

Time On with Baby and Time Off from Work

Maya Rossin-Slater and Jenna Stearns

Summary

Compared to unpaid leave, paid family leave may better help working parents balance the competing needs of job and family early in a child's life, among other advantages. Yet the United States remains one of only two countries in the world without a statutory national paid maternity leave policy, and one of the only high-income countries that doesn't provide access to paid paternity leave for new fathers at the federal level.

In theory, Maya Rossin-Slater and Jenna Stearns write, paid leave can benefit families in two ways: by changing the amount of income available in the household (and the amount of resources available for the child), and by increasing the amount of time parents spend with their children. Despite the lack of paid leave at the federal level, several US states have their own paid family leave programs, all of which provide partial wage replacement during leave to care for a newborn or newly adopted child, and aim to cover a broad segment of the workforce through minimal eligibility requirements. Rossin-Slater and Stearns review research about the effects of these state-level programs, as well as paid leave programs in other countries.

The authors find that paid family leave has a number of benefits. For one, compared to unpaid leave, paid family leave increases leave-taking rates and leave duration, especially among disadvantaged parents. Paid leave programs that range from a few months to up to a year in length also appear to improve both infants' health and mothers' outcomes in the job market. At the same time, the research finds that existing paid leave programs have minimal impacts on businesses, suggesting that these programs confer benefits to workers and their families at little to no cost to their employers.

Finally, because rising economic inequality in the United States is in part driven by disparities in early childhood, the authors argue that paid family leave may be one way to level the playing field for children from all backgrounds and help improve intergenerational mobility.

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Maya Rossin-Slater is an assistant professor of health policy at Stanford University School of Medicine, a faculty fellow at the Stanford Institute for Economic Policy Research, and a faculty research fellow at the National Bureau of Economic Research. Jenna Stearns is an assistant professor of economics at the University of California, Davis.

In the United States today, most parents of young children work outside the home. In 2018, over 71 percent of mothers and 93 percent of fathers with children under age 18 were in the labor force, and more than half of all mothers with infants were employed. Despite the rise in the share of working parents in recent decades, paid family leave and other family-friendly benefits have lagged those of other countries. Perhaps unsurprisingly, most working parents report that balancing work and family responsibilities is a significant challenge.¹

Maternity and family leave policies provide time off from work so women can prepare for and recover from childbirth, and so both mothers and fathers can care for their newborn or newly adopted children. These policies aim to help new parents balance work and family responsibilities, with the goal of improving the family's wellbeing and promoting career continuity. Because women typically take on more caregiving responsibilities than men, proponents of family leave argue that such policies may also reduce gender inequities both in the labor market and at home.

The United States is one of only two countries in the world without a statutory national paid maternity leave policy (the other is Papua New Guinea). It's also one of the only high-income countries that doesn't provide access to paid paternity leave for new fathers, parental leave that can be taken by both new mothers and fathers, or family leave that can be taken to care for ill family members in addition to new children. Paid leave policies vary substantially across countries on several key dimensions, including duration,

benefit amount, whether they include job protection (that is, a legal clause that ensures workers can return to their previous jobs following leave), eligibility requirements, and financing. However, the United States is clearly an outlier in its lack of access to paid leave at the national level. The federal 1993 Family and Medical Leave Act (FMLA) allows some workers to take 12 weeks of job-protected unpaid leave, but only about 60 percent of workers are eligible for this program.² Although we have no paid leave at the federal level, eight states and the District of Columbia have passed their own paid family leave legislation. In other states, the provision of leave is left to the discretion of individual employers. Employer-provided coverage is uncommon—only about 18 percent of private sector workers have access to employer-provided paid family leave.³

Paid family leave not only helps working parents balance the competing needs of job and family early in a child's life, it can also affect the health and wellbeing of parents and children alike. And paid family leave programs can bolster families' economic security through their effects on the parents' labor market outcomes. In this article, we first describe the current state of access to paid and unpaid leave in the United States; we then discuss what we know about its effects on families. The evidence suggests that paid family leave improves child health and development and maternal wellbeing, while causing minimal harm to employers. Therefore, a national paid family leave program may be an effective tool for improving early-life outcomes for children from all backgrounds, curbing the rise in inequality and boosting long-term economic growth and stability.

Paid Family Leave in the United States

Although the United States has no national paid family leave policy, paid leave is available to new parents in select states under two types of programs. Birth mothers in five states (California, Hawaii, New Jersey, New York, and Rhode Island) qualify for six to 10 weeks of paid leave under their state's temporary disability insurance (TDI) system. This leave has been available since the 1978 Pregnancy Discrimination Act mandated that states with TDI programs cover pregnancy as a disability, allowing women to take leave to prepare for and recover from childbirth.

More recently, several states have enacted their own paid family leave (PFL) programs. California was the first to do so, in 2004, followed by New Jersey (2009), Rhode Island (2014), New York (2018), and Washington and the District of Columbia (2020). Massachusetts, Connecticut, and Oregon recently passed laws to start providing paid family leave benefits in 2021, 2022, and 2023, respectively. At least 16 other states have introduced similar legislation.

These state-level PFL laws all provide partial wage replacement during leave to care for a newborn or newly adopted child, and aim to cover a broad segment of the workforce through minimal eligibility requirements. But the policies differ on several key dimensions, including the benefit duration, the wage replacement rate, whether job protection is included, the scope of use, and the funding mechanism (see table 1).

In all states, PFL benefits are paid as a percentage of a worker's average weekly earnings calculated over a base period, up to a weekly maximum. Both the wage replacement rate and the maximum benefit

vary significantly across states. Wage replacement rates range from 50 to 100 percent, while the maximum benefit amount ranges from \$667 to \$1,300 per week. PFL benefit duration also varies substantially—from four to 12 weeks, depending on the state. And while some states explicitly require that employers allow workers to return to the same jobs after their leave has ended, California, New Jersey, and the District of Columbia do not. Workers in these places can rely on job protection through the FMLA, but only if they're eligible for it.

