

Dynamics of Workplace and Firm-level Wages

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Research results and conclusions expressed are those of the authors and do not necessarily reflect the views of the Census Bureau. This presentation has been screened to insure that no confidential data are revealed.

Background

- Large literature on U.S. wage dispersion and income inequality
 - Largely based on individuals' wages
- Exploration of wages as reported by firms
 - Davis & Haltiwanger (1991, 1995)
 - Dunne, Foster, Haltiwanger & Troske (2000)
 - Lazear & Shaw (2006)
 - Skans, Edin & Holmlund (2006)
 - Comin, Groshen & Rabin (2006)
 - Margolis (2006)

Data

- Longitudinal Business Database (LBD)
 - Jarmin and Miranda (2002)
 - Business Register Data 1977-2002
- Economic Census
 - LBD for omitted scope
 - Finance, Mining, Utilities

Plant and Firm Level Wages

All Plants	1977	1982	1987	1992	1997	2002
Mean Wage	18,101	16,066	16,891	17,061	18,290	19,733
s.d.	17,431	17,239	21,569	21,577	27,159	29,243
90/10	4.75	5.42	6.52	6.59	7.06	7.31
All Firms						
Mean Wage	18,409	16,420	17,620	17,987	18,905	20,505
s.d.	8,536	8,449	10,451	12,205	12,726	15,274
90/10	3.57	3.98	4.71	4.47	4.87	5.20

