

Does intelligence shield children from the effects of parental unemployment?

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Parental job loss has negative impact on children's outcomes

- education Coelli (2011); Rege, Telle, and Votruba (2011)
- earnings and employment Oreopoulos, Page, and Stevens (2008)
- personality and well-being Angelini, Bertoni, and Corazzini (2018); Brand and Thomas (2014)

Potential mechanisms

- loss of income Coelli (2011); Oreopoulos, Page, and Stevens (2008)
- psychological distress Rege, Telle, and Votruba (2011)
- change in preferences Taylor and Rampino (2014)

Different interactions with cognitive skills of children

Research questions

- How parental unemployment effects vary with intelligence of children
- What do the interactions imply for the mechanisms

Overview

- UK largest household survey
- Parental unemployment at age 14
- Interaction with *IQ* score of respondents
- Causal interpretation in difference-in-differences framework

Preview of results

- Higher IQ **worsens** the effect of parental unemployment on **education**
 - Most of the losses among children of less-educated parents
 - Dynamic complementary of skills (Cunha and Heckman 2007)
- Higher IQ **mitigates** some of the effects later in the **labour market**
 - More stable and prestigious jobs; higher earnings
 - Wage penalty remains
 - Employer-learning theory (Farber and Gibbons 1996)
- Support **income loss channel**

Data

Cross-sectional: wave 3 (2011-13)

- *Main variables:*
 - six cognitive test results **PCA**
 - employment status of parents when respondents were 14
 - Aggregate**
 - Detailed**
- *Education:* post-16 school, tertiary degree, years of education
- *Labour market:* empl status, earnings, hours worked, hourly wages, job ranking

Difference-in-differences

Difference-in-differences

$$Y_i = \beta_0 + \beta_1 UP_i + \beta_2 IQ_i + \beta_3 UP_i \times IQ_i + \beta_4 \mathbf{X}_i + \beta_5 \mathbf{P}_i + v_i$$

Y_i	outcome
UP_i	1 if parent unemployed when child was 14
IQ_i	child's intelligence score
\mathbf{X}_i	child's pre-determined characteristics (<i>gender, birth year & country, ethnicity, immigrant</i>)
\mathbf{P}_i	parents' pre-determined characteristics (<i>highest qual, country of birth</i>)

Causal interpretation

Potential outcomes: Y^0 when parents are employed; Y^1 when parents are unemployed

Parallel trends: constant selection bias across intelligence Graph

$$\frac{\text{Cov}(Y^0, IQ|UP = 1)}{\text{Var}(IQ|UP = 1)} - \frac{\text{Cov}(Y^0, IQ|UP = 0)}{\text{Var}(IQ|UP = 0)} = 0$$

UKHLS birth

BCS birth

IQ persistence

BCS age 5

BCS age 16

IQ as outcome

$$\beta_3 = \frac{\partial}{\partial IQ} \mathbb{E}(Y^1 - Y^0 | UP = 1, IQ)$$

How intelligence changes the effect of parental unemployment

Results

Education

	Dependent variables		
	Age left school	Post-16 school	Degree
Parent unemp	-0.167*** (0.029)	-0.081*** (0.014)	-0.039*** (0.013)
IQ	0.301*** (0.008)	0.138*** (0.004)	0.131*** (0.004)
Parent unemp \times IQ	-0.066 ^{††} (0.025)	-0.035 ^{†††} (0.012)	-0.036 ^{†††} (0.011)
Obs.	20,293	20,307	20,307
Outcome mean	16.62	0.37	0.27
Outcome sd	1.06	0.48	0.44

[†] $q < 0.1$; ^{††} $q < 0.05$; ^{†††} $q < 0.01$ based on false discovery rate q -values (Benjamini and Hochberg, 1995)

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$ based on conventional p -values

Dynamic complementarity (Cunha and Heckman 2007)

Loss of HC investments has larger effect on high-skilled children

Intergenerational transmission of earnings (Mulligan 1997)

Only poor households ↓ HC investments in response to income shocks

- Strongest effects among individuals with less-educated parents [Table](#)

Labour market

	Dependent variables			
	Work	% Δ earnings	% Δ hourly wage	Hours
Parent unemp	-0.061*** (0.013)	-0.279*** (0.045)	-0.116*** (0.027)	-2.752*** (0.520)
IQ	0.052*** (0.004)	0.296*** (0.014)	0.161*** (0.009)	1.870*** (0.154)
Parent unemp \times IQ	0.048 ^{†††} (0.013)	0.130 ^{†††} (0.040)	-0.051 [†] (0.026)	1.552 ^{†††} (0.466)
Obs.	20,307	20,307	15,643	20,307
Outcome mean	0.74	2.63	0.16	25.52
Outcome sd	0.44	1.65	0.15	17.68

[†] $q < 0.1$; ^{††} $q < 0.05$; ^{†††} $q < 0.01$ based on FDR q-values

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$ based on conventional p-values

Employer learning theory (Farber and Gibbons 1996)

- Initially, education is the only signal of worker ability
- Over time, receive additional signals about worker productivity

