Transitions into Deep Poverty: The Role of Parenthood

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Extended Abstract

Becoming a parent is one of the most significant and momentous events in many people's lives. At the same time, it can pose enormous economic and personal challenges, due to loss of employment and income, disruptions of relationships, and the exceptionally high financial and emotional pressure associated with single parenthood. These challenges are likely to make new parents (and with them their children) with few material resources more vulnerable to experiencing deep poverty. Poverty statistics from across the world highlight this issue: In the US, 17.7% of children under five live in families whose income is below 100% of the poverty line, compared to 11.8% of the population overall (United States Census Bureau 2018). In Germany, 20% of children grow up in single-parent families; 30% of these families are at risk of poverty, compared to 16.7% of individuals, overall (Federal Statistical Office of Germany 2016).[1] On average across the the OECD, individuals living in single-parent families experience a poverty risk of 31% - three times higher than that of those living in two-parent families (OECD 2018).[2]

The staggering correlation between poverty and (single) parenthood is alarming, and understanding the underlying causes is key for designing better policies that help protect low-income families. Key open questions in this domain are: Does new parenthood *cause* deep poverty, and if yes, how large is the effect? How permanent or transitory are such impacts? Secondly, why do some low-income parents manage to avoid extreme poverty after the birth of a child – they maintain stable housing, food security, and health for themselves and their children, while others in similar environments do not? What social and institutional

[1] "At risk of poverty" is defined as having household income below 60% of the national median income.

[2] Here, poverty risk is defined as having household income below 50% of the national median income.

factors protect new parents from "falling through the cracks" due to hardships caused by parenthood.

In this paper, we use administrative records pertaining to health, housing, crime and welfare benefit receipt of low-income residents of a large US county to evaluate the effect of pregnancy and child birth on transitions into deep poverty as measured by housing stability (namely homelessness) and crime. Our empirical strategy employs a sharp, dynamic event study design in combination with high-frequency outcome data, comparing low-income women who give birth a few months apart in time. Identification relies on the assumption that within a narrow time window, the exact timing of conception is quasi-random. For robustness, we carry out a dynamic difference-in-difference design, comparing women who do vs. do not experience a miscarriage.

Data for this project comes from a large urban county in the US. It encompasses welfare benefit, homeless service, and court records of all individuals residing in the county, as well as medical records for all Medicaid[3] insured individuals. Our sample includes all 13,759 women residing in the county who experienced a live birth or a miscarriage in the years 2015-2019 and who were 15-40 years old and Medicaid insured at the time. Table 1 presents summary statistics.

Preliminary results focussing on homelessness indicate that new parenthood is a major cause of housing instability for low-income women: It increases the likelihood of homelessness encounters dramatically, by 0.5pp on a base of 1.3% - representing a 38% increase. Fig. 1 shows how homelessness encounter risk develops month-by-month, as a function of time relative to birth. The coefficient estimates are obtained from a regression of individual-month level indicators for homelessness encounters on month-to-birth dummies, controlling for cohort-specific time trends through year-month $\times$ cohort fixed effects.[4] As evident in the figure, homelessness encounters are remarkably stable during the pre-conception phase and during early pregnancy; they start increasing sharply in the last two months of pregnancy and stay constantly elevated throughout the first 12 months after child birth.

While all individuals in our sample are relatively poor, there is vast heterogeneity in response to the pregnancy/child birth event. Figures 2-5 show event study coefficients for four different demographic splits: Age, race, presence of a substance use disorder (SUD)[5], and presence of a mental health disorder (MHD).[6] Young mothers age 15-24, while entering homelessness

[3]Medicaid is a public health insurance program for low-income individuals.

[4]For the sample of women who experienced a live birth, including their first observed birth only.

[5]An individual is codes as having a SUD if they are diagnosed with an opioid use disorder, a cocaine use disorder, or an alcohol use disorder at any point pre-pregnancy.

[6]An individual is codes as having a MHD if they are diagnosed with major depressive disorder, bipolar disorder, or schizophrenic disorder at any point pre-pregnancy.

at similar rates as older mothers around child birth, recover within a few months after birth (while older mothers do not), consistent with the hypothesis that they have better access to longer term informal family support in times of economic need. Strikingly, African American women experience increases in homelessness encounters due to child birth that are 30% larger than those experienced by white women. Women with a pre-existing SUD experience by far the largest absolute rise in homelessness encounters compared to pre-pregnancy levels: Homelessness encounters rise by 1.5pp (on a base of 6.5%). This finding indicates that individuals who already face severe life challenges due to substance abuse are particularly vulnerable to the economic and psychological challenges posed by pregnancy and parenthood.[7]

This paper contributes to a large and growing literature on the causes of transitory and permanent economic hardship. It is similar in methodology to studies about the economic consequences of adverse life events, such as health shocks or the death of a spouse (Dobkin et al. 2018, Fadlon & Nielsen 2017). We contribute to this literature by focusing on parenthood as the major life event, and housing stability as our main measure of economic hardship.

