Published in final edited form as:

Popul Res Policy Rev. 2012 February ; 31(1): 1–30. doi:10.1007/s11113-011-9221-6.

Going Back Part-time: Family Leave Legislation and Women's Return to Work

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Abstract

Using a multinomial logit model with data from the Survey of Income and Program Participation, this paper tests whether the implementation of the Family and Medical Leave Act (FMLA) is associated with an increase in return to work at part-time status among first-time mothers working full-time during their pregnancy. I find a statistically significant trend of increasingly higher odds of returning to work at part-time status relative to return at full-time status, beginning in 1993 (the year in which the FMLA is implemented). Furthermore, an additional week of either state or federal leave is significantly associated with a higher odds of return at part-time status. This article provides evidence that job protection and leave legislation may help facilitate higher levels of labor force participation among women with small children, through more flexible work arrangements.

Keywords

Parental leave; Part time; Work arrangements; Work choice

Introduction

In industrial societies, there is often a tension between the task of rearing young children and participating in the formal labor market. Nevertheless, several industrialized countries have been able to sustain high total fertility rates alongside high rates of labor force participation among women with children at the aggregate level. In the United States, a country with relatively high fertility compared to its European counterparts, the participation of married women in the labor force has increased considerably over the last several decades (Costa 2000). Even women with infants are working at historically high rates: of women having their first child between 2000 and 2002, 64% were working within one year of the birth, compared to only 28% of women just a generation earlier (whose first births occurred between 1971 and 1975) (Johnson 2008).

To explain the coexistence of both high total fertility and high women's labor force participation rates at the aggregate level, demographers have suggested that institutional factors may facilitate the compatibility of work and family (Adser 2004; Diprete et al. 2003; Technical Panel on Assumptions and Methods 2003). Institutional factors can include structural attributes of the economy, such as labor markets with few restrictions on exit and re-entry or the availability of part-time employment options; the legislative environment,

such as the existence of mandated parental leave; and informal workplace characteristics, such as workplace flexibility. Workplace flexibility may include the adjustment of hours, work location, or job-sharing, for example. To working women who are also mothers, the adjustment of work hours and location may be of particular relevance. Data from a nationally-representative survey of mothers in the United States suggest that their “ideal employment arrangement” is either part-time work (preferred by 33%) or work from home (preferred by 30% of mothers) (Erickson and Aird 2005).¹ Work at part-time status may indeed allow women to balance their time more effectively between work and family life.

This paper offers evidence of increasing flexibility for women with infants among U.S. workplaces over the last decade or so, and posits that the implementation of federally-legislated family leave policy may have contributed to this shift. For example, the percent of women who were working at all during their pregnancy and returned to work at part-time status following the birth of their first child rises from 23% in the period 1990–1992 to 33% in 2000–2002 (author’s calculations from SIPP data). This shift has occurred while the percent of women returning at all and those returning to the same employer have remained relatively constant over the same time period; the percent of women working part-time during their pregnancy only increased slightly over that period.

Background

The study of family leave is important, as previous evidence has suggested that it may have implications for women’s labor market continuity and the gender wage gap, as well as for the health, cognitive ability, and emotional well-being of children. Family leave may help contribute to job continuity (Baum 2003b; Waldfogel et al. 1999), as more women may be able to return to the pre-childbirth employer after taking a period of permitted leave. Furthermore, family leave may increase the likelihood of return to the pre-childbirth employer (Baum 2003b; Waldfogel 1998; Waldfogel et al. 1999), thus, permitting women to command higher wages for their higher levels of experience and job tenure. For example, while Lundberg and Rose (2000) find that mother’s wages are estimated to decline by 5% following first birth (a finding that reinforces several similar studies of the family pay gap, such as Anderson et al. (2003); Budig and England (2001)), mothers who remain continuously employed see no declines in wages.

Family leave may also have important implications for children’s physical, cognitive and emotional development. For example, Berger et al. (2005) find that maternal employment within 12 weeks after birth is associated with reductions in breastfeeding, the receipt of immunizations, and the number of well-baby visits within the first year. Cross-national studies have found that longer parental leave periods are associated with lower infant mortality (Ruhm 2000; Tanaka 2005). Links between early maternal employment and cognitive deficiencies have also been established, even when controlling for family fixed effects (Baum 2003a; Waldfogel et al. 2002). Finally, early maternal employment may also be associated with more behavioral problems, reflecting issues surrounding a child’s emotional development (Berger et al. 2005; NICHD early child care research network (NICHD ECCRN) 1998). These behavioral issues may even persist into adolescence (Belsky et al. 2007).

The Family and Medical Leave Act (FMLA), implemented in August 1993, guarantees eligible women job protection and continued medical benefits for 12 weeks surrounding childbirth. It is estimated to cover less than half of women (Ruhm 1997; Waldfogel 1999).

¹In contrast, 15% would ideally work full-time, and 21% would prefer not to work at all. Note that no distinction is made between full- and part-time status for the response “working for pay from home.” (Erickson and Aird 2005).

In order to be eligible for the FMLA, women must have worked for at least a year, and for at least 1,250 hours in the last year, at an employer with 50 or more employees. Most evidence on leave expansion in the U.S. has suggested that the FMLA has indeed led to increased leave-taking. Han et al. (2009; Han and Waldfogel (2003); Waldfogel (1999)) find that leave expansions have led to increases in leave-taking, while (Baum 2003b) finds no evidence that the introduction of the FMLA led to greater leave-taking. However, the previous literature has yet to examine any possible link between the introduction of this legislation and greater workplace flexibility for women returning to work after the birth of a child. While family leave may not be directly linked to greater job flexibility, this paper posits that perhaps an indirect link exists. In essence, family leave provides bargaining power for women with which to negotiate better terms of return. A more complete explanation of this proposed mechanism follows in the next section.

Workplace flexibility and part-time work, in particular, is worth examining as it reflects the work conditions of the employed population that may be attempting to balance work and family life. In 2004, it is estimated that some 26.7% of women enjoyed “flexible schedules”, allowing them to vary the time they began or ended work (Bureau of Labor Statistics 2005). A generation or two ago, workers may have been expected to commit many hours to their jobs and little flexibility may have been granted regarding time off for family-related issues. Once women began to enter the workforce *en masse*, the need for flexibility to manage both family and work issues came to the forefront. The pioneering women in the workforce in the first half of the century worked tirelessly to be granted equal treatment in the workplace, often at the expense of having a family. Only recent generations have managed to enjoy both families and careers (Goldin 2004), and with both partners often participating in the workforce, some flexibility is required to work around issues of child or care provider illness, gathering children from their day care situation on time, and other family needs. Now that women make up some 47% of the workforce and 51% of individuals in management, professional and related occupations (Bureau of Labor Statistics 2010), flexibility may be increasingly common for employers.

While federal leave policy may only guarantee leave for eligible women, its potential impact in terms of workplace flexibility may indeed be broader. In particular, it may not only facilitate return to work for mothers, but also invite workplace flexibility at firms wishing to be family friendly.

Conceptual Framework

Prior to the passage of the FMLA, only thirteen states mandated family or disability leave for some types of employers (Han and Waldfogel 2003). Employers not subject to these state laws, whether exempt due to their size, type or location, were not required to provide leave to workers following childbirth, but were subject to the Pregnancy Discrimination Act of 1978. According to this law, employers providing temporary disability benefits for its workers were required to provide the same coverage to pregnant women (Ruhm 1997). While some employers may have provided such benefits, coverage varied by firm size.² Furthermore, pregnancy is treated as a disability by private insurers for only 6 weeks (8 weeks for Cesarean births), substantially fewer than the 12 weeks guaranteed by the FMLA.

