

# Entering the labour market in a weak economy: scarring and insurance

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IIPF 2018, Tampere

22<sup>nd</sup> August 2018

# Introduction

- We study long term economic impacts (“scarring”) on individuals of entering the labour market when economy is weak
  - Important topic given recent events, the cyclical nature of the youth labour market and potential for early career disruption to have lasting effects
- Focus on building a richer picture of the impacts on material wellbeing than you get by just looking at employment and earnings impacts
  - Incorporating key insurance mechanisms

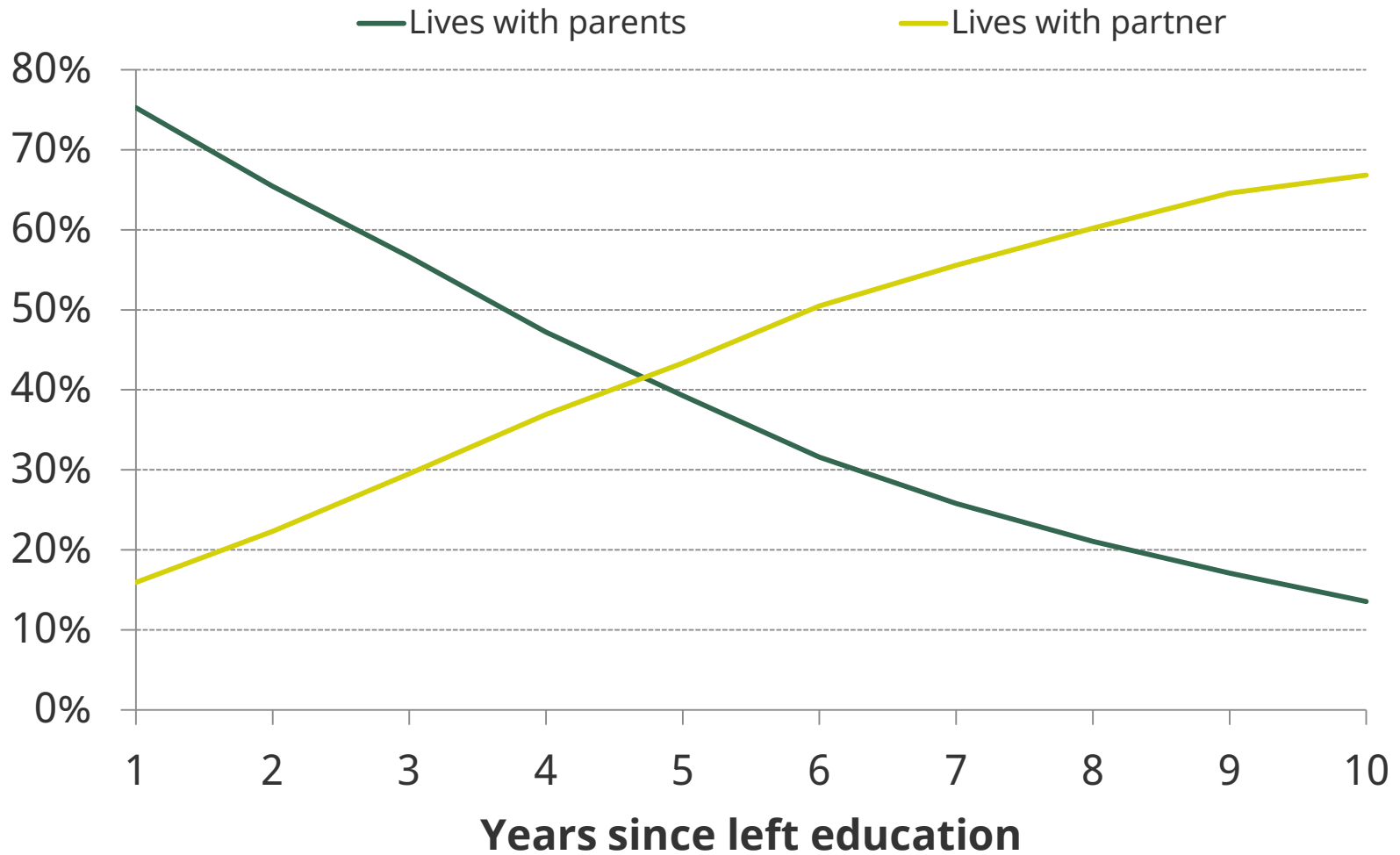
# Our contribution to the literature

- We know a fair bit about scarring w.r.t. “raw” labour market outcomes
  - Using aggregate economic cycle (e.g. Kahn, 2010; Oreopoulos et al, 2012; Altonji et al 2016) or individual-level employment shocks (e.g. Arulampulam et al, 2001; Gregg and Tominey, 2005)
  - “Aggregate swings” literature tends to find persistent earnings scars for affected cohorts that fade after a few years
- Separate literature looks at degree of insurance against earnings / income shocks (e.g. Attanasio and Davis, 1996; Blundell et al, 2008)
  - Various insurance mechanisms found to be significant, even for very persistent shocks, though varies across groups
- **Our main aim: understand the impacts of scarring better by bridging the gap between these literatures**

# Scarring and insurance

- Scarring resulting from entering labour market at a bad time is one kind of earnings shock...
  - ...with a particular degree of persistence (key topic of previous scarring work), occurring at particular stage in lifecycle, etc
- Sources of insurance available to mitigate impacts on living standards likely to be very specific to this case:
  - partners
  - cohabitation with others (e.g. parents)
  - assets

# Household composition by time since education



# Basic idea

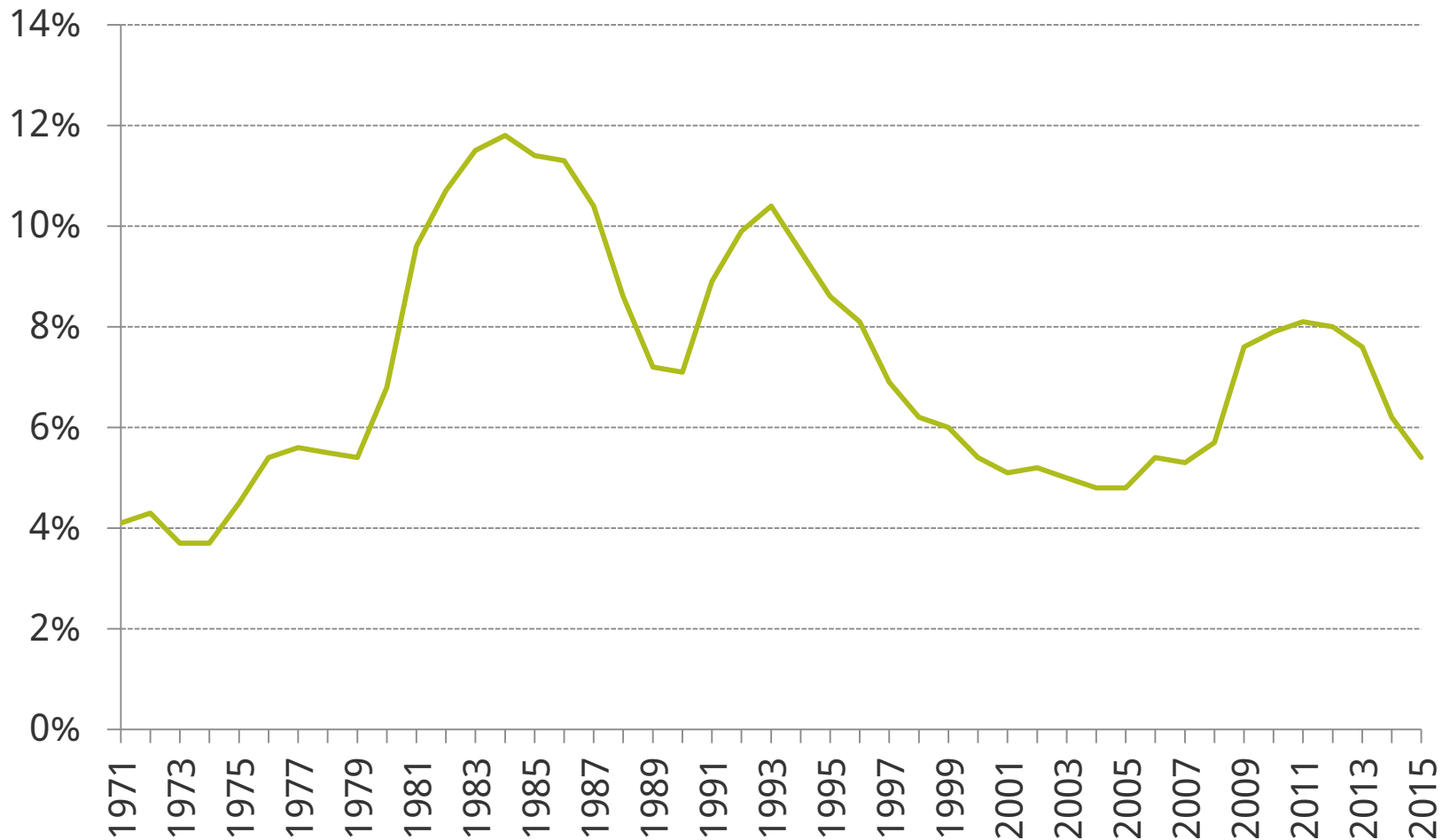
- We estimate and contrast scarring effects on multiple outcomes
  - (gross) earnings and employment rates
  - gross and net “family”/household earnings/income
  - household expenditures
- Moving through these outcomes we cumulatively incorporate role of various insurance mechanisms:
  - Partners’ income / labour supply
  - Co-residence with others (e.g. parents)
  - Tax and transfer system
  - Savings / assets / access to credit