Second, the paper contributes to a large literature on the (economic) consequences of parenthood. Existing work has largely focused on earnings and employment, with a special focus on differences across gender (See, for example, Kleven et al. 2019). We expand on this literature by recognizing that labor market outcomes only capture a sliver of the economic consequences of parenthood, and this may be particularly true for individuals with low labor market attachment to begin with. Expanding the set of outcomes to include material deprivation in the form of housing stability, crime, and health is critical for understanding how parenthood shapes the life trajectories of low-income individuals.

Third, this paper contributes to a more recent literature on housing instability and homelessness (see Evans et al. 2019, for a thorough review of the literature). Much of this literature has focused on evaluations of different homelessness service programs and expansions of funding for homelessness services on individuals' housing outcomes (e.g. Lucas 2017, and Corinth 2017). This literature is preceded by a large correlational literature on predictors of homelessness, including a paper on the cross-sectional correlation between pregnancy and homelessness (Weitzman, 1989). We contribute to this literature a careful causal analysis evaluating the extent to which pregnancy and new parenthood give rise to transitions into homelessness.

The evidence presented so far is still preliminary and incomplete. As next steps in the short run, we plan to 1) expand the set of outcomes to welfare benefit use, crime, and mental

[7]These individuals may also be more likely to experience complications during pregnancy, and their children are more likely to be sick, further exacerbating the challenges.

health, 2) disentangle mechanisms, in particular the role of employment vs. domestic dispute using data from employment and court records, and 3) add robustness checks employing a difference-in-difference strategy with the group of women who experienced miscarriages as a control group.

To conclude, a deeper understanding of the causes of severe economic hardship among low-income families is crucial for developing policies that better protect these groups. We hope that our project focussing on the consequences of parenthood for housing stability can provide important insights in this domain. We employ a dynamic event study design comparing the outcomes of low-income women who give birth at different points in time. Preliminary findings indicate that late pregnancy and new parenthood produce sizeable and lasting housing instability in the form of a 0.5pp, or 38% increase in homelessness encounters. These effects are particularly pronounced for women older than 24, for racial minorities, and for women with pre-existing substance use disorders.[8]

[8]Guided by the finding that pregnancy causes severe housing instability, and that women with substance use disorders are particularly affected, we plan to study how a mother's access to stable housing and mental health care impacts child development. Using birth record data that links parents to children back to the year 2005, we plan to study how receipt of public housing, treatment of mental health disorders, and treatment of substance use disorders of pregnant mothers at different gestational ages of the fetus impacts later-life outcomes (in particular health and education) of their unborn children. This empirical strategy is similar to Persson and Rossin-Slater (2018), who study the impacts of family ruptures experienced at different stages of pregnancy on the mental health of the child. For the case of public housing assignment and mental health and substance use disorder treatment, it relies on the assumption that within a narrow time window of a few weeks, the exact timing of receipt of these services is quasi-random.

