

The Impact of Paid Leave: Evidence from Temporary Disability Insurance in Rhode Island

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To support working-women and their children, U.S. policymakers are considering legislation to create paid maternity leave programs. Proponents argue paid leave supports mothers “who cannot set aside sufficient funds for saving” (Mathur et al. 2017) by helping them “...achieve the goals of parent and child bonding, family care, children and family health, workforce stability, and economic security” (Washington State 2013).¹ While the 1993 Family Medical Leave Act (FMLA) requires that employers provide 12 weeks of unpaid leave,² there is no national paid leave policy, and only 12 percent of workers have access to paid leave through their private sector employer (DOL 2016).

Women in five states (California, Hawaii, New Jersey, New York, and Rhode Island) can currently access paid leave through Temporary Disability Insurance (TDI) programs. These programs cover pregnancy and postpartum recovery as temporary injuries allowing new mothers access to funds from the Unemployment Insurance (UI) system. Mothers who have worked enough to qualify for UI can withdraw up to 30 weeks of paid leave for pregnancy or recovery from pregnancy. Full allotment of TDI benefits can only be received when a mother is not working,³ and a mother with paid maternity leave can claim TDI benefits in addition to receiving any maternity leave benefits provided by her employer. Several more states have proposed mandating paid maternity leave through UI funded systems (A Better Balance 2016).⁴

This paper uses administrative data from Rhode Island to provide new evidence on how mothers use maternity leave and whether paid leave improves outcomes of mothers and their children.⁵ The records include over two decades of anonymized data on TDI claims, births and administrative and survey measures of maternal and child health outcomes. We examine the impact of paid leave provided through TDI on mother's workforce participation and earnings post-birth, as well as on future participation in social programs such as Temporary Disability Insurance, Supplemental Security Income (SSI), Temporary Assistance for Needy Families (TANF), Supplemental Nutrition Assistance Program (SNAP), and Medicaid. Further, we test for effects on measures of child health and development. These include measures of health at birth such as birth weight, on-time immunization, and standardized test scores.

We begin our analysis of the administrative data by documenting several descriptive facts about paid maternity leave provided through the TDI system. First, we find that mothers who qualify for TDI with earnings just above the eligibility threshold are 35% less likely to claim TDI benefits than mothers who qualify for TDI and live in households with moderately higher earnings. Mothers claim benefits both before and after birth; overall, 59% of mothers claim

¹ See also Boushey et al. 2013

² FMLA eligibility only applies to individuals who work in firms with 50 or more employees.

³ Recipients can work part time while receiving TDI benefits as long as they earn less than their weekly benefit rates. Benefits of part-time working recipients adjust downward so that the combined compensation from part-time work and benefits totals up to the weekly TDI benefit rate in the absence of part-time work.

⁴ As of 2014, new mothers and fathers in Rhode Island can claim up to four weeks of TDI benefits-potentially in addition to benefits claimed for disability due to pregnancy for bonding with a newborn child through a new program called Temporary Caregiver Insurance (TCI).

⁵ The data are housed in a secure facility at the Rhode Island Innovative Policy Lab (RIIPL) at Brown University. Personally identifiable information has been removed from the data and replaced with anonymous identifiers that make it possible for approved researchers to analyze records associated with the same individual while preserving anonymity.

benefits after birth. Across the income distribution, mothers who claim TDI take 10-11 weeks of paid leave.

We study the causal impacts of paid leave using a regression-discontinuity (RD) approach based on a discrete cutoff in program eligibility for TDI. Workers with a medically-verified temporary injury (which includes pregnancy) qualify for TDI if their earnings (and thus contributions to the UI system) exceed a minimum amount in the year before claim filing. The earnings threshold is low, at approximately \$10,000,⁶ allowing us to measure causal impacts on very low-income mothers, those who are least likely to save to cover basic needs during time off of work and also less likely to have employer-provided paid maternity leave from full time employment.⁷

We present RD results for two samples. First, we use the claims data to create a sample of claim filers, and compare those whose claims were accepted versus rejected as a function of threshold crossing. Among new mothers who file TDI claims, crossing the earnings eligibility threshold increases the probability of receiving paid leave by 81.7 percentage points, increases the weeks of TDI leave taken by 7.3 weeks, and the total amount of TDI benefits received by \$842. Second, we use a sample of all births in Rhode Island. Among all new mothers, regardless of claim filing, threshold crossing increases the probability of receiving paid leave by 20.1 percentage points from 2.6%, the weeks of TDI leave taken by 1.76 weeks, and the total amount of TDI benefits received by \$211. Both RD samples are valid: baseline characteristics do not change significantly across the threshold and the density of earnings is smooth across the threshold.

