Online Appendix

Investing in Infants:

The Lasting Effects of Cash Transfers to New Families

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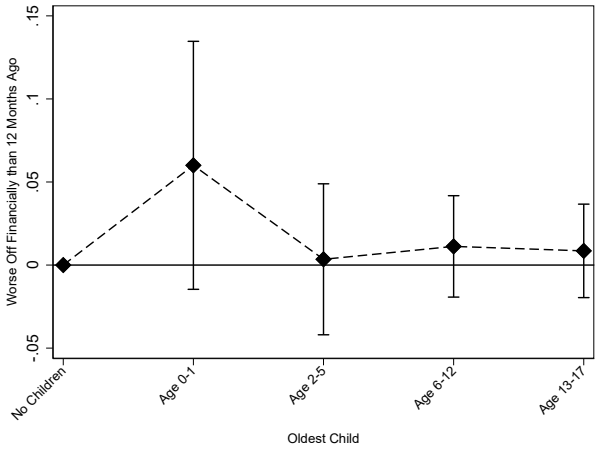
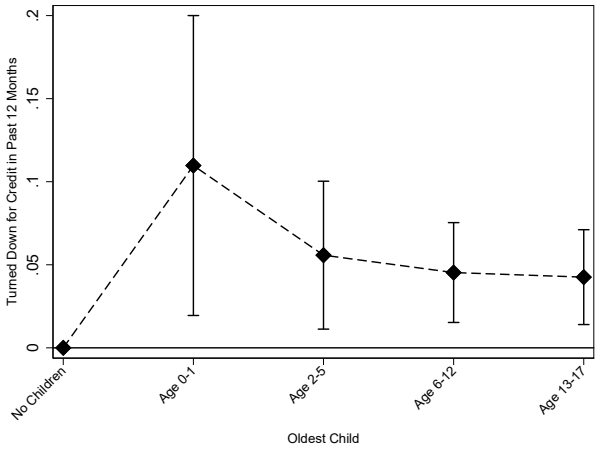
Figure A.I: First Birth and Potential Liquidity Constraints



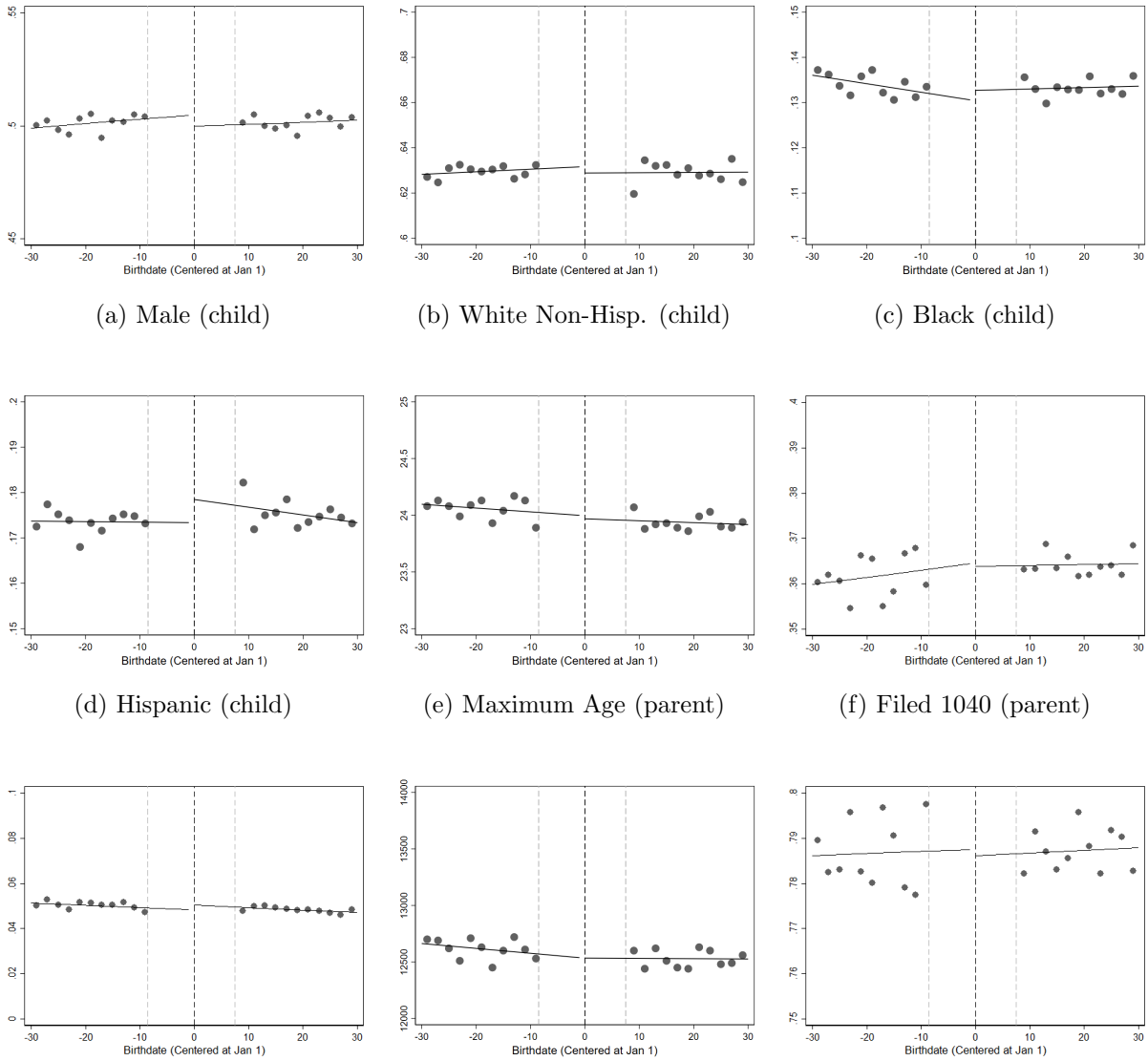
(a) Worse Off Financially



(b) Denied Credit

Note: The figure displays the coefficient estimates (and 95% confidence intervals using robust standard errors) for indicators of age group of oldest child (relative to no children) from a regression that also includes parent age category, region, and year fixed effects. In panel (a), the dependent variable is an indicator equal to one if a respondent reports being "Much worse off" or "Somewhat worse off" financially than 12 months ago. In panel (b), the dependent variable is an indicator equal to one if a respondent reports being "Turned down for credit" in the past 12 months. The sample includes respondents under age 50 from waves 2015-2019 of the Survey of Household Economics and Decision-making.

Figure A.II: Balance on Baseline Characteristics



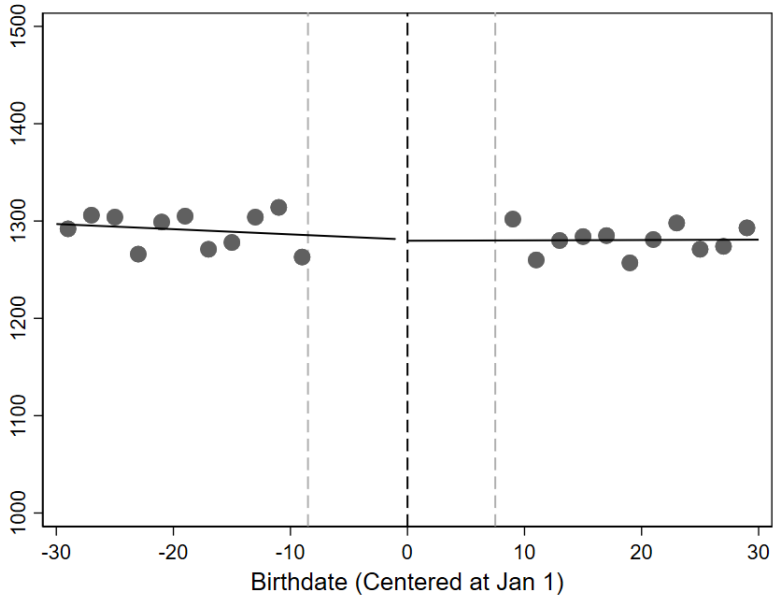
(a) Male (child) (b) White Non-Hisp. (child) (c) Black (child)

(d) Hispanic (child) (e) Maximum Age (parent) (f) Filed 1040 (parent)

(g) Married (parent) (h) Predicted AGI (parent) (i) In Poverty (parent)

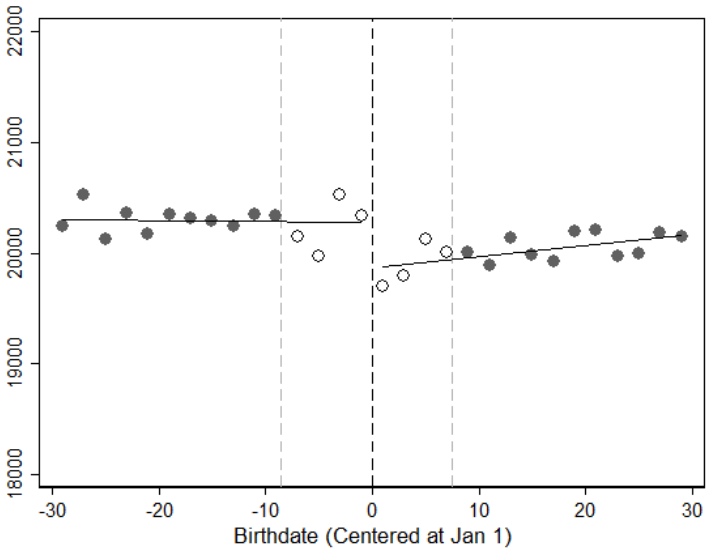
Note: The figure displays the mean of each baseline covariate by 2-day birthdate bin for first-born children who were born within 28 days of January 1 in years 1981-82, 1986-87, and 1991-92, and whose families have predicted AGI below the EITC eligibility maximum in the relevant tax year preceding birth. Parent/family variables are constructed from pre-birth filing information. The horizontal axis represents days relative to the January 1 birthdate cutoff. Birthdates to the left of the dotted line represent those where the child's family could have received additional resources from child-related tax benefits in the following year. See Table 2 for the RD estimates associated with each graph. See Table I and text for additional sample restrictions and information on variable construction. Census statistics approved for release under disclosure numbers CBDRB-FY2021-CES010-002, CBDRB-FY2021-CES010-003, and CBDRB-FY2021-CES010-010.

