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THE EFFECT OF UNEMPLOYMENT INSURANCE ON THE SAFETY NET AND INFANT HEALTH IN THE USA

ABSTRACT: *This paper examines the effects of Unemployment Insurance temporary cash transfer payments on birth outcomes in the United States. Using natality data for the years 1970–2019 and implementing a triple-difference strategy, we find that the programme has sizeable and significant effects on the health outcomes of new-borns, including birth weight, gestational age, and Apgar score. Moreover, we show that these effects are more pronounced among black mothers, low-educated mothers, and unmarried mothers.*

KEY WORDS: *social insurance, unemployment insurance, externality, foetal origin hypothesis, birth outcomes, prenatal care, health utilisation, cash transfer, safety net*

JEL CLASSIFICATION: D62, H51, I13, I18, J65, P36

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1. INTRODUCTION

Unemployment Insurance (UI) is a temporary cash transfer programme that aims to insulate against income fluctuations among workers who are laid off through no fault of their own. UI benefits were vastly expanded during and after the great recession, making the UI programme the largest safety net in the US during the crisis (Bitler and Hoynes, 2016). In addition to the benefit expansion, high unemployment rates escalated UI payments during the great recession. In 2007 the total amount of payments was $33 billion, while $94 billion was paid out in 2012 (Budget Office, 2018). In the one-year period between 2008 and 2009 total claims increased from around three to six million. The slow economic recovery accompanied by larger payments and longer duration of payments stimulated a strand of studies revisiting the social costs and benefits of the UI programme (Barr and Turner, 2015; Bitler and Hoynes, 2016; Card et al., 2015a; Mueller, Rothstein, and Wachter, 2016), as well as its unintended and unplanned externalities on other outcomes including crime (Beach and Lopresti, 2019), foreclosure (Hsu, Matsa, and Melzer, 2018), alcohol abuse (Lantis and Teahan, 2018), cigarette smoking (Fu and Liu, 2019), health (Kuka, 2018), mental health (Tefft, 2011a), college enrolment (Barr and Turner, 2015), and children's educational outcomes (Regmi, 2019).

Increases in UI benefits may have spillover effects on infants' health outcomes through several channels. The primary channel is through the effects on temporary income. UI payments can enable households to absorb negative consumption shocks (Chetty, 2006; East & Kuka, 2015a; Landais et al., 2018). This consumption-smoothing channel can influence the health outcomes of infants by providing materials that directly benefit health, such as food, or by providing goods that operate indirectly, such as health insurance and prenatal care (Figlio et al., 2009; Ga & Feng, 2012; Haeck & Lefebvre, 2016b; Mocan et al., 2015; Noghanibehambari et al., 2020b; Sonchak, 2016). Social insurance also has the potential to influence maternal mental health outcomes and help mothers experience less stressful pregnancies. Since stress has a detrimental influence on birth outcomes, UI payments can be beneficial for infants' health outcomes (Álvarez-Aranda et al., 2020; Bozzoli & Quintana-Domeque, 2014; Noghanibehambari et al., 2020a; Olafsson, 2016).

Another channel is the improvement of job-match quality. Not all pregnancies overlap with the unemployment period: earlier trimesters might overlap with unemployment and later trimesters with the period of being re-employed. The evidence suggests that UI payments can help this transition by providing more time and increasing the efficiency of job search, thus improving the quality of re-employment occupational match (Baker & Fradkin, 2017; Blau & Robins, 1986; Centeno, 2004; Tatsiramos & van Ours, 2014; van Ours & Vodopivec, 2008).

Although UI is a federally mandated programme, each state has its own eligibility criteria and payment schedule, as well as duration of UI payments. As a result, state-level differences in UI laws generate a substantial cross-sectional variation in UI benefits. States also adjust their benefits in biannual periods, for either common reasons such as inflation or state-specific reasons like economic conditions or the solvency of UI Trust Funds.

We take advantage of changes in both dimensions: across states and over time. We exploit these variations to investigate how changes in income (through changes in temporary cash transfers) influence the health outcomes of newborns. We use the information on virtually all birth records in the US from National Vital Statistics covering the years 1970–2019 and apply a panel data fixed effects research design that implements a triple difference estimation strategy. In particular, the identification strategy compares the average health outcomes of mothers that are predicted to be eligible for UI payments with those of mothers that are not (within state variation) to state-level UI law changes over time.