We do not find a significant impact of TDI-based paid leave on labor market activity. Measures of labor market outcomes include employment, earnings, earnings conditional on employment, and whether the mother returned to work at the employer she primarily worked at prior to giving birth. We measure these outcomes at three time intervals: in the fourth quarter after birth, in quarters 4 through 7 after birth (the year following one year after birth), and in quarters 4 through 11 after birth (the two years following one year after birth). We find no significant impact of TDI benefits receipt on any of these measures of a mother's labor force outcomes.

We next measure impacts of paid leave benefits receipt on subsequent use of social safety net programs such as further use of TDI for pregnancy or non-pregnancy-related injury, enrollment in Permanent Disability Insurance or Supplemental Security Income programs, Supplemental Nutrition Assistance (SNAP), Medicaid, and Temporary Assistance for Needy Families (TANF). The only significant impact we detect is a positive effect on Supplemental Security Income (SSI) enrollment.

Finally, we measure impacts on child health at birth and early life outcomes. Approximately 25% of TDI-using mothers apply for benefits at least 2 weeks before birth. Among these mothers

⁶ The earnings threshold for a given claimant depends on the composition of her wages in the prior year. While \$10,000 is an approximate threshold for many claimants, the threshold can be as low as \$4,000.

⁷ The RIPL database contains information on father's earnings at birth as well as qualification for means-tested social programs, allowing us to focus on low-earning mothers in low-earning households.

who claim benefits before birth, we examine the impact of TDI qualification on birth outcomes. Our main outcomes of interest include gestational weeks, birth weight, APGAR score (measure of physical condition at birth), and the number of days the infant spent in the NICU. We measure the impact of TDI receipt on measures of investments in child care, child development, and family planning by examining the impact of TDI benefits on whether the mother accepted invitations for a home visiting program offered in Rhode Island to very low income mothers,⁸ mother's fertility within the next three years, whether the child received on-time immunizations by age 2, whether the child developed the need for special education once at school age, and standardized test scores once the child reached third grade. We find marginally significant (10% level) and positive impacts on NICU Days and whether the child needed an Individualized Education Plan once of schooling age.

The regression discontinuity approach measures causal impacts free of bias from selection into TDI receipt. That said, it only allows us to infer causal impacts for mothers with earnings near the eligibility threshold - very low-earning mothers. The TDI program is available to all mothers, and it may be the case that mothers (and their newborns) with incomes above the TDI qualification threshold experience significant benefits from paid leave. While we do not have exogenous variation in TDI benefits away from the qualification threshold, we can control for an unprecedented range of observable characteristics available in the anonymized and secure administrative database. We estimate the impact of TDI benefits on outcomes for mothers in households earning below \$20,000 and between \$20,000 and \$40,000 in the base year. We select controls using Double LASSO, a machine learning technique for dimension reduction and choosing optimal control variables developed in Belloni et al. (2012) and Belloni et al. (2014). We allow the Double LASSO algorithm to select optimal controls from over 10,000 controls which include race and ethnicity, age, marital status, wages, social assistance program use, and employment history, as well as interactions between these covariates and higher-order polynomials.

In the Double LASSO analysis, we find positive and significant impact of TDI paid leave on the probability that a mother returns to work after birth. The impacts decrease with household income, and range from 3.3 to 9.9 percentage points. We also find significant impacts on earnings in the fourth quarter, year, and two years following birth for mothers in households earning less than \$20,000 per year of between \$383 and \$1,432. We do not find sustained positive and significant impacts on earnings for mothers with household earnings between \$20,000 and \$40,000 per year. We find positive and significant impacts on returning to the same employer only for mothers earning \$20,000 or less per year. We show that Double LASSO lowers point estimates on all earnings outcomes toward zero relative to traditional OLS regression estimates (which control for researcher-selected covariates), suggesting that selection on unobservable characteristics works to overstate impacts of TDI benefits on mother's labor force participation. Double LASSO estimates also indicate lower enrollment in TANF, consistent with the estimated effects on earnings. However, they also indicate higher enrollment in Medicaid, and higher future use of TDI over the next two years after giving birth. We find no

⁸ The First Connections home visiting program connects contacts and offers home visiting to low-income, at risk mothers. It provides them with information and assistance on childcare and rearing as well as state-provided resources for mothers in need. It is offered right after birth.

significant impacts on investments in child outcomes, though we do find some evidence of lower fertility in the three years following birth among households earning less than \$20,000 per year.

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