All state PFL programs provide leave for the arrival of a new child through birth, adoption, or foster care, as well as leave to care for close family members with serious health conditions. The programs in Massachusetts and Washington also cover leaves related to the military deployment of a family member, and New Jersey and Oregon include provisions to cover victims of domestic violence and their caregivers. In this article, however, we focus specifically on parental leave.

Finally, most PFL programs are funded entirely through employee payroll taxes, though the District of Columbia imposes a payroll tax on employers, and the programs in Oregon and Washington are jointly financed by employers and employees. The payroll tax rate is between 0.1 and 1 percent of wages (up to an annual cap) across states.

Despite state differences in program design, most PFL policies are too recent to study, so we don't yet have compelling evidence on the causal effects of policy variations such as the wage replacement rate or leave duration. Most of the evidence on the effects of PFL comes from California, whose first-in-the-nation PFL policy took effect 15 years ago,

Table 1. State Paid Family Leave Policies

State	Effective Date	2020 Maxium Weekly Benefit	2020 Wage Replacement Rate	2020 Maximum Weeks of Leave	Job Protection	Eligibility Criterion
California	2004	\$1,300	60%–70%	8	No	Earned at least \$300 in taxable income over the base period.
New Jersey	2009	\$881	85%	12	No	Earned at least \$200 weekly for 20 weeks or \$10,000 in the year before taking leave.
Rhode Island	2014	\$867	60%	4	Yes	Earned at least \$12,000 in base period wages.
New York	2018	\$840.70	60%	10	Yes	Employed full-time for 26 weeks or part-time for 175 days.
Washington	2020	\$1,000	90%	12	Yes	Worked at least 820 hours in the year before taking a leave.
District of	July 2020	\$1,000	90%	8	No	Has been a covered employee (spending more than 50% of work time in DC) for at least one week in the year preceding the qualifying event.
Massachusetts	2021	\$850	80% of earnings equal to or less than 50% of the state average weekly wage and 50% of earnings in excess of 50%.	12	Yes	Received wages during the base period that total 30 times the weekly unemployment insurance benefit rate.
Connecticut	2022	\$780	95% of up to 40 times the minimum hourly wage and 60% of earnings above this amount	12	Yes	Worked for same employer for at least 12 weeks and earned \$2,325 during the base period.

Table 1 continued

State	Effective Date	2020 Maximum Weekly Benefit	2020 Wage Replacement Rate	2020 Maximum Weeks of Leave	Job Protection	Eligibility Criterion
Oregon	2023	\$1,254	100% of earnings for those earning less than 65% of the state average weekly wage; for those earning more, 65% of the state average weekly wage plus 50% of the amount by which the employee’s average weekly wage exceeds the state average weekly wage.	12	Yes	Received \$1,000 in wages during the base year.

allowing us ample time to study its short- and medium-term effects.

Theoretical Effects of Paid Family Leave

How might PFL policies affect health and employment? Paid leave can benefit families in two ways: by changing the amount of income available in the household, and by increasing the amount of time parents spend with their children. For some parents who would take unpaid time off in the absence of a paid leave policy, PFL’s main benefit is the increase in income. Additional income can translate into additional resources for the child, which may improve health as well as cognitive and socioemotional outcomes.

For families who either couldn’t afford unpaid time off or would otherwise choose not to take it, PFL increases the amount of

time parents can spend with new children. Additional time spent with an infant may affect health through several channels. First, if mothers don’t return to work immediately, they can breastfeed longer. Breastfeeding is correlated with reduced risk of health problems in children, including sudden infant death syndrome, obesity, diabetes, and asthma; it’s also associated with a lower risk of breast and ovarian cancer in mothers.⁴ More time to spend with infants during PFL may affect health in other ways as well. For example, if parents have more time to visit the doctor, they may be more likely to stick to recommended immunization schedules and seek more timely or consistent medical care.

By increasing financial or job security, PFL may lower mothers’ stress during pregnancy; such stress can lead to child health problems

at birth and later in life. PFL also gives mothers more time to physically recover from childbirth and to improve their mental health in the postpartum period.

Fathers' use of PFL may increase gender equity in the household and the labor market. When fathers take time off to engage in childcare and housework, mothers can return to work sooner than they otherwise would and invest more in their careers. Fathers who develop childcare skills early may also continue to invest more time in childcare even after the leave ends.⁵

PFL's effects on parents' work outcomes are theoretically ambiguous.⁶ With PFL, parents who would otherwise not take leave will spend more time away from work. And more time away from work can hinder their careers—their earnings may grow more slowly, and they may be less likely to be promoted. On the other hand, PFL may cause parents who would have quit their jobs to remain more attached to the labor force. Particularly when job protection is available, parents may find it easier to return to work after their leave ends. This effect can lead to higher employment rates not only in the period around the birth, but in the longer term as well.

Of course, when paid leave doesn't fully replace lost wages, parents face a tradeoff between time with the baby and income. Recently, researchers who examined the relationship between California's PFL program and mothers' poverty status found that mothers of one-year-olds are significantly less likely to be living in poverty if they have access to PFL at the time of birth.⁷ However, the research also suggests that due to the reduced earnings, PFL may increase the likelihood that mothers of infants live in

poverty. Paid leave can also affect eligibility for other benefits such as Temporary Assistance for Needy Families or the Supplemental Nutrition Assistance Program (SNAP, formerly the Food Stamp Program). Households eligible for wage subsidies such as the Earned Income Tax Credit may be less likely to use PFL because the loss of income when on PFL would lower the amount of tax credit they'd get.