Testable implications

- No differential impact on first jobs Job rankings
- Remediation effect increasing with age Age profiles

- Alternative parental unemployment measures
 - Subsample born before 1981 (high match with aggregate unemployment rates) [Table](#)
 - Broad measure including parental death and separation [Table](#)
- Unemployment vs long-term poverty: [Neighbourhoods](#)
- Sample composition [Table](#)
- Replication in the British Cohort Study 1970 [Table](#)

Loss of human capital investments is key

Supporting evidence

- less heterogeneity by *IQ* at younger ages (BCS70) [Table](#)
- father's unemployment is the main driver of results [Table](#) [HH income](#)
- psychological distress: little difference by children's gender [Table](#)

- New: how intelligence changes parental unemployment effects on children
- Higher IQ **exacerbates** costs on educational attainment
 - born by children of less educated parents
- Higher IQ **mitigates** some labour-market outcomes later in life
 - consistent with employer-learning theory (Farber and Gibbons 1996)
- **Loss of human capital investments** as the driving mechanism

Thank you!

Appendix

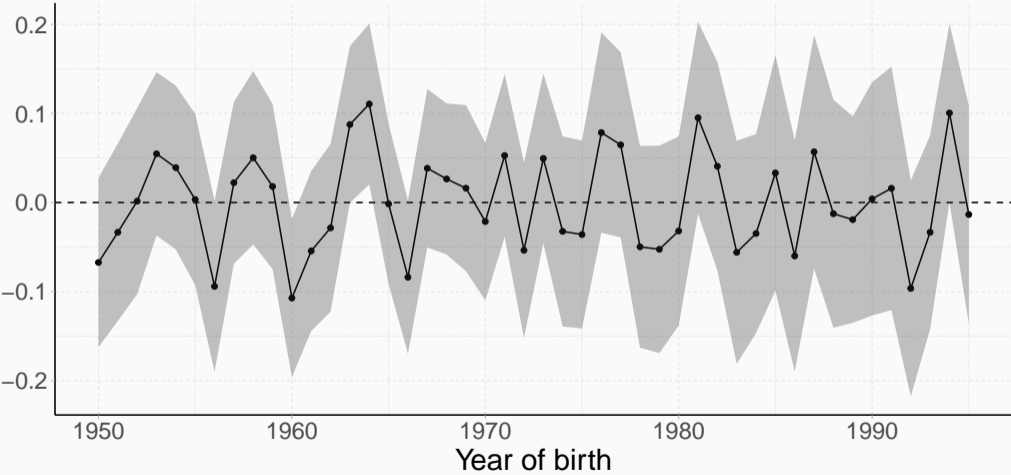
Intelligence score: principal component analysis

- 5 tests administered in wave 3 to all 16+ respondents
- Use PC1 as the intelligence score (42.2% of variation)

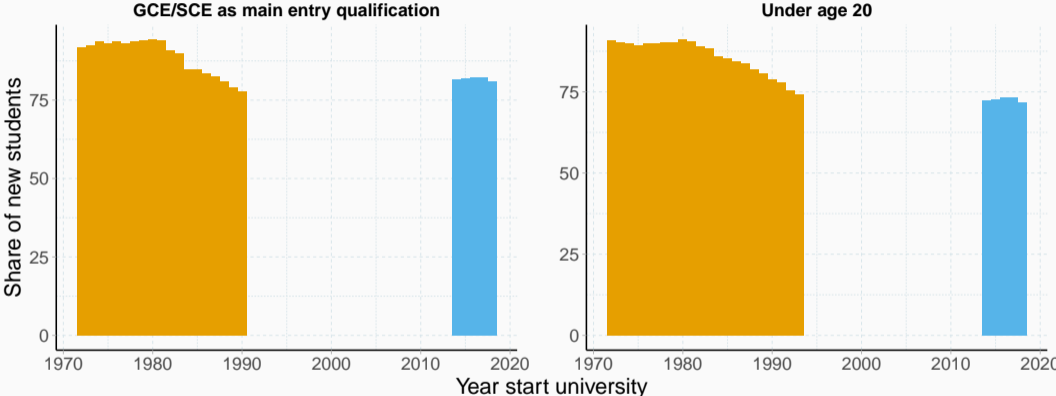
Test	Measure	PC1 loading
Immediate word recall	Episodic memory	0.46
Delayed word recall	Episodic memory	0.45
Serial 7 subtraction	Working memory	0.32
Number series	Fluid reasoning	0.40
Verbal fluency	Categoric fluency	0.36
Numeric ability	Numerical knowledge	0.44

