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

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Abstract

The Family and Medical Leave Act (FMLA) guarantees eligible women job protection and health benefits for 12 weeks surrounding childbirth. While the law is estimated to cover less than half of women, it has arguably increased leave, extended leave periods, and led to a higher rate of return to previous employer. This paper seeks to test whether the FMLA may have afforded women more bargaining power with which to negotiate more flexible work arrangements, such as return to work at part-time status. Data show that the percent of women working full-time during pregnancy who return to work to the same employer at part-time status after their first birth doubles, from 8 percent in the early 1990s, prior to FMLA's passage, to 16 percent in the early 2000s, post-FMLA. Analyzing data from the 1996 and 2004 panels of the Survey of Income and Program Participation (SIPP), this paper evaluates whether the implementation of FMLA is associated with the increase in return to work at part-time status among first-time mothers working full-time during their pregnancy. Using a multinomial logit model, 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 paper 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

JEL Classification: J18; J22.

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1 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. 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 percent were working within one year of the birth, compared to only 28 percent 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, Morgan, Engelhardt, and Pacalova 2003; Technical Panel on Assumptions and Methods (2003) 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 percent) or

work from home (preferred by 30 percent 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. In particular, 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 percent in the period 1990-1992 to 33 percent in 2000-2002. 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.

While informal workplace policies may be instrumental to the decision of some women to return to work following the birth of a child, federal policy ensuring job-protected leave may have a broader impact on the population. In particular, not only may it facilitate return to work for mothers, but it may invite additional workplace flexibility at firms wishing to be family friendly. 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. 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. While the law is estimated to cover less than half of women (Waldfogel 1999), there is some evidence that it may have increased leave-taking (Han and Waldfogel

[1] In contrast, 15 percent would ideally work full-time, and 21 percent 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).

2003; Waldfogel 1999), extended leave periods (Baum 2003; Han and Waldfogel 2003) and led to a higher rate of return to previous employer (Baum 2003; Waldfogel, Higuchi, and Abe 1999). 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.

2 Maternity leave legislation and return to work

This paper probes whether, beyond merely providing maternity leave, the FMLA may have had a broader impact on the flexibility of workplaces with regard to women's return to work. In particular, I hypothesize that the FMLA may have afforded women bargaining power with which to negotiate more flexible work arrangements, such as return at part-time status or the ability to telecommute upon return to work.

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 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

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

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 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; weighing the costs of the alternative of hiring a new employee became irrelevant. Thus, employers subject to FMLA no longer hold bargaining power to dictate the terms of return.

Meanwhile, with maternity leave policy in place, the threat point for employees 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 not 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

[3]There 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).

the work preferences of the employee.

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.

3 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 whether there are differences between 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. 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 more data. Third, available data on educational field

of study may help ameliorate any bias due to employment type.

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.[4]

Table 1 shows the general trends in work for new mothers from the early 1980s to the early 2000s.[5] First, we note a slight increase in the percent of women working during pregnancy, from 60 percent in the early 1980s to 68 percent in the early 2000s.[6] Second, 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 percent. Third, 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.

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

[4]Although 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 also only for births going back to 1990; thus it provides no additional information beyond that gleamed from the 2004 panel, which includes more recent births as well.

[5]The first three years of each decade are analyzed here merely to demonstrate trends over time.

[6]Henceforth, the term "pregnancy" in this paper refers to the pregnancy leading to the first birth.

Table 1: First births and return to work within 12 months, 1980-1982, 1990-1992, 2000-2002

	1980-1982	1990-1992	2000-2002
Total mothers with first births	1,822	1,948	1,755
% worked during pregnancy	60.4	67.0	68.1
Total worked during pregnancy	1,100	1,305	1,195
% full time	88.2	88.4	85.6
% part time	11.8	11.6	14.4
% returned to work within 12 months	71.4	80.0	77.4
Total worked full-time during pregnancy	970	1,154	1,023
Status upon return, return within 12 months:			
% not working	27.1	18.8	21.3
% full-time, same employer	49.6	58.1	50.0
% full-time, different employer	10.5	10.3	7.4
% part-time, same employer	7.7	8.3	16.0
% part-time, different employer	5.1	4.4	5.3

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.

