Can individuals still climb the social ladder as middling jobs become scarce? Evidence from two British Cohorts

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Motivation

- Decline in mobility over the past decades (Blanden et al. 2007, Chetty et al. 2020, i.a.)
  - Strengthened the link between individuals' background and their socio-economic outcomes
- Increase in job polarization (Autor et al. 2003, Goos and Manning. 2007, Goos et al.2014, i.a.)
  - Share in total employment of low- and high-paying occupations has increased at the expense of that of middling occupations

$\Rightarrow$ Can individuals from less well-off backgrounds still climb the social ladder as the middle rungs become scarce?

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This paper

- We use data on two mature British cohorts born in 1958 and 1970 and exploit the fact that the younger cohort entered a much more polarized labour market

- Our empirical analysis proceeds in two steps:
  1. We disentangle changes in social mobility that are due to intra- (job-to-job transition) versus inter-generational component (family background)
  2. We estimate the effect of polarization on the role of parental income at the regional level

- Main results:
  - *Intra*-generational mobility matters for *inter*-generational mobility
  - Those from better-off backgrounds have become more likely to climb up the job ladder
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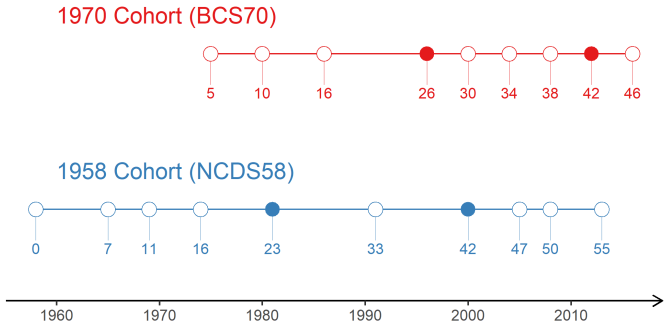
Related literature

- Determinants of inter-generational mobility (Erikson and Goldthorpe 1992, Blanden et al. 2007, Blanden et al. 2013, Chetty et al. 2014a, Chetty et al. 2014b, Chetty et al. 2017, i.a.)
- Increased role of parental background on children outcomes (Blanden and Gregg 2004, Gregg and Macmillan 2010, Chetty et al. 2014b, i.a.)
- Consequences of employment polarization (Spitz-Oener 2006, Autor and Dorn 2013, Acemoglu and Restrepo 2018, Hennig 2022, Arntz et al. 2022, Guo 2022, i.a.)

Two mature British cohort studies

- First-period occupation
  - Age 23 (NCDS58)
  - Age 26 (BCS70)
- Second-period occupation
  - Age 42
- Average parental income from underage interviews in £1970
  - In logarithm, then standardized at the cohort level



Occupational classification

⇒ Classify 2-digit ISCO-88 occupations into: high-paying, middling, low-paying occupations and out-of-work

Code	Occupation
High-paying occupations	
11	Legislators and senior officials
12	Corporate managers
13	Managers of small enterprises
21	Physical, mathematical and engineering professionals
22	Life science and health professionals
23	Teaching professionals
24	Other professionals
31	Physical, mathematical and engineering associate professionals
32	Life science and health associate professionals
33	Teaching associate professionals
34	Other associate professionals
Middling occupations	
41	Office clerks
42	Customer service clerks
61	Skilled agricultural and fishery workers
71	Extraction and building trades workers
72	Metal, machinery and related trade work
73	Precision, handicraft, craft printing and related trade workers
74	Other craft and related trade workers
81	Stationary plant and related operators
82	Machine operators and assemblers
83	Drivers and mobile plant operators
Low-paying occupations	
51	Personal and protective service workers
52	Models, salespersons and demonstrators
91	Sales and service elementary occupations
92	Agricultural, fishery and related labourers
93	Laborers in mining, construction, manufacturing and transport

Empirical approach

- We estimate the multinomial logistic regression for first-period occupations j:

$$\log\left(\frac{p_j}{p_O}\right) = \alpha_{1j} + \beta_{1j} Y^p + \gamma_{1j} X,$$

- and for mature occupations k:

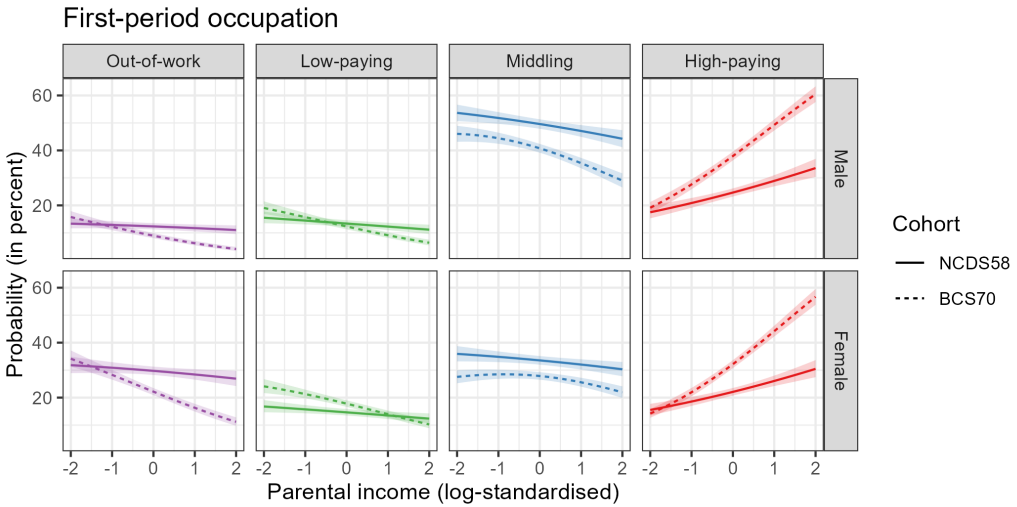
$$\log\left(\frac{p_k}{p_O}\right) = \alpha_{2k} + \beta_{2k} Y^p + \gamma_{2j} X,$$

- as well as the outcome conditional on initial occupations (transition probabilities):

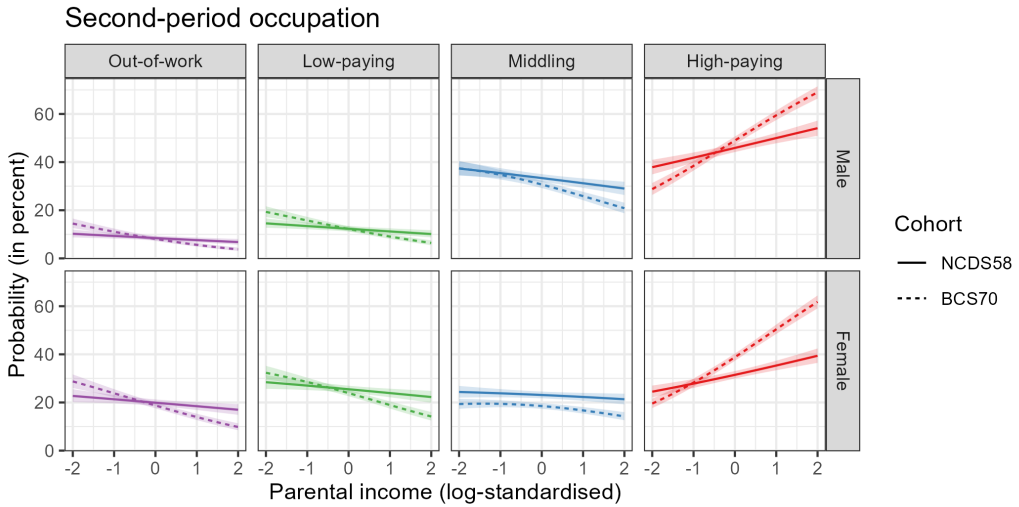
$$\log\left(\frac{p_k}{p_O}\right) = \alpha_{3k} + \sum_j \eta_{kj} \mathbb{1}_j + \beta_{3k} Y^p + \gamma_{3k} X.$$

$\Rightarrow$ All terms are interacted with a dummy that equals one for those in the 1970 cohort (BCS70) and zero otherwise

First-period occupation probability according to parental income



Second-period occupation probability according to parental income



Change in transition probabilities (summary)

1. Those at the top of the parental income distribution in the younger cohort are more likely to have upward intra-generational mobility (regardless of their first-period occupation) compared to the older cohort

2. Those at the bottom are more likely to end up in out-of-work or low-paying occupations

Regional polarization

- We use the Labour Force Survey (LFS) to build a polarization measure ΔPol^r
  - 10 regions: East Anglia, East Midlands, North, North West, Scotland, South East, South West, Wales, West Midlands, and Yorkshire and Humberside

