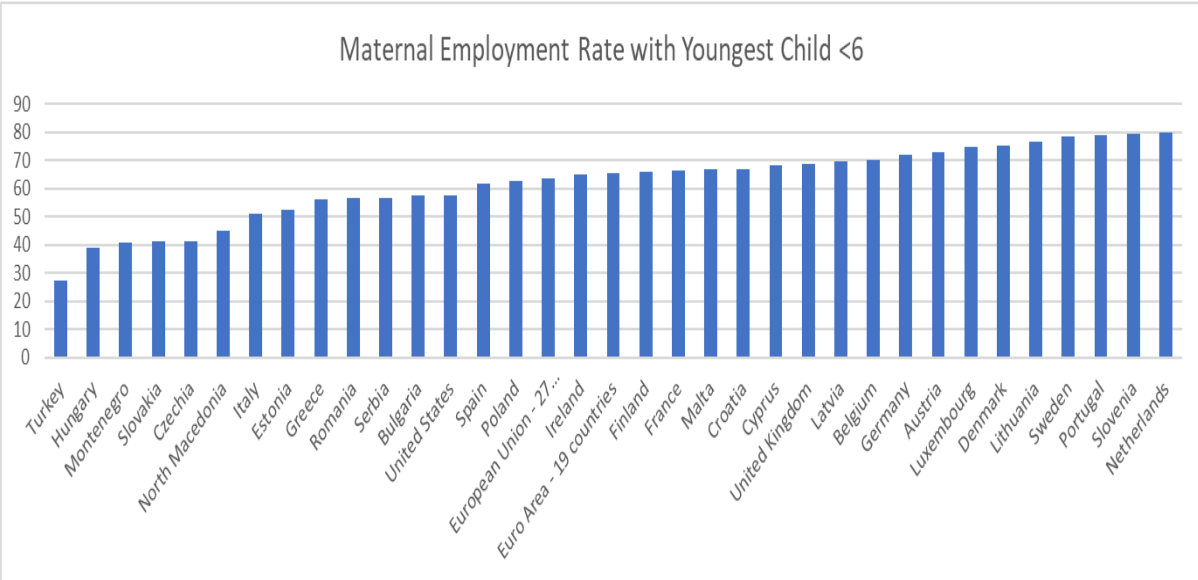
APPENDIX FOR ONLINE PUBLICATION

A Descriptive figures and tables

Figure A.11: Maternal employment with youngest child below 6 years of age across countries



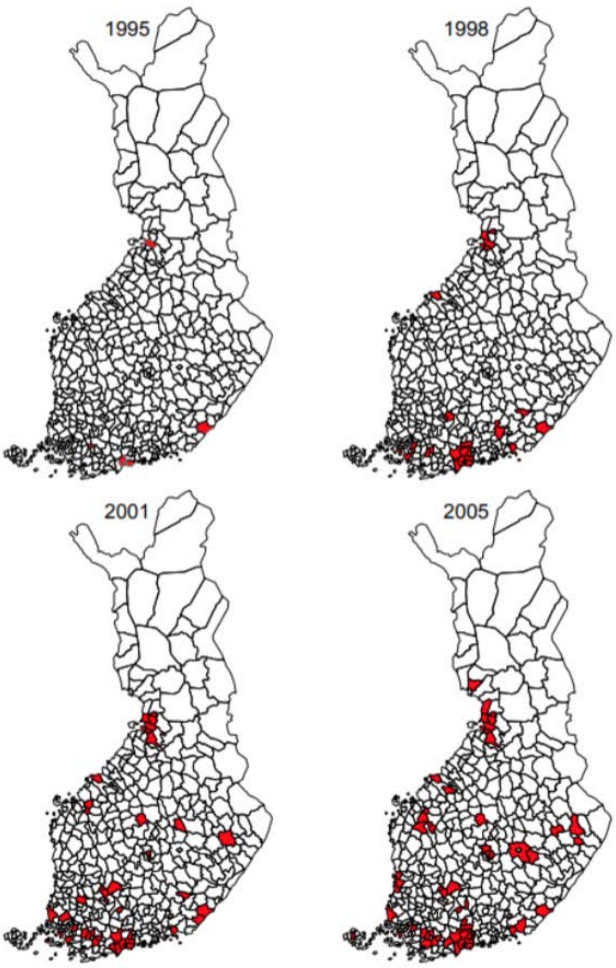
Note: The graph shows a maternal employment rates with youngest child below age of six across countries. Source: Eurostat, data for 2020.

Table A.9: Child care enrollment rate

Age	Finland	Denmark	France	Germany	Norway	Sweden	United States
0-2	26	58.5	47	26	52	46	25
3	67	97	99	89	94	94	40
4	73	98	100	95	96	97	64
5	77	98	100	97	97	98	91

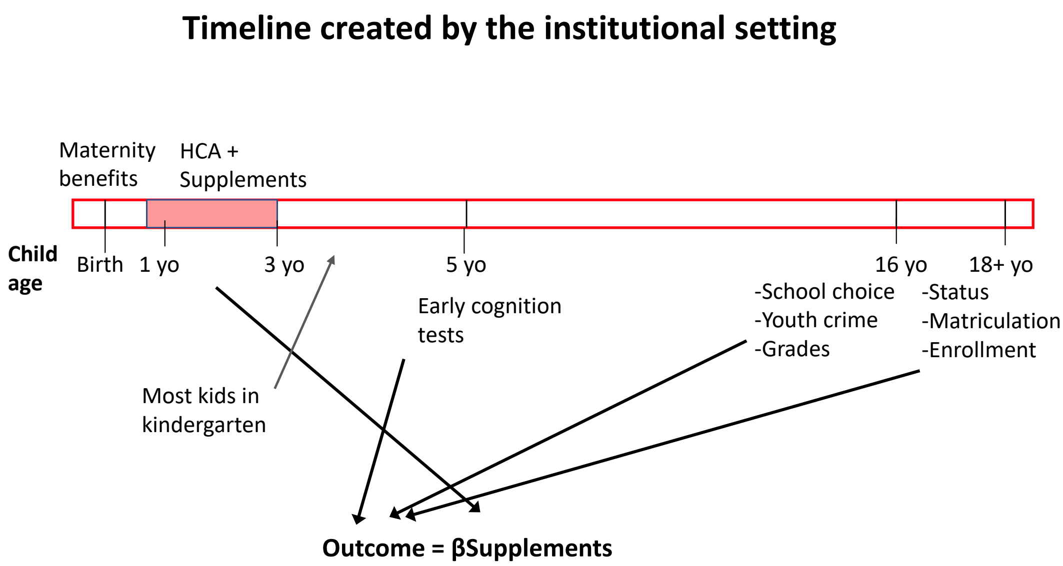
Note: Source: OECD Family data base. The table shows enrolment rate to child care by the age category of children in different rows and for different countries in the columns. Data for 2014.

Figure A.12: Municipalities having supplements in different years on map



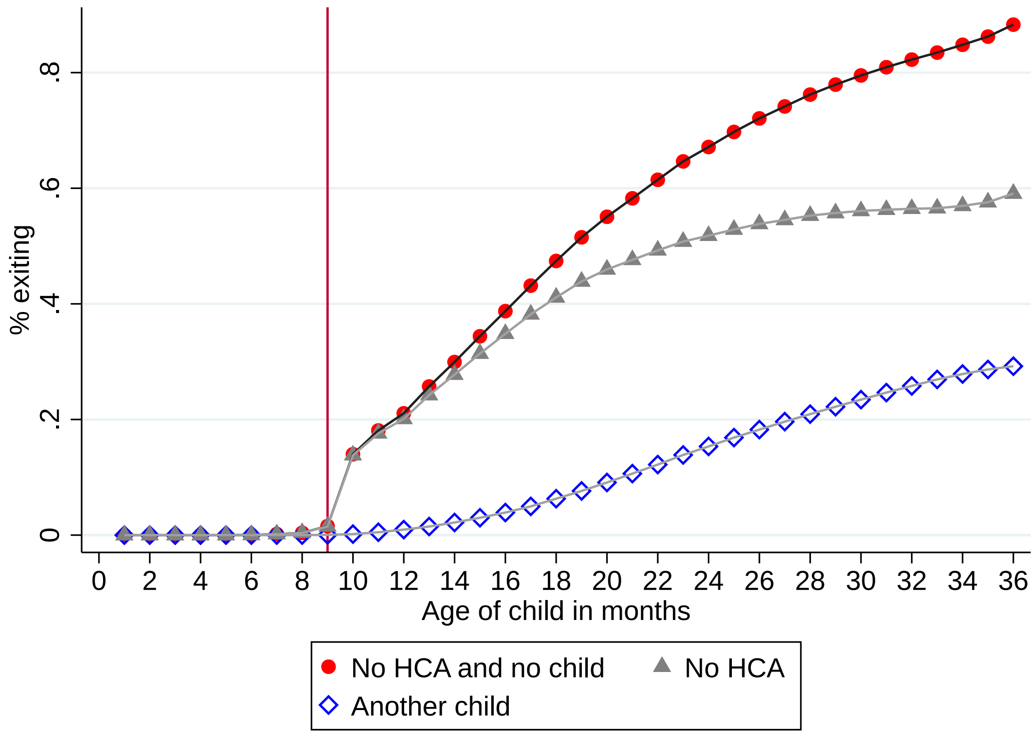
Note: Maps of Finland showing in red municipalities that provide supplement to the national HCA, different maps for years 1995, 1998, 2001 and 2005, respectively.