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.

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 percent in the early 1990s, prior to FMLA's passage, to 16.0 percent 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.

Table 2: First births and return to work within 12 months, 1980-1982, 1990-1992, 2000-2002

Work status during pregnancy	Work status within 12 months following birth			
	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.

Figure 1 graphically shows the percent of women working full-time during their pregnancy that return to the same employer at part-time status within 12 months of the birth over the time period 1980-2002. 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.

To test the importance of the FMLA in explaining women's return to work at part-

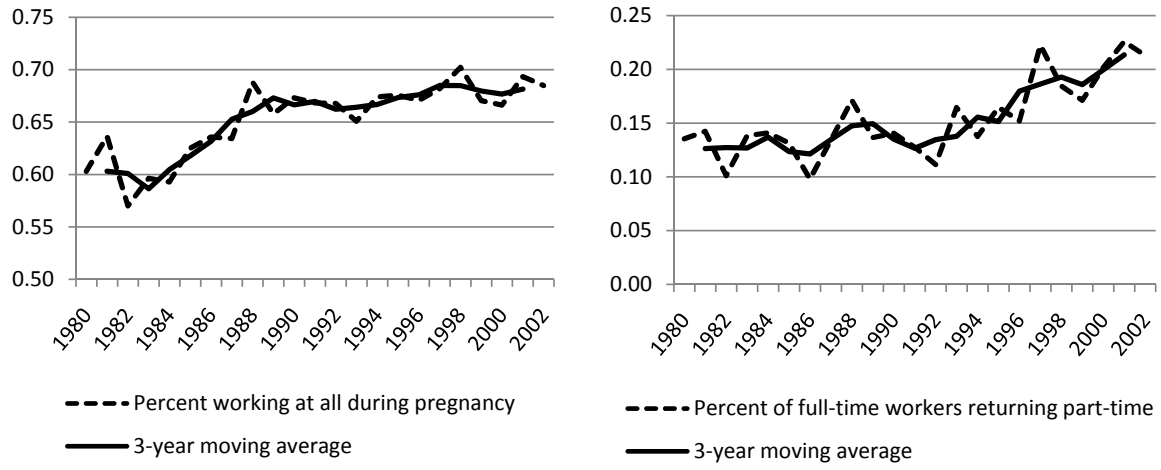

Figure 1: Percent of women working at all during pregnancy and percent working full-time during pregnancy that return at part-time status

time status, I estimate a multinomial logit model for women working full-time during their pregnancy. 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. One drawback of the multinomial logit model is that it requires the assumption of independence of irrelevant alternatives, which could arguably be a concern for this data 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. As I am modeling the return decisions of all women working full-time during pregnancy, I do not limit the sample to women who return to the same employer.

The following multinomial logit model is estimated:

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

where X is a vector of individual characteristics and measures of labor force attachment, L is a vector of labor market characteristics, including 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, and $t_F = 1$ in 1993, and $t_F = 10$ for birth year 2002, and t_F^2 is a quadratic time trend for the years in which FMLA is in effect. I also include a t^2 term in robustness checks, which is a quadratic time trend over the entire period 1980-2002, discussed in section 5.

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 (figure 2). In simple cross tabulations, there is no obvious 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) (figure 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 three, four, six 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 importance of the FMLA to women's return decisions, apart from predictions of early as opposed to later return.

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 (non-Hispanic), of some other race (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 mother,[7] years of potential experience at the time of birth (estimated as age at birth-education-6), and by whether an individual took paid maternity leave. 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.[8] 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. 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. 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 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.

[7]Income 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.

[8]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 household income, and may exhibit reverse causality with the return to work decision. It must be interpreted with caution.