## Identification: basic idea

- Use history of fluctuations in UK economic cycle since 1970s
- Cohorts very close together can face very different starting conditions in labour market
  - Swings in economic cycle occur quickly
  - Other differences between adjacent cohorts should be negligible
  - So their relative circumstances, at given levels of potential experience, identify scarring effects of initial conditions

# Identifying variation: UK economic cycle

## UK 16+ unemployment rate





# Data

- Use almost 40 years of data from two large UK household surveys:
  - Family Expenditure Survey (since 1978)
  - Family Resources Survey (since 1994-95)
- Sample restrictions:
  - Left education between compulsory school leaving age and age 25
  - Left education since 1971
  - Are observed within 10 years of having left education
- We trim the top and bottom 1% within each year for each financial variable of interest
- Pooled sample contains 196,876 observations

# Empirical specification (1)

$$y_{ict} = \alpha + \sum_{s=0}^2 \sum_{e=0}^{10} \gamma_{es} [\textit{experience} = e] \times [\textit{educ} = s] + \sum_{e=0}^{10} \beta_e \textit{unemp\_lefted}_c \times [\textit{experience} = e] \\ + f(\textit{yearlefted}_c) + \mu_t + \theta X_{ict} + \varepsilon_{ict}$$

- $i$  indexes people,  $c$  is year-left-education cohort,  $t$  is year
- Control flexibly for potential experience: single-year dummies interacted with education level
- Allow unemployment rate upon leaving education to affect outcome differently in each year of experience

## Empirical specification (2)

$$y_{ict} = \alpha + \sum_{s=0}^2 \sum_{e=0}^{10} \gamma_{es} [\textit{experience} = e] \times [\textit{educ} = s] + \sum_{e=0}^{10} \beta_e \textit{unemp\_lefted}_c \times [\textit{experience} = e] \\ + f(\textit{yearlefted}_c) + \mu_t + \theta X_{ict} + \varepsilon_{ict}$$

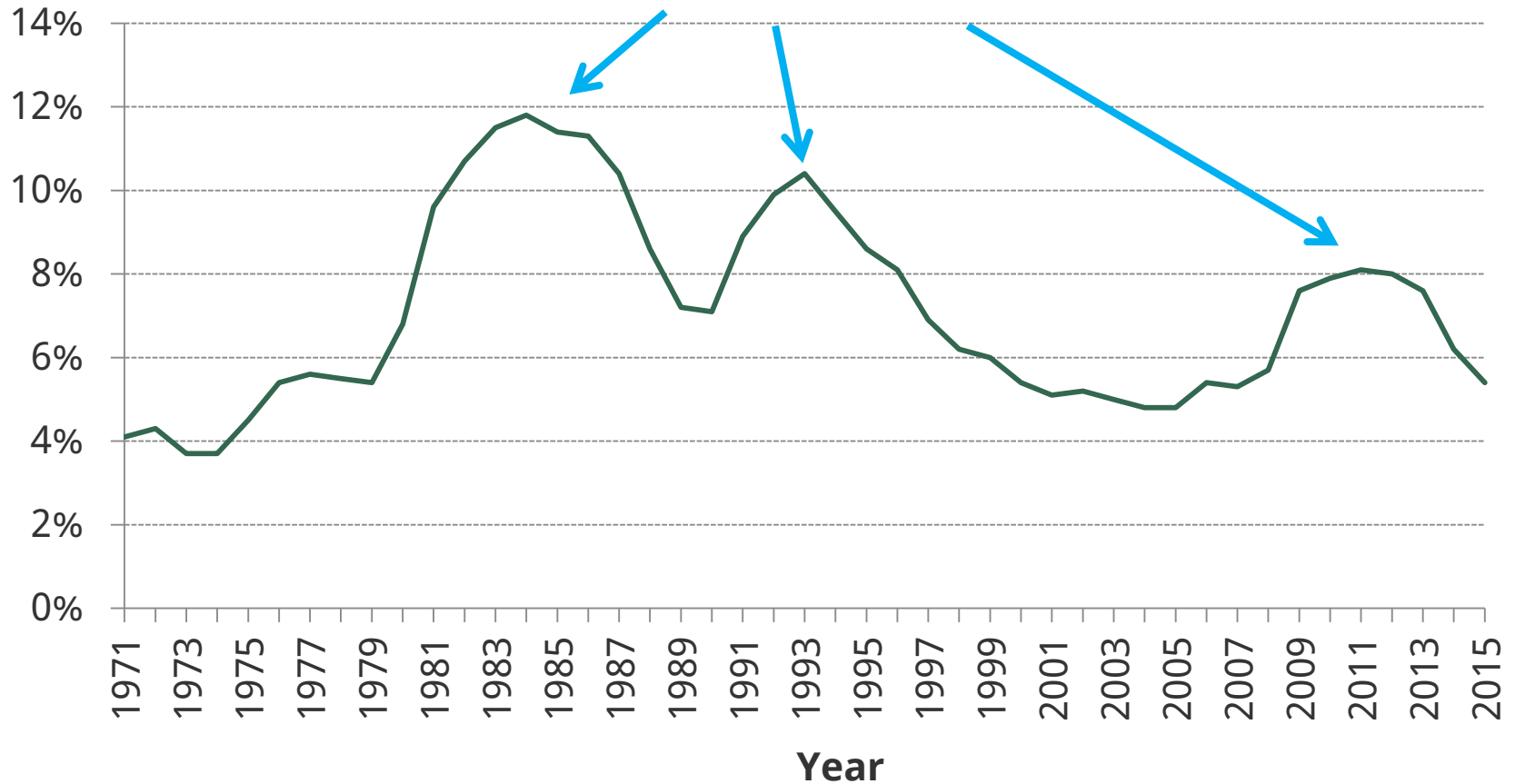
- $f(\textit{yearlefted}_c)$  is a set of five-year “cohort” dummy variables
  - So we compare outcomes of people born only a few years apart
  - Results robust to different five-year windows
- $\mu_t$  are time dummies
- $X_{ict}$  are individual-level controls
  - sex, dataset, whether compulsory school leaving age was 16

# Education / timing of labour market entry

- People may stay longer in education in response to labour market shocks
- 1. Could affect education composition of entrants at different stages of cycle
  - Control for education level in regressions
- 2. Could unobservably change composition of labour market entrants. But:
  - Hard for selection to generate scarring “effects” that fade to zero with experience
  - Magnitude: similar to Altonji et al (2016), we estimate effects of cycle on education participation and they are too small to be important driver of our results (we’re working on a bounding exercise)
  - Kahn (2010) used IV to address this issue and it made little difference

