The Short-Term Effects of New York's Paid Family and Medical Leave Policy on Mothers of Newborns

Sara LaLumia, Jonah Tobin
Department of Economics, Williams College*

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Abstract

New York is the fourth state in the U.S. to implement paid family and medical leave, effective at the start of 2018. Following the birth or adoption of a child, eligible parents can receive at least eight weeks of benefits. Paid leave can increase incentives to remain in the labor force, and has been shown to increase mothers' employment in California. This paper is the first to estimate the effect of New York's paid family leave on the labor market outcomes of mothers. It uses a difference-in-difference strategy, comparing New York mothers who gave birth before and after the policy change to mothers giving birth in the same time period in states without paid family leave. We find that the policy increased employment of mothers with children less than a year old by approximately 3.5 percentage points. Results are robust to the use of alternative control groups, and results are similar when we use a synthetic control estimation strategy.

In 1993, the United States passed the federal Family and Medical Leave Act. This anti-discrimination law grants workers the right to take 12 weeks of unpaid leave without being fired. Workers can take this leave if they or their spouse gives birth, if they adopt, or if they or a loved one has a medical emergency. However, the FMLA does not require employers to provide any earnings or benefits during leaves of absence. The United States joins a distinguished group of countries that do not have paid parental leave laws: Sierra-Leone, Swaziland, Papua New Guinea, and Liberia (Lusk 2012).

In the absence of federal provision of paid maternity leave, some states have implemented their own paid family and medical leave policies. California was first in 2004, and there is a

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good deal of evidence investigating how California's policy has affected mothers' leave-taking and subsequent labor market outcomes (Rossin-Slater, Ruhm and Waldfogel 2013, Baum and Ruhm 2016, Bana, Bedard and Rossin-Slater 2020). Policies in New Jersey and Rhode Island became effective in 2009 and 2014, respectively, and have been less studied (Byker 2016). New York's policy become effective in 2018, and there is little analysis of its effects. This paper seeks to fill that gap. It estimates the short-term effects of New York's paid family leave on employment, hours worked, and earnings for mothers with children under a year old.

Researching New York and other states' laws is an essential step in fully understanding paid family leave. Because New York's policy was more generous, providing more weeks of leave than California's, it may have a larger impact on labor market behavior. The number of states that have passed paid family leave laws is growing rapidly (Bipartisan Policy Center 2021). With many states recently passing laws that cover up to 12 weeks of leave, it is important to understand how paid family leave impacts mothers of newborns across the country.

To understand causal effects from paid maternity leave, we use data from the American Community Survey from 2015 through 2019 to implement a difference-in-difference model. We compare mothers of newborns in New York to mothers of newborns who did not have access to paid family leave. We consider three control groups: mothers of newborns in states across the country that do not already have a paid family leave law, a similar group but restricted to those in states geographically close to New York, and New York mothers of older children. Our estimates show that New York's paid maternity leave increased the employment rate of mothers between 2.6 and 3.4 percentage points. We also see increases in usual hours worked and earnings.

The underlying assumption of the difference-in-difference model is that the control and treatment groups would have experienced parallel trends in the absence of the policy change. This is impossible to observe directly, but we present results from an event study suggest-

ing that employment of treated and control groups was not diverging prior to the policy's implementation. We also present results from a synthetic control model, following Abadie, Diamond and Hainmueller (2010). These results suggest a larger increase in employment, an effect close to six percentage points.

The findings in this study are confined to one year of post-treatment data and further research should be done in future years to examine their persistence. However, the increase in employment status for mothers of newborns highlights the positive short-term impacts of paid family leave. Mothers who retained their employment may earn higher salaries later in their careers because of increased job continuity. If this is true, our results suggest that paid family leave could decrease the gender earnings gap in the long term.

1 Background

1.1 New York's Paid Family and Medical Leave Law

In 2018, New York became the fourth state in the country to offer paid family and medical leave. Workers are eligible once they have worked in private, covered employment for approximately six months.[1] Public employees are eligible if their employers have opted into paid leave, or if represented by a union that has negotiated the benefit through collective bargaining. Self-employed individuals can opt in to the program. Eligibility does not depend on state of residence, so individuals who work in New York but live elsewhere are eligible, and eligibility does not depend on citizenship or immigration status.

The program provides eligible workers with paid time off in the event of a birth, adoption, or arrival of a foster child; in order to care for a family member with a serious health condition; or when a family member is on active military service abroad. The maximum length of leave

[1]Full time employees become eligible after 26 consecutive weeks of working 20 or more hours per week. Part-time employees with a regular schedule of less than 20 hours per week become eligible after working 175 days (New York State Department of Financial Services 2021). Non-covered workers include clergy, those working in a professional or teaching capacity at a not-for-profit, maritime and railroad workers, golf caddies, and jockeys.

was initially eight weeks, increased to ten weeks in 2019, and increased to twelve weeks in 2021. The weekly benefit amount calculation has also changed over time. In 2018 it was 50% of the employee's average weekly wage, up to a cap of 50% of the Statewide Average Weekly Wage (SAWW). The maximum weekly benefit was $653. In 2019, the weekly benefit was equal to 55% of the employee's average weekly wage, with a cap of $746 or 55% of the SAWW. Workers' jobs are protected and their health insurance coverage continues while they are on leave. To claim the benefits, employees must give thirty days notice (when practical), and must submit an application online.

