

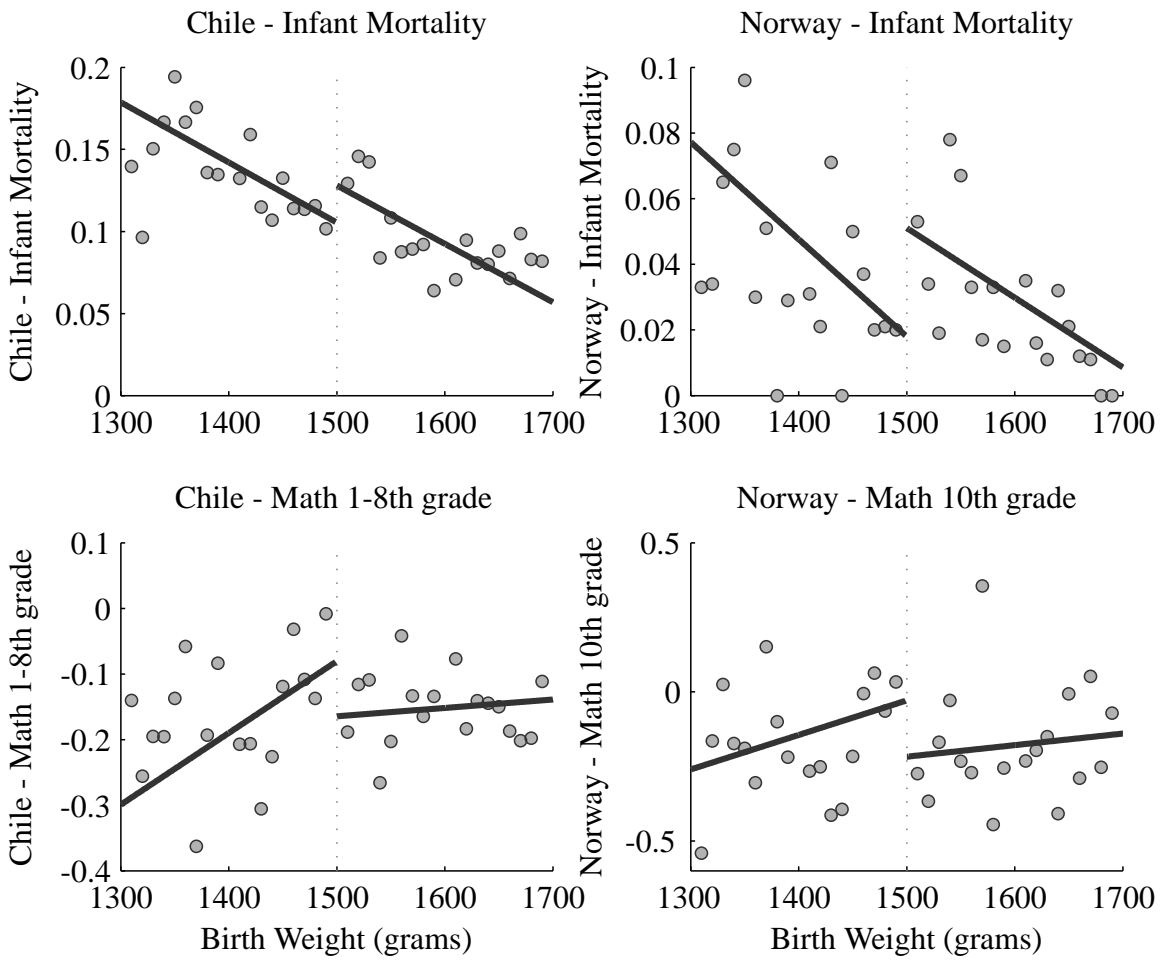
Online Appendix

Early Life Health Interventions and Academic Achievement

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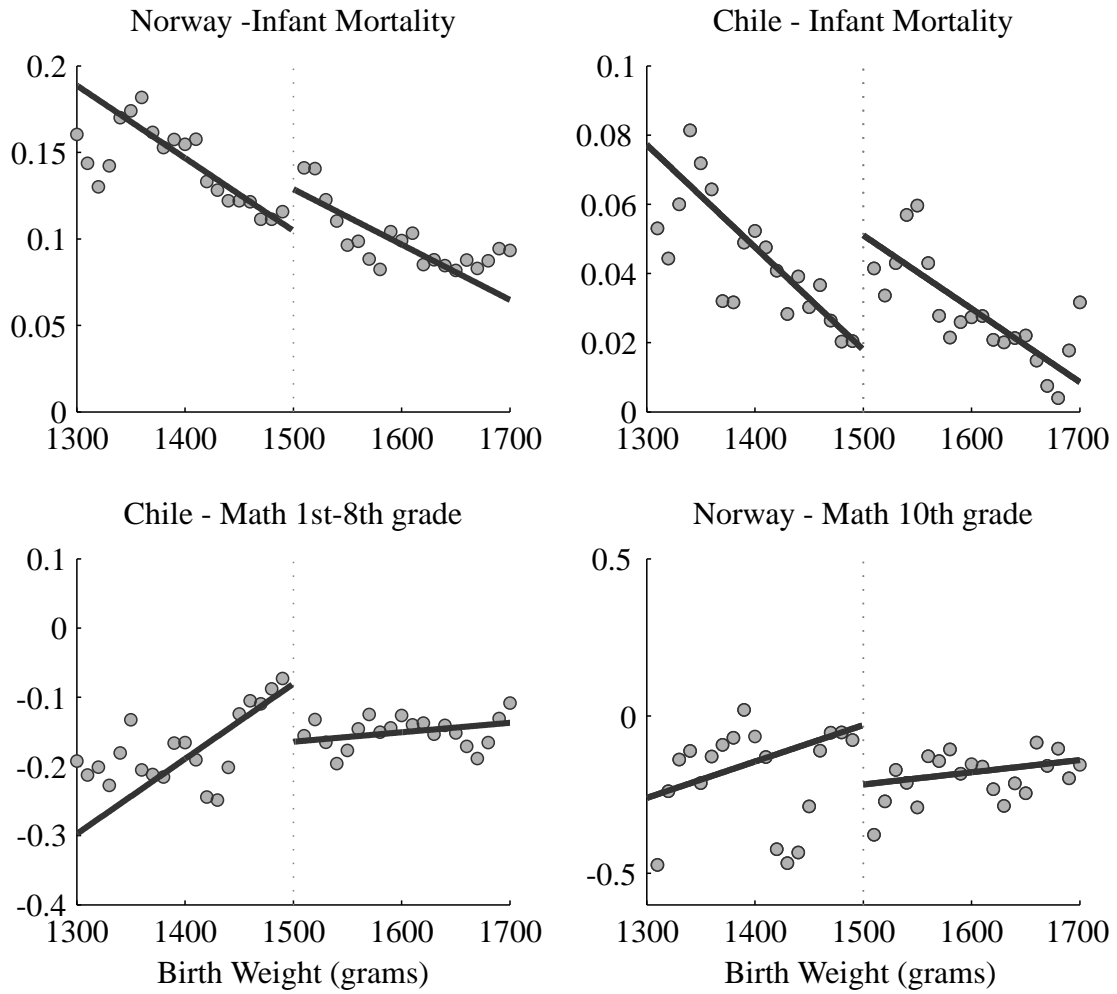
A Robustness of Main Results

Figure A-1: Main Results, smaller bins (10 grams)



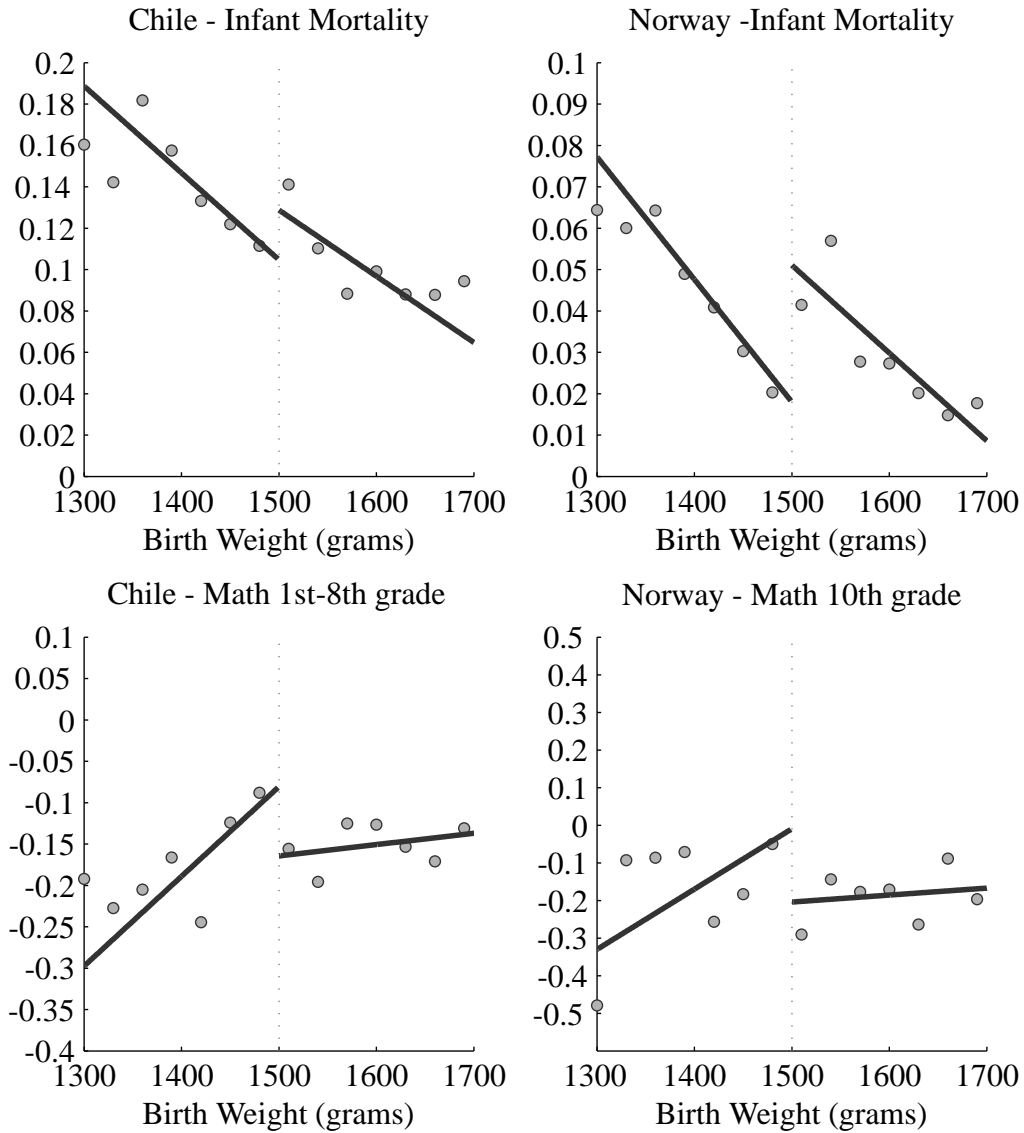
Note: This figure shows the main results presented in the paper with bins of 10 grams (1/3 an ounce). This is the level at which birth weight is measured in Norway and where almost 90% of data is measured in Chile. See main text for a description of the construction of these figures. The 1500 gram bin was dropped. All figures for 32 weeks of gestation or more.