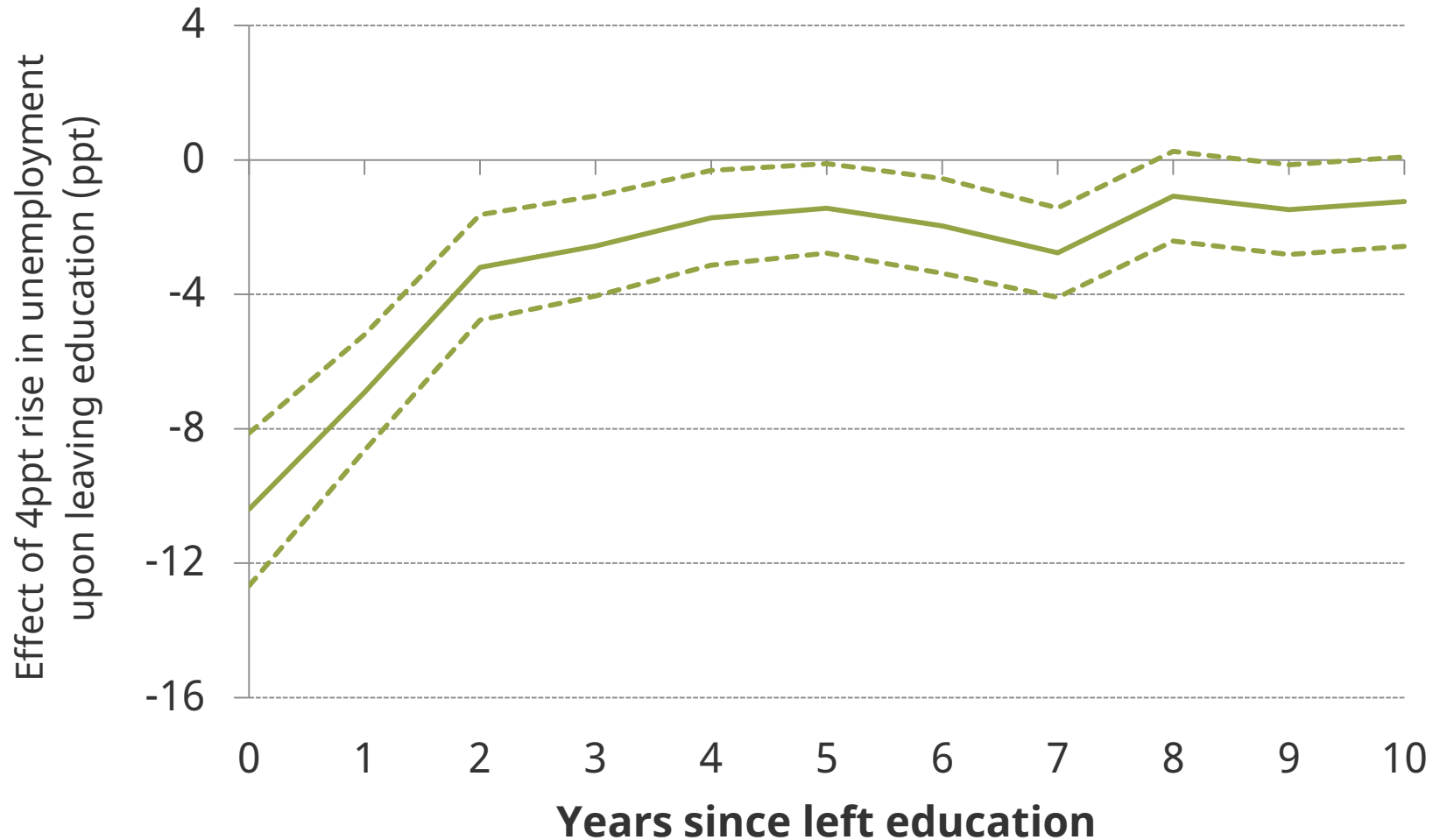
# UK unemployment rate 1971-2015

**Average increase in unemployment in last 3 recessions: 4 ppt**



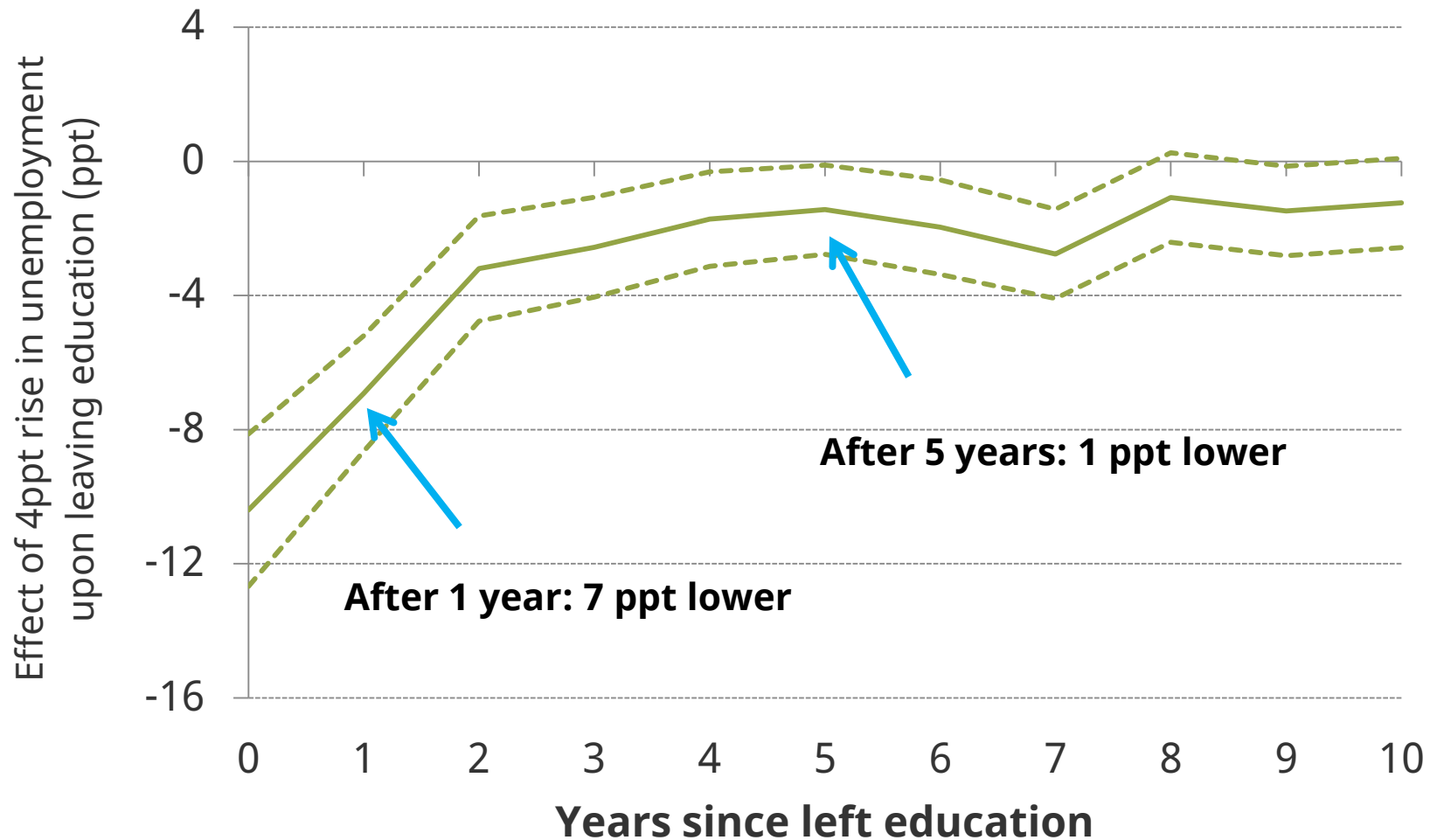
Source: ONS Labour Market Statistics

# Effect on probability of being in paid work



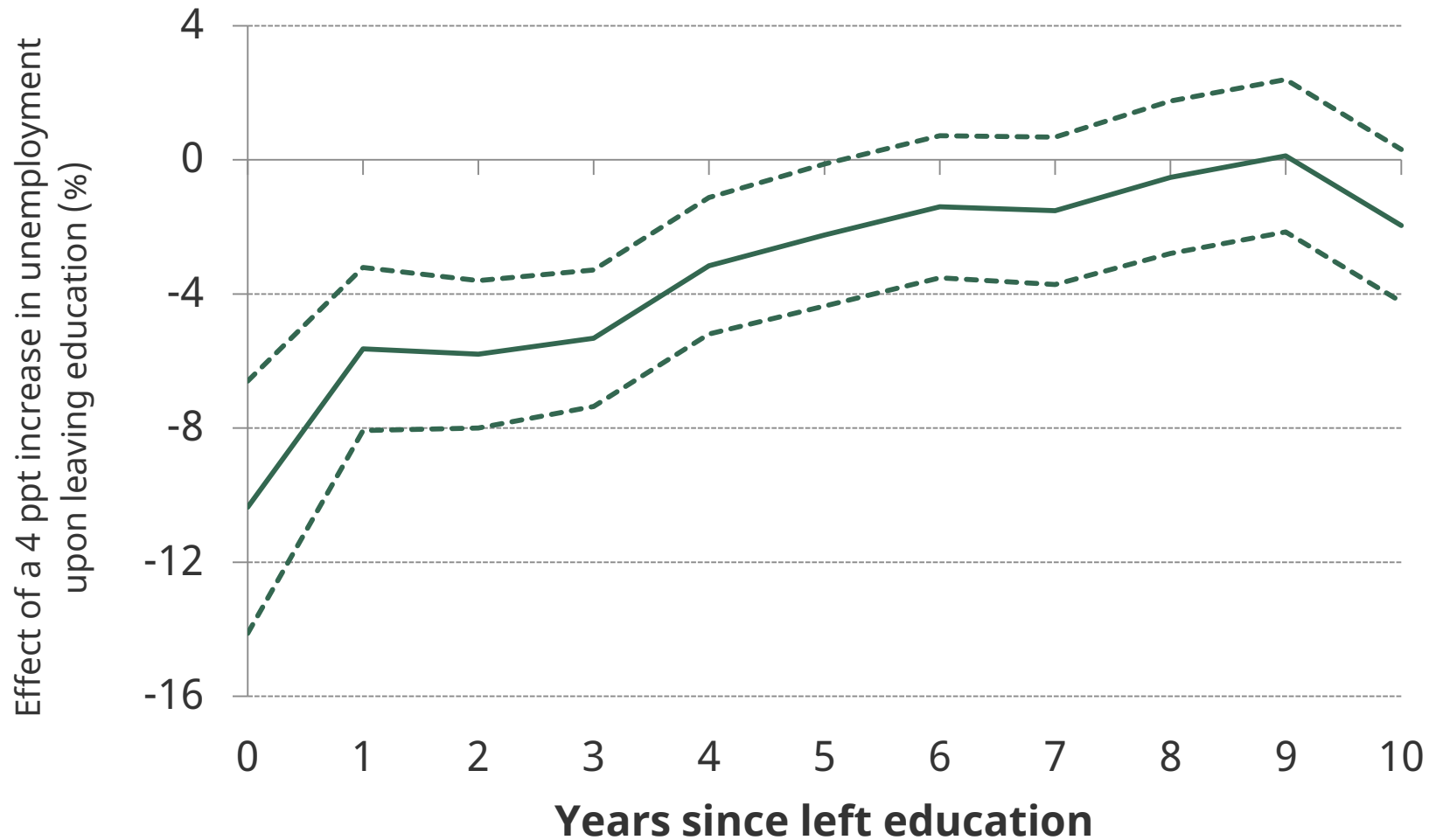
