
The Impact of Parental Leave on Maternal Return to
Work after Childbirth in the United States

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SUMMARY

Although new mothers are more likely than ever to be in the labour force, the time around childbirth is a dynamic one, with women quitting work altogether or changing jobs to accommodate the demands of their infants. The passage of Family and Medical Leave legislation during the 1980s and early 1990s may have altered incentives for employment among mothers of young children. This paper will examine whether the FMLA or prior state-legislated leave packages were associated with changes in the continuity of employment for mothers following childbirth, changes in return to their previous employer, and changes in their post-return versus pre-return earnings. Data come from the 1984-1997 waves of the Panel Study of Income Dynamics and its 1997 Child Development Supplement. Women who had a child post-FMLA return to work more quickly than those whose child was born prior to the FMLA, controlling for demographic factors and the state economic situation. Women who return are also more likely to return to the same job after the passage of the FMLA, but this is true only in states that had not passed a medical leave statute prior to the FMLA. Finally, the FMLA and leave are not associated with increased wages in the two years after birth. The success of job-protected leave policies for retaining experienced employees is discussed.

RESUME

Les mères qui viennent d'avoir un enfant sont plus que jamais susceptibles d'occuper un emploi, mais la période qui précède et qui suit cette naissance est une période d'évolution, certaines femmes arrêtant de travailler ou changeant d'emploi pour mieux concilier leurs obligations professionnelles et maternelles. Il se peut que la promulgation de la législation sur les congés de maladie et les congés pour raison familiale (Family and Medical Leave Act, FMLA) pendant les années 1980 et au début des années 1990 ait eu une incidence sur les incitations à travailler des mères de jeunes enfants. Ce document s'efforce de déterminer si la FMLA ou les dispositions relatives aux congés adoptées antérieurement par les Etats ont induit des changements dans la continuité de l'emploi des mères après une naissance, leur retour auprès de leur précédent employeur et leur rémunération avant et après leur retour au travail. Les données sont tirées des séries recueillies de 1984 à 1997 dans le cadre du Panel Study of Income Dynamics et de son Child Development Supplement de 1997. Les femmes qui ont eu un enfant après la promulgation de la FMLA recommencent à travailler plus rapidement que celles dont l'enfant est né avant l'adoption de cette loi, compte tenu des facteurs démographiques et de la situation économique de l'Etat considéré. Les femmes qui recommencent à travailler sont également plus susceptibles de reprendre leur emploi précédent depuis l'adoption de la FMLA, mais cela n'est vrai que dans les Etats qui n'avaient pas adopté de dispositions relatives aux congés de maladie avant cette date. Enfin, il n'y a pas de corrélation entre la FMLA et la prise de congés et les augmentations de salaire dans les deux années suivant la naissance. L'efficacité des mesures de protection de l'emploi après congé destinées à retenir les salariées expérimentées est examinée.

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INTRODUCTION

1. The increase in U. S. women's labour force participation over the past 50 years has been dramatic. Between 1940 and 1998 the participation rate of women in the U.S. labour force increased from 27% to 60% (U.S. Bureau of the Census 1999). Between 1970 and 2000 alone, the proportion of married mothers with preschool children in the labour force doubled from 30% to 63% (U.S. Bureau of the Census 1999; Hayghe 2000). However, the most dramatic increase of all has been in the labour force participation of mothers of infants. Using data from the Survey of Income and Program Participation (SIPP), O'Connell (1990) showed that whereas only about 14% of mothers with newborns who had their first baby in 1961-1965 were working by the time the child was 6 months old (increasing to 17% by the twelfth month), 48% of new mothers in 1981-1985 were working 6 months after childbirth, increasing to 56% by the twelfth month. By 1991-1994, this proportion had risen to 52% by the sixth month and 60% by the twelfth month (Smith, Downs and O'Connell 2001). Although so far maternal labour force participation has shown steady increases, this trend may not continue. In 2000, 54% of married mothers of infants (under age 1) were in the labour force, a decline from 59% in 1998 (Bachu and O'Connell 2001). It is too soon to determine whether this is a temporary response to the economic recession in the U.S. or whether it is a harbinger of declining participation in response to the difficulties of managing work and family with an infant. It may be the latter, as the decline in labour force participation occurred among women with at least some college education, and it was strongest for those with a college degree.

2. A variety of factors led to an increased proportion returning to work soon after childbirth, including increased educational levels of women, increased levels of female employment overall, and a stagnation in male wages compared to female wages over the period of the late 1980s to mid-1990s (Levy 1998). The lack of medical leave statutes or formal maternity leave policies of U.S. employers prior to 1993 is also cited as a contributing factor.

3. In the U.S., women return to work very rapidly after birth. In many European countries, in contrast, while women are very likely to be employed, mothers of infants are less likely than in the U.S. to actually be working at a job (Ruhm and Teague 1997). Many have a job but are on leave. In the U.S. the difference between being employed and being at work is largest at 1 month after birth, when about 40% have a job but only about 10% are actually at work (Klerman and Leibowitz 1994). However, this proportion shrinks rapidly such that by 4 months after birth, 40% are working. In the European countries, where lengths of leave averaged more than 1 year and paid leave averaged about 33 weeks in 1989, with about 17 full-pay equivalent weeks, at-work rates of mothers are low in the child's first year (Ruhm and Teague 1997).

4. It is argued that differential access to paid parental leave partly explains the high rate at which mothers of very young children in the United States in the 1980s were actually working and the lower rate of work in Europe, though labour force participation rates were equally high. Prior to 1993 only 1-2% of employers paid for maternity leave (Hofferth, *et al.* 1991). Instead, most employees utilized paid sick leave, and vacation leave, or short-term disability leave -- available to 53, 79, and 36% of employees, respectively (Bureau of Labour Statistics 2001) -- and either returned or left work altogether. Their jobs were not assured. Changes in policy during the 1990s may have changed incentives for employment among mothers of young children. The February 1993 Family and Medical Leave Act guaranteed job protection and a maximum of 12 weeks of unpaid leave for purposes of caring for a newborn child or a

family member who was ill (Ruhm 1997). To be eligible the individual must work in a firm with 50 or more employees and have worked at least 1 250 hours during the previous year. Even though this leave is unpaid, it is argued that it alters the decision-making calculus of employees, who have a greater incentive to remain with the same employer than before.