Figure A.13: Illustrating the timeline in our setting



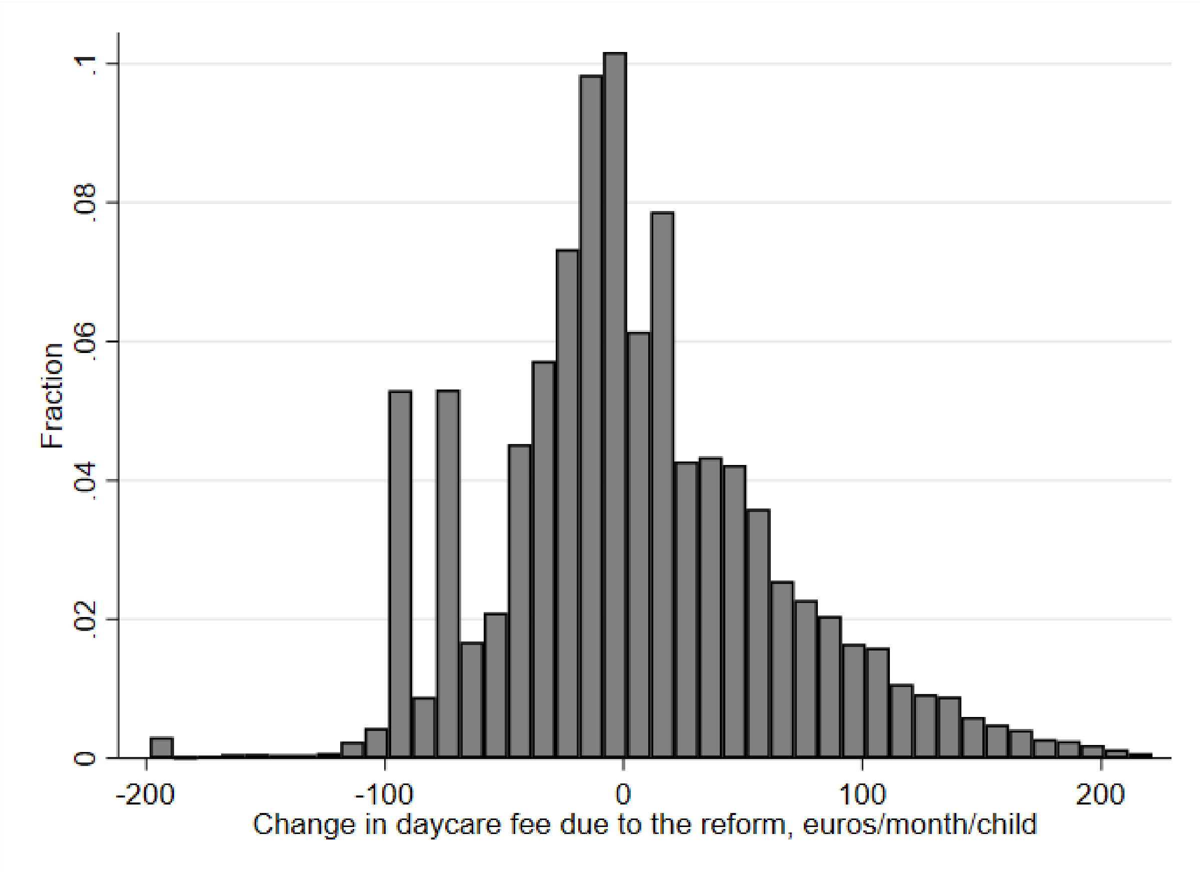
Note: The graph illustrates the timeline in our setting to estimate the effects of HCA (or DCF) on parental and child outcomes. The treatment occurs when the child is one year old and some outcomes for parents and all outcomes for children are observed some years later.

Figure A.14: The rate of exiting HCA to work or having next child by child's age



Note: Data from SII and own calculations. The graph describes by the age of children in months the fraction of parents not using parental leave or having another child. Population data for mothers who had a child in 2015.

Figure A.15: Distribution of change in day care fees due to the reform



Note: The graph shows a histogram of the predicted change in day care fees due to the 1997 reform. The amount of change depends solely on how the fee schedule changed in the municipality, but varies across different households within municipalities because the fees depend differently on family characteristics before and after the reform.

B Detailed information on child health care clinic data

In Finland there is a system of periodic health checks for the expecting mothers and children under the school age that are organized in maternity or child health care clinics. Municipalities are responsible for organizing the health checks and providing them for free for all mothers and children who live in the municipality. Our early outcome data are collected from electronic records of child health care clinics. Especially important as an outcome for children are so called extensive health checks at ages 4 months, 18 months and 4 years (5 years prior to 2010). The extensive health checks aim at providing comprehensive picture of the health status of the children and parents. Both parents can participate to the extensive health check, and they involve physiological and neurological testing as well as psychological evaluation. The extensive health checks are not mandatory, but given that they are a free service for the family and that the child health clinics contact the family for making the appointment to the health check, it is not surprising that a very large fraction of families do go to the health checks.

In the child health care clinic children undergo different tests designed to detect any slow development in speech, neurological, physiological or psychological/emotional areas. The tests are conducted by nurse and usually in connection with the extensive health checks, also a medical doctor. The exact tests vary by age. Our data originate from electronic files that the nurse records using electronic forms. It is possible that some child health care clinics do not use the electronic forms to record all the tests they do. They can also use old fashioned paper files, in which case we do not observe the children having done the tests. In case we do observe the child in the tests, the information about them is recorded by the child's personal identity number. Thus even if they change municipalities, we are able to follow them and have the information about consequent tests connected to the same child. There are three or four different private companies that provide the electronic forms used to record the information in child health care clinics, and we have bought the data from two of the largest. Some rare municipalities used an electronic systems to record the child development tests in 1990s, and the usage of electronic files has become much more common over time. Even in the most recent years we do not observe all children in the data, either because the municipality used some other electronic system than that we have data from, or because some of the tests were not recorded in the system, although the system in principle is in use.

The data coverage is described in Table B.10 overall, in Table B.11 for the largest municipalities individually, and Table B.12 by birth year of children. Table B.10 shows in the first row the amount of children in the data for years 1994 to 2014, the second row the amount of children that appear somewhere in the child health care clinic data for tests done between ages 3 and 6 years old, and the third row shows the amount of children for which we observe the extensive health check, the Lene test, the main outcome. The first column is for all the observations in the data and the second column for years between 1998 and 2012 and discarding tiny municipalities, when the electronic files were more common. Table B.11 shows the amount of children and the share of children in our child outcome data for largest municipalities individually. The table includes years from 2000 to 2011, when the coverage of our data is the greatest. Table B.10 shows the amount of children in population, the amount of children in child health clinic data and the amount of children for which we have the Lene test by birth year of children. Clearly the share for which we observe the child health clinic data becomes larger over time, except for the latest years when the children start to become too young to appear in some of the tests.

Table B.10: Amount of children in data overall and in child health care clinic data

Var	All	Y 1998 - 2012
N children	1170383	645685
N data	343402	300289
N Lene	214781	193817

Our raw data are variables from electronic forms that are filled in after the health check is over. Although the forms are slightly different for different companies from which we collected the data, the tests itself are the same across municipalities. The individual

Table B.11: Amount of children and share in child health data in the largest municipalities

Municipality	Share in data	Lene dummy	N children
Helsinki	.8530374	.6646039	58981
Espoo	.5836636	.2055892	34316
Vantaa	.1088851	.0643255	26055
Tampere	.813534	.5970075	22122
Turku	.8589528	.7218859	17838
Jyväskylä	.6443348	.3716784	11553
Lahti	.8711591	.6443991	10284

test results are recorded in the same way: +/- for whether or not the test is passed, and some comments in open text form for each test. Child health care clinic visit at different ages are scheduled to have different tests, and the tests for the same age are done in the same way for all children across Finland. The neurological tests utilize specific tools, such as cubics, show cards and paper and pen that are provided centrally to the child health care clinics and thus are similar across the country. In the extensive health checks medical doctors record growth of children, measure their hearing and eyesight, other physiological measures, as well as some of the neurological measures.

For this study we have information about the neurological development tests that we use as an early outcome. The aim of the neurological tests is to understand in part the cognitive development of children, and in part motor skills as well as emotional and other psychological development. We focus on tests that have an interpretation of testing the cognitive development of children.

When the extensive health check was done at age five, prior to 2010, the neurological testing consisted of twelve individual tests. These were; Jump on one foot, Cut a circle from a paper, Draw a square, Draw human being with 4 to 5 different parts, Do a pencil grasp, Whether child is left or right handed, Speaking normally without deformations, Child can follow three-part instructions, Child role plays, Child focuses on one thing only at least for a while, Child has the ability to co-operate and Child is able to form friend relationships. We select as our main outcome as describing cognitive development of children; Cut a circle, Draw a square, Draw human being and Follow instructions. The

Table B.12: Amount of children and share in child health data by birth year of children

Year	N children	N child data	N Lene
1996	17110	3006	1911
1997	36010	4487	3113
1998	40829	7808	3956
1999	41728	12231	6385
2000	43465	14934	10651
2001	43318	18137	11814
2002	43304	18977	12296
2003	43327	19266	12306
2004	44757	20991	12909
2005	45274	22011	14211
2006	45901	22410	14558
2007	47232	24292	15543
2008	48032	25251	15788
2009	48675	25719	16274
2010	49836	25504	18456
2011	49971	24450	16478
2012	48619	20293	13410
2013	44396	15801	11645
Total	781784	325568	211704

other measure either physiological aspects or are not based on clean cut test conducted at the clinic, rather than asked from a parent. In 2010 and thereafter the extensive test is done at age 4, and the tests done at that age are different (less demanding due to younger age of children). The tests are; Walk a line, Draw a cross, Ask where and when, Speaking is comprehensible, Explain details from a picture in a show card, Can identify 3 out of 4 main colors in a show card, Plays with other children, Mimics a parent (of same sex). For the same reasons as above, we choose as our main outcome; Draw a cross, Asks when or where, Explains details and Identifies main colors.

We construct a dummy taking value one if child fails at least one of the tests and zero otherwise, at the extensive health check at age five or four (depending on the year the test is conducted). We complement the +/- information for failing an individual test with information from the open text remarks connected to the individual test in question. The reason for this is that the data do not include the binary outcome, or the test is marked as pass, but the open text form clearly indicates that there was some problem with the test. We include these as failing the test in the dummy constituting the main outcome. We needed to code the open text fields to have a numerical variable indicating a negative remark for that test. This was done by capturing words that indicate a good performance, such as "well" or "good" ("hyvin" in Finnish). If such words were found in the text field, that text field was not taken into consideration. Other text fields not containing such words were interpreted as indications of failing the test.

Table B.13 shows descriptive statistics of the individual tests and the dummy we use as main outcome that is formed based on the individual tests and the open text remarks. Upper panel in the table is for tests done at age four and lower panel for tests at age five. Variable "Comb" gives the combined rate of failing at least one of the tests and "Comb + notes" the combined rate of either failing one of the tests or having negative remarks. We use as the main outcome the tests having only +/- markings and as broad outcome the one with failing from open test notes added. Our broad outcome has a failing rate of 23% in test at age four and 21% in tests at age five.

