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A Online Appendix

Figure A.1: Decomposition of the Effect of RoSLA on Child Cognitive Skills (+/- 1 yr sample)

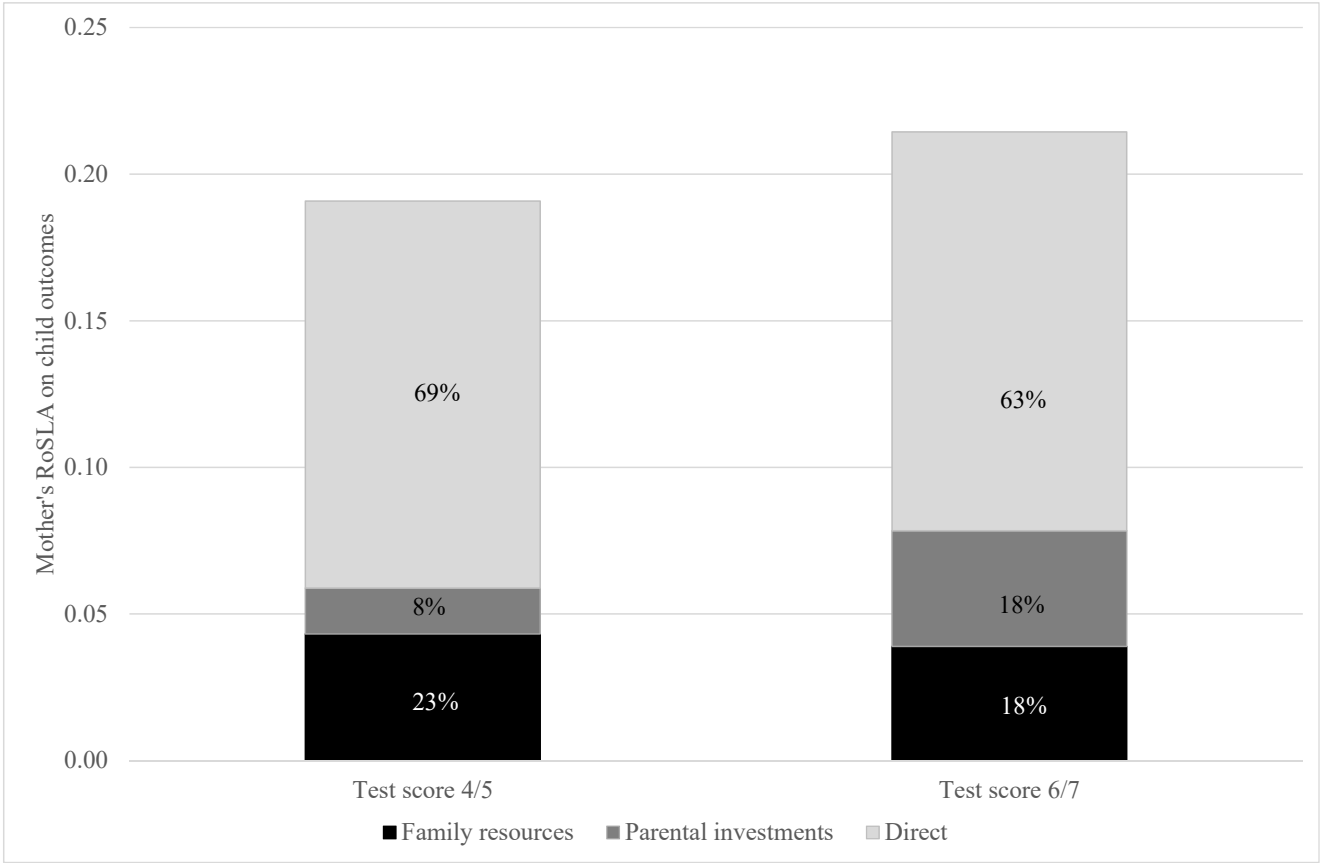


Figure relating to Equation 6 and results in Table 6. Column 1 (2) decomposes the total effect of RoSLA on cognitive skills at age 4-5 (test scores at age 6-7) into the effect explained by family resources; parental investments and the unexplained component.

A.1 Components of the child socio-emotional skills

We measure socio-emotional skills of children with the strengths and difficulties questionnaire (SDQ), a validated measure of child skills, when the child was 81 months (6.75 years) old.

