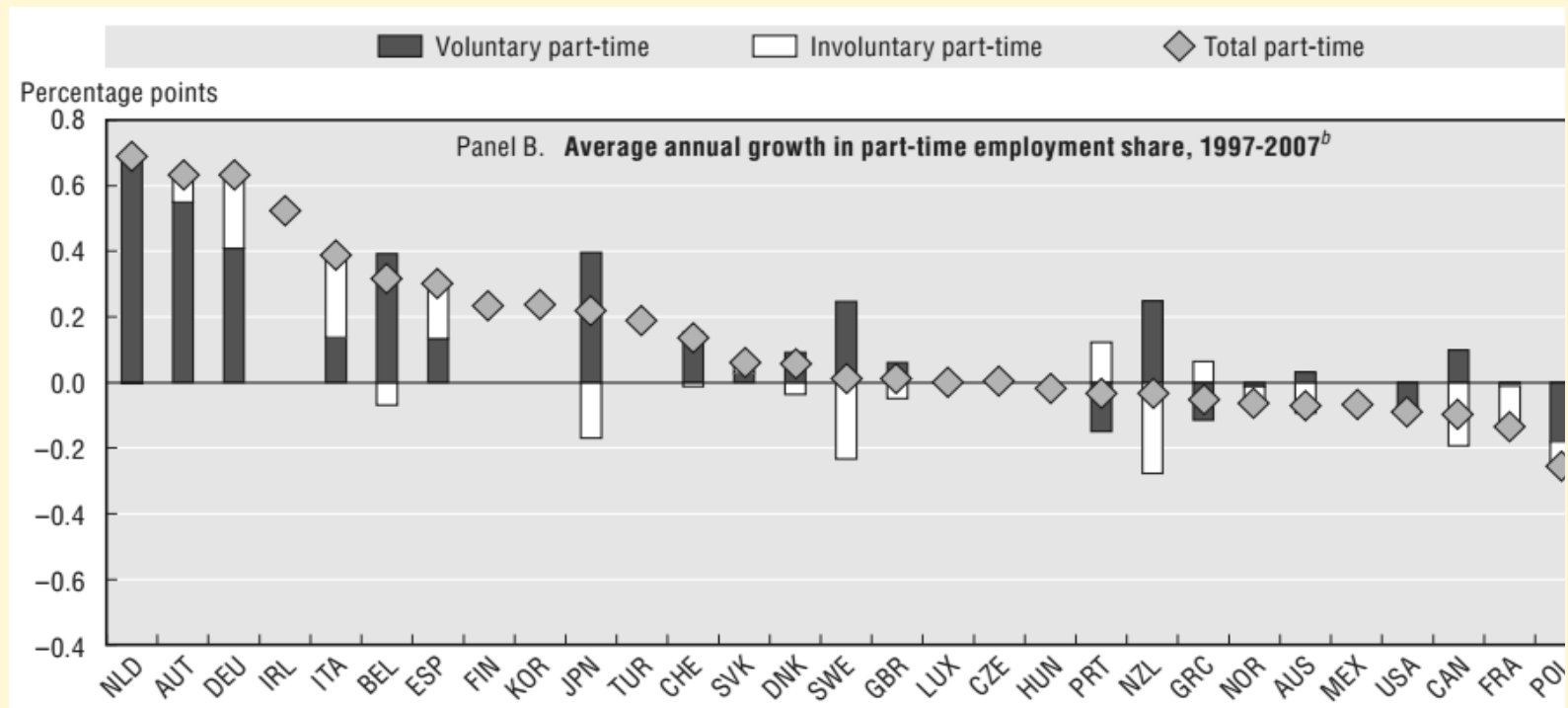


Part-Time Wage-Gap in Germany: Evidence across the Wage Distribution

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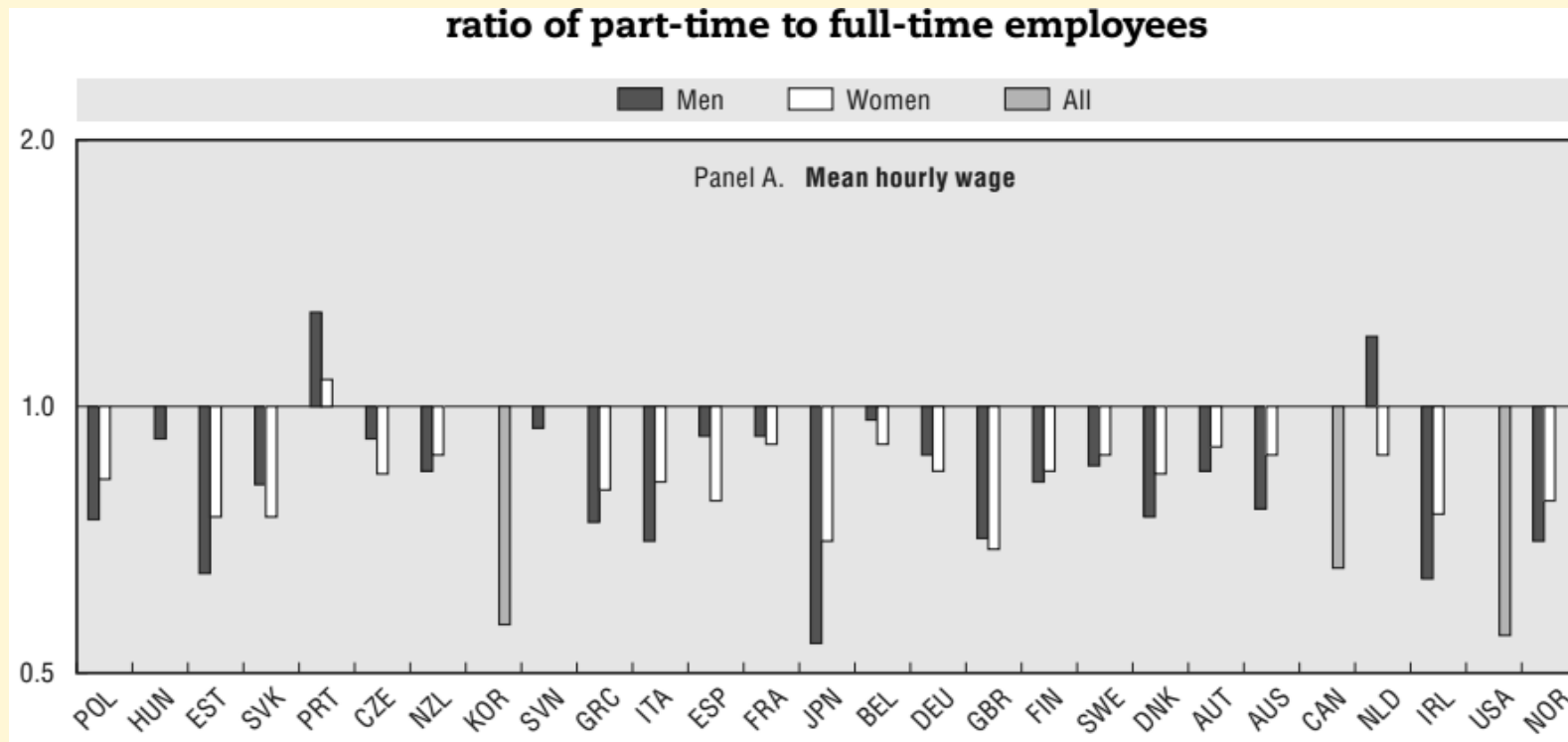
Part-time



Source: OECD(2010)

- Large growth of part-time employment in Europe.
- Germany: large and heterogeneous growth.

Part-time wage gap



Source: OECD(2010)

- Usually a wage gap.
- Cross-country (institutional?) variation.

Evidence on part-time wage gap

■ Part-time wage gap varies a lot

- ◆ across countries - institutional backgrounds.
- ◆ age.
- ◆ according to employment contract.
- ◆ sector of employment.
- ◆ trade union strength and policy.

■ ...and this makes sense!

- ◆ Part-time wage is (usually) considered homogeneous.
- ◆ Controlling for heterogeneity does not fully account for differences.
- ◆ Germany: in absence of minimum wages differences are relevant for workers with similar skills in similar occupations.

