Do Minimum Wages Really Reduce Teen Employment? Evidence from the United States

Productivity, Investment in Human Capital and the Challenge of Youth Employment

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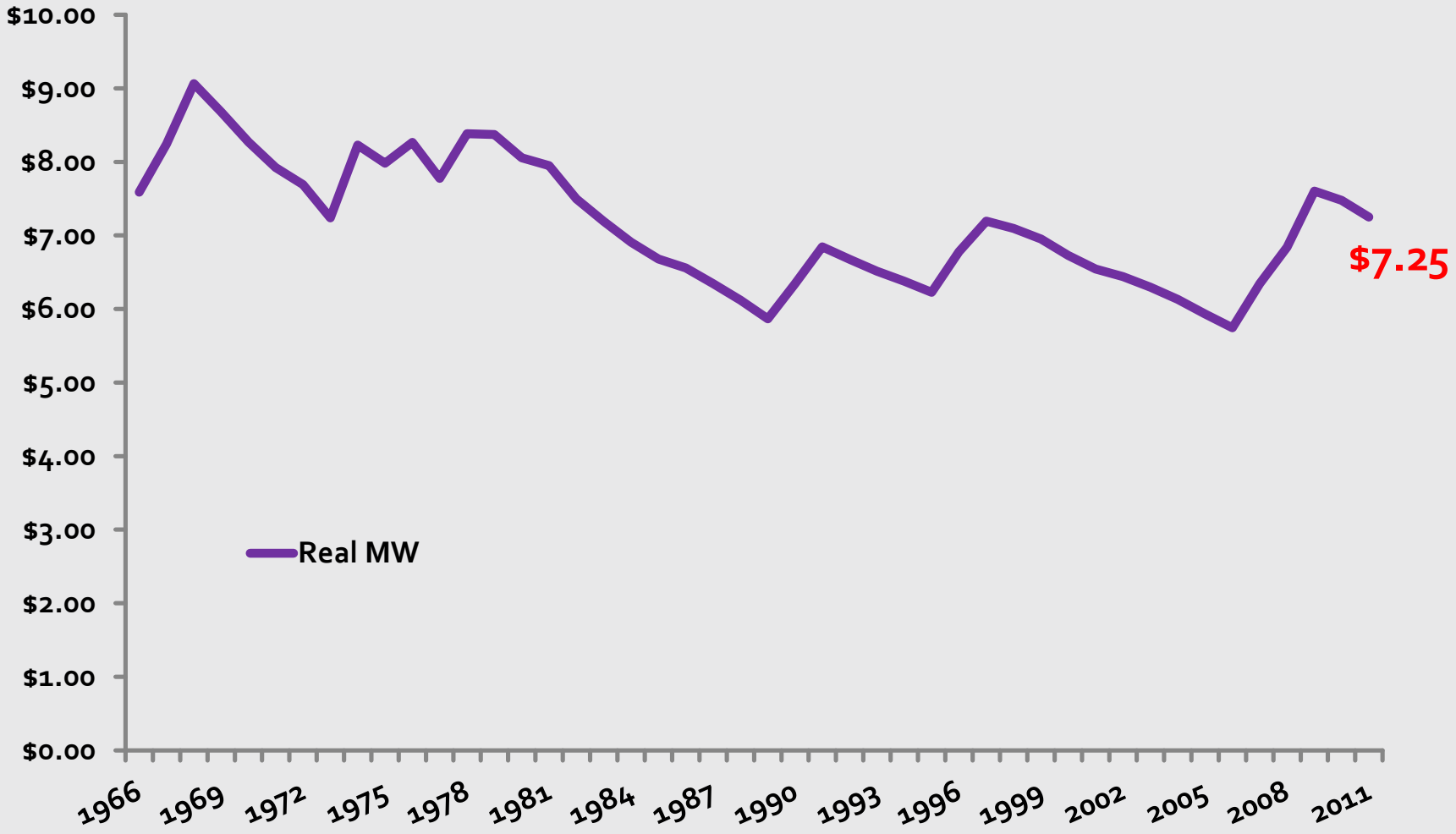
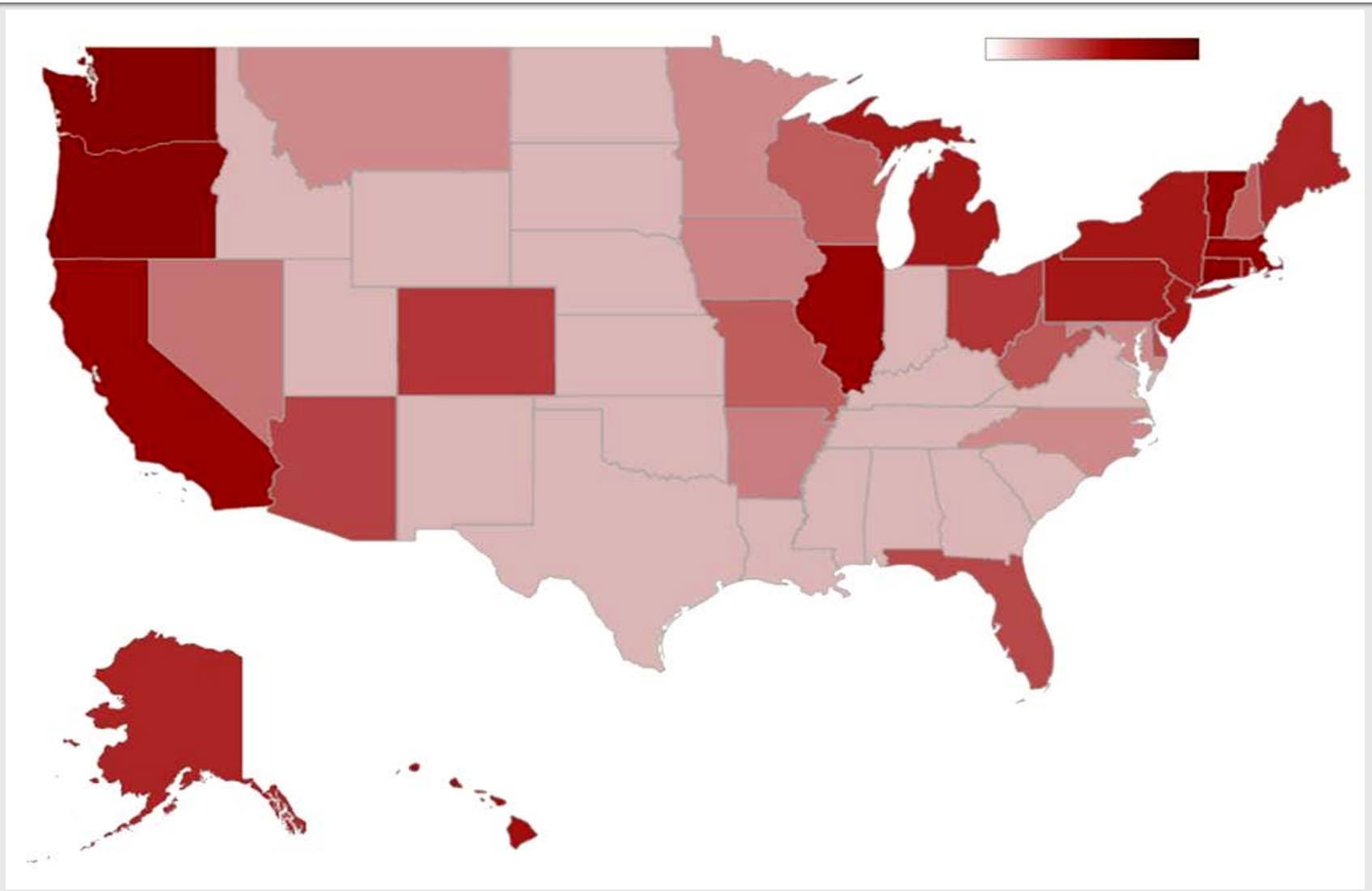
Outline