The results indicate that higher UI benefits are associated with better birth outcomes. For example, an increase of $3,828 in benefit caps, the standard deviation of the maximum possible payments to an unemployed person over the sample, can increase birth weight by approximately 110 grams and weekly foetal growth by 2.3 grams.

It is worth noting that these effects are intention-to-treat effects and smaller in magnitude than treatment-of-treated effects, for several reasons. First, the UI programme does not target pregnant women or women in general but the total eligible unemployed population. Second, the regular benefits are limited in time, so they might not cover the whole critical period of pregnancy. Third, due to the temporary nature of the transfers, families might not spend them on health-related expenditures such as prenatal care or better health insurance.

This study builds on the work of Noghanibehambari and Salari (2020). We add to their paper in several ways. First, we add 23 additional data years so that our sample covers 50 years of data and virtually all birth records across the US. Second, we investigate the heterogeneity of the results across subsamples. This aspect of our research has more policy implications, revealing the subpopulations that are most affected. Third, we analyse extended UI benefits. This is important because the extended UI programmes could confound the health effects of the regular UI programmes.

The rest of the paper is organised as follows. Section 0 reviews the literature. Section 0 introduces the data sources. Section 0 discusses the empirical method. Section 0 reviews the main results. Section 0 provides the results of the heterogeneity analysis. Section 0 replicates the main results for extended benefits. Section 1 explores endogenous fertility. Finally, section 0 concludes the paper.

2. A BRIEF LITERATURE REVIEW

UI payments generate a transitory income shock to the unemployed. The changes in income may affect infants' health outcomes through several channels, which we discuss below.

Income increase expands the demand curve for normal products. Some known determinants of health inputs, such as health insurance and healthcare spending, are shown to be normal goods (Alfonso et al., 2016; Cameron and Trivedi, 1991). Therefore, an increase in income may encourage households to allocate more resources to infants' health. A small strand of literature provides evidence that income is positively associated with improved birth outcomes (Bhalotra and Rawlings, 2013; Hoynes et al., 2011). For instance, Hoynes et al. (2015) evaluate the effects of changes in the Earned Income Tax Credit (EITC) payments schedule as a federal tax reform on infants' health. The cash transfers created a significant and also permanent shock to households' income. The increased income encouraged healthcare spending, including prenatal care and private health insurance. They find that a $1,000 treatment-on-the-treated increase in income is associated with 6.4 grams higher birth weight and about 2%–3%

reduction in low birth weight. On the other hand, Cole and Currie (1993) explore the effect of cash transfers from Aid to Families with Dependent Children (AFDC) on birth outcomes and find no evidence of an increase in birth weight.

Income increases may also shift mothers' demand for prenatal health care and insurance. This shift might be manifested by obtaining health insurance for uncovered mothers or choosing better quality health insurance, both of which are associated with better pregnancy outcomes (Conway and Kutinova, 2006; Currie and Grogger, 2002).

The UI programme is considered a successful social insurance programme that aims to smooth the income and consumption of the unemployed (East and Kuka, 2015). Consumption smoothing and having a safety net may alleviate the financial burden, anxiety, and distress associated with job loss (Tefft, 2011b). A small strand of literature evaluates the health effects of maternal stress during pregnancy and suggests a positive though small association (Duncan et al., 2017; Olafsson, 2016). If the UI programme is also successful in reducing maternal anxiety and stress, it could improve birth outcomes.

Another critical health input that may increase by income is nutrition. It is well documented that better nutrition leads to better health outcomes for infants (Almond et al., 2011a; Haeck and Lefebvre, 2016; Majid, 2015).

3. DATA

The main source of data is the restricted version county-identified US Vital Statistics Natality Detailed files. They cover all birth records in the US over the years 1970–2019 and contain information on a child's health measures, mother's characteristics, and limited father's characteristics.

We drop observations with missing values on birth weight and gestational weeks. In addition, we restrict the sample to singleton births, since outcomes of plural births might be driven by factors other than intrauterine determinants of infants' health.

The Measure of UI Payments

The UI benefit rules and payment schedule are obtained from the US Department of Labor. Following Hsu et al. (2018), we proxy the UI payments by the maximum benefit that eligible unemployed can receive, which is the maximum weekly allowance times the maximum duration of payments, hereafter called 'maximum benefit'. Figure 1 presents a graphic of each state's 'maximum benefit' in each year. There is a large cross-sectional variation in the 'maximum benefit' across states. Over the sample period (1970–2019) the average 'maximum benefit' is \$11,897 and its standard deviation is \$3,828, both in real 2019 dollars. In 2019, the 'maximum benefit' in the most and the least generous state was \$33,090 (Massachusetts) and \$3,300 (Florida). Rhode Island, Washington, and Connecticut are the next most-generous states after Massachusetts.