To the extent that PFL affects employment decisions, it's also important to consider the availability of care for infants when their mothers return to work. Infant childcare is expensive in the United States, and its quality varies. Most infant care options are informal arrangements rather than child care centers. Such care isn't regulated, and caregivers often have little formal training in early childhood education. Informal care is also more likely to be unstable, which is an additional source of stress for working parents. Thus parents' decisions to take PFL may be influenced by the type of infant care they can find. (See Ajay Chaudry and Heather Sandstrom's article in this issue for more about research on childcare in the United States.⁸)

Availability and Take-Up

PFL affects children's and parents' outcomes only if parents use it. In this section, we review the research on leave take-up in the United States. Throughout this chapter, we limit our discussion to studies that use *natural experiment* research designs, which attempt to identify causal effects of leave programs using variation in access to leave from various policy changes. This is important because whether or not parents use leave isn't randomly assigned, so merely comparing the outcomes of families that do

and don't use leave can't separate the causal impacts of the leave itself from the many other possible differences between these families.

Research shows that US parents value being able to take both paid and unpaid leave. In earlier studies that focused on the impacts of the 1993 FMLA, which offers only unpaid leave, researchers examined the change in leave-taking outcomes of individuals living in states with no leave provisions before the FMLA. As a comparison group, they used individuals in states that already had unpaid leave provisions. These *difference-in-difference* analyses generated consistent evidence that access to unpaid, job-protected leave increased leave-taking around the time of a birth.⁹ Specifically, new mothers were 13 to 20 percent more likely to be on leave if they were covered by leave legislation.

The effects of paid leave policies on leave-taking are estimated to be even larger. Researchers have studied the introduction of California's PFL program using similar difference-in-difference methods. They examined changes in the leave-taking rate for new parents before and after the state implemented PFL, compared to the change in leave-taking among individuals unaffected by the policy (such as new parents in states without PFL, or parents of older children who are ineligible to make a PFL claim for purposes of bonding with a new child). They found that the introduction of California's PFL program substantially increased leave-taking rates for both mothers and fathers of infants.¹⁰ The policy had the largest impacts on relatively disadvantaged mothers, suggesting that access to paid leave may reduce socioeconomic disparities in leave use. Furthermore, in households where both

parents work, PFL increased the amount of time both parents were on leave together, as well as the amount of time fathers were on leave while the mother returned to work. This evidence suggests that PFL increases the total amount of time a parent stays home with a child more than a policy providing maternity leave alone would.

However, not all parents use the PFL benefits they're eligible for. For example, only 47 percent of employed new mothers and 12 percent of employed new fathers made a PFL claim in California in 2014.¹¹ What are the barriers to take-up? A recent report indicates that the amount of wage replacement isn't high enough for some mothers to take leave.¹² Information barriers and the lack of job protection may also restrict use.¹³ In states without explicit job protection built into their PFL policy, only about 60 percent of workers have access to job protection through the FMLA. Even a decade after PFL was introduced in California, awareness of the policy was still low. Also, many parents have trouble finding clear information about the program benefits and eligibility requirements, or find it difficult to submit a claim. These barriers may be especially high for workers in low-wage jobs, who are less likely to be eligible for job protection and to be able to afford to take partially paid leave.¹⁴ Peer effects (that is, whether one's co-workers, friends, or family members take leave) and the workplace culture may also affect program take-up, suggesting that both policy and non-policy factors can influence PFL take-up rates.¹⁵

Finally, PFL may affect fertility decisions. There's some evidence that the introduction of PFL may have changed the timing of pregnancies or increased the fertility rate in California.¹⁶ In general, however, evidence

across countries about whether these policies increase birth rates is mixed.¹⁷

PFL and Health

The empirical evidence on the effects of family leave in the United States suggests that both paid and unpaid leave can improve children's health, at least in the short term. Maya Rossin-Slater, a co-author of this article, examined how the FMLA affected infant health. She used a *triple-difference* research design, in which she compared counties with relatively high and low female labor force participation rates, in states with and without pre-FMLA unpaid leave provisions, both before and after the FMLA. The study found that the FMLA led to a small increase in average birth weight and a reduction in infant mortality.¹⁸ The impacts were concentrated entirely among children of highly educated and married mothers, who are the most likely to be eligible for FMLA leave and to be able to afford to take unpaid time off. Thus, access to unpaid leave may actually exacerbate socioeconomic disparities in infant health.

Paid and unpaid leave can improve children's health, at least in the short term.

Studies show that paid leave also has important effects on children's short-term health outcomes. Jenna Stearns, the other author of this article, studied the impacts of the original paid maternity leave provisions mandated by the 1978 Pregnancy Discrimination Act in five states with TDI systems. She compared the outcomes of children born in these states before and

after the law, relative to the change in outcomes in comparison states without TDI systems. Stearns found that paid maternity leave reduced the incidence of low birth weight (that is, less than 2,500 grams) by 3 percent and the likelihood of early-term birth (at 37 to 38 weeks of gestation) by almost 7 percent. In contrast to the effects of unpaid leave, these impacts were largest among disadvantaged black and unmarried mothers. This research implies that paid and unpaid leave policies effectively target different populations, and that wage replacement may be an important way to reduce inequality in access to and use of leave benefits.