5. Evaluating the effectiveness of legislation effective at the same date throughout the United States is problematic because there is no variation across states. However, a number of states had passed legislation mandating unpaid but job-protected medical leave during the 1980s through 1993, and the extent of coverage and length of leave varied substantially. Could the passage of these state-legislated leave packages be responsible for some of the increased return to work after childbirth among mothers during the late 1980s and early 1990s?

6. The purpose of this paper is to analyze changes in the continuity of employment for mothers following childbirth, changes in return to their previous employer, and changes in their post-return versus pre-return earnings that may have resulted from the implementation of unpaid parental leave policies over the period from 1984 through 1996 in individual states and in the U.S. The data come from the Panel Study of Income Dynamics and its 1997 Child Development Supplement.

THEORETICAL FRAMEWORK

7. An economic approach assumes that a mother will maximize the household consumption of goods and services, her own health and that of her baby, subject to time and income constraints. The employment decision of a mother will be based upon a comparison of the value of her market time (her wage rate and accumulated human capital--education, job skills, seniority, and experience) with the value of her time at home in terms of producing a healthy child (the reservation wage) (Desai and Waite 1991; Joesch 1994; Leibowitz, Klerman and Waite 1992). The value of market time is not only earnings but also the appreciation of skills and gain in tenure and work experience. The value of home time, while not directly measured, is the value of investment in home and child. The latter depends upon other income sources, such as the income of the husband or partner and AFDC receipt, the number of parents, and the number and ages of children. For families with children, having a non-working mother has tended to be a normal good (Mason and Kuhlthau 1991), one which can only be afforded by higher income families. More income also raises the demand for home-produced services and the value of the time of homemakers in producing them. Thus, a higher other family income increases the value of the mother's time at home relative to time outside the home. It is expected that a higher level of mother's hourly earnings and human capital will shorten her time to work following childbirth, while a higher level of other family income will lengthen it. A mother will work outside the home when the value of her market time or earnings exceeds the value of her home time.

8. The process of entry into work after childbirth varies from mother to mother. After the birth, the value of the mother's home time is high and the value of her market time low. Even if a new mother could find someone to care for her newborn, the cost of such care would be very high (the opportunity cost of the father equals his net wage, for example). Thus, after having a baby the value of a mother's home time is greater than her market wage, so she remains home. However, as the child ages, the need for her time and attention declines, alternative caregivers become feasible and affordable, and the value of her time at home may decline relative to the value of her time at work

9. Some factors affect returning to work because they influence the costs and benefits of working versus staying home. First and foremost are work experience and whether she worked during pregnancy. Working during pregnancy, especially during the last trimester, indicates a high degree of commitment to the job. Those who worked during pregnancy return to work sooner and are more likely to return to the same employer (Smith, Downs and O'Connell 2001). Klerman and Leibowitz (Klerman and Leibowitz 1999) found that 60% of those who worked full-time during the last trimester returned to the same job post-birth. Some mothers have problem pregnancies and may not be able to actually be at work during the last part of pregnancy, but they will certainly say that they are employed. Tenure at the present job and total work experience are, similarly, expected to be associated with earlier returns to work because they increase the benefit of returning. They should also be associated with greater likelihood of returning to the same job and with higher earnings.

10. A second critical factor is the health of the infant. Mothers of infants who are premature, low birth weight, or who have other health problems are likely to delay returning to work (McGovern, *et al.* 2000). Recent research shows that problems in the baby after the birth affect return to work time, whereas problems with the pregnancy do not appear to affect leave-taking after the birth (McGovern, *et al.* 2000).

11. A third factor is whether this is the first or a later birth. Mothers return sooner after the first than after a second or later birth (Hofferth 1996). The costs of staying home decline and the costs of working rise following the second such that return is slowed. The total number of children is also important. Managing two children is much more complex than managing one, and managing several young children makes working very difficult. A larger number of children also increases the value of home time and should lengthen the time it takes to enter or re-enter the work force.

12. Most factors that affect this decision vary from individual to individual, so two mothers with the same wage level and family income will not necessarily return at the same time. For example, age, race, and education may proxy tastes or preferences for working outside the home versus inside the home. Black mothers have historically been employed at higher rates than white mothers. Older mothers may have developed a taste for employment by working prior to their first child's birth. Compared with mothers with less schooling, mothers with higher educational levels will find the benefits of returning to work greater and will return more quickly (Hofferth 1996). Salaries will be higher and the work more meaningful.

Potential Impact of Family and Medical Leave Policy

13. Theory would suggest that a maternity leave policy would result in more women entering the work force and remaining employed, because they do not have to exit employment to take time off from work. On the one hand, it could lead to more women on leave at any one point in time (and thus fewer actually working), since many women who were content, or at least resigned to taking little time off after childbirth may take longer leaves than they might have before. Parental leave may reduce labour force efficiency if it encourages women who would otherwise be employed to stay out of work longer. On the other hand, leave times may be shortened rather than lengthened if mothers who would like more time off take shorter leaves instead of leaving their employer, which would have previously been their only choice. A leave policy, therefore, has ambiguous effects on rapidity of returning to work.

14. However, parental leave is likely to have stronger effects on returning to the same job and on wages. Knowing they will have access to leave if needed may encourage women to stay with the same employer. This is because employees are guaranteed their own or a similar position when they return. There is little incentive to change jobs. The legislation provides women with a source of negotiating power in wages as well. Women no longer have to give up seniority or earnings in order to obtain maternity leave.

This should increase their bargaining power in terms of hours and flexibility of schedule after returning, crucial aspects of employment in the transition period (Hofferth 1996).

PREVIOUS RESEARCH

15. A substantial amount of recent U.S. research has focused upon the issue of the economic impact of paid and unpaid parental leave on women's labour force participation, return to work, return to the same job, work hours, and earnings.