Imputation of Mother's Unemployment Status

Since the Natality files do not report mothers' employment status, we impute the likelihood of each mother being unemployed and eligible for UI benefits based on their demographic characteristics and residential location using monthly Current Population Survey (CPS) data. In so doing, we compute the share of women who are unemployed and identified as job losers or on lay off[1] in each month, year, state, and for the following demographic characteristics: age, education, race, and marital status. This share is calculated using CPS weights. Since job losers or individuals on lay off are probably eligible for unemployment insurance, we name the generated variable 'predicted eligibility'. Figure 2 shows a graphical visualization of 'predicted eligibility' among CPS women across each state and over the years 1970–2019.

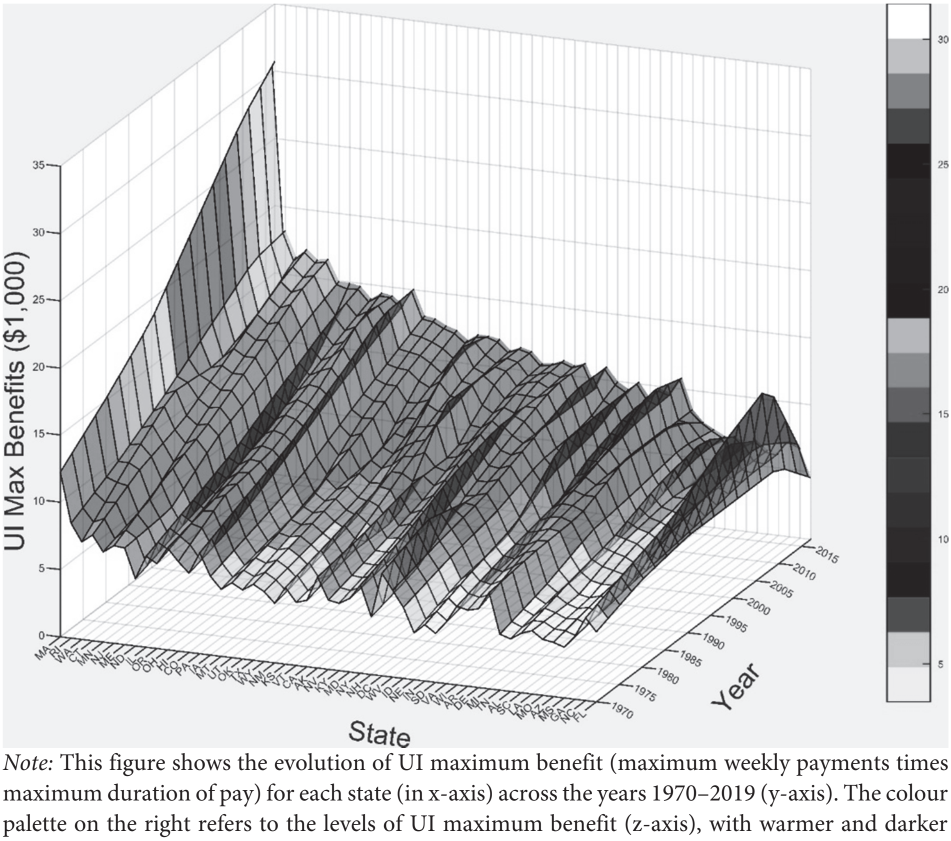
To have a consistent level of aggregation, we collapse the final sample of Natality data into the state, year and month of birth, age, education, race, and marital status. We then merge the collapsed Natality data with the generated 'predicted eligibility' data and UI benefits based on state, demographic group, and year and month of birth.

1 The CPS asks each person who is in the labour force and currently claims to be unemployed the reason for being unemployed. These reasons are categorized as: job-losers on lay off, other job losers, temporary job ended, job leaver, re-entrant, new entrant.

Since embryos are susceptible to external shocks during the in-utero period, the UI transfers might be effective during pregnancy. Therefore, a better approach requires the UI benefits to be assigned during pregnancy, which is usually nine months, rather than their contemporaneous values. We thus calculate the average of UI benefits and 'predicted eligibility' over the nine months prior to each month and year of birth.