Both in the pre- and post-FMLA environment, a pregnant employee wishing to take leave following the birth of her child must negotiate with her employer to obtain such leave. We can consider this process as occurring within a bargaining framework, where each party has

²For example, in 1992, 20% of employees at small firms (less than 100 employees) were covered by leave policy, while 63% of employees at medium to large firms (100 employees or more) were covered in 1993 (Waldfogel 1999).

different preferences, and then bargains to obtain the best outcome. If an agreement is not reached, then the payoff received by each party is represented by a threat point, which is the utility each receives if there is no cooperation. This threat point is likely determined by formal factors, such as the wages of the employee, job market characteristics, company leave policy (if any exists), as well as informal factors, such as the relative importance of the employee to the company, and even personal attributes.

Without maternity leave policy in place, the threat point for the employer would be to permit the number of weeks of leave which would minimize costs. In particular, the firm would likely weigh the cost of maintaining the position of the employee with that of searching for and training a new worker. While the costs of maintaining the employee would likely be increasing in the number of weeks of leave permitted, the costs of search and training of a new employee might be decreasing in number of weeks. Thus, at some number of weeks, the cost of hiring a new employee would likely be lower than that of maintaining the position of the pregnant employee. For some jobs, a new employee might be found and trained in a matter of days, thus leading the employer to offer no leave. In other jobs, search and training might be more costly, with the cost of hiring a new employee equivalent to the costs of maintaining the pregnant employee's position for 6 weeks, for example.

Meanwhile, without maternity leave policy, the threat point for the pregnant employee would be to leave the job. She can either accept the number of weeks permitted by the employer, or she can quit. In this context, the employee has little formal leverage or bargaining power with which to negotiate leave time or conditions of return. In contrast, with maternity leave policy in place, the threat point for employers is the minimum number of weeks mandated by leave policy, regardless of whether it is costly for the firm to provide this leave. In the case of the FMLA, employers are required to seek alternative solutions to any time-contingent work responsibilities and/or make arrangements in order to permit a recent mother's return to the same or equivalent position for 12 weeks. In this context, weighing the costs of the alternative of hiring a new employee becomes irrelevant. Thus, employers subject to FMLA no longer hold most of the bargaining power to dictate the terms of return.

With maternity leave policy in place, the threat point for the pregnant employee is also the minimum number of weeks mandated by the policy. She still faces the decision of whether to quit or to return to work, but may de facto make this decision at any time up until the number of weeks of leave expires. Since the employer is required by law to incur the costs to protect her position, and must do so up until the required number of weeks, the employee requesting leave now has a stronger bargaining position. Rather than bargaining to keep her job, she knows she may return in the given number of weeks (which is 12, in the case of the FMLA). Furthermore, she may attempt to negotiate more favorable terms of return, such as return at part-time status. While the employer is by no means required to permit alternative work arrangements upon return, he has already incurred substantial costs in order to retain the employee, and thus may be more likely to accept alternative work arrangements, particularly if they are only temporary.³

Therefore, maternity leave policy changes the threat point for employers and employees in a bargaining framework. This new threat point encourages cooperation and a continuation of the relationship between the firm and the employee. More cooperation between the firm and the employee may well lead to more flexibility on the part of the employer to accommodate the work preferences of the employee.

³There is a literature on the psychology of sunk costs suggesting that individuals are more likely to continue to invest in a project if they have already incurred substantial, or "sunk", costs. See for example Arkes and Blumer (1985); Garland (1990); Kelly (2004).

While the impact of the FMLA on leave-taking per se may be immediate, since a change in law at a specific point in time may lead to a discrete jump when employers suddenly provide leave, its effect on return at part-time status may be more gradual. As more and more women observe their colleagues pursuing a bargaining strategy to negotiate the terms of their return, they may be more likely to pursue such a strategy themselves, so that return at part-time status becomes ever more common. Furthermore, as firms see their partners and competitors increasingly making concessions to permit return to work at part-time status, even if just temporarily, they may be more likely to allow such arrangements for their own employees. Thus, we may expect a gradual and increasing rise in return at part-time status among women that were working full-time during their pregnancy. The increase is likely to eventually level off, as the percent of women preferring return at part-time status and the percent of employers willing to grant it eventually reach their respective maxima.

Finally, while the above scenario is certainly plausible, one could also imagine an alternative one in which workplace flexibility is not encouraged. Since the employer is not required to permit any alternative work arrangements upon a new mother's return, he may simply not do so. In response to a possible request for a new mother to return at part-time status, an employer might simply refuse and instead offer her the alternatives of either working full-time or being replaced by some other worker who will. Ultimately, whether the FMLA may have facilitated return to work at part-time status is an empirical question and the topic of the following analysis.

Data and Methods

The following analysis relies upon retrospective data from the Survey of Income and Program Participation (SIPP). Information on a woman's employment status around her first birth is collected in the wave two fertility module through a retrospective fertility history. The benefit of these data as compared to other sources is that it is a large, nationally-representative sample taken over a number of decades, and it contains information on women's work status during pregnancy, the age of the child in months at her actual return to the workforce (which is not possible using Current Population Survey data, where women with infants between 0 and 12 months are aggregated), and the types of leave utilized around the birth. It also represents births to women over all ages, rather than just a specific cohort (as one would observe with the National Longitudinal Survey of Youth [NLSY]), allowing us to observe trends among a variety of cohorts as well as changes over time.

Some limitations to the retrospective fertility history data are that (i) data on employment around first birth are not real-time, but rather, based on recall, (ii) employment data are only gathered around the first birth, and (iii) no information on employer at the time of first birth is collected. These limitations are not necessarily a liability, however. First, retrospective data on employment are gathered with a maximum of 12 year look-back; one could argue that due to the significance of the first birth event, women are likely to remember their employment history around the birth with relative accuracy.⁴ Second, using information on return to work after the first birth only is an appropriate level of analysis for this study, as the results are less likely to be confounded by the effects of multiple children on mothers' labor force participation. Women's return to work after higher order births is a separate and important question that requires additional data. Third, available data on educational field of

⁴Studies have shown high reliability of maternal recall of events such as infant birth weight and obstetric conditions, particularly around the first birth (Soua et al. 2006; Catov et al. 2006; Buka et al. 2004). However, there is a lack of research specific to the reliability of maternal recall of age of child at return to work. Research on the reliability of recall data on migration suggests that recall is more accurate when linked to life events such as the birth of a child (Smith and Thomas 2003).

study may help ameliorate any bias due to the exclusion of employment type from the analysis.

The total number of first births in the sample is 14,074; there are 8,082 first births occurring during the period 1990–2002 from the 2004 SIPP panel, and there are 5,992 first births occurring between 1980 and 1989 from the 1996 SIPP panel.⁵

Table 1 shows the general trends in work for new mothers from the early 1980s to the early 2000s.⁶ First, the majority of women in this dataset were working during their pregnancy, and the vast majority were working full-time, and also returned to work within 12 months. Second, examining the percentages in the early part of each decade, we can note a slight increase in the percent of women working during pregnancy, from 60% in the early 1980s to 68% in the early 2000s.⁷ Third, the percent of women who worked during their pregnancy at part-time status (defined as less than 35 hours per week) remains relatively flat over this time period, at around 11–14%. Finally, in examining the return to work, we see that the percent of women that return to work to the same employer at part-time status is relatively flat from the early 1980s to the early 1990s, and then doubles by the early 2000s. These data suggest that more women may be returning to the same employer, while more are also returning at part-time status.

Table 1 also presents detail with respect to work decisions among women working full-time during their pregnancy, revealing a shift in return to work over the last two decades. First, from the early 1980s to the early 1990s, women working full-time during their pregnancy shifted from not returning at all to returning to the same employer at full-time status. This change may represent a secular trend, as more and more women may be entering and returning to the labor force. Second, from the early 1990s to the early 2000s, the percent of women returning to the same employer at full-time status declines, while the percent returning to the same employer at part-time status increases by nearly the same amount. Specifically, after not showing much change from the early 1980s to the early 1990s, the percent of full-time workers returning to the same employer at part-time status doubles, from 8.3% in the early 1990s, prior to FMLA's passage, to 16.0% of full-time workers in the early 2000s, post-FMLA. It is this increase in return to work to the same employer at part-time status that this paper seeks to explore.