Return to Employment Following Childbirth

16. The first hypothesis is that women will be more likely to be employed (even if not at work) if unpaid parental leave is available. Klerman and Leibowitz (1997) examined the change in proportion of US mothers employed, on leave and at work between 1980 and 1990 in states that passed unpaid medical leave statutes (MLS) and in those that did not. They found that mothers of infants in MLS states increased their employment significantly more than comparable women in states that did not pass an MLS during the 1980s. This fits with the hypothesis that more mothers will remain in the labour force if access to leave is increased. In contrast to what was expected, however, they did not find any significant association with whether women were on leave, but found that mothers of infants were more likely to be working at a job in 1990 than in 1980. However, these results appear more likely to be due not to maternity leave legislation, but to something else. While they find that mothers of infants in MLS states increased their employment significantly more than mothers of infants in states that did not pass an MLS during the 1980s, mothers of toddlers in the same state (who should not have been affected by maternity leave statutes) increased their employment even more. This suggests that these changes were not the result of maternity leave legislation but something else in these states linked both to passing MLS and to greater maternal employment. This is likely to be the overall wealth of the state, as reflected in the incomes of its residents. In addition, that study used data from only 6 states that passed such legislation between 1980 and 1990, providing only minimal variation on which to test the effects of public policies. Most of the statutes did not apply to all employees; the potential population affected was very small.

17. Ruhm and Teague (1997) examine the association between European leave policies at the level of the state and indicators of macro conditions such as the log of gross domestic product, the employment to population ratio, the labour force participation rate, and the unemployment rate. If leave reduces labour market efficiency, it should reduce GDP and increase the LFP rate, but increase unemployment and lower the employment rate. Ruhm and Teague test for a variety of negative effects of mandated family leave on these efficiency measures. Not only do they *not* find evidence of detrimental effects, but mandated leave may also be beneficial, particularly paid leave. Paid leave is found to be associated with an increased domestic GDP, increased employment, and reduced unemployment (Ruhm and Teague 1997). Unpaid leave is associated with increased labour force participation and employment, but increased unemployment as well; unpaid leave is not sufficient to discourage mothers who want longer leaves from leaving their jobs (Ruhm and Teague 1997).

Return to the Same Employer

18. A second hypothesis is that access to paid or unpaid parental leave will keep women working for the same employer since they do not have to leave their jobs to have access to such leave. Consistent with this hypothesis, Waldfogel (1997) found that women covered by a formal unpaid maternity leave policy were more likely to return to the same employer than those who were not covered. In the NLSY, 65% of the women working at the time they had their most recent child reported being covered by an unpaid maternity leave policy.

Earnings

19. A third expectation is that women who have access to paid or unpaid parental leave will have higher wages and salaries, as a result of staying with the same employer and accumulating experience and tenure at the job. Waldfogel (1997) finds that maintaining job continuity over childbirth (returning to same employer) was associated with higher pay in two different longitudinal data sets. Besides initial higher pay, those who stayed with the job had higher subsequent work experience and job tenure after childbirth. Maternity leave coverage was associated with subsequent job continuity through childbirth. While the initial results suggest that maternity leave may help women maintain higher wages over time, this is partially due to selectivity. Those who had coverage were different before the birth; their wages were higher. When the difference between pre- and post-birth wages was examined, the difference due to coverage declined to marginal significance.

Effects of Employer Policies

20. Another literature focuses on the effects of private employer policies on women's return to work after childbirth. Hofferth (1996) found a number of employer policies to be linked to the rapidity with which mothers returned to work after childbirth. Those who had access to part-time work through their employer or to child care at the work site returned to work part-time sooner, and mothers who had access to a flexible spending account or liberal unpaid leave returned to full-time work sooner than mothers who did not have access to such policies. Since income was found to be a consistently important factor related to early return, with low-income mothers returning sooner, this suggests that unpaid leave will not be helpful to them in balancing work and family life. There were too few mothers who received paid leave to draw any conclusions about the impact of income replacement on return to work. Glass & Riley (1998) found evidence that not having to work long hours, having more leave available, having schedule flexibility and being able to work at home were associated with women employed before the birth being less likely either to change jobs or to exit the work force, but more likely to stay with the pre-birth employer. Working a non-standard schedule was also associated with being less likely to exit. While these results cannot establish causality, since mothers may be attracted to such employers before the birth, they are generally consistent with the hypothesis that greater flexibility and support at the workplace increases retention following childbirth.

Analyses of the Impact of the Family and Medical Leave Act in the U.S.

21. The results of two studies using data collected from employers and from employees under the sponsorship of the US Department of Labour have concluded that the impacts of the FMLA are small but positive (Commission on Family and Medical Leave 1996; Cantor, *et al.* 2002). Eight out of ten employees reported that taking leave improved their ability to care for family members' health and well-being. Eight out of ten believed that everyone should have access to FMLA leave. Employers reported no noticeable

effects on their business. Leaves also were associated with job continuity. Of those taking leave, 84% returned to the same employer.

22. Since 67% of employees reported that they were paid by the employer for their leave time through sick, vacation or disability leave, it is easy to see why the FMLA has not had a major impact. Utilization is low. The rate of FMLA utilization is only 2 to 4% of employees. Only 17% of employees took leave for a reason covered by FMLA and of these only 7% reported that it was, indeed FMLA leave. It is probably a last resort after all paid leave opportunities are exhausted. Just over 3% of employees reported needing but not taking leave. Of these, 64% could not afford the loss of wages. The figures from the 2000 survey are essentially the same, with a slightly higher utilization rate. Given these figures and the proportion that returned to the same employer even prior to the passage of the FMLA, we do not expect a big impact on the speed of returning to work. However, it may have a larger impact on returning to the same employer and on earnings.

23. The majority of the studies of the effects of leave have examined the impact of access to maternity or parental leave statutes from their employer. Unfortunately, since women select their employers, the availability of maternity leave is not exogenous. Women who want to have children and to work may choose to work for employers with more attractive leave policies. In this case working for an employer with a liberal leave policy is a consequence of the desire to work and raise a family, rather than returning to work being a result of a liberal leave policy. In contrast, we examine the effect of implementation of state medical leave statutes and the national FMLA.