Figure A-2: Main Results, 400 gram window



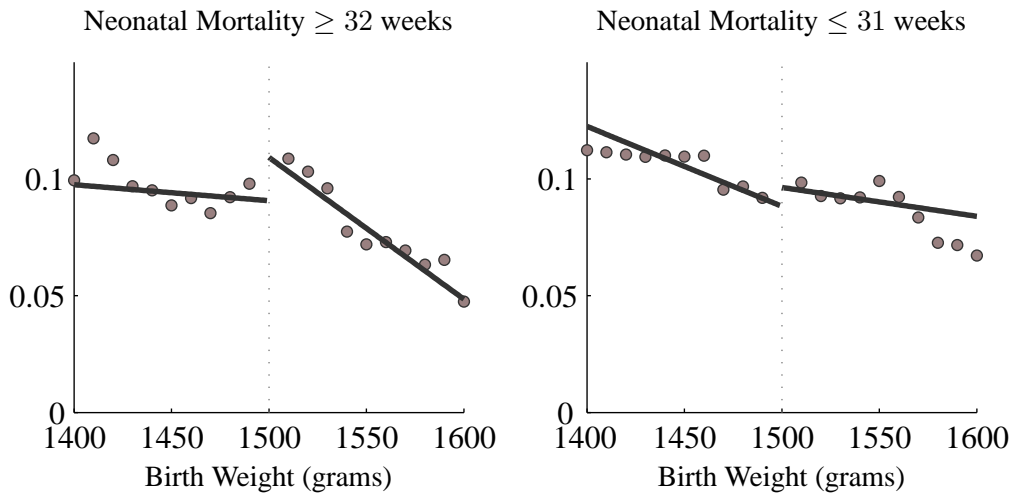
Note: This figure shows the main results presented in the paper with a larger window width of 200 grams on either side of the cutoff. See main text for a description of the construction of these figures. The 1500 gram bin was dropped. All figures for 32 weeks of gestation or more.

Figure A-3: Main Results, 30 gram bins at 30 gram intervals only



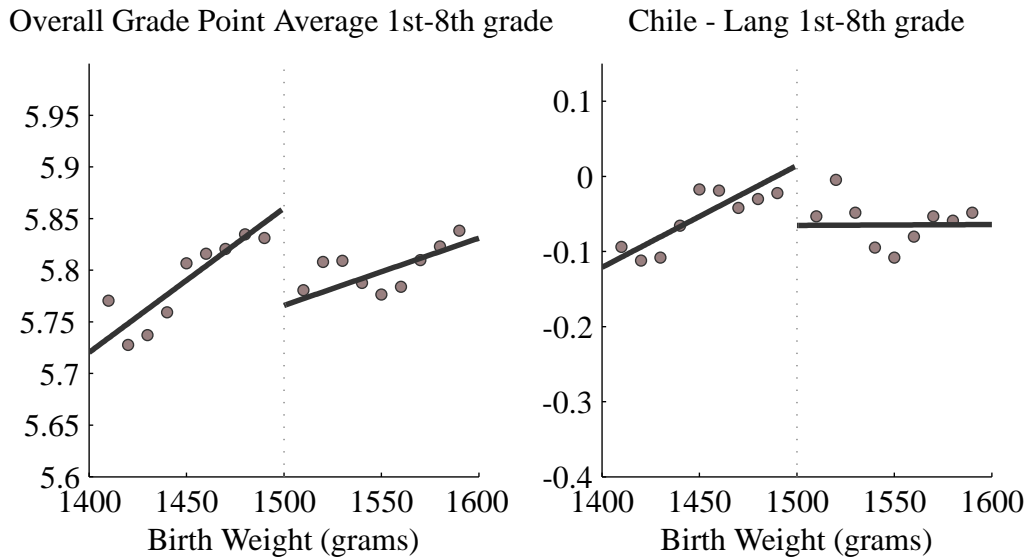
Note: This figure shows the main results presented in the paper with dots that represent averages of 30 gram bins (approximately 1 ounce) centered at 30 gram intervals. The window width is 200 grams on either side of the cutoff. The dark lines are a linear fit using triangular weights on either side using the micro data. The 1500 gram bin was dropped. All figures for 32 weeks of gestation or more.

Figure A-4: Neonatal Mortality



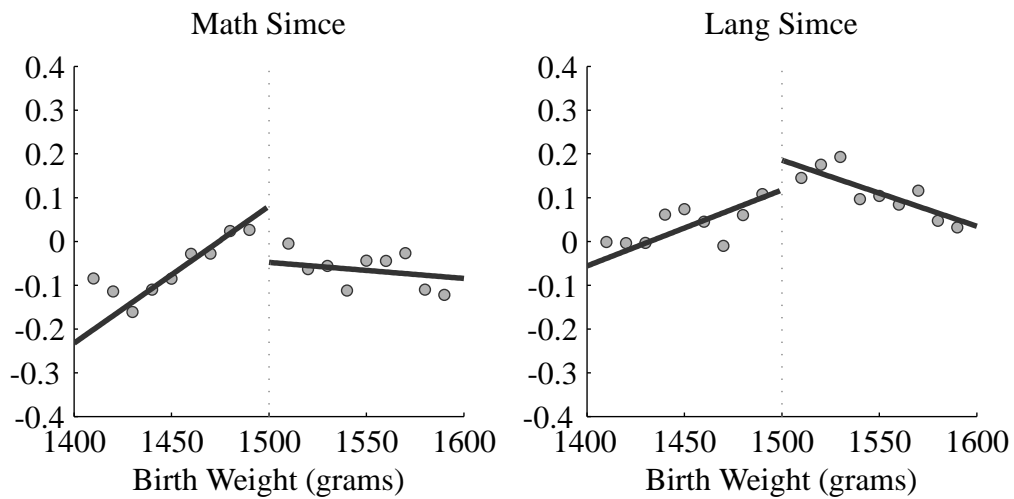
Note: This figure shows the results for neonatal mortality (28 days). See main text for a description of the construction of these figures.

Figure A-5: GPA and Language Grades, 1-8th grade



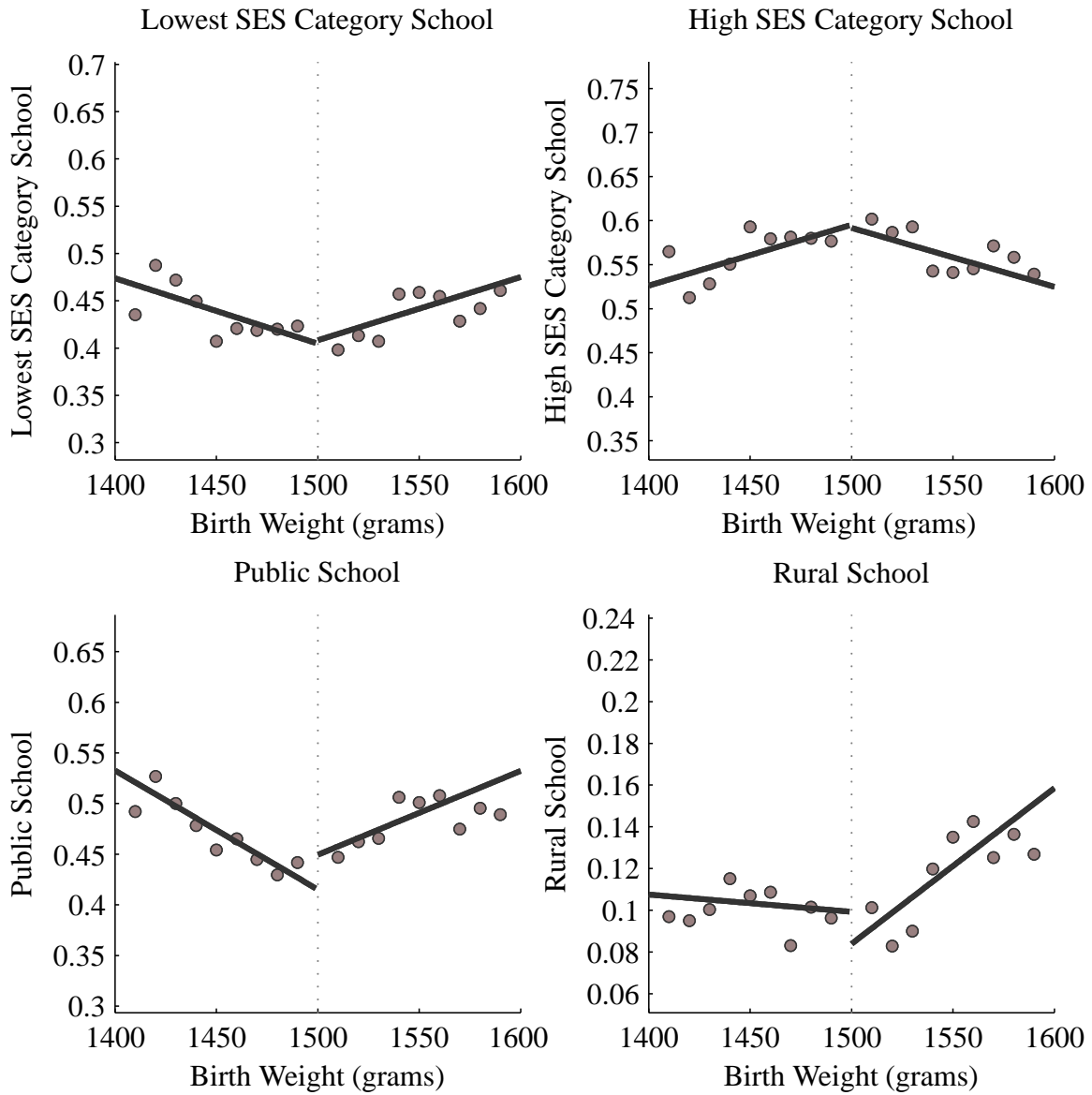
Note: This figure shows the results for alternative academic outcomes. GPA is the average grade point average reported by the schools in levels, averaged over first through eighth grade. Language grades are standardized at the classroom level and averaged over first through eighth grade. See main text for a description of the construction of these figures.