Recent evidence suggests that California's PFL program led to improvements in other measures of infant health as well. PFL is associated with increased breastfeeding rates three to nine months after the birth of a child, which is important because breastfeeding may improve infant nutrition and strengthen the immune system.¹⁹ Using data from the National Immunization Survey, a new working paper shows that PFL reduced late vaccinations in California, with stronger effects for families below the poverty line.²⁰ Another study suggests that PFL also reduced hospitalizations for infants due to avoidable infections and illnesses.²¹ The study's authors argue that the decline in admissions is due to causes that can be affected by increased parental care (versus outside childcare) and increased breastfeeding; they find no change in hospitalizations for reasons unlikely to be affected by the existence of parental leave. And another study supports these findings, showing that PFL improved parent-reported measures of overall infant health.²²

Some evidence suggests that PFL is associated with improvements in mothers' mental health.²³ A recent study analyzed data on several measures of mental health from two survey data sets and found that California's PFL improved self-reported maternal mental health. However, the strength of the results depended on the empirical model that the researchers used, and which states were included in the analysis as controls.

Do improvements in child health persist over time? Although PFL laws in the United States are too recent to study the impacts into adulthood, we have some evidence on the effects of California's PFL on measures of child health in kindergarten. Using data from the Early Childhood Longitudinal Study, a recent study found that PFL was associated with lower rates of being overweight, reductions in the probability of being diagnosed with attention deficit/hyperactivity disorder, and fewer hearing problems.²⁴ These effects were driven by children from less advantaged backgrounds, and the outcomes are associated with benefits from breastfeeding. Other recent research found that PFL also increased the time mothers spent in childcare activities, suggesting that improvements in childhood health may be driven by both physiology and behavior.²⁵ Another possible cause for the larger effects among more disadvantaged families is that when parents don't have the option to take paid leave, their infants are more likely to experience lower-quality nonparental care.²⁶

Though we need more research to understand the long-term consequences of PFL in the United States, current evidence suggests that introducing short periods of paid and unpaid leave can improve children's health in both the short and medium term.

PFL and the Labor Market

Many researchers have explored the relationship between leave in the United States, both paid and unpaid, and mothers' short- and longer-term labor market outcomes. Being able to take relatively short periods of unpaid leave enables women to return to work after childbirth, with minimal detectable impacts on their labor market outcomes later in life. By exploiting variation in the timing of the FMLA's passage and that of earlier state-level unpaid leave laws, researchers have shown that being able to take job-protected unpaid leave increases the probability that mothers will return to the jobs they held before childbirth.²⁷ However, they've found no evidence that unpaid leave has significant positive or negative impacts on women's longer-term employment or wages.²⁸

Other researchers have focused on the labor market consequences of California's PFL program. Studies that used survey data to compare mothers' outcomes in California before and after PFL to the difference among mothers in other states without PFL have found that one year after childbirth, mothers who had access to six weeks of paid leave were more likely to be employed and were working more hours, on average.²⁹ But a word of caution is in order: a recent working paper that used administrative tax records data to compare California mothers who gave birth in the first quarter of 2004 (before PFL was available) to those who gave birth in the third quarter of 2004 (immediately after PFL became available), relative to the analogous difference in other years without a policy change, found that California's PFL had no impact or even small negative impacts on mothers' long-term employment and wages.³⁰ The discrepancy between these studies may reflect the fact that different research designs

are able to identify effects for different population subgroups (for example, the study using tax records identified effects for women who were immediate users of the policy right after it was implemented).

Because most of the evidence on PFL's effects in the United States comes from studying California's 2004 policy, it's difficult to say how much that policy's particular features (such as the duration of benefits or the wage replacement rate) may drive the results. Recent work co-authored by Maya Rossin-Slater sheds some light on the effects of the replacement rate, at least for high-earning women.³¹ Examining women whose earnings were high enough that they were eligible for almost the maximum weekly benefit in California, the authors analyzed administrative data to show that higher benefit amounts don't affect either the duration of leave or the probability of making a PFL claim. However, they found some evidence that higher benefit amounts may improve job continuity by increasing the likelihood that mothers return to the jobs they held before childbirth.

To the best of our knowledge, no studies have identified the effects of PFL on US fathers' labor market outcomes. This may stem from the fact that fathers take PFL relatively rarely, which implies that any labor market impacts are likely to be small when estimated across the entire population.

When considering how PFL might affect parents' labor market outcomes, it's also important to examine the employers' role. If PFL imposes large costs on employers, they may react by making different hiring decisions or creating an environment less conducive to leave-taking. Even if employers don't have to directly fund PFL, they may

face indirect costs when their workers take leave: they need to hire replacement workers, reassign work tasks across employees, and coordinate employee schedules. On the flip side, employers might save money if PFL reduces turnover rates by making it easier for new parents to keep their jobs. PFL might also improve worker morale, potentially affecting productivity.

The evidence on how PFL affects employers is quite limited. Several surveys of firms in California and New Jersey have found that most employers report either positive or neutral effects on employee productivity, morale, and costs.³² Though these studies haven't been able to compare changes in outcomes before and after PFL legislation was passed, the results don't offer much support for the idea that PFL imposes a large burden on firms and co-workers.

We aren't aware of any peer-reviewed studies that identify causal impacts of PFL on US employer outcomes. However, for a report prepared for the US Department of Labor, researchers surveyed small and medium-sized food service and manufacturing firms in Rhode Island, Connecticut, and Massachusetts both before and after Rhode Island's PFL law was instituted, in order to study the effects of PFL on these employers using a difference-in-difference framework.³³ They found that PFL had no significant impacts on employee turnover rates or employee productivity. However, small sample sizes limited the conclusions that could be drawn.

Another report, this one prepared for the California Employment Development Department, used administrative data on nearly all California employers to study how employee PFL claim rates affect employer

outcomes.³⁴ Examining within-employer changes in outcomes, the authors found no evidence that firms' turnover or wage costs increase when claim rates rise. But the analysis couldn't account for the fact that there may be significant differences in the costs of PFL for different firms, which could affect claim rates. In a recent working paper using the same administrative data from California, researchers found that take-up of paid leave was substantially higher in firms that pay relatively higher wages to workers with similar skills.³⁵ The authors argue that better-paying firms may have cultures that are more conducive to leave-taking, suggesting that if we wish to increase use of leave more broadly, firms' behavior and norms may need to change.