Evaluating the Effects of FMLA and State Medical Leave Policies

24. Evaluation of a policy implemented nationally, such as the Family and Medical Leave Act, is difficult. Klerman and Leibowitz (1997) took advantage of state variation in the 1980s, for example. Ruhm and Teague examined variation across the European countries. Waldfogel et al have examined variations across the US, Britain, and Japan. Research by Ross (1998) was innovative. She hypothesized that the leave patterns of new mothers in states that did not previously have a Medical Leave Statute would be affected more by the FMLA than those in states that previously had such a Statute. This turned out to be the case. The percentage of mothers employed was significantly greater post-FMLA among those in states previously without such legislation. The FMLA passage was not associated with increased retention at the job. There was some evidence of convergence of length of leave for women living in states with and without a MLS as a result of the FMLA. As a further test, the author examined differences among those eligible for and those not eligible for leave in the different states. There was some evidence for a positive effect of the FMLA on leave lengths, comparing eligible and non-eligible women in states without and with an MLS before and after 1993. No effects on work hours were found. The authors found evidence that states that offered maternity leaves prior to 1993 differed from those that did not, in ways related to maternal employment, retention and length of leave.

25. Besides the unpaid Medical Leave statutes passed in 21 states prior to 1993, a number of states have modified either disability provisions or unemployment legislation that would permit wage replacement for FMLA eligible leaves. This provides additional variation in parental leave policies across the states and when combined with data on mothers across different states between 1985 and 1996 permits evaluation of the effects of differences in access to paid and unpaid parental leave in the U.S. in the 1980s and 1990s. Unfortunately, whether the state also pays family leave under its temporary disability insurance policy (only 5 states) was not found to be linked to return to work and was dropped from the analysis.

26. The objectives of the present study are to examine changes between the late 1980s, early 1990s, and the mid-1990s in 1) how soon mothers were employed following childbirth, 2) whether they return to

the same employer, 3) whether their post- return wages/earnings are higher than their pre-return earnings/wages, and 4) whether any of these changes are linked to changes in the FMLA and/or state leave policies over the period.

DATA, VARIABLES AND METHODS

Data: The Panel Study of Income Dynamics Child Development Supplement

27. The study sample is drawn from the 1997 Child Development Supplement (CDS) to the Panel Study of Income Dynamics (PSID). The PSID is a 30-year longitudinal survey of a representative sample of U.S. men, women, children, and the families in which they reside. In 1997, the PSID added a refresher sample of immigrants to the United States (since 1968) so that the sample represents the U.S. population in 1997. When weights are used, the PSID has been found to be representative of U.S. individuals and their families (Fitzgerald, Gottschalk and Moffitt 1998a). With funding from the National Institute of Child Health and Human Development (NICHD), data were collected in 1997 on up to two randomly selected 0-12-year-old children of PSID respondents both from the primary caregivers and from the children themselves (Hofferth, *et al.* 1999). A small number who had turned 13 by the interview date are included in the analysis. The CDS survey period began in March 1997 and, with a break from mid-June through August, ended on December 6, 1997. Interviews were completed with 2 380 child households containing 3 563 children under age 13. The response rate was 90% for those families regularly interviewed in the core PSID and 84% for those contacted the first time this year for the immigrant refresher to the sample, for a combined response rate for both groups of 88%. Post-stratification weights based upon the 1997 Current Population Survey are used to make the data nationally representative.

28. From this sample of children and data from the core PSID we prepared a detailed monthly history of the employment of each child's mother beginning at the child's birth. Thus for the oldest children (12 and 13 years) there is information going back to 1984. In this study we focus on non-immigrant children for whom we have these detailed histories. After deleting immigrant children, our sample size is 3 234. We constructed indicators of whether the mother worked during the last three months pregnancy, the month the mother returned to work within 24 months of the birth of each child, whether she returned to the same employer, and her earnings both before the birth and after returning to work. Other information collected from the core includes annual income of the family, education of the mother, race/ethnicity, and family structure (whether two parent or not).

Independent Variables

29. Birth dates of children are available in the Child Development Supplement.

30. The child's birth weight was also drawn from the CDS. Maternal information such as age, race, Hispanic origin, education, marital status, total number of children, work experience since the age of 18, work status before and after birth, work hours, tenure at her present employer, earnings, and family income were drawn from the core PSID and attached to the child's file. Nearly all of the variables were assigned based on the year in which the child was born.

Employer continuity, whether returned to same employer, and post-return earnings

31. The PSID collects a monthly history of employment at primary and secondary jobs each year. The survey obtains the length of time the person worked with the current employer, the starting month and year of each job and the ending month and year. The PSID also asks detailed information about time off from work, how much time, and when that occurred. By following the child from birth, we can determine how many months the mother was not employed and when she returned to employment. We can also determine whether she returned to the same employer by examining the beginning and ending dates of each job around the time of the birth of the child. Her earnings the year in which she returned to work can be compared to her earnings in the child's birth year.

Economic Conditions

32. Finally, we have included information about the economy at the time of birth. In particular, we have included the unemployment rate and median family income in the state of residence each year (U.S. Bureau of the Census 2001). Higher unemployment provides incentives to remain with the same employer rather than changing and higher median income is an indicator of the cost of living. More prosperous states are more likely to have implemented a state medical leave statute prior to 1993.

POLICY VARIABLES

33. Policy variables come from reports about state family and medical leave policies in the early 1990s (Ruckelshaus 1997). State policies are categorized in terms of whether they provided leave for childbirth or adoption in each month from 1984 to 1996. Each mother was assigned a dummy variable for whether the state she lived in at the birth of that child had a leave policy in place. Another dummy variable was assigned to the mother regarding whether the child was born before or after February 1993, the date of passage of the FMLA. We grouped birth years into several groups to examine pre-FMLA and post-FMLA trends. After controlling for all the demographic and economic variables, we can see whether the leave variables have an independent effect on the continuity of the mother's employment, whether she returns to the same employer, and how her post-return earnings compare with her former earnings.