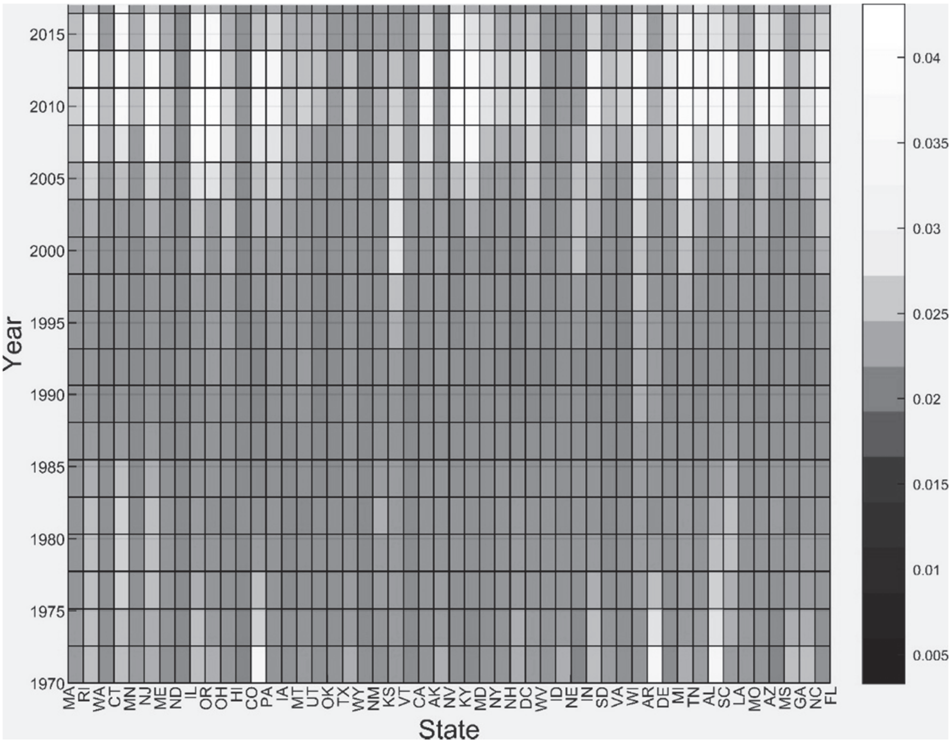
Summary statistics of the final sample are reported in Table 1. On average, about 10% of births are categorized as low birth weight. Roughly 1.4% of mothers are eligible for benefits.

Figure 1: Maximum UI benefits across states and over time



Note: This figure shows the evolution of UI maximum benefit (maximum weekly payments times maximum duration of pay) for each state (in x-axis) across the years 1970–2019 (y-axis). The colour palette on the right refers to the levels of UI maximum benefit (z-axis), with warmer and darker colors showing larger amounts. Massachusetts (the far-left state on the x-axis) experienced the largest increases in UI benefits over the years 1970–2019 and Florida (the far-right state on the y-axis) experienced the lowest increases.

Figure 2: Average predicted UI eligibility within mothers' demographic cells, across states and over the years



Note: The variable 'predicted eligibility' is the share of women in monthly CPS files who are unemployed and identified as job losers or on lay-off in each month, year, state, and for the following demographic characteristics: age, education, race, and marital status. It represents the imputed value of mothers who are likely to receive UI benefits. This figure shows the distribution of 'predicted eligibility' across states (x-axis) and over the years 1970–2019 (y-axis). The lighter colours show higher values and the darker colours show lower values.

Table 1: Descriptive Statistics

	Mean	SD	Median
Infants' Characteristics			
Birth Weight (Grams)	3200.18	320.24	3234.13
Full-Term Birth Weight (Grams)	3349.56	224.08	3356.90
Gestational Age-Adjusted Birth Weight (Grams)	3294.61	217.47	3333.13
Low Birth Weight	0.09	0.14	0.07
Small for Gestational Age	0.13	0.15	0.11
Foetal Growth	83.82	6.84	84.28
Sex (Female=1)	0.49	0.21	0.49
Gestational Age (Weeks)	38.69	1.52	38.91
Preterm Birth	0.20	0.18	0.18
Apgar Score (1–10)	8.74	0.59	8.85
Delivery Method (Vaginal=1)	0.69	0.22	0.72
Mothers' Characteristics			
Predicted Eligibility	0.014	0.020	0.00
Age	27.66	5.87	26.21
Education: Missing	0.21	0.41	0.00
Education: Less Than High School	0.02	0.07	0.00
Education: High School	0.36	0.46	0.00
Education: Some College	0.20	0.30	0.00
Education: Bachelor Degree	0.12	0.19	0.00
Education: Master – PhD	0.08	0.15	0.00
Race: White	0.53	0.50	1.00
Race: Black	0.27	0.38	0.00
Race: Indian	0.05	0.17	0.00
Ethnicity: Hispanic	0.07	0.15	0.01
Married	0.51	0.50	1.00
Prenatal Visits	11.31	2.17	11.50
No. of Cigarettes Smoked	1.00	2.10	0.22
Smoker	0.11	0.17	0.04
State Unemployment Insurance Figures			
Duration (Weeks)	25.91	1.61	26.00
Maximum Weekly Pay (Nominal, $1,000)	0.36	0.13	0.33
Maximum Benefit (Nominal, $1,000)	9.24	3.75	8.55
Maximum Benefit (Real, $1,000)	11.89	3.82	11.38
Observations:		577,978	