Figure A.III: Balance on Potential Additional Resources During Infancy had Child been Born Prior to Jan 1

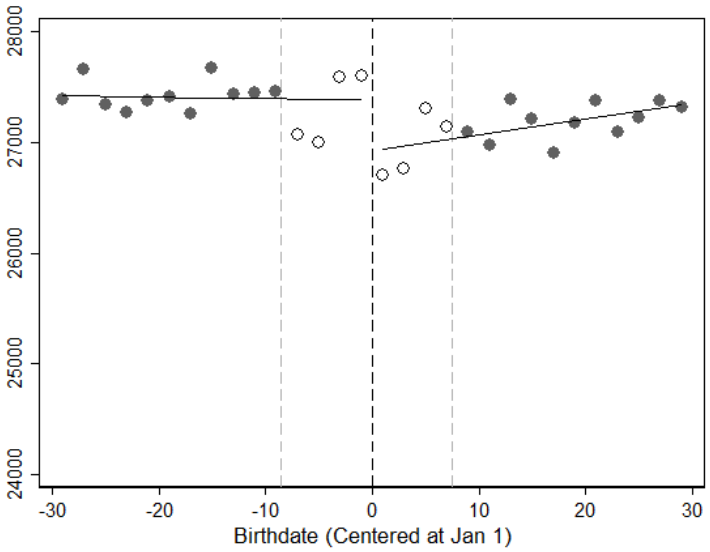


Note: The figure displays the mean potential additional resources from child-related tax benefits by 2-day birthdate bin for first-born children who were born within 28 days of January 1 in years 1981-82, 1986-87, and 1991-92, and whose families have predicted AGI below the EITC eligibility maximum in the relevant tax year preceding birth. Potential additional resources is defined as the child-related tax benefits that a child's family would have received if they had been born prior to January 1 (regardless of when they were actually born). It is calculated using information from prior tax filings combined with NBER's TAXSIM program. The horizontal axis represents days relative to the January 1 birthdate cutoff. The figure displays the estimated tax benefit of an additional dependent child for all birthdays, while only those to the left of the threshold are eligible. See Table I and text for additional sample restrictions and information on variable construction. Census statistics approved for release under disclosure numbers CBDRB-FY2021-CES010-002, CBDRB-FY2021-CES010-003, and CBDRB-FY2021-CES010-010.

Figure A.IV: Effect of Cash Transfer Eligibility on Adult Earnings (No Donut)



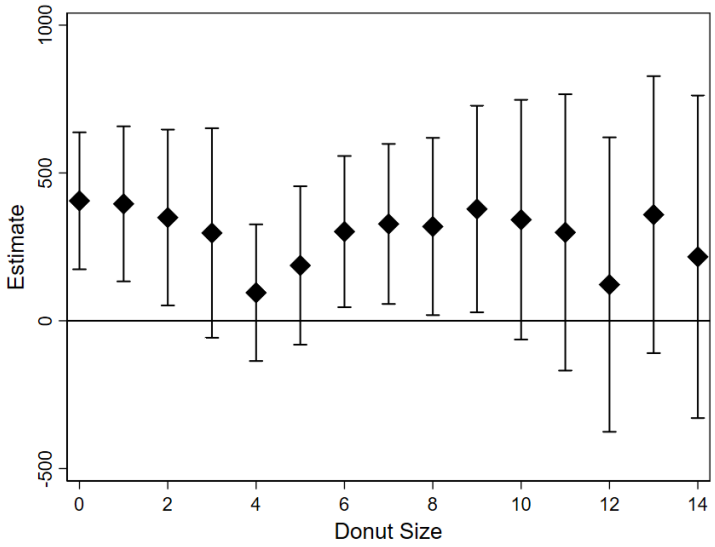
(a) Earnings (23 to 25)



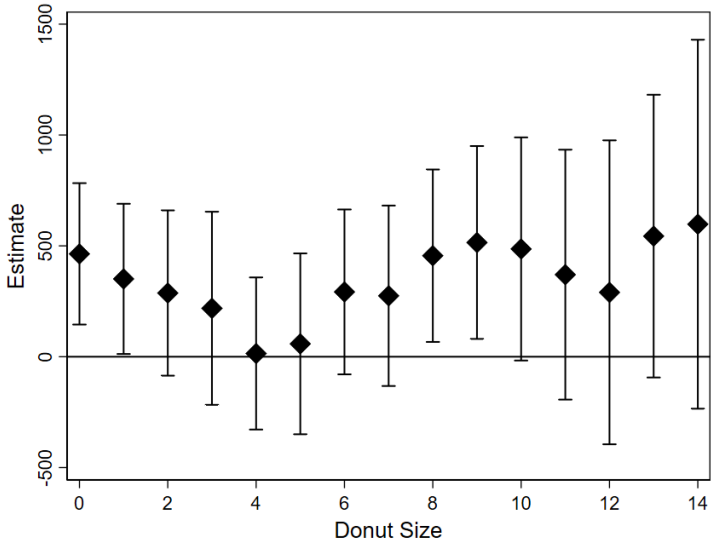
(b) Earnings (26 to 28)

Note: The figure displays mean earnings by 2-day birthdate bin for first-born children who were born within 28 days of January 1 in years 1981-82, 1986-87, and 1991-92, and whose families have predicted AGI below the EITC eligibility maximum in the relevant tax year preceding birth. The earnings outcome is constructed as the 3-year average of earnings (including non-filers as zeroes) at the filing unit level. The eight days on either side of January 1 are not excluded. The horizontal axis represents days relative to the January 1 birthdate cutoff. Birthdates to the left of the dotted line represent those where the child's family could have received additional resources from child-related tax benefits in the following year. See Table I and text for additional sample restrictions and information on variable construction. Census statistics approved for release under disclosure numbers CBDRB-FY2021-CES010-002, CBDRB-FY2021-CES010-003, and CBDRB-FY2021-CES010-010.

Figure A.V: Adult Earnings RD Estimates by Donut Size



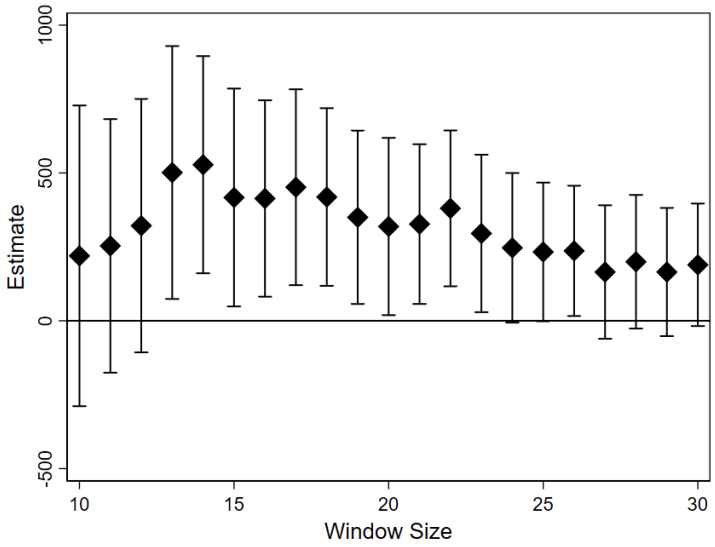
(a) Earnings (23 to 25)



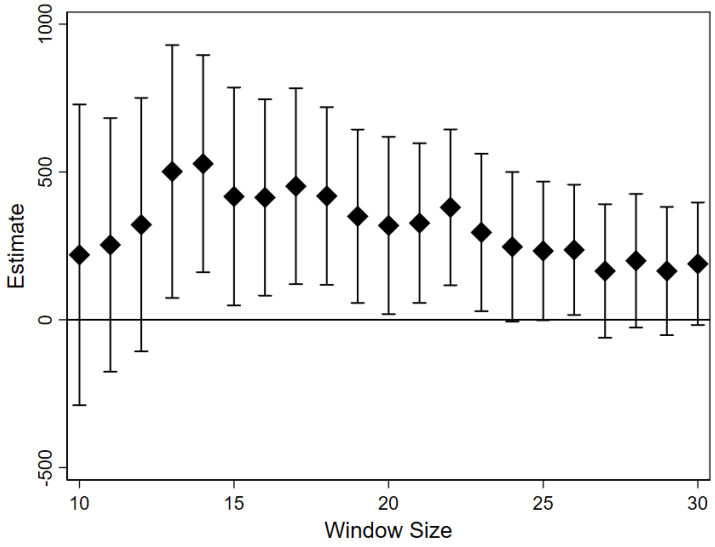
(b) Earnings (26 to 28)

Note: The figure displays a regression discontinuity estimate (β_1 from Equation 1) of earnings at ages 23-25 and 26-28 for various donut sizes. A bandwidth of 20 days on either side of the donut is used throughout. Census statistics approved for release under disclosure numbers CBDRB-FY2021-CES010-002, CBDRB-FY2021-CES010-003, and CBDRB-FY2021-CES010-010.

Figure A.VI: Adult Earnings RD Estimates by Bandwidth



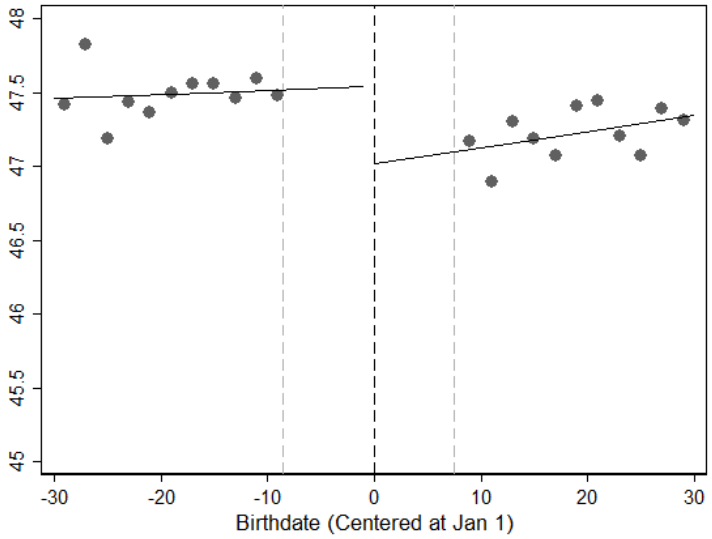
(a) Earnings (23 to 25)



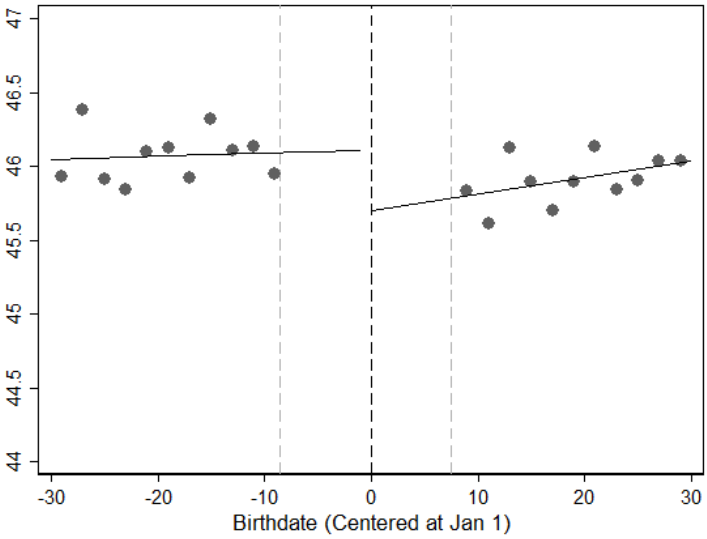
(b) Earnings (26 to 28)

Note: The figure displays a regression discontinuity estimate (β_1 from Equation 1) of earnings at ages 23-25 and 26-28 for various bandwidth sizes (on either side of the donut). A donut of eight days on either side of the cutoff is used throughout. Census statistics approved for release under disclosure numbers CBDRB-FY2021-CES010-002, CBDRB-FY2021-CES010-003, and CBDRB-FY2021-CES010-010.