Table B.13: Description of early child tests

	(1) Cross	(2) Ask	(3) Details	(4) Colours	(5) Notes	(6) Comb	(7) Comb +notes
Mean	.15	.02	.027	.045	.089	.18	.23
Sd	.36	.14	.16	.21	.29	.38	.42
N	45872	41491	46116	47318	48511	48511	48511
	Circle	Square	Human	Instruct	Notes	Comb	Comb +notes
Mean	.058	.071	.072	.041	.099	.15	.21
Sd	.23	.26	.26	.2	.3	.36	.41
N	128172	122839	120197	133556	144358	144358	144358

C Additional child outcome tests at the child health clinic

Table B.14: Description of early child tests used to build the alternative cognitive tests

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
				Tests at 4 years old				
Tests	Cross	Asks	Details	Colors	Compreh.	Play		
Av. fail	.109	.019	.021	.047	.029	.008		
Count	195084	179015	193848	201856	201251	194714		
				Tests at 5 years old				
	Circle	Square	Human	Instruct	Focus	Tell	Cooper.	Friends
Av. fail	.055	.069	.069	.037	.01	.03	.006	.006
Count	165111	163082	154595	174524	186964	183003	186061	174739
				Tests at 6 years old				
	Human2	Triangle	Repeat	Tell2	Planned	Group		
Av. fail	.021	.032	.044	.01	.005	.006		
Count	134768	153089	140415	139009	148770	153751		

Table C.15: The effect of supplement on individual child outcome tests at four years old tests

VARs	(1) Walk line	(2) Compr.dable	(3) Cross	(4) Ask2	(5) Details	(6) Play	(7) Colors	(8) Mimick
Supplem.	0.0013**	0.0006	-0.0035	0.0008	-0.0005	-0.0008	0.0003	0.0005
	(0.0006)	(0.0013)	(0.0052)	(0.0010)	(0.0013)	(0.0005)	(0.0012)	(0.0004)
N	177,331	188,697	182,966	167,900	181,670	182,751	189,307	143,124
R^2	0.0049	0.0112	0.0327	0.0108	0.0197	0.0049	0.0210	0.0042
out mean	0.01	0.03	0.11	0.02	0.02	0.01	0.05	0.01

Table C.16: The effect of supplement on individual child outcome tests at five years old tests

VARs	(1) Jump 1 leg	(2) Pencil	(3) Dom. hand	(4) Explain	(5) Cut circle	(6) Square
Supplem.	0.0034	0.0017	-0.0007	0.0013	0.0081**	0.0044*
	(0.0025)	(0.0017)	(0.0009)	(0.0016)	(0.0039)	(0.0026)
N	161,083	168,122	169,848	170,659	153,617	151,519
R^2	0.0169	0.0077	0.0031	0.0235	0.0217	0.0145
out mean	0.08	0.05	0.02	0.03	0.06	0.07

VARs	(7) Human	(8) Instruct	(9) Role play	(10) Focus	(11) Cooperate	(12) Friends
Supplem.	0.0035	0.0054	-0.0008	-0.0001	0.0004	-0.0002
	(0.0033)	(0.0037)	(0.0008)	(0.0005)	(0.0004)	(0.0005)
N	144,458	162,684	146,564	174,353	173,568	163,201
R^2	0.0183	0.0366	0.0041	0.0083	0.0045	0.0048
out mean	0.07	0.04	0.01	0.01	0.01	0.01

Table C.17: The effect of supplement on individual child outcome tests at six years old tests

VARs	(1) Sports	(2) Clearspeech	(3) Human2	(4) Triangle	(5) Repeat	(6) Explain2	(7) Planned
Supplem.	0.0013	0.0030	-0.0008	-0.0019	0.0021	0.0009	0.0005
	(0.0009)	(0.0023)	(0.0010)	(0.0017)	(0.0021)	(0.0008)	(0.0005)
N	146,887	145,426	125,649	142,366	131,008	129,433	138,568
R^2	0.0089	0.0129	0.0092	0.0125	0.0243	0.0114	0.0045
out mean	0.01	0.10	0.02	0.03	0.04	0.01	0.01

D Heterogeneity in DiD results by parents' characteristics

Table D.18: The effect of HCA on parental outcomes: College educated mother

VARs	(1) HCA	(2) Employment	(3) Earnings	(4) Income
Supplem.	280.8***	-0.0156***	-238.2***	135.9***
	(40.8)	(0.0032)	(75.8)	(52.2)
N	375,176	375,176	375,176	375,176
R^2	0.2663	0.147	0.173	0.168
out mean	2352.8	0.40	8850.7	16882.3

Note: Results for a sample where mother has college education attained. Dependent variables are: HCA added with possible supplements in column (1), maternal employment in column (2), maternal labor earnings in column (3), mother's disposable income including earnings and income transfers in column (4),earnings of a spouse in column (5) and total family income in column (6). Each column is separate regression for different outcomes. Supplement refers to municipality specific supplement to home care allowance in 100 euros. The specification controls for year and municipality dummies, as well as mother's age dummies, mother's education level dummies, dummy for mother living with a spouse, dummy for being an immigrant, child age dummies (in months at the end of the year when supplement is measured).

Table D.19: The effect of HCA on parental outcomes: Less than college educated mother

VARs	(1) HCA	(2) Employment	(3) Earnings	(4) Income
Supplem.	272.2***	-0.0135***	-300.583***	138.7***
	(44.7)	(0.0019)	(82.6)	(51)
N	521,452	521,452	521,452	521,452
R^2	0.2750	0.142	0.168	0.187
out mean	2427.5	0.40	9666.2	17843.2

Note: Results for a sample where mother does not have college education attained. Dependent variables are: HCA added with possible supplements in column (1), maternal employment in column (2), maternal labor earnings in column (3), mother's disposable income including earnings and income transfers in column (4),earnings of a spouse in column (5) and total family income in column (6). Each column is separate regression for different outcomes. Supplement refers to municipality specific supplement to home care allowance in 100 euros. The specification controls for year and municipality dummies, as well as mother's age dummies, mother's education level dummies, dummy for mother living with a spouse, dummy for being an immigrant, child age dummies (in months at the end of the year when supplement is measured).

Table D.20: The effect of HCA on failing an early outcome test: College educated mother

VARs	(1) Cognitive	(2) Cognitive 4-6 yo tests	(3) Motor
Supplem.	0.0188***	0.0143**	0.0063
	(0.0059)	(0.0057)	(0.0057)
N	62,327	106,761	82,853
R^2	0.0394	0.0258	0.0418
out mean	0.20	0.23	0.10

Note: Results for a sample where mother has college education attained. Dependent variables are: a dummy for failing at least one of cognitive tests conducted at child health clinics at age 5 or 4 years old in column (1), failing at least one of motor skills tests as part of the same neurological examination in column (2) and failing any of early tests done at ages 4 to 6 observed until 2011 in column (3). Supplement refers to municipality specific supplement to home care allowance in 100 euros. The specification controls for year and municipality dummies, as well as mother's age dummies, mother's education level dummies, dummy for mother living with a spouse, dummy for being an immigrant, child age dummies (in months at the end of the year when supplement is measured).

Table D.21: The effect of HCA on failing an early outcome test: Less than college educated mother

VARs	(1) Cognitive	(2) Cognitive 4-6 yo tests	(3) Motor
Supplem.	0.0176***	0.0178***	0.0019
	(0.0046)	(0.0065)	(0.0043)
N	91,376	114,310	122,904
R^2	0.0380	0.0282	0.0592
out mean	0.28	0.31	0.10

Note: Results for a sample where mother mother does not have college education attained. Dependent variables are: a dummy for failing at least one of cognitive tests conducted at child health clinics at age 5 or 4 years old in column (1), failing at least one of motor skills tests as part of the same neurological examination in column (2) and failing any of early tests done at ages 4 to 6 observed until 2011 in column (3). Supplement refers to municipality specific supplement to home care allowance in 100 euros. The specification controls for year and municipality dummies, as well as mother's age dummies, mother's education level dummies, dummy for mother living with a spouse, dummy for being an immigrant, child age dummies (in months at the end of the year when supplement is measured).

Table D.22: The effect of HCA on child long-term outcomes: College educated mother

VARs	(1) High school	(2) Vocational	(3) Convict by 18
Supplem.	-0.0059***	0.0049**	0.0018**
	(0.0022)	(0.0021)	(0.0008)
N	210,215	205,560	148,562
R^2	0.0798	0.0888	0.0073
out mean	0.69	0.30	0.02

Note: Results for a sample where mother has college education attained. Dependent variables are: child enrolling to academic high school (typically at ages 15 or 16 years old) in column (1), child enrolling to vocational secondary education in column (2) and having been sentenced from crime committed at ages 15 to 18 years old in column (3). Supplement refers to municipality specific supplement to home care allowance in 100 euros. The specification controls for year and municipality dummies, as well as mother's age dummies, mother's education level dummies, dummy for mother living with a spouse, dummy for being an immigrant, child age dummies (in months at the end of the year when supplement is measured).

Table D.23: The effect of HCA on child long-term outcomes: Less than college educated mother

VARs	(1) High school	(2) Vocational	(3) Convict by 18
Supplem.	-0.0047**	0.0042**	0.0023***
	(0.0022)	(0.0021)	(0.0009)
N	280,950	269,475	210,683
R^2	0.0536	0.0569	0.0148
out mean	0.39	0.59	0.05

Note: Results for a sample where mother does not have college education attained. Dependent variables are: child enrolling to academic high school (typically at ages 15 or 16 years old) in column (1), child enrolling to vocational secondary education in column (2) and having been sentenced from crime committed at ages 15 to 18 years old in column (3). Supplement refers to municipality specific supplement to home care allowance in 100 euros. The specification controls for year and municipality dummies, as well as mother's age dummies, mother's education level dummies, dummy for mother living with a spouse, dummy for being an immigrant, child age dummies (in months at the end of the year when supplement is measured).

Table D.24: The effect of HCA on parental outcomes: High income family

VARs	(1) HCA	(2) Employment	(3) Earnings	(4) Income
Supplem.	269.3***	-0.0111***	-209.1***	270.3***
	(56.2)	(0.0017)	(78.3)	(52.6)
N	670,188	670,188	670,188	670,188
R^2	0.315	0.092	0.162	0.24
out mean	3029.9	0.19	5113	12919.4

Note: Results for a sample where family has higher than medium earnings in year before the child was born. Dependent variables are: HCA added with possible supplements in column (1), maternal employment in column (2), maternal labor earnings in column (3), mother's disposable income including earnings and income transfers in column (4),earnings of a spouse in column (5) and total family income in column (6). Each column is separate regression for different outcomes. Supplement refers to municipality specific supplement to home care allowance in 100 euros. The specification controls for year and municipality dummies, as well as mother's age dummies, mother's education level dummies, dummy for mother living with a spouse, dummy for being an immigrant, child age dummies (in months at the end of the year when supplement is measured).

Table D.25: The effect of HCA on parental outcomes: Low income family

VARs	(1) HCA	(2) Employment	(3) Earnings	(4) Income
Supplem.	249.3***	-0.0064***	-87.6***	263.7***
	(62.6)	(0.0013)	(22)	(40.1)
N	523,912	523,912	523,912	523,912
R^2	0.347	0.096	0.121	0.184
out mean	3144.6	0.14	3257.7	10856.6

Note: Results for a sample where family has lower than medium earnings in year before the child was born. Dependent variables are: HCA added with possible supplements in column (1), maternal employment in column (2), maternal labor earnings in column (3), mother's disposable income including earnings and income transfers in column (4),earnings of a spouse in column (5) and total family income in column (6). Each column is separate regression for different outcomes. Supplement refers to municipality specific supplement to home care allowance in 100 euros. The specification controls for year and municipality dummies, as well as mother's age dummies, mother's education level dummies, dummy for mother living with a spouse, dummy for being an immigrant, child age dummies (in months at the end of the year when supplement is measured).