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Theoretical background

- Segmentation approach.
- Distinction between 'retention' and 'secondary' part-time jobs (Tilly, 1991, 1992, 1996; Walsh, 1999).
 - ◆ Retention: high-paid high-skilled workers in high-quality jobs.
 - ◆ Secondary: involuntary or workers valuing less the wage. Low paid workers.
- Part-time has a different role at the two segments.
 - ◆ Primary: retention jobs.
 - ◆ Secondary: secondary part-time jobs.
- Part-time is an indication of the labour market segment in low-paid jobs but not in high-paid jobs.
- Higher wage gap at the bottom of the distribution.

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- Quasi-fixed costs: hiring costs, training, coordination.
 - ◆ Retention: high fixed costs.
 - ◆ Secondary: low fixed costs.
- Part-time has a different role at the two segments.
- Higher wage gap at the top of the wage distribution.

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- German Socio-Economic Panel (GSOEP), 1991-2008.
- We select: workers aged 18-55.
- Part-time: working less than 30 hours/week.
- We exclude the self-employed and the apprentices.

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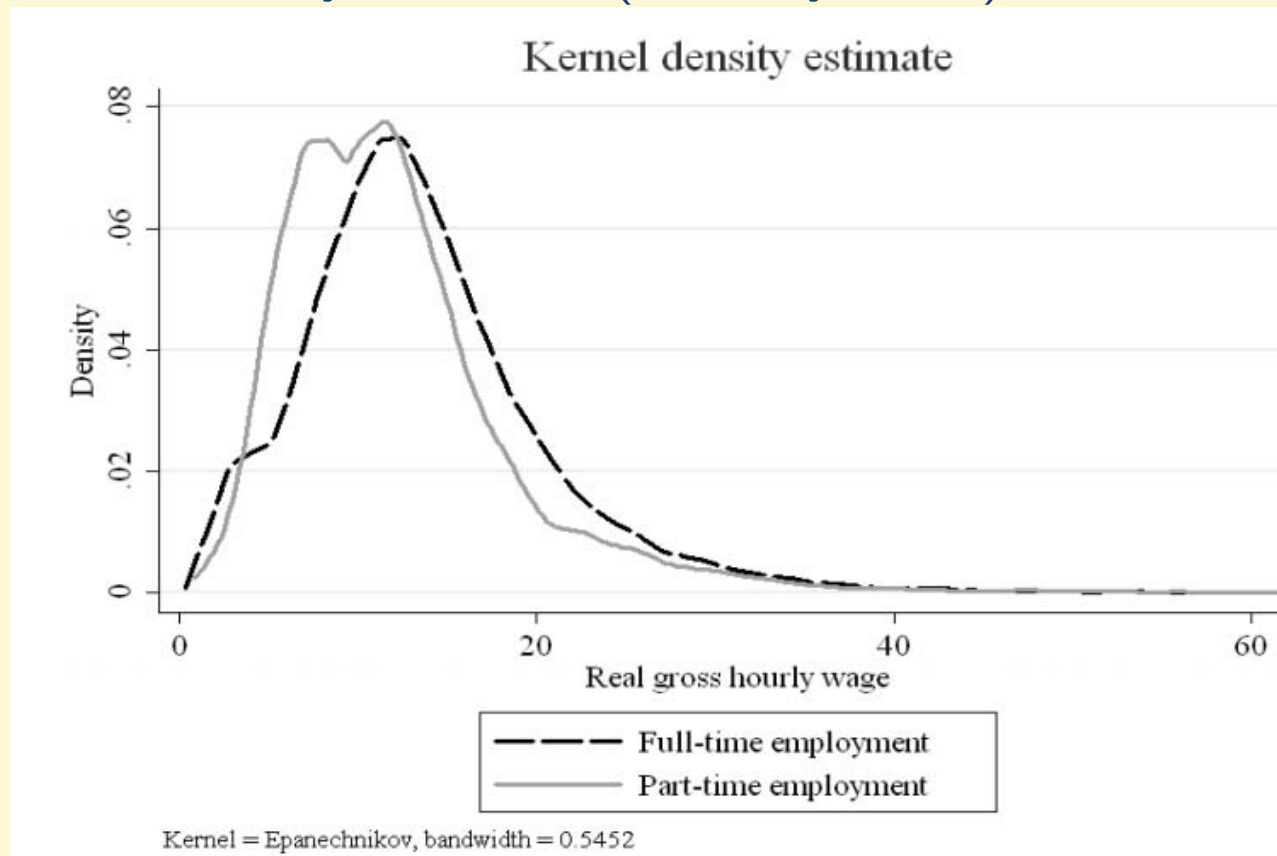
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Kernel density estimate (January 2007)