Though the evidence so far suggests that existing state-level PFL programs place only a small burden on employers, we need more research to solidify these conclusions. In particular, we need to better understand how particular attributes of employers or employees may affect employers' costs.

Evidence from Other Countries

We won't fully review the evidence on PFLs effects in other countries. But looking elsewhere can help overcome some limitations of the US research, particularly those that stem from the relatively recent implementation of PFL policies and the lack of policy variation within states over time. In this section, we briefly describe some key findings about PFLs effects on labor market and health outcomes beyond the United States, with an eye toward understanding why key results do or don't differ from those found in this country.

By exploiting variation in policy changes (that is, implementation of new policies and

extensions of existing policies), research on the effects of paid maternity leave in other countries generally finds that short leaves of up to about one year tend to have either no impact or small positive impacts on women's job continuity and medium- to long-term employment.³⁶ Longer leaves, on the other hand, can harm women's long-term wages, employment, and career advancement.³⁷ One explanation for this difference in labor market effects by the duration of paid leave is that long periods away from work may reduce job-related human capital or productivity during key times in one's career. Longer leaves are often not fully job-protected or have lower wage replacement rates, which may also explain some of the difference.³⁸

There's little evidence from outside the United States that extending the duration of paid maternity leave—for example, from one year to a year and a few months—improves children's wellbeing in the long term. Leave expansions in Canada, Sweden, Austria, and Germany had no significant impacts on children's cognitive development in early childhood, on teenage cognitive outcomes or test scores, on educational attainment, or on earnings in early adulthood.³⁹

The benefits of paid maternity leave on children's long-term health and cognition may be concentrated in the months immediately following birth.

However, in a recent study from Norway that examined the long-term impact on children of introducing (rather than extending) a four-month paid maternity

leave policy in 1977, the researchers found that the policy reduced the high school dropout rate and increased earnings at age 30.⁴⁰ These impacts were concentrated among children from more disadvantaged backgrounds. Another recent study of the same Norwegian policy found that it also improved indicators of mothers' mental and physical health, particularly for more disadvantaged women.⁴¹ Other evidence on how PFL affects mothers' health around the time of birth is mixed. Though one study in Denmark found that an increase in the duration of maternity leave reduced by almost 70 percent the probability that mothers would experience an inpatient hospital stay within a year of birth, two other studies, in Denmark and Canada, found that leave extensions had no significant effects on mothers' depression.⁴²

Consistent with early evidence from the more recent US policies, these studies suggest that any benefits of paid maternity leave on children's long-term health and cognition may be concentrated in the months immediately following birth. However, the research can't point conclusively to the optimal leave duration, nor can it rule out positive longer-term impacts on outcomes that are harder to measure. Most studies of the long-term impacts of paid maternity leave compare the outcomes of cohorts affected by the policy to those of unaffected cohorts (such as individuals born immediately before an extension of leave), but they can't directly compare individuals whose parents took (longer) leaves to those who didn't. The policy-based research design improves researchers' ability to identify causal impacts, since individuals who take longer leaves are different in many ways from those who take shorter leaves. Without identifying

direct users of the leave, however, the studies are limited in their ability to estimate very long-term effects.

Lastly, two recent working papers using administrative data from Denmark analyzed how paid parental leave affects employer-level outcomes.⁴³ This research suggests that paid leave has no measurable effects on firms' output, profitability, or survival overall, though some small firms may be less likely to survive. Just as in the United States, we need more research on employer outcomes in other countries to fully understand how PFL affects firms.

Conclusions

Support for paid family leave is growing among US workers. In a 2017 survey by the Pew Research Center, 82 percent of Americans said that mothers should be able to take paid leave from work following the birth or adoption of a child, and 69 percent supported paid leave for fathers.⁴⁴ Support for paid leave policies is also growing at state and federal levels. The FAMILY Act introduced in Congress in 2019, for example, proposes a federal program to provide 12 weeks of paid family leave to all workers in the United States. In addition to the District of Columbia and the eight states that have already passed PFL programs, many other states are currently considering legislation for similar state-level programs.

As PFL becomes more popular, we need to understand the costs and benefits of such programs. Though research on PFL in the United States has been growing rapidly, more work is necessary in several key areas. We know relatively little about PFL's health effects on parents, particularly fathers. Similarly, as the early cohorts of children exposed to PFL grow older, we

need to keep watching for longer-term effects on their health and wellbeing. Given rising US healthcare costs, quantifying any potential health effects is important. We also need research to better understand how PFL affects employers. Current evidence suggests a low employer burden, but we know little about potential differences in costs across different types of employers or how employers respond to PFL by changing their own benefit packages, hiring practices, workplace flexibility, or other job characteristics. Lastly, we need to examine the impacts of specific PFL policy features—including the wage replacement rate, leave duration, and availability of job protection—on health and employment outcomes. As more and more state-level policies go into effect in the coming years, it will be possible to examine differences across states to identify these effects and to guide recommendations about the best policy designs.

Nevertheless, the research so far on PFL in the United States already points to four important takeaways that may help guide future policy and research.

First, paid family leave increases leave-taking rates and leave duration, especially among disadvantaged parents who are the least likely to be able to afford unpaid time off. But barriers to take-up remain, even when PFL eligibility requirements are low. Universal job protection and higher wage replacement rates for low-wage workers may be important for increasing equity in leave take-up.