There were approximately 121,000 claims in 2018 and approximately 143,000 in 2019, corresponding to 1.6-1.7% of eligible workers claiming benefits. Approximately 70% of claims are for bonding with a new child. Two-thirds of all claims are made by women. Leaves last an average of 6.6 weeks. (New York State Department of Financial Services 2021).

PFL functions as an insurance system, administered by the state, and paid for by employees themselves through payroll deductions. At the end of the year, the Department of Financial Services sets an employee contribution rate to cover the cost of the past year's coverage. For example, in 2022, the employee contribution rate was 0.511% of earnings. However, the individual contribution was capped annually at $423 (New York State Department of Financial Services 2021). Employers may choose to pay the deduction on behalf of their employees but this is uncommon.

1.2 Existing Literature on Paid Family Leave

Offering paid maternity leave to mothers is unambiguously predicted to increase leave taking, but the predicted effects on employment are not as clear cut. The effect could be zero. All of the increase in leave taking could come from mothers who are continuously employed after giving birth, and who would have been so in the absence of PFL, who are now swapping some weeks of paid absence from work for weeks they otherwise would have been employed and working. The effect on employment could be positive, if some mothers

who would have quit their jobs after giving birth without PFL choose to stay employed when offered PFL. There are several mechanisms that might explain this behavior. First, PFL offers a direct financial incentive to maintain employment in the short run–the benefit is only paid to those who are employed. Second, the implementation of PFL could send a signal that mothers are valued in the workplace. Survey evidence suggests that employers are more accepting and have higher support of leave taking after a policy is implemented (Applebaum and Milkman 2011, Bartel, Rossin-Slater, Ruhm, Slopen and Waldfogel 2021). This could increase employment in both the short and long run. Third, the extra resources provided by PFL may allow mothers to pay for childcare or household necessities that make for an easier transition back to work. Finally, the effect on employment could be negative. The longer leave made possible by PFL might cause some erosion of skills or might change preferences for market work.

Empirical evidence on the labor market effects of PFL in the United States has primarily come from California. Rossin-Slater et al. (2013) use March CPS data to study outcomes in the first six years of California's policy. New mothers took longer leaves, with the average leave duration increasing from three to six weeks. Employed mothers of 1- to 3-year-olds worked more hours and had higher wage income, with increases of about 10%. There is no evidence of an increase in mothers' employment. Baum and Ruhm (2016) use data from the National Longitudinal Survey of Youth. They find paid leave causes two to three additional weeks of leave for mothers, greater probability of return to work nine to twelve months after birth, and positive mid-term effects on hours worked and possibly on wages. They estimate that paid family leave in California created a 3.9 percentage point decline in non-employment. Bana et al. (2020) use a regression kink design using women who have earnings above the maximum level replacement rate in California. This studies the impact of the weekly benefit amount on leave duration or future work participation and finds no negative effects. They also find that a 10% increase in the weekly benefit amount increases likelihood of returning to work by 0.3 to 4.2 percentage points. Bailey, Byker, Patel and Ramnath (2019) use tax

return data to consider both the short and long run effects of California's policy. They find no long-run effect on employment or wage income among the full set of mothers, with long-run reductions for first-time mothers.

There is a smaller literature on the effects of paid family leave in other states. Byker (2016) considers paid leave policies in both California and New Jersey, finding that they increase labor force participation by between 5 and 10 percentage points in the three months before and three months after giving birth, with the effect entirely drive by women with less than a bachelors degree. Timpe (2022) uses much earlier policy variation, from the 1960s and 1970s, related to differential state expansion of paid maternity leave though short-term disability insurance programs. He finds substantial increases in the use of short-term leave, with some subsequent decline in employment.

Using exogenous variation from policy changes in economics studies and survey data in policy analyses, researchers have found health and financial benefits to paid family leave. In her 2017 review of the literature, Maya Rossin-Slater concludes that the introduction of leaves can increase women's leave taking and employment rates, improve children's health and education outcomes, and has minimal impacts on employer level outcomes like profitability and productivity (Rossin-Slater 2017). Eligibility for paid leave has the potential to affect other financial decisions, and Rodgers (2020) shows that California's paid family leave reduces the saving of expectant parents.

While this study will not focus on any health outcomes it is important to briefly mention some of the studied effects. Rossin (2011) finds that unpaid leave from the federal government's Family and Medical Leave Act led to decreases in premature births and birth weight. For highly educated and married women, the unpaid leave also created a substantial decrease in infant mortality. These groups of women are much more likely to take unpaid leave and it should be expected that paid leave would have more universal effects on all new mothers. Rossin-Slater (2017) also cites evidence from a paper in 2015 by Huang and Yang. They found that California's paid leave increased breastfeeding rates by ten to twenty percentage

points three, six, and nine months after birth. Lusk (2012) shows how breastfeeding can in turn have tremendous benefits for both the mother and child. While more suggestive, Lusk (2012) also discusses how longer leaves can have positive effects on infant brain development, vaccination rates, and mother's stress.