- A wage gap exists.

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Variables	Categories	Full-time	Part-time
Real gross hourly wage	euros	13.913	12.183
Tenure	years	10.375 (9.908)	8.873 (8.869)
Man		62.84%	8.81%
Married		57.54%	75.28%
Education	Low education	14.41%	13.92%
	Medium education	63.05%	67.90%
	High education	22.54%	18.18%
Region	East-Germany	29.50%	16.95%
Temporary contract		13.78%	12.22%
Received training prev. year		8.76%	1.79%
Firm-size (nr of employees)	Micro firm (<20)	5.49%	12.65%
	Small firm (20-199)	45.92%	51.07%
	Medium firm (200-1999)	23.99%	17.12%
	Large company	24.60%	19.16%
Sector	Primary sector	2.45%	2.09%
	Secondary sector	39.74%	12.94%
	Tertiary sector (service industry)	34.22%	43.78%
	Public services (health, education and defence) (reference category)	23.60%	41.18%
Number of observations (N)		72,761	14,238

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- Regression of wage y_i for quintile θ

$$Q_\theta(y_i|\mathbf{X}_i) = \alpha(\theta) + \mathbf{X}_i\beta_\theta, \theta \in (0, 1) \quad (1)$$

- Unconditional quintile (Machado and Mata, 2005)

$$q(X_i, \beta_\theta, \theta) = \inf\left\{q : \frac{1}{N} \sum_{i=1}^N \sum_{j=1}^J (\theta_j - \theta_{j-1}) 1(x_i\beta_{\theta_j} \leq q) \geq \theta\right\} \quad (2)$$

- Counterfactual decomposition

$$q(X_i^p, \beta^t, \theta) - q(X_i^f, \beta^f, \theta) = [q_\theta(x^p, \beta_\theta^p) - q_\theta(x^p, \beta_\theta^f)] + [q_\theta(x^p, \beta_\theta^f) - q_\theta(x^f, \beta_\theta^f)] + \text{residual} \quad (3)$$

where p is part-time and f fulltime.