Second, relatively short periods of leave appear to have positive benefits for infant health as well as for mothers' labor market outcomes. Paid leave that lasts longer than a year may be more likely to have adverse effects on mothers' long-term career outcomes. Although a PFL program providing one year or more of benefits is unlikely in the United States, optimal leave duration remains an important policy consideration. There's little causal evidence to suggest that leave extensions beyond a few months lead to significant improvements in mothers' or children's health. As a whole, the research suggests that programs lasting up to about six months have positive effects on health and wellbeing without significant career costs.

Third, the evidence shows that existing state programs have minimal negative impacts on businesses, suggesting that paid family leave programs confer benefits to workers and their families at little to no cost to their employers. These benefits may be especially important for the least-advantaged families, in which workers are least likely to have access to any employer-provided paid leave.

Finally, much evidence indicates that rising economic inequality in the United States is driven by disparities in early childhood. The research suggests that paid family leave may be one way to level the playing field for children from all backgrounds and help improve intergenerational mobility.

Endnotes

1. See, for example, “Raising Kids and Running a Household: How Working Parents Share the Load,” Pew Research Center, Nov. 4, 2015, <http://www.pewsocialtrends.org/2015/11/04/raising-kids-and-running-a-household-how-working-parents-share-the-load/>.
2. Jacob Alex Klerman, Kelly Daley, and Alyssa Pozniak, “Family and Medical Leave in 2012: Technical Report,” US Department of Labor, Sept. 7, 2012 (revised April 18, 2014), <https://www.dol.gov/sites/dolgov/files/OASP/legacy/files/FMLA-2012-Technical-Report.pdf>.
3. See “National Compensation Survey,” US Bureau of Labor Statistics, March 2019, <https://www.bls.gov/nchs/ebs/benefits/2019/ownership/private/table31a.pdf>.
4. American Academy of Pediatrics, “Breastfeeding and Maternal and Infant Health Outcomes in Developed Countries,” *AAP Grand Rounds* 18, no. 2 (2007): 15–16, <https://doi.org/10.1542/gr.18-2-15>; Nancy K. Lowe, “The Surgeon General’s Call to Action to Support Breastfeeding,” *Journal of Obstetric, Gynecologic & Neonatal Nursing* 40 (2011): 387–9, <https://doi.org/10.1111/j.1552-6909.2011.01266.x>.
5. Ankita Patnaik, “Reserving Time for Daddy: The Consequences of Fathers’ Quotas,” *Journal of Labor Economics* 37 (2019): 1009–59, <https://doi.org/10.1086/703115>.
6. Claudia Olivetti and Barbara Petrongolo, “The Economic Consequences of Family Policies: Lessons from a Century of Legislation in High-Income Countries,” *Journal of Economic Perspectives* 31 (2017): 205–30, <https://doi.org/10.1257/jep.31.1.205>.
7. Alexandra Boyle Stanczyk, “Does Paid Family Leave Improve Household Economic Security Following a Birth? Evidence from California,” *Social Service Review* 93 (2019): 262–304, <https://doi.org/10.1086/703138>.
8. See also Elizabeth U. Cascio, “Public Investments in Child Care,” in *The 51%: Driving Growth through Women’s Economic Participation*, ed. Diane Whitmore Schanzenbach and Ryan Nunn (Washington, DC: Hamilton Project, 2017), 123–42, https://www.hamiltonproject.org/assets/files/public_investments_child_care_cascio.pdf.
9. Jane Waldfogel, “The Impact of the Family and Medical Leave Act,” *Journal of Policy Analysis and Management* 18 (1999): 281–302, [https://doi.org/10.1002/\(SICI\)1520-6688\(199921\)18:2<281::AID-PAM5>3.0.CO;2-J](https://doi.org/10.1002/(SICI)1520-6688(199921)18:2<281::AID-PAM5>3.0.CO;2-J); Wen-Jui Han, Christopher Ruhm, and Jane Waldfogel, “Parental Leave Policies and Parents’ Employment and Leave-Taking,” *Journal of Policy Analysis and Management* 28 (2009): 29–54, <https://doi.org/10.1002/pam.20398>.
10. Maya Rossin-Slater, Christopher J. Ruhm, and Jane Waldfogel, “The Effects of California’s Paid Family Leave Program on Mothers’ Leave-Taking and Subsequent Labor Market Outcomes,” *Journal of Policy Analysis and Management* 32 (2013): 224–45, <https://doi.org/10.1002/pam.21676>; Charles L. Baum II and Christopher J. Ruhm, “The Effects of Paid Family Leave in California on Labor Market Outcomes,” *Journal of Policy Analysis and Management* 35 (2016): 333–56, <https://doi.org/10.1002/pam.21894>; Ann P. Bartel et al., “Paid Family Leave, Fathers’ Leave-Taking, and Leave-Sharing in Dual-Earner Households,” *Journal of Policy Analysis and Management* 37 (2018): 10–37, <https://doi.org/10.1002/pam.22030>.
11. Sarah Bana, Kelly Bedard, and Maya Rossin-Slater, “Trends and Disparities in Leave Use under California’s Paid Family Leave Program: New Evidence from Administrative Data,” *AEA Papers and Proceedings* 108 (2018): 388–91, <https://doi.org/10.1257/pandp.20181113>.
12. Pamela Winston et al., *Supporting Employment among Lower-Income Mothers: The Role of Paid Family Leave* (Washington, DC: Office of the Assistant Secretary for Planning and Evaluation, US Department of Health and Human Services, May 2019), <https://aspe.hhs.gov/pdf-report/supporting-employment-among-lower-income-mothers-role-paid-family-leave>.