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*	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**	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
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 Cosmotology/Home Economics	0.011	0.103
Field Other	0.088	0.284

Observations = 7,961

*Calculated as age at birth - years of education - 6

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

The possible impact of the FMLA is explored in three specifications. 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, a linear time trend, and then t_F^2, a quadratic time trend, both of which begin in 1993, the first year in which the FMLA is in effect.

There are limitations to this analysis that are worth mentioning. First, the SIPP retrospective fertility history survey questionnaire does not include questions about the occupation and industry of the woman or years of experience at the time the first birth occurs, both of which are important determinants of whether she may return to work. While 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. In an attempt to control for industry and occupation, I control for educational field of study. Second, we do not know whether a woman is actually eligible for the FMLA. Since at most 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.

4 Results

The regression results presented in table 4 suggest that the presence of FMLA is associated with a higher odds of return to work at part-time status as compared to full-time, for women

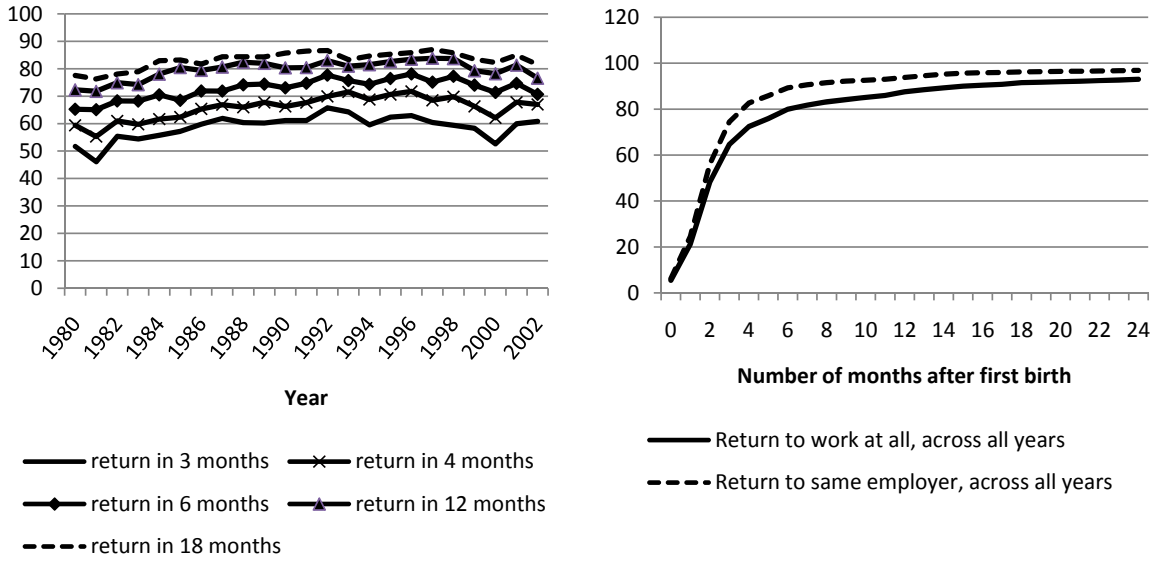

Figure 2: Percent of women working full-time during their pregnancy that return to work at all within the given number of months and timing of return, across all years

who worked full-time during their pregnancy. Simplified model 1 includes only a dummy indicating that the FMLA is in effect during the year of birth. In this model, the FMLA dummy is significantly associated with a risk of return to work at part-time status which is 32 percent[9] higher relative to the risk of returning at full-time status.[10] 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 (model 2), 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 looses significance in model 2 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 (model 3), the FMLA dummy regains significance, but the quadratic term is also significant, though only

[9]Calculated as e^{β}, where β is the coefficient on the FMLA dummy from model 1.
[10]Appendix A discusses a model which explores the issue of sample selection bias.