- Standardize to mean 0 and sd 1 by sex and 5-year birth cohorts

Average intelligence score

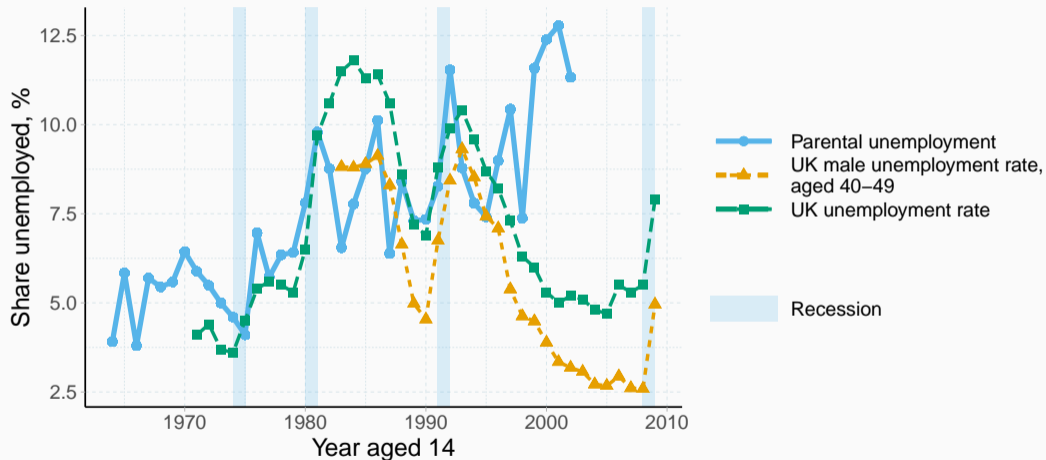


University admission in the UK

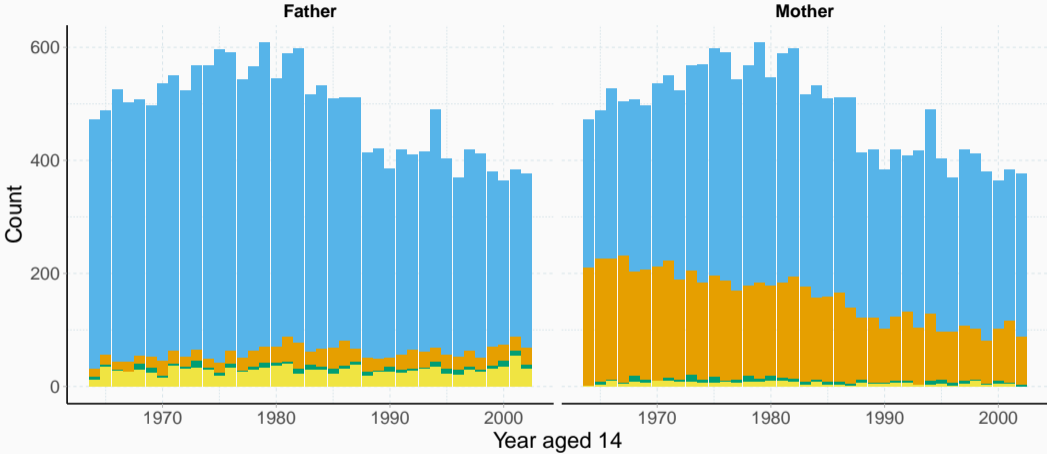


Data source ■ Higher Education Statistics Agency (1994–) ■ Universities' Statistical Record (1972–1993)

Parental unemployment (aggregate)



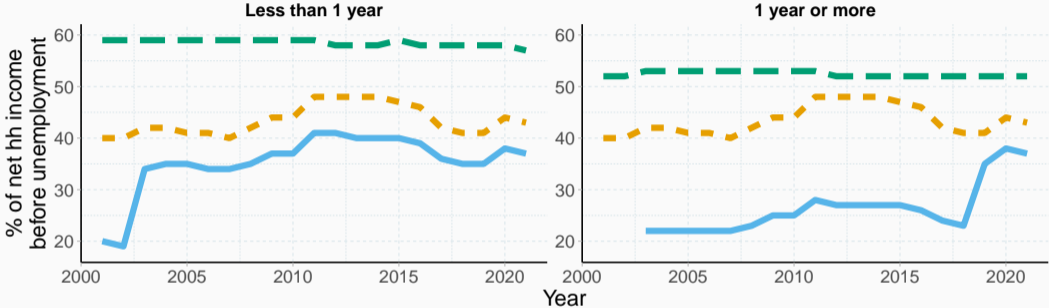
Parental unemployment (detailed)



Empl status at age 14 ■ Employed ■ Unemployed ■ Missing ■ Other

Unemployment benefits

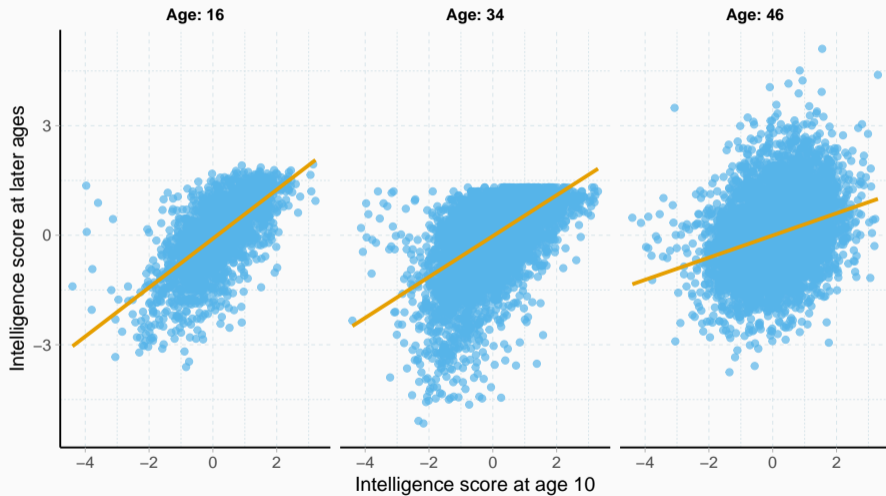
Net household income during unemployment



