1994, 1998, 2000, 2002 and 2004. Table shows unstandardized coefficients with robust standard errors, clustered by state, in parentheses. The control group is composed of women at 12- and 11-months prior to the birth. The models also control for mother's age, education, marital status, race/ethnicity, whether the child is first-born, the number of children, state and year dummy variables, and state unemployment rates in the survey month. The models also controls for whether the state had an approved welfare waiver had implemented TANF, the length in months of welfare work exemptions for mothers with infants and (the natural log of) federal and state EITC refundable benefits, in dollars.

[+]$p < .10$.

[*]$p < .05$.

[**]$p < .01$.

[***]$p < .001$.