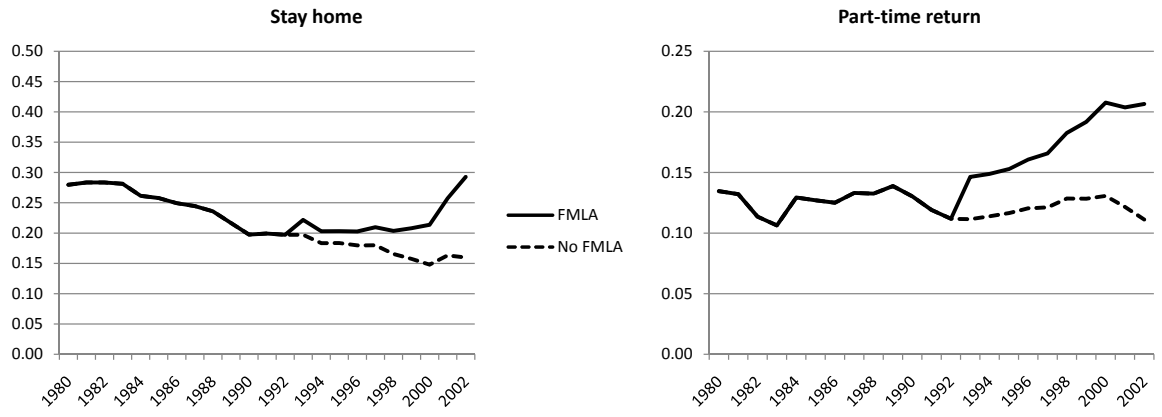

Figure 3: Predicted probabilities of staying home and returning to work at part-time status

at the 90 percent 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 figure 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 to 39 percent higher odds of returning at part-time status relative to full-time status.[11] This association is statistically separate from the association with FMLA legislation, 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

[11]Calculated as e^{β}, where β is the coefficient on the dummy indicating state leave legislation in effect at the time of the birth, models 1-3.

California, Tennessee and the District of Columbia permit more weeks than the FMLA).[12] 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 also have significance in this model. 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.[13] This result suggests that return to work at part-time status is likely to be a manifestation of employment preferences, rather than an artifact of involuntary underemployment (i.e., return to work at part-time status as a result of not finding full-time employment).

Two market attachment covariates are significantly associated with the decision of whether to return to work full-time, part-time, or not at all. First, 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. Second, greater market at-

[12]State 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), 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. 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).

[13]That the coefficient loses significance in model 2 may suggest that the simple linear time trend is picking up a trend in the economy.

tachment (higher income) is associated with higher likelihood of full-time return as compared to returning part-time or staying home.

It is worth noting that the associations with race are large and significant. Non-whites have a significantly lower odds of staying home (vs. returning full-time) and of returning part-time (vs. returning full-time), in all cases except for blacks for staying home. In a probit regression of the likelihood that one is in the workforce during their pregnancy, these women are less likely to be in the workforce during their pregnancy (see A.1). Thus, non-whites who indeed are in the labor force are likely to be more highly attached, which may help explain these strong associations.

Finally, there are some fields that are significantly associated with return at part-time as opposed to full-time status. In particular, the field of "art/architecture" and of "home economics/cosmetology" are associated with higher odds of returning part- versus full-time, while the fields of health, education, and "business/management" are associated with significantly lower odds of returning at part-time relative to full-time status (results available from author upon request). The omitted category is "no field reported," which is typically the case if an individual did not complete any sort of degree beyond high school. Not surprisingly, it appears that some fields are clearly more compatible with part-time work than others.

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. Similarly,

state leave legislation also counteracts the negative time trend. Being more attached to the workforce (having a higher income) is associated with lower odds of staying home relative to returning full-time, while higher other household income has the opposite association (though this result may reflect reverse causality due to the timing of income observations). Finally, only the field of "police/other vocational/technical training" is significantly associated with staying home relative to full-time return; women from this field have odds that are over 2 times higher than those with no field.

To further explore how the FMLA may play a changing role over time, I predict the probability of returning to work at part-time or full-time status and of staying home, using model three, 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 figure 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. The overall probability of return at part-time status appears to level off in the early 2000s.