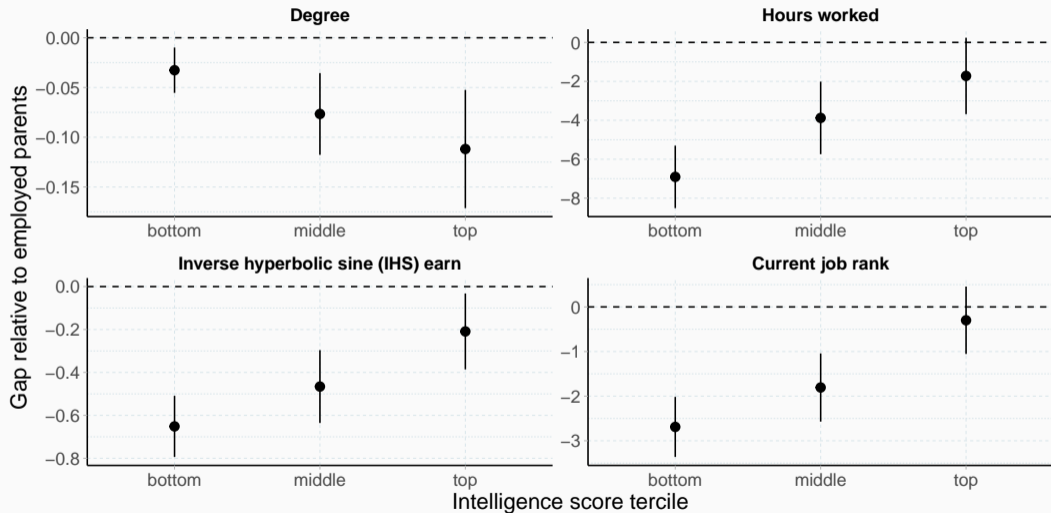
- Single person with 2 children
- Couple with 2 children – partner is out of work
- Couple with 2 children – partner's earnings: AW

Source: OECD

Relative stability of intelligence score (BCS70)



Parental unemployment and gap in outcomes



Parallel trends

Potential outcomes

- Y^0 when parents stay employed
- Y^1 when parents are unemployed

Parental unemployment

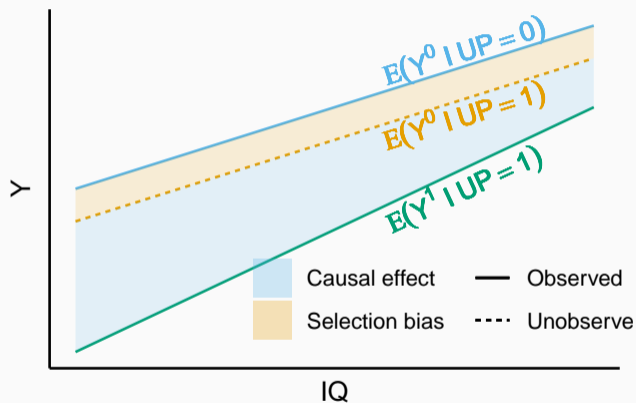
- $UP = 0$ stay employed
- $UP = 1$ unemployed

Parallel trends requires

$$\frac{\text{Cov}(Y^0, IQ|UP = 1)}{\text{Var}(IQ|UP = 1)} - \frac{\text{Cov}(Y^0, IQ|UP = 0)}{\text{Var}(IQ|UP = 0)} = 0$$

Selection bias flat across intelligence score of children

Parallel trends (graphical)