The SDQ consists of five sub-scales each which are constructed from 5 measures. The sub-scales include i) emotional problems; ii) conduct problems; iii) hyperactivity; iv) peer relationship; and v) pro-social behaviour. All measures are reported in Table A.1.

Table A.1: Components of Strength and Difficulties sub scales

Emotional problems	Has many worries, often seems worried
	Is often unhappy, down hearted or tearful
	Is nervous and clingy in new situations, easily loses confidence
	Has many fears, is easily scared
Conduct problems	Often complains of headaches, stomach-aches or sickness
	Is generally obedient, usually does what adult requests
	Often fights with other children or bullies them
	Steals from home, school or elsewhere
Hyperactivity	Often has temper tantrums or hot tempers
	Is considerate of other peoples' feelings
	Is constantly fidgeting or squirming
	Is easily distracted, concentration wanders
Peer relationship	Thinks things out before acting
	Sees tasks through to the end, has good attention span
	Is restless, overactive, cannot stay still for long
	Is rather solitary, tends to play alone
Pro-social	Has at least one good friend
	Is generally liked by other children
	Is picked on or bullied by other children
	Gets on better with adults than with other children
Pro-social	Is helpful if someone is hurt, upset or feeling ill
	Is kind to younger children
	Often lies or cheats
	Often volunteers to help others (parents, teachers, other children)
Pro-social	Shares readily with other children

A.2 Factor analysis

In this section we report factor loadings for each parental input for which we want to construct a latent factor and we discuss and test the assumptions of the same system of measurement across the treatment and control groups. We follow Cunha and Heckman (2008) and include continuous scores on particular measures of parental inputs where available and use individual measures on parental inputs otherwise. A complete discussion of the factor loadings and interpretation of the factors generated is included in Section A.2 of the working paper version Macmillan and Tominey (2020).

Table A.2: Factor Loadings: Family resources

(1)	(2)	(3)
Latent factor	Measures	Factor loading
Pre-birth human capital	Own house	1.000
	Married early pregnancy	0.424
	Working early pregnancy	0.340
Mother labour supply	No of hours mum works per week 33 months	1.000
	Mum employed at 47 months	0.044
	Mum employed at 61 months	0.063
	Mum hours 61 months	1.678
Mother well being	Mother self esteem	1.000
	Mother anxiety	-0.696
	Mother depression	-1.031
	Mother enjoyment	0.259
	Mother bonding	0.538
Partner labour supply	Partner employed at 21 months	1.000
	Partner employed at 33 months	1.139
	Partner employed at 47 months	1.031
Relationship quality with partner	Partner warmth	1.000
	Partner authority	-0.314
	Partner communication	-0.274

Table A.3: Factor loadings: Parental investments: 1/2

(1)	(2)	(3)
Health during pregnancy	Smoked cigarettes in first 3 months pregnancy	1.000
	Smoked cigarettes in last 2 weeks pregnancy	0.832
	Number smoked per day in first 3 months	10.510
	Glasses alcohol consumed in first 3 months	0.159
Monetary investments	Toy score 24 months	1
	Toy score 42 months	0.246
Mother authoritative parenting	Mum Sends Child to Room when Naughty 42 months	1.000
	Mum Takes Away Treats when Naughty 42 months	0.870
	Mum Tells Child Off when Naughty 42 months	0.401
Mother authoritarian parenting	Mum Ignores Child when Naughty 42 months	1.000
	Mum Smacks Child when Naughty 42 months	1.710
	Mum Shouts at Child when Naughty 42 months	1.743
	Mum Bribes when Naughty 42 months	0.930
Mother time investments	Mother Bathes CH 42 months	1.000
	Mother Feeds CH 42 months	1.142
	Mother Sings to CH 42 months	2.717
	Mother Reads CH Stories 42 months	2.035
	Mother Plays W Toys W CH 42 months	2.466
	Mother Cuddles CH 42 months	0.209
	Mother & CH Play Imitation Games 42 months	3.174
	Mother Plays W CH Physically 42 months	-2.842
	Mother Takes CH for Walk 42 months	-1.417
	Mother does Other Activities W CH 42 months	-0.494

