Online Appendix to "Internal Labor Markets, Wage Convergence, and Investment"

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Appendix A

This appendix presents results with different measures of diversification. In particular, it reports results using the *Divdummy* indicator and *log(number of divisions)* as measures of corporate diversification.

Table A.I: Multivariate Analysis of Wages - Divdummy control

This table shows the relation between own wages and the wages of other workers in a firm. The main difference between the estimates in this table and those in the main text is that here only *Divdummy* is included as a diversification control. The table contains the coefficients from estimating the following OLS regression:

$$Log(Wage/hour)_{idft} = \alpha + \beta \cdot Log(Firm\ \ Wage)_{dft} + X'_{idft}\gamma + \epsilon_{idft}$$

where the matrix of controls X includes $log(VA/hour)$, *Age*, *Firm Size*, *Division Size*, *Plant Size*, *State* $\times$ *Year* $\times$ *Industry* fixed effects (where Industry is defined at the 3 digit SIC level), and *Divdummy* . In Column 2, the regressions include only diversified firms and, as such, the control variable *Divdummy* is absorbed. The standard errors in parentheses are clustered by firm. Statistical significance at 1%, 5%, and 10% is marked with ***, **, and *, respectively.

	Log(Wage/hour)	
	(1)	(2)
Log(Firm Wage)	0.066***	0.147***
	(0.003)	(0.004)
log(VA/hour)	0.243***	0.172***
	(0.002)	(0.002)
Divdummy	-0.149***	
	(0.009)	
Age	0.007***	0.007***
	(0.000)	(0.000)
Firm Size	0.009***	0.009***
	(0.001)	(0.001)
Division Size	-0.000	-0.000
	(0.004)	(0.004)
Plant Size	0.507***	0.481***
	(0.053)	(0.052)
Rounded N	2,000,000	900,000
R-squared	0.709	0.738
State $\times$ Year $\times$ Industry FE	Yes	Yes

Table A.II: Impact of Internal Labor Markets on Investment Decisions - Divdummy control

This table estimates the impact of wage convergence on the investment behavior of firms. The main difference between the estimates in this table and those in the main text is that, here, only *Divdummy* is included as a diversification control. The table contains the coefficient from estimating OLS regressions of the type:

$$CAPX/Sales_{idft} = \alpha + \beta \cdot Log(Firm\ Wage)_{dft} + X'_{idft}\gamma + \epsilon_{idft}$$

where the matrix of controls X includes *Age*, *Firm Size*, *Division Size*, *Plant Size*, *State* $\times$ *Year* $\times$ *Industry* fixed effects (where Industry is defined at the three-digit SIC level), and *Divdummy*. In Columns 1 and 2, the estimates are on the full sample, while in Columns 3 and 4, the estimation is performed on low-investment divisions (those with investment below the median), and Columns 5 and 6 contain only high-investment divisions (those with investment above the median). Finally, in Columns 1, 3, and 5, the variable *Log(Firm wage)* is excluded from the estimation. The standard errors in parentheses are clustered by firm. Statistical significance at 1%, 5%, and 10% is marked with ***, **, and *, respectively.

	CAPX/Sales					
	(1)	(2)	(3)	(4)	(5)	(6)
Log(Firm Wage)		0.306***		0.251***		0.376***
		(0.029)		(0.033)		(0.043)
Divdummy	0.031	-0.933***	0.122***	-0.661***	-0.072**	-1.269***
	(0.021)	(0.092)	(0.023)	(0.102)	(0.032)	(0.136)
Age	-0.056***	-0.057***	-0.054***	-0.055***	-0.059***	-0.060***
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)
Firm Size	0.010*	0.009*	0.003	0.003	0.013**	0.012**
	(0.005)	(0.005)	(0.007)	(0.006)	(0.006)	(0.006)
Division Size	-0.018	-0.024**	-0.002	-0.006	0.038	0.017
	(0.014)	(0.012)	(0.015)	(0.015)	(0.042)	(0.037)
Plant Size	3.252***	3.168***	2.353***	2.267***	3.830***	3.774***
	(0.530)	(0.525)	(0.540)	(0.532)	(0.593)	(0.589)
Rounded N	2,000,000	2,000,000	1,000,000	1,000,000	1,000,000	1,000,000
R-squared	0.119	0.119	0.117	0.117	0.095	0.096
State $\times$ Year $\times$ Industry FE	Yes	Yes	Yes	Yes	Yes	Yes