Potential outcomes

- Y^0 when parents stay employed
- Y^1 when parents are unemployed

Parental unemployment

- $UP = 0$ stay employed
- $UP = 1$ unemployed

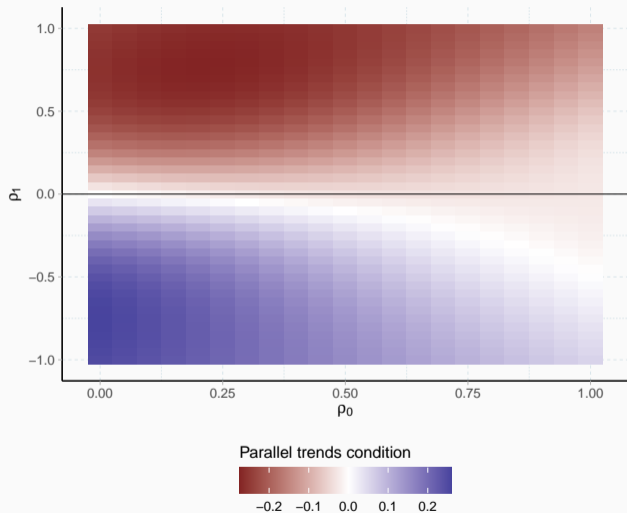
Characteristics at birth in the UKHLS

Dependent variable	Regressors			Obs.	Mean outcome
	Parent unemp	IQ	Parent unemp \times IQ		
Father's mother born UK	-0.007 (0.007)	-0.002 (0.002)	0.002 (0.006)	20,202	0.759
Father's father born UK	-0.011 (0.007)	0.002 (0.002)	0.006 (0.006)	20,202	0.750
Mother's mother born UK	-0.001 (0.006)	0.001 (0.002)	-0.003 (0.006)	20,202	0.773
Mother's father born UK	-0.009 (0.007)	0.005*** (0.002)	0.000 (0.007)	20,202	0.762
Has siblings	0.004 (0.009)	-0.000 (0.003)	-0.006 (0.008)	20,202	0.900
White british father	0.010 (0.010)	-0.000 (0.003)	-0.008 (0.009)	20,202	0.674
White british mother	0.015 (0.010)	-0.003 (0.003)	-0.005 (0.010)	20,202	0.680

Characteristics at birth in the BCS70

Dependent variable	Regressors			Obs.	Mean outcome
	Parent unemp	IQ	Parent unemp \times IQ		
Parity	0.444*** (0.094)	-0.069*** (0.022)	0.024 (0.085)	5,063	1.50
Lactation attempted	-0.049** (0.024)	0.031*** (0.008)	-0.026 (0.024)	5,063	0.32
Birthweight, g	-60.310* (35.011)	57.119*** (9.956)	-10.030 (30.745)	5,059	3,284
Age of mother	0.575* (0.325)	0.378*** (0.082)	0.380 (0.307)	5,063	26.18
Age of father	1.807*** (0.424)	0.440*** (0.102)	0.760 (0.375)	4,405	29.02
Height of mother, cm	-1.131*** (0.369)	0.346*** (0.109)	-0.033 (0.326)	5,029	161
Age of mother at first birth	-0.621*** (0.217)	0.485*** (0.061)	0.013 (0.204)	5,043	21.69

Parallel trends and intergenerational persistence of intelligence



Intergenerational process on IQ

$$IQ_{\text{child}} = \rho(IQ_{\text{par}})IQ_{\text{par}} + \nu$$

$$\rho(IQ_{\text{par}}) = \rho_0 + \rho_1 IQ_{\text{par}}$$

Parallel trends condition

$$\frac{\text{Cov}(IQ_P, IQ_C | UP = 1)}{\text{Var}(IQ_C | UP = 1)} - \frac{\text{Cov}(IQ_P, IQ_C | UP = 0)}{\text{Var}(IQ_C | UP = 0)} = 0$$

Cognitive test results at age 5 in the BCS70

Dependent variable	Regressors			Obs.	Mean outcome
	Parent unemp	IQ	Parent unemp \times IQ		
Composite score (PC1)	-0.123 (0.088)	0.267*** (0.037)	0.020 (0.072)	2,134	-0.05
Reading score	-0.523 (0.353)	1.448*** (0.17)	-0.898 (0.359)	2,215	3.10
English picture vocab. score	-0.349*** (0.091)	0.375*** (0.025)	0.012 (0.084)	4,587	-0.34
Copying designs score	-0.052 (0.062)	0.393*** (0.017)	0.089 (0.056)	4,587	-0.10
Draw-a-man score	-0.109 (0.077)	0.288*** (0.02)	0.055 (0.078)	4,587	-0.17
Complete-a-profile score	-0.330 (0.258)	0.480*** (0.072)	0.016 (0.251)	4,431	6.85

Cognitive test results at age 16 in the BCS70

Dependent variable	Regressors			Obs.	Mean outcome
	Parent unemp	IQ	Parent unemp \times IQ		
Composite score (PC1)	-0.178* (0.1)	0.579*** (0.026)	0.129 (0.103)	1,297	-0.07
Reading score	-2.791** (1.368)	7.387*** (0.351)	2.646 (1.459)	1,377	53.58
Spelling score	-2.178 (4.753)	14.864*** (1.365)	2.697 (4.205)	5,063	74.11
Vocabulary score	-0.872 (1.284)	6.146*** (0.381)	-0.584 (1.162)	5,063	19.64
Math score	-0.185 (1.099)	6.102*** (0.287)	0.946 (1.175)	1,643	36.14
Complete-matrix score	-0.285* (0.172)	0.575*** (0.048)	0.034 (0.212)	1,412	8.81