To further examine work transitions for women before and after the birth of their first child, Table 2 presents a matrix of work decisions. First, note the considerable variability in women's work choices. The two most frequent combinations of states are (i) working full-time during pregnancy and returning at full-time status within a year of the first birth, and (ii) working neither during pregnancy nor within a year after the first birth. Thus, the modal outcome for women is to not make a transition at all, which is true for over half of all women. At the same time, the percent of women working neither during nor after pregnancy is declining over time. The most frequently occurring transition in the early 1980s and early 1990s is moving from full-time status during pregnancy to not working at all during the first year after first birth, while by the early 2000s, it becomes equally likely that a woman will transition from full-time status during pregnancy to part-time status upon return.

⁵Although the 1996 panel also includes births between 1990 and 1996, I exclude these from the analysis in order to (i) minimize sampling bias introduced by the use of several samples and (ii) not erroneously give more weight to births occurring during this period. I limit the births in the 2004 sample to those occurring through 2002 in order to allow enough time for women giving birth in 2002 to report return to work within one full year. The 2001 panel fertility history module also asks questions about employment surrounding first birth, but only for births going back to 1990; thus it provides no additional information beyond that gleaned from the 2004 panel, which includes more recent births as well.

⁶The first 3 years of each decade are analyzed here merely to illustrate trends over time.

⁷Henceforth, the term "pregnancy" in this paper refers to the pregnancy leading to the first birth.

Figure 1 graphically shows the trends in return decisions among women working full-time during their pregnancy over the time period 1980–2002, with return defined as occurring within 12 months. In panel (a), we can see that the most common decision is to return at full-time status to the same employer. While the percentage of women choosing this option increases over the period, it begins to decline starting around the year 1993. The second-most common decision is to stay home for at least 12 months following first birth. The percent of women choosing this option is steadily declining over the period, though it begins to increase slightly towards the end of the period, by 1999. While there is no clear trend in the percent of women who switch employers, returning either full- or part-time, there does appear to be a distinct increase in the percent of women who return part-time to the same employer, beginning in about 1993.

Panel (b) hones in on the percent of women working full-time during their pregnancy that return at part-time status (to the same or different employer; we see the distinction between these two in panel (a)). Here we see a clear increase over time in the percent of women returning to the same employer at part-time status. At first glance, it does appear that the slope of this line may increase after 1993, which is consistent with the hypothesis that the FMLA may have indirectly facilitated the negotiation of part-time work status upon return to work. While it is not unreasonable to suggest that the FMLA may have facilitated such a change, it is important to control for individual characteristics and explore other factors that may have contributed to this shift.

Empirical Strategy

To test the importance of the FMLA in explaining women's return to work at part-time status, I estimate a multinomial logit model for women working full-time during their pregnancy. I focus on full-time female workers as they are the population for whom workplace flexibility following childbirth may be most relevant. In addition, they are more likely to be eligible for the FMLA or to benefit from any spillover effects of the law. The three possible outcomes following the birth are (i) stay-home, (ii) return to work at part-time status, and (iii) return to work at full-time status. As I am modeling the return decisions of only women working full-time during pregnancy, I do not limit the sample to women who return to the same employer.

I estimate two separate multinomial logit models. First, I estimate the following model:

$$Pr(\text{stay-home, return part-time, return full-time}) = W(F, t_F, t_F^2, X, l, s, t) \quad (1)$$

where X is a vector of individual characteristics and measures of labor force attachment, l is the employment to population ratio for men ages 25–65, s is a dummy for whether a state-specific maternity leave policy is in effect, t is a linear time trend equal to zero in birth year 1980 and equal to 21 in birth year 2002, F is a dummy for the FMLA being in effect, equal to zero for all birth years prior to 1993 and equal to one for birth years 1993–2002. t_F is a linear time trend for the years in which the FMLA is in effect, that is, $t_F = 0$ for all birth years up until 1993, $t_F = 1$ in 1993, and increases to $t_F = 10$ by birth year 2002; t_F^2 is a quadratic time trend for the years in which FMLA is in effect.

The purpose of this model is to estimate the possible impact of the FMLA, but it assumes that any impact is entirely independent from state maternity leave legislation. The second model discussed below does not make this assumption. The benefit of this approach is that we can predict what the likelihood of return to work at part-time status would have been in the absence of the FMLA. In this model, the possible impact of the FMLA is explored in three ways. First, a simplified model includes only a dummy for years in which the FMLA is

in effect to examine the overall relationship with return to work. Next, in order to capture effects that may accumulate and then level off over time, the model expands to include t_F , the linear time trend associated with the FMLA, and then t_F^2 , a quadratic time trend associated with the FMLA. Both of these trends begin in 1993, the first year in which the FMLA is in effect. In these models, a state dummy variable controls for states in which maternity leave legislation is in place.

The dependent variable is defined as a woman's work status upon return, with a cut-off of return within 12 months following the first birth. The vast majority of women who work during their pregnancy and return to work after the birth of their first child do so within 12 months (Fig. 2). In simple cross tabulations, there is no obvious time trend in the percent of women returning within 6, 12, or 18 months following first birth, though return within 3 months arguably declines slightly after 1992 (as FMLA begins to take effect) (Fig. 2). However, to test the sensitivity of the model to the time cut-off of 12 months, I also conduct the analysis for return within 3, 4, 6 and 18 months. While survival analysis might be another approach to conducting this analysis that would eliminate the need for these checks, we would gain little additional information about the relationship between the FMLA and women's return decisions, apart from predictors of early as opposed to later return.

Second, to determine whether the observed associations are actually associated with maternity legislation, rather than some other secular time trend coinciding with 1993, I estimate the following model:

$$Pr(\text{stay-home, return part-time, return full-time}) = W(\text{WEEKS}, X, l, t, t^2) \quad (2)$$

In this model, the total number of weeks of either state or federally-mandated maternity leave for which a woman may be eligible is the independent variable of interest. For women whose births occurred in states where maternity leave legislation existed prior to the FMLA, this variable will equal the total number of weeks for which a woman may be eligible by state law. For women whose births occurred in all other states prior to the FMLA, this variable will equal zero. For births occurring after the FMLA is passed, the variable will equal 12, except for women whose births occurred in states that were more generous than the FMLA, where the value will equal the total number of weeks to which they may be eligible under state law. This model allows for both linear and quadratic time trends.

The multinomial logit estimates the odds of returning at part-time status as opposed to full-time status, and of staying home as opposed to return at full-time status. Return at full-time status is used as the reference category because it is the most frequently occurring outcome. Demographic characteristics controlled include being black (and non-Hispanic), of some other race (and non-Hispanic), Hispanic, married with spouse present, age at first birth category, birth cohort, field of study, and highest level of education obtained. Labor force attachment is characterized by log income of the worker,⁸ years of potential experience at the time of birth (estimated as age at birth-education-6)⁹, and by whether an individual took paid maternity leave.

⁸Income is not observed in the year of first birth, but rather, at the time of the survey. Therefore, this variable is interpreted as a measure of labor market attachment in general, rather than the association between income itself and return to work. In separate analysis, this variable was excluded to see whether it was introducing bias to the other variables. The results for the FMLA were robust.

⁹While potential experience is known to be an imperfect estimate of experience for women, it may be more accurate for women who have had no births, since they may arguably have had fewer spells out of the labor force.