Note: Dotted lines represent 95% confidence intervals around the estimated effects

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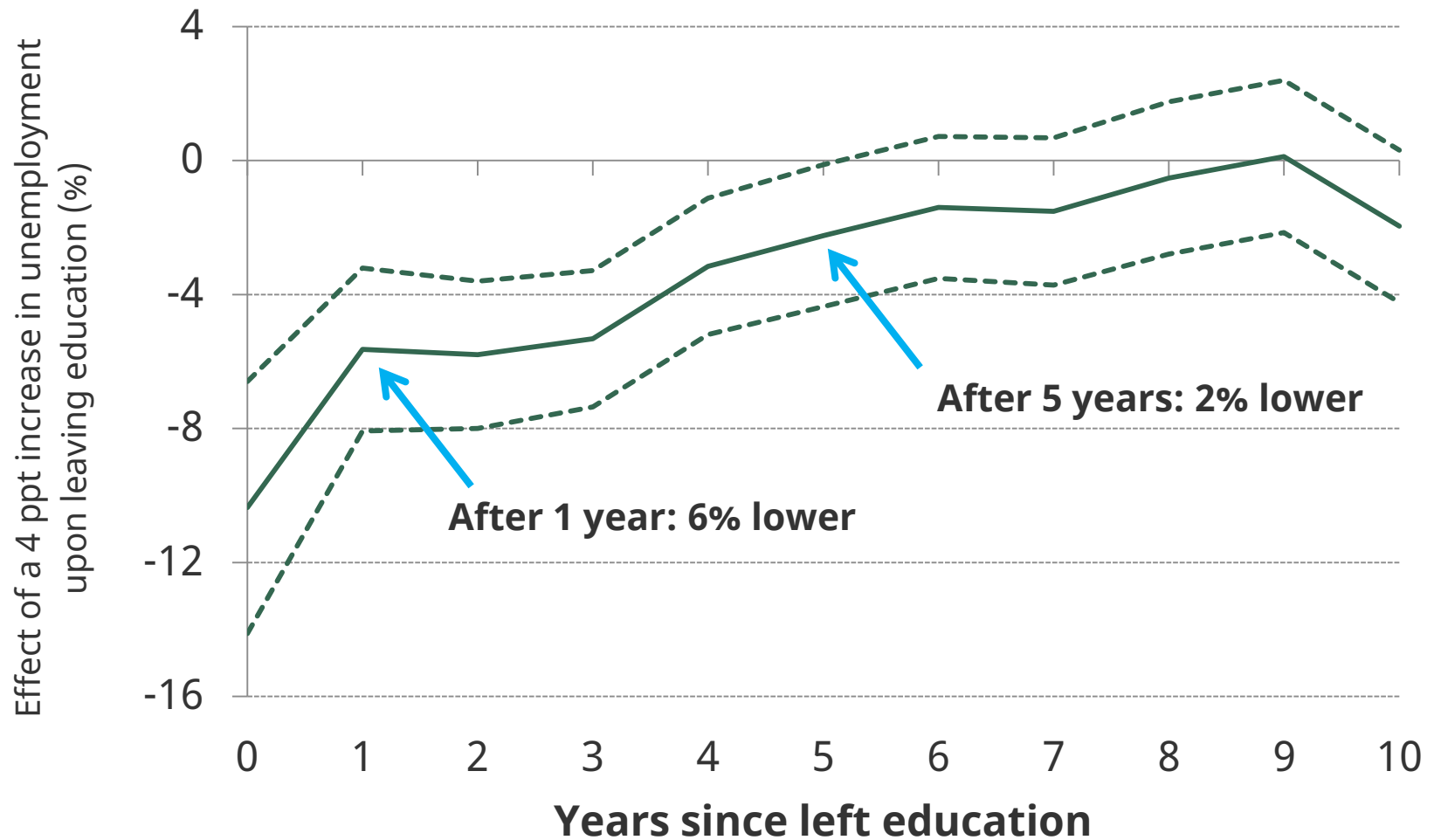
# Effect on pre-tax earnings for workers



Note: Dotted lines represent 95% confidence intervals around the estimated effects