- History of the MW in the U.S.
- Importance of MW
- MW workers
- Outline of Studies: Data & Methods
- Results: MW Effects
- Further discussion

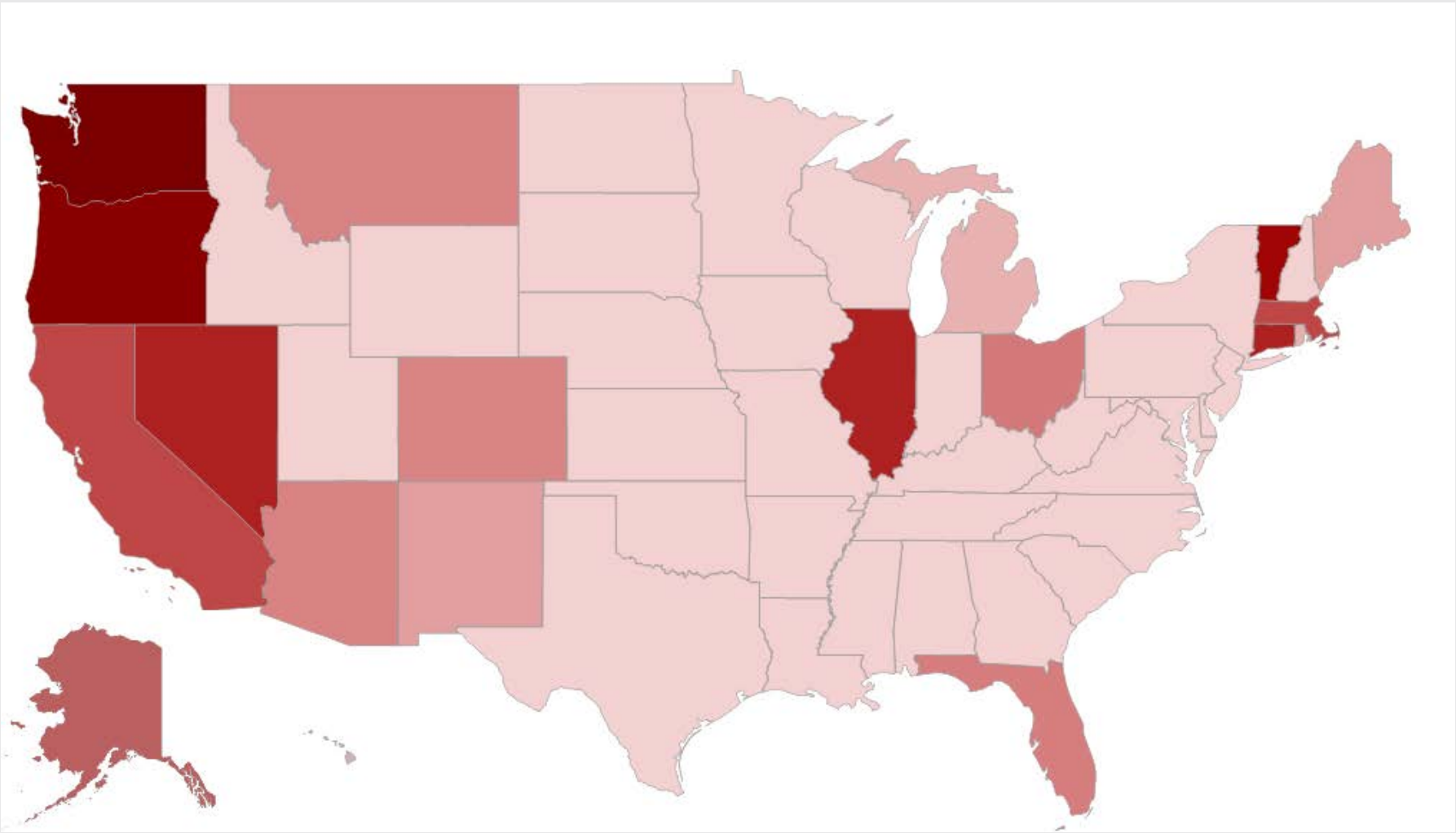
History of the Federal MW



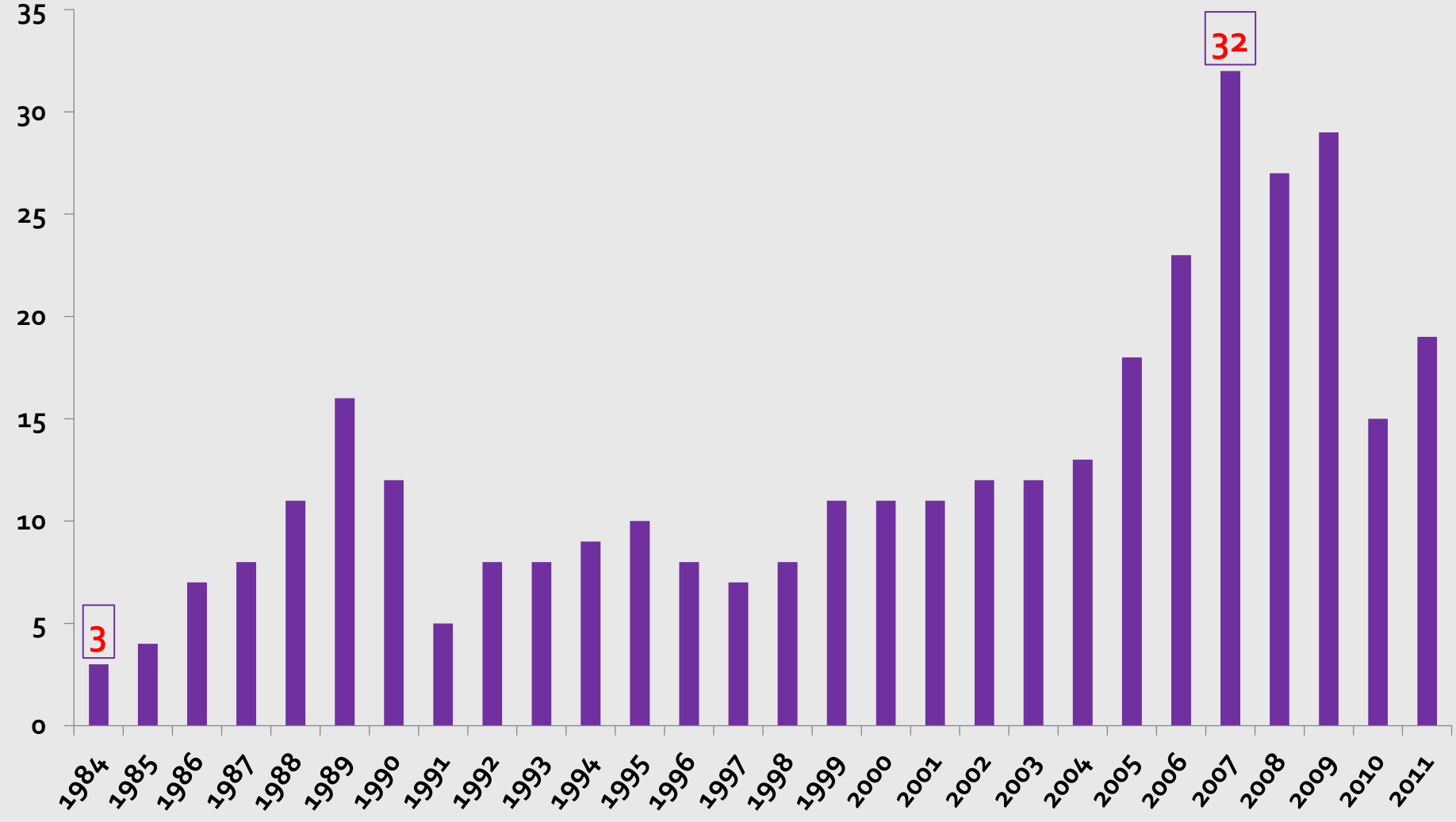
2007: $5.85 to $7.93



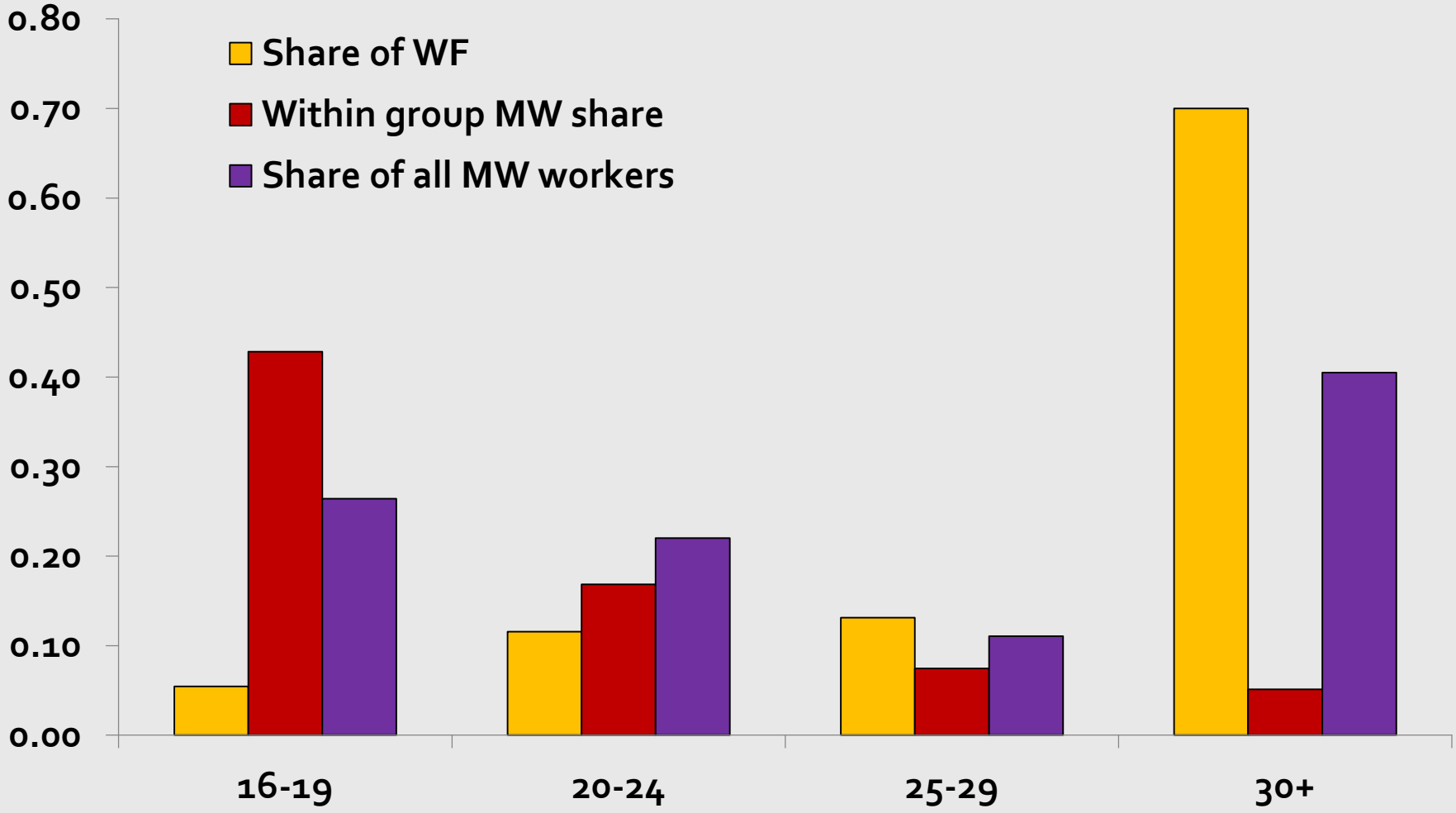
2010: $7.25 to $9.04



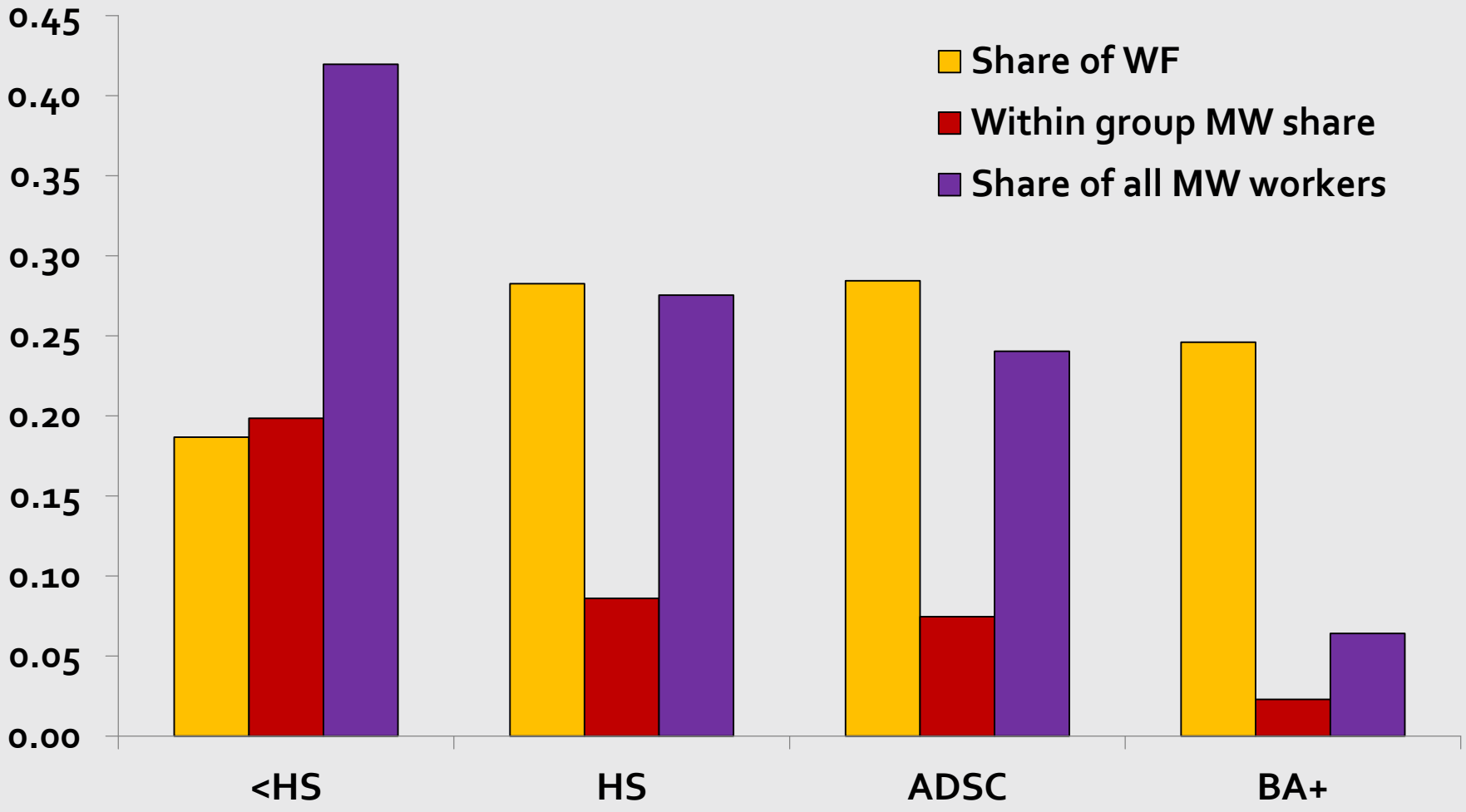
Number of SMW>FMW



Who are MW workers?