Table A.III: Multivariate Analysis of Wages - log(number of divisions) control

This table shows the relation between own wages and the wages of other workers in a firm. The main difference between the estimates in this table and those in the main text is that, here, instead of 1-HHI Employees, the variable *log(number of divisions)* is used as a control for corporate diversification. The table contains the coefficients from estimating the following OLS regression:

$$Log(Wage/hour)_{idft} = \alpha + \beta \cdot Log(Firm\ Wage)_{dft} + X'_{idft}\gamma + \epsilon_{idft}$$

where the matrix of controls X includes $log(VA/hour)$, *Age*, *Firm Size*, *Division Size*, *Plant Size*, *State* $\times$ *Year* $\times$ *Industry* fixed effects (where Industry is defined at the three-digit SIC level), *Divdummy*, and *log(number of divisions)*. In Column 2, the regressions includes only diversified firms and, as such, the control variable *Divdummy* is absorbed. The standard errors in parentheses are clustered by firm. Statistical significance at 1%, 5%, and 10% is marked with ***, **, and *, respectively.

	Log(Wage/hour)	
	(1)	(2)
Log(Firm Wage)	0.062***	0.141***
	(0.003)	(0.004)
log(VA/hour)	0.242***	0.169***
	(0.002)	(0.002)
Divdummy	-0.194***	
	(0.009)	
log(number of divisions)	0.031***	0.032***
	(0.002)	(0.002)
Age	0.007***	0.007***
	(0.000)	(0.000)
Firm Size	0.005***	0.005***
	(0.001)	(0.001)
Division Size	0.003	0.003
	(0.004)	(0.004)
Plant Size	0.505***	0.484***
	(0.052)	(0.051)
Rounded N	2,000,000	900,000
R-squared	0.710	0.740
State $\times$ Year $\times$ Industry FE	Yes	Yes

Table A.IV: Impact of Internal Labor Markets on Investment Decisions - log(number of divisions) control

This table estimates the impact of wage convergence on the investment behavior of firms. The main difference between the estimates in this table and those in the main text is that, here, instead of 1-HHI Employees, the variable *log(number of divisions)* is used as a control for corporate diversification. The table contains the coefficient from estimating OLS regressions of the type:

$$CAPX/Sales_{idft} = \alpha + \beta \cdot Log(Firm\ Wage)_{dft} + X'_{idft}\gamma + \epsilon_{idft}$$

where the matrix of controls X includes *Age*, *Firm Size*, *Division Size*, *Plant Size*, *State* $\times$ *Year* $\times$ *Industry* fixed effects (where Industry is defined at the three-digit SIC level), *Divdummy*, and *log(number of divisions)* as measures of corporate diversification (where firm divisions are defined at the three-digit SIC level). In Columns 1 and 2, the estimates are on the full sample, while in Columns 3 and 4, the estimation is performed on low-investment divisions (those with investment below the median), and Columns 5 and 6 contain only high-investment divisions (those with investment above the median). Finally, in Columns 1, 3, and 5, the variables *log(Firm wage)* and *Divdummy* are excluded from the estimation. The standard errors in parentheses are clustered by firm. Statistical significance at 1%, 5%, and 10% is marked with ***, **, and *, respectively.

Table A.V: Impact of wage convergence on Investment - log(number of divisions) control

	CAPX/Sales					
	(1)	(2)	(3)	(4)	(5)	(6)
Log(Firm Wage)		0.312***		0.253***		0.387***
		(0.029)		(0.033)		(0.043)
Divdummy		-0.883***		-0.646***		-1.177***
		(0.096)		(0.106)		(0.143)
log(number of divisions)	0.000	-0.038**	0.041***	-0.011	-0.046***	-0.070**
	(0.012)	(0.019)	(0.013)	(0.021)	(0.017)	(0.028)
Age	-0.056***	-0.057***	-0.054***	-0.055***	-0.059***	-0.060***
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)
Firm Size	0.011**	0.014**	-0.001	0.005	0.018***	0.019***
	(0.005)	(0.006)	(0.007)	(0.007)	(0.006)	(0.007)
Division Size	-0.018	-0.029**	0.003	-0.008	0.040	0.018
	(0.014)	(0.012)	(0.015)	(0.016)	(0.043)	(0.037)
Plant Size	3.282***	3.172***	2.398***	2.270***	3.833***	3.764***
	(0.532)	(0.525)	(0.545)	(0.534)	(0.592)	(0.587)
Rounded N	2,000,000	2,000,000	1,000,000	1,000,000	1,000,000	1,000,000
R-squared	0.119	0.119	0.117	0.117	0.095	0.096
State $\times$ Year $\times$ Industry FE	Yes	Yes	Yes	Yes	Yes	Yes

Appendix B

This appendix presents results of the impact of wages on investment by instrumenting plant-level wages with the wages of workers in other divisions of the firm, labor unionization, and the interaction between unionization and the wages of workers in other divisions of the firm.