Figure A.VII: Effect of Cash Transfer Eligibility on Adult Earnings Percentile



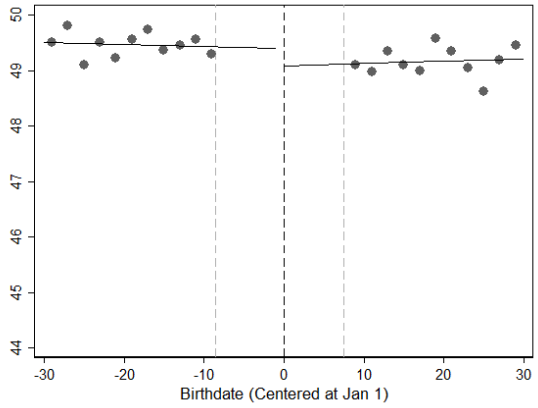
(a) Earnings Percentile (23 to 25)



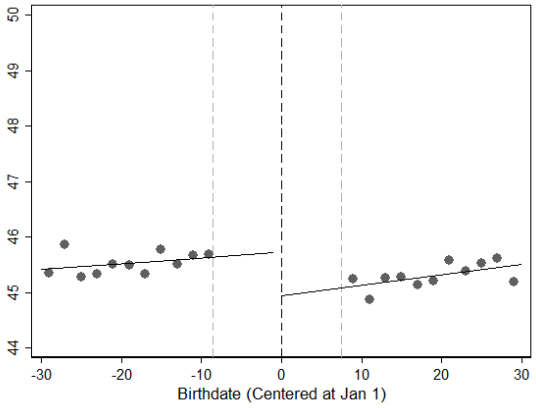
(b) Earnings Percentile (26 to 28)

Note: The figure displays mean adult earnings percentile by 2-day birthdate bin for first-born children who were born within 28 days of January 1 in years 1981-82, 1986-87, and 1991-92, and whose families have predicted AGI below the EITC eligibility maximum in the relevant tax year preceding birth. Adult earnings percentile is constructed by taking the 3-year average of earnings at the filing unit level (counting non-filing as zero) and then finding the percentile of that average within a child's cohort. The horizontal axis represents days relative to the January 1 birthdate cutoff. Birthdates to the left of the dotted line represent those where the child's family could have received additional resources from child-related tax benefits in the following year. See Table I and text for additional sample restrictions and information on variable construction. Census statistics approved for release under disclosure numbers CBDRB-FY2021-CES010-002, CBDRB-FY2021-CES010-003, and CBDRB-FY2021-CES010-010.

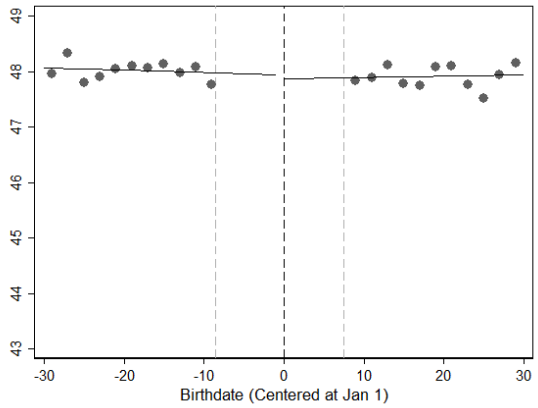
Figure A.VIII: Heterogeneity by Sex in the Effect of Cash Transfer Eligibility on Adult Earnings Percentile



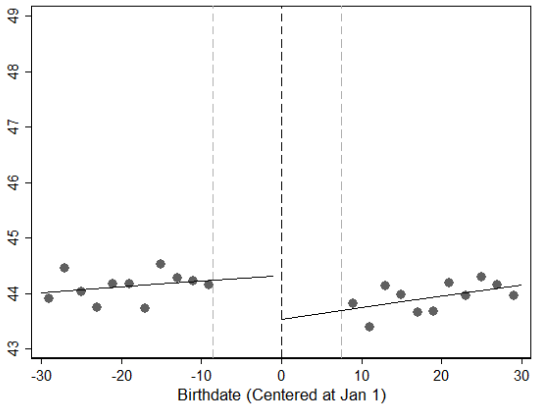
(a) Female Percentile Earnings (23 to 25)



(b) Male Percentile Earnings (23 to 25)



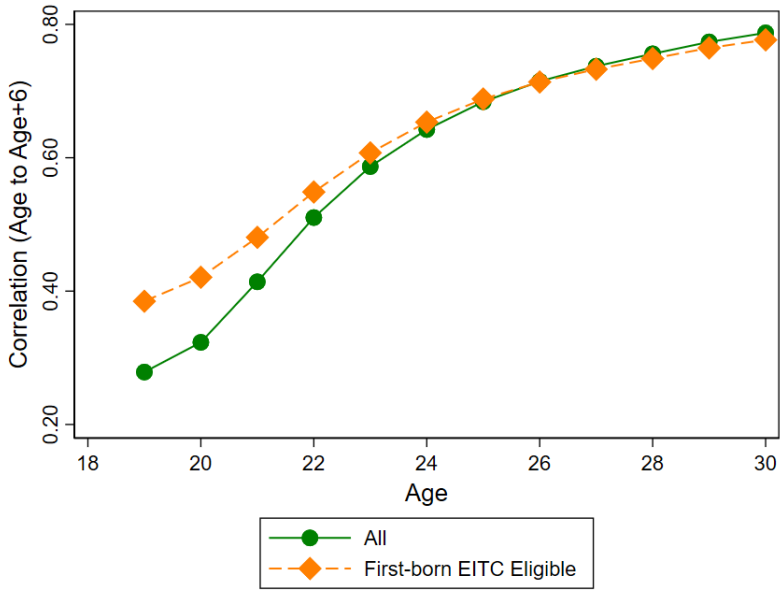
(c) Female Percentile Earnings (26 to 28)



(d) Male Percentile Earnings (26 to 28)

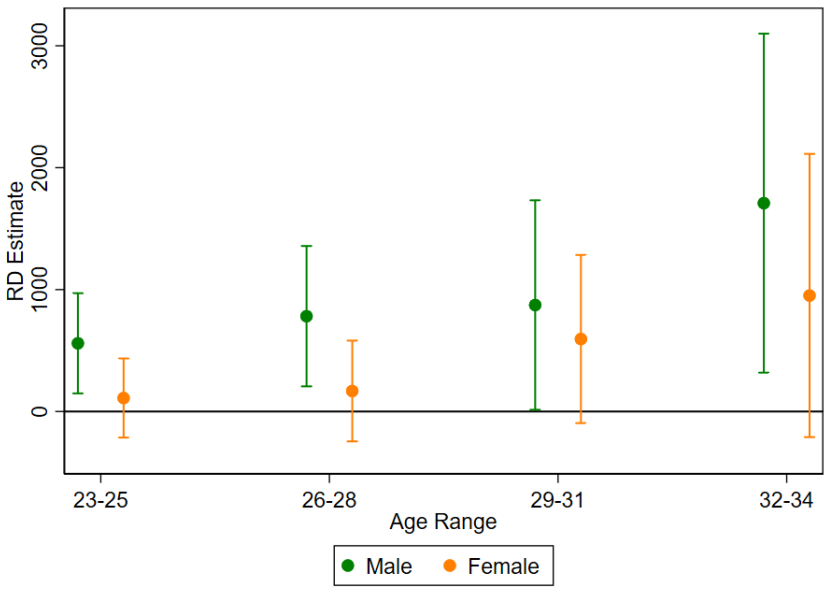
Note: Each figure displays mean adult earnings percentile by 2-day birthdate bin for first-born children who were born within 28 days of January 1 in years 1981-82, 1986-87, and 1991-92, and whose families have predicted AGI below the EITC eligibility maximum in the relevant tax year preceding birth. Adult earnings percentile is constructed by taking the 3-year average of earnings at the filing unit level (counting non-filing as zero) and then finding the percentile of that measure within the distribution of each child's cohort. The horizontal axis represents days relative to the January 1 birthdate cutoff. Birthdates to the left of the dotted line represent those where the child's family could have received additional resources from child-related tax benefits in the following year. See Table I and text for additional sample restrictions and information on variable construction. Census statistics approved for release under disclosure numbers CBDRB-FY2021-CES010-002, CBDRB-FY2021-CES010-003, and CBDRB-FY2021-CES010-010.

Figure A.IX: Correlation Between Earnings at Age t and Age $t+6$



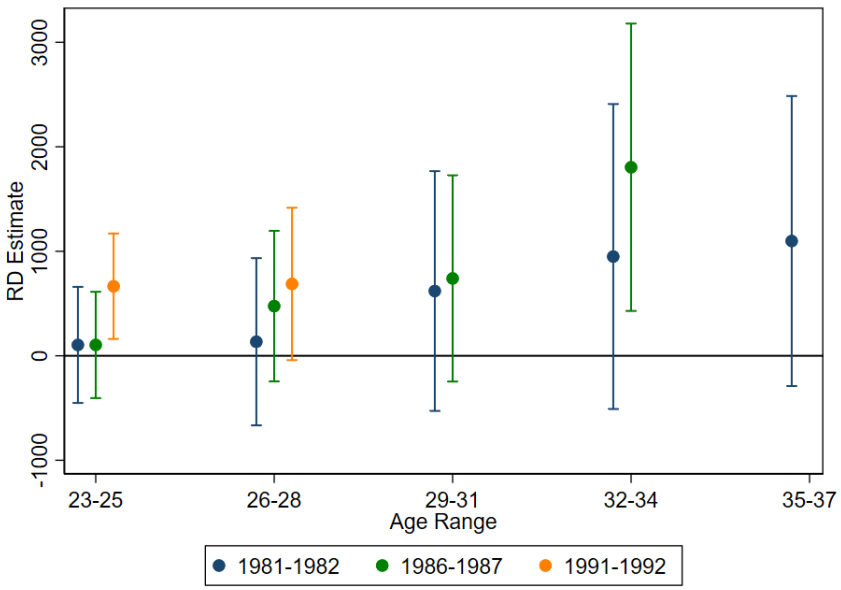
Note: The figure displays the correlation between earnings measured at age t and earnings at age $t+6$ within our analytical sample as well as that sample with parent income restriction removed. Census statistics approved for release under disclosure numbers CBDRB-FY2021-CES010-002, CBDRB-FY2021-CES010-003, and CBDRB-FY2021-CES010-010.