Figure A-6: Simce Test, 4th Grade



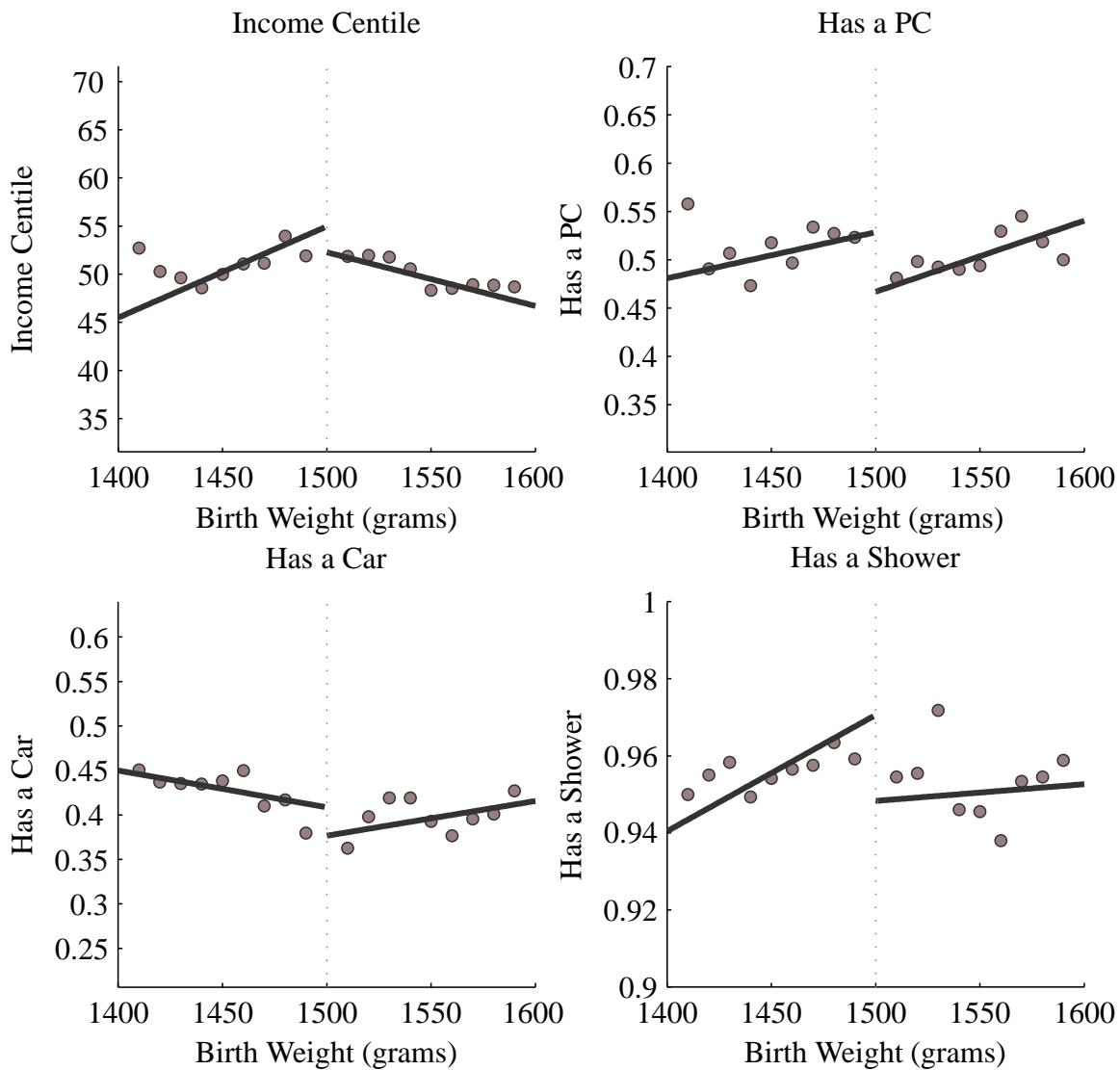
Note: This figure shows the results for SIMCE tests scores. See main text for a description of the construction of these figures.

Figure A-7: School Characteristics in 4th Grade



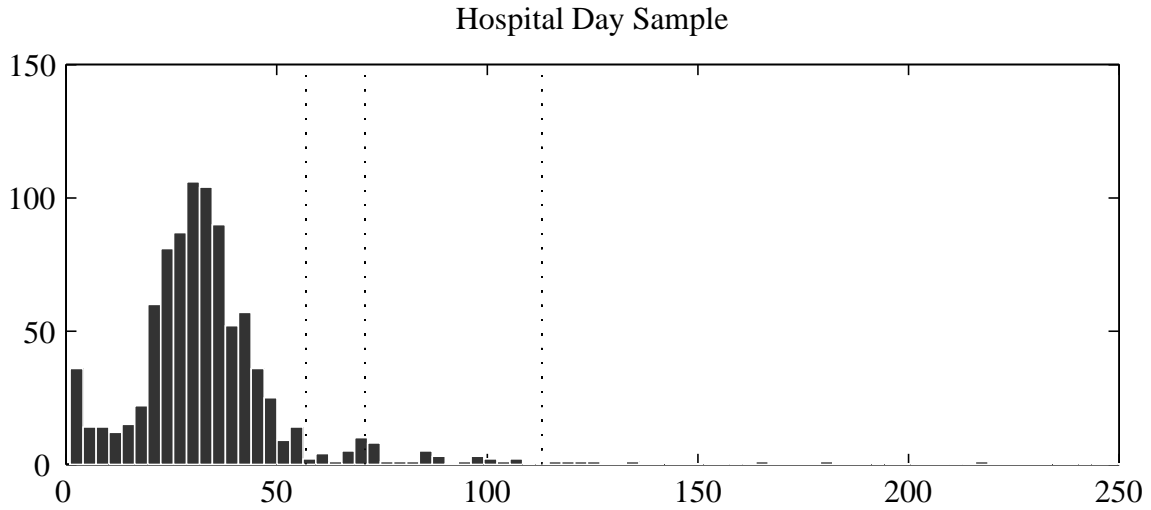
Note: This figure shows the evolution of several covariates of children born around the cutoff of 1500g. Bins are 30 gram wide plotted at every 10 gram interval. The solid black line is a linear trend fitted to the data in above and below the cutoff.

Figure A-8: Covariates in 4th Grade



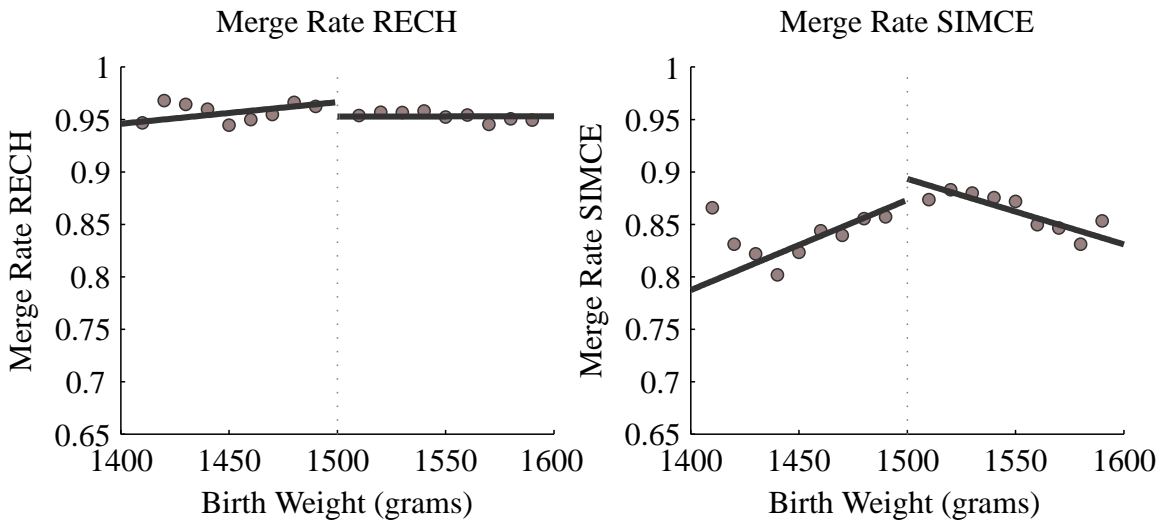
Note: This figure shows the evolution of several covariates of children born around the cutoff of 1500g. Bins are 30 gram wide plotted at every 10 gram interval. The solid black line is a linear trend fitted to the data in above and below the cutoff.