Table B.I: Unionization Instrumented Investment Regressions

This table estimates the impact of wage convergence on the investment behavior of firms. The table contains the coefficient from estimating IV regressions of the type:

$$CAPX/Sales_{idft} = \alpha + \beta \cdot \widehat{Log(Wage/hour)}_{idft} + X'_{idft}\gamma + \epsilon_{idft}$$

where the matrix of controls X includes *Age*, *Firm Size*, *Division Size*, *Plant Size*, *State* $\times$ *Year* $\times$ *Industry* fixed effects (where Industry is defined at the three-digit SIC level), *Divdummy*, and one minus Herfindahl Index of Employees at the different divisions of the firm as measures of corporate diversification (where firm divisions are defined at the three-digit SIC level). *Log(Wage/hour)* is instrumented by *Log(Firm Wage)*, unionization, and the interaction of unionization and *Log(Firm Wage)*. In Column 1, the estimates are performed on the full sample, while in Column 2, the estimation is performed on low-investment divisions (those with investment below the median), and Column 3 contains only high-investment divisions (those with investment above the median). The standard errors in parentheses are clustered by firm. Statistical significance at 1%, 5%, and 10% is marked with ***, **, and *, respectively.

	CAPX/Sales	CAPX/Sales	CAPX/Sales
Log(Wage/hour)	1.853***	1.591***	2.188***
	(0.219)	(0.242)	(0.310)
Divdummy	-0.149***	0.055	-0.137*
	(0.049)	(0.047)	(0.074)
1-HHI Employees	-0.220**	0.005	-0.536***
	(0.093)	(0.094)	(0.132)
Age	-0.068***	-0.064***	-0.072***
	(0.002)	(0.003)	(0.003)
Firm Size	-0.005	-0.013	-0.004
	(0.009)	(0.008)	(0.013)
Division Size	-0.077***	-0.044**	-0.070
	(0.019)	(0.021)	(0.075)
Plant Size	3.360***	1.948***	4.177***
	(0.635)	(0.532)	(0.781)
Rounded N	1,500,000	700,000	700,000
R-squared	0.012	0.006	0.008
State $\times$ Year $\times$ Industry FE	Yes	Yes	Yes

Appendix C

This appendix presents results with industry defined at the two-digit SIC level.

Table C.I: Multivariate Analysis of Wages two-digit SIC industries

This table shows the relation between own wages and the wages of other workers in the firm. The main difference between the estimates in this table and those in the main text is that, here, the industry definition is two-digit SIC codes. The table contains the coefficients from estimating the following OLS regression:

$$Log(Wage/hour)_{idft} = \alpha + \beta \cdot Log(Firm\ \ Wage)_{dft} + X'_{idft}\gamma + \epsilon_{idft}$$

where the matrix of controls X includes $log(VA/hour)$, *Age*, *Firm Size*, *Division Size*, *Plant Size*, *State* $\times$ *Year* $\times$ *Industry* fixed effects (where Industry is defined at the two-digit SIC level), *Divdummy SIC2*, and one minus the Herfindahl Index of Employees at the different divisions of the firm as measures of corporate diversification (where firm divisions are defined at the two-digit SIC level). In Column 2, the regressions includes only firms that are diversified at the three-digit SIC level. The standard errors in parentheses are clustered by firm. Statistical significance at 1%, 5%, and 10% is marked with ***, **, and *, respectively.

	Log(Wage/hour)	
	(1)	(2)
Log(Firm Wage)	0.020***	0.148***
	(0.001)	(0.004)
log(VA/hour)	0.243***	0.171***
	(0.002)	(0.002)
Divdummy SIC2	-0.022***	0.029***
	(0.005)	(0.005)
1-HHI Employees SIC2	0.053***	0.057***
	(0.008)	(0.007)
Age	0.007***	0.007***
	(0.000)	(0.000)
Firm Size	0.008***	0.008***
	(0.001)	(0.001)
Division Size	0.002	0.001
	(0.005)	(0.004)
Plant Size	0.516***	0.485***
	(0.052)	(0.051)
Rounded N	2,000,000	900,000
R-squared	0.709	0.739
State $\times$ Year $\times$ Industry FE	Yes	Yes

Table C.II: Impact of Internal Labor Markets on Investment Decisions two-digit SIC industries

This table estimates the impact of wage convergence on the investment behavior of firms. The main difference between the estimates in this table and those in the main text is that, here, the industry definition is two-digit SIC codes. The table contains the coefficient from estimating OLS regressions of the type:

$$CAPX/Sales_{idft} = \alpha + \beta \cdot Log(Firm\ Wage)_{dft} + X'_{idft}\gamma + \epsilon_{idft}$$

where the matrix of controls X includes *Age*, *Firm Size*, *Division Size*, *Plant Size*, *State* $\times$ *Year* $\times$ *Industry* fixed effects (where Industry is defined at the two-digit SIC level), *Divdummy* and one minus Herfindahl Index of Employees at the different divisions of the firm as measures of corporate diversification (where firm divisions are defined at the two-digit SIC level). In Columns 1 and 2, the estimates are on the full sample, while in Columns 3 and 4, the estimation is performed on low-investment divisions (those with investment below the median), and Columns 5 and 6 contain only high-investment divisions (those with investment above the median). Finally, in Columns 1, 3, and 5, the variables *Log(Firm wage)* and *Divdummy* are excluded from the estimation. The standard errors in parentheses are clustered by firm. Statistical significance at 1%, 5%, and 10% is marked with ***, **, and *, respectively.