Figure A.X: Effect of Cash Transfer Eligibility on Adult Earnings: By Age and Sex



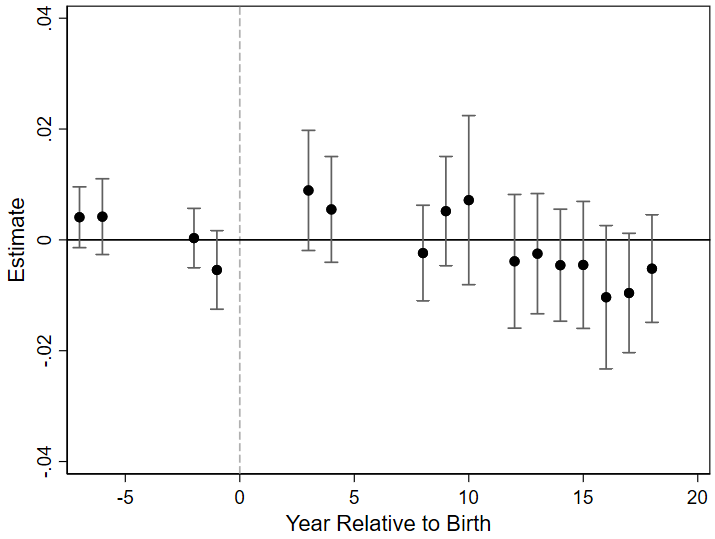
Note: The figure displays the basic regression discontinuity estimate (β_1 from Equation 1) by age range and sex. The sample changes across estimates since later cohorts are not yet observed at older ages. See Table I and the text for additional details on sample restrictions, specification, and construction of outcome variables. Census statistics approved for release under disclosure numbers CBDRB-FY2021-CES010-002, CBDRB-FY2021-CES010-003, and CBDRB-FY2021-CES010-010.

Figure A.XI: Effect of Cash Transfer Eligibility on Adult Earnings: By Age and Cohort

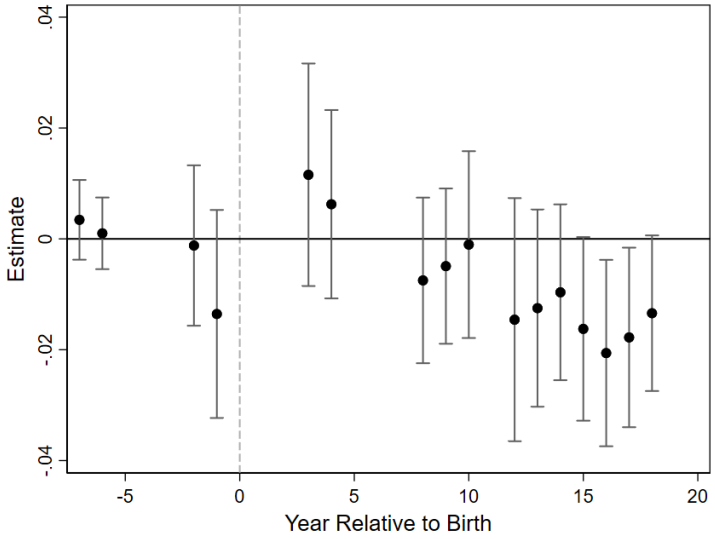


Note: The figure displays the basic regression discontinuity estimate (β_1 from Equation 1) by age range and cohort. For cohorts that are not observed at all ages in a given age range, we take the mean of ages at which they are observed. See Table I and the text for additional details on sample restrictions, specification, and construction of outcome variables. Census statistics approved for release under disclosure numbers CBDRB-FY2021-CES010-002, CBDRB-FY2021-CES010-003, and CBDRB-FY2021-CES010-010.

Figure A.XII: Effect of Cash Transfer Eligibility on Parent Marital Status Before and After Birth



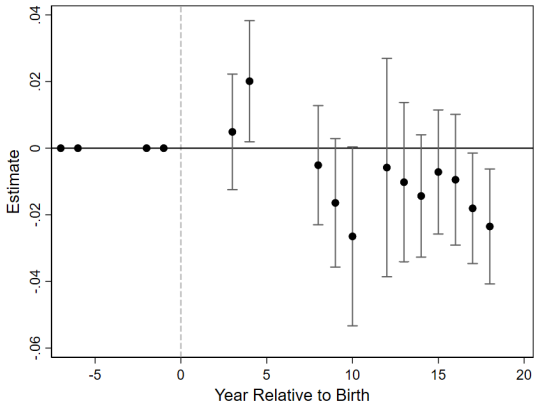
(a) Full Sample



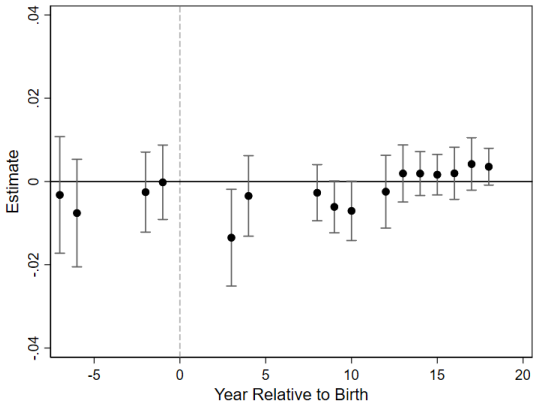
(b) Filers

Note: The figure displays the basic regression discontinuity estimate (β_1 from Equation 1) for marital status, where non-filers are counted as not married, at various years before (i.e., -6, -7, -2, and -1) and after the child's birth (i.e., 3, 4, 8, 9, 10, and 12-18). Panel (a) contains all families and panel (b) is restricted to families that filed a 1040 in the year or two prior to the birth of their child. Observed years are limited by tax data availability. See Table I and the text for additional details on sample restrictions, specification, and construction of outcome variables.

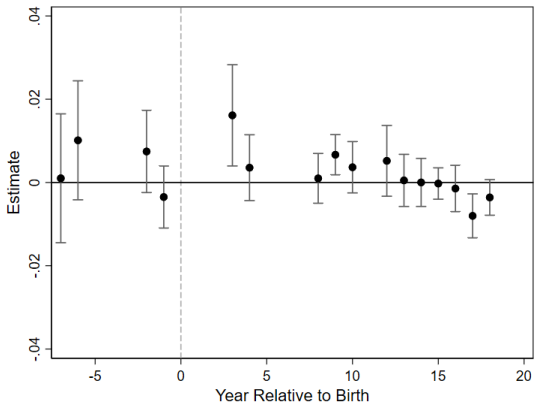
Figure A.XIII: Effects of Eligibility on Early Family Environment Before and After Birth



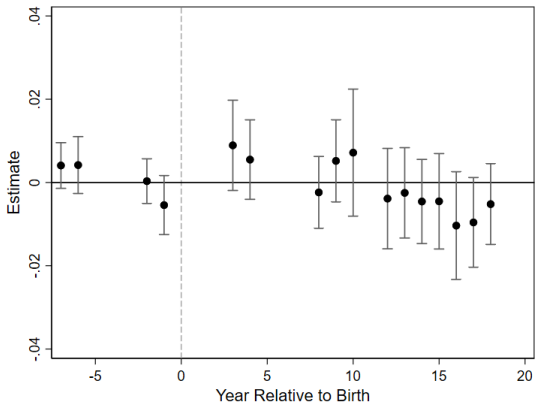
(a) Dependents



(b) Parent Poverty Status



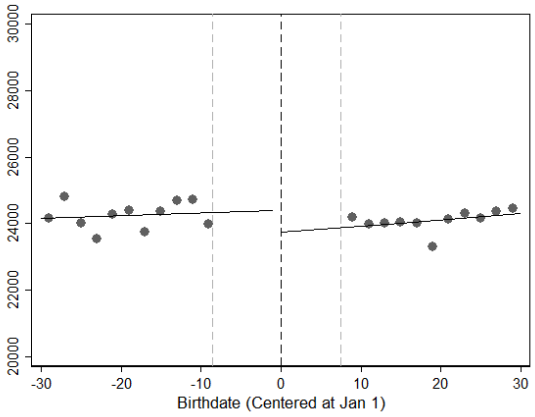
(c) Parent File 1040



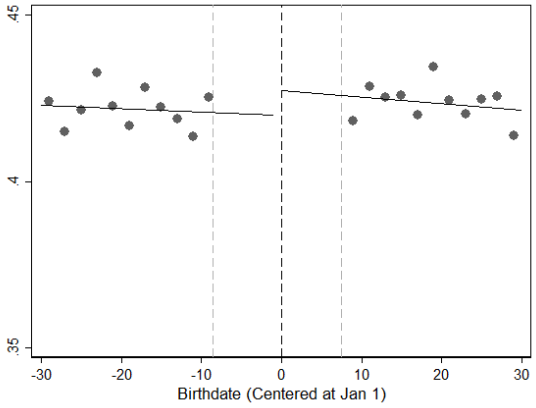
(d) Parent Marital Status

Note: The figure displays the basic regression discontinuity estimate (β_1 from Equation 1) for parental outcomes at various years before (i.e., -6, -7, -2, and -1) and after the child's birth (i.e, 3, 4, 8, 9-10, and 12-18). Observed years are limited by tax data availability. See Table I and the text for additional details on sample restrictions, specification, and construction of outcome variables.

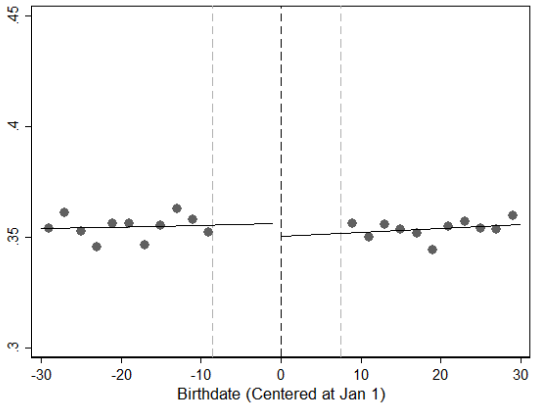
Figure A.XIV: Effects of Eligibility on Early Family Environment (3-4 Years After Birth)