Figure A-9: Histogram of Hospital Days



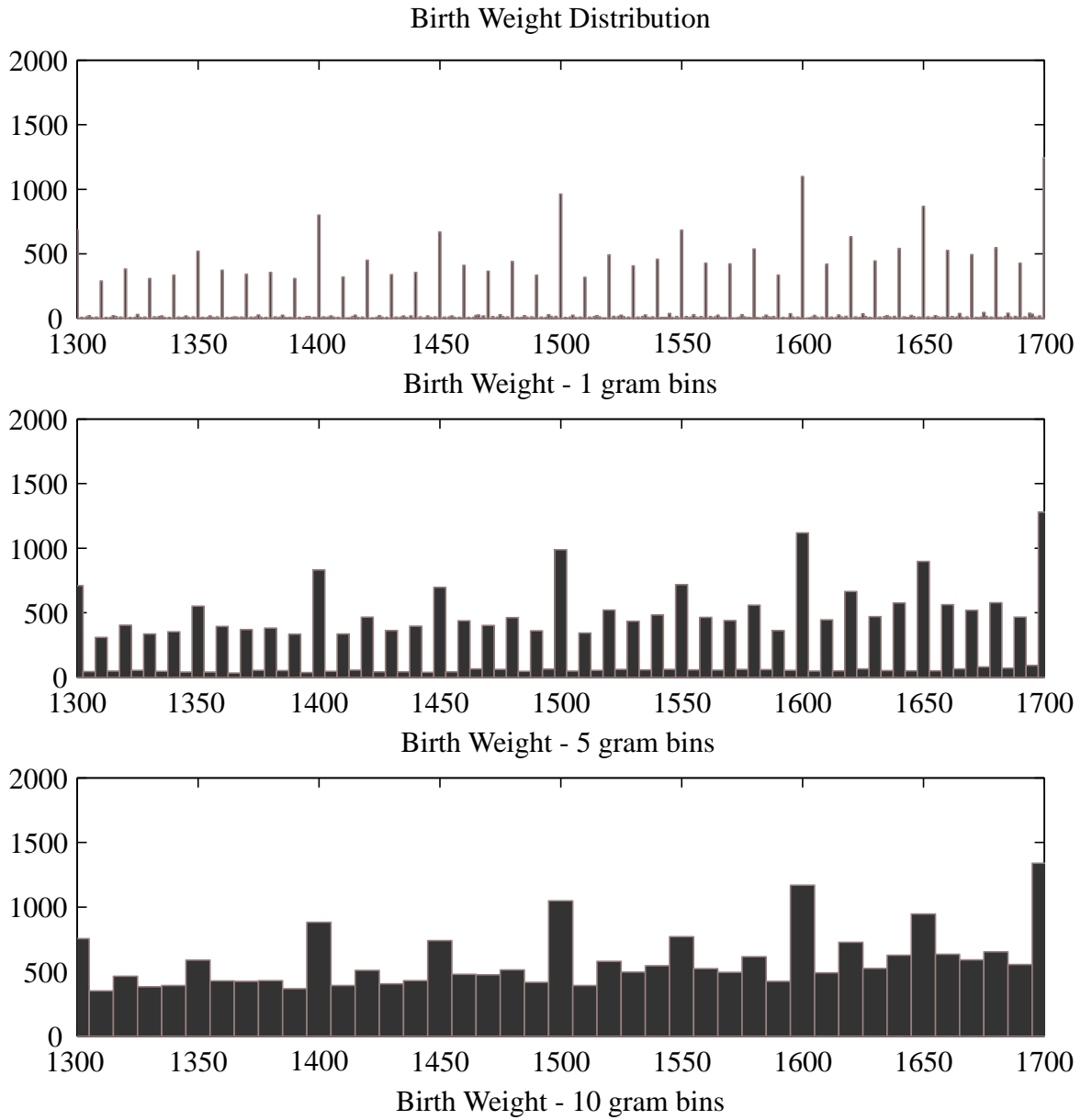
Note: This figure shows the histogram of hospital stay lengths that begin during the first month of life for births of weight between 1400 grams and 1600 grams. The dotted vertical lines indicate the 90th, 95th and 99th percentile.

Figure A-10: Simce Test, 4th Grade



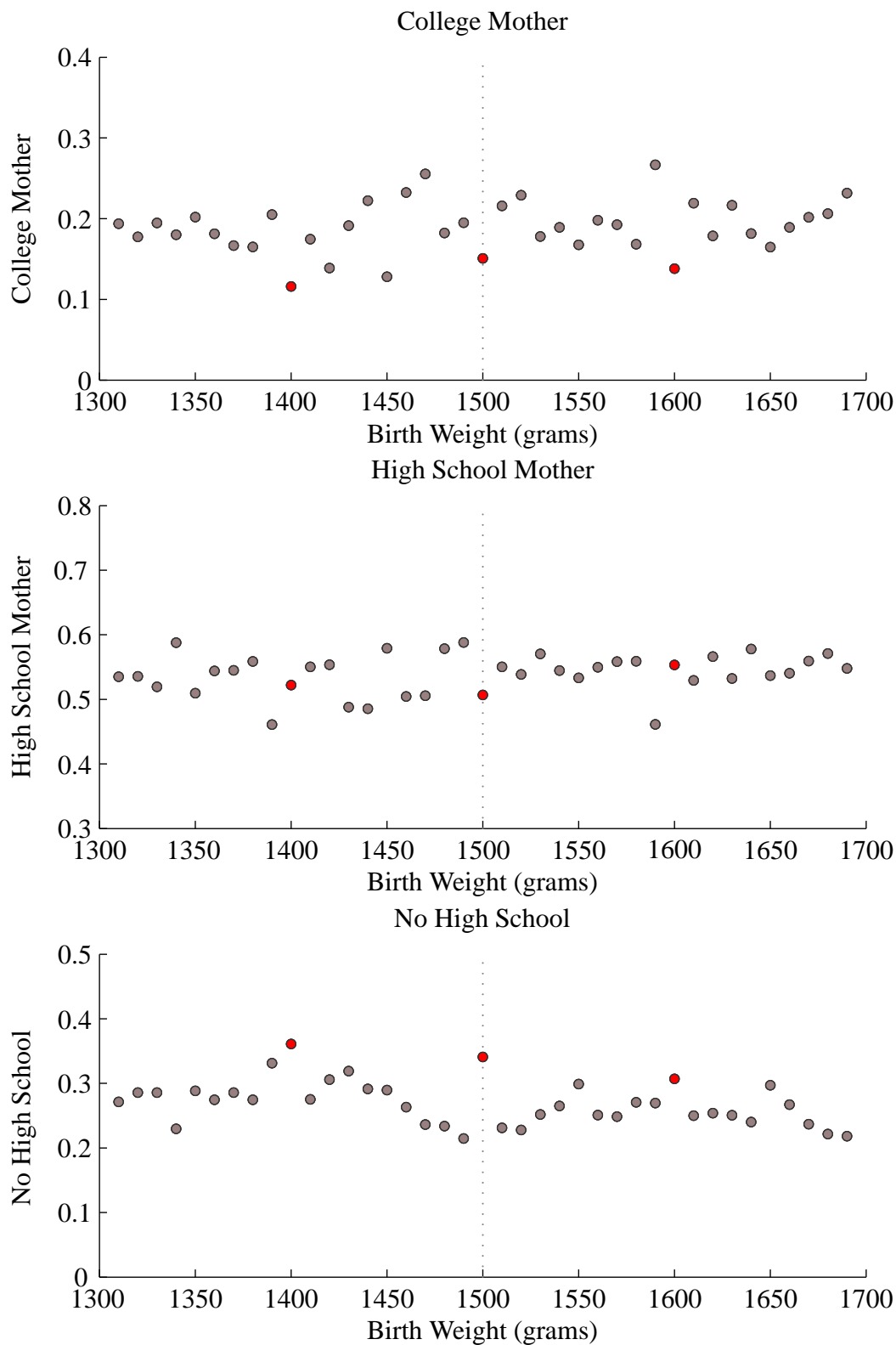
Note: This figure shows the average merge rate across the cutoff.

Figure A-11: Histogram of Birth Weight, 1,5 and 10 gram bins.



Note: This figure shows the histogram of birth weight for Chile, for the relevant window of analysis. It includes all births between 1992 and 2007. In the entire distribution, 93% of all births have recorded birth weight ending in a 0. Approximately 20% have birth weight recorded as ending in 00 and 12% ending in 50.

Figure A-12: Mother Education at Birth, 10 gram bins.



Note: This figure shows average mother education by small bins of 10 grams. 1400, 1500 and 1600 show a noticeably worse education for mothers suggesting non random heaping. These bins are omitted or controlled for in the analysis throughout the paper.

Online Appendix A Table 1 - Alternative measures of school performance around 1500 grams by gestational Age

Birth cohorts 1992-2002	Alternative test measures from Chile		
	All gestational ages	Gestational age ≥ 32 weeks	Gestational age < 32 weeks
<i>Classroom language scores</i>			
Birth Weight < 1500	0.0412 (0.0420)	0.113* (0.0583)	-0.0544 (0.0660)
Observations	4,958	2,837	2,121
<i>Classroom math scores Grades 1-4</i>			
Birth Weight < 1500	0.0563 (0.0605)	0.169** (0.0667)	-0.0935 (0.0790)
Observations	4,740	2,719	2,021
<i>Classroom language scores Grades 1-4</i>			
Birth Weight < 1500	0.0157 (0.0505)	0.120* (0.0683)	-0.123* (0.0733)
Observations	4,675	2,680	1,995
<i>Classroom math grades, standardized nationally</i>			
Birth Weight < 1500	0.0530 (0.0412)	0.177*** (0.0555)	-0.0917 (0.0601)
Observations	5,117	2,935	2,182

* significant at 10%; ** significant at 5%; *** significant at 1%

Note: Window of 100 grams on either side of 1500 grams used for Chile. Regression controls for mother's age, education and marital status, year of birth and region of birth fixed effects, type of birth service and 100 gram heap fixed effect. Linear slopes on either side of 1500 grams are included and regression is weighted using triangular weights. Standard errors are clustered at the gram level. For details on the construction and availability of the dependent variable, please see Section 4 and Section 5 of the paper.

Online Appendix A Table 2: Bounds for test scores accounting for differential mortality

Birth weight range 1450-1550		Chile	Norway
Untreated ≥ 1500	i. Observations	1476	169
	ii. Proportion non missing	0.846	0.952
	iii. Mean score	-0.189	-0.12
Treated < 1500	iv. Observations	859	231
	v. Proportion nonmissing	0.858	0.93
	vi. Mean score	-0.097	0.084
$p = [(v-ii)/v]$		0.013986014	-0.023655914
p 'th quantile score in treatment group score		-1.91	-1.92
Trimmed mean ($y > y_p$)		-0.0744	0.098
1-p 'th quantile		1.53	2.12
Trimmed mean ($y < y_{(1-p)}$)		-0.12	0.033
Upper bound estimate		0.1146	0.218
Lower Bound estimate		0.069	0.153
Estimate from regression		0.0898399	0.204

Online Appendix A Table 3 - Other covariates examined at 1500 grams

Covariates	Mother's Age	Mother attended college	Mother attended high school	Mother married	Birth Mother Employed	Non twin birth	APGAR1	Ln(family income) birth
<i>Chile</i>								
Birth Weight<1500	-1.279 (0.814)	-0.00232 (0.0441)	0.0471 (0.0470)	0.0159 (0.0414)	-0.0426 (0.0477)	-0.00366 (0.0337)	NA	NA
Mean of dependent variable	27.88	0.163	0.546	0.556	0.282	0.793		
Observations	2,877	2,877	2,877	2,877	2,875	2,877		
<i>Norway</i>								
Birth Weight<1500	-0.008 (0.604)	-0.069 (0.046)	0.002 (0.056)	-0.031 (0.040)	-0.050 (0.05)	0.033 (0.033)	-0.092 (0.121)	-0.046 (0.083)
Mean of dependent variable	27.5	0.3	0.41	0.55	0.7	0.76	7.4	12.2
Observations	1.594	1.594	1.594	1.594	1.594	1.594	1.565	1.563

* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: 100 gram window on either side of 1500 grams used in Chile and 200 gram window on either side of 1500 grams used in Norway. No covariates are included in regressions, except for 100 gram heap fixed effects. Linear slopes on each side of 1500 grams and triangular weights are used. Standard error clustered at the gram level. Chile data uses cohorts 1992-2002 and Norway data uses cohorts 1986-1993, which are the relevant sample for schooling outcomes. Balance on covariates for other samples (mortality sample for example) are presented in the Online Appendix.