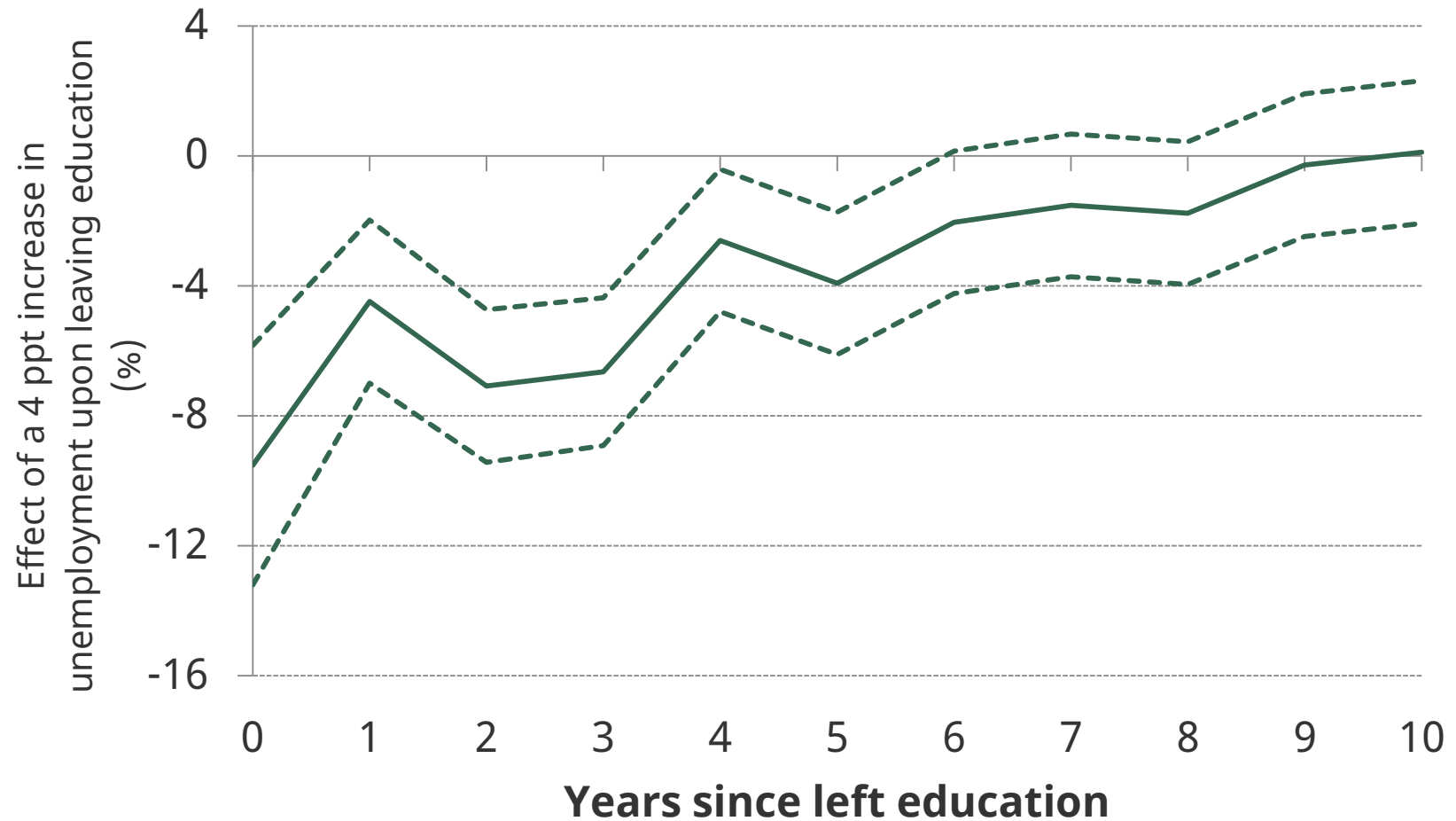


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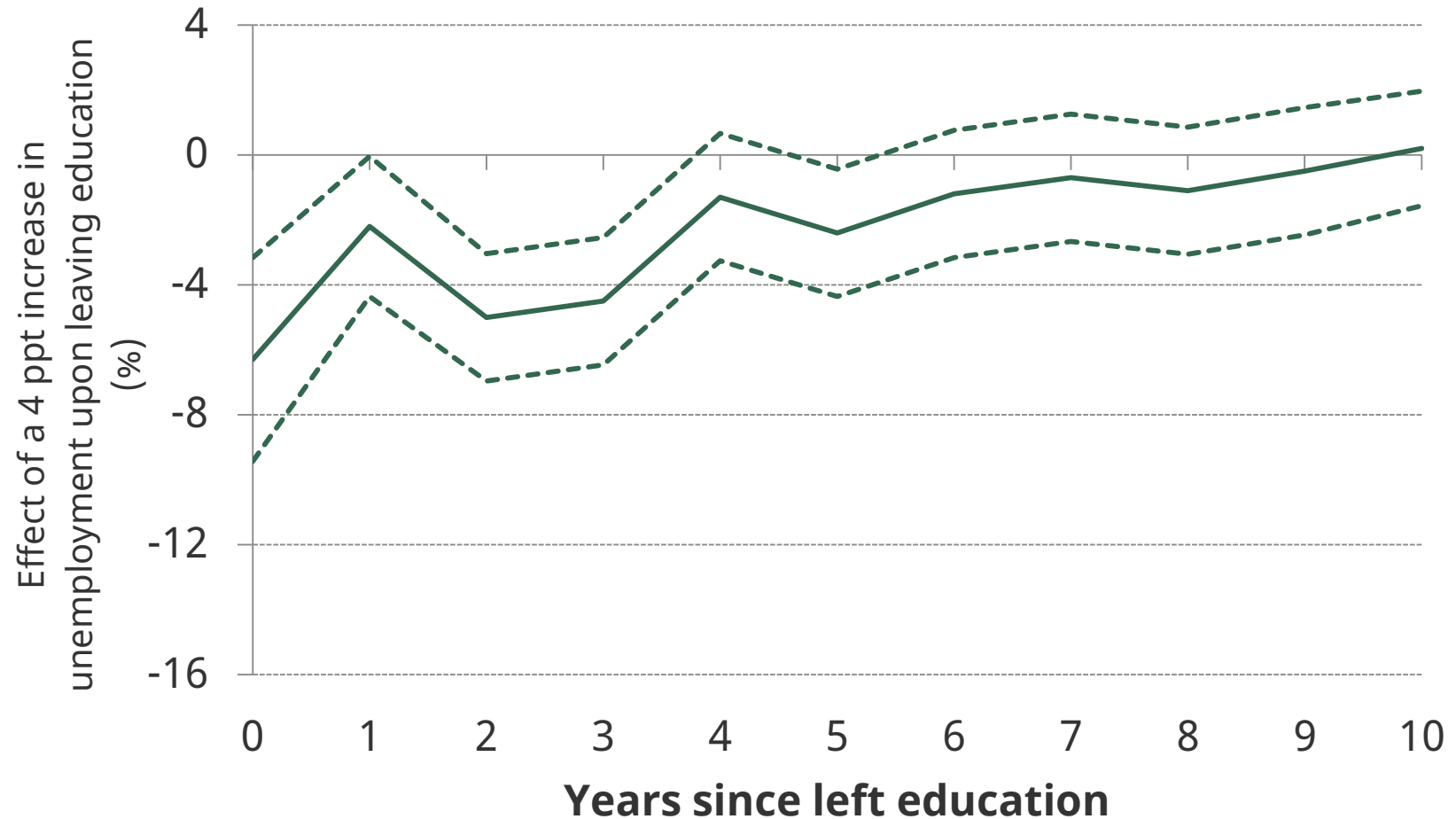
# Effect on combined earnings of individuals and their cohabiting partner (where applicable)



Notes: Working families only.