13. See, for example, Eileen Appelbaum and Ruth Milkman, *Leaves That Pay: Employer and Worker Experiences with Paid Family Leave in California* (Los Angeles: UCLA Institute for Research on Labor and Employment, 2011), <https://escholarship.org/uc/item/6bm118ss>; Ruth Milkman and Eileen Appelbaum, *Unfinished Business: Paid Family Leave in California and the Future of U.S. Work-Family Policy* (Ithaca, NY: ILR Press, 2013); Mark DiCamillo and Mervin Field, “Just 36% of Voters Aware of State’s Paid Family Leave Program,” Field Research Corporation and California Center for Research on Women and Families, 2014.
14. Sarah Fass, “Paid Leave in the States: A Critical Support for Low-wage Workers and Their Families” (New York: National Center for Children in Poverty, Mailman School of Public Health, Columbia University, March 2009), <https://doi.org/10.7916/DSXH00VS>.
15. Gordon B. Dahl, Katrine V. Løken, and Magne Mogstad, “Peer Effects in Program Participation,” *American Economic Review* 104 (2014): 2049–74, <https://doi.org/10.1257/aer.104.7.2049>; Sarah Bana et al., “Unequal Use of Social Insurance Benefits: The Role of Employers,” working paper, National Bureau of Economic Research, Cambridge, MA, 2018, <https://www.nber.org/papers/w25163>.
16. Shirlee Lichtman-Sadot, “The Value of Postponing Pregnancy: California’s Paid Family Leave and the Timing of Pregnancies,” *BE Journal of Economic Analysis & Policy* 4 (2014): 1467–1499, <https://doi.org/10.1515/bejeap-2013-0141>; Eleanor Golightly, “Is Paid Family Leave a Pro-Natal Policy? Evidence from California,” unpublished manuscript, University of Texas, Austin, Nov. 10, 2019, <https://drive.google.com/file/d/1U3YJDO0a9oOSqgVFq6xPfb6ZoW4Cagwz/view>.
17. See, for example, Rafael Lalive and Josef Zweimüller, “How Does Parental Leave Affect Fertility and Return to Work? Evidence from Two Natural Experiments,” *Quarterly Journal of Economics* 124 (2009): 1363–1402, <https://doi.org/10.1162/qjec.2009.124.3.1363>; Anna Raute, “Can Financial Incentives Reduce the Baby Gap? Evidence from a Reform in Maternity Leave Benefits,” *Journal of Public Economics* 169 (2019): 203–22, <https://doi.org/10.1016/j.jpubeco.2018.07.010>; and Gordon B. Dahl et al., “What is the Case for Paid Maternity Leave?,” *Review of Economics and Statistics* 98 (2016), 655–70, https://doi.org/10.1162/REST_a_00602.
18. Maya Rossin, “The Effects of Maternity Leave on Children’s Birth and Infant Health Outcomes in the United States,” *Journal of Health Economics* 30 (2011): 221–39, <https://doi.org/10.1016/j.jhealeco.2011.01.005>.
19. Rui Huang and Muzhe Yang, “Paid Maternity Leave and Breastfeeding Practice before and after California’s Implementation of the Nation’s First Paid Family Leave Program,” *Economics & Human Biology* 16 (2015): 45–59, <https://doi.org/10.1016/j.ehb.2013.12.009>.
20. Agnitra Roy Choudhury and Solomon Polachek, “The Impact of Paid Family Leave on the Timing of Infant Vaccinations,” working paper, Institute of Labor Economics (IZA), Bonn, Germany, 2019, <https://www.iza.org/publications/dp/12483/the-impact-of-paid-family-leave-on-the-timing-of-infant-vaccinations>.
21. Ariel Marek Pihl and Gaetano Basso, “Did California Paid Family Leave Impact Infant Health?,” *Journal of Policy Analysis and Management* 38 (2019): 155–80, <https://doi.org/10.1002/pam.22101>.
22. Lindsey Rose Bullinger, “The Effect of Paid Family Leave on Infant and Parental Health in the United States,” *Journal of Health Economics* 66 (2019): 101–16, <https://doi.org/10.1016/j.jhealeco.2019.05.006>.
23. *Ibid.*
24. Shirlee Lichtman-Sadot and Neryvia Pillay Bell, “Child Health in Elementary School following California’s Paid Family Leave Program,” *Journal of Policy Analysis and Management* 36 (2017): 790–827, <https://doi.org/10.1002/pam.22012>.
25. Samantha Trajkovski, “California Paid Family Leave and Parental Time Use,” unpublished manuscript, University of Connecticut, 2019, https://docs.wixstatic.com/ugd/c6de6e_7fcc7bf2b2ff47eca9fe9c7a9659ff34.pdf.