Table D.26: The effect of HCA on failing an early outcome test: High income family

VARs	(1) Cognitive	(2) Cognitive 4-6 yo tests	(3) Motor
Supplem.	0.0181***	0.0140**	0.0030
	(0.0042)	(0.0059)	(0.0043)
N	83,420	116,007	109,378
R^2	0.0380	0.0277	0.0473
out mean	0.23	0.24	0.09

Note: Results for a sample where family has higher than medium earnings in year before the child was born. Dependent variables are: a dummy for failing at least one of cognitive tests conducted at child health clinics at age 5 or 4 years old in column (1), failing at least one of motor skills tests as part of the same neurological examination in column (2) and failing any of early tests done at ages 4 to 6 observed until 2011 in column (3). Supplement refers to municipality specific supplement to home care allowance in 100 euros. The specification controls for year and municipality dummies, as well as mother's age dummies, mother's education level dummies, dummy for mother living with a spouse, dummy for being an immigrant, child age dummies (in months at the end of the year when supplement is measured).

Table D.27: The effect of HCA on failing an early outcome test: Low income family

VARs	(1) Cognitive	(2) Cognitive 4-6 yo tests	(3) Motor
Supplem.	0.0174***	0.0191***	0.0039
	(0.0055)	(0.0062)	(0.0052)
N	70,262	105,064	96,349
R^2	0.0481	0.0352	0.0551
out mean	0.28	0.30	0.11

Note: Results for a sample where family has lower than medium earnings in year before the child was born. Dependent variables are: a dummy for failing at least one of cognitive tests conducted at child health clinics at age 5 or 4 years old in column (1), failing at least one of motor skills tests as part of the same neurological examination in column (2) and failing any of early tests done at ages 4 to 6 observed until 2011 in column (3). Supplement refers to municipality specific supplement to home care allowance in 100 euros. The specification controls for year and municipality dummies, as well as mother's age dummies, mother's education level dummies, dummy for mother living with a spouse, dummy for being an immigrant, child age dummies (in months at the end of the year when supplement is measured).

Table D.28: The effect of HCA on child long-term outcomes: High income family

VARs	(1) High school	(2) Vocational	(3) Convict by 18
Supplem.	-0.0066***	0.0058***	0.0016
	(0.0020)	(0.0020)	(0.0011)
N	243,242	237,685	177,450
R^2	0.1258	0.1327	0.0091
out mean	0.62	0.37	0.03

Note: Results for a sample where family has higher than medium earnings in year before the child was born. Dependent variables are: child enrolling to academic high school (typically at ages 15 or 16 years old) in column (1), child enrolling to vocational secondary education in column (2) and having been sentenced from crime committed at ages 15 to 18 years old in column (3). Supplement refers to municipality specific supplement to home care allowance in 100 euros. The specification controls for year and municipality dummies, as well as mother's age dummies, mother's education level dummies, dummy for mother living with a spouse, dummy for being an immigrant, child age dummies (in months at the end of the year when supplement is measured).

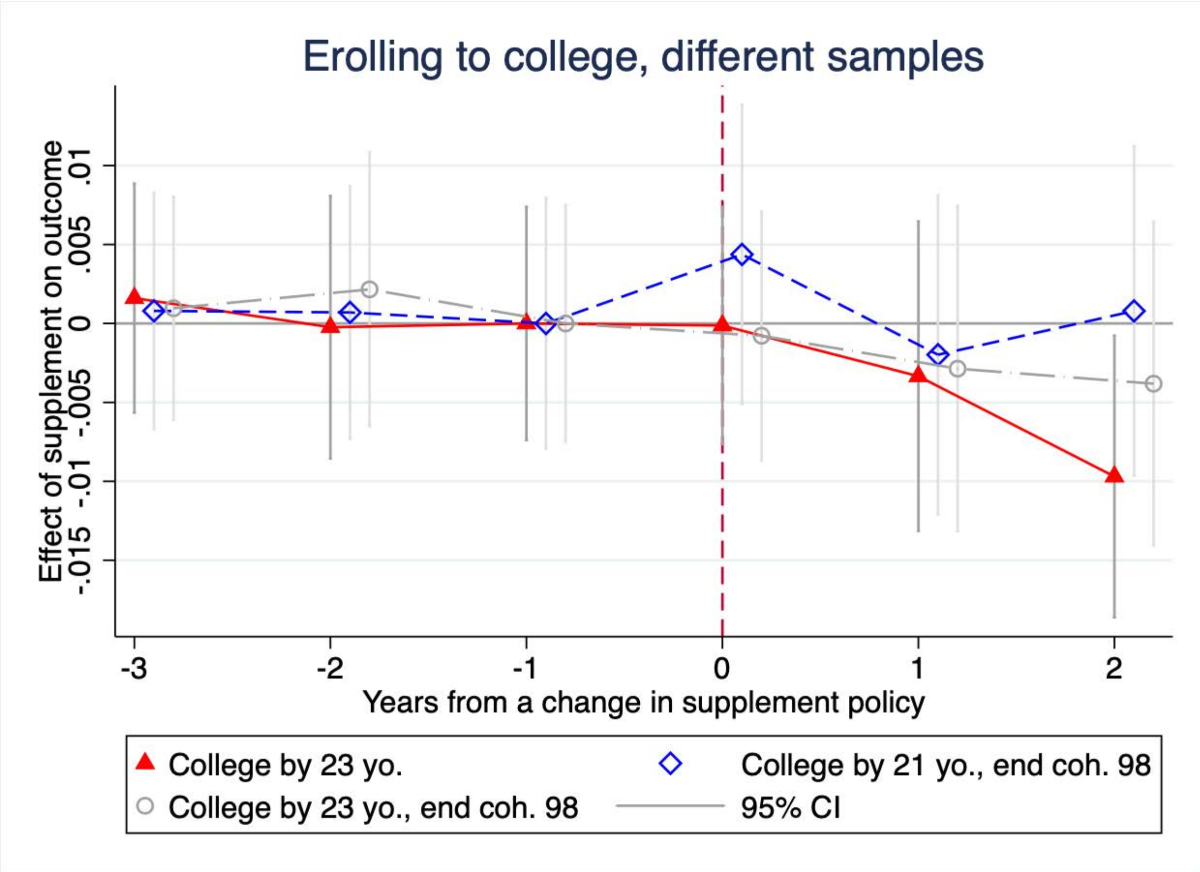
Table D.29: The effect of HCA on child long-term outcomes: Low income family

VARs	(1) High school	(2) Vocational	(3) Convict by 18
Supplem.	-0.0044*	0.0045*	0.0024*
	(0.0026)	(0.0025)	(0.0013)
N	247,923	237,350	181,795
R^2	0.1001	0.1051	0.0173
out mean	0.42	0.56	0.05

Note: Results for a sample where family has lower than medium earnings in year before the child was born. Dependent variables are: child enrolling to academic high school (typically at ages 15 or 16 years old) in column (1), child enrolling to vocational secondary education in column (2) and having been sentenced from crime committed at ages 15 to 18 years old in column (3). Supplement refers to municipality specific supplement to home care allowance in 100 euros. The specification controls for year and municipality dummies, as well as mother's age dummies, mother's education level dummies, dummy for mother living with a spouse, dummy for being an immigrant, child age dummies (in months at the end of the year when supplement is measured).

E Additional DiD results

Figure E.16: Dynamic DiD: Enrolling to college, varying the sample



Note: The graph plots coefficients and confidence intervals that are estimates of leads and lags in years from changes in the supplement amount in 100 euros in year 0 as shown in equation (1). The graph shows estimates from three separate estimation that each control for common year effects and municipality fixed effects. The outcome is an indicator for enrolling to college with varying the upper observation age to 23 or 21 and limiting the sample to those who were one year old either in 2000 or 1998.

Table E.30: Enrolling to college, varying the sample

VARs	(1) End cohort 2000 College by 23	(2) College by 21	(3) End cohort 1998 College by 23	(4) College by 21
Supplem.	-0.0071***	-0.0011	-0.0017	0.0002
	(0.0026)	(0.0026)	(0.0025)	(0.0026)
N	348,408	348,408	254,457	254,457
R^2	0.117	0.096	0.109	0.095
out mean	0.41	0.35	0.45	0.36

Note: The outcome in column (1) is college enrolment observed the latest by 23 years old, and in column (2) is college enrolment observed the latest by 21 years old when limiting the sample to the cohort to those who were one year old in 2000 the latest. Columns (3) and (4) repeat this analysis, but limits the end cohort those who were one year old in 1998 the latest. Each column is separate regression for different outcomes. Supplement refers to municipality specific supplement to home care allowance in 100 euros. The specification controls for year and municipality dummies, as well as mother's age dummies, mother's education level dummies, dummy for mother living with a spouse, dummy for being an immigrant, child age dummies (in months at the end of the year when supplement is measured).

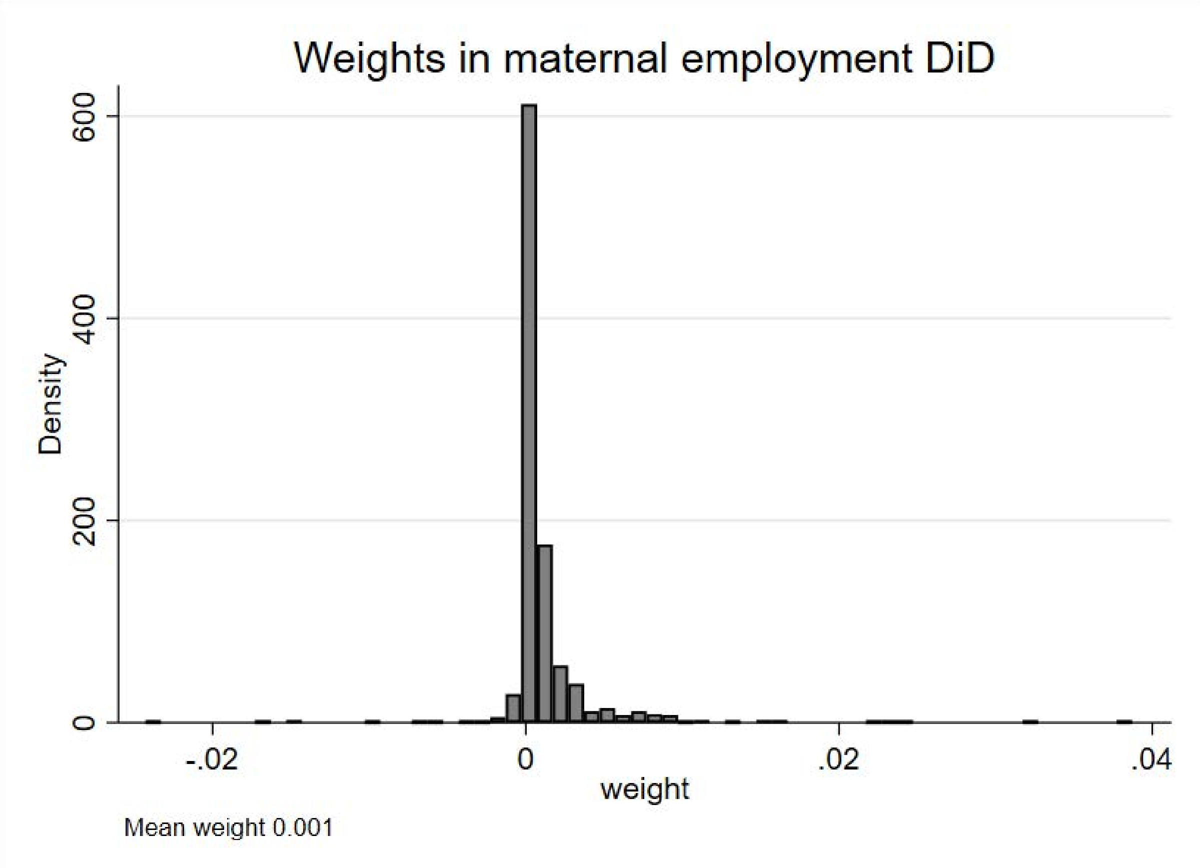
Table E.31: Effect of Day care fee reform in 1997 on earnings and income in longer term

