The East German wage structure after transition

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Outline

1. Introduction and Background
2. Methods
3. Data
4. Major Findings
5. Conclusions
Introduction

- Reunification almost two decades ago
- Prior to unification in eastern Germany:
  - Returns to experience and tenure only half of those in western Germany (Bird et al. 1994)
  - Life cycle wage heterogeneity much below western German levels (Krueger, Pischke 1995)
## Literature

- **5 yrs after reunification:**
  - Returns to experience in eastern Germany are considerably lower (Jurajda & Harmgard, 2007)
  - Franz & Steiner (2000) found steeper wage profile with respect to tenure but wages do not increase with general labor market experience
Research Question

- Differences between eastern and western Germany dissipated?
## Own Contribution

- **Comparison between eastern and western Germany**
  
- **Account for potential endogeneity of tenure and experience**
  
- **Most recent data:** German Socio-Economic Panel, waves of 2002-2006
**METHODS**

- identifying causal returns to tenure and experience

\[ W_{ijt} = b_1 T_{ijt} + b_2 E_{ijt} + e_{ijt} \]

- Error term is assumed to combine fixed individual effects, fixed job match effects and a random term

- Various mechanism cause correlation between T or E and the error term
METHODS (cont'd)

- **Tenure:**
  - Productive match is unlikely to end
  - Observe only those new relationships which improve individual situation

- **Experience:**
  - Better match, the longer an individual is active in the labor market
  - Motivated individuals spend more time in the labor market
METHODS (cont'd)

- Two classic estimators:
  - Instrumental variables approach
    Altonji/Shakotko (1987)
  - Two step procedure
    Topel (1991)
- Upper (Topel) and lower (AS) bound to the returns to tenure
- Still applied in the literature (Parent 2000, Dustmann & Pereira 2008)
**Methods: AS**

- Instrument: difference between period specific and average value

\[ T_{ijt} = T_{ijt} - \bar{T}_{ij} \]

- Uncorrelated with unobservables
- Valid instrument, sums to zero for person i in job j
Methods: Topel's 2-step

1. Within job wage growth (1st difference) for individuals who did not change job

\[ W_{ijt} - W_{ijt-1} = (b_1 + b_2) + e_{ijt} - e_{ijt-1} \]

2. Cross-sectional for individuals with a new job (T=0)

\[ W_{ijt} = b_2 E_{ij0} + e_{ijt} \]

3. 1st - 2nd step = returns to tenure
### Data

- **GSOEP (2002-2006)**
- male population (aged 25-60)
- private sector
- full-time employment
- 10 multiply imputed datasets
Data (cont'd)

- Dependent variable:
  - real log hourly wage (gross)

- Independent variables:
  - (polynomials of) tenure and experience, education, industry, state of residence, calender year
# Change in Predicted Log Wage

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Standard errors are generated by block-bootstrap for the multiple imputation dataset.
Explanations?

- Cohort effects?
10 vs 0 yrs experience (cohort ≥1970)

**Motivation**

**Methods**

**Data**

**Results**

**Conclusions**

Change in log wage

- **OLS**
  - WEST: ***
  - EAST: 

- **AS**
  - WEST: ***
  - EAST: **

- **TO**
  - WEST: ***
  - EAST: **
Explanations?

- Cohort effects?
- Differences in skill level?
  - Robust results for all skill level
- Aggregate wage trends?
  - Eastern wages grow somewhat faster but the effect is too small to explain the differences
Conclusions

- Almost two decades after reunification the wage-experience profile is still substantially flatter in eastern Germany
- Robust results also for younger individuals
- Results hold across all skill groups
- Does it take at least one generation to leave the socialist heritage behind?

Thank you for your attention!