Note: US dollar values are in 2019 dollars. The panel covers the years 1970–2019. Each observation is a demographic (based on mothers' education, race, marital status, and age)–state–year cell.

4. EMPIRICAL STRATEGY

Although the main source of exogeneity in the identification strategy is the state–time changes in UI benefits, the 'predicted eligibility' generates another dimension of variation within each state and time. The identification strategy takes advantage of space–time variation in UI laws as well as the extent to which each group of mothers is likely to be eligible for the treatment; i.e., their 'predicted eligibility'. This strategy can be summarized in the following difference-in-difference-in-difference (hereafter DDD) estimation strategy:

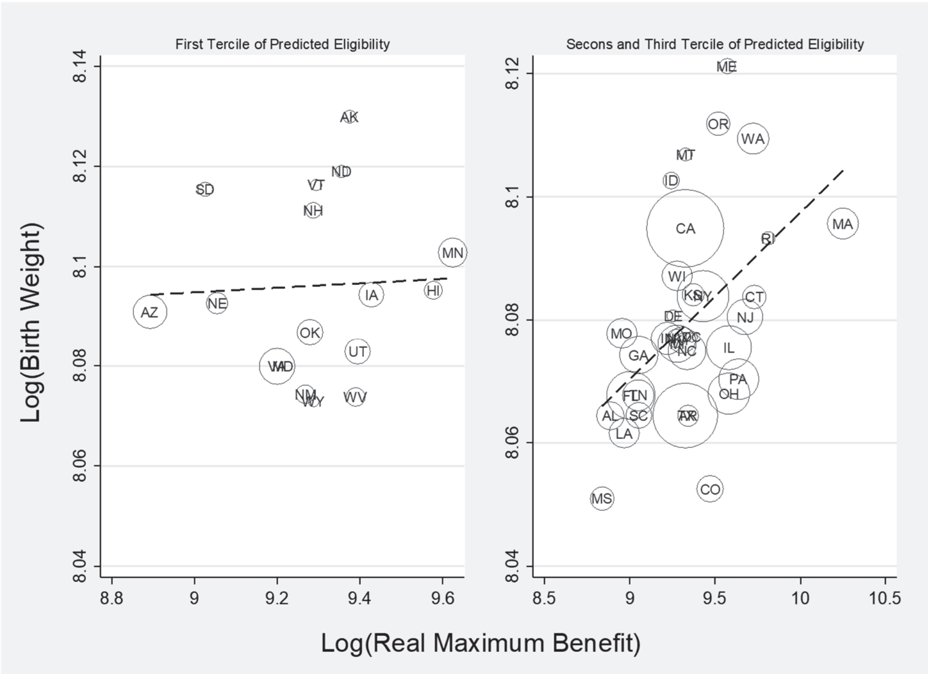
$$\begin{aligned} y_{aermst} &= \alpha + \delta MaxBen_{st} \times PredElig_{aerm} + \beta MaxBen_{st} + \theta PredElig_{aerm} \\ &\quad + \vartheta X_{aerm} + \gamma Z_{st} + \mu_a + \phi_e + \kappa_r + \zeta_m + \pi_t + \tau_s \times t + \varepsilon_{ist} \end{aligned} \tag{1}$$

where y is the average birth outcome of mothers in age group a, education group e, race r, with marital status m, in state s and time (month–year) t. $MaxBen$ is maximum UI benefits; i.e., maximum weekly payments × maximum number of weeks of payments, measured in 2019 thousand dollars except where explicitly stated otherwise. X is a vector of mother and father characteristics (father's age and race dummies, mother's delivery method dummies, and mother's use of prenatal care); Z is a vector of state-by-year controls (share of different age groups in the population, share of different race groups in the population, income per capita, minimum wage, expenditure per capita on Medicaid, and unemployment rate); μ, ϕ, κ, and ζ are a series of fixed effects for age, education, race, and marital status, respectively; π is time (month–year) fixed effects; $\tau_s \times t$ is a state-specific time trend included in some specifications. Finally, ε is a disturbance term. All regressions are weighted using the birth counts in each cell.