Some research and policy analysis has also been conducted on the effects of paid leave on employers. Applebaum and Milkman (2011) offer insights into the impact of California's PMFL policy on the business community. There is often large business opposition to PMFL laws but they have findings of no effect or positive effects for business via a survey. After more than five years, the vast majority of employers reported California's policy had minimal impacts on business operations. Ninety percent of employers agree that PMFL increased or had no effect on productivity, profitability, turnover, and employee morale. Importantly, there seems to be some crowd-out of private paid leave. In the survey, 60 percent of employers coordinated their program with the state benefits to decrease their benefits dollar for dollar with the increase of state benefits. To find causal results, Bartel et al. (2021) administer a survey to firms in New York and Pennsylvania. Using Pennsylvania firms as a control in a difference-in-difference model, they survey employers on a range of questions and find New York employers have a statistically significant increase in reported ease of handling worker's absences of over 4 weeks. These surveys show that paid family leave benefits are not just restricted to workers, but also help employers.

2 Empirical Strategy

To estimate the causal effects of New York's paid maternity leave policy on mothers' labor supply, we implement a difference-in-difference model. The model compares mothers who have had a child in the past year in New York and in states that do not have paid family leave. Mothers of newborns are observed before and after the policy goes into effect. The difference-in-difference model measures the change in labor market outcomes over time

for new mothers in New York compared to the change in employment for new mothers in the set of control states. The group of control states provides a prediction for how labor market outcomes would have changed in New York in the absence of the policy. We estimate equations of the form:

$$Y_{ist} = \beta_1(Post2018 * NY) + \gamma X_{ist} + \delta_s + \delta_t + \epsilon_{ist} \quad (1)$$

Dependent variables include employment, usual hours worked, and earnings. The variable $Post2018$ is a binary variable equal to one for observations after 2018. The NY binary variable is equal to one if the mother lives in New York. A vector of state fixed effects is included in δ_s and a vector of year fixed effects is included in δ_t. The effect of the policy change is measured by the coefficient on the interaction between the $Post2018$ and NY dummies, β_1. Following the results of other studies like Rossin-Slater et al. (2013) and Baum and Ruhm (2016), we predict this coefficient will be positive, indicating that in the presence of paid maternity leave, women are more inclined to maintain their employment.

Equation 1 also includes a set of demographic controls, X, that are likely to impact a mother's decision to return to work. Some variables relate to the general decision and ability for any person to have employment. Others are particularly important when making the decisions as a mother. We control for age and age squared, for marital status with a binary variable equal to one if a woman is married, for the number of children in the household, and for being born in the US. We control for race with binary variables for non-Hispanic Black, non-Hispanic Asian, Hispanic, and other. We control for education with binary variables for having completed a high school degree, some college, a college degree, or more than a college degree.

A difference-in-difference model relies on two identifying assumptions. The first is that the control and treatment groups would have experienced parallel trends in the absence of the policy change. This counterfactual is impossible to observe, but pre-trends can be

inspected to provide suggestive evidence. The inclusion of an event study design, as well as a synthetic control, serve as robustness checks to account for and control against any differences in pre-treatment trends. The second assumption is that the composition of the control and treatment groups is stable over time. The most important concern is whether PFML changed childbirth decisions. ACS data for New York indicates that, in 2015 through 2017, 1.61% of all women had a child in the previous year. In 2019, 1.56% percent of all women in New York had a child in the past year. These results demonstrate that paid family leave does not seem to incentivize women to have a child. Considering the consequences and responsibility of having children, it is expected that a modest increase in pay for eight weeks does not incentivize a change in decision making.

We conduct a set of robustness checks in which different control groups are chosen. In one, we restrict to observations only from states that are close to New York. These states may have economies, populations, or societal norms that are more similar to New York and therefore may better meet the parallel trends assumption. In the second, only New York residents are included. The treatment group consists of New York mothers with a youngest child younger than one, and the control group consists of New York mothers with a youngest child somewhere between age 5 and 17. All mothers in this control group last gave birth before New York's paid family leave policy was implemented.

Finally, we create a synthetic control group using the method outlined in Abadie et al. (2010). The synthetic control uses a panel data set by state and year. By weighting the control group across various states, the control matches the characteristics of the treatment group. It also is designed to match the pre-treatment trend of New York. The synthetic control is created using weights from all states that do not have PFML laws. These results should be viewed as another robustness check.

We re-estimate Equation 1 with alternative dependent variables. We consider the self-reported average number of hours worked per week. For mothers who are not working, this variable is non-missing and set equal to 0. The effect of a paid family leave policy on hours

worked, inclusive of zeroes, could be either positive or negative. On one hand, usual hours of worked will mechanically fall if women take longer leaves, working zero hours during their leaves. On the other hand, if more women return to work because of leave, usual hours worked per week will be higher. Additionally, mothers who have returned to the labor force after a paid leave have been shown to work more during the second year of the child's life (Baum and Ruhm 2016). If such behavior also holds in the year after giving birth, we may find a positive effect of the New York policy on usual hours.

We use wage and salary income, measured in logs, as another outcome of interest. We add one to wage and salary income of all sample members, allowing us to include those with no earnings. The coefficient of interest reports the percent change in earnings resulting from the implementation of paid family leave. We expect the coefficient to be positive and significant, reflecting the increased number of women who maintain their employment because of paid family leave. However, we expect no increase in earnings conditional on being employed.

3 Data

We use data from the American Community Survey (ACS) for years 2015 through 2019. Because New York's policy was enacted in January 2018, this gives us three years of pre-treatment observations. We stop in 2019, rather than including data from 2020, because of the effects of the COVID-19 pandemic on labor market activity.

