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

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IIPF 2018, Tampere

22nd 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 cyclicality 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

- Lives with parents
- Lives with partner

Years since left education

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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

Source: ONS Labour Market Statistics

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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)

\[ y_{ict} = \alpha + \sum_{s=0}^{2} \sum_{e=0}^{10} \gamma_{es}[experience = e] \times [educ = s] + \sum_{e=0}^{10} \beta_{e \text{unemp_lefted}_c} \times [experience = e] + f(\text{yearlefted}_c) + \mu_t + \theta X_{ict} + \epsilon_{ict} \]

- \( i \) 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)

\[
y_{ict} = \alpha + \sum_{s=0}^{2} \sum_{e=0}^{10} \gamma_{es}[\text{experience} = e] \times [\text{educ} = s] + \sum_{e=0}^{10} \beta_{e \text{unemp_lefted}_c} \times [\text{experience} = e] + f(\text{yearlefted}_c) + \mu_t + \theta X_{ict} + \epsilon_{ict}
\]

- \(f(\text{yearlefted}_c)\) 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

- Effect of 4ppt rise in unemployment upon leaving education (ppt)

Years since left education

Effect of 4ppt rise in unemployment upon leaving education (ppt)

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

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Effect on probability of being in paid work

Effect of 4ppt rise in unemployment upon leaving education (ppt)

Years since left education

After 1 year: 7 ppt lower
After 5 years: 1 ppt lower

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

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Effect on pre-tax earnings for workers

Effect of a 4 ppt increase in unemployment upon leaving education (%)

Years since left education

Note: Dotted lines represent 95% confidence intervals around the estimated effects
Effect on pre-tax earnings for workers

After 1 year: 6% lower
After 5 years: 2% lower

Note: Dotted lines represent 95% confidence intervals around the estimated effects
Effect on combined earnings of individuals and their cohabiting partner (where applicable)

**Graph:**

- **Y-axis:** Effect of a 4 ppt increase in unemployment upon leaving education (%)
- **X-axis:** Years since left education

**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)

Effect of a 4 ppt increase in unemployment upon leaving education (%)

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

Years since left education

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

Effect on equivalised net household spending (%)

Years since left education

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

- Low educated: 60%
- High educated: 21%
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?