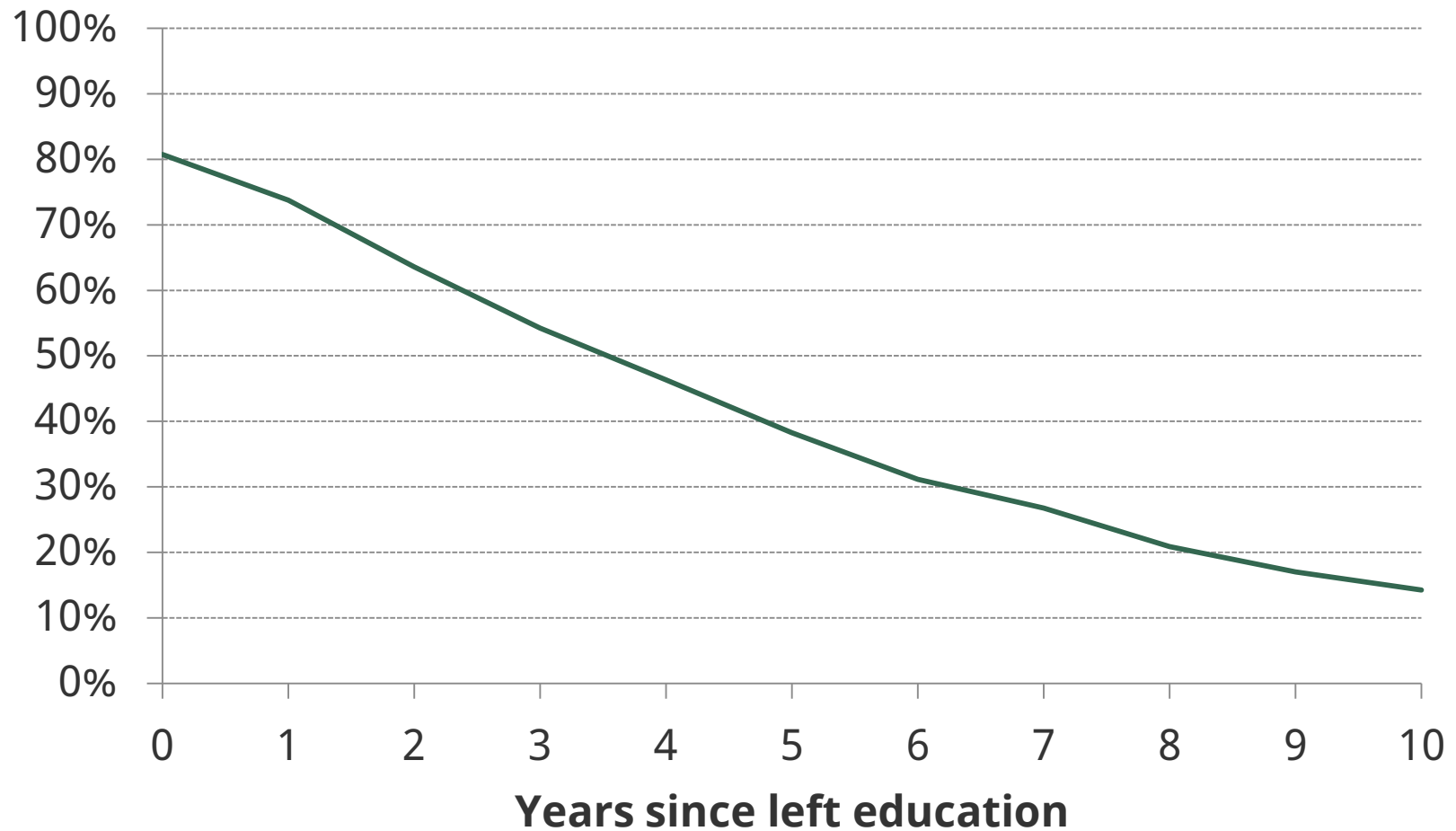
Dotted lines represent 95% confidence intervals around the estimated effects

# Effect on net income of individuals and their cohabiting partner (post taxes and transfers)

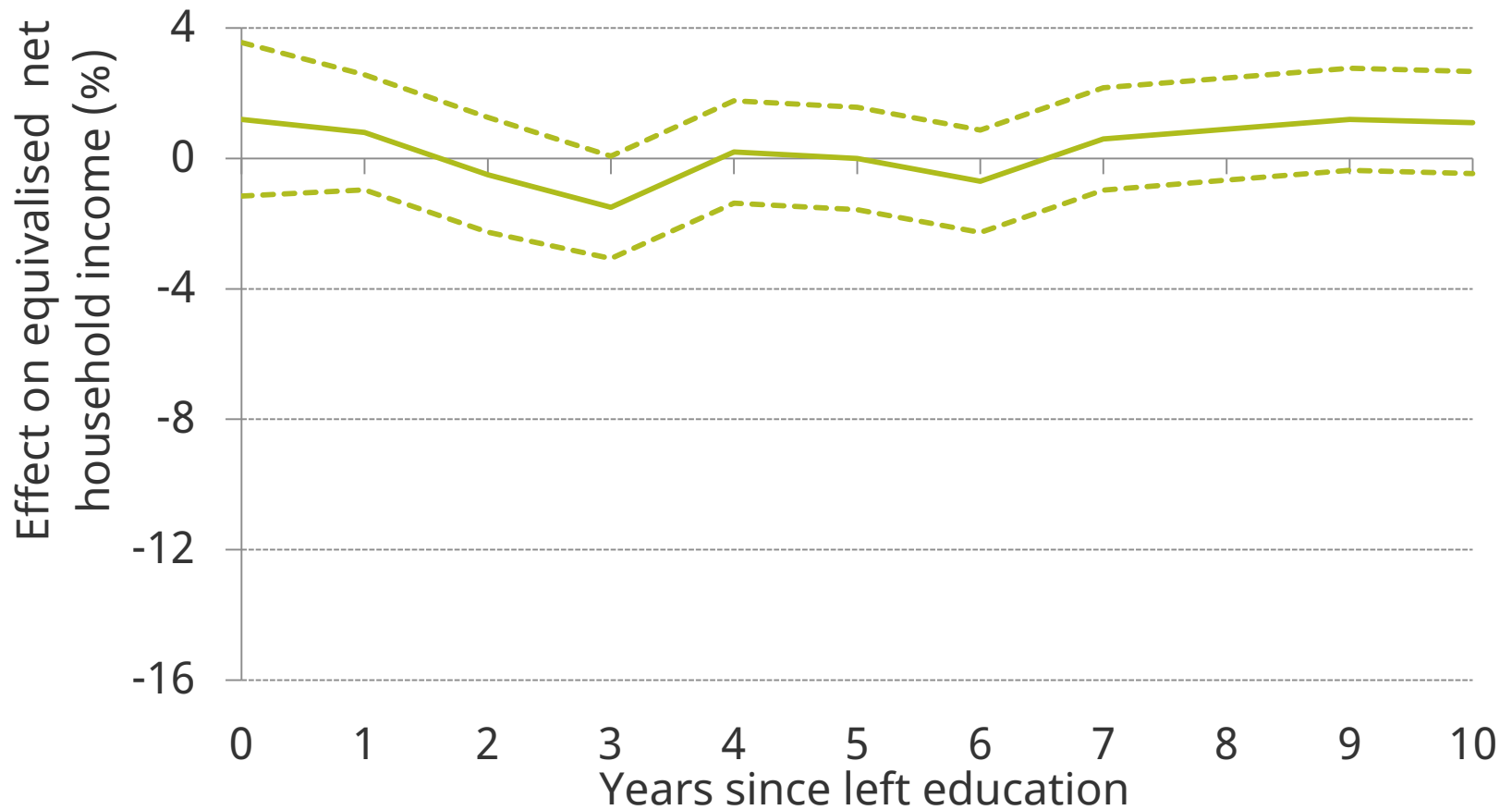


Notes: Working families only. Dotted lines represent 95% confidence intervals around the estimated effects