VARs	(1) S.emp1-5	(2) Earn 1-5	(3) Inc. 1-5	(4) Fam Inc. 1-5
Δ DCF	0.0476***	1,889.3***	1,598.1***	3,539.5***
	(0.0130)	(297.67)	(224.24)	(1,180.94)
N	241,455	241,455	241,455	241,455
R^2	0.2186	0.25	0.25	0.28
out mean	2.01	36545.18	54777.40	1.4e+05

Note: DiD regressions for the effect of the day care fee reform in 1997 on mothers' outcomes. Δ DCF refers to a change in imputed day care fees in 100 euros due to the reform. Each column is a separate regression. The outcome in column (1) is sum of maternal earnings when child is one or two years old, in column (2) is sum of maternal earnings when child is three to five years old, in column (3) is sum of maternal earnings when child is one to five years old, in column (4) is average of maternal income when child is one to two years old, column (5) is average of maternal income when child is three to five years old, (6) is sum of maternal income when child is one to five years old, in column (7) sum of family income when child is one to two years old, in column (8) sum of family income when child is three to five years old, and in column (9) sum of family income when child is one to five years old. The specification controls for the main effect of day care fees, year and municipality dummies, as well as mother's age dummies, mother's education level dummies, dummy for mother living with a spouse, dummy for being an immigrant, child age dummies (in monhts at the end of the year when supplement is measured).

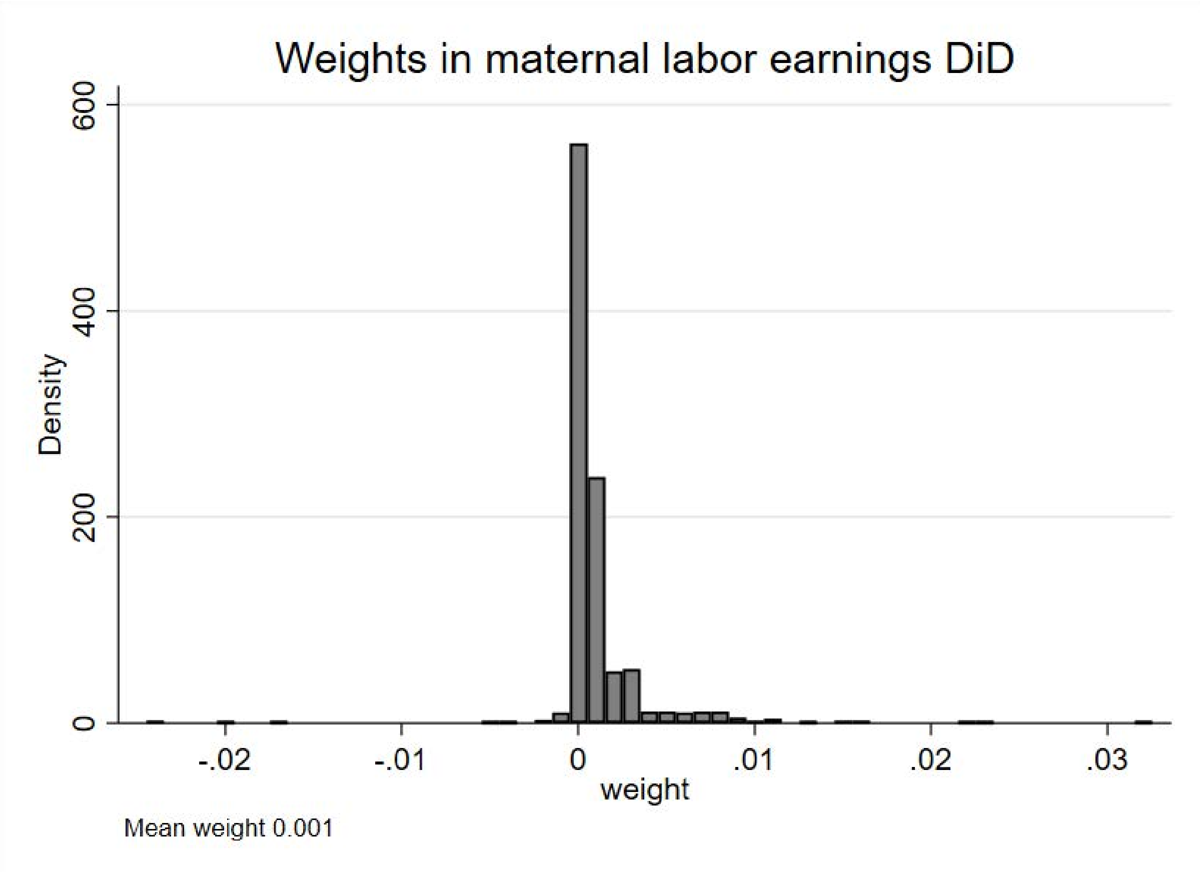
F Dealing with two-way fixed effects problems

Figure F.17: Weights in DiD regression using supplements as dependent variable and maternal employment as the outcome



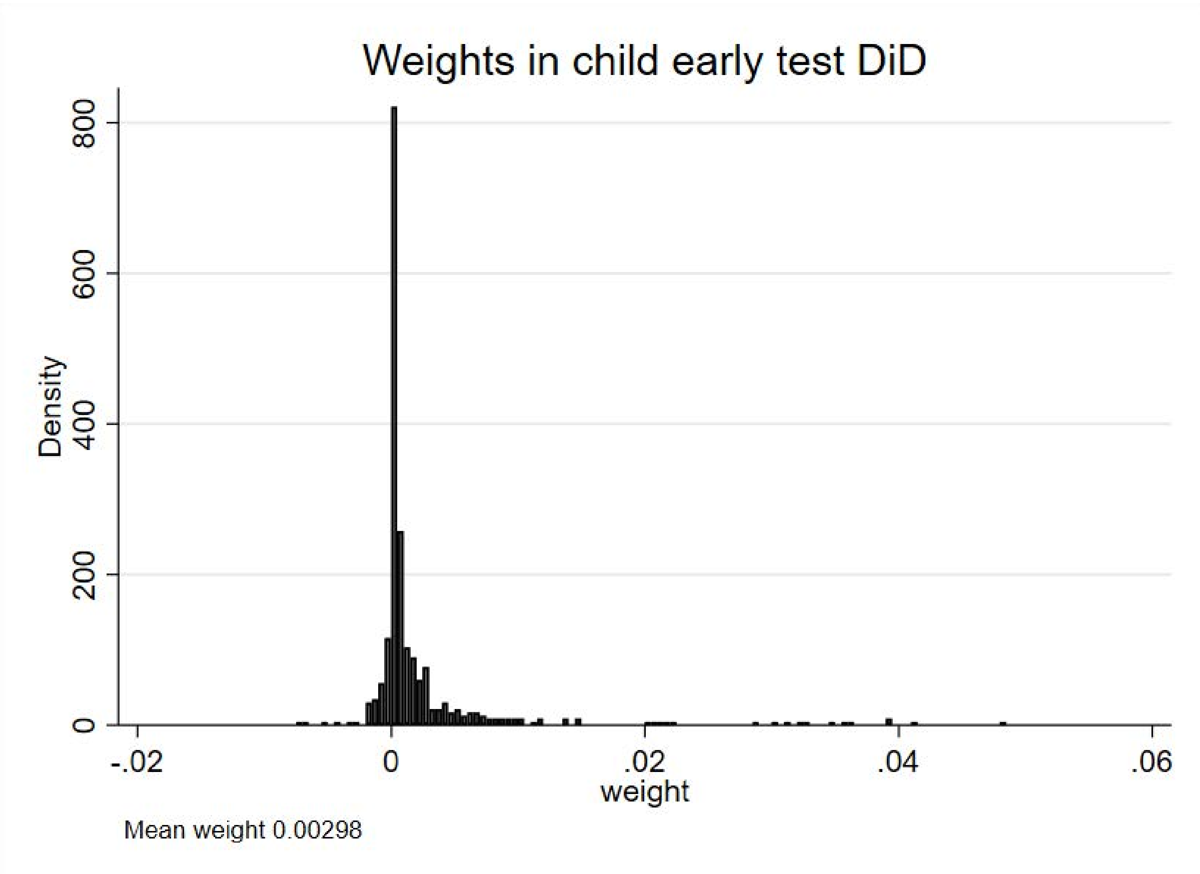
Note: Distribution of DiD weights used in main specification where dependent variable is supplement and outcome maternal employment.

Figure F.18: Weights in DiD regression using supplements as dependent variable and maternal earnings as the outcome



Note: Distribution of DiD weights used in main specification where dependent variable is supplement and outcome maternal earnings.

Figure F.19: Weights in DiD regression using supplements as dependent variable and failing early cognitive test as the outcome



Note: Distribution of DiD weights used in main specification where dependent variable is supplement and outcome failing early cognitive test.