By including paid leave as a control, I implicitly assume that the effects of paid maternity leave are independent from those of unpaid leave mandated by the FMLA. This assumption is not unreasonable as the availability of paid leave is entirely firm-specific and not likely to be related to state or federal mandates of unpaid leave. A dummy for having completed education following first birth controls for situations in which individuals have negative levels of potential experience at first birth. Log of other household income is included as an approximate control for the economic earnings of other household members apart from the new mother.¹⁰ The model controls for labor market characteristics in the year of birth by the inclusion of the U.S. employment-to-population ratio for men aged 25–54 in that year. A dummy for having moved since the birth is also included, to control for cases in which women may not have been living in their current state of residence during the year in which they had their first birth. To control for the state leave environment, a dummy is equal to one for women living in states with mandated leave coverage in effect in the year of first birth. However, no state time trends are included. To capture any secular change over time in return to work, a simple linear time trend is included.

Table 3 shows sample means and standard deviations.

One drawback to the multinomial logit model is that it requires the assumption of independence of irrelevant alternatives, which could arguably be a concern for this dataset if errors are correlated across alternatives. I conduct a test of whether this assumption is violated, and, as an alternative specification, also analyze a sequential logit model.

Finally, it is important to emphasize that we do not know whether a woman is actually eligible for the FMLA.¹¹ Since it is estimated that about half of women are covered (Han and Waldfogel 2003), this model is likely to calculate a conservative estimate of any FMLA effect. At the same time, it is also possible that firms not subject to the FMLA may nevertheless alter their policies in response to common market practices. That is, the FMLA may have a broader impact on firms than its specific mandate would suggest. As a result, there is no clear comparison group for the FMLA, so I may only observe the pre-post differences in leave-taking. To get at the association between leave decisions and the actual leave legislation itself, rather than a point in time, I turn to the second model, whose key independent variable is the total number of weeks for which a woman may be eligible, which compares differing levels of leave at different points in time, essentially offering several points of comparison.

Results

Model 1

Table 4 presents regression results for model 1. Results suggest that the presence of the FMLA is associated with a higher odds of return to work at part-time as compared to full-time status, for women who worked full-time during their pregnancy. Simplified model 1(a) includes only a dummy indicating that the FMLA is in effect during the year of birth, and essentially captures the pre-post difference in likelihood of part-time as opposed to full-time return. Here, we see that the FMLA is significantly associated with a risk of return to work at part-time status which is 32% ¹² higher relative to the risk of returning at full-time status.

¹⁰Other household income is not observed in the year of first birth but rather, at the time of the survey. Therefore, this variable is only an approximation of other household income. However, results were robust to a model excluding this variable.

¹¹In order to determine eligibility, we would need information on firm size and number of hours worked at the firm in the year prior to the birth, data that are not collected in the SIPP survey instrument.

¹²Calculated as e^{β} , where β is the coefficient on the FMLA dummy from model 1(a).

That is, there is clearly a level difference in the average odds of return at part-time status before and after the FMLA is implemented.

When the FMLA time trend is included with model 1(b), the significance of the FMLA is taken up by the FMLA time trend, suggesting that the odds of returning at part-time relative to full time status begins to increase linearly starting in 1993. The fact that the FMLA dummy loses significance in model 1(b) merely suggests that there may be a gradual, linear increase in the odds of part-time return, rather than a level jump before and after 1993.

When the FMLA time trend is specified as quadratic rather than linear in model 1(c), the FMLA dummy regains significance, but the quadratic term is also significant, though only at the 90% confidence level. As it is difficult to calculate the overall effects over time using the coefficient estimates listed in the table, I present predicted values in Fig. 3, which are discussed below. It is also notable that there is no significant relationship between the FMLA dummy and the odds of staying home relative to returning full-time. All of these results are consistent with the hypothesis that the FMLA may have granted women more bargaining power with which to negotiate alternative work arrangements, such as return to part-time status.

Furthermore, it is worth noting that the dummy indicating that state leave legislation is in effect is also associated with a higher likelihood of returning at part-time status as compared to full-time status. Coefficient estimates suggest that, depending on the model, women who gave birth in states with state leave legislation in place had a 37–39% higher odds of returning at part-time status relative to full-time status.¹³ This association is statistically separate from the association with FMLA legislation,¹⁴ perhaps reflecting more generous state leave conditions than the FMLA, whether with respect to the point in time (prior to the enactment of FMLA) or to the number of leave weeks permitted (laws in California, Tennessee and the District of Columbia permit more weeks than the FMLA).¹⁵ In separate analysis not shown including state fixed effects, this variable loses significance; however, the results for FMLA effects remain significant.

A number of other covariates are worth mentioning. In better economic times, when the employment to population ratio of males aged 25–64 is higher, women are more likely to return at part-time status rather than full-time status.¹⁶ This result suggests that return to work at part-time status is likely to be a manifestation of employment preferences, rather

¹³Calculated as e^{β} , where β is the coefficient on the dummy indicating state leave legislation in effect at the time of the birth, models 1(a)–(c)

¹⁴It is interesting that the association of state leave is robust to the inclusion and exclusion of the FMLA dummy, as well to the exclusion of births occurring in the years prior to FMLA implementation, according to additional analysis not shown here. In addition, an interaction between the FMLA and the state law dummies was not significant, suggesting that the two do operate separately. This evidence would support the hypothesis that the effect of state leave law on part-time return has been similar to that of the FMLA. However, they do appear to act independently, so that having a state leave law encourages part-time return, and then the introduction of the FMLA further encourages part-time return.

¹⁵State laws are coded as in effect in the year in which they take effect. States coded as having laws mandating leave include California (all sample years), Connecticut (from 1991), the District of Columbia (from 1991), Maine (from 1990, since Maine was not separately coded as a state in data for 1988 and 1989), Massachusetts (all sample years), Minnesota (from 1988), New Jersey (from 1990), Oregon (from 1988), Rhode Island (from 1988), Tennessee (from 1988), Vermont (from 1993), Washington (from 1990), and Wisconsin (from 1988). Covered firm size varies from 5 or more employees to 100 or more employees. States in which leave legislation was only mandated to state employees, including Alaska (enacted in 1993), Georgia (enacted in 1993), Hawaii (enacted in 1992), North Carolina (enacted in 1988), North Dakota (enacted in 1990), Oklahoma (enacted in 1989), are not coded as having state legislated leave for this analysis. In the 1996 panel, Vermont and Maine, which had differing state laws, were not uniquely coded. These cases were coded as zero in 1988 and 1989, in order to draw more conservative conclusions regarding the importance of state laws. Source for state leave legislation dates: Han and Waldfogel (2003).

¹⁶That the coefficient loses significance in model 1(b) may suggest that the simple linear time trend is picking up some trend in the economy.

than an artifact of involuntary underemployment (i.e., return to work at part-time status as a result of not finding full-time employment).

Second, women who take paid maternity leave are both significantly less likely to stay home and less likely to return at part-time status, when compared to the likelihood of return at full-time status. It is worth noting that this association goes in the opposite direction as the coefficient on the FMLA dummy, suggesting that paid leave may be associated with different behavior from that of unpaid leave. It may be that women receiving paid leave are more attached to their positions, and thus more likely to return at full-time status. This result may be of interest to companies considering providing paid maternity leave to their employees.

It is worth noting that the associations with race are large and significant. Nonwhites have a significantly lower odds of staying home (vs. returning full-time) and of returning part-time (vs. returning full-time), in almost all cases. Appendix discusses the issue of sample selection bias, and suggests that non-whites are less likely to be in the workforce during their pregnancy in the first place. Thus, nonwhites who indeed are in the labor force during pregnancy are likely to be more highly attached, which may help explain these strong associations.

It is also worth mentioning the results for the risk of staying home relative to returning to work full-time. First, there appears to be a negative secular time trend making women less and less likely to stay home than to return full-time, which appears to then reverse around the implementation of the FMLA. The robustness tests outlined below suggest that there may be an underlying secular increase in the propensity to stay home that occurs sometime during this time period, and is not definitively associated with a start in 1993. However, the model appears to perform less well for the decision to stay home as opposed to full-time return, so analysis by a sequential model (discussed below) may be more appropriate.