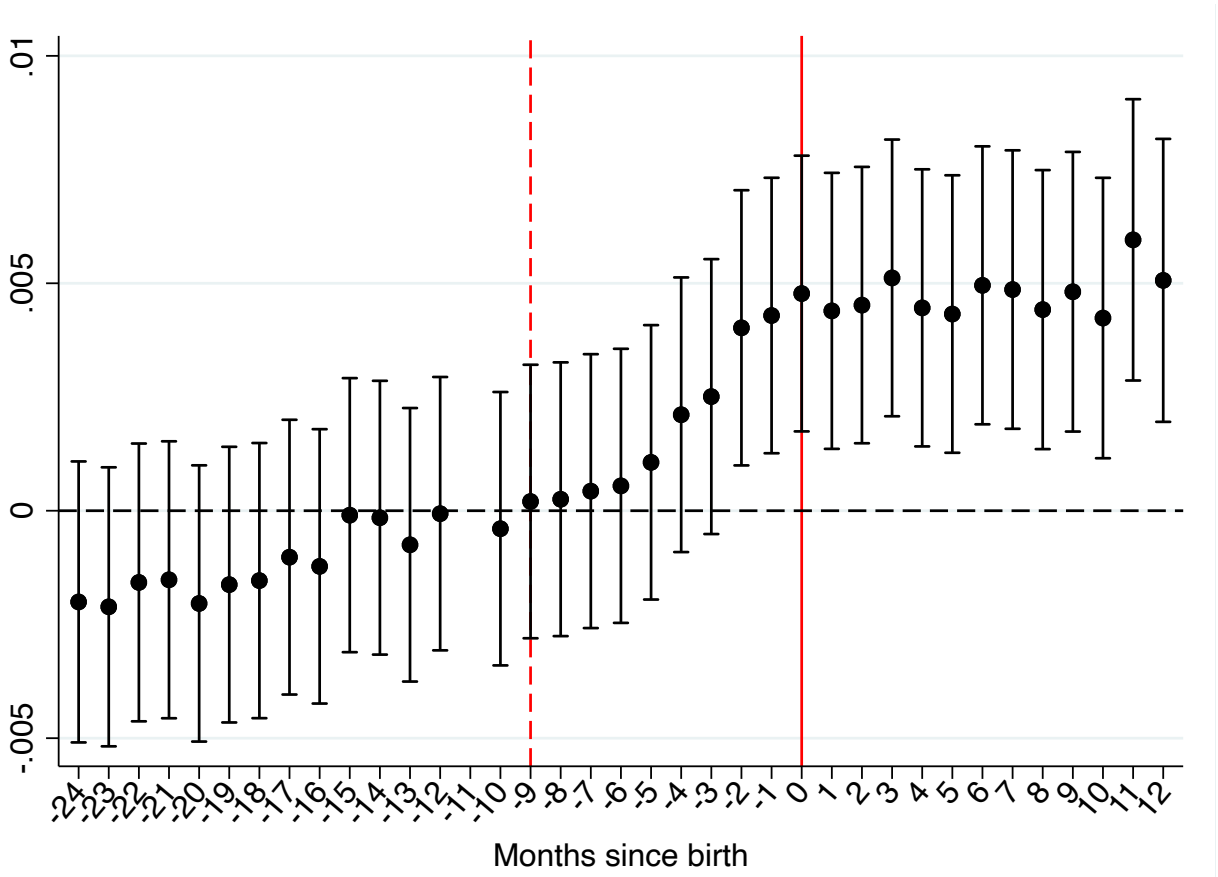
Appendix: Tables and Figures

Table 1: Summary Statistics

	mean	sd	min	max
Age	27.020	5.224	15	40
Age 15-19	0.064	0.244	0	1
Age 20-24	0.283	0.450	0	1
Age 25-29	0.337	0.473	0	1
Age 30-40	0.317	0.465	0	1
Black	0.465	0.499	0	1
White	0.471	0.499	0	1
Miscarriage	0.047	0.211	0	1
Homeless in month -1	0.018	0.133	0	1
Homeless in 12 months before event	0.041	0.199	0	1
Homeless in 12 months after event	0.043	0.203	0	1
Received Section 8 voucher in month -1	0.116	0.321	0	1
Lived in public housing in month -1	0.050	0.219	0	1
Received SNAP in month -1	0.349	0.477	0	1
Receives TANF in month -1	0.138	0.345	0	1
Received SSI in month -1	0.037	0.189	0	1
Any MHD pre-pregnancy	0.149	0.356	0	1
Any SUD pre-pregnancy	0.059	0.235	0	1
Birth in 2015	0.319	0.466	0	1
Birth in 2016	0.284	0.451	0	1
Birth in 2017	0.249	0.432	0	1
Birth in 2018	0.149	0.356	0	1
Observations	13759			