Online Appendix A Table 4 - Discontinuity at 1500 grams Sequentially adding covariates

Test scores	1	2	3	4	5	6	7
<i>Chile</i>							
Birth Weight<1500	0.145** (0.0649)	0.145*** (0.0445)	0.151*** (0.0458)	0.152** (0.0606)	0.152** (0.0583)	0.143*** (0.0545)	0.120 (0.0904)
Observations	2,877	2,877	2,877	2,877	2,877	2,877	1,227
		1+ clustering	2+ triangular weights	3+100 gram heap fixed effect	4+covariates	5+Municipality of birth fixed effect	6+ Hospital service region
<i>Norway</i>							
Birth Weight<1500	0.218* (0.118)	0.218* (0.114)	0.227** (0.104)	0.216** (0.107)	0.228** (0.087)	0.223* (0.114)	0.220** (0.101)
Observations	1.163	1.163	1.163	1.163	1.163	1.163	1.156
Covariates included		1+ clustering	2+ triangular weights	3+100 gram heap fixed effect	4+covariates	5+Municipality of birth fixed effect	6+Hospital fixed effects

Std errors clustered at the gram level for Chile, 10 gram level for Norway

* significant at 10%; ** significant at 5%; *** significant at 1%

Note: 100 gram window on either side of 1500 grams used in Chile and 200 gram window on either side of 1500 grams used in Norway. Hospital ID is only available starting in 2001 in Chile, hence a proxy for hospital name is the hospital's service region (there are 29 such regions in Chile). However, even hospital service region data is only available after 1997. Covariates in column 5 are: Year and region/county of birth fixed effects, Mother's age, education and marital status, type of birth service and sex.

Online Appendix A Table 5 - Examining Cutoffs on Test Scores between 1100-3000 grams

<i>Chile</i>				<i>Norway</i>			
Cutoff point	Coefficient on cutoff	Cutoff point	Coefficient on cutoff	Cutoff point	Coefficient on cutoff	Cutoff point	Coefficient on cutoff
1100		2100	0.0210 (0.0217)	1100	0.052 (0.243)	2100	0.074* (0.042)
1200	0.215 (0.141)	2200	-0.0280 (0.0265)				
1300	0.00418 (0.130)	2300	0.0119 (0.0317)	1300	-0.075 (0.142)	2300	0.042 (0.038)
1400	0.106 (0.0809)	2400	-0.00400 (0.0144)				
1500	0.152** (0.0583)	2500	0.0148* (0.00848)	1500	0.228** (0.087)	2500	0.024 (0.041)
1600	-0.0107 (0.0420)	2600	0.0180 (0.0187)				
1700	-0.0882** (0.0402)	2700	-0.0376*** (0.00762)	1700	-0.028 (0.080)	2700	-0.001 (0.028)
1800	0.0197 (0.0611)	2800	-0.00740 (0.00930)				
1900	-0.0172 (0.0282)	2900	-0.00397 (0.00511)	1900	0.071 (0.058)	2900	0.031 (0.022)
2000	0.00981 (0.0236)	3000	-0.0115* (0.00679)				

* significant at 10%; ** significant at 5%; *** significant at 1%

Note: Window of 100 grams on either side of each cutoff point used for Chile, and a 200 gram window on either side of the cutoff used in Norway. Regression controls for mother's age, education and marital status, year of birth and region of birth fixed effects, type of birth service and 100 gram heap fixed effect. Linear slopes on either side of 1500 grams are included and regression is weighted using triangular weights. Standard errors are clustered at the gram level.

Online Appendix A Table 6: Sensitivity to Bandwidth and Polynomial Selection in Test Score Regressions

<i>Chile: Average over 8 years of test scores</i>											
Bandwidth	50	60	70	80	90	100	110	120	130	140	150
Polynomial											
1	0.172*** (0.0548)	0.122** (0.0523)	0.117** (0.0508)	0.131*** (0.0491)	0.134*** (0.0470)	0.131*** (0.0447)	0.117*** (0.0419)	0.106*** (0.0402)	0.0957** (0.0383)	0.0942** (0.0371)	0.0885** (0.0364)
2	0.385*** (0.0921)	0.303*** (0.0691)	0.221*** (0.0666)	0.134* (0.0713)	0.124** (0.0613)	0.131** (0.0565)	0.151*** (0.0541)	0.161*** (0.0541)	0.162*** (0.0531)	0.146*** (0.0527)	0.144*** (0.0519)
3	0.378 (0.242)	0.476*** (0.169)	0.477*** (0.118)	0.420*** (0.0957)	0.281*** (0.0894)	0.194** (0.0917)	0.132 (0.0840)	0.110 (0.0783)	0.126* (0.0668)	0.162** (0.0626)	0.156** (0.0607)
Observations	1,350	1,800	2,057	2,320	2,646	2,877	3,529	3,753	4,148	4,430	4,740
<i>Norway: 10th grade national exam</i>											
Window	100	120	140	160	180	200	220	240	260	280	300
Polynomial											
1	0.476*** (0.097)	0.370*** (0.084)	0.294*** (0.081)	0.249*** (0.084)	0.233*** (0.085)	0.228** (0.087)	0.222** (0.087)	0.230*** (0.085)	0.231*** (0.085)	0.219** (0.085)	0.222** (0.085)
2	0.463** (0.186)	0.607*** (0.169)	0.572*** (0.151)	0.489*** (0.130)	0.423*** (0.115)	0.386*** (0.109)	0.336*** (0.096)	0.290*** (0.096)	0.268*** (0.095)	0.283*** (0.095)	0.270*** (0.095)
3	-0.068 (0.357)	0.205 (0.229)	0.478** (0.211)	0.612*** (0.216)	0.620*** (0.208)	0.627*** (0.204)	0.540*** (0.170)	0.509*** (0.155)	0.471*** (0.142)	0.385*** (0.128)	0.379*** (0.118)
Observations	556	657	789	920	1,051	1,163	1,280	1,412	1,538	1,682	1,838

Note: Regression controls for mother's age, education and marital status, year of birth and region/municipality of birth fixed effects, type of birth service and 100 gram heap fixed effect. Regression is weighted using triangular weights. Standard errors are clustered at the gram level. For details on the construction and availability of the dependent variable, please see Section 4 and Section 5 of the paper.

Online Appendix B Table 1: Validity of Chile Micro Data

Year	Total Births from Official Summary Files	Births with valid unique IDs from micro files	Match between summary files and micro data	Infant mortality counts from Summary files	Infant mortality observed in micro data	Match rate between summary files and micro data
1992	279098	278958	0.9990	4209	3419	0.812
1993	275916	275857	0.9998	3792	3657	0.964
1994	273766	273745	0.9999	3454	3376	0.977
1995	265932	265897	0.9999	3107	3043	0.979
1996	264793	264776	0.9999	3095	3036	0.981
1997	259959	259936	0.9999	2732	2694	0.986
1998	257105	257068	0.9999	2793	2770	0.992
1999	250674	250469	0.9992	2654	2628	0.99
2000	248893	248867	0.9999	2336	2315	0.991
2001	246116	245684	0.9982	2159	2103	0.974
2002	238981	236366	0.9891	1964	1902	0.968
2003	234486	230469	0.9829	1935	1859	0.961
2004	230352	230348	1.0000	2034	2016	0.991
2005	230831	230827	1.0000	1911	1907	0.998
2006	231383	231378	1.0000	1839	1838	0.999
2007	240569	240567	1.0000	2009	2005	0.998

Online Appendix B Table 2: Characteristics of Mothers

Chile	1400 ≤ BW ≤ 1600	All
Mother has College Education	17.10%	16.80%
Mother has High School Education	55.10%	57.70%
Mother has Elementary Education	27.30%	25.10%
None of the above	0.50%	0.40%
Mother is Married	48.20%	50.90%
Mother is Single	51.80%	49.20%
Mother Age at Birth	27.5	26.8
Father Age at Birth	30.5	29.9
Born in Hospital	98.70%	98.70%
Birth Attended by Doctor	54.90%	33.90%
Birth Attended by midwife	44.30%	65.80%
Norway	1300 ≤ BW ≤ 1700	All
Mother has College Education	32%	36%
Mother has High School Education	41%	41%
Mother has Elementary Education	23%	20%
None of the above	10%	6%
Mother is Married	57%	63%
Mother is Single	43%	37%
Mother age at Birth	27.7	27.5
Father age at Birth	30.9	30.9
Female child	50%	49%
Born in hospital	99%	99%
Transferred to NICU	27%	2%

Online Appendix B Table 3 : Merge rates for births between 1300-1700 grams

Birth Year	Total Births	Missing because dead	RECH data base			SIMCE data base		
			Missing due to other reasons	Number of matched observations	Merge Rate	Missing due to other reasons	Number of matched observations	Merge Rate
1992	4396	807	268	3328	0.93	2050	1541	0.43
1993	4089	716	244	3133	0.93	2511	862	0.26
1994	3782	624	177	2984	0.94	2917	241	0.08
1995	3790	631	190	2971	0.94	1443	1716	0.54
1996	3886	577	185	3126	0.94	669	2642	0.8
1997	3915	572	161	3188	0.95	690	2653	0.79
1998	4169	579	183	3408	0.95	679	2911	0.81
1999	4183	529	192	3464	0.95	903	2751	0.75
2000	4020	467	184	3371	0.95	1086	2468	0.69
2001	3895	409	148	3338	0.96	2683	803	0.23
2002	3878	357	199	3322	0.94	3521	0	0

Norway	Ever dead	Take exam in 10th grade	Missing but not dead	Observations
1986	12%	70%	18%	261
1987	8%	72%	20%	300
1988	8%	71%	21%	295
1989	10%	73%	17%	335
1990	8%	73%	20%	375
1991	7%	76%	17%	382
1992	7%	72%	21%	343
1993	4%	74%	23%	336

Online Appendix B Table 4 - Examining Cutoffs on Infant Mortality between 1100-3000 grams

<i>Chile (birth cohorts 1992-2007)</i>				<i>Norway (birth cohorts 1980-1993)</i>			
Cutoff point	Coefficient on cutoff	Cutoff point	Coefficient on cutoff	Cutoff point	Coefficient on cutoff	Cutoff point	Coefficient on cutoff
1100		2100	0.00660 (0.00455)	1100	-0.027 (0.039)	2100	-0.004 (0.004)
1200	0.0636 (0.0467)	2200	0.00567 (0.00346)				
1300	0.000396 (0.000465)	2300	0.00175 (0.00331)	1300	0.026 (0.025)	2300	0.004 (0.004)
1400	0.0153 (0.0226)	2400	-0.00436** (0.00212)				
1500	-0.0449** (0.0181)	2500	-0.00180 (0.00202)	1500	-0.031** (0.013)	2500	0.001 (0.002)
1600	-0.00903 (0.00985)	2600	-0.00290** (0.00143)				
1700	0.00711 (0.0138)	2700	-0.000567 (0.000521)	1700	-0.005 (0.010)	2700	-0.002 (0.002)
1800	-0.00890 (0.0119)	2800	0.000114 (0.000539)				
1900	0.00516 (0.00535)	2900	-0.000386 (0.000986)	1900	-0.006 (0.007)	2900	0 (0.001)
2000	-0.00235 (0.00615)	3000	0.000232 (0.000669)				

Std errors clustered at the gram level for Chile, 10 gram level for Norway

* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: same notes as Appendix Table 5 apply.