	CAPX/Sales					
	(1)	(2)	(3)	(4)	(5)	(6)
Log(Firm Wage)		0.064***		0.062***		0.065***
		(0.013)		(0.015)		(0.020)
Divdummy SIC2		-0.069		-0.038		-0.113
		(0.056)		(0.062)		(0.084)
1-HHI Employees SIC2	-0.010	-0.173**	0.182***	-0.015	-0.221***	-0.330***
	(0.046)	(0.083)	(0.048)	(0.086)	(0.065)	(0.118)
Age	-0.056***	-0.057***	-0.053***	-0.054***	-0.059***	-0.059***
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)
Firm Size	0.011**	0.012**	0.001	0.003	0.017***	0.017***
	(0.005)	(0.005)	(0.006)	(0.007)	(0.006)	(0.006)
Division Size	-0.019	-0.023*	0.002	-0.002	0.034	0.025
	(0.014)	(0.012)	(0.014)	(0.015)	(0.041)	(0.038)
Plant Size	3.287***	3.196***	2.413***	2.297***	3.834***	3.779***
	(0.532)	(0.528)	(0.542)	(0.534)	(0.594)	(0.591)
Rounded N	2,000,000	2,000,000	1,000,000	1,000,000	1,000,000	1,000,000
R-squared	0.119	0.119	0.117	0.117	0.095	0.095
State $\times$ Year $\times$ Industry FE	Yes	Yes	Yes	Yes	Yes	Yes

Appendix D

This appendix presents results with separate fixed effects for State, Year, and three-digit SIC Industry.

Table D.I: Multivariate Analysis of Wages - Separate Year, Industry, and State Fixed Effects

This table shows the relation between own wages and the wages of other workers in the firm. The main difference between the estimates in this table and those in the main text is that, here, instead of including State × Year × Industry fixed effects the regressions include separate fixed effects for State, Year, and Industry. The table contains the coefficients from estimating the following OLS regression:

$$Log(Wage/hour)_{idft} = \alpha + \beta \cdot Log(Firm\ \ Wage)_{dft} + X'_{idft}\gamma + \epsilon_{idft}$$

where the matrix of controls X includes $log(VA/hour)$, *Age*, *Firm Size*, *Division Size*, *Plant Size*, State fixed effects, Year fixed effects, Industry fixed effects (where Industry is defined at the three-digit SIC level), *Divdummy*, and one minus the Herfindahl Index of Employees at the different divisions of the firm as measures of corporate diversification (where firm divisions are defined at the three-digit SIC level). In Column 2, the regressions include only diversified firms and, as such, the control variable *Divdummy* is absorbed. The standard errors in parentheses are clustered by firm. Statistical significance at 1%, 5%, and 10% is marked with ***, **, and *, respectively.

	Log(Wage/hour)	
	(1)	(2)
Log(Firm Wage)	0.071***	0.156***
	(0.003)	(0.004)
log(VA/hour)	0.240***	0.172***
	(0.002)	(0.002)
Divdummy	-0.216***	
	(0.010)	
1-HHI Employees	0.099***	0.105***
	(0.008)	(0.007)
Age	0.007***	0.007***
	(0.000)	(0.000)
Firm Size	0.008***	0.007***
	(0.001)	(0.001)
Division Size	0.002	0.002
	(0.005)	(0.004)
Plant Size	0.524***	0.497***
	(0.054)	(0.052)
Rounded N	2,000,000	900,000
R-squared	0.670	0.680
State, Year and Industry FE	Yes	Yes

Table D.II: Impact of Internal Labor Markets on Investment Decisions - Separate Year, Industry, and State Fixed Effects