(a) Parent Earnings



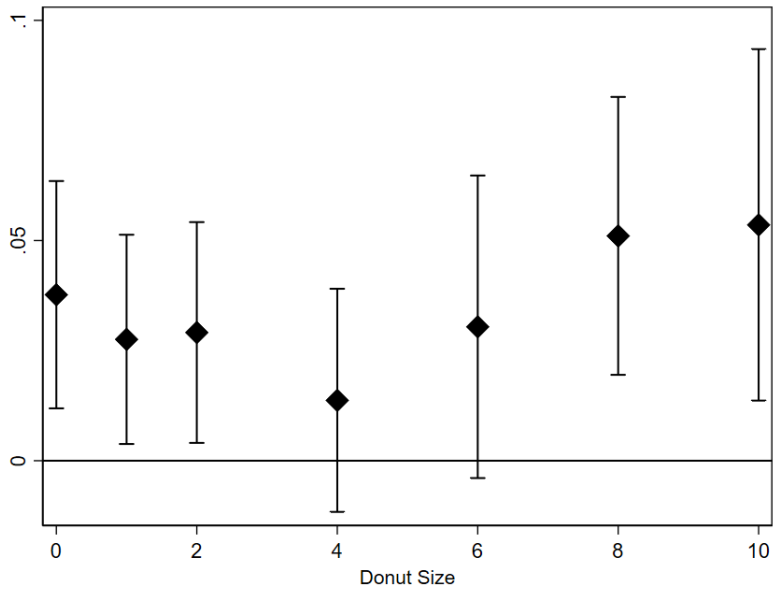
(b) Parent Poverty Status



(c) Parent Marital Status

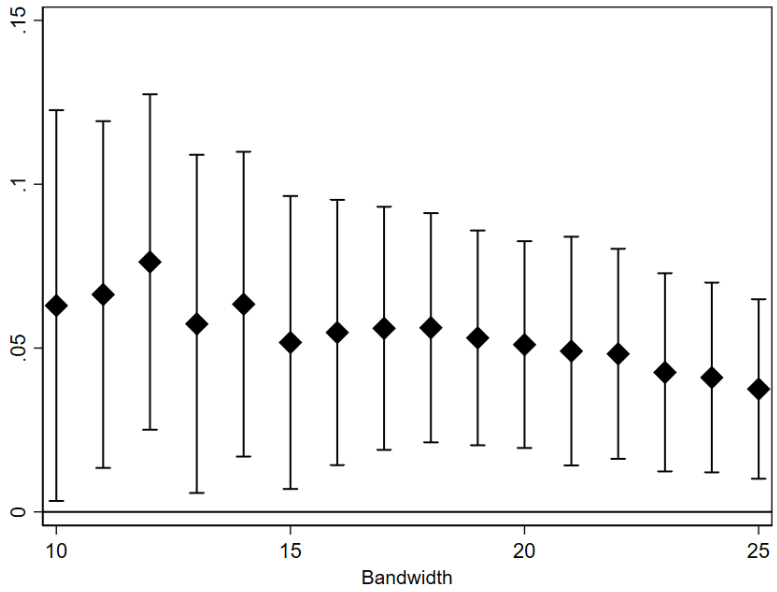
Note: The figure displays each outcome by 2-day birthdate bin for first-born children who were born within 28 days of January 1 in years 1981-82, 1986-87, and 1991-92, and whose families have predicted AGI below the EITC eligibility maximum in the relevant tax year preceding birth. The horizontal axis represents days relative to the January 1 birthdate cutoff. Birthdates to the left of the dotted line represent those where the child's family could have received additional resources from child-related tax benefits in the following year . Each panel reflects a different parental outcome observed 3-4 years after the child's birth. See Table I and text for additional sample restrictions and information on variable construction. Census statistics approved for release under disclosure numbers CBDRB-FY2021-CES010-002, CBDRB-FY2021-CES010-003, and CBDRB-FY2021-CES010-010.

Figure A.XV: Student Outcome Index RD Estimates by Donut Size (North Carolina)



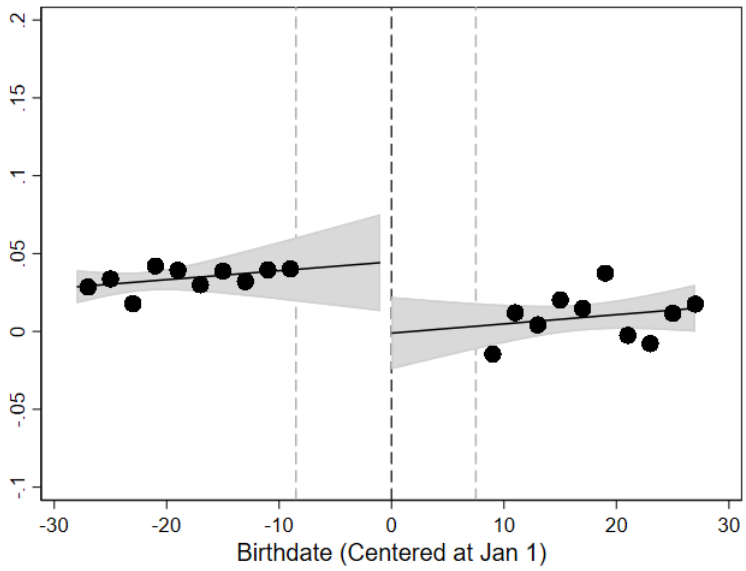
Note: The figure displays the basic regression discontinuity estimate (β_1 from Equation 1) of the student outcome index for various donut sizes. The sample consists of ever-FRL-eligible students born within 28 days of January 1 in years 1993 to 1998 who entered a North Carolina public school by grade 5. See the text for additional details on variable construction and sample restrictions..

Figure A.XVI: Student Outcome Index RD Estimates by Bandwidth (North Carolina)



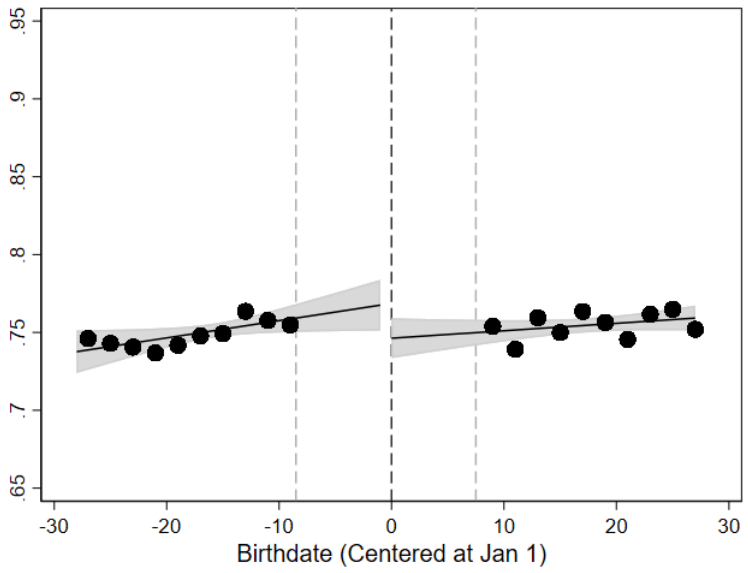
Note: The figure displays the basic regression discontinuity estimate (β_1 from Equation 1) of the student outcome index for various bandwidth sizes on either side of an 8-day donut. The sample consists of ever-FRL-eligible students born around January 1 in years 1993 to 1998 who entered a North Carolina public school by grade 5. See the text for additional details on variable construction and sample restrictions.

Figure A.XVII: Effect of Cash Transfer Eligibility on Student Test Score Index (North Carolina)



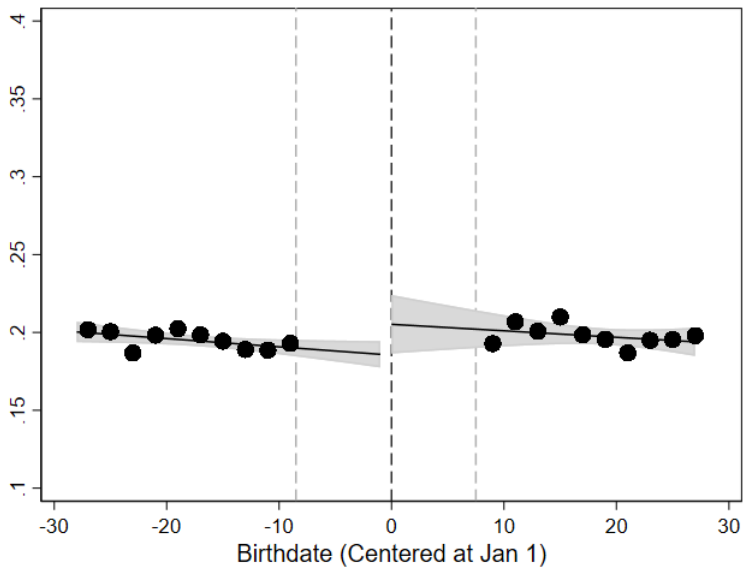
Note: The figure displays the mean of student test score index residuals (after accounting for recentered birth year fixed effects) by 2-day birthdate bin for FRL-eligible students born within 28 days of January 1 in years 1993 to 1998 who entered a North Carolina public school by grade 5. Test score index is constructed as the mean of normalized (mean zero, standard deviation one) math and reading test scores in grades 3 through 8. The horizonal axis represents days relative to the January 1 birthdate cutoff. Birthdates to the left of the dotted line represent those where the child's family could have received additional resources from child-related tax benefits in the following year. The shaded area shows the 95% confidence interval.

Figure A.XVIII: Effect of Cash Transfer Eligibility on HS Graduation (North Carolina)



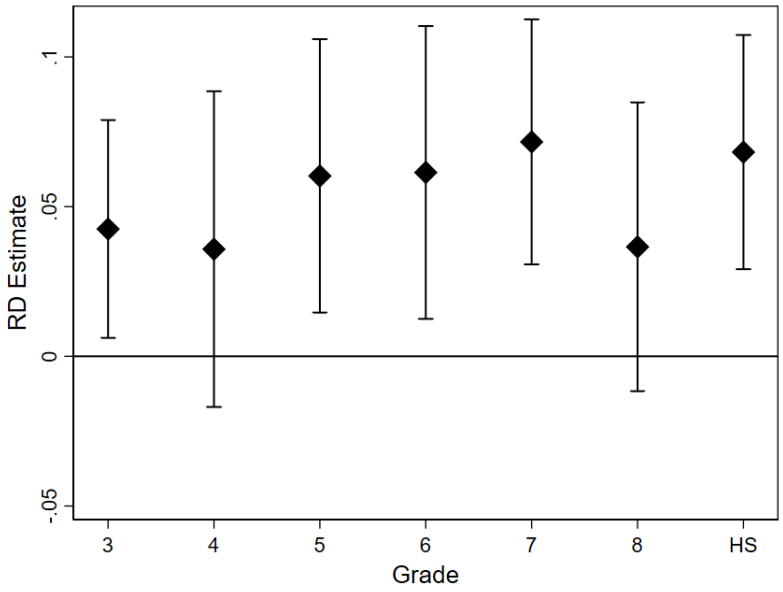
Note: The figure displays the mean of HS graduation rate (after accounting for recentered birth year fixed effects) by 2-day birthdate bin for FRL-eligible students born within 28 days of January 1 in years 1993 to 1998 who entered a North Carolina public school by grade 5. The horizonal axis represents days relative to the January 1 birthdate cutoff. Birthdates to the left of the dotted line represent those where the child's family could have received additional resources from child-related tax benefits in the following year. The shaded area shows the 95% confidence interval.

Figure A.XIX: Effect of Cash Transfer Eligibility on Ever Being Suspended (North Carolina)



Note: The figure displays the mean likelihood of ever being suspended in middle or high school (after accounting for recentered birth year fixed effects) by 2-day birthdate bin for FRL-eligible students born within 28 days of January 1 in years 1993 to 1998 who entered a North Carolina public school by grade 5. The horizonal axis represents days relative to the January 1 birthdate cutoff. Birthdates to the left of the dotted line represent those where the child's family could have received additional resources from child-related tax benefits in the following year The shaded area shows the 95% confidence interval.