Who are MW workers?



Importance of MW

- Politically debated for years
- Three decades of declining real wages
- Recent declines in family incomes
  - -8.1% or $4,400 since 2007
- Significant increases in student loans
- Huge gap and growing trends in inequality

4th Generation MW research

- Builds upon G1-G3
- Local case studies
  - Card & Kruger NJ/PA (2000)
- National panel studies
  - Neumark & Wascher (2007, 2000)
- Replicates and refutes "old-consensus" estimates on employment -1% to -3%

IRLE on forefront of MW research

- **Do Minimum Wages Really Reduce Teen Employment? Accounting for Heterogeneity and Selectively in State Panel Data**

  Allegretto, Dube & Reich
  Industrial Relations
  April 2011

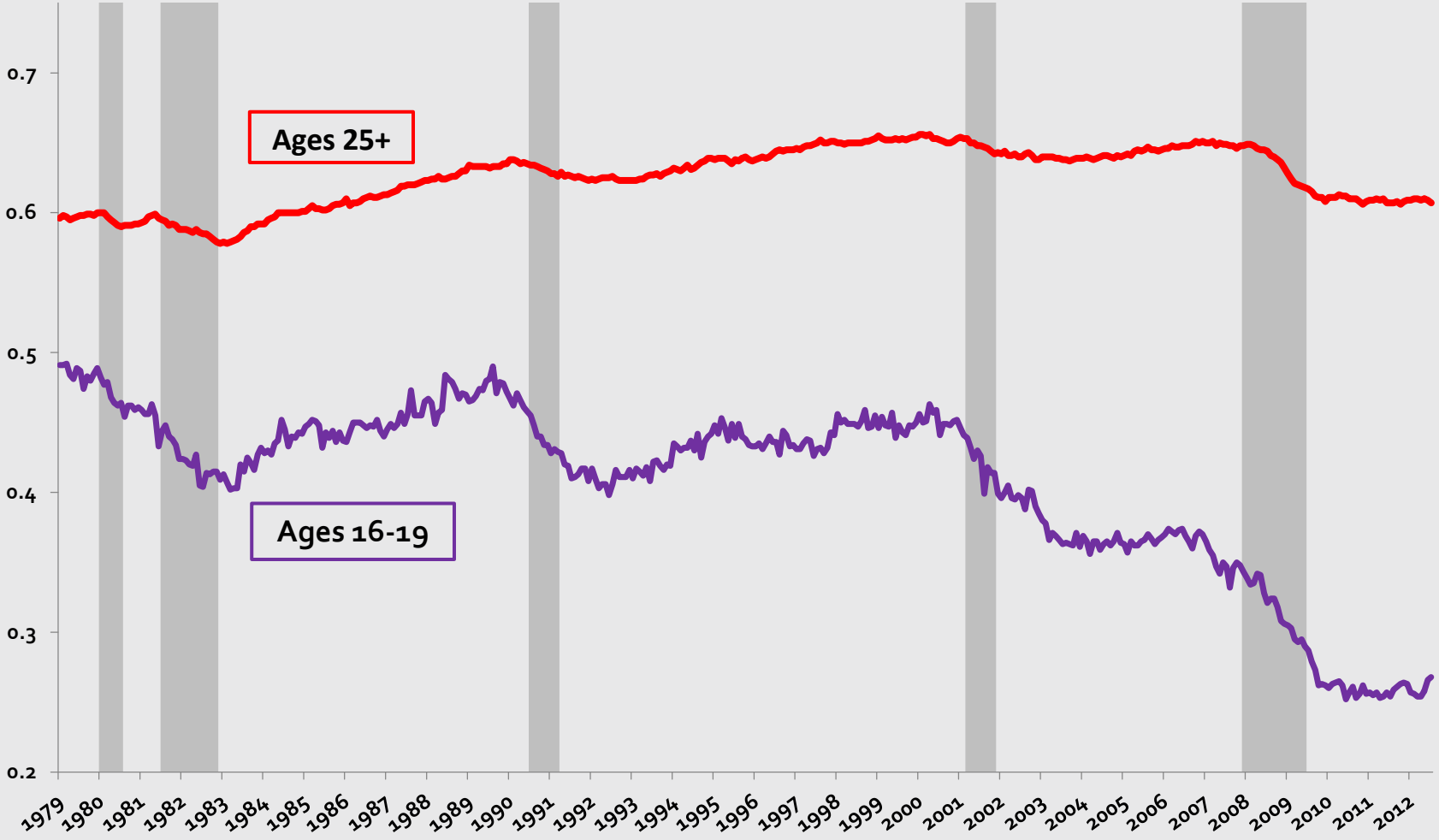
- **Minimum Wage Effects Across State Borders: Estimates Using Contiguous Counties**