ANALYTIC FRAMEWORK

34. The continuity of the mother's employment before and after childbirth uses a continuous time proportional hazard modelling approach. We prepared a spell-based file. We started with a file in which the first month was the child's birth month and that contained information on maternal employment for that month and each subsequent month up until the age of the child in months at the time of the 1997 survey. This file was transformed into a spell file in which we have one record for the first two years for each child born to CDS mothers between 1984 and 1997. Attached are socioeconomic and demographic

information about the mother and her family at the time of birth. In addition, there is information about maternal employment, earnings, and work hours before and after the birth, when the mother returned to work, and whether she returned to the same employer. The analysis was conducted for the entire sample, and then for those who both worked in the last trimester of pregnancy and also returned to work within 24 months after childbirth. Multiple observations for the same person are included if they have several births over the study period. After a new child is born into the family, the data are censored if the family is interviewed or leaves the study within 24 months and the mother does not return to work, or if 24 months are reached without a return to work

35. Logistic regression is used to analyze whether the leave policy variables had any association with the mother returning to the same employer (0=did not return to the same job and 1=returned to the same job). Ordinary least squares (OLS) regression is used to analyze whether the leave policies have an association with the mother's post-return earnings. This variable is continuous and represents her annual earnings upon return to work after childbirth, in thousands of dollars. All dollars are in constant 2000 dollars.

36. **Analysis 1: Return to employment.** We first conduct analyses of working in pregnancy and length of time to maternal employment after childbirth for the mothers of individual children, controlling for demographic background variables, using the spell-based file. We then add the FMLA and state medical leave dummy variables to the model with demographic variables to examine the relationship between public policies and return to employment. In the third model we add mother's work experience since the age of 18. In the final model, the state unemployment rate and median income are included.

37. **Analysis 2: Return to the same employer.** The dependent variable for analysis 2 is whether the mother returned to the same employer. This model is limited to those mothers who worked during the final trimester of pregnancy and also returned to employment within 24 months of childbirth. The introduction of covariates is almost identical to analysis 1 except that the mother's tenure at the present employer is added in addition to her work experience.

38. **Analysis 3: Earnings.** Using the same subset of mothers, the dependent variable in analysis 3 is her post-birth hourly wage. The introduction of covariates is the same as for model 2 except that whether she returned to the same job is included as a covariate, as well as her state unemployment rate and median income. The final model includes her pre-birth hourly wage so that her earnings gain can be measured.

RESULTS

Bivariate Analysis

39. Table 1 shows the overall results for the dependent variables by FMLA status and whether a state MLS was in place at the time of the child's birth. The proportion of mothers who returned in the first 24 months after childbirth was higher after the passage of the FMLA than before (.85 compared with .79). Women returned more than 4 months sooner (at 7.6 months after childbirth) after the FMLA was passed than before its passage (11.9 months). The proportion of women returning to work within 24 months is virtually the same (.80) for those in which a state MLS was in place at the child's birth and for those in which a law was not in place. However, the median return time was almost two months earlier for mothers who lived in a state with a family and medical leave law than for those who did not.

Table 1. Return to work within 24 months after birth, by whether the child was born before or after the FMLA and whether a state medical leave law was in place at the time

Variable	Total	FMLA Status		State Leave Law in Place	
		Pre-FMLA (1984-92)	Post-FMLA (1993-97)	No	Yes
Model 1:					
Mother returned (yes/no) ^a	0,800	0,785	0,854	0,804	0,796
Median return time ^a	10,580	11,887	7,629	10,875	9,110
Model 2:					
Mother returned to the same job(yes/no)	0,704	0,693	0,741	0,682	0,785
Model 3:					
Mother's hourly post-birth wages ^b	\$17,57	\$17,76	\$16,99	\$16,68	\$19,66

^aFrom Life Table analysis^bIn constant 1996 dollars

40. For mothers who both worked during pregnancy and returned within 24 months, the proportion that returned to the same job was higher after passage of the FMLA (74%) than before (69%) and was also higher for mothers who lived in states with medical leave laws (79%) than for those who did not (68%).

41. The mother's hourly post-birth wages are slightly lower post-FMLA (\$16.99) than before (\$17.76) but higher for those with a state family and medical leave law (\$19.66) than those without (\$16.68).

Risk of Returning to Employment within First Two Years after Childbirth

42. Table 2 shows the factors associated with returning to work within two years of a birth. Most of the effects are as anticipated. Consistent with economic theory, the higher the value of a mother's time (her earnings), the more rapidly she returns to work (Model A). She returns more slowly when other family income is higher, also consistent with economic theory. Mothers with more children return more slowly; the value of their time at home is greater. Black women have historically had higher rates of labour force participation than whites; black women also return more quickly after a birth than white women. Married mothers return to work more rapidly than single mothers; the spouse or partner may provide alternative care for the child (Brayfield 1995), or they may purchase care. While we hypothesized that having a low birth weight child might delay return, in these data having a low birth weight child is not linked to rapidity of return. As anticipated, mothers who work during pregnancy return more quickly than those who do not work during pregnancy.

Table 2. Effects of demographic and leave variables on the risk of employment within the first 24 months after childbirth