This section describes the staggered DiD design and results from it. We begin by simplifying our current set up, and focus on one event (one change in the supplement) at a time for each municipality, and use as a comparison group municipalities that did not change their supplement to home care allowance during the entire study period. We label the year when the home care supplement changes as an event-year b. We follow each municipality three years before and after each change in municipality supplement occurs. If municipality has a new change in supplement policy we stack it to the data as a new observation. The empirical specification takes the following form:

$$Y_{it} = \theta_{bk} + \mu_{mb} + \sum_{k=-3,j\neq-1}^{3} \beta_k \Delta Supp_{mk} \ + \rho_a + \mathbf{X}_{it}\gamma + \varepsilon_{it}, \tag{5}$$

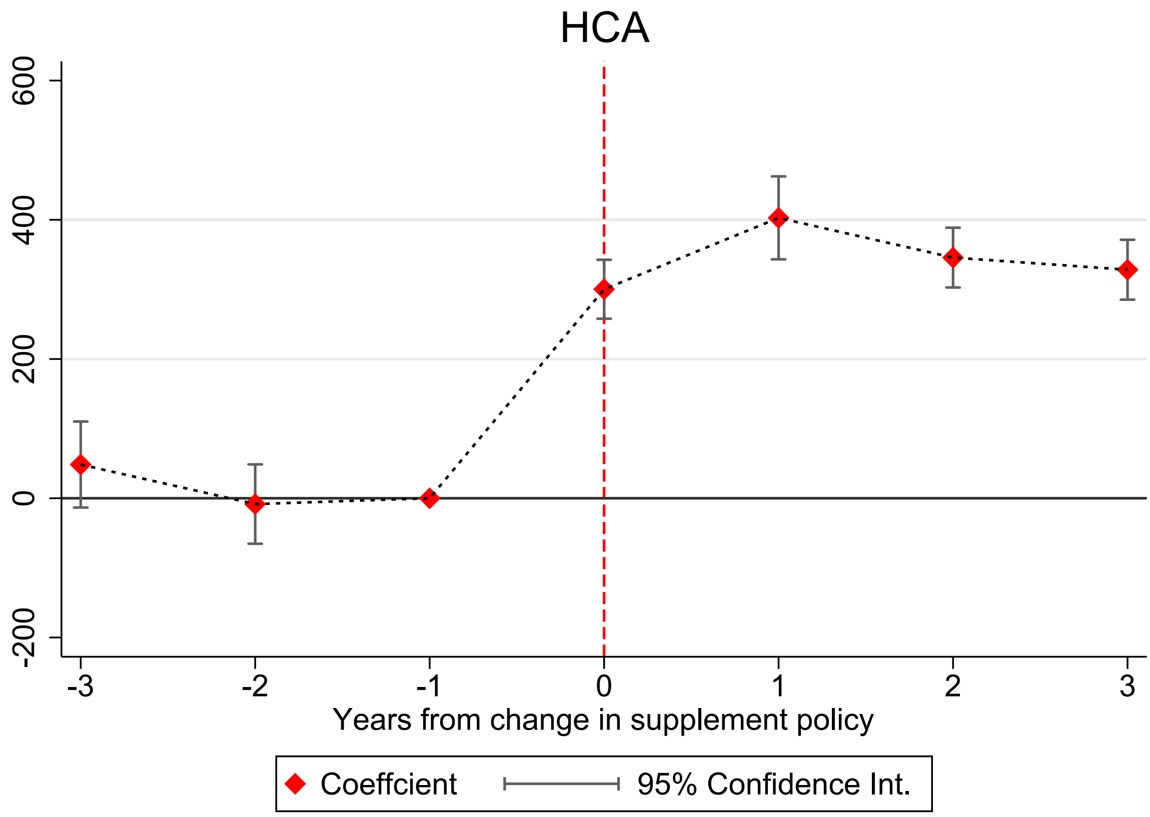
where $\Delta Supp_{mk}$ are indicators for *the change* in the supplement amount k years ago in 100 euros a family is eligible for in municipality m. $\mu_m b$ is a event-year (b) -specific-municipality fixed-effect and θ_{bk} is an indicator specific to each time-since-event-year for each event year cohort. Our main interests lies in the coefficients β_k which will identify the effect of supplement change relative to the year -1. The specification also controls for child age dummies ρ_a (in months at the end of the year) and mother characteristics from pre-birth year, such as mother's age, level of education, and number of children. Note that the municipalities that did not have at a change in their supplement policy are in the comparison group in each base-year with 0 change in their home care allowance supplement.

Figure F.20 shows how the amount of home care allowance evolve around the time of the municipality specific supplement change. The Figure plots the point estimates that we obtain from (equation 5). The results indicate that amount of home care allowance received by mother's of one year old children increases with the increase in supplement amount. In Figures F.21 and F.22 show how employment and earnings of mother's of one year old children change around the time of the supplement change. The results confirm our previous findings. Mother's strongly decrease their labor supply in the municipalities when the amount of home care allowance increases.

Next we focus on children's outcomes. Figure F.24 show that increase in supplement amount at the time when child is one year old coincides with an increase in the probability that child fails an early cognition test at age five. The probability of choosing an academic high school track between ages 15 and 17 years old declines with the increase in the municipality specific supplement (measured when child was one years old) as shown in Figure F.25. We find an increase in criminal behavior between ages 15 and 18 (Figure F.26), although the pre-trends are again somewhat noisy.

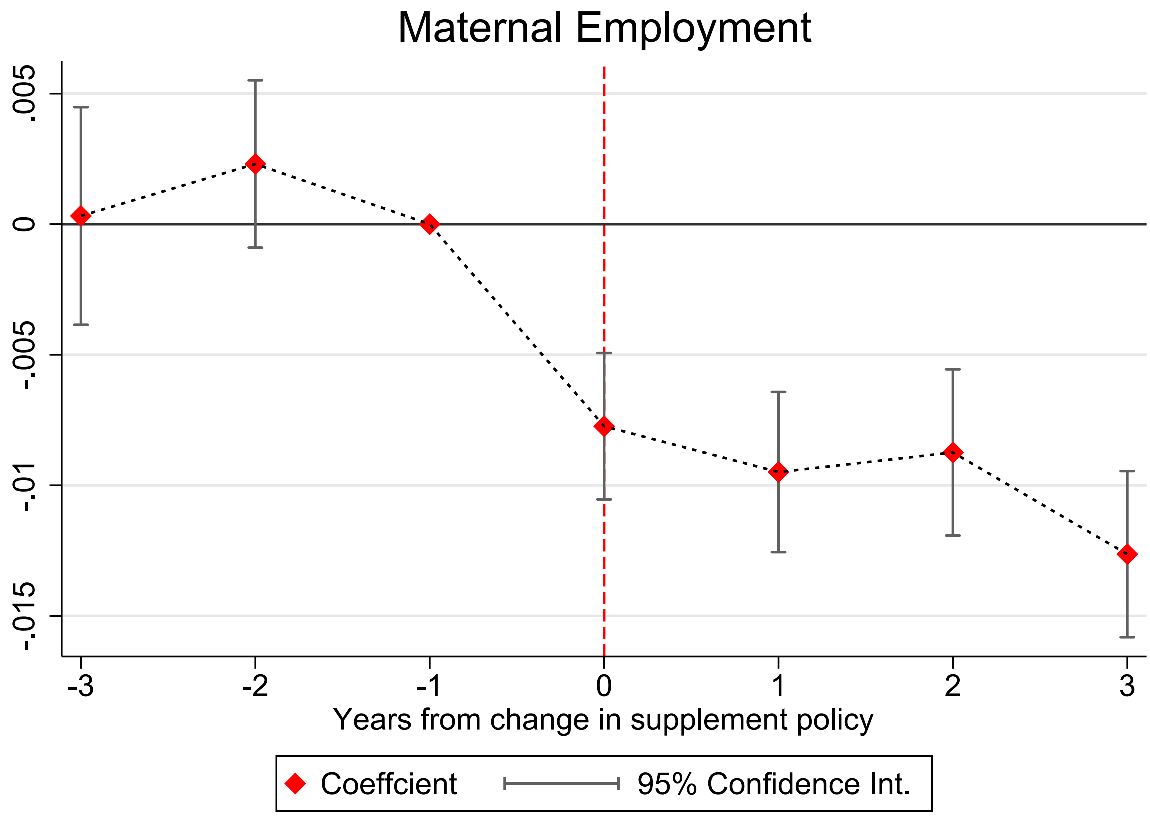
In summary, the results confirm our previous findings, indicating clear negative consequences on mother's labor market outcomes. For children the results show that they do worse in early childhood cognition tests, that they enrol less often to academic high school track and that we observe more youth crimes as a response to higher HCA in the form of municipal supplements when they were one year old. Thus, our conclusion is that according to this analysis the fact that sometimes municipal supplements change close to each other does not create significant bias in our main estimations.

Figure F.20: Balanced DiD: Amount of home care allowance



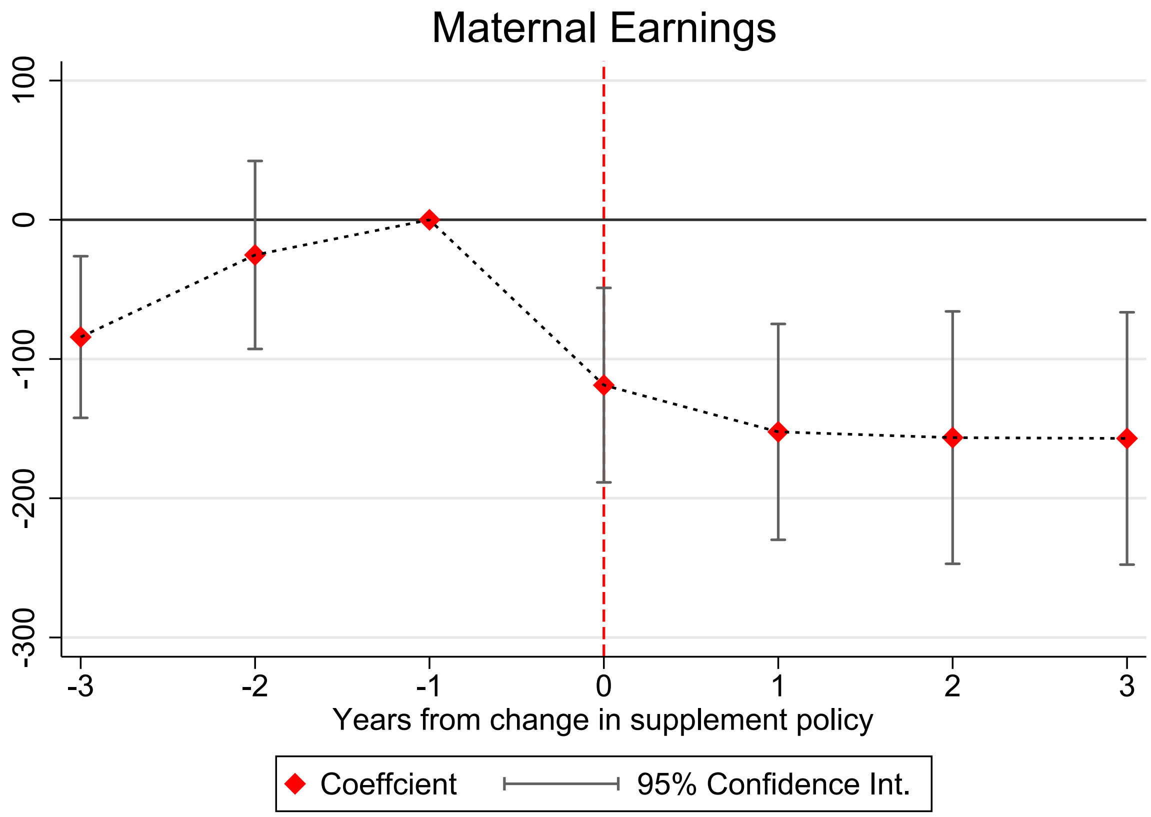
Note: The graph plots coefficients and confidence intervals that are estimates of 100 euros change in supplement amount occurring in year 0 as shown in equation (5). The specification controls for common year effects and municipality fixed effects, mother's age, child age in months. The explanatory variable is amount of supplement change in 100 Euros.