  Dube, Lester, Reich
  Review of Economics and Statistics
  November 2010

Recall importance of Teens

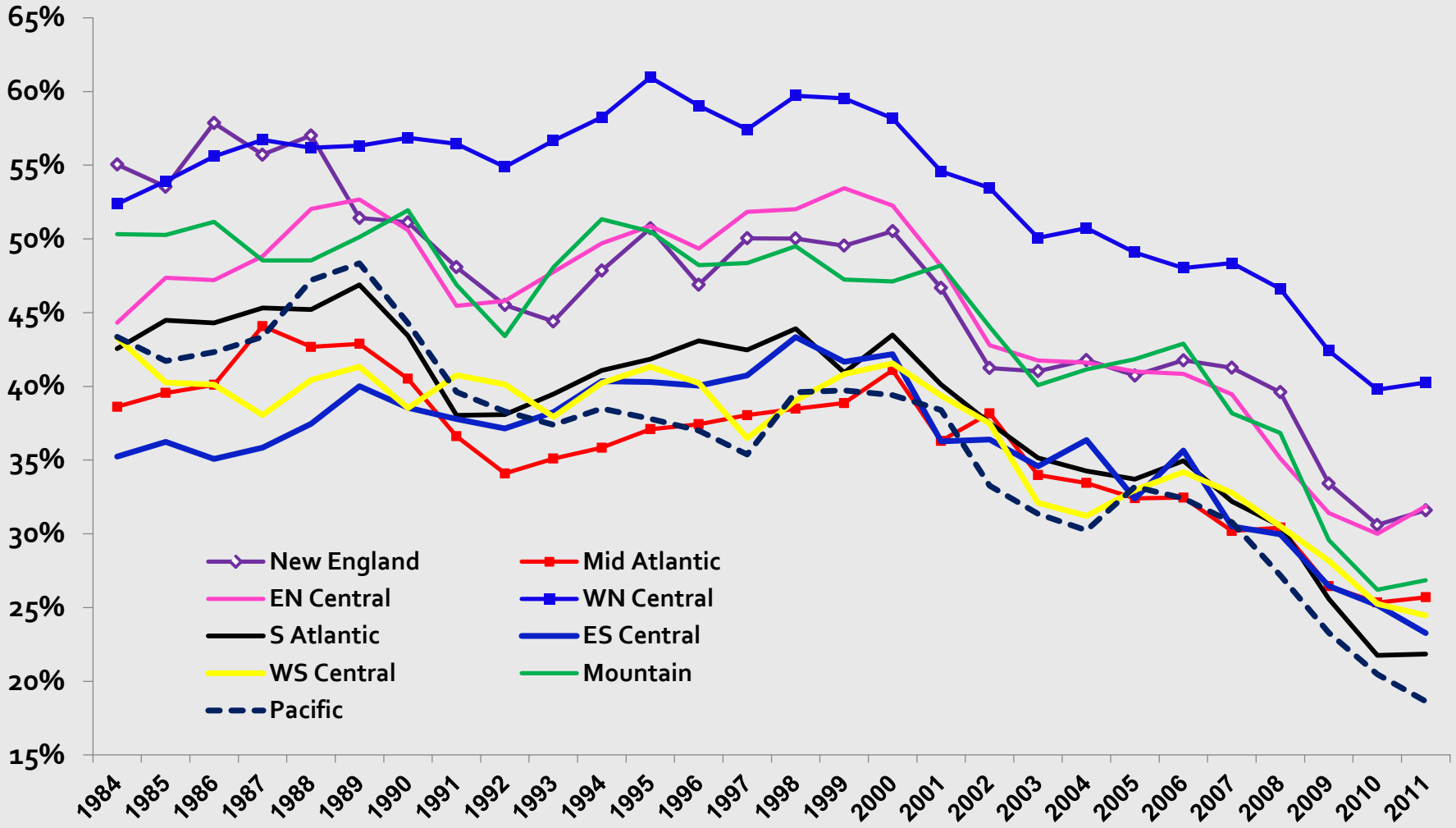
- 1/3 of MW workers are teens
- 43% of teenage workers are MW earners
- MW workers are disproportionally:
  - Young
  - Female
  - High school degree or less
  - Hispanic or African American

Teen EPOPs



Source: Bureau of Labor Statistics and National Bureau of Economic Research. Data are seasonally adjusted.

Teen EPOPs by Region



Panel data 1990-2010

- Current Population Survey (CPS)
  - Estimates monthly unemployment rate, etc.
  - Individual-level repeated cross-section
  - Widely used in research
- CPS is merged w/macro variables that capture variation in aggregate labor demand & supply
- Merge with MW variables

Canonical Fixed Effects Model

$$y_{ist} = \beta MW_{st} + X_{ist}\Gamma + \lambda \cdot unemp_{st} + \phi_s + \tau_t + \varepsilon_{ist}$$

- ***MW*** **refers to the log of the minimum wage**
- ***i*****,** ***s*****, and** ***t*** **denote: individual, state & time indexes**
- ***X*** **is a vector of individual characteristics**
- ***unemp*** **is the quarterly unemployment rate in state** ***s*** **at time** ***t***
- ϕ_s **refers to state fixed effects**
- τ_t **represents quarterly time dummies**
- **Standard errors clustered at the state level**

Building FE Specification

(1) $$y_{ist} = \beta MW_{st} + X_{ist}\Gamma + \lambda \cdot unemp_{st} + \phi_s + \tau_t + \varepsilon_{ist}$$

(2) $$y_{ist} = \beta MW_{st} + X_{ist}\Gamma + \lambda \cdot unemp_{st} + \phi_s + \tau_{dt} + \varepsilon_{ist}$$

(3) $$y_{ist} = \beta MW_{st} + X_{ist}\Gamma + \lambda \cdot unemp_{st} + \phi_s + \psi_s \cdot t + \tau_t + \varepsilon_{ist}$$

(4) $$y_{ist} = \beta MW_{st} + X_{ist}\Gamma + \lambda \cdot unemp_{st} + \phi_s + \psi_s \cdot t + \tau_{dt} + \varepsilon_{ist}$$

- **Importance of controlling for unexplained heterogeneity**

Wage Effects

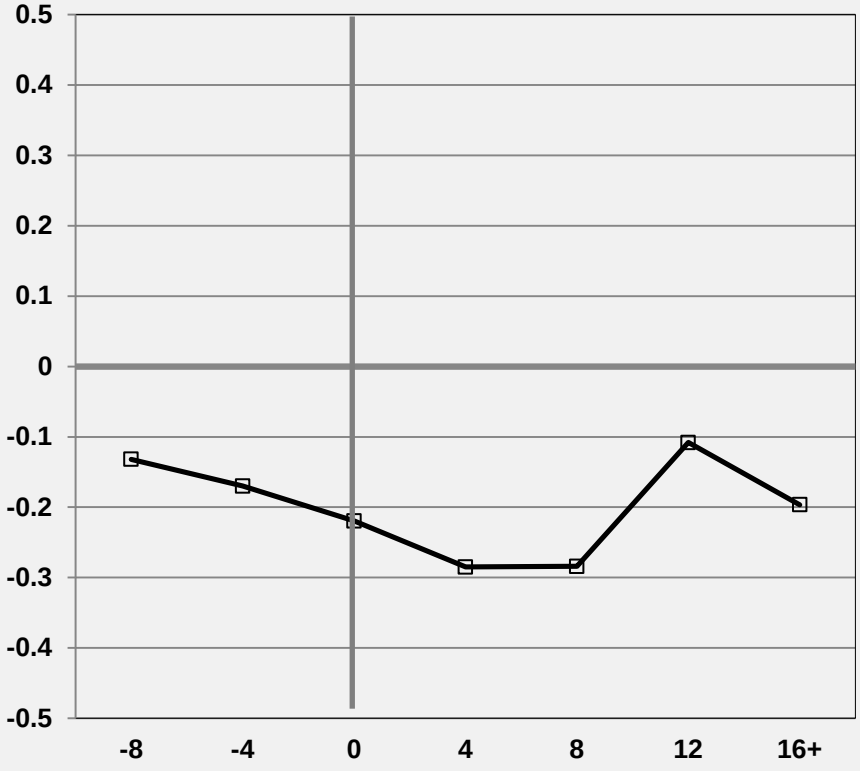
		(1FE)	(2)	(3)	(4ADR)
All Teens	**η**	**0.123*** **	**0.161*** **	**0.165*** **	**0.149*** **
	se	(0.026)	(0.030)	(0.025)	(0.024)
16-17	**η**	**0.197*** **	**0.224*** **	**0.221*** **	**0.220*** **
	se	(0.032)	(0.036)	(0.030)	(0.033)
18-19	**η**	**0.074** **	**0.115*** **	**0.120*** **	**0.093*** **
	se	(0.030)	(0.037)	(0.038)	(0.033)
Division-specific time controls **State-specific time trends**		- -	**Y** -	- **Y**	**Y** **Y**