	All Mothers								
	Model A		Model B		Model C		Model D		
	Coefficient	Standard Error	Risk Ratio	Coefficient	Standard Error	Risk Ratio	Coefficient	Standard Error	Risk Ratio
White and other (omitted)									
Black	0,125	0,067 +	1,133	0,122	0,067 +	1,130	0,134	0,067 +	1,143
Hispanic	-0,206	0,240		-0,245	0,241		-0,247	0,242	
High school	0,053	0,097		0,084	0,097		0,070	0,098	
Some college	0,125	0,102		0,143	0,102		0,122	0,103	
College	0,136	0,113		0,148	0,114		0,134	0,114	
Two parents	0,171	0,078 +	1,186	0,218	0,079 **	1,244	0,238	0,079 **	1,269
Mother's pre-birth hourly wage	0,027	0,003 ***	1,027	0,027	0,003 ***	1,027	0,025	0,003 ***	1,026
Other income (000)	-0,005	0,001 ***	0,995	-0,005	0,001 ***	0,995	-0,005	0,001 ***	0,995
Age of mother	-0,006	0,005		-0,006	0,005		-0,027	0,008 ***	0,974
Number of children	-0,057	0,027 +	0,945	-0,051	0,027 +	0,950	-0,040	0,027	
Low birthweight	-0,076	0,100		-0,045	0,101		-0,036	0,101	
Worked during pregnancy	1,014	0,073 ***	2,756	1,039	0,073 ***	2,827	0,990	0,075 ***	2,644
FMLA				0,374	0,067 ***	1,453	0,387	0,067 ***	1,472
State leave				-0,129	0,063 +	0,879	-0,119	0,064 +	0,887
Mother work experience (years)							0,034	0,013 **	1,035
Mother's work experience squared							0,000	0,000	
State unemployment rate							0,000	0,018 **	0,949
State median income							-0,009	0,007	
N	1822			1822			1819		
-2 log L	18874			18874			18827		
Chi square (df)	587 (14)			587 (14)			601 (16)		
							611 (18)		

+ p<.10, *p<.05, **p<.01, ***p<.001

43. In model B, we add indicators of public policy--whether the birth occurred before or after passage of the FMLA in 1993 and whether the mother lived in a state that passed a MLS prior to the birth. Returns are higher after passage of the FMLA. Return rates are lower for states that had passed a state medical leave law than for those that did not. To test whether the increased rate of return is simply a continuation of previous trends, we also tested the inclusion of dummy variables for the years 1984-1988 and 1989-1993 compared with 1994-1996 (not shown). There was no clear time trend prior to 1993; the coefficients for these two years were similar. While this certainly does not prove that the passage of the FMLA increased returns, it cannot be ruled out since the data are consistent with this possibility.

44. Model C adds work experience to the previous model. The coefficient for the mother's work experience is statistically significant while the coefficients for the FMLA and MLS variables are virtually unchanged.

45. Model D adds the state unemployment rate and median income for the year and state in which the child was born. The state unemployment rate is negatively and significantly associated with the rapidity of the mother's return to work. This makes sense; mothers facing difficulties finding employment will find it less costly to stay home. The state median income is not significantly associated with the mother's return. The coefficient for the FMLA variable is still positive and significant upon the introduction of these variables. However, the coefficient for the MLS becomes insignificant in this final model that controls for state economic characteristics. Thus, it is the economic situation of the states that passed an MLS compared with those that did not that is associated with the mother's return to work, not the laws themselves.

Risk of Returning to the Same Job

46. For those mothers who worked during pregnancy and returned to work within 24 months, a number of factors are linked to returning to the same job (Table 3). Hispanic mothers, older mothers and those that were married are more likely to return to the same job. Mothers with more education are more likely to return to the same job, and mothers with a college degree are highly significantly likely to do so. Consistent with the human capital investment story, mothers with higher earnings return to the same job. These mother experience higher gains by returning to their pre-birth employment. Mothers who live with higher earning partners or other family members have more latitude about returning and are less likely to return to the same job, net of their own earnings.

47. In the second model we see that both the FMLA and the State Medical Leave policies are linked to return to the pre-birth employer. Their coefficients are similar.

48. In model C we add tenure and work experience. The mother's work experience and her tenure at the present job are associated with a greater likelihood of returning to the pre-birth job. The association between the policy variables and returning to the same job is actually strengthened upon the addition of these variables. The size of the effect substantial, several times the standard deviation of returning the same job. The effect of state leave is about 1.6 times the standard deviation, a large effect.

Table 3. Effects of demographic and leave variables on returning to the same job for those mothers who were employed during pregnancy and were employed within the 24 months after childbirth

	Model A			Model B			Model C			Model D		
	Coefficient	Standard Error	Risk Ratio	Coefficient	Standard Error	Risk Ratio	Coefficient	Standard Error	Risk Ratio	Coefficient	Standard Error	Risk Ratio
White and other (omitted)												
Black	0,412	0,273		0,501	0,280 +	1,650	0,487	0,439	0,487	0,441		
Hispanic	-0,996	0,582 +	0,370	-1,118	0,597 +	0,327	-1,034	0,774	-0,993	0,775		
Less than high school (omitted)												
High school	0,637	0,336 +	1,891	0,616	0,336 +	1,852	0,434	0,544	0,465	0,546		
Some college	0,801	0,349 +	2,227	0,748	0,350 +	2,112	0,650	0,553	0,691	0,556		
College	1,245	0,373 ***	3,474	1,227	0,373 **	3,412	1,364	0,573 +	1,402	0,576 +	4,064	
Two parents	0,640	0,258 +	1,896	0,770	0,266 **	2,160	1,599	0,641 +	1,558	0,649 +	4,747	
Mother's pre-birth hourly wage	0,062	0,013 ***	1,064	0,061	0,013 ***	1,063	0,014	0,013	0,015	0,014		
Other income (000)	-0,007	0,003 **	0,993	-0,008	0,003 **	0,992	-0,004	0,003	-0,004	0,003		
Age of mother	0,060	0,017 ***	1,061	0,055	0,017 **	1,057	-0,095	0,036 **	-0,093	0,037 +	0,911	
Number of children	-0,026	0,082		-0,009	0,082		0,101	0,105	0,106	0,105		
Low birthweight	0,112	0,323		0,025	0,327		0,195	0,426	0,150	0,429		
FMLA				0,384	0,206 +	1,468	1,494	0,266 ***	1,575	0,287 ***	4,828	
State leave				0,414	0,191 +	1,512	0,781	0,238 **	0,874	0,256 **	2,396	
Mother's work experience (years)							0,273	0,069 ***	0,271	0,069 ***	1,311	
Mother's work experience squared							-0,007	0,003 +	-0,007	0,003 +	0,993	
Mother's tenure at present job (months)							0,027	0,004 ***	0,027	0,004 ***	1,027	
State unemployment rate									-0,052	0,064		
State median income									-0,024	0,024		
N	1014			1012			813		813			
-2 log L	1060			1046			757		755			
Chi square (df)	120 (11)			131 (13)			204 (16)		206 (18)			

+ p<.10, *p<.05, **p<.01, ***p<.001

49. Previous research hypothesized that the effects of the passage of the FMLA should be greater in states that did not have a maternity leave statute prior to 1993. We tested this by adding an interaction between the passage of the FMLA and whether a state had previously passed such a statute to model C. The coefficient is negative, large in magnitude and statistically significant (not shown). The results support the hypothesis that the passage of the FMLA had a positive impact on returning to the same job in states in which such a statute was not already in place. In states with such a statute, the impact was negative. This is further support for the importance of access to leave through legislation such as the FMLA to whether mothers return to their same job post-childbirth.