Figure A.XX: Effect of Cash Transfer Eligibility on Student Test Score Index Across Grades (North Carolina)



Note: The figure displays the basic regression discontinuity estimates (β_1 from Equation 1) across grades. The sample contains ever-FRL-eligible students born within 28 days of January 1 in years 1993 to 1998 who entered a North Carolina public school by grade 5. Test score index is constructed as the mean of normalized (mean zero, standard deviation one) math and reading test scores in the given grade. Algebra and English end-of-course tests are used for high school. The vertical bars illustrate the 95% confidence intervals.

Table A.I: Balance on County of Birth Characteristics (from 1980 Census)

	Population (1)	Median Family Income (2)	% Poverty (3)	% Age ¡ 5 (4)	% Age ¿ 65 (5)	% HS Dropout (6)	% BA+ (7)	% Black (8)	% Hispanic (9)	LFP (10)
Born Before Jan 1	1.67e+04	20.1200	-0.0005	0.0000	0.0004*	0.0005	-0.0007	-0.0005	-0.0003	-0.0001
	(2.30e+04)	(40.2500)	(0.0006)	(0.0001)	(0.0002)	(0.0009)	(0.0006)	(0.0013)	(0.0014)	(0.0004)
Obs	*599,000*	*599,000*	*599,000*	*599,000*	*599,000*	*599,000*	*599,000*	*599,000*	*599,000*	*599,000*
Mean	*1.19e+06*	*19670.00*	*0.13*	*0.09*	*0.14*	*0.33*	*0.17*	*0.13*	*0.09*	*0.62*

Note: Each cell shows the basic regression discontinuity estimate (β_1 from Equation 1) from a separate regression where the row denotes the 1980 county characteristic (based on county of birth) serving as the dependent variable. The sample is restricted to individuals born within 28 days of January 1 in years 1981-82, 1986-87, and 1991-92, and whose families have predicted AGI below the EITC eligibility maximum in the relevant tax year preceding birth. All regressions exclude observations within an eight day donut of the January 1 cutoff. Significance levels indicated by: * (p<0.10), **(p<0.05), ***(p<0.01).

Table A.II: Comparison of Average Family Characteristics in December versus January

	Married (1)	Teen Mom (2)	White (3)
Buckles and Hungerman (2013)			
December (vs. January)	0.0056***	-0.0011***	0.0021***
	(0.0001)	(0.0000)	(0.0001)
Obs	*52,041,052*	*52,041,052*	*52,041,052*
Mean	*0.69*	*0.13*	*0.79*
Full Sample			
December (vs. January)	0.0056***	-0.0018***	-0.0007
	(0.0005)	(0.0004)	(0.0006)
Obs	*19,310,000*	*16,880,000*	*15,900,000*
Mean	*0.44*	*0.12*	*0.63*
First-Born EITC Eligible Sample			
December (vs. January)	0.0007	0.0000	-0.0004
	(0.0004)	(0.0011)	(0.0011)
Obs	*5,767,000*	*4,777,000*	*4,587,000*
Mean	*0.05*	*0.35*	*0.63*

Note: Each cell shows the coefficient for December births (relative to January births) from a regression following the specification used in Buckles and Hungerman (2013). The first panel shows results from Table 1 in Buckles and Hungerman (2013). The second panel shows results from the full sample of births in our tax data for recentered birth years 1981-82, 1986-87, and 1991-92. The third panel shows results from the sample of first births to EITC-eligible families in our tax data for recentered birth years 1981-82, 1986-87, and 1991-92. Significance levels indicated by: * ($p<0.10$), **($p<0.05$), ***($p<0.01$).

Table A.III: Balance on Baseline Student Demographic Characteristics (North Carolina)

	Black	White	Hispanic	LEP	Male
	(1)	(2)	(3)	(4)	(5)
Born Before Jan 1	-0.017	0.022	-0.008	-0.007	-0.011
	(0.016)	(0.017)	(0.008)	(0.008)	(0.011)
Obs	*45,010*	*45,010*	*45,010*	*44,948*	*45,010*
Mean	*0.406*	*0.399*	*0.147*	*0.091*	*0.518*

Note: Each cell shows the basic regression discontinuity estimate (β_1 from Equation 1) from a separate regression where the column denotes the demographic characteristic used as the dependent variable. The sample contains ever-FRL-eligible students born within 28 days of January 1 in years 1993 to 1998 who entered a North Carolina public school by grade 5. All regressions exclude observations within an eight day window of the January 1 cutoff. LEP indicates whether a student has been designated to have limited English proficiency. Significance levels indicated by: * ($p<0.10$), **($p<0.05$), ***($p<0.01$).

Table A.IV: Placebo Discontinuities for Adult Earnings

	Age 23-25 (1)	Age 26-28 (2)
Born Before February 1	176.0	-76.5
	(175.8)	(395.5)
Born Before March 1	-237.0**	-237.8
	(112.9)	(339.9)
Born Before April 1	-127.7	-35.6
	(163.2)	(290.8)
Born Before May 1	-64.9	63.6
	(186.4)	(270.1)
Born Before June 1	93.2	-16.6
	(158.7)	(326.4)
Born Before August 1	-49.0	106.2
	(153.5)	(292.7)
Born Before October 1	127.5	-214.0
	(126.3)	(215.5)
Born Before November 1	-82.5	-271.9
	(131.5)	(226.0)

Note: Each cell shows the regression discontinuity estimate (β_1 from Equation 1) for being born before the 1st of a month from a separate regression where the row title denotes the month pair comparison. We look at all month pairs for which less than 10 percent of the U.S. population is affected by a school start date (we further exclude July 1 due to the structure of our sample). The sample is restricted to first-born individuals born within 28 days of each 1st of the month in the given re-centered birth years, and whose families have predicted AGI below the EITC eligibility maximum in the relevant tax year preceding birth. All regressions exclude observations within an eight day donut of the 1st cutoff. See the text for additional details on variable construction and sample restrictions. Census statistics approved for release under disclosure numbers CBDRB-FY2021-CES010-002, CBDRB-FY2021-CES010-003, and CBDRB-FY2021-CES010-010. Significance levels indicated by: * (p<0.10), **(p<0.05), ***(p<0.01).

Table A.V: Effect of Cash Transfer Eligibility on Adult Earnings Percentile

	(1)	(2)	(3)
Earnings Percentile (23 to 25)	0.471**	0.433*	0.434*
	(0.224)	(0.226)	(0.223)
Mean	*47.22*	*47.22*	*47.22*
Earnings Percentile (26 to 28)	0.337	0.305	0.337
	(0.214)	(0.215)	(0.213)
Mean	*45.90*	*45.90*	*45.90*
Cash Transfer in Infancy	1,291	1,291	1,291
Observations	625,000	625,000	625,000
Recentered Birth Year Fixed Effects	X	X	X
Demographic Controls		X	X
Parent Predicted AGI Control			X

Note: Each cell shows the basic regression discontinuity estimate (β_1 from Equation 1) from a separate regression where the row denotes the outcome variable. Each column indicates the set of controls included. The sample is restricted to first-born children born within 28 days of January 1 in the given re-centered birth years, and whose families have predicted AGI below the EITC eligibility maximum in the relevant tax year preceding birth. All regressions exclude observations within an eight day donut of the January 1 cutoff. Adult earnings percentile is constructed by taking the 3-year average of earnings at the filing unit level (counting non-filing as zero) and then finding the percentile of that average within a child's cohort. See the text for additional details on variable construction and sample restrictions. Census statistics approved for release under disclosure numbers CBDRB-FY2021-CES010-002, CBDRB-FY2021-CES010-003, and CBDRB-FY2021-CES010-010. Significance levels indicated by: * (p<0.10), **(p<0.05), ***(p<0.01).

Table A.VI: Effect of Cash Transfer Eligibility on Adult Earnings of Non-First-Born By Cohort

	1981-82 (1)	1986-87 (2)	1991-92 (3)	All (4)
Earnings (23 to 25)	187.4	-194.8	-215.7	-110.0
	(507.6)	(664.8)	(449.0)	(251.6)
Mean	*21,520*	*17,860*	*18,590*	*19,170*
Earnings (26 to 28)	-624.3	-4.99	-217.3	-271.1
	(624.6)	(801.7)	(555.2)	(366.9)
Mean	*27,020*	*24,350*	*24,070*	*24,860*
Cash Transfer in Infancy	291.3	219.9	345.7	306.2
Observations	53,000	44,000	116,000	213,000

Note: Each cell shows the basic regression discontinuity estimate (β_1 from Equation 1) from a separate regression where the row denotes the outcome variable. Each column indicates the set of birth years included. The earnings outcome is constructed as the 3-year average of the earnings (including non-filers as zeroes) at the filing unit level. The sample is restricted to non-first-born children born within 28 days of January 1 in the given re-centered birth years, and whose families have predicted AGI below the EITC eligibility maximum in the relevant tax year preceding birth. The sample is further restricted to parents who filed in the year or two prior to the birth of a non-first-born child. This is to avoid the large increase in the transfer that would result from an income-eligible non-filer with a single child deciding to file as a result of their second child being born prior to January 1. All regressions exclude observations within an eight day donut of the January 1 cutoff. See the text for additional details on variable construction and sample restrictions. Census statistics approved for release under disclosure numbers CBDRB-FY2021-CES010-002, CBDRB-FY2021-CES010-003, and CBDRB-FY2021-CES010-010. Significance levels indicated by: * (p<0.10), **(p<0.05), ***(p<0.01).

Table A.VII: Effect of Cash Transfer Eligibility on Marital Status

	All	Female	Male
	(1)	(2)	(3)
Married (23 to 25)	0.002	0.004	0.001
	(0.003)	(0.004)	(0.004)
Mean	*0.16*	*0.19*	*0.12*
Married (26 to 28)	0.001	-0.001	0.004
	(0.003)	(0.004)	(0.004)
Mean	*0.24*	*0.27*	*0.20*
Cash Transfer in Infancy	1,295	1,295	1,295
Observations	625,000	312,000	313,000

Note: Each cell shows the basic regression discontinuity estimate (β_1 from Equation 1) from a separate regression where the row denotes the outcome variable. Each column indicates the subsample by sex. Non-filers are counted as not married. The sample is restricted to first-born children born within 28 days of January 1 in the years 1981-82, 1986-87, and 1991-92, and whose families have predicted AGI below the EITC eligibility maximum in the relevant tax year preceding birth. All regressions exclude observations within an eight day donut of the January 1 cutoff. See the text for additional details on variable construction and sample restrictions. Census statistics approved for release under disclosure numbers CBDRB-FY2021-CES010-002, CBDRB-FY2021-CES010-003, and CBDRB-FY2021-CES010-010. Significance levels indicated by: * ($p<0.10$), **($p<0.05$), ***($p<0.01$).