Intelligence as outcome

Parallel trend assumption

$$\frac{\text{Cov}(Y^0, IQ^1 | UP = 1)}{\text{Var}(IQ^1 | UP = 1)} - \frac{\text{Cov}(Y^0, IQ^0 | UP = 0)}{\text{Var}(IQ^0 | UP = 0)} = 0$$

Regression interpretation

$$\beta_3 = \frac{\partial}{\partial IQ^1} \mathbb{E}(Y^1 - Y^0 | UP = 1, IQ^1)$$

Limitation: $Y^1 - Y^0$ may interact differently with IQ^0

Effect on education by parental qualifications

	Post-16 school	Degree	Age left school
Parent unemp \times IQ	0.066 (0.042)	0.025 (0.048)	0.059 (0.077)
Qual missing \times Parent unemp \times IQ	-0.125 ^{††} (0.049)	-0.103 [†] (0.052)	-0.154 (0.098)
No school \times Parent unemp \times IQ	-0.146 (0.106)	-0.267 ^{†††} (0.106)	-0.342 (0.236)
Some school \times Parent unemp \times IQ	-0.100 [†] (0.045)	-0.052 (0.050)	-0.117 (0.083)
Obs.	20,307	20,307	20,293
Outcome mean	0.37	0.27	16.62
Outcome sd	0.48	0.44	1.06

[†] $q < 0.1$; ^{††} $q < 0.05$; ^{†††} $q < 0.01$ based on false discovery rate q-values (Benjamini and Hochberg, 1995)

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$ based on conventional p-values

Heckman two-step: labour-market results

	Dependent variables			
	IHS earnings	IHS hourly wage	Hours	IHS current job rank
Parent unemp	-0.270*** (0.064)	-0.037*** (0.009)	-1.539*** (0.431)	-0.086*** (0.016)
IQ	0.290*** (0.036)	0.046*** (0.005)	0.526** (0.252)	0.129*** (0.008)
Parent unemp \times IQ	0.122** (0.061)	0.010 (0.009)	0.697* (0.410)	0.026* (0.015)
Obs.	20,307	20,307	20,307	20,307

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

Job rankings

Dependent variables

	IHS first job rank	IHS current job rank
Parent unemp	-0.039*** (0.013)	-0.234*** (0.046)
IQ	0.029*** (0.004)	0.248*** (0.013)
Parent unemp \times IQ	0.005 (0.012)	0.159 ^{††} (0.043)
Obs.	16,400	20,307
Outcome mean	2.84	2.72
Outcome sd	0.50	1.54

[†] $q < 0.1$; ^{††} $q < 0.05$; ^{†††} $q < 0.01$ based on FDR q -values

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$ based on conventional p -values

Age profiles

	Dependent variable			
	Work	IHS earnings	IHS hourly wage	Hours
Ages 16-20	0.020 (0.049)	-0.469 (0.415)	-0.231** (0.112)	-0.534 (1.649)
Ages 21-25	0.017 (0.036)	-0.289 (0.334)	-0.151** (0.066)	-0.551 (1.176)
Ages 26-30	0.018 (0.025)	-0.404 (0.277)	-0.162** (0.064)	-0.589 (0.864)
Ages 31-35	0.009 (0.018)	-0.308 (0.247)	-0.085 (0.053)	-0.581 (0.653)
Ages 36-40		-0.275 (0.219)	-0.068 (0.046)	
Ages 41-45		0.064 (0.159)	-0.052 (0.036)	
Ages 56-60	0.009 (0.021)	-0.004 (0.178)	0.002 (0.050)	0.198 (0.819)
Ages 61-65	0.015 (0.036)	0.070 (0.271)	-0.055 (0.070)	0.812 (1.280)
Obs.	175,072	175,124	134,279	175,124

Robustness: alternative unemployment (born before 1981)

	Post-16 school	Degree	Work	% Δ earnings	% Δ hourly wage	Hours
Parent unemp	-0.058*** (0.017)	-0.007 (0.016)	-0.042*** (0.015)	-0.213*** (0.052)	-0.114*** (0.032)	-1.949*** (0.605)
IQ	0.137*** (0.004)	0.137*** (0.004)	0.059*** (0.004)	0.326*** (0.015)	0.172*** (0.009)	2.021*** (0.173)
Parent unemp \times IQ	-0.029 [†] (0.015)	-0.017 (0.014)	0.049 ^{†††} (0.015)	0.138 ^{††} (0.050)	-0.039 (0.031)	1.383 ^{††} (0.591)
Obs.	15,907	15,907	15,907	15,907	12,661	15,907
Outcome mean	0.36	0.28	0.80	2.85	0.17	27.35
Outcome sd	0.48	0.45	0.40	1.61	0.16	17.19

[†] $q < 0.1$; ^{††} $q < 0.05$; ^{†††} $q < 0.01$ based on FDR q-values

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$ based on conventional p-values