Quintile regression

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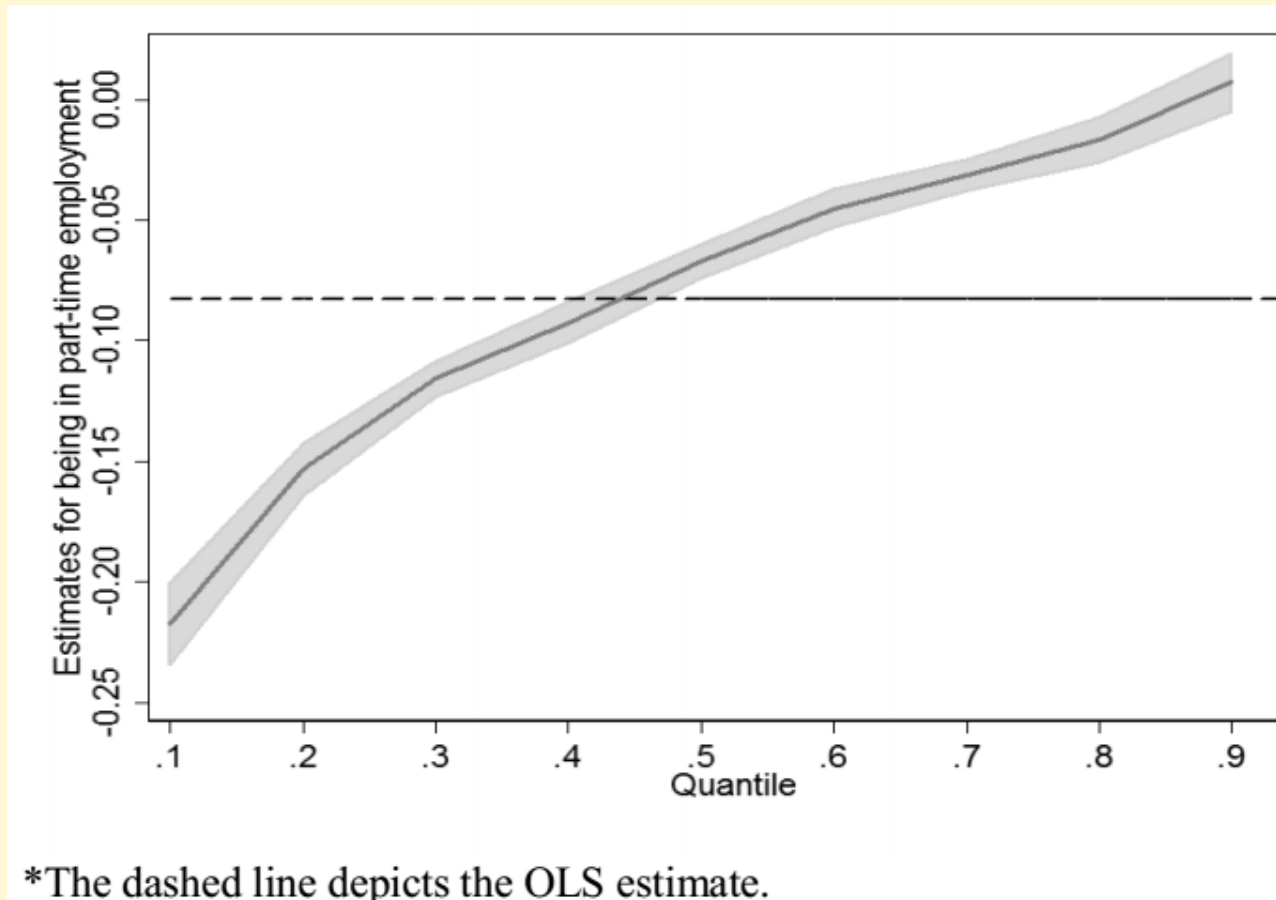
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Quantile regression estimates



- Wage gap turns to wage premium if we move to higher wage strata!

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Decomposition

- Bottom: coefficients' effect.
- Top : characteristics' effect.

	Raw wage-gap (Std.)	Characteristics effect (Std.)	Coefficients effect (Std.)
Q.10	-0.030 (0.010)	0.117 (0.008)	-0.147 (0.009)
Q.20	-0.129 (0.006)	0.001 (0.004)	-0.130 (0.006)
Q.30	-0.150 (0.005)	-0.042 (0.004)	-0.109 (0.005)
Q.40	-0.155 (0.004)	-0.065 (0.003)	-0.090 (0.005)
Q.50	-0.155 (0.004)	-0.081 (0.003)	-0.074 (0.004)
Q.60	-0.153 (0.005)	-0.093 (0.003)	-0.060 (0.004)
Q.70	-0.151 (0.005)	-0.104 (0.003)	-0.046 (0.004)
Q.80	-0.149 (0.005)	-0.119 (0.004)	-0.030 (0.004)
Q.90	-0.137 (0.007)	-0.143 (0.004)	0.005 (0.006)
No. of obs. in the reference group 72761			
No. of obs. in the counterfactual group 14238			

Sensitivity analysis

- Same results if we focus only on women.
- Involuntary part-time:
 - ◆ Larger wage gap.
 - ◆ Similar pattern across quintiles.
- Part-time accompanied by a job change:
 - ◆ Larger wage gap.
 - ◆ Similar pattern across quintiles.

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- Part-time wage gap is not homogeneous to the wage level.
- Large and unexplained by characteristics for the low paid.
- Segmentation theory more relevant than the quasi-fixed costs.
- Policy recommendation: ensure equal pay for part-timers at the bottom of the distribution.

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Conclusions