This table estimates the impact of wage convergence on the investment behavior of firms. The main difference between the estimates in this table and those in the main text is that, here, instead of including State × Year × Industry fixed effects the regressions include separate fixed effects for State, Year, and Industry. The table contains the coefficient from estimating OLS regressions of the type:

$$CAPX/Sales_{idft} = \alpha + \beta \cdot Log(Firm\ Wage)_{dft} + X'_{idft}\gamma + \epsilon_{idft}$$

where the matrix of controls X includes *Age*, *Firm Size*, *Division Size*, *Plant Size*, State fixed effects, Year fixed effects, Industry fixed effects (where Industry is defined at the three-digit SIC level), *Divdummy*, and one minus Herfindahl Index of Employees at the different divisions of the firm as measures of corporate diversification (where firm divisions are defined at the three-digit SIC level). In Columns 1 and 2, the estimates are on the full sample, while in Columns 3 and 4, the estimation is performed on low-investment divisions (those with investment below the median), and Columns 5 and 6 contain only high-investment divisions (those with investment above the median). Finally, in Columns 1, 3, and 5, the variables *Log(Firm wage)* and *Divdummy* are excluded from the estimation. The standard errors in parentheses are clustered by firm. Statistical significance at 1%, 5%, and 10% is marked with ***, **, and *, respectively.

	CAPX/Sales					
	(1)	(2)	(3)	(4)	(5)	(6)
Log(Firm Wage)		0.315***		0.265***		0.395***
		(0.030)		(0.032)		(0.044)
Divdummy		-0.901***		-0.728***		-1.170***
		(0.099)		(0.106)		(0.149)
1-HHI Employees	0.015	-0.108	0.227***	0.100	-0.223***	-0.344***
	(0.040)	(0.069)	(0.043)	(0.070)	(0.058)	(0.101)
Age	-0.054***	-0.056***	-0.052***	-0.054***	-0.056***	-0.057***
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)
Firm Size	0.009	0.010	0.001	0.002	0.014*	0.015*
	(0.006)	(0.006)	(0.006)	(0.006)	(0.008)	(0.008)
Division Size	-0.018	-0.027**	0.003	-0.004	0.024	-0.001
	(0.014)	(0.013)	(0.014)	(0.015)	(0.041)	(0.036)
Plant Size	3.610***	3.499***	2.637***	2.515***	4.174***	4.093***
	(0.570)	(0.564)	(0.531)	(0.522)	(0.669)	(0.663)
Rounded N	2,000,000	2,000,000	1,000,000	1,000,000	1,000,000	1,000,000
R-squared	0.037	0.038	0.024	0.024	0.021	0.021
State, Year and Industry FE	Yes	Yes	Yes	Yes	Yes	Yes

Appendix E

This appendix presents results with county-level geographic controls.

Table E.I: Multivariate Analysis of Wages - Geography defined at the County Level

This table shows the relation between own wages and the wages of other workers in a firm. The main difference between the estimates in this table and those in the main text is that, here, County is used instead of State as the level of geography for the controls in the regression. The table contains the coefficients from estimating the following OLS regression:

$$Log(Wage/hour)_{idft} = \alpha + \beta \cdot Log(Firm\ Wage)_{dft} + X'_{idft}\gamma + \epsilon_{idft}$$

where the matrix of controls X includes $log(VA/hour)$, *Age*, *Firm Size*, *Division Size*, *Plant Size*, *County* $\times$ *Year* $\times$ *Industry* fixed effects (where Industry is defined at the three-digit SIC level), *Divdummy*, and one minus the Herfindahl Index of Employees at the different divisions of the firm as measures of corporate diversification (where firm divisions are defined at the three-digit SIC level). In Column 2, the regressions includes only diversified firms and, as such, the control variable *Divdummy* is absorbed. The standard errors in parentheses are clustered by firm. Statistical significance at 1%, 5%, and 10% is marked with ***, **, and *, respectively.

	Log(Wage/hour)	
	(1)	(2)
Log(Firm Wage)	0.067***	0.153***
	(0.003)	(0.005)
log(VA/hour)	0.249***	0.177***
	(0.002)	(0.003)
Divdummy	-0.209***	
	(0.010)	
1-HHI Employees	0.089***	0.094***
	(0.007)	(0.007)
Age	0.007***	0.008***
	(0.000)	(0.000)
Firm Size	0.008***	0.007***
	(0.001)	(0.001)
Division Size	0.002	0.002
	(0.004)	(0.004)
Plant Size	0.505***	0.480***
	(0.051)	(0.050)
Rounded N	2,000,000	900,000
R-squared	0.728	0.771
County $\times$ Year $\times$ Industry FE	Yes	Yes

Table E.II: Impact of Internal Labor Markets on Investment Decisions - Geography defined at the County Level