Plant Wage/Employee



Plant Wage for Single Unit Firms



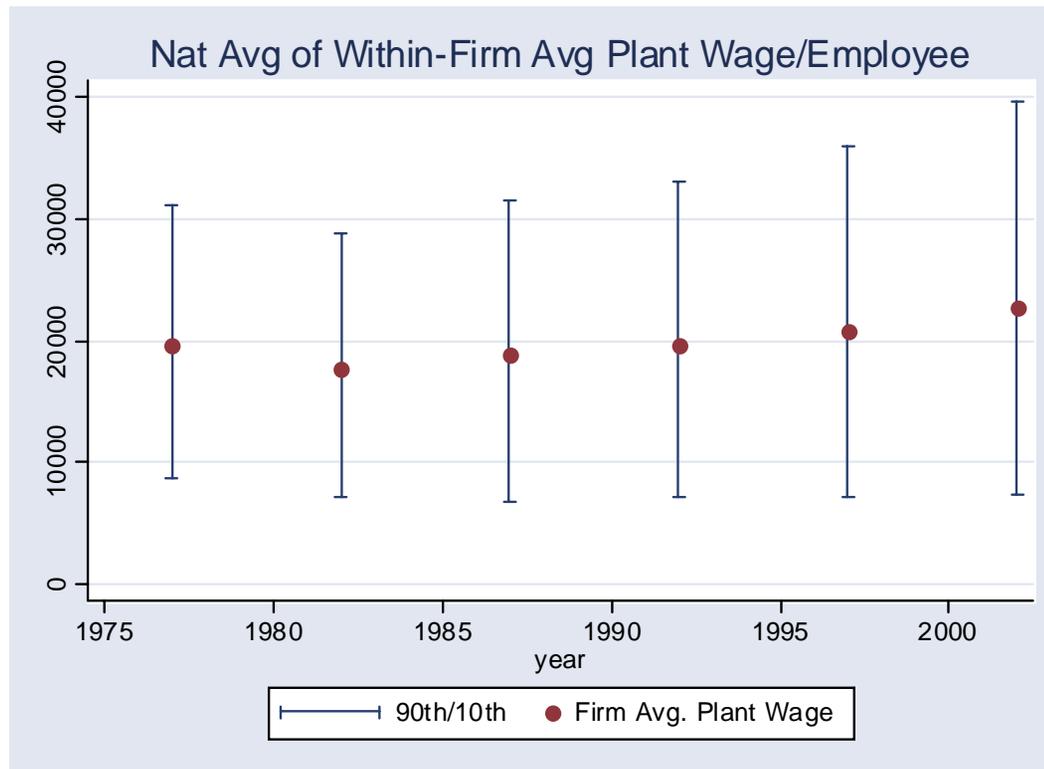
Firm Wage/Employee



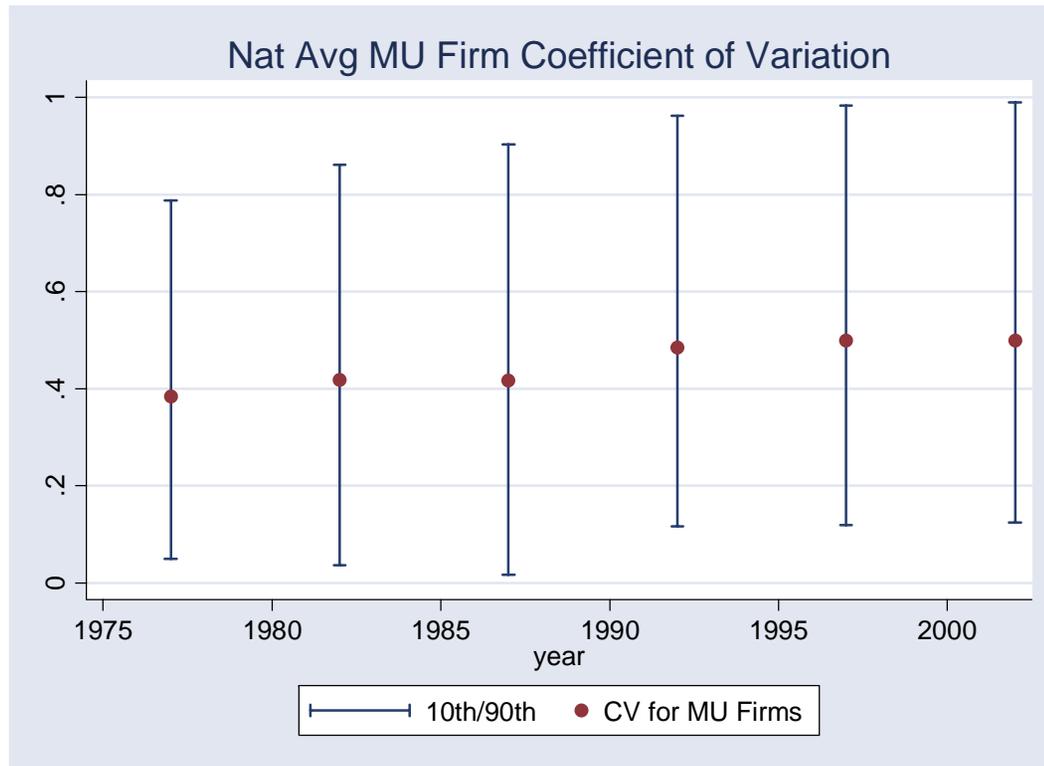
Dispersion of Plants within Firms

	1977	1982	1987	1992	1997	2002
Mean Wage	19,697	17,673	18,931	19,674	20,906	22,690
s.d.	10,972	10,604	12,790	15,224	15,797	19,192
COV	.384	.417	.416	.485	.499	.499
90/10	3.59	4.04	4.67	4.62	5.06	5.33

Within-Firm Average Plant Wage



Coefficient of Variation



Firm Characteristics

Year	Employment	Establishments	Plant Size	Payroll (M)
1977	2359	36	149	30
1982	2365	39	144	44
1987	2215	38	143	50
1992	2123	40	135	58
1997	2205	40	132	70
2002	2322	45	127	90
s.d.	12,030	229	258	235

Firm Characteristics

Employment Shares	77-82	82-87	87-92	92-97	97-02	s.d.
Acquisitions	.096	.142	.146	.126	.100	.15
Divestitures	.028	.047	.032	.037	.026	.74
New Plants	.262	.271	.265	.225	.265	.22
Closures	.128	.149	.141	.110	.139	.52
Expansions	.288	.272	.240	.292	.258	.32
Contractions	.096	.083	.095	.085	.105	.19
Spinoffs	.013	.020	.017	.016	.014	.02

Wage and Coefficient of Variation Regressions

	ln (Firm Average Plant Wage)		ln (Coefficient of Variation)	
	OLS	Fixed Effects	OLS	Fixed Effects
ln(plants)	.0464*** (.0018)	-.0814*** (.0047)	.239*** (.003)	.219*** (.012)
ln(average plant size)	.106*** (.002)	-.0905*** (.0063)	.0331*** (.0041)	-.112*** (.0157)
Retail	-.487*** (.005)	-.0375*** (.0105)	-.0148 (.0101)	-.0228 (.0306)
FIRE	-.00746 (.00696)	.0447* (.0267)	.0203* (.0123)	.0270 (.0556)
Services	-.326*** (.005)	-.0251* (.0146)	-.0352*** (.0103)	.0164 (.0372)
R ²	.183	.0873	.122	.0713
Obs	81770	81770	81581	81581
Firms	36638	36638	36512	36512

*** 1% ** 5% * 10% significance, Huber-White robust standard errors

Wage and Coefficient of Variation Regressions

	ln (Firm Average Plant Wage)		ln (Coefficient of Variation)	
	OLS	Fixed Effects	OLS	Fixed Effects
1987	.0474*** (.0066)	.0758*** (.0042)	-.0548*** (.0153)	-.0691*** (.0162)
1992	.0802*** (.0064)	.0987*** (.0045)	.289*** (.0130)	.233*** (.015)
1997	.117*** (.006)	.159*** (.005)	.347*** (.013)	.314*** (.016)
2002	.195*** (.006)	.249*** (.006)	.343*** (.012)	.344*** (.018)
Midwest	-.120*** (.006)	-.048*** (.012)	.0697*** (.0109)	.0171 (.0341)
South	-.087*** (.005)	-.0459*** (.0105)	.0358*** (.0105)	.00795 (.03046)
West	.016** (.006)	-.0250* (.0139)	.0547*** (.0121)	.00796 (.03876)

*** 1% ** 5% * 10% significance, Huber-White robust standard errors

Wage and Coefficient of Variation Regressions

	ln (Firm Average Plant Wage)		ln (Coefficient of Variation)	
	OLS	Fixed Effects	OLS	Fixed Effects
Employment share of				
acquired plants	.223*** (.013)	.0390*** (.0119)	.357*** (.023)	.167*** (.035)
divested plants	-.00276 (.00568)	-.00869*** (.00233)	.00662 (.00701)	.00604 (.00877)
new plants	-.133*** (.011)	.0180* (.0094)	.351*** (.019)	.260*** (.030)
closed plants	.0437*** (.0107)	-.000404 (.003860)	.0607*** (.0108)	.0165* (.0091)
expanding plants	.0161** (.0077)	-.0220*** (.0059)	-.0336** (.0158)	.0498** (.0209)
contracting plants	.00744 (.01159)	.0255*** (.0090)	.0260 (.0242)	-.0248 (.0301)
spin-offs	-.0792 (.1197)	-.129 (.205)	-.213 (.241)	-.0461 (.3447)

*** 1% ** 5% * 10% significance, Huber-White robust standard errors