Using model 1(c), which includes the quadratic time trend for the FMLA, I predict the probability of returning to work at part-time or full-time status and of staying home, evaluating all values, apart from the year, at their means. First, I predict the probabilities over time with the FMLA in place, and then I predict the values for the counterfactual of the probabilities had the FMLA not been implemented (when the FMLA time trends and dummy are equal to zero in all years). The predicted probabilities are presented in Fig. 3.

Overall, the probability of returning to work at part time status increases over time in the presence of the FMLA. In 1993, the probability of part-time return is 3 percentage points higher on average than it would have been in the absence of the FMLA, according to this model. These effects accumulate over the decade of the 1990s, and the difference increases 9 percentage points by 2002 to a level of 20% likelihood of part-time return, which is 85% higher than the initial value of 11% in 1992. The overall probability of return at part-time status appears to level off in the early 2000s.

Model 1 sensitivity and robustness checks—While the results above may be somewhat compelling, the effects of FMLA are essentially identified purely from an author-defined time trend. While there is statistical significance for the FMLA dummy in model 1(a), the FMLA time trend in model 1(b), and the FMLA dummy and quadratic trend in model 1(c), one could argue that I have arbitrarily assigned the start to such a trend to the year 1993. Furthermore, perhaps the cutoff of return within 12-months may lead to different findings than I would have found had return been cut-off at 3, 4, 6 or 18 months.

First, to test the sensitivity of the results in Table 4 to the specification of return to work within 12 months, I employ alternative definitions of return to work within 3, 4, 6 and 18 months. Using all four of these definitions of the dependent variable, the presence of the FMLA is significantly associated with higher odds of return at part-time status relative to full-time, but not with the odds of staying home in almost all cases (Table 5). The 12 month definition is the most conservative estimate of the relationship between return at part-time status and the FMLA. Employees who benefit from the FMLA may arguably return within 3–4 months, as they are guaranteed 12 weeks and may in some cases extend their leave using vacation, sick, or other permitted leave, so it could be that the true FMLA effect is even larger than estimated by model 1. These results, then, are consistent with the hypothesis that some of the women returning at part-time status may have been able to negotiate better terms of return with their employer.

To test the robustness of the results in Table 4 to the selection of the FMLA start year of 1993, I conduct the same analysis using alternative, hypothetical years for the start year of a time trend and dummy. Table 5 also shows relatively convincing evidence that the significance of the 1993 FMLA dummy and time trends is not arbitrary. There is only one year within the decade surrounding the change in which an arbitrarily chosen start year is significant, which is 1997. However, when predicted probabilities are calculated using the three coefficients for this arbitrarily selected year cutoff point, the probability of return at part-time status is quite erratic. In combination with the changing signs over time in this table, this result suggests that perhaps there are simply non-linearities in trends reflected in the selection of this cut-off year.

As a second robustness test, I eliminate the FMLA time trend and dummy from the model altogether, and instead include a simple quadratic time trend over the period 1980–2002. That is, I let the data tell the story of at what moment in time any significant trend or nonlinearity in the odds of part-time return may begin. In this model, the coefficient on the quadratic time trend is significant at the 99% confidence level, suggesting that indeed, there is nonlinearity in the odds of part-time return over time. The predicted values from this model (model 1(d)) appear in Fig. 4, alongside the predicted values from model 1(c). In this figure, we see that there is indeed an increase in the odds of part-time return, beginning in 1993. Furthermore, the predicted values do not differ substantially from model 1(c), suggesting that we are not artificially constructing a start year for this trend.¹⁷

Finally, I turn to the concern over the assumption of the irrelevance of independent alternatives (IIA). Whether the results from the multinomial logit model are biased depends upon whether this assumption is valid. In essence, this assumption is that there is no correlation in errors across alternatives. If a woman were given just two of the three options, her original preference ordering between the first two options would not change if the third alternative were included. For example, a woman may chose between full-time or part-time return, and chose part-time return. If given the additional option to stay home, this assumption means that she would not then chose to return full-time instead. One could argue that as long as the alternatives are the same for each individual, and the predictors are characteristics of the individuals only, there may not be concern that the IIA assumption introduces bias. Since all individuals face the same three choices, the relative odds when one changes the availability of a given alternative are not necessarily likely to vary. However, I test whether this assumption is violated using the Hausman test, the seemingly-unrelated estimation based Hausman test, and the small Hsiao test, and the results are not definitive.

¹⁷In analysis not shown, t^3 was also included, but its coefficient was not significant.

However, to test further the robustness of the empirical findings, I employ an alternative model specification using the sequential logit.¹⁸ In this model, the woman first decides whether to return to work, and then, conditional upon having decided to return to work, she decides whether to return at full- or part-time status. This model requires the assumption that the probability a woman chooses to work part-time over full-time is independent of the choice of whether to work at all. Results from this model are similar to those in the multinomial logit. In the first stage, the FMLA has no significant relationship with a woman's choice to work versus stay home. In the second stage, conditional upon choosing to work, the FMLA dummy coefficient is significant and similar in size to coefficients estimated from the multinomial logit model. The predicted probabilities of part-time as compared to full-time return are also very similar to those in Fig. 3.

Model 2

While model 1 is informative in trying to determine the overall effect over time of the FMLA, it remains difficult to disentangle the implementation of the law in 1993 and any other secular or other trend that may simultaneously coincide in the economy or workforce. Therefore, model 2 includes an alternative specification which identifies the possible impact of maternity leave legislation in general on the likelihood of part-time as opposed to full-time return. In this model, the maternity leave legislation in general is examined, and it may be state or federal leave. This model allows for variation by year and state in eligibility for leave, which essentially allows for comparison at differing leave levels. The number of weeks of available leave ranges from 0 to 17.

To test whether it is actually the leave legislation, as opposed to some other trend, that may be driving the observed increase in return at part-time status, I conduct a separate multinomial logit model using a new independent variable to measure the importance of leave legislation, combining the total leave between state and federal requirements. In this model, the number of leave weeks is used, and is calculated for each state and birth year separately. For years prior to 1993, the number of leave weeks is zero, unless there is state mandated leave, in which case the value is equal to the number of state-mandated leave weeks in that state. For years 1993 and after, the number of leave weeks is equal to 12, unless state leave legislation guarantees more than 12 weeks, in which case the value is equal to the number of state-mandated leave weeks in that state. There is no FMLA dummy or time trend included in the model; instead a quadratic trend over the entire period is included. The results from this model further bolster the previously mentioned findings (Table 6). In particular, the leave weeks variable is statistically significant at the 99% confidence level. Each additional week of mandated maternity leave is statistically significantly associated with a 2% higher odds of part-time return as compared to full-time return, which translates into 24% higher odds of part-time return for a move from 0 to 12 weeks of leave.

Discussion

Without a doubt, return to part-time work following first birth has become more common, particularly from the early 1990s to the early 2000s. Among women working full-time during their pregnancy, there appears to be direct shift in the raw data from returning to work at full-time status to return at part-time status instead. The implementation of the FMLA, which occurred in 1993, is a likely candidate for explaining this shift. In a regression framework, controlling for other characteristics, the FMLA is indeed associated with a greater likelihood of returning at part-time status as compared to full-time status.

¹⁸I employ the seqlogit command in Stata, written by Maarten Buis, Vrije Universiteit Amsterdam (Buis 2007).

When just number of leave weeks is considered, an additional week of maternity leave is significantly associated with a higher odds of return at part-time relative to full-time status.

This article posits that the passage of the FMLA may have provided women with additional bargaining power with which to negotiate more flexible work arrangements, such as return to work at part-time status. Knowing that their job is protected by federal legislation, eligible women are guaranteed up to 12 weeks unpaid leave, and can negotiate more favorable conditions of return with their employer. While employers are not required to make concessions or grant flexible work arrangements, they may be more likely to do so if they are already required to incur the costs of providing extended unpaid leave. Costs may be either indirect, such as the cost of making alternative arrangements to ensure that time-sensitive work is completed (i.e., hiring temporary help, paying over-time to other employees, etc.), or direct, such as the costs of paying the employer portion of group health insurance for the individual taking leave. Prior to passage, the employer would have weighed these costs against the cost of hiring and training a new employee, and in many cases, might have chosen the latter.