# Proportion who live with parents (2010-2015)

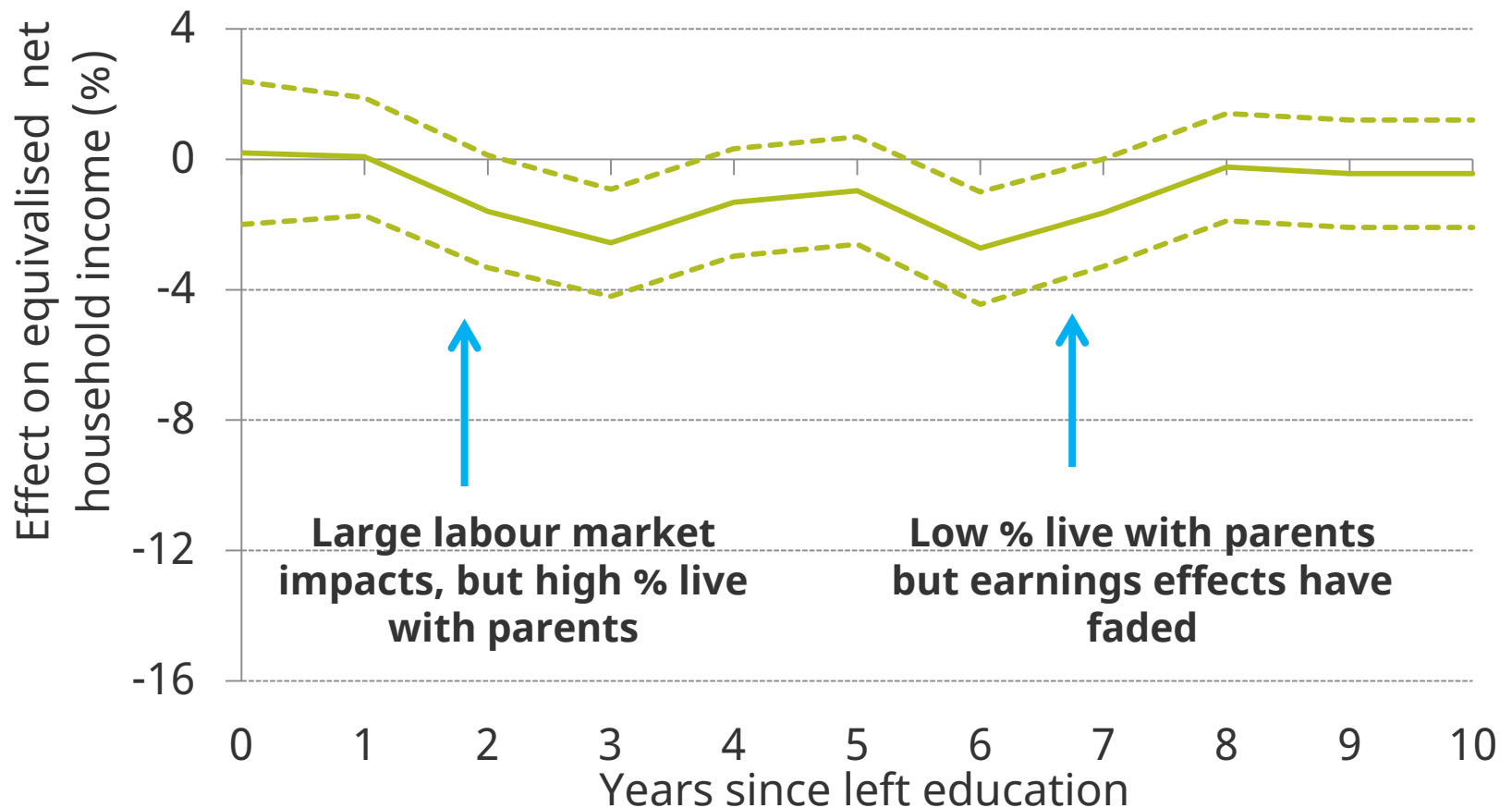


# Effect on equivalised net household income



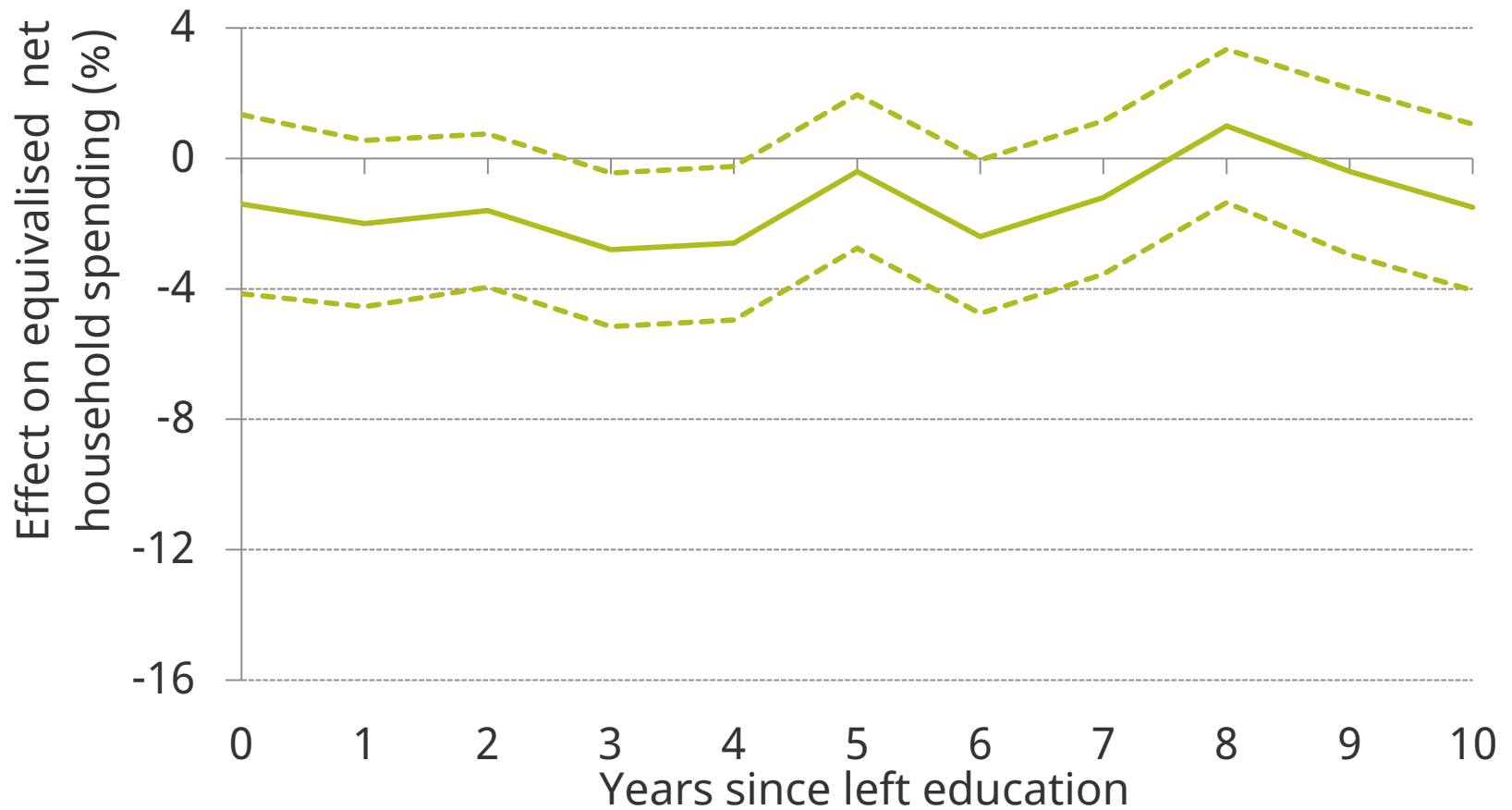
Note: Working families only. Dotted lines represent 95% confidence intervals around the estimated effects

# Effect on equivalised net household income (including non-workers)



Note: Dotted lines represent 95% confidence intervals around the estimated effects

# Effect on equivalised net household expenditure



Note: Dotted lines represent 95% confidence intervals around the estimated effects