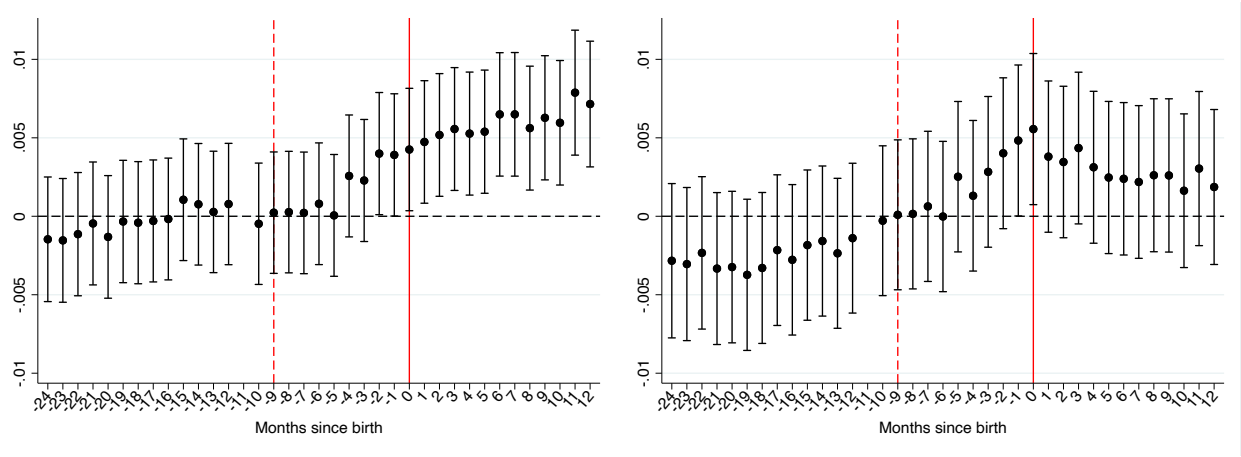
Note: Summary statistics are at the individual level, as of the month before birth (unless otherwise noted). For women who had a miscarriage, the approximate birth date is set to six months after the date of miscarriage. Only first observed birth and first observed miscarriage are included.

Figure 1: Homelessness - Event Study Around Pregnancy/Child Birth



Note: Figure shows estimated coefficients on month-to-birth dummies and associated 95% confidence bands obtained from regression of homelessness indicator on dummies for month to childbirth, for the sample of women who have a live birth. Regression also includes fixed effects for calendar year-month × cohort.

Figure 2: Homelessness - Heterogneity by Age

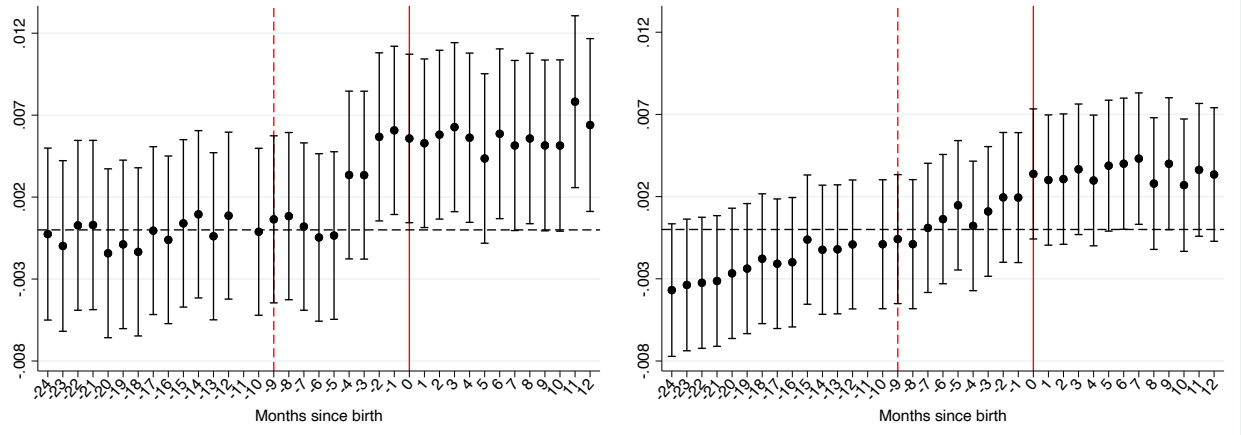


(a) Age 25 or older

(b) Age 24 or younger

Note: Figures show estimated coefficients on month-to-birth dummies and associated 95% confidence bands obtained from regression of homelessness indicator on dummies for month to childbirth - separately for individuals older/younger than 25 at childbirth, for the sample of women who have a live birth. Regression also includes fixed effects for calendar year-month × cohort.