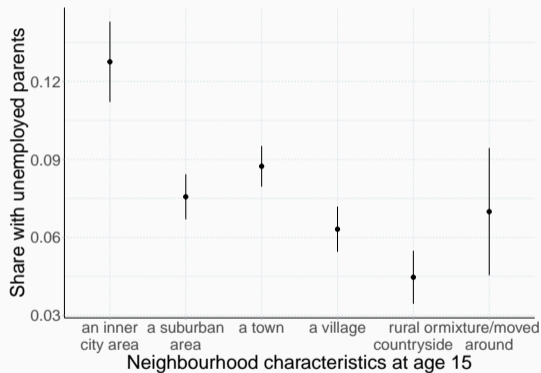
Robustness: alternative unemployment (incl. death and separation)

	Post-16 school	Degree	Work	% Δ earnings	% Δ hourly wage	Hours
Parent unemp	-0.082*** (0.012)	-0.034*** (0.011)	-0.048*** (0.011)	-0.233*** (0.037)	-0.107*** (0.023)	-2.182*** (0.413)
IQ	0.140*** (0.004)	0.132*** (0.004)	0.051*** (0.004)	0.291*** (0.014)	0.161*** (0.009)	1.830*** (0.156)
Parent unemp \times IQ	-0.043 ^{†††} (0.010)	-0.033 ^{†††} (0.009)	0.039 ^{†††} (0.011)	0.124 ^{†††} (0.034)	-0.030 (0.020)	1.406 ^{†††} (0.388)
Obs.	20,329	20,329	20,329	20,329	15,655	20,329
Outcome mean	0.37	0.27	0.74	2.63	0.16	25.52
Outcome sd	0.48	0.44	0.44	1.65	0.15	17.68

[†] $q < 0.1$; ^{††} $q < 0.05$; ^{†††} $q < 0.01$ based on FDR q-values

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$ based on conventional p-values

Robustness: neighbourhood characteristics at age 15



Back

	Inner city
Parent unemp	0.047*** (0.011)
IQ	-0.015*** (0.003)
Parent unemp \times IQ	0.007 (0.010)
Obs.	20,303

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

Robustness: subgroup analysis

	Post-16 school	Degree	Work	% Δ earnings	% Δ hourly wage	Hours
<i>White British</i>						
Parent unemp \times IQ	-0.035 ^{††}	-0.039 ^{†††}	0.052 ^{†††}	0.145 ^{†††}	-0.050 [†]	1.703 ^{†††}
	(0.013)	(0.011)	(0.014)	(0.044)	(0.028)	(0.497)
Obs.	18,176	18,176	18,176	18,176	14,209	18,176
<i>Born in England</i>						
Parent unemp \times IQ	-0.034 ^{††}	-0.035 ^{††}	0.055 ^{†††}	0.148 ^{†††}	-0.045	1.634 ^{†††}
	(0.014)	(0.013)	(0.015)	(0.045)	(0.030)	(0.547)
Obs.	15,222	15,222	15,222	15,222	11,742	15,222
<i>Born in Wales</i>						
Parent unemp \times IQ	-0.045	-0.060	0.031	0.171	-0.134	2.670
	(0.053)	(0.042)	(0.070)	(0.148)	(0.078)	(2.032)
Obs.	1,337	1,337	1,337	1,337	1,003	1,337
<i>Born in Scotland</i>						
Parent unemp \times IQ	-0.012	0.001	0.044	0.098	-0.181 ^{††}	2.079
	(0.063)	(0.046)	(0.060)	(0.139)	(0.068)	(2.125)
Obs.	1,927	1,927	1,927	1,926	1,502	1,927

[†] $q < 0.1$; ^{††} $q < 0.05$; ^{†††} $q < 0.01$ based on false discovery rate q-values (Benjamini and Hochberg, 1995)
^{*} $p < 0.1$; ^{**} $p < 0.05$; ^{***} $p < 0.01$ based on conventional p-values

Robustness: BCS70

	Post-16 school	Degree	Work	% Δ earnings	% Δ current job rank
<i>UKHLS sample born in 1970</i>					
Parent unemp \times IQ	-0.051 (0.026)	-0.004 (0.014)	0.106 ^{†††} (0.016)	0.197 (0.222)	0.367 (0.194)
Obs.	578	578	578	578	578
<i>BCS70 at age 26</i>					
Parent unemp \times IQ	-0.055 ^{††} (0.020)	-0.072 ^{†††} (0.011)	0.028 (0.027)	0.078 (0.089)	0.012 (0.055)
Obs.	5,029	4,901	5,063	4,780	1,920
<i>BCS70 at age 30</i>					
Parent unemp \times IQ	-0.026 (0.027)	-0.060 ^{†††} (0.016)	0.082 ^{††} (0.027)	0.280 [†] (0.145)	0.089 (0.063)
Obs.	4,047	5,056	4,170	1,886	2,442

[†] $q < 0.1$; ^{††} $q < 0.05$; ^{†††} $q < 0.01$ based on FDR q-values

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$ based on conventional p-values