50. The addition of median state income and unemployment rate (Model D) does not affect the above results and neither variable is statistically significantly associated with returning to the same job.

Hourly Earnings of Mothers who Return within Two Years Post-Childbirth

51. Hourly earnings are linked to human capital accumulation. Not surprisingly, women who attended college or completed a college degree earn more two years after the birth of their child than those who have less schooling. Older mothers also tend to earn more than younger mothers. Higher other family income is linked to higher earnings. This may be a result of assortative mating, a process in which like marries like.

52. The passage of the FMLA (Model B) is not directly associated with wages. However, state leave policy is. Women who lived in a state with a maternity leave policy in place pre-FMLA have hourly wages that are almost \$2.00 higher than with those not living in such a state.

53. When tenure and work experience are added (Model C), we see that the results for the FMLA and MLS decline to non-significance. Living in a state with a MLS or the FMLA at birth is not significantly related to increased earnings. The only variables that are significant in this model are other family income and the mother's tenure at the present job, both of which are positive. Mothers who return to the same job earn about \$2 per hour more than for mothers who do not (Model D). Model E adds state-level characteristics. The median income of the state (Model E) is associated with higher wages, as anticipated.

54. In the final model (F), the mother's pre-birth hourly wage is added as a control so that the dependent variable is now the hourly earnings gain between birth and two years post-birth. This variable is highly statistically significant. In this model, both the FMLA and state leave policies are associated with a negative earnings gain; that is, they are associated with a decline in hourly earnings.

Table 4. Effects of demographic and leave variables on returning wages for those mothers who were employed during pregnancy and were employed within the 24 months after childbirth

	Model A		Model B		Model C		Model D		Model E		Model F	
	Coefficient	Standard Error	Coefficient	Standard Error	Coefficient	Standard Error	Coefficient	Standard Error	Coefficient	Standard Error	Coefficient	Standard Error
White and other (omitted)	0,670	1,504	1,226	1,471	2,251	1,851	2,135	1,862	2,172	1,841	1,857	1,591
Black	-4,181	4,088	-3,437	3,995	-3,179	4,513	-3,015	4,521	-3,017	4,479	0,062	3,822
Hispanic	1,013	2,244	0,860	2,175	-2,942	3,338	-3,465	3,365	-3,841	3,327	-2,697	2,934
Less than high school (omitted)	4,326	2,287 +	4,106	2,224 +	0,073	3,368	-0,507	3,391	-1,360	3,356	-1,481	2,964
High school	9,326	2,310 ***	8,690	2,241 ***	4,717	3,369	3,852	3,405	3,124	3,372	-0,504	3,000
Some college	0,348	1,546	0,444	1,534	1,198	3,228	0,749	3,257	1,978	3,236	2,957	3,189
College	0,122	0,017 ***	0,129	0,016 ***	0,145	0,017 ***	0,145	0,017 ***	0,133	0,017 ***	0,059	0,016 ***
Two parents	0,248	0,085 +	0,206	0,083 +	0,171	0,185	0,187	0,186	0,170	0,184	0,023	0,161
Other income (000)	0,354	0,454	0,269	0,440	0,276	0,501	0,239	0,504	0,182	0,499	0,995	0,435 +
Age of mother	-0,862	1,864	-1,365	1,825	-0,756	1,969	-0,873	1,974	0,085	1,964	0,764	1,674
Number of children												
Low birthweight												
FMLA												
leave												
Mother work experience (years)												
Mother's work experience squared												
Mother's tenure at present job (months)												
Mother returned to same job												
State unemployment rate												
State median income												
Mother's pre-birth hourly wage												
N	908		906		726		719		719		697	
R-Square	0,194		0,205		0,228		0,227		0,247		0,399	

+ p<.10, *p<.05, **p<.10, ***p<.001

SUMMARY AND CONCLUSIONS

55. The objectives of this research were to examine the association between having access to unpaid parental leave and mothers' employment during their child's first two years. In spite of the fact that FMLA use is quite low, probably because it is unpaid, its passage was associated with an acceleration of the pace with which mothers returned to work during the post-FMLA period through 1996. Of course, other circumstances during that period, such as economic prosperity, pulled women into the work force and welfare reform gave low-income women a push to find a job. However, controls for state-level economic prosperity do not eliminate this association. These results provide support for the hypothesis that access to unpaid job-protected leave encourages women to remain with their employer and take a shorter leave rather than exit for a longer period and take a chance on finding employment with another employer later on.

56. There is good news for employers in that the passage of the unpaid FMLA was associated with a greater rate of return to the same employer. The FMLA has been successful in retaining trained employees without increasing costs, according to reports by the Commission on Leave Policy in both 1996 and 1999. That this may, indeed, be linked to the FMLA is suggested by the significance of an interaction between state leave policies and the FMLA. The FMLA effect on returns to the same employer was only positive in states that had no family and medical leave statute on the books prior to 1993. Although it is not as powerful a job retention policy as paid leave, even unpaid leave can help retain workers.

57. Living in a state that had passed a state MLS prior to the child's birth was associated with higher earnings. However, this association became negative upon control for state median income and statistically significant after controlling for pre-birth earnings. We found significant negative effects of the FMLA and living in a state that passed a medical leave statute prior to the child's birth on the change in pre-birth to post-birth earnings. The results suggest, first, that states with higher median incomes are both more likely to have high wages and to have passed an MLS. Thus, when we controlled for median incomes the benefit of the FMLA declined.