This table estimates the impact of wage convergence on the investment behavior of firms. The main difference between the estimates in this table and those in the main text is that, here, County is used instead of State as the level of geography for the controls in the regression. The table contains the coefficient from estimating OLS regressions of the type:

$$CAPX/Sales_{idft} = \alpha + \beta \cdot Log(Firm\ Wage)_{dft} + X'_{idft}\gamma + \epsilon_{idft}$$

where the matrix of controls X includes *Age*, *Firm Size*, *Division Size*, *Plant Size*, *County* × *Year* × *Industry* fixed effects (where Industry is defined at the three-digit SIC level), *Divdummy*, and one minus Herfindahl Index of Employees at the different divisions of the firm as measures of corporate diversification (where firm divisions are defined at the three-digit SIC level). In Columns 1 and 2, the estimates are on the full sample, while in Columns 3 and 4, the estimation is performed on low-investment divisions (those with investment below the median), and Columns 5 and 6 contain only high-investment divisions (those with investment above the median). Finally, in Columns 1, 3, and 5, the variables *Log(Firm wage)* and *Divdummy* are excluded from the estimation. The standard errors in parentheses are clustered by firm. Statistical significance at 1%, 5%, and 10% is marked with ***, **, and *, respectively.

	CAPX/Sales					
	(1)	(2)	(3)	(4)	(5)	(6)
Log(Firm Wage)		0.286***		0.219***		0.373***
		(0.031)		(0.034)		(0.046)
Divdummy		-0.801***		-0.590***		-1.081***
		(0.103)		(0.113)		(0.154)
1-HHI Employees	0.039	-0.095	0.236***	0.113	-0.179***	-0.323***
	(0.040)	(0.069)	(0.043)	(0.071)	(0.059)	(0.104)
Age	-0.056***	-0.057***	-0.053***	-0.054***	-0.059***	-0.060***
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)
Firm Size	0.012**	0.013**	0.002	0.003	0.019**	0.020**
	(0.006)	(0.006)	(0.006)	(0.006)	(0.008)	(0.008)
Division Size	-0.021	-0.029**	0.003	-0.003	0.017	-0.009
	(0.014)	(0.014)	(0.017)	(0.018)	(0.040)	(0.036)
Plant Size	3.600***	3.490***	2.705***	2.592***	4.157***	4.076***
	(0.598)	(0.593)	(0.598)	(0.590)	(0.669)	(0.663)
Rounded N	2,000,000	2,000,000	1,000,000	1,000,000	1,000,000	1,000,000
R-squared	0.199	0.199	0.218	0.218	0.167	0.167
County × Year × Industry FE	Yes	Yes	Yes	Yes	Yes	Yes

Appendix F

This appendix presents results with standard errors clustered at the plant level.

Table F.I: Multivariate Analysis of Wages - Plant level clustering

This table shows the relation between own wages and the wages of other workers in the firm. The main difference between the estimates in this table and those in the main text is that, here, standard errors are clustered by plant. The table contains the coefficients from estimating the following OLS regression:

$$Log(Wage/hour)_{idft} = \alpha + \beta \cdot Log(Firm\ \ Wage)_{dft} + X'_{idft}\gamma + \epsilon_{idft}$$

where the matrix of controls X includes $log(VA/hour)$, *Age*, *Firm Size*, *Division Size*, *Plant Size*, *County* $\times$ *Year* $\times$ *Industry* fixed effects (where Industry is defined at the three-digit SIC level), *Divdummy*, and one minus the Herfindahl Index of Employees at the different divisions of the firm as measures of corporate diversification (where firm divisions are defined at the three-digit SIC level). In Column 2, the regression includes only diversified firms and, as such, the control variable *Divdummy* is absorbed. The standard errors in parentheses are clustered by plant. Statistical significance at 1%, 5%, and 10% is marked with ***, **, and *, respectively.

	Log(Wage/hour)	
	(1)	(2)
Log(Firm Wage)	0.064***	0.144***
	(0.001)	(0.002)
log(VA/hour)	0.242***	0.170***
	(0.001)	(0.001)
Divdummy	-0.195***	
	(0.005)	
HHI Employees	0.093***	0.101***
	(0.003)	(0.003)
Age	0.007***	0.007***
	(0.000)	(0.000)
Firm Size	0.008***	0.008***
	(0.000)	(0.000)
Division Size	0.001	0.001
	(0.001)	(0.001)
Plant Size	0.510***	0.488***
	(0.035)	(0.034)
Rounded N	2,000,000	900,000
R-squared	0.710	0.739
State $\times$ Year $\times$ Industry FE	Yes	Yes

Table F.II: Impact of Internal Labor Markets on Investment Decisions - Plant-level clustering