Employment Effects

		(1FE)	(2)	(3)	(4ADR)
All Teens	**η**	**-0.118****	**-0.036**	**-0.034**	**0.047**
	se	(0.022)	(0.034)	(0.027)	(0.024)
16-17	**η**	**-0.232****	**-0.077**	**-0.071**	**0.101**
	se	(0.028)	(0.043)	(0.032)	(0.032)
18-19	**η**	**-0.053**	**-0.010**	**-0.020**	**0.018**
	se	(0.021)	(0.034)	(0.027)	(0.027)
Division-specific time controls **State-specific time trends**		- -	Y -	- Y	Y Y

MW Employment Time Paths

(1)



(4)

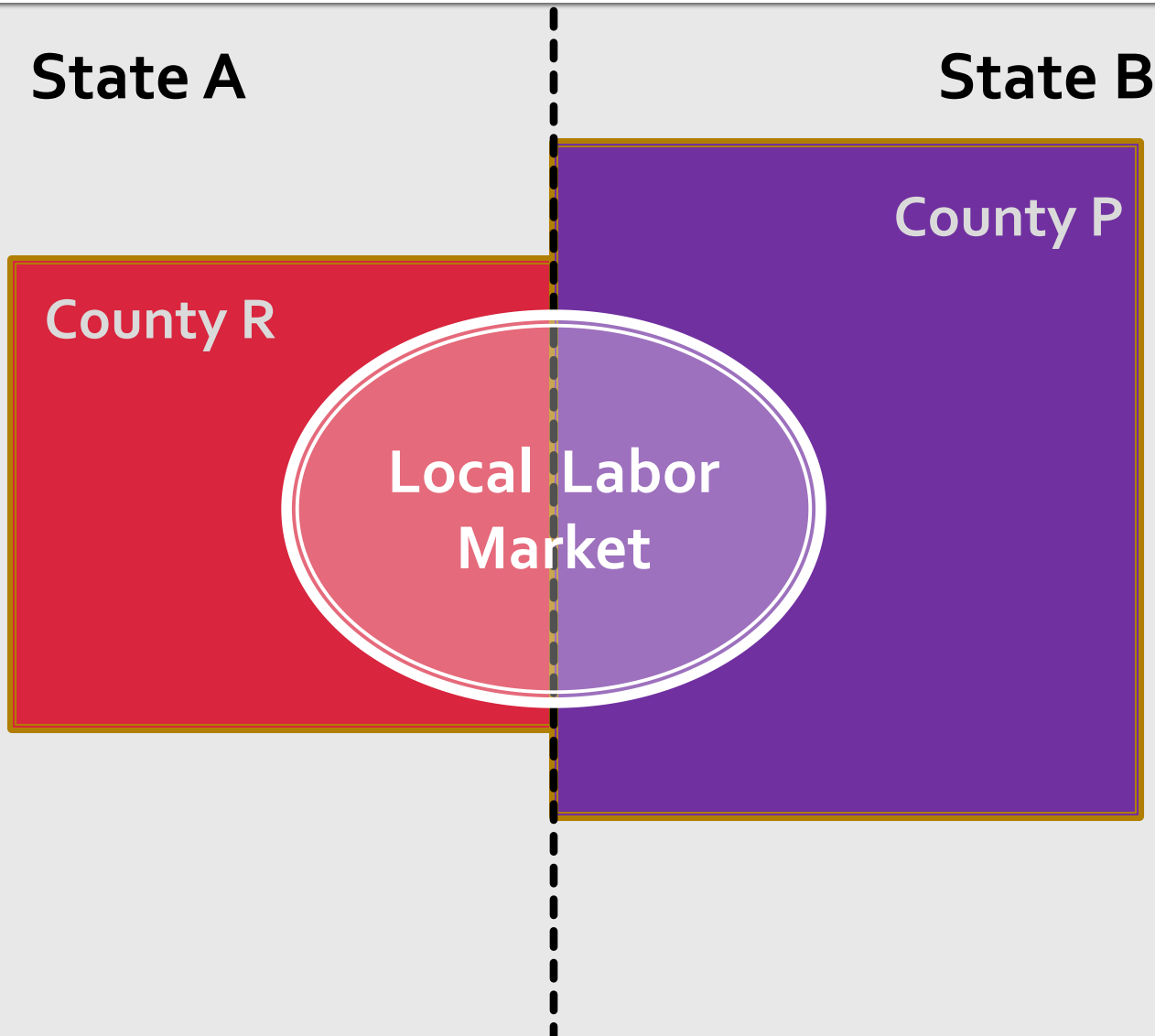
Hours Effects

		(1FE)	(2)	(3)	(4ADR)
All Teens	**η**	**-0.074****	**-0.054**	**-0.001**	**-0.032**
	se	(0.035)	(0.048)	(0.040)	(0.042)
16-17	**η**	**-0.070**	**0.002**	**-0.011**	**0.038**
	se	(0.042)	(0.074)	(0.044)	(0.073)
18-19	**η**	**-0.090****	**-0.092***	**-0.011**	**-0.079***
	se	(0.042)	(0.049)	(0.050)	(0.042)
Division-specific time controls **State-specific time trends**		- -	Y -	- Y	Y Y

ADR main results for teens

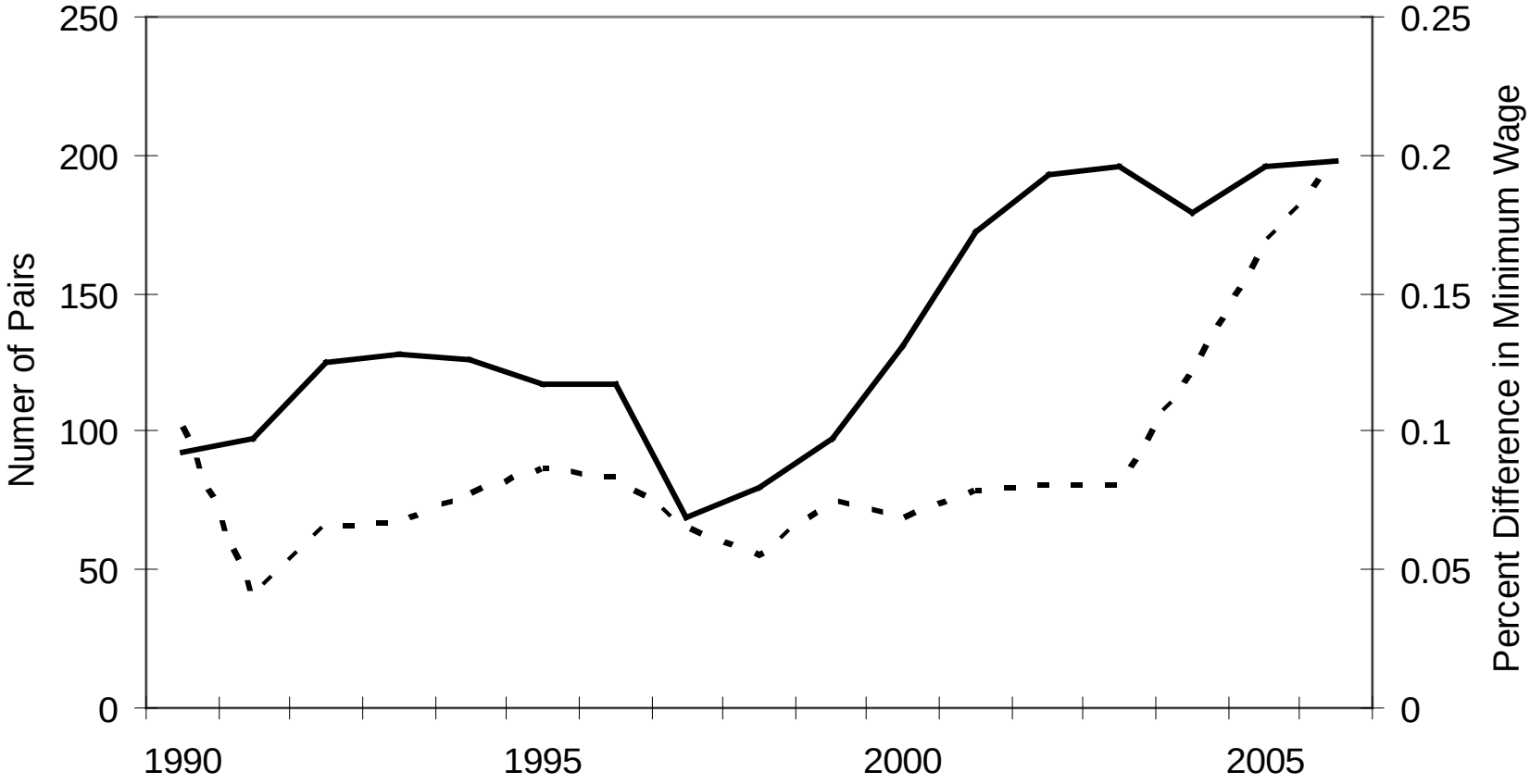
Specification		(1 FE)	(4 ADR)
A. Wages	η	0.123***	0.149***
	se	(0.026)	(0.024)
B. Employment	coeff	-0.047**	0.019
	se	(0.022)	(0.024)
	η	-0.118**	0.047
C. Hours	η	-0.074**	-0.032
	se	(0.035)	(0.042)
Division-specific time controls			Y
State-specific time trends			Y