Table A.VIII: Effect of Cash Transfer Eligibility on Adult Earnings by Sex and Cohort

	1981-82		1986-87		1991-92		All	
	Female	Male	Female	Male	Female	Male	Female	Male
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Earnings (23 to 25)	-259.3	555.2	-17.79	296.4	519.0	782.2**	110.6	559.6***
	(321.8)	(386.3)	(334.5)	(375.8)	(331.7)	(345.5)	(165.4)	(209.7)
Mean	*23,150*	*19,930*	*20,140*	*17,690*	*20,730*	*18,970*	*21,280*	*18,830*
Earnings (26 to 28)	-148.4	521.4	545.0	499.5	105.8	1208.0**	168.3	781.9***
	(454.3)	(561.5)	(408.1)	(568.8)	(449.9)	(481.2)	(210.9)	(293.7)
Mean	*29,830*	*25,560*	*28,800*	*25,440*	*28,320*	*25,340*	*28,940*	*25,440*
Observations	94,000	89,500	100,000	101,000	117,000	122,000	312,000	313,000

Note: Each cell shows the basic regression discontinuity estimate (β_1 from Equation 1) from a separate regression where the row denotes the outcome variable. Each column indicates the set of birth years included and the gender of the individual. The sample is restricted to individuals meeting the given subsample criteria, who were first-born children, and who were born within 28 days of January 1 in years 1981-82, 1986-87, and 1991-92, and whose families have predicted AGI below the EITC eligibility maximum in the relevant tax year preceding birth. All regressions exclude observations within an eight day donut of the January 1 cutoff. See the text for additional details on variable construction and sample restrictions. Census statistics approved for release under disclosure numbers CBDRB-FY2021-CES010-002, CBDRB-FY2021-CES010-003, and CBDRB-FY2021-CES010-010. Significance levels indicated by: * (p<0.10), **(p<0.05), ***(p<0.01).

Table A.IX: Effect of Cash Transfer Eligibility on Parent Outcomes

	Control Mean (1)	RD Estimate (2)
Cumulative Earnings	625,600	11550** (4903)
Cumulative Earnings (Filer)[a]	737,200	7493 (7103)
Mean Earnings	58,250	903.7** (458.7)
Mean Poverty	0.21	-0.001 (0.002)
Always in Poverty	0.04	0.001 (0.002)
Always Filer	0.46	0.007** (0.003)
Ever Married	0.71	-0.002 (0.005)
Ever Single	0.84	-0.005* (0.003)

Note: Each cell in column (1) contains control means (i.e. means for those born after January 1). Each cell in column (2) shows the basic regression discontinuity estimate (β_1 from Equation 1) from a separate regression where the row denotes the outcome variable. The sample is restricted to first-born individuals who were born within 28 days of January 1 in years 1981-82, 1986-87, and 1991-92, and whose families have predicted AGI below the EITC eligibility maximum in the relevant tax year preceding birth. All regressions exclude observations within an eight day donut of the January 1 cutoff. For years where we do not observe the universe of tax records, we use linear interpolation and extrapolation (bounded at zero and the maximum family income from the 18 years following childbirth) to impute family income. For other measures, we use only the subset of 18 years following childbirth where we observe the universe of tax records. See the text for additional details on variable construction and sample restrictions. *a* - parent filer indicates whether parent filed in year or two prior to birth of child (see Appendix B for more information). Census statistics approved for release under disclosure numbers CBDRB-FY2021-CES010-002, CBDRB-FY2021-CES010-003, and CBDRB-FY2021-CES010-010. Significance levels indicated by: * (p<0.10), **(p<0.05), ***(p<0.01).

Table A.X: Effect of Cash Transfer Eligibility on Student Outcome Index: Robustness to Inclusion of Various Fixed Effects

	(1)	(2)	(3)	(4)	(5)
Born Before Jan 1	0.051***	0.043**	0.039**	0.040**	0.039**
	(0.016)	(0.019)	(0.019)	(0.019)	(0.019)
Obs	*44,992*	*39,322*	*39,319*	*39,804*	*39,757*
Mean	*-0.059*	*-0.052*	*-0.052*	*-0.051*	*-0.051*
Cash Transfer in Infancy	1,595	1,595	1,595	1,595	1,595
Recentered Birth Year FEs	X	X	X	X	X
Day-of-Week FEs	X	X	X	X	X
District FEs		X			
District X Recentered Birth Year FEs			X		
School FEs				X	
School X Recentered Birth Year FEs					X

Note: Each cell shows the regression discontinuity estimate (β_1 from Equation 1) from a separate regression where the column denotes the inclusion of different sets of fixed effect controls: school district, school, district by recentered birth year, and school by recentered birth year. All regressions exclude observations within an eight day window of the January 1 cutoff. The sample consists of ever-FRL-eligible students born within 28 days of January 1 in years 1993 to 1998 who entered a North Carolina public school by grade 5. See the text for additional details on variable construction and sample restrictions.Significance levels indicated by: * (p<0.10), **(p<0.05), ***(p<0.01).

Table A.XI: Effect of Cash Transfer Eligibility on Student Outcome Index: Robustness to Alternative Index Construction

	(1)	(2)	(3)
Primary Index	0.051***	0.051***	0.047***
	(0.016)	(0.016)	(0.016)
Obs	*44,992*	*44,992*	*44,992*
Mean	*-0.059*	*-0.059*	*-0.059*
Only observed components are included	0.046***	0.046**	0.041**
	(0.018)	(0.018)	(0.017)
Obs	*44,992*	*44,992*	*44,992*
Mean	*-0.063*	*-0.063*	*-0.063*
Students with any missing components dropped	0.051**	0.050**	0.049**
	(0.020)	(0.020)	(0.019)
Obs	*29,191*	*29,191*	*29,191*
Mean	*0.009*	*0.009*	*0.009*
Cash Transfer in Infancy	1,595	1,595	1,595
Recentered Birth Year Fixed Effects	X	X	X
Day-of-Week Fixed Effects		X	X
Demographic Controls			X

Note: Each cell shows the regression discontinuity estimate (β_1 from Equation 1) from a separate regression where the row denotes different index constructions and the column denotes the inclusion of various controls. All regressions exclude observations within an eight day window of the January 1 cutoff. The sample consists of ever-FRL-eligible students born within 28 days of January 1 in years 1993 to 1998 who entered a North Carolina public school by grade 5. The average cash transfer in infancy is produced using tax data for a similar population of individuals born in North Carolina and observed as eligible for FRL based on their reported 1040 AGI at the relevant ages. See the text for additional details on variable construction and sample restrictions. Significance levels indicated by: * (p<0.10), **(p<0.05), ***(p<0.01).

Table A.XII: Heterogeneity of Effect of Cash Transfer Eligibility on Student Outcome Index by Student Demographics

	Black	White	Hispanic	LEP	Male	Female
	(1)	(2)	(3)	(4)	(5)	(6)
Born Before Jan 1	0.011	0.098***	0.014	-0.028	0.049**	0.051**
	(0.026)	(0.025)	(0.039)	(0.047)	(0.024)	(0.023)
Obs	*18,348*	*17,811*	*6,607*	*4,002*	*23,302*	*21,690*
Mean	*-0.163*	*0.045*	*-0.093*	*-0.253*	*-0.130*	*0.017*
Cash Transfer in Infancy	1,657	1,595	1,554	NA	1,595	1,595

Note: Each cell shows the regression discontinuity estimate (β_1 from Equation 1) from a separate regression where the column denotes the subsample. All regressions exclude observations within an eight day window of the January 1 cutoff (i.e., Donut Size = 8). The sample consists of ever-FRL-eligible students born within 28 days of January 1 in years 1993 to 1998 who entered a North Carolina public school by grade 5. The average cash transfer in infancy is produced using tax data for a similar population of individuals born in North Carolina and observed as eligible for FRL based on their reported 1040 AGI at the relevant ages. See the text for additional details on variable construction and sample restrictions. LEP indicates whether a student has been designated to have limited English proficiency. Significance levels indicated by: * ($p<0.10$), **($p<0.05$), ***($p<0.01$).

Table A.XIII: Effect of Cash Transfer Eligibility on Adolescent Outcomes

	(1)	(2)	(3)
HS Algebra Test Score	0.036*	0.035*	0.032
	(0.021)	(0.021)	(0.020)
Obs	*32,527*	*32,527*	*32,526*
Mean	*0.064*	*0.064*	*0.064*
HS English Test Score	0.073***	0.072***	0.064**
	(0.026)	(0.026)	(0.026)
Obs	*34,842*	*34,842*	*34,842*
Mean	*-0.142*	*-0.142*	*-0.142*
Graduate HS	0.022**	0.022**	0.023**
	(0.011)	(0.011)	(0.011)
Obs	*36,519*	*36,519*	*36,517*
Mean	*0.748*	*0.748*	*0.748*
Ever Suspended in HS	-0.006	-0.006	-0.006
	(0.006)	(0.006)	(0.006)
Obs	*36,991*	*36,991*	*36,989*
Mean	*0.050*	*0.050*	*0.050*
Cutoff Year Fixed Effects	X	X	X
Day-of-Week Fixed Effects		X	X
Demographic Controls			X

Note: Each cell shows the regression discontinuity estimate (β_1 from Equation 1) from a separate regression. All regressions exclude observations within an eight day window of the January 1 cutoff (i.e., Donut Size = 8). The sample consists of ever-FRL-eligible students born within 28 days of January 1 in years 1993 to 1998 who entered a North Carolina public school by grade 5. Test scores are normalized to have a mean of zero and a standard deviation of one within years. See the text for additional details on variable construction and sample restrictions. Significance levels indicated by: * (p<0.10), **(p<0.05), ***(p<0.01).

Appendix B: Data Details, AGI Prediction, and Simulated Cash Transfer

We use the administrative tax data housed at the U.S. Census to explore the long-term effects of cash transfers provided during infancy. We have access to IRS 1040 data for every filer in the United States in 1979, 1984, 1989, 1994-95, and 1998-2018. We obtain date of birth, sex, and state of birth for nearly every individual born in the United States after 1969 from the Social Security Administration (SSA) Numident File.[1] Using information on family composition, income, and exact date of birth, we can look back at an individual's early childhood family environment to calculate the size of the cash transfer available from tax benefits (and how this varied across the January 1 date of birth eligibility threshold).

We use the Numident file to focus on a sample born within one month of January 1 in 1981-82, 1985-86, and 1991-92. We focus on these years due to the availability of 1040 tax information (in 1979, 1984, and 1989), which we use to predict eligibility for the EITC. We link these children with their parents using any 1040 tax form on which a child (identified by their SSN) is reported as a dependent. To determine likely eligibility for the EITC, we follow the linked parents backwards to the closest pre-birth year in which we have the universe of 1040 tax information.[2] We use this information (including whether or not an individual's parents filed a 1040) to predict AGI during the tax year ending with or just prior to the birth of a new child.

As discussed in the text, we use predicted Adjusted Gross Income (AGI) in multiple places in our analyses (e.g., to restrict our sample to EITC-eligible individuals, to simulate the magnitude of the cash transfer in infancy, to conduct balance checks, etc.). To fit our prediction model, we use data from the late 90s and early 2000s when we have a more

[1] For the purposes of our main analyses, we are missing the small number of individuals who do not show up in the Numident file (i.e., lack SSNs) or are never claimed as a dependent in the tax data. Our outcome information is limited to that observed in the tax data in later years, in which we observe all filers.