This table estimates the impact of wage convergence on the investment behavior of firms. The main difference between the estimates in this table and those in the main text is that, here, standard errors are clustered by plant. The table contains the coefficient from estimating OLS regressions of the type:

$$CAPX/Sales_{idft} = \alpha + \beta \cdot Log(Firm\ Wage)_{dft} + X'_{idft}\gamma + \epsilon_{idft}$$

where the matrix of controls X includes *Age*, *Firm Size*, *Division Size*, *Plant Size*, *State* $\times$ *Year* $\times$ *Industry* fixed effects (where Industry is defined at the three-digit SIC level), Divdummy and one minus Herfindahl Index of Employees at the different divisions of the firm as measures of corporate diversification (where firm divisions are defined at the three-digit SIC level). In Columns 1 and 2, the estimates are on the full sample, while in Columns 3 and 4, the estimation is performed on low-investment divisions (those with investment below the median), and Columns 5 and 6 contain only high-investment divisions (those with investment above the median). Finally, in Columns 1, 3, and 5, the variables *Log(Firm wage)* and *Divdummy* are excluded from the estimation. The standard errors in parentheses are clustered by plant. Statistical significance at 1%, 5%, and 10% is marked with ***, **, and *, respectively.

	CAPX/Sales					
	(1)	(2)	(3)	(4)	(5)	(6)
Log(Firm Wage)		0.309***		0.249***		0.384***
		(0.020)		(0.024)		(0.033)
Divdummy		-0.883***		-0.696***		-1.120***
		(0.067)		(0.077)		(0.110)
1-HHI Employees	0.010	-0.111***	0.184***	0.077*	-0.185***	-0.322***
	(0.024)	(0.041)	(0.027)	(0.044)	(0.037)	(0.066)
Age	-0.056***	-0.057***	-0.054***	-0.055***	-0.059***	-0.060***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)
Firm Size	0.010***	0.011***	0.001	0.002	0.016***	0.017***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)	(0.005)
Division Size	-0.018	-0.027	0.002	-0.004	0.038	0.013
	(0.022)	(0.022)	(0.022)	(0.022)	(0.034)	(0.034)
Plant Size	3.278***	3.165***	2.381***	2.268***	3.845***	3.762***
	(0.334)	(0.329)	(0.312)	(0.308)	(0.440)	(0.435)
Rounded N	2,000,000	2,000,000	1,000,000	1,000,000	1,000,000	1,000,000
R-squared	0.119	0.119	0.117	0.117	0.095	0.096
State $\times$ Year $\times$ Industry FE	Yes	Yes	Yes	Yes	Yes	Yes

Appendix G

This appendix presents results with standard errors clustered by year.

Table G.I: Multivariate Analysis of Wages - Clustering by Year

This table shows the relation between own wages and the wages of other workers in the firm. The main difference between the estimates in this table and those in the main text is that, here, standard errors are clustered by year. The table contains the coefficients from estimating the following OLS regression:

$$Log(Wage/hour)_{idft} = \alpha + \beta \cdot Log(Firm\ \ Wage)_{dft} + X'_{idft}\gamma + \epsilon_{idft}$$

where the matrix of controls X includes $log(VA/hour)$, *Age*, *Firm Size*, *Division Size*, *Plant Size*, *County* $\times$ *Year* $\times$ *Industry* fixed effects (where Industry is defined at the three-digit SIC level), *Divdummy*, and one minus the Herfindahl Index of Employees at the different divisions of the firm as measures of corporate diversification (where firm divisions are defined at the three-digit SIC level). In Column 2, the regressions includes only diversified firms and, as such, the control variable *Divdummy* is absorbed. The standard errors in parentheses are clustered by year. Statistical significance at 1%, 5%, and 10% is marked with ***, **, and *, respectively.

	Log(Wage/hour)	
	(1)	(2)
Log(Firm Wage)	0.064***	0.144***
	(0.010)	(0.006)
log(VA/hour)	0.242***	0.170***
	(0.011)	(0.006)
Divdummy	-0.195***	
	(0.028)	
1-HHI Employees	0.093***	0.101***
	(0.006)	(0.004)
Age	0.007***	0.007***
	(0.001)	(0.001)
Firm Size	0.008***	0.008***
	(0.000)	(0.000)
Division Size	0.001	0.001
	(0.002)	(0.001)
Plant Size	0.510***	0.488***
	(0.025)	(0.017)
Rounded N	2,000,000	900,000
R-squared	0.710	0.739
State $\times$ Year $\times$ Industry FE	Yes	Yes

Table G.II: Impact of Internal Labor Markets on Investment Decisions - Clustering by Year