Local case study



DLR generalizes local case study design

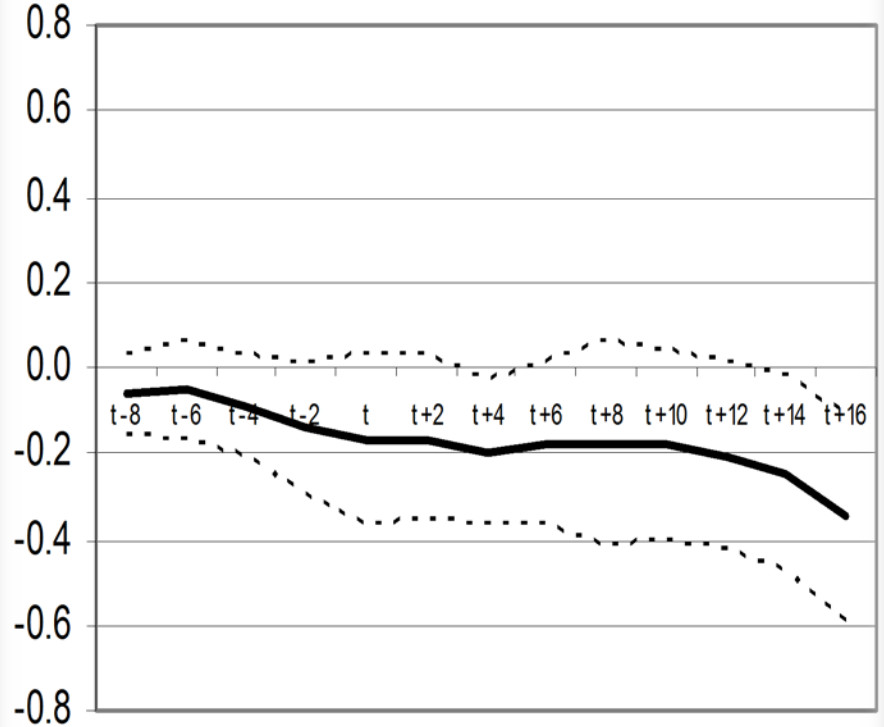
DLR County pairs

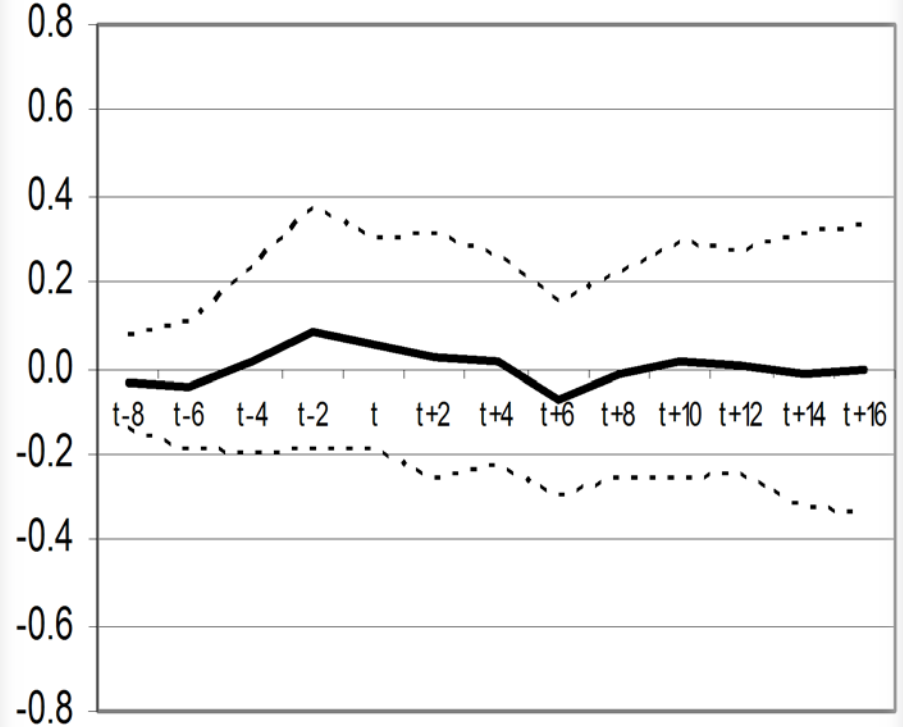


DLR main results for restaurants

Specification		(1 FE)	(6 DLR)
A. Earnings	η	0.224***	0.188***
	se	(0.033)	(0.060)
B. Employment	η	-0.211**	0.016
	se	(0.095)	(0.098)
C. Labor demand elasticity		-0.787*	0.079
		(0.427)	(0.286)
County pair X period dummies			Y
State-specific time trends			Y

DLR Employment (1) and (6)