To construct our sample, we select women who have a youngest own child less than one year old at the time of the interview. We will refer to these women as mothers of newborns. The ACS definition of own child includes biological children, step children, and adopted children. Adoption is covered under the PFML law, so inclusion of mothers of adopted children is appropriate for our research question.

Publicly available ACS data do not report month or day of birth, nor do they report month or day of ACS interview. This makes it impossible for us to accurately assign treat-

ment status to mothers of newborns observed in 2018 ACS data. We cannot distinguish between those mothers whose children were born in late 2017, who would not have been eligible for PFL, and mothers whose children were born in 2018 and who were eligible for PFL. For this reason, we exclude 2018 data from some of our analysis.

We restrict the sample to women ages 16 to 50, following the literature on the effects of paid family leave. We drop observations in the states that had implemented paid maternity leave policy prior to New York - California, New Jersey, and Rhode Island - or in states that began offering PFL benefits in 2019 - Washington and Massachusetts (Bipartisan Policy Center 2021). We restrict the sample to those who reported working sometime in the past five years, because women without recent work history are not eligible for PFL benefits. These restrictions result in a sample of 77,991 mothers of newborns, with 5,508 living in New York.

Summary statistics are reported in Table 1. From these means, there is preliminary evidence that New York's policy change is associated with a relative increase in employment. From 2015 to 2017, 69.1% of mothers of newborns were employed in the set of control states and 74.3% of mothers of newborns were employed in New York. Whereas in 2019 the control states only experienced a 2.7 percentage point increase in employment, New York had a 5.8 percentage point increase. This study aims to investigate whether that difference is significant and can be attributed to New York's PFML. Furthermore, the summary statistics support the assumption that the control and treatment groups are similar in make up. The groups in New York pre- and post-2018 and compared to control states closely mirror one another in demographic composition. The only notable difference is that roughly 78% of mothers in New York were born in the U.S. compared to 88% of mothers in control states. This larger difference and other subtle differences will be controlled by the difference-in-difference model.

4 Results

4.1 Employment

Difference-in-difference results, shown in Table 2, indicate that New York's paid family leave increased employment of mothers of newborns. Column 1 uses a control group of mothers of newborns drawn from all states that lacked paid family leave policies during the time period of our analysis. In this case, the introduction of New York's paid family leave is associated with a significant 2.6 percentage point increase in the probability that a mother of a newborn is employed. Column 2 narrows the control group to those living in states that are geographically close to New York. The point estimate is larger in this specification, suggesting that New York's paid family leave increased mothers of newborns' employment rate by 3.6 percentage points. The last column uses a different control group, women in New York with a youngest child ages 5-16.[2] New York's PFL program did not exist when these mothers were pregnant or in the year after they gave birth. Column 3 shows that the probability of employment was 3.4 percentage points higher for New York mothers giving birth after PFL was in place, relative to New York mothers giving birth in earlier years.[3]

These results fall within the range of empirical effects estimated in other studies. Rossin-Slater et al. (2013) find that California's paid leave increased employment of mothers with children younger than one by two to six percent, although this result is not statistically significant. Baum and Ruhm (2016) study how effects vary with time elapsed since birth. They find a general increase in likelihood of employment over time, rising to a statistically significant 15 to 20 percentage point increase after 52 weeks. Our results for New York, averaging across mothers observed anywhere in the first year after giving birth, fall within

[2]Mothers in the treatment group, with children less than one year old, must be between ages 16 and 50. To construct a comparable control group of mothers of older children, we calculate age at last pregnancy by subtracting age of the youngest child from a mother's age at the time of interview. We restrict the sample of control-group women to those whose age of last pregnancy was between ages 16 and 50.

[3]We have restricted the sample to those who have worked at some point in the last five years. If we drop this restriction, results are somewhat larger. We estimate coefficients and standard errors of 0.035 (0.014) using the full set of control states, 0.044 (0.015) using control states close to New York, and 0.040 (0.013) using a control group of New York mothers of older children.

their confidence intervals between 10 to 40 weeks after pregnancy. Although focused on labor force participation rather than employment, Byker (2016) finds a five to eight percentage point increase in the probability of being in the labor force in the six months centered around giving birth.

We have excluded observations from 2018 from the first set of analyses. As discussed above, publicly available ACS data do not include exact date of birth or date of interview. When we observe a mother of a child under one year old in 2018 data, we do not know if the birth occurred before the end of 2017 or after the start of 2018, and we cannot accurately assign these mothers to the control or treatment group. If we include mother of newborns observed in 2018, we would expect that mismeasurement of their treatment status would bias our estimated effect towards zero. We carry out this analysis in panel B of Table 2. As expected, the estimated treatment effect becomes smaller across all specifications. The treatment effect remains significant when the control group is mothers of newborns in states close to New York (column 2), or when the control group is New York mothers of older children (column 3). In both cases, the estimates suggest that PFL increased maternal employment by 2.4 percentage points.

In addition to difference-in-difference analysis, we carry out an event study type of analysis, in which we allow the effect of being in the treated group to vary over time. We expect no significant difference between treated and control groups in years prior to 2018. This serves as an indirect test of the parallel trends assumption. If PFL does increase employment, we might start to see some relative growth in the employment of the treated group in 2018, with further growth in 2019. Figure 1 shows the results of this analysis. In panel a, New York mothers of newborns are compared to mothers of newborns in all other states without PFL. In panel b, the control group is restricted to mothers of newborns in states close to New York. In panel c, the control group is New York mothers with youngest children between the ages of 5 and 16. The pattern is similar in all cases. There is no evidence of a divergence in the employment of treated and control mothers before New York's PFL is available. The

effect of being in the treated group is not different from zero in 2018. The point estimate is larger in 2019, although significantly different from zero only when New York mothers of older children are used as the control group. In this specification, the point estimate suggests that PFL increased the employment of treated mothers by 2.7 percentage points.