Figure F.21: Balanced DiD: Maternal Employment



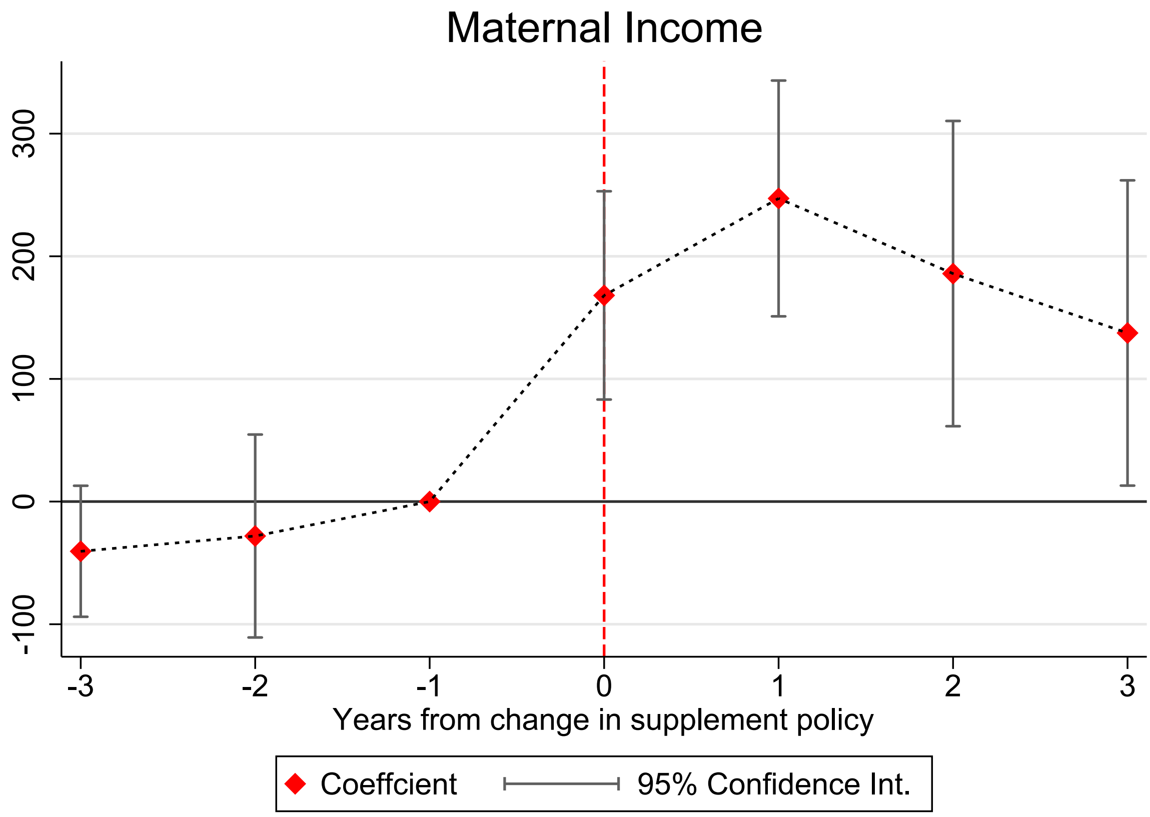
Note: The graph plots coefficients and confidence intervals that are estimates of 100 euros change in supplement amount occurring in year 0 as shown in equation (5). The specification controls for common year effects and municipality fixed effects, mother's age, child age in months. The explanatory variable is amount of supplement change in 100 Euros.

Figure F.22: Balanced DiD: Maternal Earnings



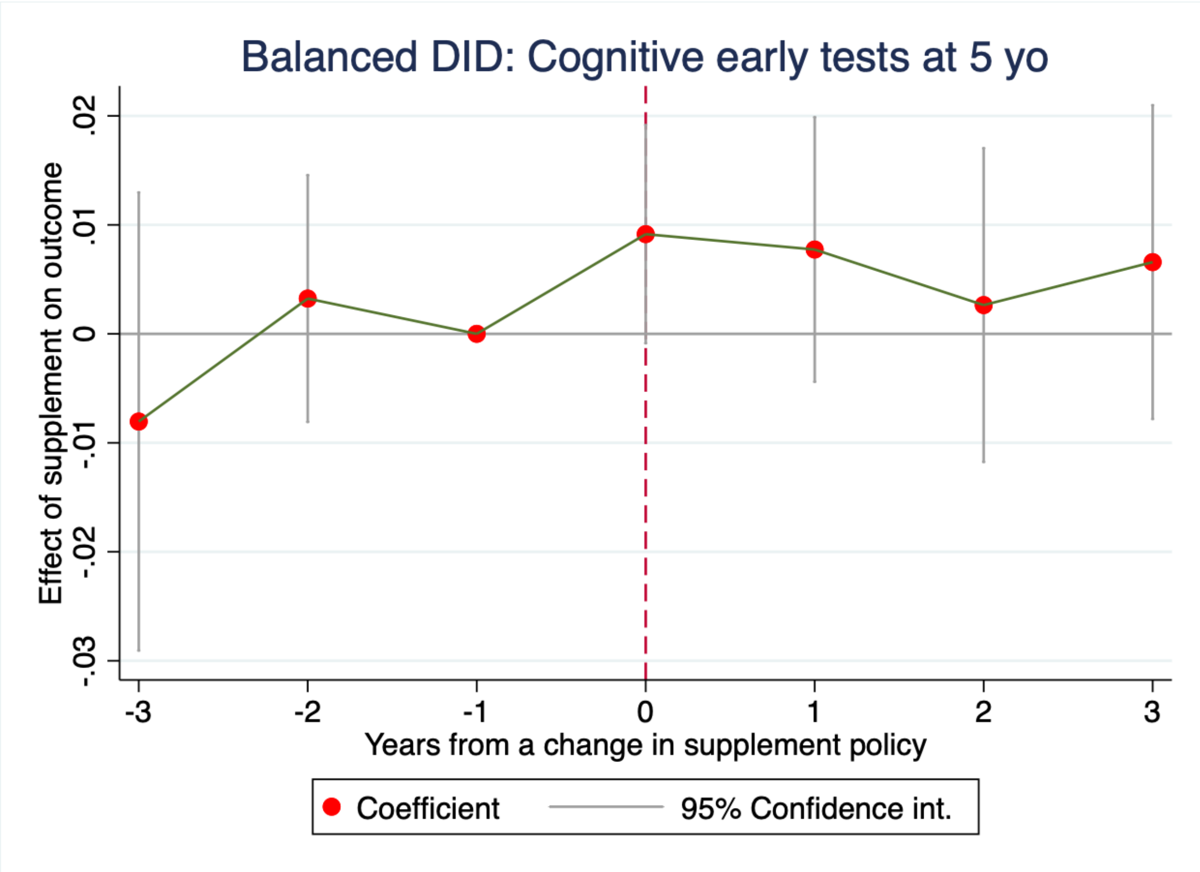
Note: The graph plots coefficients and confidence intervals that are estimates of 100 euros change in supplement amount occurring in year 0 as shown in equation (5). The specification controls for common year effects and municipality fixed effects, mother's age, child age in months. The explanatory variable is amount of supplement change in 100 Euros.

Figure F.23: Balanced DiD: Income



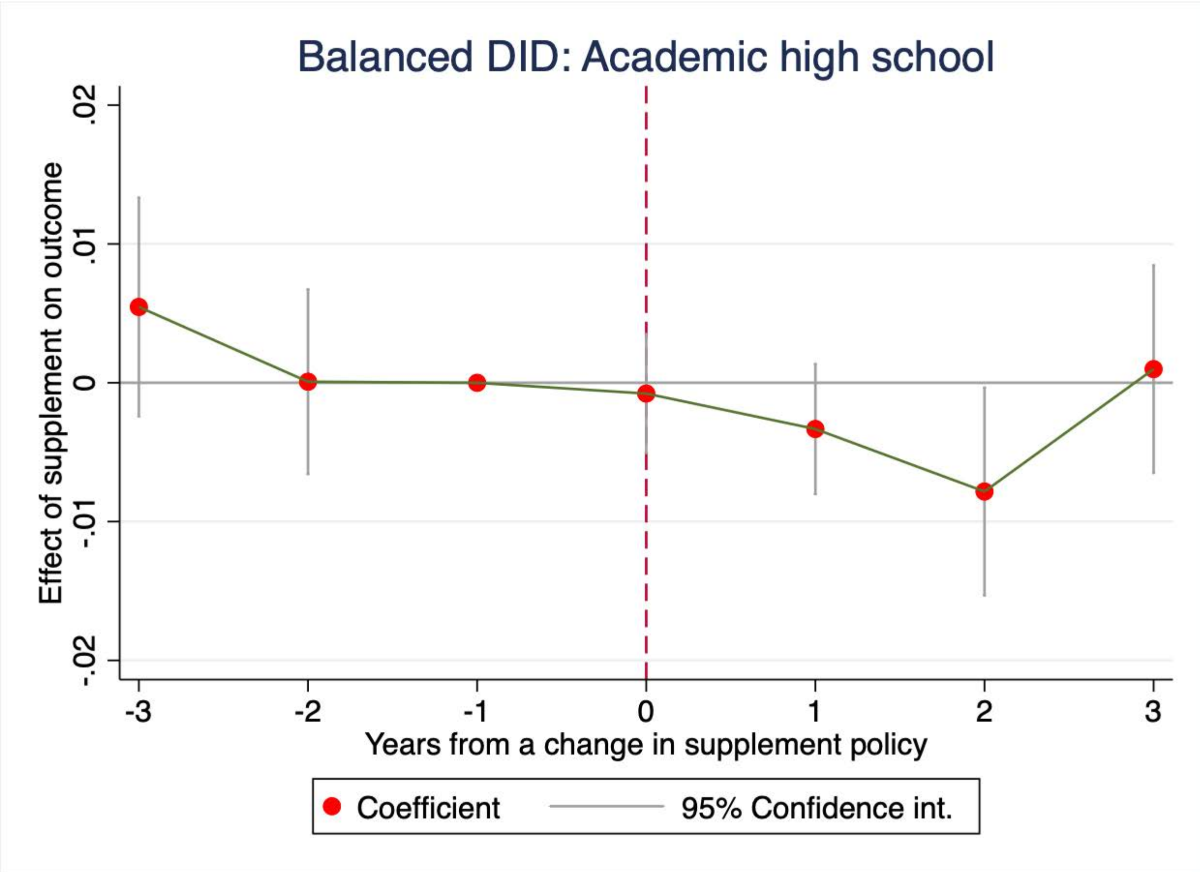
Note: The graph plots coefficients and confidence intervals that are estimates of 100 euros change in supplement amount occurring in year 0 as shown in equation (5). The specification controls for common year effects and municipality fixed effects, mother's age, child age in months. The explanatory variable is amount of supplement change in 100 Euros.