26. See Patrick Kline and Christopher R. Walters, “Evaluating Public Programs with Close Substitutes: The Case of Head Start,” *Quarterly Journal of Economics* 131 (2016), 1795–1848, <https://doi.org/10.1093/qje/qjw027>.
27. Charles L. Baum II, “The Effects of Maternity Leave Legislation on Mothers’ Labor Supply after Childbirth,” *Southern Economic Journal* 69 (2003): 772–99, <https://doi.org/doi:10.2307/1061651>.
28. Han, Ruhm, and Waldfogel, “Parental Leave Policies”; Waldfogel, “Impact.”
29. Rossin-Slater, Ruhm, and Waldfogel, “Effects of California’s Paid Family Leave”; Baum and Ruhm, “Effects of Paid Family Leave.”
30. Martha Bailey et al., “The Long-Term Effects of California’s 2004 Paid Family Leave Act on Women’s Careers: Evidence from U.S. Tax Data,” unpublished manuscript, University of Michigan, 2019.
31. Sarah Bana, Kelly Bedard, and Maya Rossin-Slater, “The Impacts of Paid Family Leave Benefits: Regression Kink Evidence from California Administrative Data,” working paper, National Bureau of Economic Research, Cambridge, MA, 2019, <https://www.nber.org/papers/w24438>.
32. Appelbaum and Milkman, *Leaves That Pay*; Miriam Ramirez, “The Impact of Paid Family Leave on New Jersey Businesses,” PowerPoint presentation, Bloustein School of Planning and Public Policy, Rutgers University, 2012, <https://bloustein.rutgers.edu/wp-content/uploads/2012/03/Ramirez.pdf>; Sharon Lerner and Eileen Appelbaum, “Business as Usual: New Jersey Employers’ Experiences with Family Leave Insurance,” report no. 2014-12, Center for Economic and Policy Research, Washington, DC, 2014, <https://ideas.repec.org/p/epo/papers/2014-12.html>.
33. Ann Bartel et al., *Assessing Rhode Island’s Temporary Caregiver Insurance Act: Insights from a Survey of Employers* (Washington, DC: U.S. Department of Labor, Chief Evaluation Office, 2016), https://digitalcommons.ilr.cornell.edu/key_workplace/1597/.
34. Kelly Bedard and Maya Rossin-Slater, “The Economic and Social Impacts of Paid Family Leave in California: Report for the California Employment Development Department,” State of California Employment Development Department, October 13, 2016, https://www.edd.ca.gov/disability/pdf/PFL_economic_and_social_impact_study.pdf.
35. Bana et al., “Unequal Use.”
36. Michael Baker and Kevin Milligan, “How Does Job-Protected Maternity Leave Affect Mothers’ Employment?,” *Journal of Labor Economics* 26 (2008): 655–91, <https://doi.org/10.1086/591955>; Jochen Kluge and Marcus Tamm, “Parental Leave Regulations, Mothers’ Labor Force Attachment and Fathers’ Childcare Involvement: Evidence from a Natural Experiment,” *Journal of Population Economics* 26 (2013): 983–1005, <https://doi.org/10.1007/s00148-012-0404-1>; Annette Bergemann and Regina T. Riphahn, “Maternal Employment Effects of Paid Parental Leave,” working paper, Institute of Labor Economics (IZA), Bonn, Germany, May 2015, <http://ftp.iza.org/dp9073.pdf>.
37. Schönberg and Johannes Ludsteck, “Expansions in Maternity Leave Coverage and Mothers’ Labor Market Outcomes after Childbirth,” *Journal of Labor Economics* 32 (2014): 469–505, <https://doi.org/10.1086/675078>; Laurent Lequien, “The Impact of Parental Leave Duration on Later Wages,” *Annals of Economics and Statistics*, no. 107/108 (2012): 267–85, <https://doi.org/10.2307/23646579>; Lalive and Zweimüller, “How Does Parental Leave Affect Fertility”; Dahl et al., “What is the Case?”
38. Jenna Stearns, “The Long-Run Effects of Wage Replacement and Job Protection: Evidence from Two Maternity Leave Reforms in Great Britain,” Social Science Research Network, Rochester, NY, May 7, 2018, <https://doi.org/10.2139/ssrn.3030808>.
39. Michael Baker and Kevin Milligan, “Evidence from Maternity Leave Expansions of the Impact of Maternal Care on Early Child Development,” *Journal of Human Resources* 45 (2010): 1–32, <https://doi.org/10.3368/jhr.45.1.1>; Michael Baker and Kevin Milligan, “Maternity Leave and Children’s Cognitive and

- Behavioral Development,” *Journal of Population Economics* 28 (2015): 373–91, <https://doi.org/10.1007/s00148-014-0529-5>; Qian Liu and Oskar Nordstrom Skans, “The Duration of Paid Parental Leave and Children’s Scholastic Performance,” *B.E. Journal of Economic Analysis & Policy* 10 (2010): 1–33, <https://doi.org/10.2202/1935-1682.2329>; Natalia Danzer and Victor Lavy, “Paid Parental Leave and Children’s Schooling Outcomes,” *Economic Journal* 128, no. 608 (2018): 81–117, <https://doi.org/10.1111/ecoj.12493>; Christian Dustmann and Uta Schönberg, “Expansions in Maternity Leave Coverage and Children’s Long-Term Outcomes,” *American Economic Journal: Applied Economics* 4 (2012): 190–224, <https://doi.org/10.1257/app.4.3.190>.
40. Pedro Carneiro, Katrine V. Løken, and Kjell G. Salvanes, “A Flying Start? Maternity Leave Benefits and Long-Run Outcomes of Children,” *Journal of Political Economy* 123 (2015): 365–412, <https://doi.org/10.1086/679627>.
 41. Aline Butikofer, Julie Riise, and Meghan M. Skira, “The Impact of Paid Maternity Leave on Maternal Health,” *American Economic Journal: Economic Policy* (forthcoming).
 42. Louise Voldby Beuchert, Maria Knoth Humlum, and Rune Vejlin, “The Length of Maternity Leave and Family Health,” *Labour Economics* 43 (2016): 55–71, <https://doi.org/10.1016/j.labeco.2016.06.007>; Michael Baker and Kevin Milligan, “Maternal Employment, Breastfeeding, and Health: Evidence from Maternity Leave Mandates,” *Journal of Health Economics* 27 (2008): 871–87, <https://doi.org/10.1016/j.jhealeco.2008.02.006>.
 43. Anne A. Brenøe et al., “Is Parental Leave Costly for Firms and Coworkers?,” working paper, National Bureau of Economic Research, Cambridge, MA, Jan. 2020 (revised June 2020), <https://www.nber.org/papers/w26622>; Yana Gallen, “The Effect of Parental Leave Extensions on Firms and Coworkers,” unpublished manuscript, University of Chicago, 2019, http://yanagallen.com/Gallen_ParentalLeave_2019.pdf
 44. See Juliana Menasce Horowitz et al., “Support for Paid Leave Policies,” Pew Research Center, March 23, 2017, <https://www.pewsocialtrends.org/2017/03/23/support-for-paid-leave-policies/>.