The positive effects shown in Table 2 could be due to some combination of more mothers being on maternity leave (employed and not working) in the weeks and months shortly after giving birth, and more mothers having returned to their jobs (employed and working) several months after giving birth. Other papers have considered these outcomes separately, and we do so in Table 3. We would expect to see effects on being employed and not working concentrated in a time period when people are eligible for maternity leave, perhaps in the first three months after giving birth. Thus, we would ideally restrict the sample to mothers of newborns under four months old for this analysis. Because age in months cannot be observed in our data, we cannot split the sample in this way. Pooling across mothers with newborns anywhere between birth and eleven months, panel A of 3 shows that New York's PFL increased the probability of being employed and temporarily not working by 1.7 to 2.2 percentage points. The estimate is significant in two out of three specifications, but insignificant when the control group is mothers of newborns in states close to New York. In panel B, the dependent variable is equal to one if a person is employed and working. If we could narrow in on the basis of the age of the newborn in months, we would expect to see any positive effect on this outcome occurring when children are three months or older. Without an ability to focus on particular months, we find an insignificant effect of New York's PFL on this outcome.

Next we consider the possibility of heterogeneity in the effect of PFL. Results are shown in Table 4, for the specification that compares New York mothers of newborns to New York mothers of children ages 5 to 17.[4] We generally do not find large differences across

[4]We show the results for New York mothers because confidence intervals are generally smallest in this specification. If we instead use a control group of mothers of newborns drawn from other states, either geographically close to New York or all states without PFL policies, there is still significant overlap in the estimates for different demographic groups, with large confidence intervals around many of the point

demographic groups. Point estimates are of similar magnitude for married and for unmarried mothers, although statistically significant only for married mothers. For this group, we estimate that PFL increased employment by 3.4 percentage points. Likewise, we find very similar point estimates for mothers of different education levels, with a statistically significant estimate (of 3.3 percentage points) only for mothers who have completed some college or more. The estimated effect for white mothers is a statistically significant 3.5 percentage points. Point estimates for Black, Hispanic, and Asian mothers are not statistically different from zero, but all have wide confidence intervals. When we pool these mothers into one composite non-white group, we estimate a significant 3.2 percentage point employment effect of PFL. Although not shown in the table, we have also considered heterogeneity by whether or not the newborn is a mother's first child. Results vary with the choice of control group. When the control group is New York mothers of older children, point estimates are very similar for first-time mothers and for other mothers. With the other two control groups, point estimates are smaller and not significant for first-time mothers.

Previous studies note that federal unpaid leave under the FMLA Act of 1993 benefited white, married, and more educated mothers (Rossin-Slater et al. 2013, Byker 2016, Rossin-Slater 2017) For paid leave, we may expect non-white, less educated groups to benefit most because the change in resources during leave taking has a greater impact. In fact, Rossin-Slater et al. (2013) also report results for leave-taking across marital status, race, and education. Though largely imprecise due to sample size, they find that California's paid leave had a greater impact on the leave-taking of less educated, non-white groups. For example, Black and Hispanic mothers had increases in leave taking of 10.6 and 6.2 percentage points, respectively, compared to 4 percentage points for white, non-Hispanic mothers. Less-educated mothers had larger increases in leave taking compared to more-educated mothers.

However, the expected results for employment changes are more ambiguous. On one hand, women with higher socio-economic status may be more likely to leave the labor force

estimates.

entirely to become a caregiver and therefore paid leave has a greater effect on their labor force retention. On the other hand, women with lower socio-economic status may have lacked access to childcare and needed to leave employment to care for newborns. Byker (2016) finds that increases to labor force participation in New Jersey and California are exclusively driven by women with less than a bachelor's degree. She does not split results by race or marital status. Future research should continue to study the heterogeneous results of PFML policy to identify its effects on individuals with varying socio-ecoonmic status.

Fathers can take PFL in New York, provided they meet eligibility requirements. But because few new fathers drop out of employment in the absence of PFL, there is not much reason to expect that the availability of PFL would increase their employment. We show the effects of New York's PFL on fathers' employment in Table 5. In this analysis, as we did for women, we construct a group of treated fathers who are living in New York, and who have an own child less than one year old at the time of the ACS interview. We try one specification in which the control group is fathers of newborns living in all other states without PFL policies; one in which the control group is fathers of newborns living in states close to New York; and one in which the control group is New York fathers of older children. There is no evidence that the policy increased the employment of new fathers. Across the three specifications, the coefficient of interest is close to zero, with a confidence interval that excludes the point estimates for women. Consistently high rates of employment for fathers in our sample may be limiting the scope for any increase in employment. Employment rates for these men in the pre-period are near 94%. Previous evidence for fathers likewise indicates little effect of paid leave. Baum and Ruhm (2016) find that fathers have modest increases in leave-taking in California, but their leaves are very short and that only about 20% of fathers take leave. They do not study employment or work changes for fathers because they anticipate no effect.