5. MAIN RESULTS

We start with a visual depiction of the relationship between benefits, eligibility, and birth outcomes. Among mothers in the top two terciles of 'predicted eligibility' there is a strong unconditional correlation between birth weight and UI Maximum Benefit (shown in the right panel of Figure 3). At the same time, there is no visual correlation between UI benefits and birth weight among mothers in the first tercile of predicted eligibility (left panel of Figure 3).

Figure 3: UI maximum benefits and birth weight across terciles of predicted eligibility



In order to empirically explore the visually positive association between UI benefits and birth outcomes, we run different specifications of Equation 1. The results are reported in Table 2. 'Predicted eligibility' is negatively correlated with birth weight, while the 'maximum benefit' has a positive but insignificant correlation. The signs of the main effects comply with our prior expectations that being laid off restricts the mothers' necessary resources during pregnancy, while cash transfers mediate such difficulties.

The DDD term, δ (reported in the third row), suggests a positive effect on birth outcomes. The estimated coefficient of column 1 implies that a \$3,828 increase in benefits, a standard deviation of benefits over the sample period, increases birth weight by roughly 110.3 grams, a 3.4% increase in the mean of birth weight.

Moreover, a one-standard-deviation increase in 'maximum benefit' is associated with roughly 41.2 hours longer gestational age, a 0.6% increase in the mean of gestational age.

The interaction coefficient implies a marginal effect of an 89-basis-point reduction in 'low birth weight' (birth weight < 2,500 g) for a $1,000 change in 'maximum benefit', or an 8.9% reduction in the mean of low birth weight (compared to a 0.8% increase in the mean of birth weight). The effect is similar when we look at the low tails (bottom 10%) of birth weight distribution within each week of gestation. The marginal effect of –1.0 percentage points on 'small for gestational age' (column 2) implies a reduction of 7.7% for each additional $1,000 rise in benefits. The DDD coefficient of full-term birth weight (birth weight for infants with gestational age between 38 and 42 weeks, column 3) is smaller than that of mean birth weight in column 1. Furthermore, the DDD term implies a 123-basis-points reduction in preterm birth (gestational age less than 37 weeks), equivalent to a 6.2% reduction in the mean of preterm birth (column 4). These results suggest that the UI benefits are more helpful for poorer mothers who are at the risk of having a child with low birth weight or a preterm child.

Children who are in utero for a longer time have higher birth weight, and those who are born prematurely are born with low birth weight. In a full specification regression based on the final sample of this paper, the elasticity of birth weight with respect to gestational weeks is 1.5. Therefore, an interesting question is whether or not the positive effects of UI benefits on birth weight are merely the results of having a longer gestational period. To investigate this we use another measure of health at birth, 'foetal growth', which is defined as birth weight divided by gestational weeks. The DDD term of 0.62 (p-value<0.01) implies an increase of 0.7% in the mean of 'foetal growth' as a response to a $1,000 rise in 'maximum benefits' (column 6). Comparing this rise with 0.8% for the birth weight and 0.15% for the gestational age (marginal effect of 0.06 for a mean of 38.6), one can conclude that the positive effects on birth weight are mainly driven by faster intrauterine growth of the foetus rather than a longer gestational period.

Another measure of health at birth is the five-minute Apgar score (varies between 1 and10). While there is a positive interaction term that points to an improvement in Apgar score, the estimate is imprecise. However, the DDD term on all other outcomes (columns 1–7) is economically large and statistically significant at the 1% level.

The estimated coefficients are comparable to other studies. For instance, Hoynes et al. (2015) find that a treatment-on-the-treated $1,000 raise in income through the extension of earned income tax credit increases birth weight by about 6 grams for the entire population of recipients and by about 18.7 grams for blacks, a 0.2% and 0.6% rise in the mean of birth weight, respectively. In another study, Almond, Hoynes, and Schanzenbach (2011) explore the health effects of the introduction of the Food Stamp Program (FSP) during the 1970s on birth outcomes. They find that food stamps lead to an increase in the mean birth weight of about 0.06%. These positive externalities also hold in the case of developing countries. Amarante, Manacorda, Miguel, and Vigorito (2016) show that participation in PANES, a government welfare programme in Uruguay targeted at the poorest 10% of the country, is associated with roughly 30 grams higher birth weight, and about 165 grams higher birth weight among premature children.