5 Model 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, the FMLA time trend in model 2, and the FMLA dummy and quadratic trend in model 3, 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 three, four, six or 18 months.

First, to test the sensitivity of the results in table 4 to the specification of return to work at 12 months, I employ alternative definitions of return to work within three, four, six 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 larger. It is also worth noting that the coefficient on state maternity leave also remains significant and stable in these four regressions. 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.

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	Model 2	Model 3	Model 1	Model 2	Model 3
FMLA in effect	0.2745**	0.1428	0.4163**	0.1164	-0.0763	0.2864
	(0.1316)	(0.1392)	(0.2069)	(0.1210)	(0.1317)	(0.1904)
FMLA time trend (1993-2002)		0.0743***	-0.0462		0.0945***	-0.0699
		(0.0242)	(0.0703)		(0.0227)	(0.0665)
Square of FMLA time trend (1993-2002)			0.0106*			0.0146***
			(0.0058)			(0.0055)
State law in effect	0.3139***	0.3259***	0.3267***	0.1682**	0.1820**	0.1820**
	(0.0755)	(0.0757)	(0.0757)	(0.0736)	(0.0738)	(0.0739)
Time trend, 1980-2002	0.0245	0.0010	0.0003	-0.0058	-0.0312	-0.0324
	(0.0223)	(0.0237)	(0.0237)	(0.0202)	(0.0211)	(0.0211)
Employment to population ratio, males aged 25-64	0.0661**	0.0453	0.0790**	-0.0247	-0.0465	-0.0089
	(0.0333)	(0.0338)	(0.0395)	(0.0293)	(0.0296)	(0.0330)
Took paid maternity leave	-	-	-	-	-	-
	0.5434***	0.5364***	0.5366***	0.8948***	0.8833***	0.8832***
	(0.0734)	(0.0735)	(0.0735)	(0.0734)	(0.0735)	(0.0735)
Log of other household income	0.0190	0.0174	0.0175	0.0437***	0.0422***	0.0424***
	(0.0134)	(0.0134)	(0.0134)	(0.0123)	(0.0124)	(0.0124)
Log of income	-	-	-	-	-	-
	0.0774***	0.0777***	0.0780***	0.2024***	0.2024***	0.2030***
	(0.0129)	(0.0130)	(0.0130)	(0.0108)	(0.0108)	(0.0108)
Black, non-Hispanic	-	-	-	-0.0626	-0.0552	-0.0558
	0.6463***	0.6426***	0.6427***			
	(0.1285)	(0.1285)	(0.1286)	(0.1016)	(0.1017)	(0.1018)
Other race, non-Hispanic	-	-	-	-	-	-
	0.9334***	0.9493***	0.9570***	0.4307***	0.4474***	0.4570***
	(0.1691)	(0.1694)	(0.1696)	(0.1388)	(0.1391)	(0.1392)
Hispanic	-	-	-	-	-	-
	0.8838***	0.8903***	0.8935***	0.3620***	0.3693***	0.3733***
	(0.1497)	(0.1498)	(0.1499)	(0.1143)	(0.1144)	(0.1145)
Constant	-7.0379**	-5.0490*	-8.0380**	2.3684	4.4335*	1.1020
	(2.9463)	(3.0013)	(3.5050)	(2.5936)	(2.6246)	(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.
*significant at 10%; ** significant at 5%; ***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				