This further reinforces that the results found for mothers of newborns are causally linked to the creation of PFML. Because men do not exhibit similar or any increases in employment

and results are robust to women with older children in New York, the results previously shown for mothers of newborns are probably not due to some other trend affecting the labor market for new parents in New York.

4.2 Other Measures of Labor Market Activity

The availability of PFL may influence mothers' labor supply decisions on the intensive as well as the extensive margin. Leave may allow mothers to maintain employment in previously-held jobs, rather than dropping out of the labor force around the time of birth and then having to find a new job once ready to return. The net result could be that fewer weeks out of the year are spent searching for employment, while more are spent working. Additionally, PFL might help keep new mothers in relatively "good" jobs, with higher hourly pay.

Results showing the impact of New York's PFL on mothers' usual hours worked per week and on real annual wage income are shown in Table 6. Both outcomes are measured for the whole sample of women, not conditional on being employed. Usual hours is set equal to zero for mothers who are not working. In considering annual wage income, we add one to the recorded value before taking the ln, so that women with zero wage income can be included in the analysis. Panel a of Table 6 shows that New York's PFL policy increases usual hours worked by about 1.1 to 1.3 hours per week. The effect is statistically significant in all three specifications. Panel b of 6 shows that mothers of newborns experienced increases in income of 1.6 to 2.9 percent. Results, however, are only significant with a control group of states close to New York.

When conditioning the sample based on employment, the point estimates for both usual hours worked and income are close to zero and insignificant. This leads to the understanding that the changes in Table 6 reflect increases in employment retention. Other studies have found changes to hours worked and income in the medium term. For example, Rossin-Slater et al. (2013) find usual weekly hours for employed moms of 1 to 3 year olds increased by 10

to 17 percentage points and wage income increase by a similar amount. Later in life income and hours worked increases could be due to employment retention because mothers have higher job continuity and therefore more promotions or raises. Future studies in New York should continue to examine the effects of PFML on hours worked and income across various years after giving birth and with different conditions on employment.

5 Synthetic Control Results

The event study and difference-in-difference models are supported by the use of a synthetic control model. Following the process from Abadie et al. (2010), we use a weighted average of control states to create a control group that mirrors the attributes of New York. By construction, the synthetic control creates pre-treatment trends in employment that mirror the trends of New York. By controlling for employment trends, the synthetic comparison group may provide a better proxy for what would have occurred in New York in the absence of the policy.

This synthetic control uses a weighted average from all non-PFML states with relatively even weights pulling from all 44 control states. The three most represented states are South Dakota, Maine, and Montana which represent 6.8%, 5.4%, and 3.9% of the synthetic control. The lowest proportion comes from Vermont at 1%. The vast majority of the states represent between 1.5% and 2.5% of the synthetic control. The predictor balances are also reported in Table 7 for New York and the synthetic control. Again, there are different levels for race and education but the control meets the estimating assumptions that the pre-treatment trend matches that of New York.

Figure 2 reports the results of the synthetic control compared to the actual employment rates of mothers of newborns in New York. In 2015 through 2017, the employment rates for new mothers in New York and the synthetic control follow nearly identical trends. When New York enacts paid family leave in 2018, actual employment rates are just less than 2

percent greater than the control. In 2019, actual employment rates rise to roughly 6 percent greater than the control. As expected, there is a small increase in 2018 likely from the fact that some mothers observed in this year were eligible for paid leave. Results in 2019 are larger than the event study results. This may occur because varying pre-existing trends in the event study biased estimates towards 0 whereas the synthetic control accounts for these trends by design. These results support the earlier findings that paid family leave promotes higher employment retention for new mothers after giving birth or adopting.

6 Conclusion

Using data from the ACS, we created a difference-in-difference model to estimate the effects of PFML on mothers of newborns in New York. The difference-in-difference models find consistent results of a 2.6 to 3.6 percentage point increase in employment for mothers of newborns. The event study finds results in the same range, although only significant with one of the control groups. They synthetic control approach finds a much larger increase of around 6 percentage points.

Through the work of robustness tests and falsification exercises, we find that these increases are not likely to be due to other policy changes or general economic trends in New York. The changes in 2019 did not affect mothers of newborns in others states, fathers of newborns, or mothers with children ages 5-16. While only suggestive, results by sub-sample also show that New York's paid maternity leave likely had a similar effect across marital status, education, and white and non-white groups.

This paper contributes to existing literature because it studies the effects of PFML in New York. Almost no research has focused on paid leave laws outside of California, which being enacted more recently may have differing effects. That said, this paper makes use of only one year of post treatment data. Future research should continue to study the effects of PFML in New York to estimate whether the policy continues to increase job retention for new mothers

in years after 2019. This research should also examine the effects of PFML on mothers in the years after they take their leave. Ideally, future research would examine whether there are long term earnings or hours worked increases for new mothers or if children whose mothers received paid leave have health, education, or economic benefits. More research and data would provide a stronger explanation to our findings.

Our results have large policy implications as they demonstrate the ability of paid family leave to have positive returns. In 2019, 95,271 mothers of newborns filed claims for paid leave. On average they claimed seven weeks of leave and received $3,731, in total costing roughly $354 million (New York State Department of Financial Services 2021). This cost taxpayers roughly $30 dollars a year but may have kept as many as 10,000 mothers employed. Because these mothers have higher job continuity, PFML may create numerous benefits. These women would have fewer gaps in employment history and, later in their careers, may earn salaries higher than they would have if they took time off. This could, in turn, decrease the gender pay gap. Our analysis of employment benefits also does not account for increased health and well-being for the mother and child or the implied utility from being able to take maternity leave. While increases to mothers' earnings are already high in the first year, the benefits of PFML, most likely, continue to grow with time.