Table 2: Maximum UI benefits and infants' birth outcomes

	Birth Weight	Low Birth Weight	Small for Gestational Age	Full-Term Birth Weight	Preterm Birth	Foetal Growth	Gestational Age	Apgar Score
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Predicted UI Eligibility	–498.44***	0.1573***	0.1738***	–379.90***	0.2063***	–10.610***	–1.17***	–0.7686**
	(93.30)	(0.0241)	(0.0395)	(87.67)	(0.0038)	(2.222)	(0.27)	(0.3819)
Maximum benefit ($1,000)	0.481	0.0001	–0.0001	0.6479	–0.0002	0.0081	0.001	0.0006
	(0.659)	(0.0001)	(0.0002)	(0.4921)	(0.0004)	(0.0128)	(0.002)	(0.0039)
Predicted UI Eligibility × Maximum Benefit ($1,000)	28.83***	–0.0089***	–0.0101***	23.597***	–0.0123***	0.6213***	0.064***	0.0356
	(6.08)	(0.0015)	(0.0021)	(5.938)	(0.0038)	(0.1356)	(0.023)	(0.0230)
R^2	0.78	0.50	0.58	0.78	0.17	0.08	0.58	0.52
Observations	577,978	577,978	577,978	577,978	577,978	577,978	577,978	339,987
Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Full Covariates	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: All regressions are weighted by the number of birth counts in the cell. Standard errors, clustered on the state, are reported in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

6. HETEROGENEITY ANALYSIS

In this section we explore the heterogeneity in the effects across subsamples based on some observable characteristics. In Table 3 we show the triple-interaction coefficient for a selected set of outcomes and across subsamples. The effects are largest among low-educated and unmarried mothers. For instance, a $1,000 increase in benefits among eligible versus non-eligible mothers is associated with 56 grams higher birth weight in unmarried-mother samples. This effect is about 6.7 grams in the married-mother sample. The effects are also larger in counties with a higher share of blacks compared to counties with a lower share of blacks. Overall, the results suggest that the effects are more concentrated in more vulnerable populations and point to larger externalities among low-educated, unmarried, and black mothers.

7. EXTENDED BENEFITS AND INFANT HEALTH

During periods of high unemployment, states may extend the duration of UI payments for those who have exhausted their regular benefit and remained unemployed. Two federal programmes cover such extensions. The Extended Benefit (EB) programme provides an additional 13 weeks of UI payments and is triggered when the unemployment rate goes above 5% and is 20% higher than the two-year average of the state-level unemployment rate. The Emergency Unemployment Compensation (EUC) Act of 2008, modified by the Middle-Class Tax Relief and Job Creation Act of 2012, categorizes claimants into four tiers based on the state-level three-month seasonally adjusted unemployment rate. It provides 20, 14, 13, and 6 weeks of additional benefits for tiers one through four. The cumulative additional benefits can add up to 53 weeks. The EUC expired in December 2013.

These extended benefits provided an unprecedented additional cash transfer that varied across states based on their contemporaneous unemployment rate. In Table 4 we explore the possible effects of extended benefits on infant health outcomes for the period 2000–2014.[2] For birth weight, both the main effect of 'maximum benefit' and the DDD coefficient are positive and significant (column 1). For 'predicted' eligible mothers versus 'predicted' non-eligible mothers, a one-

[2] These extended UI payments started around 2002 and ended in 2013.

standard-deviation rise in ‘maximum benefits’, equivalent to a $12,574 increase, is associated with 28.2 grams-higher birth weight. The implied marginal effects for low birth weight and preterm birth are −0.12 and −0.14 percentage points (columns 2 and 8, respectively). These effects are substantially lower than those in the main results for regular UI benefits. One possible explanation is that extended benefits are for those who have exhausted their regular payments and are still unemployed. These potential eligible mothers might be systematically different from others in unobservable ways that are correlated with their birth outcomes and lead to a bias in the estimated coefficients. Another reason could be the fact that extended benefits (especially EUC) are paid in times of extremely high unemployment rates. A deep recession may generate a harsher environment for pregnant mothers and may mitigate the positive effects of cash transfers.