The results of the regressions presented above are suggestive that the FMLA may have indeed impacted the likelihood of return to work at part-time status among women working full-time during their pregnancy. In particular, the results from model 2 showing that each week of leave for which a woman is eligible is associated with a greater likelihood of part-time return suggest that indeed it may be leave legislation, rather than some other secular trend, that explains this change. Therefore, the increasing likelihood to return to the workforce at part-time status may well be a consequence of the implementation of the FMLA. Without the explicit requirement for firms to offer return at part-time status, it may be that through bargaining, women manage to negotiate such arrangements informally.

However, we cannot entirely rule out other scenarios that could also explain an increase in return to work at part-time status following the birth of the first child. Some alternative explanations could be (i) some other legislative change affecting women's employment in the same time period, (ii) an increase in involuntary part-time employment for want of full-time employment, and (iii) increasing unobserved heterogeneity among the female labor force participation.

Considering these possible sources in turn, I first turn to the question of whether there were other legislative changes that could have affected women's likelihood to return at part-time status. One major legislative change during this period was the Welfare Reform Act of 1996, which placed work requirements on women receiving welfare benefits. One could argue that some women who might normally have dropped out of the labor force and gone on welfare might have instead decided to return at part-time status, not bothering with welfare at all. However, there is no reason to believe that there would be anticipatory behavior change starting as early as 1993, the year in which the increase in part-time work begins, particularly since the population on welfare may not have even been aware of proposed changes to welfare reform. There were no other work-family related legislative changes at the federal level in the mid-1990s.

One could also argue that return to work at part-time status merely reflects an increase in involuntary underemployment, as women who would prefer to work full-time are instead given part-time positions. This explanation seems unlikely, given that the mid- to late-1990s was a time period in which the economy was growing, and jobs at various skill levels were abundant. Furthermore, women are more likely to return to work at part-time status as compared to full-time status when the employment rate is higher, as shown in the regression results in Table 4. In addition, there is little reason to expect that women returning to the

same employer would experience involuntary underemployment, as their full-time positions were job-protected by the FMLA. As Table 3 shows, much of the shift to return at part-time status occurs among women who return to work to the same employer.

A third shift that could explain a secular increase over time in return at part-time status could be a change in the composition of the female workforce, namely an increase in unobserved heterogeneity. Over this time period, the labor force participation of single women held relatively steady, while that of married women was increasing, particularly between 1980 and 1995. Supposing for simplicity that there are two types of women, those highly attached to the labor force, and those less attached, there may have been an increase in the proportion of women less attached to the labor market over this period. It could be that in the early period of the study, there was a higher proportion of women that were highly attached to the labor market working during their pregnancy, and they were thus more likely to return to work full-time after the birth. As the labor force participation of married women was increasing, the population of women working during their pregnancy might have become more heterogeneous, with a higher proportion of less attached women working during their pregnancy, and then returning to work at part-time status, instead of full-time.

In order to consider this hypothesis, I graphically analyze the percent of women working during pregnancy over the sample period (Fig. 5). While there is indeed an increase in the percent of women working during pregnancy, this increase is steeper in the 1980s, and flatter in the 1990s. Thus, the effects of unobserved heterogeneity would likely show up in the period prior to 1990, rather than coinciding with the implementation of the FMLA. Furthermore, there is no reason to believe that suddenly all of the women entering the workforce would begin to have children and make these choices starting in 1993. While certainly the effects of increasing heterogeneity may be relevant to this population and may help explain the significant time trends starting around the time of implementation, it is not clear that this argument could explain the robust increase in odds of return to work at part-time status during the post-FMLA period.

At the same time, it is important to keep in mind that return at part-time status following the first birth only reflects a snapshot of women's experiences. It may be that some women return at full-time status, and subsequently drop out of the labor force, or that some women return at part-time status, and then move to full-time status within a week, or within a year. It may also be that some women would prefer to remain at part-time status indefinitely, but cannot do so without losing their job. While the FMLA may have facilitated flexibility in the return to work, it falls short of guarantees provided in other countries, such as the statutory right for some to return to part-time positions without having to change jobs, employers or occupations, as mandated in countries like the Netherlands and Sweden (Gornick 2004).¹⁹ Thus, further research into the dynamics of work transitions and childbearing is necessary in order to determine whether the institutional environment in the United States truly fosters both a high female labor force participation rate and high fertility. Nevertheless, this analysis offers evidence that the FMLA may well have helped facilitate the compatibility of work and childbearing.

¹⁹In the Netherlands, the labor force participation rate of women with a child under the age of 6 was 71% in 2002, of whom 79% were working part-time; in Sweden, 61% of these women were in the labor force, of whom 74% were working part-time (Organisation for Economic Co-operation and Development social indicators, series SS4.1 and SS4.2)

Appendix

There may be some concern that since I limit the sample to women who are working full-time during their pregnancy, I introduce sample selection bias to the estimates. To generalize about the potential impact of the FMLA on the entire population, it would be wise to take into account the ways in which women working full-time during their pregnancy may be a selected group of individuals. While statistical methods exist to control for such bias when the first stage regression includes a binomial or multinomial dependent variable and the second stage is a continuous dependent variable (Heckman 1979; Lee 1983), I know of no straightforward extension of such an approach to a multinomial dependent variable in the second stage.

As a second-best approach, I calculate the inverse Mills ratio using predicted probabilities from a first stage probit of labor force participation during pregnancy, and include this variable in the second stage multinomial logit regression. While the inverse Mills ratio will not have the same statistical characteristics in this equation, it may instead serve as a proxy for the extent to which selection may be an issue, and reveal the way in which our independent variables of interest may change. In this approach, the first stage equation is separately identified from the second stage equation by (i) the male employment-to-population lagged by the number of years of potential experience,²⁰ and (ii) a variable for being disabled prior to pregnancy (for first stage regression results, see Table 7) I use two specifications for the first stage regression: working at all during pregnancy versus not working, and working full-time during pregnancy versus not working. The specification for the second stage regression is identical to that in model 1(c), Table 4.

When selection is a concern, one would expect the coefficient on the inverse Mills ratio to be significant, and for the estimates of the independent variable of interest to be biased. In this case, the coefficient on the inverse Mills ratio is indeed significant, but the coefficient on the FMLA variable only increases slightly in magnitude. These results suggest that any sample selection bias may actually lead us to underestimate the importance of the FMLA (Table 7). Therefore, the estimates in the body of the paper are likely to constitute a conservative estimate of the true FMLA relationship with return to work.

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²⁰For women whose potential experience is 10 years or greater, the employment-to-population ratio lagged 10 years is coded; for women whose experience is negative or zero, the ratio in the year in which they gave birth is coded.

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Note: PT = part-time, FT = full-time; DE = different employer
SE = same employer

Fig. 1.

Return decisions of women working full-time during their pregnancy, return occurring within 12 months of first birth

Fig. 2.
Percent of women working full-time during their pregnancy that return to work at all within the given number of months and timing of return, across all years

Fig. 3.
Predicted probabilities of staying home and returning to work at part-time status, model 1(c).