- We consider the between-cohort change in the role of parental income for being in occupation k while in region r at age 16, namely,

$$\Delta\beta_k^r \equiv \beta_k^{r,BCS70} - \beta_k^{r,NCDS58}$$

$\Rightarrow$ We estimate the effect of regional polarization on the role of parental income:

$$\Delta\beta_k^r = \delta_k + \eta_k \Delta Pol^r + \gamma_k X_r + u_r,$$

where X_r include the initial level of mobility and the change in the unemployment rate in the region

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Identification and shift-share IV strategy

- Two concerns:
  1. Regional structure of employment may have been affected by the degree of social mobility (endogeneity)
  2. Other factors may affect both polarization and social mobility (omitted variable)

1. We construct a shift-share measure based on national level changes:

$$\Delta Pol^r = \sum_i s^r_{i,1979} \left(s^{UK}_{i,2004} - s^{UK}_{i,1992} \right) \times 100.$$

where $s_{i,t}$ is the share of individuals aged 25 to 49 that are employed in occupation i in year t

2. We instrument s_i^{UK} with the changes in these same occupations but averaged across a set of European countries (DE, DK, ES, FR, IT, NE) using EU-LFS data

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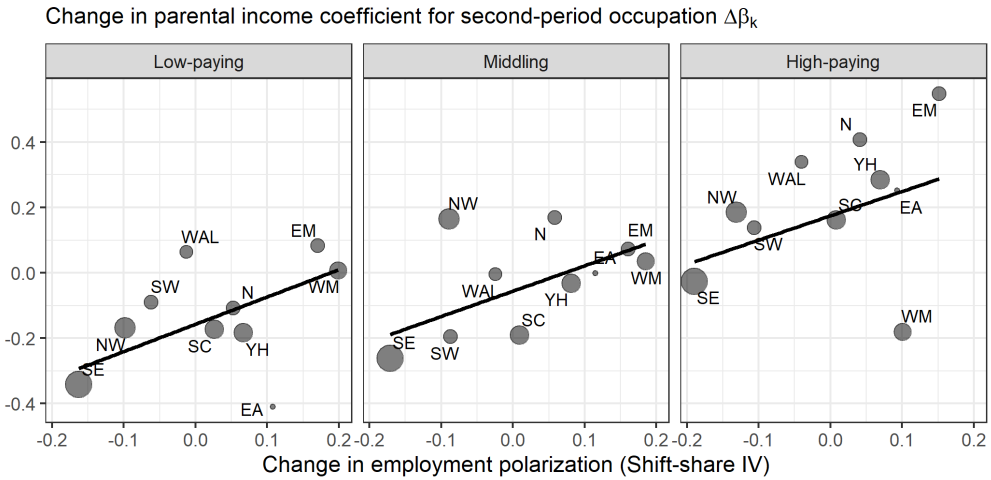
Second-stage shift-share IV regression

First stage



Conclusions

1. Intra-generational mobility is an essential aspect of the observed correlation between parent and child outcomes

2. Those from better-off backgrounds have become more likely to climb up the job ladder, while others get stuck at the bottom

3. Effect of parental income on occupational outcomes is stronger for individuals that lived in areas with greater job polarization

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First-stage IV regression

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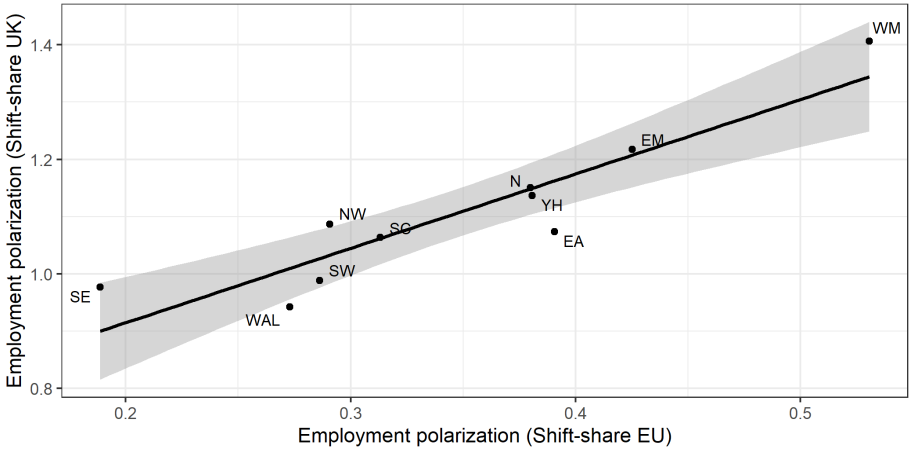

- Slope coefficient: 1.299 (0.202), $R^2 = 0.838$ and F-stat $= 41.51$