The results also suggest a positive effect of extended benefits on other birth outcomes, such as small for gestational age, full-term birth weight, Apgar score, foetal growth, and gestational age. However, they are imprecisely estimated and quite small in magnitude.

Table 3: Heterogeneity of results across subsamples

Sample	Outcomes				
	Birth Weight	Low Birth Weight	Gestational Weeks	Preterm Birth	Apgar Score
Mother Education ≤ 12	31.81***	–0.0098***	0.0936**	–0.0140**	0.0785**
	(6.28)	(0.0019)	(0.0041)	(0.0057)	(0.0326)
R^2	0.71	0.44	0.55	0.47	0.18
Observations	306,143	306,143	306,143	306,143	168,706
Mother Education > 12	19.21***	–0.0046***	0.0422*	–0.0087***	0.0017
	(11.81)	(0.0015)	(0.0231)	(0.0029)	(0.0261)
R^2	0.80	0.50	0.63	0.47	0.20
Observations	210,142	210,142	210,142	210,142	117,003
Mother Unmarried	55.77***	–0.0180***	0.1470***	–0.0270***	0.0554
	(9.667)	(0.0032)	(0.0445)	(0.0070)	(0.0358)
R^2	0.70	0.46	0.54	0.45	0.18
Observations	247,419	247,419	247,419	247,419	137,125
Mother Married	6.776**	–0.0031***	0.0149	–0.0044*	0.0182
	(3.242)	(0.0010)	(0.0131)	(0.0022)	(0.0141)
R^2	0.72	0.35	0.55	0.38	0.19
Observations	267,866	267,866	267,866	267,866	148,584
Below-Median Blacks	27.14***	–0.0060**	0.0583*	–0.0144***	0.0195
	(7.41)	(0.0022)	(0.0345)	(0.0052)	(0.0199)
R^2	0.78	0.51	0.58	0.51	0.19
Observations	277,276	277,276	277,276	277,276	153,991
Above-Median Blacks	30.10***	–0.0098***	0.0483*	–0.0100	–0.0034
	(7.58)	(0.0024)	(0.0264)	(0.49)	(0.0179)
R^2	0.77	0.49	0.56	0.49	0.19
Observations	238,009	238,009	238,009	238,009	131,718

Note: Each cell represents a separate regression. All regressions are weighted by the number of birth counts in the cell. Standard errors, clustered on the state, are reported in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Table 4: UI extended benefits (EB+EUC) and infants' birth outcomes

	Birth Weight	Low Birth Weight	Small for Gestational Age	Full-Term Birth Weight	Apgar Score	Foetal growth	Gestational Weeks	Preterm Birth
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Predicted UI Eligibility	–198.78***	0.0699***	0.0731***	-135.07***	–0.5249**	–4.103***	–0.5566***	0.0633***
	(59.44)	(0.0161)	(0.0253)	(52.36)	(0.2559)	(1.344)	(0.1561)	(0.0206)
Maximum benefit ($1,000)	0.2999***	–0.00005**	–0.0001***	0.2299***	–0.0010	0.0066***	0.0005	–0.00004
	(0.0506)	(0.00002)	(0.00003)	(0.0577)	(0.0006)	(0.0014)	(0.0003)	(0.00004)
Predicted UI Eligibility × Maximum Benefit ($1,000)	2.243**	–0.0012***	–0.0006	1.577*	0.0081	0.0414	0.0092*	–0.0014**
	(1.027)	(0.0003)	(0.0005)	(0.9368)	(0.0082)	(0.0269)	(0.0050)	(0.0006)
R^2	0.76	0.49	0.58	0.78	0.17	0.55	0.52	0.48
Observations	158,185	158,185	158,126	153,381	156,576	158,126	158,126	158,126
Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Covariates	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: All regressions are weighted by the number of birth counts in the cell. Standard errors, clustered on the state, are reported in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

8. CONCLUSION

This paper examined the effects of temporary cash transfer through the Unemployment Insurance programme on an untargeted population: infants. We extended previous studies on this topic by showing that UI payments benefit mothers and new-borns. In addition, we provide evidence that these benefits are more pronounced among black mothers, uneducated mothers, and unmarried mothers.

The nontrivial effects of UI benefits on birth outcomes offer an unplanned externality that policymakers can use to re-evaluate the benefit components of the programme and re-design the optimum benefit schedule. The importance of these externalities lies in the long-term effect of health endowment at birth, and specifically the lifetime costs of adverse birth outcomes such as low birth weight.

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