The East German wage structure after transition

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Outline

1. Introduction and Background
2. Methods
3. Data
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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 considerable 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

$$\tilde{T}_{ijt} = T_{ijt} - \overline{T}_{ij}$$

- 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

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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

	western Germany			eastern Germany		
	OLS	AS	TO	OLS	AS	TO
5 vs 0 yrs Ten.	**.08** ***	**-.01**	**.05** *	**.07** **	**-.03**	**.05**
	(.02)	(.02)	(.02)	(.03)	(.03)	(.05)
10 vs 0 yrs Ten.	**.14** ***	**.01**	**.07**	**.14** ***	**-.06**	**.14**
	(.02)	(.03)	(.05)	(.04)	(.05)	(.09)
5 vs 0 yrs Exp.	**.20** ***	**.20** ***	**.22** ***	**.17** ***	**.16** **	**.14** *
	(.02)	(.03)	(.04)	(.06)	(.07)	(.08)
10 vs 0 yrs Exp.	**.33** ***	**.34** ***	**.44** ***	**.26** ***	**.27**	**.22**
	(.04)	(.04)	(.09)	(.08)	(.30)	(.17)

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

Explanations?

- Cohort effects?

10 vs 0 yrs experience (cohort ≥1970)
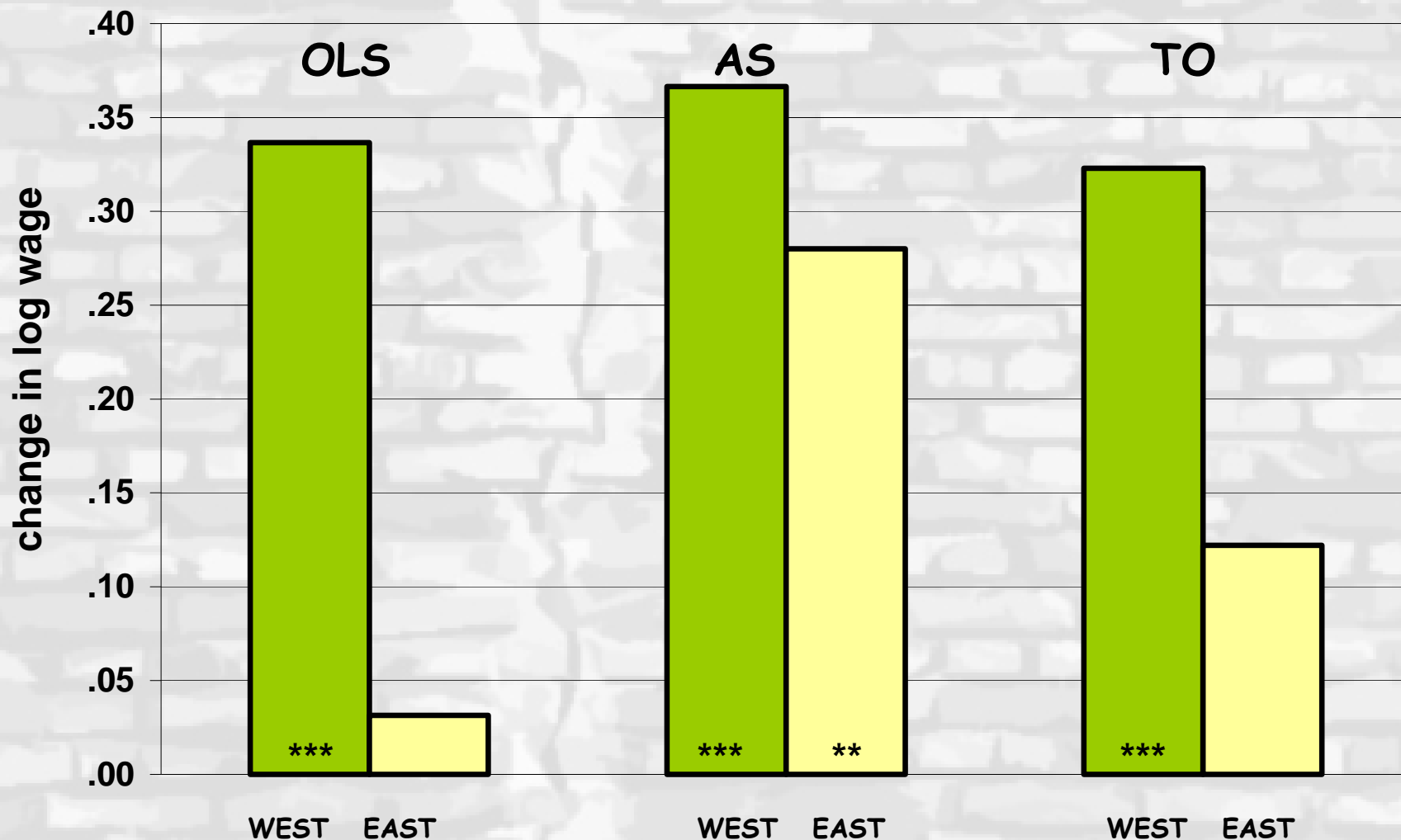
Explanations?

- 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!