Fig. 4.
Probability of part-time return, predicted values

Fig. 5.
Percent of women working full-time during pregnancy

Table 1

First births and return to work within 12 months

	1980–1982	1990–1992	2000–2002	All Data
Total mothers with first births	1,822	1,948	1,755	14,074
% worked during pregnancy	60.4	67.0	68.1	65.4
Total worked during pregnancy	1,100	1,305	1,195	9,198
% full time	88.2	88.4	85.6	87.2
% returned to work within 12 months	71.4	80.0	77.4	71.4
Total worked full-time during pregnancy	970	1,154	1,023	8,016
Status upon return, return within 12 months				
% not working	27.1	18.8	21.3	20.3
% full-time, same employer	49.6	58.1	50.0	54.0
% full-time, different employer	10.5	10.3	7.4	10.3
% part-time, same employer	7.7	8.3	16.0	10.5
% part-time, different employer	5.1	4.4	5.3	5.0

Source: Data for 1980–1989 are from wave 2 of the 1996 SIPP
data for 1990–2002 are from wave 2 of the 2004 SIPP

Table 2

Work status during pregnancy and upon return to work, return within 12 months of first birth

Work status during pregnancy	Work status upon return, return within 12 months			
	None	Full-time	Part-time	Total
1980–1982				
None	30.0	5.5	4.2	39.6
Full-time	14.4	32.0	6.8	53.2
Part-time	2.9	1.2	3.1	7.1
Total	47.3	38.7	14.1	100.0
1990–1992				
None	23.2	6.5	3.3	33.0
Full-time	11.1	40.6	7.5	59.2
Part-time	2.3	1.6	3.9	7.8
Total	36.6	48.7	14.7	100.0
2000–2002				
None	22.4	4.8	4.7	31.9
Full-time	12.4	33.4	12.4	58.3
Part-time	3.0	1.9	5.0	9.8
Total	37.8	40.2	22.1	100.0

Source: Data for 1980–1989 are from wave 2 of the 1996 SIPP
data for 1990–2002 are from wave 2 of the 2004 SIPP

Table 3

Sample means and standard deviations, non-weighted

Variable	Mean	Standard deviation
Black	0.110	0.313
Other race	0.058	0.233
Hispanic	0.084	0.277
Married, spouse present	0.726	0.446
Potential years of experience ^a	6.012	4.984
Education: less than high school degree	0.051	0.219
Education: high school degree	0.267	0.443
Education: some college	0.378	0.485
Education: college degree or higher	0.304	0.460
Completed schooling after first birth	0.226	0.418
Age at first birth < 20	0.117	0.321
Age at first birth 20–24	0.307	0.461
Age at first birth 25–29	0.337	0.473
Age at first birth 30–34	0.178	0.383
Age at first birth 35–39	0.051	0.219
Age at first birth 40+	0.011	0.102
Birth cohort 1935–1944	0.002	0.049
Birth cohort 1945–1949	0.012	0.109
Birth cohort 1950–1954	0.065	0.247
Birth cohort 1955–1959	0.166	0.372
Birth cohort 1960–1964	0.235	0.424
Birth cohort 1965–1969	0.209	0.407
Birth cohort 1970–1974	0.171	0.376
Birth cohort 1975–1979	0.099	0.299
Birth cohort 1980–1984	0.038	0.192
Birth cohort 1985–1989	0.002	0.043
Log of income in survey year	6.247	2.638
Log of other household income in survey year	6.487	3.275
Moved since first birth	0.756	0.429
Took paid maternity leave	0.324	0.468
Field: None ^b	0.514	0.500
Field Agriculture/Forestry	0.015	0.121
Field Art/Architecture	0.009	0.092
Field Business/Management	0.126	0.332
Field Education	0.071	0.256
Field Engineering/Technical	0.009	0.093
Field Languages	0.033	0.179
Field Health	0.075	0.263

Variable	Mean	Standard deviation
Field Math/Statistics	0.004	0.065
Field Social Sciences	0.026	0.158
Field Professional	0.012	0.107
Field Police/Vocational	0.008	0.088
Field Cosmetology/Home Economics	0.011	0.103
Field Other	0.088	0.284
Observations = 7,961		

^aCalculated as age at birth—years of education—6

^bField only available if individual holds a degree from vocational, bachelors or higher order professional training

Table 4

Multinomial logit: odds of returning part-time and staying home following first birth, relative to the odds of returning full-time, 1980–2002, coefficient estimates

	Part-time vs. full-time			Stay home vs. Full-time		
	Model 1(a)	Model 1(b)	Model 1(c)	Model 1(a)	Model 1(b)	Model 1(c)
FMLA in effect	0.2745 ^b (0.1316)	0.1428 (0.1392)	0.4163 ^b (0.2069)	0.1164 (0.1210)	−0.0763 (0.1317)	0.2864 (0.1904)
FMLA time trend (1993–2002)		0.0743 ^c (0.0242)	−0.0462 (0.0703)		0.0945 ^c (0.0227)	−0.0699 (0.0665)
Square of FMLA time trend (1993–2002)			0.0106 ^d (0.0058)			0.0146 ^c (0.0055)
State law in effect	0.3139 ^c (0.0755)	0.3259 ^c (0.0757)	0.3267 ^c (0.0757)	0.1682 ^b (0.0736)	0.1820 ^b (0.0738)	0.1820 ^b (0.0739)
Time trend, 1980–2002	0.0245 (0.0223)	0.0010 (0.0237)	0.0003 (0.0237)	−0.0058 (0.0202)	−0.0312 (0.0211)	−0.0324 (0.0211)
Employment to population ratio, males aged 25–64	0.0661 ^b (0.0333)	0.0453 (0.0338)	0.0790 ^b (0.0395)	−0.0247 (0.0293)	−0.0465 (0.0296)	−0.0089 (0.0330)
Took paid maternity leave	−0.5434 ^c (0.0734)	−0.5364 ^c (0.0735)	−0.5366 ^c (0.0735)	−0.8948 ^c (0.0734)	−0.8833 ^c (0.0735)	−0.8832 ^c (0.0735)
Log of other household income	0.0190 (0.0134)	0.0174 (0.0134)	0.0175 (0.0134)	0.0437 ^c (0.0123)	0.0422 ^c (0.0124)	0.0424 ^c (0.0124)
Log of income	−0.0774 ^c (0.0129)	−0.0777 ^c (0.0130)	−0.0780 ^c (0.0130)	−0.2024 ^c (0.0108)	−0.2024 ^c (0.0108)	−0.2030 ^c (0.0108)
Black, non-hispanic	−0.6463 ^c (0.1285)	−0.6426 ^c (0.1285)	−0.6427 ^{cc} (0.1286)	−0.0626 (0.1016)	−0.0552 (0.1017)	−0.0558 (0.1018)
Other race, non-hispanic	−0.9334 ^c (0.1691)	−0.9493 ^c (0.1694)	−0.9570 ^c (0.1696)	−0.4307 ^c (0.1388)	−0.4474 ^c (0.1391)	−0.4570 ^c (0.1392)
Hispanic	−0.8838 ^c (0.1497)	−0.8903 ^c (0.1498)	−0.8935 ^c (0.1499)	−0.3620 ^c (0.1143)	−0.3693 ^c (0.1144)	−0.3733 ^c (0.1145)
Constant	−7.0379 ^b (2.9463)	−5.0490 ^d (3.0013)	−8.0380 ^b (3.5050)	2.3684 (2.5936)	4.4335 ^a (2.6246)	1.1020 (2.9255)
Observations	7,961	7,961	7,961	7,961	7,961	7,961
Log likelihood	−6,644	−6,633	−6,629	−6,644	−6,633	−6,629

Standard errors in parentheses

^a significant at 10%;

^b significant at 5%;

^c significant at 1%

Note: All models control for education, birth cohort, age at birth, field, potential years experience, moved since first birth, and marital status