58. Why the wage benefit of the FMLA is negative is not yet clear. However, it may be that, pre-FMLA, women who were more career-oriented were the ones who returned within the first two years whereas returners are less selective today. In addition, not enough time has passed since the FMLA went into effect. We do not have large samples of women 2 years after childbirth on which to test these hypotheses. In this study, only women who gave birth between 1993 and 1995 could be used to test the post-FMLA earnings gain at 2 years after childbirth. Although we expect that the wage differential will eventually become positive, our period of follow-up is not yet long enough to test long-term effects of family and medical leave legislation.

59. Why does the passage of the FMLA seem to have had the effects that it had on return to work and on returns to the same employer, in spite of its limited use to date? We argue that the passage of this legislation made legitimate the right of employed women to take time off for childbearing and return to the same job. Instead of having to negotiate over the terms of leave, women can negotiate over other aspects of their jobs, such as flexible schedules and work hours. Even if the FMLA per se is not greatly utilized, the right to take leave and return has been legitimated and the incentive for women to work and build experience with an employer has increased. Future research should evaluate the longer-term implications of the FMLA and other state family and medical leave initiatives in order to test both benefits and costs of such legislation.

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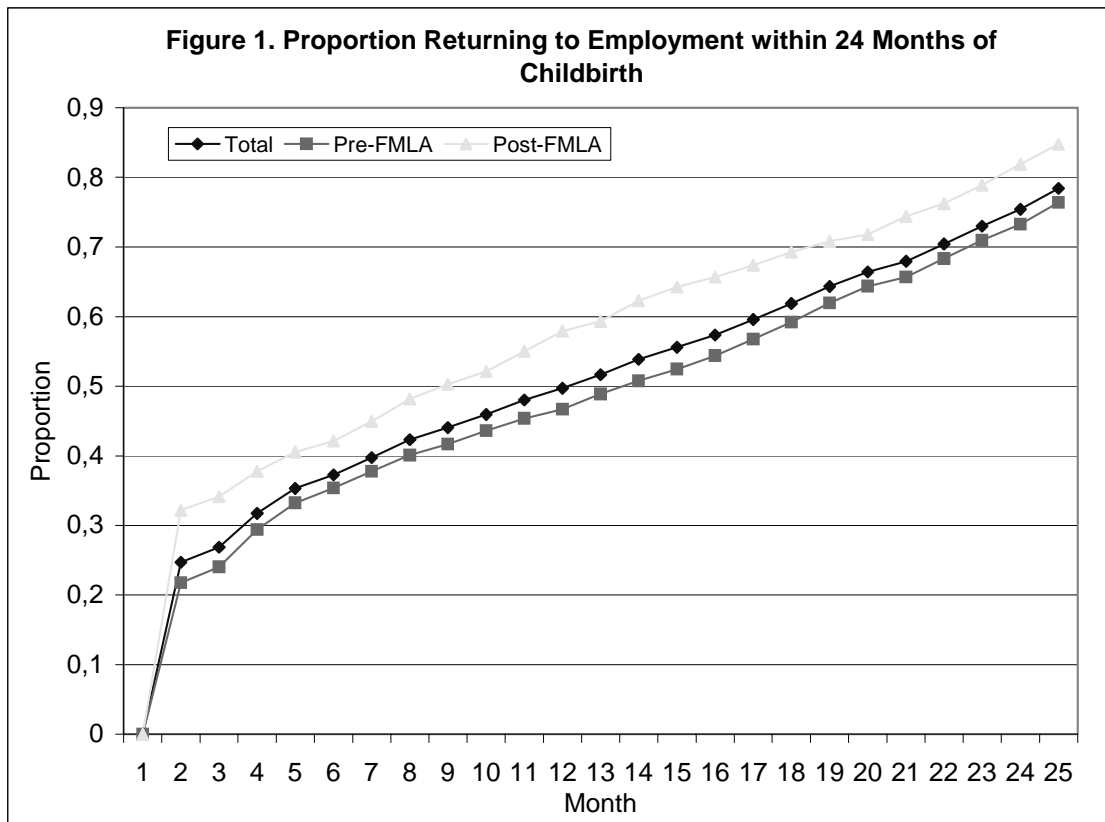
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APPENDIX

Descriptive Statistics for Variables Used in the Analysis

Variable	All Mothers			Mothers who worked in pregnancy and returned within 24 months of birth		
	N	Mean	Standard Deviation	N	Mean	Standard Deviation
Control variables						
Black	3231	0,183	1,402	1273	0,138	0,345
Hispanic	3234	0,025	0,564	1273	0,016	0,124
High school	2977	0,356	1,748	1256	0,337	0,472
Some college	2977	0,287	1,652	1256	0,289	0,453
College	2977	0,251	1,582	1256	0,319	0,466
Two parents	3160	0,730	1,607	1240	0,835	0,371
Mother's pre-birth hourly wage	2269	13,531	38,814	1081	14,270	10,129
Other income (000)	2239	39,330	151,638	1172	38,213	33,277
Age of mother	2987	28,259	22,713	1263	29,337	5,817
Number of children	2809	1,353	4,191	1206	1,158	1,026
Low birthweight	3234	0,069	0,916	1273	0,062	0,242
Mother work experience (years)	2910	6,307	17,558	1260	7,499	4,950
Mother's work experience squared	2910	66,749	469,887	1260	83,231	139,023
Worked during pregnancy	2231	0,670	1,793			
Mother's tenure at present job (months)				898	34,944	46,841
Economic variables						
State unemployment rate				1203	6,105	1,543
State median income (000)				1203	28,564	5,424
Leave variables						
FMLA	3234	0,315	1,684	1273	0,251	0,433
State leave	2796	0,313	1,713	1203	0,276	0,448
Dependent variables						
Mother returned to the same job				1183	0,704	0,460
Mother's post-birth hourly wage				964	17,571	14,537



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