Figure F.24: Balanced DiD: Failing early test



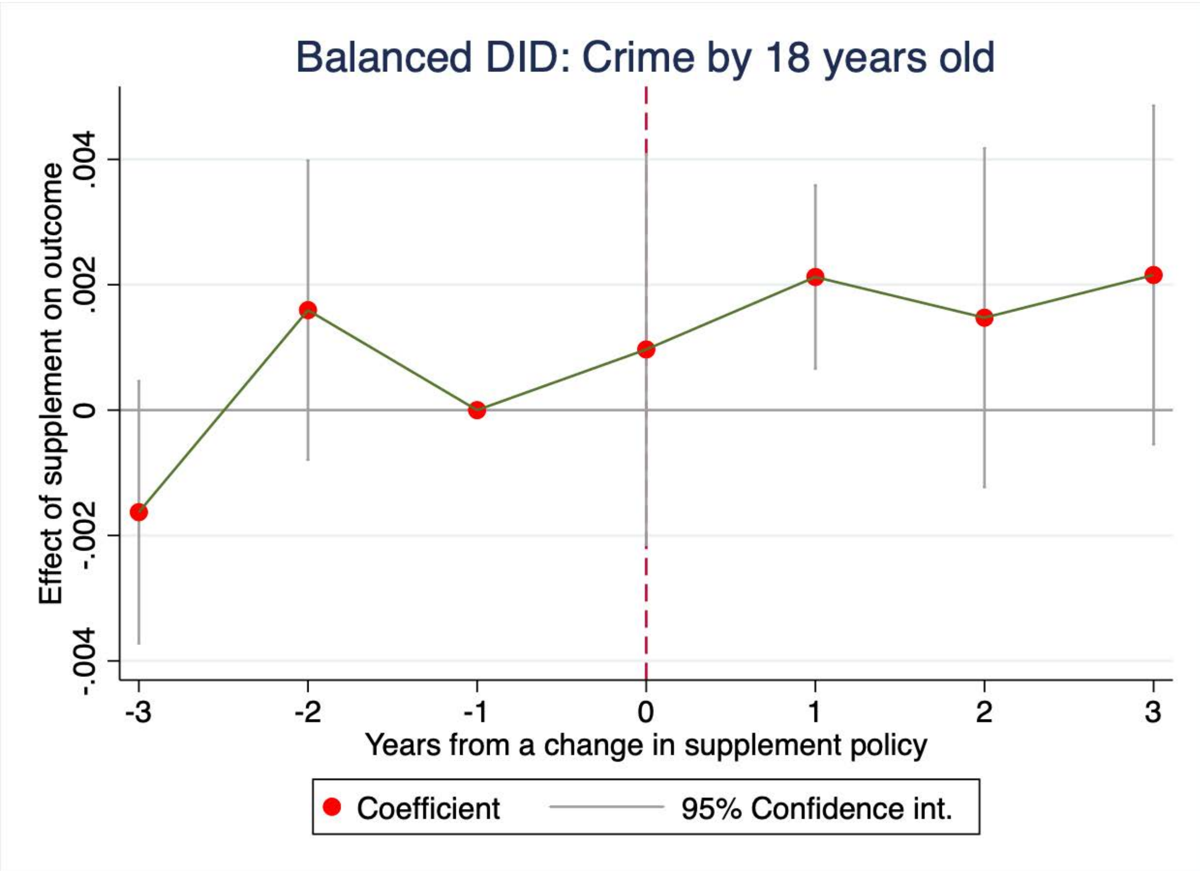
Note: The graph plots coefficients and confidence intervals that are estimates of 100 euros change in supplement amount occurring in year 0 as shown in equation (5). Outcome variable gets value one if child fails the cognition test at age 5. The specification controls for common year effects and municipality fixed effects, mother's age, child age in months. The explanatory variable is amount of supplement change in 100 Euros.

Figure F.25: Balanced DiD: Academic high school track



Note: The graph plots coefficients and confidence intervals that are estimates of 100 euros change in supplement amount occurring in year 0 as shown in equation (5). The specification controls for common year effects and municipality fixed effects, mother's age, child age in months. The explanatory variable is amount of supplement change in 100 Euros.

Figure F.26: Balanced DiD: Any crime age 15-18



Note: The graph plots coefficients and confidence intervals that are estimates of 100 euros change in supplement amount occuring in year 0 as shown in equation (5). The outcome variable gets value one if the individual committed any crime between ages 15-18 by district court records.The specification controls for common year effects and municipality fixed effects, mother's age, child age in months. The explanatory variable is amount of supplement change in 100 Euros.

This section describes the Callaway and Sant'Anna (2021) estimator, which accounts for both the treatment-weights and consequent changes in supplements problems. This estimator relies on distinct events, so to translate the method to our empirical setting of changes in HCA supplements, we use as the key event the first occurrence of at least 40 euros per month increase in supplements, which mostly means the year when the supplement was first implemented in the municipality. As our main analysis uses also subsequent changes in supplements in the same municipality as well as decreases in supplements, this specification is more restrictive. The estimation procedure compares all municipalities that had an increase in supplements in certain year to municipalities that are never treated over the same years, that is, it creates for each increase in supplements a differences-in-differences analysis with one treatment and one control group. The estimation procedure also treats treatment weights such that the heterogeneous weights are controlled for.

We show results from the above procedure that yield ATT estimates in the average pre- and post-estimates, as well as the event-study coefficients. Table F.32 shows the average pre- and post-treatment estimates for mother outcomes. We observe that the before-treatment effects are close to zero and not statistically significant, except for small negative coefficient for HCA significant only at 10% level. The post-coefficients are highly statistically significant and similar to our main DiD estimates. The effect on HCA usage and employment are larger in absolute value than the main estimates. Table F.34 shows the event-study coefficients indicating that the effects arise at the time of change in supplements and that the effects persist for the four examined years after the increase in supplements.

Table F.33 shows the results for child outcomes. The result for the early cognitive test in column (1) is similar to the main estimation, but not statistically significant. The result for enrolling to academic high school in column (2) and enrolling to vocation secondary education in column (3) are in line with the main estimation results and statistically significant at 5% level. The result for youth crime in column (4) is similar to main estimation results and statistically significant. The event-study coefficients in Table F.35 show that whenever we observe significant estimates, the effects seem quite stable after the treatment. In summary, we observe similar results for children from this exercise as our main estimation results, but that especially the early test outcome is not quite as statistically significant as in the main analysis. However, this could also be due to restrictions needed to impose in order to perform this analysis, and not necessarily evidence of two-way fixed effects problems.

Table F.32: CSDID Parent outcomes +40 euros change in supplement as treatment

VARs	(1) HCA	(2) Employment	(3) Earnings	(4) Income
Pre average	-36.11*	0.000409	41.72	-3.333
	(19.46)	(0.00162)	(34.16)	(40.82)
Post average	601.4***	-0.0216***	-274.1***	331.1***
	(60.25)	(0.00400)	(66.20)	(85.93)

Note: Regressions implementing Callaway and Sant'Anna (2021) estimators. Treatment is the first occurrence of at least + 40 euros increase in municipal supplements. Row Pre average shows the sum of coefficients prior to the change. Post average shows sum of coefficients for four years after the change and is the ATT estimate. Column (1) is for annual HCA usage in euros, column (2) maternal employment, column (3) for maternal earnings and column (4) for maternal income including benefits.

Table F.33: CSDID Child outcomes +40 change in supplement as treatment

VARs	(1) Cognitive	(2) High school	(3) Vocational	(4) Convict by 18
Pre avrg	0.00600	0.00191	-0.00175	-0.00264*
	(0.00771)	(0.00365)	(0.00352)	(0.00143)
Post avrg	0.0176	-0.00602**	0.00662**	0.00377**
	(0.0150)	(0.00299)	(0.00265)	(0.00154)

Note: Regressions implementing Callaway and Sant'Anna (2021) estimators. Treatment is the first occurrence of at least + 40 euros increase in municipal supplements. Row Pre average shows the sum of coefficients prior to the change. Post average shows sum of coefficients for four years after the change and is the ATT estimate. Column (1) is for early cognitive test, column (2) for enrolling to academic high school, column (3) for enrolling to vocational secondary education and column (4) for being sentenced for a crime committed between ages 15 and 18 years old.

Table F.34: CSDID Parent outcomes +40 change in supplement as treatment, event study coefficients

VARs	(1) HCA	(2) Employment	(3) Earnings	(4) Income
Tm3	-24.31	0.00548	31.53	49.12
	(55.79)	(0.00391)	(88.20)	(90.33)
Tm2	-98.10*	-0.00151	29.41	-81.94
	(53.11)	(0.00406)	(82.11)	(81.24)
Tm1	14.08	-0.00275	64.23	22.81
	(37.98)	(0.00480)	(80.55)	(72.76)
Tp0	509.9***	-0.0167***	-232.8***	262.6***
	(56.14)	(0.00341)	(79.21)	(72.26)
Tp1	692.5***	-0.0201***	-334.5***	365.0***
	(82.17)	(0.00505)	(110.4)	(119.3)
Tp2	620.1***	-0.0217***	-239.2***	393.6***
	(64.90)	(0.00435)	(78.02)	(110.8)
Tp3	583.2***	-0.0280***	-289.8***	303.2**
	(75.98)	(0.00633)	(104.6)	(139.8)

Note: Regressions implementing Callaway and Sant'Anna (2021) estimators. Treatment is the first occurrence of at least + 40 euros increase in municipal supplements. Rows show the event study coefficients with Tp0 being the first treatment. Column (1) is for annual HCA usage in euros, column (2) maternal employment, column (3) for maternal earnings and column (4) for maternal income including benefits.

Table F.35: CSDID Child outcomes +40 change in supplement as treatment, event study coefficients

VARs	(1) Cognitive	(2) High school	(3) Vocational	(4) Convict by 18
Tm3	0.0382	0.00929	-0.00955	-0.0106***
	(0.0255)	(0.00895)	(0.00814)	(0.00332)
Tm2	-0.00949	0.00192	-0.000784	0.00360*
	(0.0161)	(0.00569)	(0.00561)	(0.00211)
Tm1	-0.0107	-0.00548	0.00508	-0.000967
	(0.0114)	(0.00539)	(0.00585)	(0.00167)
Tp0	0.0226**	-0.000762	0.000422	0.00339*
	(0.0115)	(0.00351)	(0.00342)	(0.00194)
Tp1	0.0153	-0.00650	0.00714*	0.00280
	(0.0131)	(0.00407)	(0.00371)	(0.00211)
Tp2	0.0194	-0.00940**	0.0101**	0.00411**
	(0.0201)	(0.00435)	(0.00415)	(0.00203)
Tp3	0.0132	-0.00741	0.00884*	0.00477*
	(0.0229)	(0.00475)	(0.00453)	(0.00246)

Note: Regressions implementing Callaway and Sant'Anna (2021) estimators. Treatment is the first occurrence of at least + 40 euros increase in municipal supplements. Rows show the event study coefficients with Tp0 being the first treatment. Column (1) is for early cognitive test, column (2) for enrolling to academic high school, column (3) for enrolling to vocational secondary education and column (4) for being sentenced for a crime committed between ages 15 and 18 years old.