Table 5

Sensitivity analysis: varying the definition of return and the policy start year

Varying definition of return												
	Part-time vs. Full-time						Stay home vs. Full-time					
	12 months	3 months	4 months	6 months	18 months		12 months	3 months	4V's	6 months	18 months	
FMLA in effect	0.4163 ^b (0.2069)	0.5678 ^b (0.2534)	0.6215 ^c (0.2360)	0.4633 ^b (0.2199)	0.5074 ^b (0.2031)		0.2864 (0.1904)	0.1487 (0.1548)	0.0036 (0.1623)	0.2585 (0.1716)	0.5049 ^b (0.2065)	
FMLA time trend (1993–2002)	−0.0462 (0.0703)	−0.1148 (0.0862)	−0.1165 (0.0801)	−0.0766 (0.0748)	−0.0414 (0.0688)		−0.0699 (0.0665)	0.0493 (0.0547)	0.0211 (0.0572)	−0.0810 (0.0604)	−0.0811 (0.0718)	
Square of FMLA time trend (1993–2002)	0.0106 ^a (0.0058)	0.0138 ^b (0.0070)	0.0137 ^b (0.0065)	0.0121 ^b (0.0061)	0.0104 ^a (0.0057)		0.0146 ^c (0.0055)	0.0041 (0.0046)	0.0059 (0.0048)	0.0140 ^c (0.0050)	0.0137 ^b (0.0060)	
State law in effect	0.3267 ^c (0.0757)	0.2926 ^c (0.0959)	0.3210 ^c (0.0878)	0.3431 ^c (0.0807)	0.3341 ^c (0.0737)		0.1820 ^b (0.0739)	0.3635 ^c (0.0603)	0.3468 ^c (0.0625)	0.2252 ^c (0.0666)	0.1279 (0.0803)	
Time trend, 1980–2002	0.0003 (0.0237)	0.0446 (0.0305)	0.0266 (0.0280)	0.0099 (0.0256)	−0.0146 (0.0231)		−0.0324 (0.0211)	−0.0351 ^b (0.0174)	−0.0239 (0.0180)	−0.0330 ^a (0.0191)	−0.0403 ^a (0.0229)	
Varying policy start year												
Year	Part-time vs. Full-time						Stay home vs. Full-time					
	Start year dummy	Linear trend			Quadratic trend		Start year dummy	Linear trend			Quadratic trend	
1988	0.2521 (0.1815)	0.0208 (0.0497)			0.0049 ^a (0.0025)		0.2671 (0.1654)	0.0311 (0.0458)			0.0056 ^{bb} (0.0024)	
1989	−0.0984 (0.1771)	0.0419 (0.0509)			0.0022 (0.0029)		0.3880 ^b (0.1612)	−0.0056 (0.0476)			0.0078 ^c (0.0028)	
1990	0.0364 (0.1887)	0.0389 (0.0521)			0.0030 (0.0034)		0.5322 ^c (0.1668)	−0.0476 (0.0488)			0.0109 ^c (0.0033)	
1991	−0.0530 (0.2376)	0.0590 (0.0629)			0.0016 (0.0046)		0.4255 ^b (0.2044)	−0.0742 (0.0579)			0.0128 ^c (0.0043)	
1992	0.0052 (0.2432)	0.0611 (0.0760)			0.0017 (0.0060)		0.1637 (0.2156)	−0.0389 (0.0704)			0.0109 ^a (0.0056)	
1993	0.4163 ^b (0.2069)	−0.0462 (0.0703)			0.0106 ^a (0.0058)		0.2864 (0.1904)	−0.0699 (0.0665)			0.0146 ^c (0.0055)	
actual FMLA Year												
1994	0.0858 (0.2254)	0.0384 (0.1003)			0.0039 (0.0096)		0.0735 (0.2133)	−0.0182 (0.0958)			0.0124 (0.0093)	
1995	0.1832 (0.2302)	0.0089 (0.1177)			0.0073 (0.0127)		−0.1123 (0.2338)	0.0757 (0.1178)			0.0052 (0.0127)	
1996	0.1757 (0.2395)	0.0076 (0.1401)			0.0084 (0.0174)		−0.3288 (0.2492)	0.2347 ^a (0.1423)			−0.0117 (0.0175)	
1997	0.6857 ^c (0.2616)	−0.2913 ^a (0.1745)			0.0493 ^b (0.0250)		−0.1725 (0.2856)	0.2627 (0.1838)			−0.0180 (0.0259)	

Varying definition of return										
Part-time vs. Full-time					Stay home vs. Full-time					
	12 months	3 months	4 months	6 months	18 months	12 months	3 months	4Vs	6 months	18 months
1998	0.0059 (0.3131)	-0.0076 (0.2374)		0.0211 (0.0396)		-0.1293 (0.3214)		0.3496 (0.2425)	-0.0369 (0.0404)	

Standard errors in parentheses

- ^a significant at 10%;
- ^b significant at 5%;
- ^c significant at 1%

Regressions include the same controls as those in model 1(c), Table 4

Table 6

Multinomial regression of return decisions on number of weeks leave

	Part-time vs. Full time		Stay home vs. Full time	
	Coefficient	$P > z $	Coefficient	$> z $
weeks	0.021	0.008	0.007	0.328
t	-0.038	0.186	-0.092	0.000
ℓ^2	0.003	0.001	0.004	0.000

Table 7

First and second stage regressions to explore selection issue

I. First stage regression, binomial probit of worked and worked full-time while pregnant:			
	Worked	Worked full-time	
Disabled before first birth	-0.5315 ^c (0.0808)	-0.5400 ^c (0.0823)	
Black, non-Hispanic	-0.3078 ^c (0.0354)	-0.2345 ^c (0.0350)	
Hispanic	-0.5771 ^c (0.0353)	-0.4789 ^c (0.0356)	
Other race, non-Hispanic	-0.4552 ^c (0.0462)	-0.3872 ^c (0.0454)	
Married, spouse present	-0.0575 ^b (0.0271)	-0.0496 ^a (0.0265)	
Potential experience	0.0353 ^c (0.0065)	0.0408 ^c (0.0064)	
Education: less than high school degree	-0.6039 ^c (0.0458)	-0.5678 ^c (0.0468)	
Education: some college	0.3314 ^c (0.0315)	0.2897 ^c (0.0308)	
Education: college degree or higher	0.5590 ^c (0.0462)	0.4605 ^c (0.0442)	
Had first birth before completing schooling	-0.1373 ^c (0.0294)	-0.1617 ^c (0.0287)	
Lagged employment to population ratio, males aged 25–64	-0.0028 (0.0101)	-0.0076 (0.0097)	
Employment to population ratio, males aged 25–64	0.0340 ^c (0.0115)	0.0310 ^c (0.0111)	
	(0.1923)	(0.1845)	
Constant	-2.3660 ^b (1.1886)	-1.9304 ^a (1.1609)	
Observations	14008	14008	
Log likelihood	-7,670	-8,255	
II. Second stage regression, multinomial probit estimates			
	Part-time vs. Full-time		Stay home vs. Full-time
	No selection term	Worked	No selection term
		Worked full-time	Worked full-time
Inverse Mills ratio		1.7868 ^b (0.7797)	1.9021 ^c (0.7370)
FMVA in effect	0.4163 ^b (0.2069)	0.4249 ^b (0.2070)	0.4251 ^b (0.2070)
FMVA time trend (1993–2002)	-0.0462 (0.0703)	-0.0508 (0.0704)	-0.0519 (0.0704)
			-0.0699 (0.0665)
			-0.0715 (0.0666)
			-0.0720 (0.0666)

II. Second stage regression, multinomial probit estimates

	Part-time vs. Full-time		Stay home vs. Full-time	
	No selection term	Worked full-time	No selection term	Worked full-time
Square of FMLA time trend (1993–2002)	0.0106 ^a (0.0058)	0.0109 ^a (0.0058)	0.0146 ^c (0.0055)	0.0147 ^c (0.0055)
State law in effect	0.3267 ^c (0.0757)	0.3243 ^c (0.0757)	0.1820 ^b (0.0739)	0.1807 ^b (0.0739)
Log likelihood	–6,629	–6,626	–6,629	–6,626

Note: Regression includes controls for birth cohort and age at birth
Standard errors in parentheses

^a significant at 10%;

^b significant at 5%;

^c significant at 1%

Note: Includes same controls as Table 4, model 1(c)