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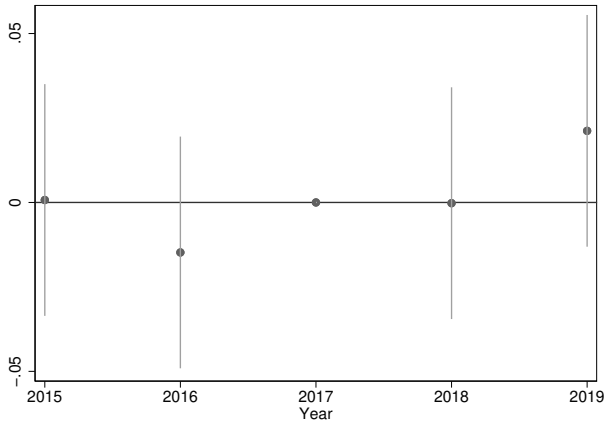
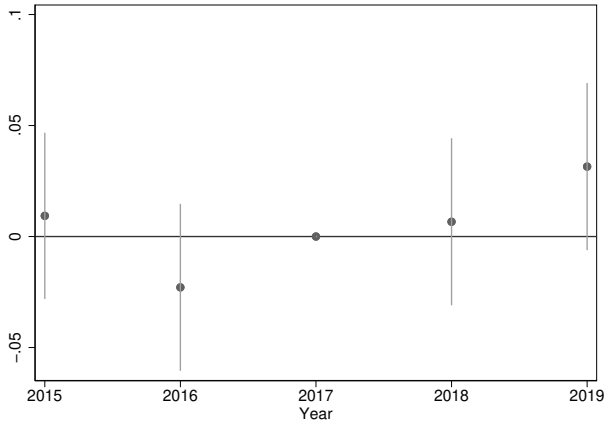
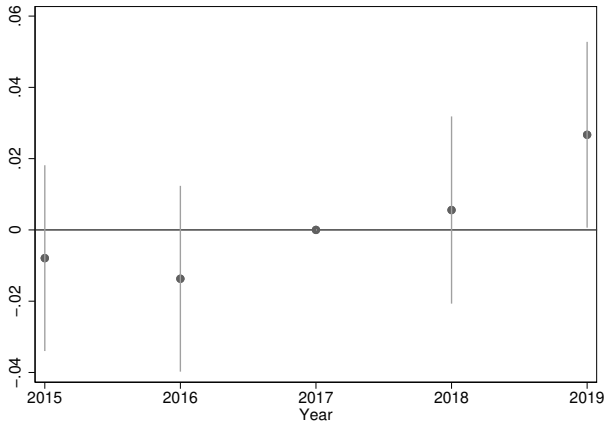
Figure 1: Event Study Estimates of Employment Effects