Online Appendix B Table 5 - Heaping and Demographic Characteristics

<i>Complete sample: 1992-2007 Chile, gestational age >= 32 weeks</i>									
Birth weight ranges from 1200-1800 grams	Heaps observed (in grams)			Heaps observed (in grams) - with municipality of birth fixed effects			Heaps observed (in grams) - with hospital fixed effects		
	10	50	100	10	50	100	10	50	100
Mother attended high school	0.00204 (0.00475)	-0.0171*** (0.00621)	-0.0188*** (0.00614)	0.00206 (0.00470)	-0.0112* (0.00617)	-0.0130** (0.00555)	-0.00242 (0.00816)	-0.0224** (0.00907)	-0.0131 (0.00814)
Mother attended college	-0.0846*** (0.0119)	-0.0531*** (0.0124)	-0.0487*** (0.0133)	-0.0535*** (0.0102)	-0.0335*** (0.00915)	-0.0322*** (0.00809)	-0.0601*** (0.0133)	-0.0472*** (0.0130)	-0.0283** (0.0119)
Mother's Age	-0.000498 (0.000362)	0.000221 (0.000495)	-0.000132 (0.000438)	-0.000230 (0.000340)	0.000424 (0.000481)	-6.73e-05 (0.000421)	-0.000728 (0.000576)	-9.79e-05 (0.000858)	-0.000368 (0.000858)
Father's Age	-0.000100 (0.000202)	-0.000308 (0.000202)	-0.000163 (0.000161)	-5.40e-05 (0.000193)	-0.000223 (0.000192)	-0.000122 (0.000165)	-9.40e-05 (0.000302)	-0.000101 (0.000246)	8.66e-05 (0.000176)
Married	0.0191*** (0.00482)	0.0176*** (0.00644)	0.0153** (0.00655)	0.0146*** (0.00464)	0.0173*** (0.00663)	0.0148** (0.00707)	0.0186** (0.00749)	0.0114 (0.0100)	0.00296 (0.00822)
Single Birth	0.0124** (0.00623)	0.00494 (0.00941)	0.00122 (0.00623)	0.00186 (0.00582)	0.000703 (0.00915)	-0.00129 (0.00662)	0.00605 (0.00856)	6.97e-05 (0.0152)	-0.0148 (0.0126)
Mother Employed	-0.0202*** (0.00613)	-0.0105 (0.00853)	0.00143 (0.00630)	-0.0115** (0.00586)	-0.00336 (0.00849)	0.00643 (0.00648)	-0.0156* (0.00874)	0.00781 (0.0115)	0.0142* (0.00809)
Constant	1.059*** (0.0180)	0.489*** (0.113)	0.328*** (0.120)	0.965*** (0.0163)	0.420*** (0.0946)	0.286*** (0.101)	0.778*** (0.0354)	0.266*** (0.0866)	0.168*** (0.0851)
Observations	19,763	19,763	19,763	19,763	19,763	19,763	9,068	9,068	9,068

<i>Complete sample: 1980-1993 Norway, gestational age >= 32 weeks</i>									
Birth weight ranges from 1200-1800 grams	Heaps observed (in grams)			Heaps observed (in grams) - with municipality of birth fixed effects			Heaps observed (in grams) - with hospital fixed effects		
	10	50	100	10	50	100	10	50	100
Mother attended high school		-0.006 (0.015)	-0.003 (0.012)		-0.017 (0.016)	-0.010 (0.013)		-0.008 (0.015)	-0.006 (0.012)
Mother attended college		0.006 (0.017)	0.009 (0.013)		-0.005 (0.018)	-0.002 (0.014)		0.001 (0.017)	0.004 (0.013)
Mother's Age		-0.001 (0.002)	0.001 (0.001)		-0.001 (0.002)	0 (0.001)		-0.001 (0.002)	0.001 (0.001)
Father's Age		0.001 (0.001)	-0.001 (0.001)		0.001 (0.002)	-0.001 (0.001)		0.001 (0.002)	0 (0.001)
Married		-0.023 (0.014)	-0.024** (0.011)		-0.023 (0.015)	-0.021* (0.012)		-0.022 (0.014)	-0.024** (0.011)
Single Birth		0.006 (0.014)	0.007 (0.011)		-0.002 (0.016)	0.001 (0.013)		0.003 (0.015)	0.004 (0.012)
Mother Employed		-0.002 (0.013)	-0.002 (0.011)		0.006 (0.014)	0.004 (0.011)		0.001 (0.014)	-0.002 (0.011)
Constant		0.247*** (0.041)	0.152*** (0.033)		0.234*** (0.048)	0.133*** (0.037)		0.218*** (0.045)	0.144*** (0.035)
Observations		3.899	3.899		3.899	3.899		3.868	3.868

Std errors clustered at the gram level
 * significant at 10%; ** significant at 5%; *** significant at 1%

Note: Dependent variable is 1 if observation is at a heaped point at the gram level as suggested by column headings. This table assesses the correlations between observed characteristics and whether or not birth weight was rounded to an integer multiple of 10, 50 or 100. Additional covariates include year of birth and region/municipality fixed effects.

Online Appendix B Table 6 - Robustness to Heaping

<i>Math scores</i>	Fixed effects for heaps			Removing points at heaps		
	10	50	100	10	50	100
<i>Chile (cohorts 1992-2002)</i>						
Birth Weight<1500	0.131*** (0.0454)	0.142*** (0.0512)	0.152** (0.0583)	0.622** (0.247)	0.154*** (0.0556)	0.153** (0.0591)
Observations	2,877	2,877	2,877	267	2,176	2,596
<i>Norway (cohorts 1986-1993)</i>						
Birth Weight<1500	smallest unit	0.242** (0.091)	0.228** (0.087)	smallest unit	0.245** (0.094)	0.220** (0.099)
Observations	of obs	1.163	1.163	of obs	863	996
<i>Infant Mortality</i>						
	Fixed effects for heaps			Removing points at heaps		
	10	50	100	10	50	100
<i>Chile (cohorts 1992-2007)</i>						
Birth Weight<1500	-0.0273* (0.0146)	-0.0312** (0.0151)	-0.0449** (0.0181)	-0.0709* (0.0371)	-0.0436** (0.0183)	-0.0425** (0.0185)
Observations	5,129	5,129	5,129	767	3,985	4,662
<i>Norway (cohorts 1980-1993)</i>						
Birth Weight<1500	smallest unit	-0.023** (0.011)	-0.031** (0.013)	smallest unit	-0.027** (0.012)	-0.034** (0.013)
Observations	of obs	2.437	2.437	of obs	1.755	2,050

Std errors clustered at the gram level

* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: Standard covariates and regression notes from Table 3 in the paper apply.

Online Appendix B Table 7 - Donut RD Design

		Size of donut around 1500 grams							
		0	1	2	3	4	5	6	7
<i>Math scores</i>									
<i>Chile (cohorts 1992-2002)</i>									
Birth Weight<1500		0.153** (0.0591)	0.153** (0.0591)	0.152** (0.0591)	0.152** (0.0591)	0.148** (0.0590)	0.148** (0.0607)	0.148** (0.0607)	0.147** (0.0608)
Observations		2,596	2,596	2,595	2,595	2,594	2,586	2,586	2,585

		Size of donut around 1500 grams							
		0	1	2	3	4	5	6	7
<i>Infant Mortality</i>									
<i>Chile (cohorts 1992-2007)</i>									
Birth Weight<1500		-0.0425** (0.0185)	-0.0425** (0.0185)	-0.0430** (0.0187)	-0.0431** (0.0187)	-0.0434** (0.0192)	-0.0412** (0.0192)	-0.0406** (0.0194)	-0.0383** (0.0191)
Observations		4,662	4,662	4,653	4,650	4,634	4,603	4,597	4,593

Std errors clustered at the gram level

* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: Standard regression notes from Table 3 apply. 0 indicates that we drop points at 1500 grams. Each subsequent column indicates that we drop that gram equivalent on either side of 1500. For example, the column heading "1" indicates that we drop observations at 1499 and 1501 grams and so on.