	12 months	3 months	4 months	6 months	18 months
FMLA in effect	0.4163**	0.5678**	0.6215***	0.4633**	0.5074**
	(0.2069)	(0.2534)	(0.2360)	(0.2199)	(0.2031)
FMLA time trend (1993-2002)	-0.0462	-0.1148	-0.1165	-0.0766	-0.0414
	(0.0703)	(0.0862)	(0.0801)	(0.0748)	(0.0688)
Square of FMLA time trend (1993-2002)	0.0106*	0.0138**	0.0137**	0.0121**	0.0104*
	(0.0058)	(0.0070)	(0.0065)	(0.0061)	(0.0057)
State law in effect	0.3267***	0.2926***	0.3210***	0.3431***	0.3341***
	(0.0757)	(0.0959)	(0.0878)	(0.0807)	(0.0737)
Time trend, 1980-2002	0.0003	0.0446	0.0266	0.0099	-0.0146
	(0.0237)	(0.0305)	(0.0280)	(0.0256)	(0.0231)
	Stay home vs. Full-time				
	12 months	3 months	4 months	6 months	18 months
FMLA in effect	0.2864	0.1487	0.0036	0.2585	0.5049**
	(0.1904)	(0.1548)	(0.1623)	(0.1716)	(0.2065)
FMLA time trend (1993-2002)	-0.0699	0.0493	0.0211	-0.0810	-0.0811
	(0.0665)	(0.0547)	(0.0572)	(0.0604)	(0.0718)
Square of FMLA time trend (1993-2002)	0.0146***	0.0041	0.0059	0.0140***	0.0137**
	(0.0055)	(0.0046)	(0.0048)	(0.0050)	(0.0060)
State law in effect	0.1820**	0.3635***	0.3468***	0.2252***	0.1279
	(0.0739)	(0.0603)	(0.0625)	(0.0666)	(0.0803)
Time trend, 1980-2002	-0.0324	-0.0351**	-0.0239	-0.0330*	-0.0403*
	(0.0211)	(0.0174)	(0.0180)	(0.0191)	(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	0.0208	0.0049*	0.2671	0.0311	0.0056**
	(0.1815)	(0.0497)	(0.0025)	(0.1654)	(0.0458)	(0.0024)
1989	-0.0984	0.0419	0.0022	0.3880**	-0.0056	0.0078***
	(0.1771)	(0.0509)	(0.0029)	(0.1612)	(0.0476)	(0.0028)
1990	0.0364	0.0389	0.0030	0.5322***	-0.0476	0.0109***
	(0.1887)	(0.0521)	(0.0034)	(0.1668)	(0.0488)	(0.0033)
1991	-0.0530	0.0590	0.0016	0.4255**	-0.0742	0.0128***
	(0.2376)	(0.0629)	(0.0046)	(0.2044)	(0.0579)	(0.0043)
1992	0.0052	0.0611	0.0017	0.1637	-0.0389	0.0109*
	(0.2432)	(0.0760)	(0.0060)	(0.2156)	(0.0704)	(0.0056)
1993= actual FMLA Year	0.4163**	-0.0462	0.0106*	0.2864	-0.0699	0.0146***
	(0.2069)	(0.0703)	(0.0058)	(0.1904)	(0.0665)	(0.0055)
1994	0.0858	0.0384	0.0039	0.0735	-0.0182	0.0124
	(0.2254)	(0.1003)	(0.0096)	(0.2133)	(0.0958)	(0.0093)
1995	0.1832	0.0089	0.0073	-0.1123	0.0757	0.0052
	(0.2302)	(0.1177)	(0.0127)	(0.2338)	(0.1178)	(0.0127)
1996	0.1757	0.0076	0.0084	-0.3288	0.2347*	-0.0117
	(0.2395)	(0.1401)	(0.0174)	(0.2492)	(0.1423)	(0.0175)
1997	0.6857***	-0.2913*	0.0493**	-0.1725	0.2627	-0.0180
	(0.2616)	(0.1745)	(0.0250)	(0.2856)	(0.1838)	(0.0259)
1998	0.0059	-0.0076	0.0211	-0.1293	0.3496	-0.0369
	(0.3131)	(0.2374)	(0.0396)	(0.3214)	(0.2425)	(0.0404)

Standard errors in parentheses.
*significant at 10%; ** significant at 5%; *** significant at 1%
Regressions include the same controls as those in model 3, table 4.