[2] In cases where a child has two parents on their later 1040 tax form that do not remain in the same household as we track them backward, we follow the mother. We identify a child as first-born if the 1040 in which they are linked to their parent contains no older siblings and the closest pre-birth year tax return contains no other children.

complete panel of tax data. Specifically, we use data from 1994-1995, and 1998-2005. We impose the same sample restrictions (i.e., parents with a child born around the January 1 cutoff) as we do for earlier birth cohorts. We then regress AGI at time t (AGI_t) on indicators for parent (maximum) age interacted with flexible set of AGI bins at time $t-k$ (AGI_{t-k}), where $k \in \{1, 2\}$.[3] More specifically, the procedure was as follows:

1. Adjust observed AGI for inflation (to \$2015) and count missing as zero AGI
2. Create AGI bins:
    - \$1000 increments from \$0-\$40,000
    - \$5,000 increments from \$40,000-\$80,000
    - \$10,000 from \$80,000-\$150,000
    - Above \$150,000
3. For each $k \in \{1, 2\}$, regress current year AGI (AGI_t) on parent (maximum) age indicators interacted with lagged (AGI_{t-k}) bins (using tax data from 1994-1995, 1998-2005)
4. Use the coefficients fit in the prior step to predict unobserved AGI 1 and 2 years after an observed year
    - Use the 1979 tax data to predict AGI for 1980 and 1981 tax years (corresponding to 1981 and 1982 recentered birth years)
    - Use the 1984 tax data to predict AGI for 1985 and 1986 tax years (corresponding to 1986 and 1987 recentered birth years)
    - Use the 1989 tax data to predict AGI for 1990 and 1991 tax years (corresponding to 1991 and 1992 recentered birth years)

Appendix Figure B.I illustrates the structure of the available tax data and the corresponding set of births that form our analytical sample. We do not include children born on or around

[3] We also estimated this relationship for $k \in \{3, 4, 5\}$, but the predictions were significantly worse over these longer time spans (e.g. the rate of actual EITC income-eligible families predicted to be non-eligible increases by more than 23% from $k \in \{1, 2\}$ to $k \in \{3, 4, 5\}$ in our sample of first-born children).

January 1 of 1980, 1985, and 1990 in our primary analysis sample because the differential 1040 filing incentives on either side of the January 1 cutoff could yield a spurious imbalance in baseline covariates simply due to differentially observing family income on either side of the cutoff. Using these years could also raise concerns of endogenous AGI.

We use the predicted AGI directly to test for balance and to restrict our sample based on (predicted) EITC eligibility for a family under the assumption that the just-born child counted for tax purposes (regardless of whether the child was born before January 1). Because this sample restriction is based on having a predicted AGI below a particular level in each year, changes to the prediction method only result in shifting relatively small groups of individuals into or out of the analytical sample. As a consequence, changes to the prediction method have minimal influence on the estimated effect of eligibility for child-related tax benefits. As discussed in the text, we also use the predicted AGI to obtain an understanding of the magnitude of the benefits associated with having a child born before January 1. We use the AGI prediction, combined with information on marital status and number of dependents, to recover the taxes owed and credits due to each family when claiming 1 child compared with no children using NBER's TAXSIM program.[4] We calculate this difference for the family of every child in our sample.

The estimated cash transfers in infancy reported in the text do not allow for forecast error in the predicting AGI that determines child tax benefits (i.e., everyone with the same lagged AGI and maximum parent age is assigned the same predicted AGI and child tax benefits). Due to the non-linearity of the relationship between child tax benefits and AGI, this may result in a biased prediction of the size of the cash transfer within groups (and

[4]We use a similar strategy to estimate the implied discontinuity in child-related benefits during infancy within our sample of North Carolina students, using the tax data to select families with similar-aged children and incomes in North Carolina before tracking them back to their pre-birth information to estimate the implied effect on resources during infancy. First, we capture the set of children meeting the following conditions: (1) the child is born in North Carolina in recentered birth years within the same sample period where we observe the universe of tax filings (i.e., 1994, 1995, and 1998), and (2) the child is ever eligible for FRL in grade 3-8 (based on their age and the income information on parent's tax filings). Next, we link these children back to their parent's tax filing prior to their birth year or the prior year (for those born in years where we observe the universe of tax filings). Finally, we estimate the implied discontinuity in child-related tax benefits during infancy using the average of the simulated benefit difference at the January 1 cutoff for those born before the cutoff.

overall). We have re-estimated the size of the cash transfer allowing for forecast error and generally find similar estimates of the magnitudes of the cash transfers within groups. To allow for forecast error, we simply collect the residuals from the prediction regressions we fit using the more complete panel of tax data we have in later years. We then randomly draw (with replacement) a residual within each cell defined by the interaction of AGI bin and parent maximal age and assign it to an observation in the associated cell in our analytic sample. For each observation we then add this residual (i.e., forecast error) to the predicted AGI level to obtain a predicted AGI with forecast error. Finally, we run these predicted AGIs (with forecast error) through the NBER's TAXSIM program. This produces estimates of the size of the cash transfer, under the assumption that forecast errors are relatively similar across years. Under these assumptions, Appendix Table B.I illustrates that the mean cash transfers are somewhat smaller than the estimates produced without forecast error.

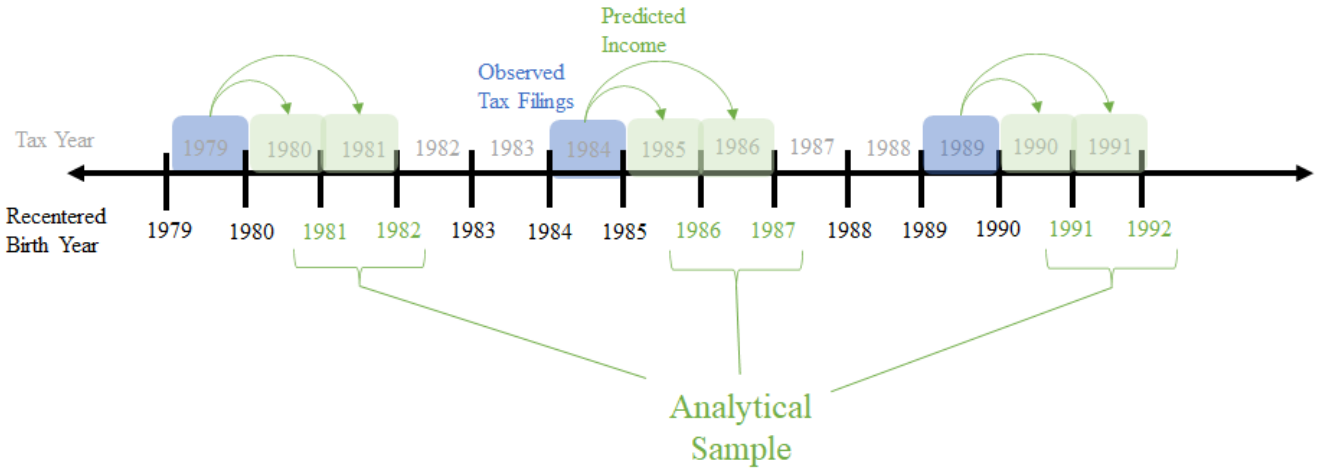
As we discuss in the text, while this measure provides a reasonable indication of the size of the average cash transfer in infancy, significant uncertainty remains. First, there is uncertainty induced by our predicted income measure. Because our predictions are based off of tax filing information from the mid-1990s to early-2000s (when the universe of 1040s is observed in consecutive years), our predictions are likely to bias our estimate of the size of the average increase in resources if the relationship between lagged income and current income changes over time. This may be more problematic in the earlier years of our sample (1981-82 and 1986-87 recentered birth years) due to the labor market fluctuations during this period.[5] Second, we are using AGI and predicted AGI to infer eligibility for the EITC. It is possible that earned income and AGI differ for some individuals (e.g. due to capital gains), which would likely result in an overestimate of the associated credit amount. Third, there is uncertainty induced by our classification of a dependent as a first child. Because the 1040 did not require a child's SSN until 1994, we use these later 1040s to link a child with their parents. While we use the prior 1040 information on number of dependent children claimed

[5]Specifically, the labor market weakened significantly between 1979 (the base year used for prediction) and the 1980 and 1981 tax years, and strengthened significantly between 1984 (the base year used for prediction) and the 1985 and 1986 tax years.

(in the 1979, 1984, and 1989 tax years) to improve our classification, there likely remains some misclassification. The primary concern is that an older sibling may not be claimed as a dependent in 1994, which may result in us incorrectly identifying a child as a first child. Because a non-first-born child generates significantly smaller tax benefits during our sample period, any improper classification of them as a first child would result in an upward bias of the implied increase in resources during infancy in our main sample of children that we classify as first-born and EITC income-eligible.[6] While we expect this misclassification is modest, it is likely to be more problematic during the earlier years of our sample (1981-82 and 1986-87 recentered birth years) given the implied age of an older sibling by 1994. Finally, but perhaps most significantly, there is uncertainty generated by incomplete filing and take up of the EITC. Our estimated increase in resources during infancy assumes that eligible individuals are filing taxes and claiming the EITC, but take-up has never been 100%. Some estimates suggest that EITC take-up was roughly 70% in the mid-1980s and rose to 81-86% by 1990 (Scholz 1990; Scholz 1994). This suggests an upward bias in our estimates of the implied increase in resources during infancy that is, again, likely worse for the earlier years of our sample.

[6] In our samples, we estimate the tax benefit as $306 for non-first-born children vs. $1,291 for first-born children. As the income of prior-filing parents of non-first-born children is substantially higher than parents of first-born children, the difference in tax benefits understates the difference in the relative importance of these resources to the two groups.

Figure B.I: Data Structure and Analytical Sample



Note: The diagram illustrates the structure of the available tax data and the corresponding set of births that form the analytical sample.

Table B.I: Alternative Estimates of Cash Transfer Means

	Mean Cash Transfer (1)
All Cohorts	785.2
1981-1982	644.4
1986-1987	504.4
1991-1992	1130.0

Note: Each cell contains the mean estimated cash transfer within the group indicated by the row. See Appendix B for details of construction. The sample is restricted to individuals meeting the given subsample criteria who were born within 28 days of January 1 in years 1981-82, 1986-87, and 1991-92, and whose families have predicted AGI below the EITC eligibility maximum in the relevant tax year preceding birth. All regressions exclude observations within an eight day donut of the January 1 cutoff. See the text for additional details on variable construction and sample restrictions. Census statistics approved for release under disclosure numbers CBDRB-FY2021-CES010-002, CBDRB-FY2021-CES010-003, and CBDRB-FY2021-CES010-010. Significance levels indicated by: * ($p<0.10$), ** ($p<0.05$), *** ($p<0.01$).