Online Appendix B Table 8: Infant Mortality Sensitivity to Window and Polynomial Selection in Test Score Regressions

<i>Chile: Infant Mortality (cohorts 1992-2007)</i>												
Window		50	60	70	80	90	100	110	120	130	140	150
Polynomial												
	1	-0.0452 (0.0307)	-0.0408* (0.0240)	-0.0392* (0.0212)	-0.0407** (0.0196)	-0.0443** (0.0187)	-0.0449** (0.0181)	-0.0318* (0.0166)	-0.0294* (0.0160)	-0.0280* (0.0153)	-0.0272* (0.0146)	-0.0273* (0.0142)
	2	-0.000712 (0.0540)	-0.0331 (0.0498)	-0.0366 (0.0450)	-0.0337 (0.0388)	-0.0297 (0.0332)	-0.0343 (0.0302)	-0.0254 (0.0201)	-0.0198 (0.0164)	-0.0182 (0.0156)	-0.0184 (0.0158)	-0.0181 (0.0160)
	3	-0.0635 (0.0711)	0.0125 (0.0702)	-0.00877 (0.0621)	-0.0262 (0.0593)	-0.0359 (0.0560)	-0.0266 (0.0519)	-0.00814 (0.0349)	0.00290 (0.0260)	0.00982 (0.0204)	0.00936 (0.0179)	0.00489 (0.0168)
Observations		2,481	3,234	3,706	4,161	4,717	5,129	6,178	6,613	7,252	7,755	8,297
<i>Norway: Infant Mortality (1980-1993)</i>												
Window		100	120	140	160	180	200	220	240	260	280	300
Polynomial												
	1	-0.02 (0.014)	-0.024* (0.013)	-0.024* (0.013)	-0.028** (0.013)	-0.029** (0.013)	-0.031** (0.013)	-0.029** (0.013)	-0.025** (0.012)	-0.021* (0.012)	-0.021* (0.012)	-0.02* (0.012)
	2	-0.001 (0.024)	-0.015 (0.021)	-0.023 (0.018)	-0.02 (0.016)	-0.023 (0.015)	-0.023 (0.015)	-0.031** (0.015)	-0.037** (0.015)	-0.041** (0.015)	-0.037** (0.015)	-0.033** (0.015)
	3	-0.05 (0.040)	-0.002 (0.029)	-0.005 (0.027)	-0.018 (0.025)	-0.018 (0.023)	-0.018 (0.022)	-0.014 (0.020)	-0.016 (0.018)	-0.019 (0.017)	-0.03* (0.017)	-0.038** (0.018)
Observations		1.206	1.411	1.669	1.937	2.180	2.437	2.675	2.946	3.244	3.513	3.846

Notes: Same notes as Appendix Table 6 apply.

Online Appendix B Table 9 - Infant Mortality around 1500 grams with Twins and Sibling Fixed Effects

Mortality estimates	Twins Sample			Siblings Sample		
	Fixed effects: Gestational Age<32 weeks	OLS: Gestational age >= 32 weeks	Fixed Effects: Gestational age >= 32 weeks	Fixed effects: Gestational Age<32 weeks	OLS: Gestational age >= 32 weeks	Fixed Effects: Gestational age >= 32 weeks
<i>Chile (1992-2007)</i>						
Birth Weight<1500	0.185 (0.120)	-0.218*** (0.0716)	-0.307* (0.153)	0.0934 (0.510)	-0.165*** (0.0530)	-0.162* (0.0914)
Mean of dependent variable	0.114	0.0732	0.0732	0.132	0.0605	0.0605
Observations	737	164	164	5,154	248	248
<i>Norway (1980-1993)</i>						
Birth Weight<1500	-0.080 (0.111)	-0.053 (0.118)	-0.062 (0.102)	-0.009 (0.107)	-0.071 (0.044)	-0.098 (0.088)
Mean of dependent variable	0.086	0.042	0.042	0.097	0.047	0.074
Observations	234	144	144	269	214	214

Std errors clustered at the gram level

* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: Standard regression notes on covariates and weighting apply.

Online Appendix B Table 10 - Discontinuity at 1500 grams Sequentially adding covariates

Infant Mortality	1	2	3	4	5	6	7
<i>Chile (cohorts 1992-2007)</i>							
Birth Weight<1500	-0.0402** (0.0169)	-0.0402** (0.0164)	-0.0418*** (0.0118)	-0.0421** (0.0163)	-0.0449** (0.0181)	-0.0512** (0.0198)	-0.0572* (0.0305)
Observations	6,771	6,771	5,682	5,682	5,129	5,129	1,847
Covariates included		1+ clustering	2+ triangular weights	3+100 gram heap fixed effect	4+covariates	5+Municipality of birth fixed effect	6+Hospital fixed effects
<i>Norway (cohorts 1980-1993)</i>							
Birth Weight<1500	-0.041** (0.017)	-0.041** (0.017)	-0.054*** (0.019)	-0.034*** (0.012)	-0.031** (0.013)	-0.047*** (0.016)	-0.024** (0.012)
Observations	2.437	2.437	2.437	2.437	2.437	2.437	2.416
Covariates included		1+ clustering	2+ triangular weights	3+100 gram heap fixed effect	4+covariates	5+Municipality of birth fixed effect	6+Hospital fixed effects

* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: 100 gram window in Chile, 200 gram window in Norway. Covariates in column 5 are: Year and region/county of birth fixed effects, Mother's age, education and marital status, type of birth service and sex. Hospital IDs only available from 2001-2006 in Chile.

Online Appendix B Table 11 - School performance around 1500 grams by different Gestational Ages

Chile math scores (1992-2002)	Only 30 and 31weeks	Only 32 and 33 weeks	Only 33 and 34 weeks
<i>Classroom grades</i>			
Birth Weight<1500	0.0236 (0.095)	0.1225 (0.083)	0.2130** (0.106)
Mean of dependent variable	-0.167	-0.122	-0.153
Observations	1,646	1,550	1,221
<hr/>			
Norway test scores (1986-1993)	Only 30 and 31weeks	Only 32 and 33 weeks	Only 33 and 34 weeks
Birth Weight<1500	-0.149 (0.254)	0.145 (0.194)	0.393** (0.165)
Mean of dependent variable	0.013	-0.088	-0.121
Observations	491	459	409

Std errors clustered at the 10 gram level

* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: Standard regression notes from Table 3 in the paper apply.

Online Appendix B Table 12 - Other covariates examined at 1500 grams

Covariates for sub samples	Mother's Age	Mother attended college	Mother attended high school	Mother married	Birth Mother Employed	Non twin birth	APGAR1	Ln(family income) birth
<i>Chile (mortality sample: 1992-2007)</i>								
Birth Weight<1500	-0.299 (0.438)	0.0425 (0.0421)	0.0576* (0.0306)	0.0157 (0.0239)	0.0644 (0.0423)	-0.00309 (0.0303)	NA	NA
Mean of dependent variable	28.06	0.190	0.545	0.475	0.308	0.807		
Observations	5,129	5,129	5,129	5,129	5,125	5,129		
<i>Norway (mortality sample: 1980-1993)</i>								
Birth Weight<1500	-0.119 (0.496)	-0.039 (0.031)	0.024 (0.047)	-0.009 (0.029)	-0.042 (0.044)	-0.003 (0.026)	0.076 (0.262)	0.064 (0.064)
Mean of dependent variable	27.08	0.292	0.416	0.611	0.620	0.776	7.20	12.04
Observations	2.468	2.468	2.468	2.468	2.468	2.468	2.405	2.416

* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: 100 gram window on either side of 1500 grams used in Chile and 200 gram window on either side of 1500 grams used in Norway. No covariates are included in regressions. Linear slopes on each side of 1500 grams and triangular weights are used. Standard error clustered at the gram level. Chile data uses cohorts 1992-2007 and Norway data uses cohorts 1980-1993.

Covariates for sub samples	Mother's Age	Mother attended college	Mother attended high school	Mother married	Birth Mother Employed	Non twin birth	APGAR1	Ln(family income) birth
<i>Chile (Hospital days sample)</i>								
Birth Weight<1500	1.097 (1.025)	-0.0299 (0.0492)	0.120 (0.0845)	-0.0169 (0.0952)	0.0860 (0.105)	-0.0413 (0.0613)	NA	NA
Mean of dependent variable	27.55	0.181	0.565	0.451	0.295	0.819		
Observations	386	386	386	386	386	386		
<i>Chile (SIMCE Sample)</i>								
Birth Weight<1500	1.549 (1.101)	0.0393 (0.0335)	0.0717 (0.0735)	0.0372 (0.0434)	0.0412 (0.0508)	-0.0258 (0.0484)	NA	NA
Mean of dependent variable	27.96	0.171	0.565	0.556	0.299	0.779		
Observations	1,463	1,463	1,463	1,463	1,461	1,463		

* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: 100 gram window on either side of 1500 grams used in Chile and 200 gram window on either side of 1500 grams used in Norway. No covariates are included in regressions. Linear slopes on each side of 1500 grams and triangular weights are used. Standard error clustered at the gram level. Chile data uses cohorts 1992-2007 and Norway data uses cohorts 1980-1993.

Covariates from SIMCE 4th grade survey	Income Percentile	Has PC	Has a Car	Has a Shower	Has a Color TV
<i>Chile (simce schooling sample)</i>					
Birth Weight<1500	3.268 (4.783)	0.0651 (0.0503)	0.00958 (0.0714)	0.0294 (0.0310)	0.0139 (0.0342)
Mean of dependent variable	49.22	0.454	0.389	0.950	0.952
Observations	1,302	1,349	1,292	1,292	420

* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: 100 gram window on either side of 1500 grams used. Data from 4th grade SIMCE surveys. Standard errors clustered at the gram level. Income is in percentiles.

Online Appendix B Table 13 - Flexible Heaps

	Flexible 10 gram heaps	Flexible 50 gram heaps
<i>Chile - Test scores</i>		
Birth weight <1500 grams	0.153*** (0.0567)	0.153*** (0.0558)
Observations	2,877	2,877
<i>Norway - Exam</i>		
Birth weight <1500 grams	N/A	0.230*** (0.0847)
Observations		1.163

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

Notes: Standard regression notes apply (see Table 3 from paper for example). Additional covariates include linear trends interacted with a dummy for heaping at 10 grams and 50 grams as column headings indicate.