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 and 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 percent confidence level, suggesting that indeed, there is nonlinearity in the odds of part-time return over time. The predicted values from this model (model 4) appear in figure 4, alongside the predicted values from model 3. 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 3, suggesting that we are not artificially constructing a start year for this trend.[14]

Whether the results from the multinomial logit model are biased depends upon the independence of irrelevant alternatives assumption. The assumption of the model is that there is no correlation in errors across alternatives. I test whether this assumption is violated

[14]In a separate model, t^3 was also included, but its coefficient was not significant.

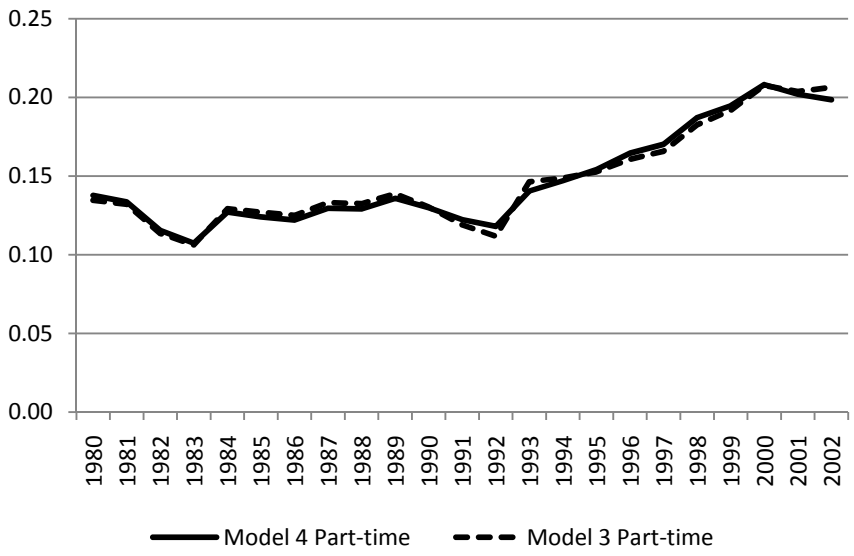

Figure 4: Probability of part-time return, predicted values

using the Hausman test, the seemingly-unrelated estimation based Hausman test, and the small Hsiao test, and the results are not definitive. 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 eliminates a given alternative are not necessarily likely to vary.

However, to test further the robustness of the empirical findings, I employ an alternative model specification using the sequential logit.[15] 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

[15]I employ the seqlogit command in Stata, written by Maarten Buis, Vrije Universiteit Amsterdamn (Buis 2007).

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.[16] Furthermore, having a state leave law in effect also has a significant coefficient of similar magnitude.[17] The predicted probabilities of part-time as compared to full-time return are also very similar to those in 3.

Finally, to further 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. In particular, the leave weeks variable is statistically significant at the 99 percent confidence level.[18]. Each additional week of mandated maternity leave is statistically significantly associated with a two percent higher odds of part-time return as compared to full-time return, which translates into 24 percent higher odds of part-time return for a move

[16]For model 1, the coefficient for the FMLA dummy is 0.2927, significant at the 95 percent confidence level. For model 2, the coefficient on the linear FMLA time trend is 0.0791, significant at the 99 percent confidence level, while the FMLA dummy again loses significance. For model 3, the coefficient on the quadratic FMLA time trend is 0.0098, significant at the 90 percent confidence level.

[17]The coefficients are 0.3080, 0.3216 and 0.3215 for models 1, 2 and 3, respectively; all are significant at the 99 percent confidence level.

[18]The coefficient on the variable for leave weeks is 0.0214108, with a standard error equal to 0.0080631.

from 0 to 12 weeks of leave.

6 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. 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 paper 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.