Table A.4: Factor loadings: Parental investments: 2/2

(1)	(2)	(3)
Partner time investments	Partner Bathes CH 42 months	1.000
	Partner Feeds CH 42 months	0.970
	Partner Sings to CH 42 months	1.324
	Partner Reads CH Stories 42 months	1.545
	Partner Plays W Toys W CH 42 months	1.571
	Partner Cuddles CH 42 months	0.586
	Partner & CH Play Imitation Games 42 months	1.467
	Partner Plays W CH Physically 42 months	1.088
Mother relationship with child	Mother really loves child 44 months	1.000
	Mother often irritated by child 44 months	-3.232
	Mother dislikes mess from child 44 months	-1.426
	Child makes mother happy 44 months	1.838
	Mother has battles of will with child 44 months	-2.293
	Child is affectionate to mother 44 months	2.200
	Child gets on mum's nerves 44 months	-2.332
	Mother feels close to child 44 months	3.646
Partner relationship with child	Partner really loves child 44 months	1.000
	Partner often irritated by child 44 months	-34.257
	Partner dislikes mess from child 44 months	-14.221
	Child makes Partner happy 44 months	2.184
	Partner has battles of will with child 44 months	-26.480
	Child is affectionate to Partner 44 months	4.078
	Child gets on mum's nerves 44 months	-25.421
	Partner feels close to child 44 months	4.643

A.3 Double treatment effect

Table A.5: Double treatment effect of RoSLA on child outcomes

	(1)	(2)	(3)	(4)
	Test score 4/5	Test score 6/7	Externalising	Internalising
<i>a) Unconditional</i>				
0 treated parents	-0.194** (0.089)	-0.226*** (0.077)	0.038 (0.079)	0.159** (0.080)
1 treated parent	-0.157*** (0.046)	-0.255*** (0.040)	0.097** (0.043)	0.106** (0.044)
<i>b) Conditional on mediators</i>				
0 treated parents	0.085 (0.076)	0.026 (0.065)	0.032 (0.065)	-0.041 (0.069)
1 treated parent	0.111 (0.083)	0.147** (0.071)	0.012 (0.072)	-0.120 (0.077)
Observations	2,591	3,031	3,101	3,043

Notes: Sample consists of births within a 6 year window of the mother's and partner's dates of birth around RoSLA; all regressions control for mother and partner's age at birth. Panel a) estimates the unconditional RoSLA effect and panel b) estimates conditional on the set of mediators. *** significant at 1%, * significant at 5%.

Table A.6: Double treatment effect of RoSLA on mediators

Treatment	Input	(1)	Input	(2)
0 treated parents	Pre-birth capital	-0.141** (0.060)	Health during pregnancy	0.108 (0.066)
1 treated parent		-0.270*** (0.032)		0.193*** (0.035)
0 treated parents	Log av. family income	-0.065* (0.036)	Monetary inputs	-0.089 (0.077)
1 treated parent		-0.102*** (0.019)		-0.096** (0.040)
0 treated parents	Mother's labour supply	0.087 (0.081)	No. of siblings	0.143* (0.075)
1 treated parent		0.046 (0.043)		0.091** (0.039)
0 treated parents	Partner's years of ed.	-0.007 (0.174)	Mother's permissive	0.172** (0.079)
1 treated parent		-0.444*** (0.091)		0.079* (0.042)
0 treated parents	Partner's employment	-0.062 (0.068)	Mother's authoritative	0.021 (0.075)
1 treated parent		-0.105*** (0.036)		-0.026 (0.040)
0 treated parents	Mother's wellbeing	-0.072 (0.077)	Mother's authoritarian	0.018 (0.075)
1 treated parent		-0.031 (0.040)		-0.031 (0.039)
0 treated parents	Partner's wellbeing	0.060 (0.073)	Mother's time investments	0.045 (0.077)
1 treated parent		0.071* (0.039)		0.089** (0.040)
0 treated parents			Partner's time investments	-0.052 (0.073)
1 treated parent				0.077** (0.038)
0 treated parents			Mother-child relationship	-0.063 (0.074)
1 treated parent				0.037 (0.039)
0 treated parents			Partner-child relationship	-0.186** (0.076)
1 treated parent				-0.091** (0.040)
Observations		2,591		2,591

Notes: Sample consists of births within a 6 year window of the mother's and partner's dates of birth around RoSLA; all regressions control for mother and partner's age at birth. Panel a) estimates the unconditional RoSLA effect and panel b) estimates conditional on the set of mediators. ** significant at 1%, * significant at 5%.