Online Appendix B Table 14 - Examining Cutoffs on Test Score between 1100-3000 grams

<i>Chile Simce Score</i>				<i>Norway: 10th grade national exam</i>			
Cutoff point	Coefficient on cutoff	Cutoff point	Coefficient on cutoff	Cutoff point	Coefficient on cutoff	Cutoff point	Coefficient on cutoff
1100		2100	-0.0400 (0.0354)	1100	0.434 (0.447)	2100	0.101*** (0.033)
1200	0.375* (0.215)	2200	-0.0131 (0.0479)	1200	0.193 (0.342)	2200	-0.101 (0.077)
1300	-0.0558 (0.215)	2300	0.00522 (0.0302)	1300	0.196 (0.233)	2300	0.090* (0.048)
1400	0.165 (0.131)	2400	0.0228 (0.0264)	1400	0.058 (0.156)	2400	0.061 (0.044)
1500	0.135 (0.0906)	2500	0.0113 (0.0186)	1500	0.476*** (0.097)	2500	0.032 (0.055)
1600	-0.0685 (0.0955)	2600	0.0101 (0.0239)	1600	0.102 (0.119)	2600	-0.135** (0.048)
1700	-0.0399 (0.116)	2700	-0.0212 (0.0181)	1700	-0.084 (0.108)	2700	-0.058* (0.032)
1800	-0.0692 (0.0622)	2800	0.00239 (0.0152)	1800	0.011 (0.158)	2800	-0.067** (0.028)
1900	0.0285 (0.0902)	2900	0.0150 (0.0212)	1900	0.107 (0.062)	2900	0.034 (0.034)
2000	-0.00482 (0.0460)	3000	0.00757 (0.0130)	2000	0.087 (0.076)	3000	0.029** (0.012)

Std errors clustered at the gram level for Chile, 10 gram level for Norway

* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: For Chile: 100 gram window and same details as Appendix Table 5

<i>Chile Hospital Days - Quantile Regressions at Median</i>				<i>Norway: NICU Admission</i>			
Cutoff point	Coefficient on cutoff	Cutoff point	Coefficient on cutoff	Cutoff point	Coefficient on cutoff	Cutoff point	Coefficient on cutoff
1100	-4.858*** (0)	1100		1100	0.137 (0.138)	2100	-0.021* (0.011)
1200	-2.026 (9.605)	1200		1200	0.065 (0.062)	2200	0.009 (0.014)
1300	2.895 (6.723)	1300		1300	-0.069 (0.043)	2300	0.018** (0.008)
1400	-2.078 (2.429)	1400		1400	-0.077 (0.046)	2400	-0.004 (0.006)
1500	3.976** (1.600)	1500		1500	0.142** (0.056)	2500	0.011** (0.005)
1600	-0.513 (1.444)	1600		1600	0.006 (0.043)	2600	0.005 (0.005)
1700	0.736 (1.047)	1700		1700	-0.008 (0.021)	2700	-0.002 (0.005)
1800	-0.244 (1.010)	1800		1800	-0.006 (0.031)	2800	0.006 (0.004)
1900	-0.0453 (0.815)	1900		1900	0.007 (0.022)	2900	0.000 (0.003)
2000	-0.539 (0.861)	2000		2000	-0.035** (0.017)	3000	-0.001 (0.001)

Std errors clustered at the gram level for Chile, 10 gram level for Norway

* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: For Chile: 100 gram window and same details as Appendix Table 5

Online Appendix B Table 15: Examining math scores discontinuity at windows ranging from 30-500 grams on either side of 1500 grams

Window	30	40	50	60	70	80	90	100	110	120
Birth weight <1500	0.286*** (0.0687)	0.240*** (0.0447)	0.172*** (0.0548)	0.122** (0.0523)	0.117** (0.0508)	0.131*** (0.0491)	0.134*** (0.0470)	0.131*** (0.0447)	0.117*** (0.0419)	0.106*** (0.0402)
Constant	-0.381*** (0.0920)	-0.357*** (0.0950)	-0.319*** (0.0967)	-0.307*** (0.0901)	-0.274*** (0.0887)	-0.289*** (0.0902)	-0.310*** (0.0930)	-0.319*** (0.0960)	-0.307*** (0.0969)	-0.298*** (0.0997)
Observations	804	1,076	1,350	1,800	2,057	2,320	2,646	2,877	3,529	3,753
R-squared	0.075	0.064	0.054	0.047	0.041	0.038	0.035	0.034	0.031	0.030
	110	120	130	140	150	160	170	180	190	200
Birth weight <1500	0.117*** (0.0419)	0.106*** (0.0402)	0.0957** (0.0383)	0.0942** (0.0371)	0.0885** (0.0364)	0.0833** (0.0360)	0.0783** (0.0356)	0.0733** (0.0351)	0.0693** (0.0345)	0.0646* (0.0339)
Constant	-0.307*** (0.0969)	-0.298*** (0.0997)	-0.286*** (0.102)	-0.277*** (0.103)	-0.266** (0.105)	-0.264** (0.105)	-0.261** (0.104)	-0.258** (0.103)	-0.263** (0.102)	-0.263** (0.102)
Observations	3,529	3,753	4,148	4,430	4,740	5,202	5,499	5,781	6,111	6,386
R-squared	0.031	0.030	0.029	0.028	0.027	0.026	0.025	0.025	0.024	0.024
	210	220	230	240	250	260	270	280	290	300
Birth weight <1500	0.0615* (0.0331)	0.0597* (0.0326)	0.0587* (0.0321)	0.0573* (0.0317)	0.0572* (0.0314)	0.0561* (0.0311)	0.0561* (0.0308)	0.0563* (0.0305)	0.0569* (0.0303)	0.0578* (0.0300)
Constant	-0.262*** (0.100)	-0.265*** (0.0995)	-0.267*** (0.0985)	-0.269*** (0.0975)	-0.269*** (0.0965)	-0.272*** (0.0952)	-0.274*** (0.0941)	-0.273*** (0.0930)	-0.273*** (0.0920)	-0.272*** (0.0911)
Observations	7,115	7,382	7,796	8,120	8,461	9,071	9,448	9,791	10,217	10,499
R-squared	0.023	0.023	0.022	0.022	0.022	0.022	0.022	0.022	0.021	0.021
	310	320	330	340	350	360	370	380	390	400
Birth weight <1500	0.0587** (0.0297)	0.0585** (0.0294)	0.0586** (0.0292)	0.0595** (0.0290)	0.0606** (0.0288)	0.0613** (0.0286)	0.0621** (0.0284)	0.0629** (0.0282)	0.0631** (0.0281)	0.0629** (0.0279)
Constant	-0.270*** (0.0899)	-0.268*** (0.0888)	-0.267*** (0.0876)	-0.267*** (0.0865)	-0.266*** (0.0855)	-0.266*** (0.0843)	-0.265*** (0.0831)	-0.264*** (0.0820)	-0.262*** (0.0810)	-0.259*** (0.0799)
Observations	11,410	11,764	12,241	12,627	13,067	13,819	14,256	14,663	15,182	15,541
R-squared	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021
	410	420	430	440	450	460	470	480	490	500
Birth weight <1500	0.0627** (0.0277)	0.0629** (0.0275)	0.0632** (0.0274)	0.0632** (0.0272)	0.0630** (0.0271)	0.0627** (0.0269)	0.0625** (0.0267)	0.0621** (0.0266)	0.0618** (0.0265)	0.0614** (0.0264)
Constant	-0.257*** (0.0788)	-0.256*** (0.0776)	-0.254*** (0.0765)	-0.253*** (0.0754)	-0.251*** (0.0743)	-0.250*** (0.0732)	-0.249*** (0.0721)	-0.247*** (0.0711)	-0.246*** (0.0700)	-0.244*** (0.0690)
Observations	16,650	17,065	17,627	18,089	18,654	19,646	20,197	20,743	21,495	21,964
R-squared	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021

Notes: Regressions use same specifications as those used in Table 3 of the paper. Observations with gestational age ≥ 32 weeks in the sample. Triangular weights for each window length used. Results for Chile.

Online Appendix B Table 16 - Mortality around 1500 grams by Gestational Age for Schooling Sample

Chile: Birth cohorts 1992-2002	All gestational ages	Gestational age ≥ 32 weeks	Gestational age < 32 weeks
<i>Infant Mortality (death within 1 year of birth)</i>			
Birth Weight < 1500	-0.0333* (0.0173)	-0.0448* (0.0251)	-0.0190 (0.0276)
Mean of dependent variable	0.133	0.122	0.147
Observations	6,160	3,460	2,700
<i>Neonatal Mortality (death within 28 days of birth)</i>			
Birth Weight < 1500	-0.0266 (0.0162)	-0.0362 (0.0265)	-0.0130 (0.0228)
Mean of dependent variable	0.101	0.0948	0.109
Observations	6,160	3,460	2,700
<i>24 hour Mortality (death within 24 hrs of birth)</i>			
Birth Weight < 1500	-0.0234** (0.00971)	-0.0307** (0.0136)	-0.0147 (0.0140)
Mean of dependent variable	0.0372	0.0434	0.0293
Observations	6,160	3,460	2,700

* significant at 10%; ** significant at 5%; *** significant at 1%

Note: Window of 100 grams on either side of 1500 grams used for Chile and window of 200 grams on either side of 1500 grams used for Norway. Regression controls for mother's age, education and marital status, year of birth and region/municipality of birth fixed effects, type of birth service and 100 gram heap fixed effect. Linear slopes on either side of 1500 grams are included and regression is weighted using triangular weights. Standard errors are clustered at the gram level. For details on the construction and availability of the dependent variable, please see Section 4 and Section 5 of the paper.

Online Appendix B Table 17 - Treatments around 1500 grams

Chile - Number of days spent in hospital when observed within "X" days of birth, above 32 week gestational age sample	30	60	90	120	150	180
Birth Weight<1500	3.976** (1.600)	0.208 (2.060)	2.650 (2.824)	4.351* (2.266)	4.035** (1.902)	3.213** (1.522)
Observations	449	509	552	575	586	602

General table note: Window of 100 grams on either side of 1500 grams used. Regression controls for mother's age, education and marital status, year of birth and region/municipality of birth fixed effects, type of birth service and 100 gram heap fixed effect. Linear slopes on either side of 1500 grams are included. For details on the construction and availability of the dependent variable, please see Section 4 and Section 5 of the paper. Due to some outliers driving the results in small sample sizes in Chile, reported regressions are quantile regressions evaluated at the median.

Online Appendix B Table 18 - Infant mortality and hospital type in Chile

All births with gestational age >=32 weeks; Birth cohorts (2001-2006)	Chile			
	Public Hospitals	Private Hospitals	Public Hospitals with a NICU	Public Hospitals without a NICU
Birth Weight<1500	-0.0746** -0.0344	0.0143 -0.0892	-0.0819* -0.0459	-0.0670 (0.0483)
Mean of dependent variable	0.0797	0.0899	0.0783	0.0813
Observations	1.569	278	843	726

* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: Window of 100 grams on either side of 1500 grams used. Regression controls for mother's age, education and marital status, year of birth and region/municipality of birth fixed effects, type of birth service and 100 gram heap fixed effect. Linear slopes on either side of 1500 grams are included and regression is weighted using triangular weights. Standard errors are clustered at the gram level. Hospital ID is only available for birth cohorts 2001-2006. Hospital names starting with "Clinic" are classified as private hospitals, while names starting with "Hospital" are considered public. NICU availability is obtained from a document published by the Ministry of Health (MINSAL): "Recin nacidos con < de 32 semanas en la red pblica de salud de Chile. Quinque- nio 2000-2004"