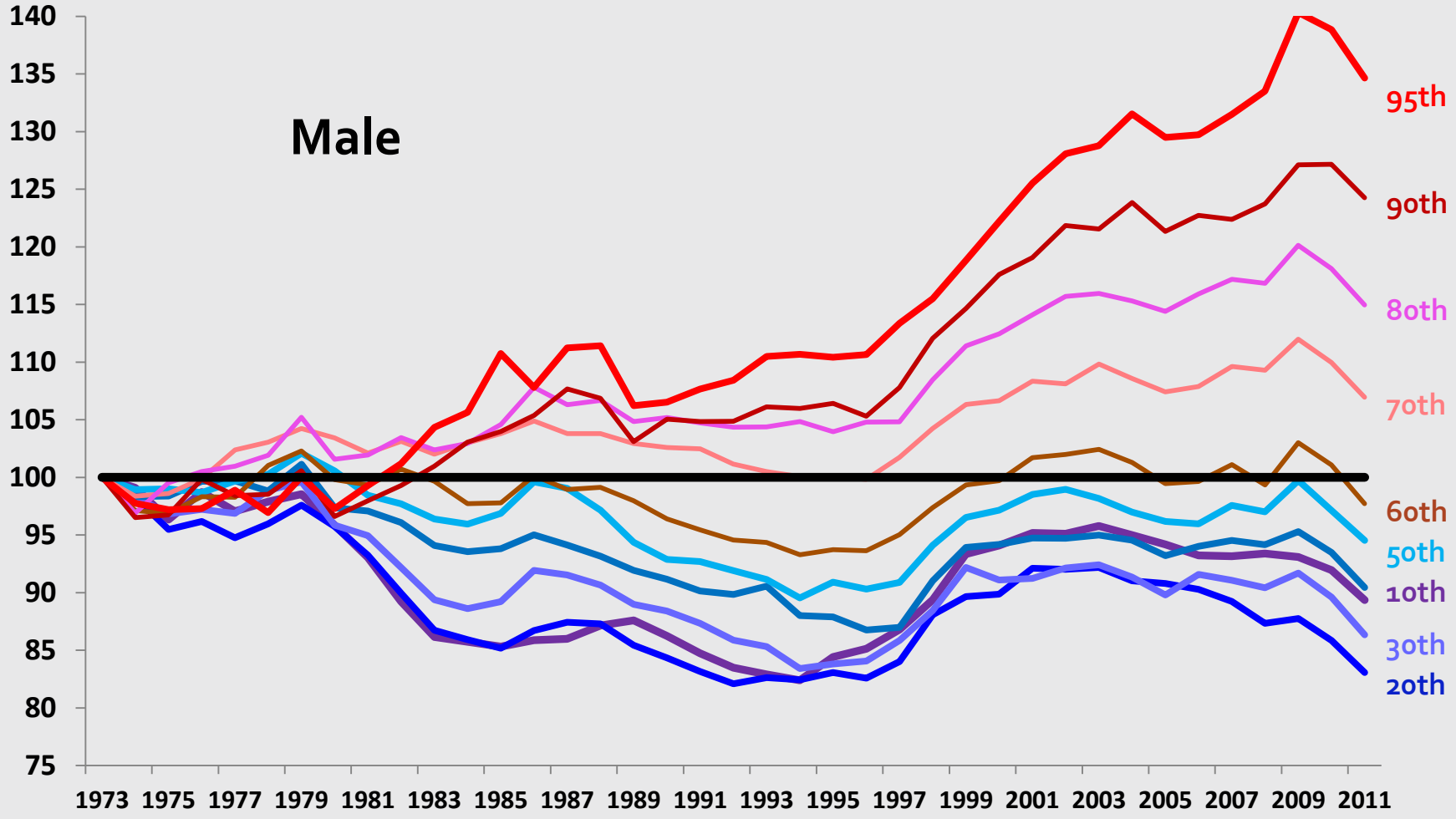




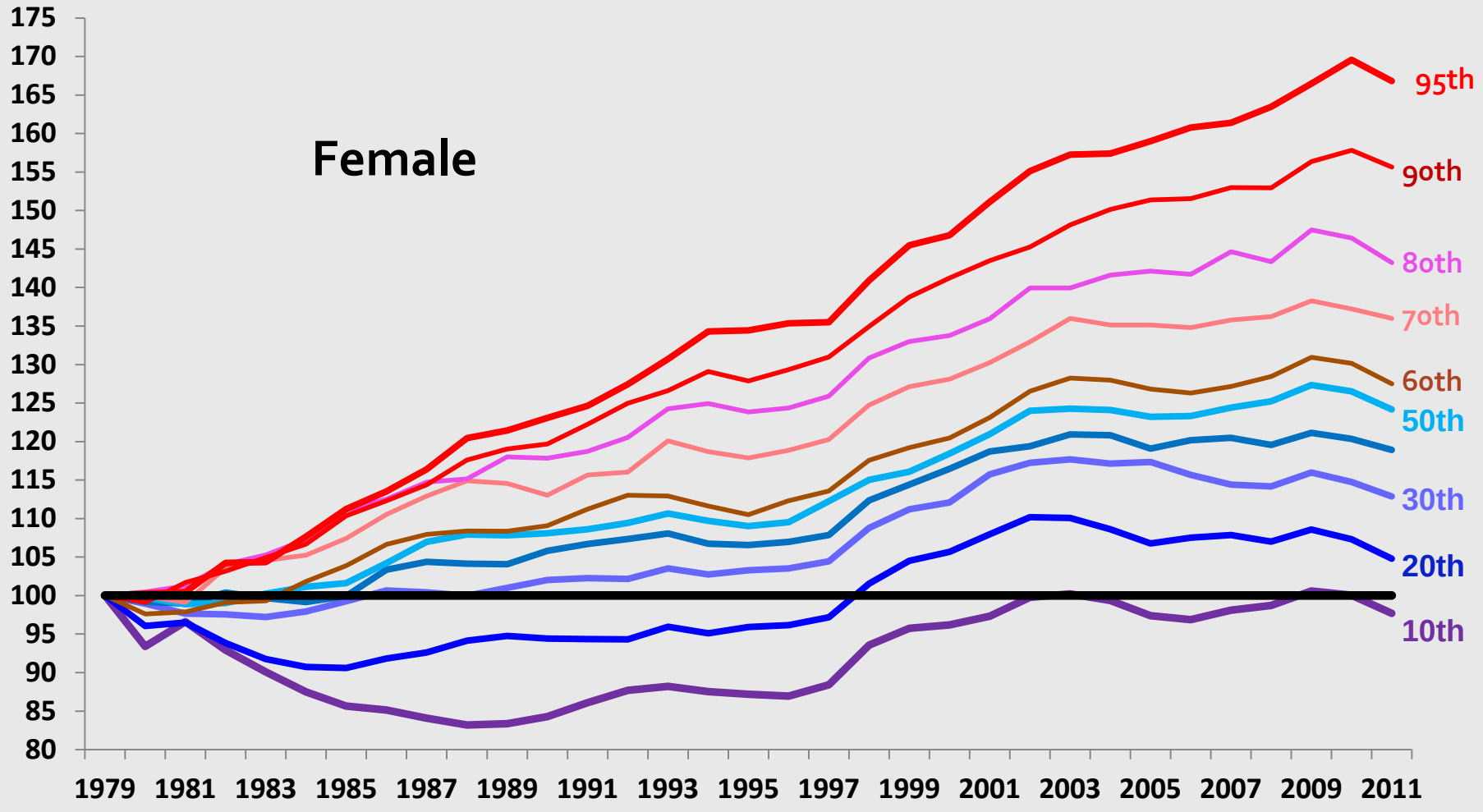
Discussion of results

- Monopsony at work?
- Other positive effects of MWs
  - Does not kills jobs, but job vacancies
  - Decreases turnover
  - Decreases recruiting & training costs
  - Increases productivity
  - Elevates pressure on government support
  - MW as stimulus

Widening Wedge of Wage Inequality



Widening Wedge of Wage Inequality



Summary

- ADR and DLR are strong evidence against conventional wisdom of negative employment effects.
- Failure to account for critical differences in employment patterns coupled with MW changes results in biased estimates—localized estimates are better.
- Spurious estimates are common and sizeable - both for low wage sectors such are restaurants and for low-wage groups such as teens. This explains why the 3G studies were wrong.
- Our estimates are robust using multitude of data sources: QCEW, CBP, QWI, Census/ACS, CPS

THANK YOU!

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