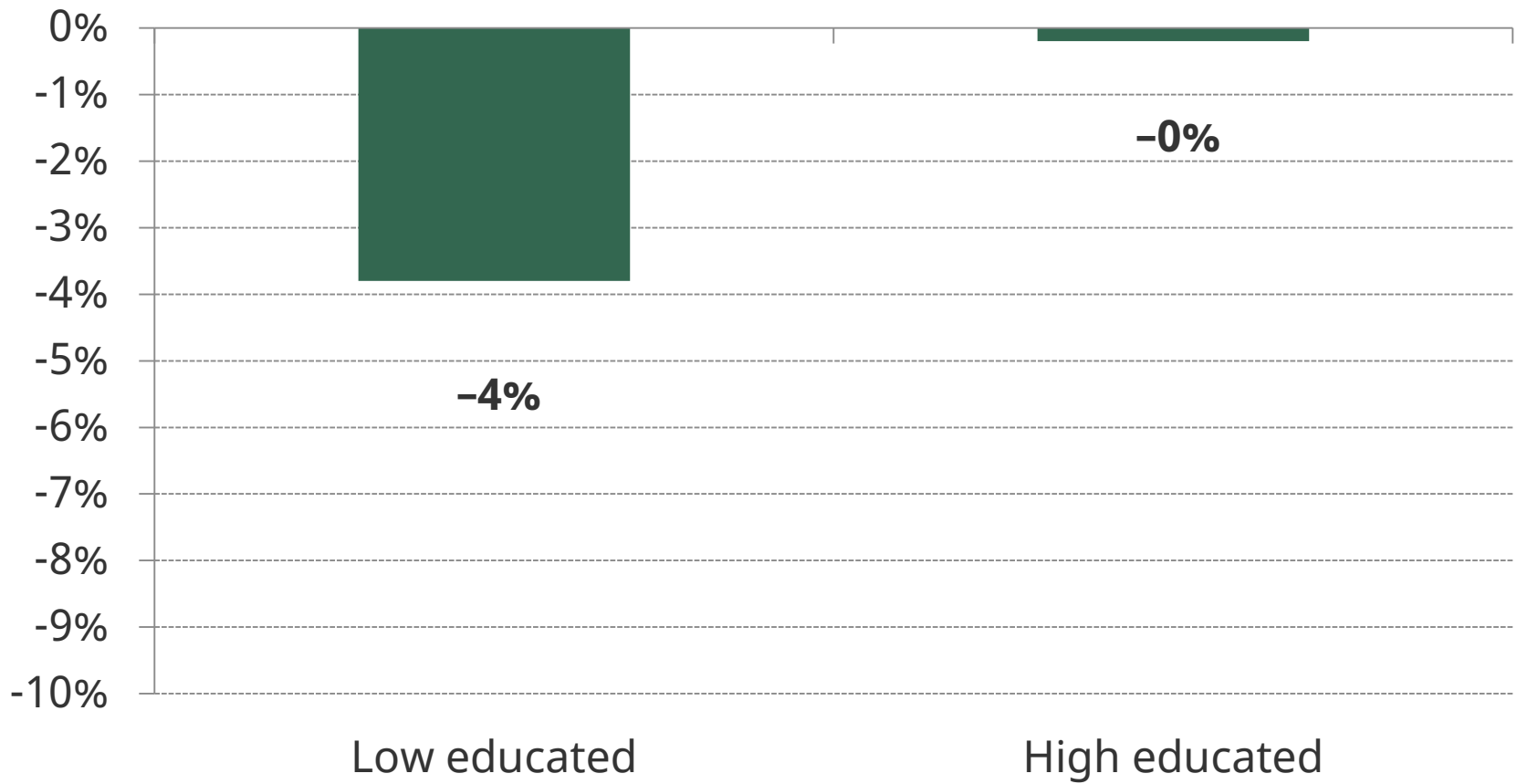
# Why does parental safety net seem so large?

- Results **not** primarily driven by young adults choosing to stay with parents as result of weak economic conditions
- Rather, many live with parents at this stage in life **regardless** of economic conditions
- 3 key reasons why parents' incomes dilute scarring effects so much:
  1. They are large relative to young adults' incomes
  2. Persistence of substantial scarring w.r.t earnings does not outlast typical period of co-residence
  3. Heterogeneity: those most scarred w.r.t. earnings are most likely to live with parents (irrespective of economic conditions)



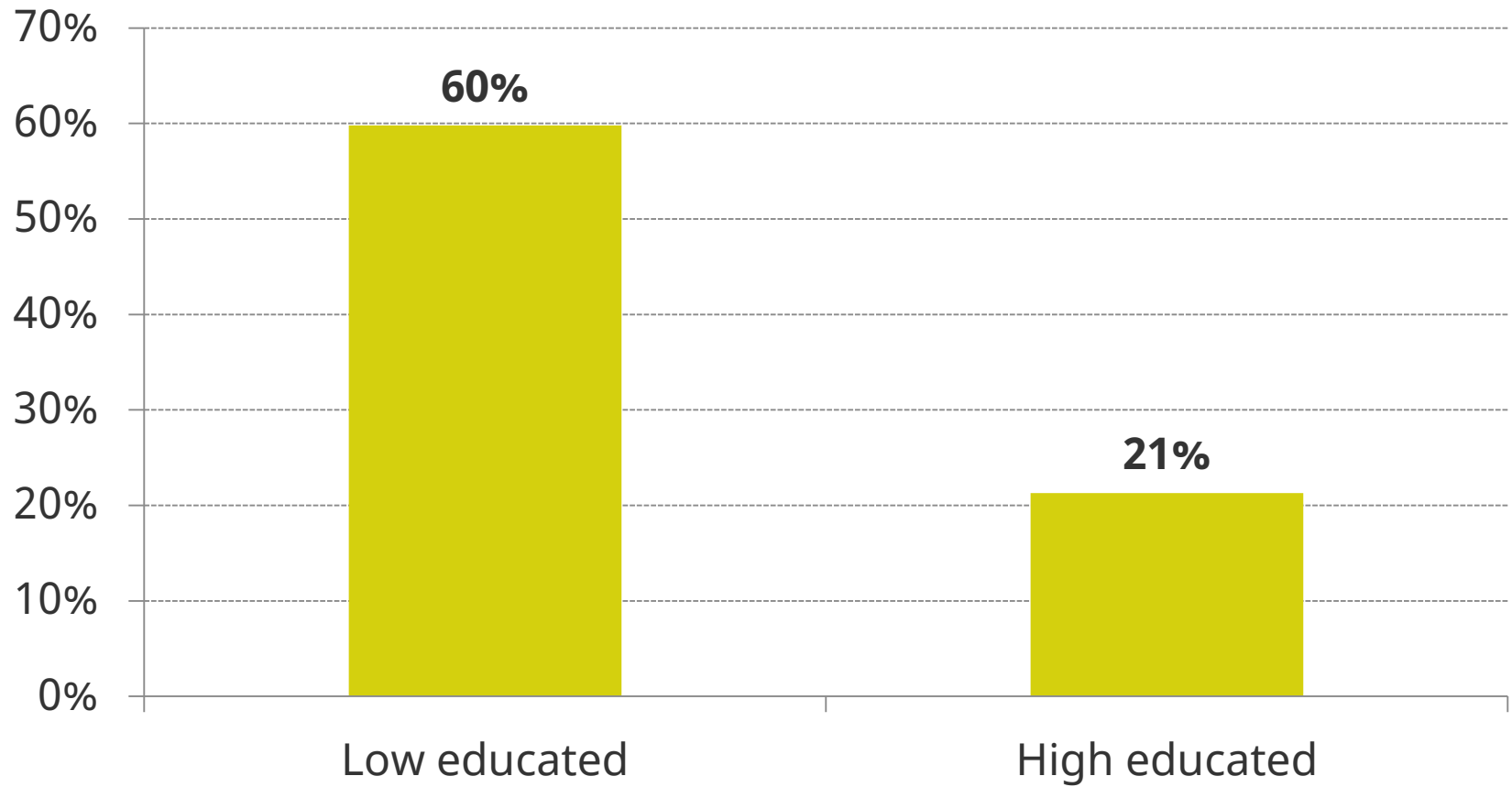
# Effects on people with high and low education

Scarring effects on pre-tax earnings of adult (plus cohabiting partner where applicable), five years after leaving education



# Effects on people with high and low education

Percentage of young adults living with parents, five years after leaving education



# Conclusion

- Sharp contrast between highly muted “scarring” effects on typical measures of living standards and substantial effects on labour market outcomes examined previously
- UK state insurance and parental incomes mean proportional impacts on household incomes and expenditures are actually very small
- Doesn’t mean that “scarring” is not a problem for young people:
  - Significant minority do not live with parents: we find negative impacts on them feeding right through to expenditure
  - To what extent do parents share income with adult co-habiting children?