Figure 3: Homelessness - Heterogeneity by Race

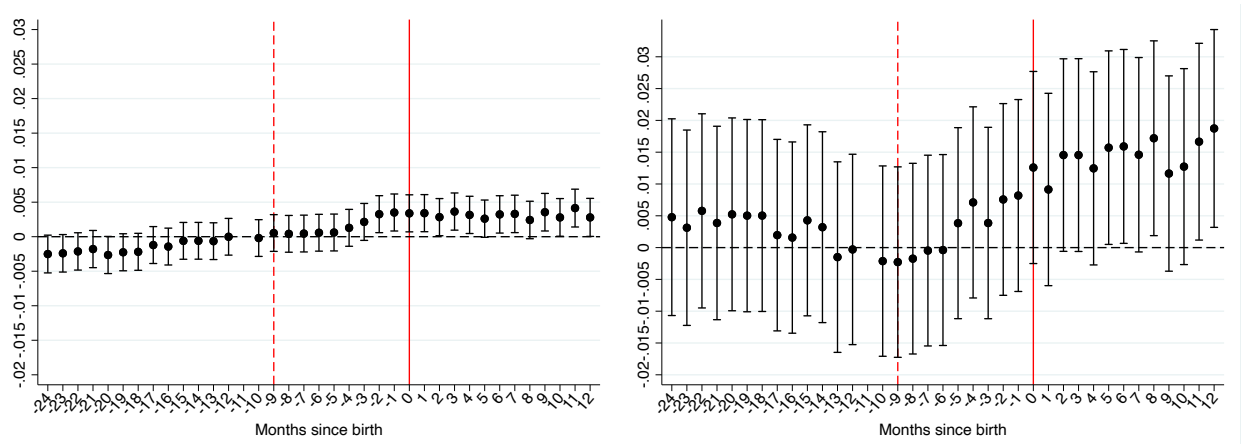


(a) Black/African American

(b) White/Caucasian

Note: Figures show estimated coefficients on month-to-birth dummies and associated 95% confidence bands obtained from regression of homelessness indicator on dummies for month to childbirth - separately for black/white individuals, for the sample of women who have a live birth. Regression also includes fixed effects for calendar year-month × cohort.

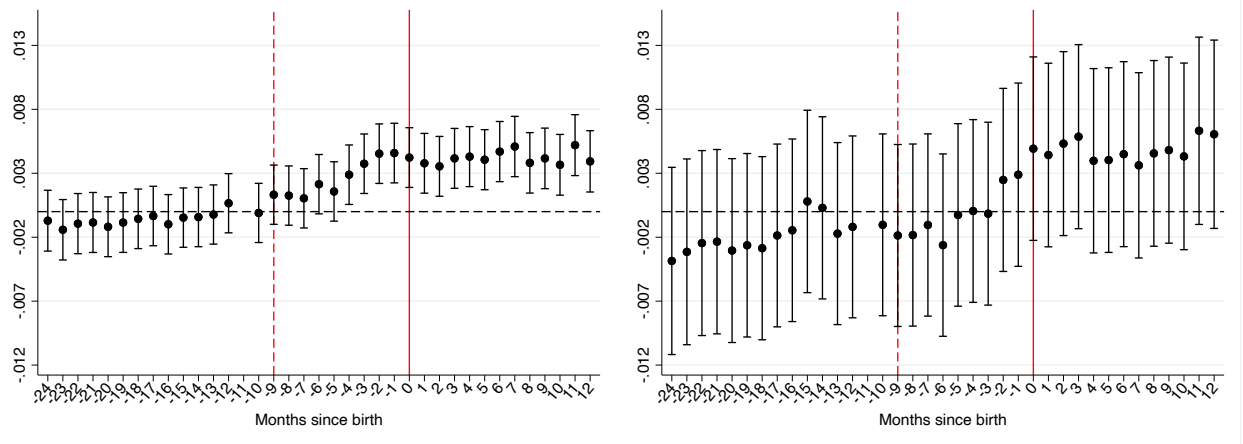
Figure 4: Homelessness - Heterogneity by Presence of a Substance Use Disorder



(a) No pre-existing SUD (b) Pre-existing SUD

Note: Figures show estimated coefficients on month-to-birth dummies and associated 95% confidence bands obtained from regression of homelessness indicator on dummies for month to childbirth - separately for individuals who were/were not treated for SUD pre-pregnancy. Regression also includes fixed effects for calendar year-month × cohort.

Figure 5: Homelessness - Heterogeneity by Presence of a Mental Health Disorder



(a) No pre-existing MHD (b) Pre-existing MHD

Note: Figures show estimated coefficients on month-to-birth dummies and associated 95% confidence bands obtained from regression of homelessness indicator on dummies for month to childbirth - separately for individuals who were/were not treated for MHD pre-pregnancy. Regression also includes fixed effects for calendar year-month × cohort.

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