(a) Full Sample



(b) Close to New York



(c) NY Moms of Older Kids

Figure 2: Results of Synthetic Control Analysis

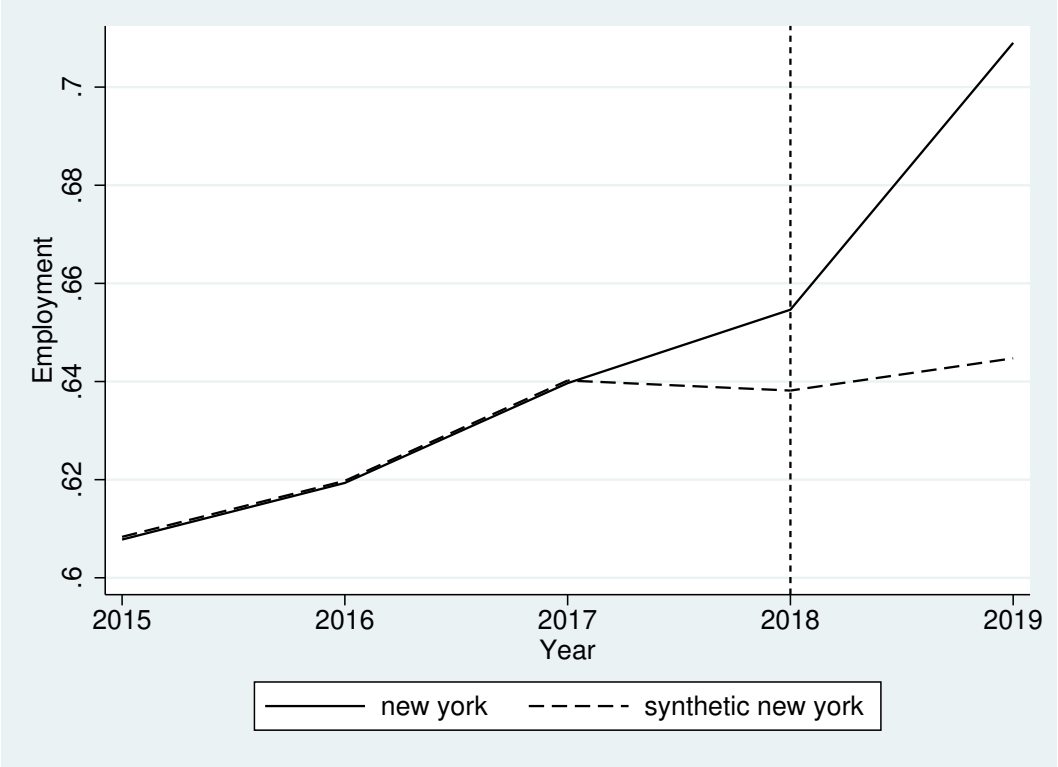


Table 1: Summary Statistics

	New York		Control States	
	Pre	Post	Pre	Post
Employed	0.743	0.801	0.691	0.718
Employed, Not Working	0.118	0.135	0.079	0.079
Employed and Working	0.625	0.666	0.612	0.640
Usual Hours Worked	29.972	31.732	29.029	29.447
Age	31.363	31.919	29.777	30.219
Black	0.094	0.080	0.101	0.091
Hispanic	0.139	0.119	0.130	0.129
Asian	0.086	0.093	0.038	0.038
Other Race	0.026	0.030	0.036	0.037
Married	0.733	0.775	0.721	0.747
High School Grad	0.157	0.151	0.184	0.180
Some College	0.257	0.236	0.329	0.311
College Grad	0.251	0.257	0.260	0.276
More than College	0.270	0.307	0.161	0.179
Born in US	0.773	0.793	0.883	0.886
N of Children	2.008	1.967	2.003	2.013
Observations	4115	1393	55051	17432

The sample is restricted to mothers, ages 16 to 50, who are living with an own child less than one year old. Control states are those other than California, Massachusetts, New Jersey, Rhode Island, or Washington. The pre period includes years 2015-2017 and the post period is 2019.

Table 2: Effects of New York Paid Family Leave on Mothers' Employment

	All States	States Close to New York	NY Mothers Of Older Kids
A. Excluding 2018			
NY*Post	0.026*	0.036**	
	(0.014)	(0.016)	
Treated*Post			0.034***
			(0.011)
N	77,991	19,020	43,017
B. Including 2018			
NY*Post	0.015	0.024*	
	(0.011)	(0.012)	
Treated*Post			0.024***
			(0.009)
N	97,625	23,729	53,778

Table 3: Alternative Dependent Variables

	All States	States Close to New York	NY Mothers Of Older Kids
A. Dependent Variable = Employed, Not Working			
NY*Post	0.017*	0.016	
	(0.009)	(0.011)	
Treated*Post			0.022***
			(0.006)
N	77,991	19,020	43,017
B. Dependent Variable = Employed And Working			
NY*Post	0.009	0.020	
	(0.015)	(0.017)	
Treated*Post			0.012
			(0.012)
N	77,991	19,020	43,017

Table 4: Heterogeneity in Employment Effects

	A. By Race				
	White	Black	Hispanic	Asian	Non-White
Treated*Post	0.035***	0.017	0.045	-0.0003	0.032*
	(0.013)	(0.037)	(0.032)	(0.036)	(0.019)
N	26,376	4,962	6,736	3,877	16,641
Mean of Dep Var, Pre-Period, Treated Group	0.744	0.786	0.703	0.764	0.741

	B. By Marital Status		C. By Education	
	Married	Unmarried	HS Degree Or Less	Some College Or More
Treated*Post	0.034***	0.032	0.030	0.033***
	(0.012)	(0.022)	(0.027)	(0.012)
N	29,794	13,223	10,858	32,159
Mean of Dep Var, Pre-Period, Treated Group	0.747	0.731	0.733	0.774

The sample is restricted to mothers living in New York. Treated mothers are those with youngest children under age 1. Control mothers are those with youngest children ages 5 to 16.

Table 5: Effects of New York Paid Family Leave on Fathers' Employment

	All States	States Close to New York	NY Fathers Of Older Kids
NY*Post	-0.007	-0.007	
	(0.007)	(0.008)	
Treated*Post			-0.005
			(0.008)
N	74,167	18,024	39,177

Table 6: Effects of New York Paid Family Leave on Other Measures of Labor Market Activity

	All States	States Close to New York	NY Mothers Of Older Kids
A. Dep Var = Usual Hours Worked			
NY*Post	1.100**	1.275**	
	(0.530)	(0.591)	
Treated*Post			1.286***
			(0.468)
N	77,991	19,020	43,017
B. Dep Var = ln(Wage Income + 1)			
NY*Post	0.205	0.291**	
	(0.129)	(0.143)	
Treated*Post			0.162
			(0.114)
N	77,991	19,020	43,017
C. Dep Var = In Labor Force			
NY*Post	0.021	0.028*	
	(0.014)	(0.015)	
Treated*Post			0.025**
			(0.010)
N	77,991	19,020	43,017

7 Appendix A: Synthetic Control

Table 7: Predictor Balance

	Treated	Synthetic
Age	31.205	29.730
White	0.624	0.729
Black	0.095	0.076
Hispanic	0.153	0.095
Asian	0.100	0.038
Other Race	0.027	0.063
Married	0.737	0.728
Less Than High School	0.098	0.083
High School Grad	0.184	0.195
Some College	0.246	0.325
College Grad	0.235	0.252
More than College	0.237	0.145
Born in US	0.736	0.896
N of Children	2.150	2.116
Employment(2015)	0.607	0.608
Employment(2016)	0.619	0.620
Employment(2017)	0.639	0.640