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Parent unemp \times IQ	-0.051 (0.026)	-0.004 (0.014)	0.106 ^{†††} (0.016)	0.197 (0.222)	0.367 (0.194)
Obs.	578	578	578	578	578
<i>BCS70 at age 34</i>					
Parent unemp \times IQ		-0.039 [†] (0.018)	0.087 ^{††} (0.028)	0.210 (0.170)	0.003 (0.055)
Obs.		5,063	3,757	1,375	2,118
<i>BCS70 at age 38</i>					
Parent unemp \times IQ		-0.005 (0.026)	0.023 (0.028)	-0.065 (0.153)	0.234 (0.209)
Obs.		3,555	3,542	3,148	5,046

[†] $q < 0.1$; ^{††} $q < 0.05$; ^{†††} $q < 0.01$ based on FDR q -values

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$ based on conventional p -values

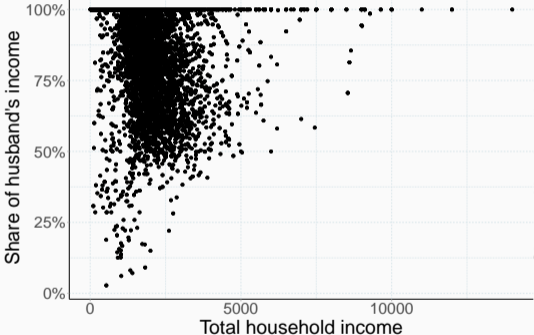
Effect on degree by age at exposure (BCS70)

	Parental unemployment recorded		
	at birth	at age 10	at age 16
Parent unemp	0.004 (0.025)	-0.033* (0.019)	-0.048* (0.025)
IQ	0.116*** (0.005)	0.126*** (0.006)	0.137*** (0.008)
Parent unemp \times IQ	-0.001 (0.023)	-0.069*** (0.020)	-0.085*** (0.026)
Obs.	5,707	5,443	3,463

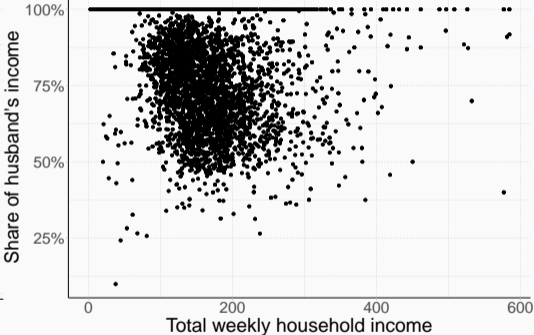
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Distribution of household income

General Household Survey 1972



General Household Survey 1980



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Effect of parental unemployment by parent's gender

	Dependent variables					
	Degree	Work	% Δ earnings	% Δ hourly wage	IHS first job rank	IHS current job rank
IQ	0.133*** (0.004)	0.046*** (0.005)	0.279*** (0.016)	0.157*** (0.010)	0.033*** (0.004)	0.228*** (0.016)
Father unemp	-0.037** (0.016)	-0.055*** (0.016)	-0.246*** (0.054)	-0.123*** (0.024)	-0.028* (0.015)	-0.215*** (0.056)
Father unemp \times IQ	-0.032 (0.014)	0.039 (0.017)	0.091 (0.051)	-0.081 [†] (0.029)	0.001 (0.014)	0.160 [†] (0.054)
Mother unemp	0.010 (0.008)	-0.034*** (0.008)	-0.169*** (0.028)	-0.015 (0.018)	-0.021*** (0.007)	-0.122*** (0.027)
Mother unemp \times IQ	-0.001 (0.007)	0.016 (0.008)	0.032 (0.028)	0.006 (0.018)	-0.010 (0.007)	0.036 (0.027)
Obs.	18,496	18,496	18,496	14,381	15,066	18,496

[†] $q < 0.1$; ^{††} $q < 0.05$; ^{†††} $q < 0.01$ based on FDR q-values

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$ based on conventional p-values

Effect of parental unemployment by children's gender

	Dependent variables					
	Degree	Work	% Δ earnings	% Δ hourly wage	IHS first job rank	IHS current job rank
Parent unemp	-0.033* (0.020)	-0.045** (0.019)	-0.270*** (0.067)	-0.135*** (0.031)	-0.034* (0.020)	-0.194*** (0.067)
IQ	0.131*** (0.005)	0.052*** (0.006)	0.299*** (0.021)	0.172*** (0.009)	0.014** (0.005)	0.235*** (0.019)
IQ \times Female	0.000 (0.006)	0.000 (0.008)	-0.006 (0.026)	-0.023 (0.018)	0.030*** (0.007)	0.026 (0.025)
Parent unemp \times IQ	-0.034 (0.017)	0.027 (0.020)	0.080 (0.067)	-0.066 (0.034)	0.001 (0.018)	0.091 (0.068)
Parent unemp \times IQ \times Female	-0.004 (0.021)	0.037 (0.026)	0.093 (0.086)	0.032 (0.051)	0.004 (0.024)	0.120 (0.088)
Obs.	20,307	20,307	20,307	15,643	16,400	20,307

$\dagger q < 0.1$; $\dagger\dagger q < 0.05$; $\dagger\dagger\dagger q < 0.01$ based on FDR q-values

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$ based on conventional p-values