While the results of the regression 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, they do not rule out other scenarios that could also explain this increase in return to work at part-time status following the birth of the first child. In particular, given that the models in which only the FMLA linear time trend was included caused the significance of the FMLA dummy coefficient to go away, there could instead be a secular time trend that happened to coincide with the FMLA. Some alternative explanations for an increase in the prevalence of return to work at part-time status 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 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, women likely to have considered going on welfare would probably had lower levels of education. The regression results show now significant relationship between level of education and return to work at part-time status. There were no other work-family related legislative changes at the federal level in the mid-1990s. At the same time, however, the robustness analysis (table 5) shows that the year of 1997 is also a significant cutoff point

for higher odds of return at part-time relative to full-time status, causing one to consider whether this argument might hold some weight.

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 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 (figure 1). 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 heterogeneity would likely show up in the period prior to 1990, rather than coinciding with the implementation of the FMLA. 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.

Furthermore, the fact that state maternity leave legislation took effect at different times in different states serves as a quasi-experiment for the impact of leave legislation. The fact that the state leave variable has a large and significant effect on return to work at part-time status, regardless of the model selected, further bolsters the argument that family leave legislation may indeed be behind the change in patterns of return to work. 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.

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.

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

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A 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 A.1). 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 3, table 4.

[20]For 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.

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 A.1). 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.

Table A.1: 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***	-0.5400***
	(0.0808)	(0.0823)
Black, non-Hispanic	-0.3078***	-0.2345***
	(0.0354)	(0.0350)
Hispanic	-0.5771***	-0.4789***
	(0.0353)	(0.0356)
Other race, non-Hispanic	-0.4552***	-0.3872***
	(0.0462)	(0.0454)
Married, spouse present	-0.0575**	-0.0496*
	(0.0271)	(0.0265)
Potential experience	0.0353***	0.0408***
	(0.0065)	(0.0064)
Education: less than high school degree	-0.6039***	-0.5678***
	(0.0458)	(0.0468)
Education: some college	0.3314***	0.2897***
	(0.0315)	(0.0308)
Education: college degree or higher	0.5590***	0.4605***
	(0.0462)	(0.0442)
Had first birth before completing schooling	-0.1373***	-0.1617***
	(0.0294)	(0.0287)
Lagged employment to population ratio, males aged 25-64	-0.0028	-0.0076
	(0.0101)	(0.0097)
Employment to population ratio, males aged 25-64	0.0340***	0.0310***
	(0.0115)	(0.0111)
	(0.1923)	(0.1845)
Constant	-2.3660**	-1.9304*
	(1.1886)	(1.1609)
Observations	14008	14008
Log Likelihood	-7,670	-8,255

Note: Regression includes controls for birth cohort and age at birth.

II. Second stage regression, multinomial probit estimates:

	Part-time vs. Full-time			Stay home vs. Full-time		
	No selection term	Worked	Worked full-time	No selection term	Worked	Worked full-time
Inverse Mills ratio		1.7868**	1.9021***		0.5958	0.7431
		(0.7797)	(0.7370)		(0.7078)	(0.6954)
FMLA in effect	0.4163**	0.4249**	0.4251**	0.2864	0.2893	0.2898
	(0.2069)	(0.2070)	(0.2070)	(0.1904)	(0.1904)	(0.1904)
FMLA time trend (1993-2002)	-0.0462	-0.0508	-0.0519	-0.0699	-0.0715	-0.0720
	(0.0703)	(0.0704)	(0.0704)	(0.0665)	(0.0666)	(0.0666)
Square of FMLA time trend (1993-2002)	0.0106*	0.0109*	0.0110*	0.0146***	0.0147***	0.0147***
	(0.0058)	(0.0058)	(0.0058)	(0.0055)	(0.0055)	(0.0055)
State law in effect	0.3267***	0.3243***	0.3244***	0.1820**	0.1808**	0.1807**
	(0.0757)	(0.0757)	(0.0757)	(0.0739)	(0.0739)	(0.0739)
Log Likelihood	-6,629	-6,626	-6,626	-6,629	-6,626	-6,626

Standard errors in parentheses.
*significant at 10%; ** significant at 5%; *** significant at 1%
Note: Includes same controls as table 4, model 3.