This table estimates the impact of wage convergence on the investment behavior of firms. The main difference between the estimates in this table and those in the main text is that, here, standard errors are clustered by year. The table contains the coefficient from estimating OLS regressions of the type:

$$CAPX/Sales_{idft} = \alpha + \beta \cdot log(Firm\ Wage)_{dft} + X'_{idft}\gamma + \epsilon_{idft}$$

where the matrix of controls X includes *Age*, *Firm Size*, *Division Size*, *Plant Size*, *State* $\times$ *Year* $\times$ *Industry* fixed effects (where Industry is defined at the three-digit SIC level), *Divdummy* and one minus Herfindahl Index of Employees at the different divisions of the firm as measures of corporate diversification (where firm divisions are defined at the three-digit SIC level). In Columns 1 and 2, the estimates are on the full sample, while in Columns 3 and 4, the estimation is performed on low-investment divisions (those with investment below the median), and Columns 5 and 6 contain only high-investment divisions (those with investment above the median). Finally, in Columns 1, 3, and 5, the variables *Log(Firm wage)* and *Divdummy* are excluded from the estimation. The standard errors in parentheses are clustered by year. Statistical significance at 1%, 5%, and 10% is marked with ***, **, and *, respectively.

	CAPX/Sales					
	(1)	(2)	(3)	(4)	(5)	(6)
Log(Firm Wage)		0.309***		0.249***		0.384***
		(0.092)		(0.074)		(0.124)
Divdummy		-0.883***		-0.696***		-1.120**
		(0.301)		(0.231)		(0.411)
1-HHI Employees	0.010	-0.111	0.184**	0.077	-0.185	-0.322***
	(0.101)	(0.073)	(0.084)	(0.060)	(0.118)	(0.090)
Age	-0.056***	-0.057***	-0.054***	-0.055***	-0.059***	-0.060***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.005)	(0.005)
Firm Size	0.010***	0.011***	0.001	0.002	0.016***	0.017***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.005)	(0.005)
Division Size	-0.018	-0.027	0.002	-0.004	0.038	0.013
	(0.023)	(0.023)	(0.030)	(0.030)	(0.036)	(0.029)
Plant Size	3.278***	3.165***	2.381***	2.268***	3.845***	3.762***
	(0.351)	(0.348)	(0.344)	(0.334)	(0.547)	(0.553)
Rounded N	2,000,000	2,000,000	1,000,000	1,000,000	1,000,000	1,000,000
R-squared	0.119	0.119	0.117	0.117	0.095	0.096
State $\times$ Year $\times$ Industry FE	Yes	Yes	Yes	Yes	Yes	Yes

Appendix H

This appendix presents additional results.

Table H.I presents the mean hourly wage of production workers by wage quintile and type of firm. Each column is associated with a type of firm. The first column shows the wages of plants that belong to non-diversified firms. The second column shows the same information for diversified firms only. Each row of Table H.I represents a different wage quintile, where quintile 1 indicates lowest wages and quintile 5 indicates highest wages (these quintiles are defined just like in Table III of the text). Note that the categorization of industries into quintiles is based on the wages of stand-alone firms only. To understand how the firm's presence in high-wage industries relates to the wages in the low-wage segments, I sequentially eliminate all plants from the firms that have at least one establishment in the high-paying quintiles. In Column 3, I exclude from the sample of diversified firms all establishments from firms that have at least one establishment in wage quintile 5. In Column 4, I exclude all plants from firms that have establishments in wage quintiles 4 or 5. The same procedure is applied to the remaining columns, where I sequentially apply more restrictions on firms that are present in the sample. Each element of the table corresponds to the average hourly wage for production workers in the wage quintile and firm associated to that row and column. For example, the average hourly wage of production workers in the manufacturing sector that operate in an industry classified as wage quintile 2, in a firm that, although diversified, has no plant in wage quintile 5 is \$10.83 (Row 2 and Column 3).

This table reveals two main patterns. First, when looking simply at wages in non-diversified firms relative to wages in diversified firms (Column 2 vs Column 3 of the table), we observe that the latter are significantly higher. This is similar to the results reported in **?**. Second, and more salient to the message of the paper, there is a positive relationship between the wages of workers in a given plant and the wages of workers in the other plants of the diversified firm. In other words, workers in a diversified firm obtain a larger wage when that firm also has higher paid workers. Columns 3 through 6 reveal a striking pattern. It appears that it is not simply corporate diversification that is associated with higher wages but diversification into high paying sectors that leads to higher wages for the entire firm.

Table H.I: Hourly Wage depending on which sectors the firm is present in

This table shows the average hourly wage for production workers in the manufacturing sector. Each row of the table is associated with a wage quintile. The wage quintiles are constructed by categorizing three-digit SIC industries based on the wages of workers in stand-alone firms, where quintile 1 represents the lowest-wage industries and quintile 5 the highest-wage industries. Once industries are placed in one of the five quintiles, this definition is applied to both diversified and non-diversified firms.

Each column of the table is associated with a type of firm. The first column contains wages for workers of stand-alone firms, while the second column contains wages of workers from diversified firms. In Column 3, the sample includes workers of diversified firms that have no establishment in wage quintile 5. In Column 4, the sample is further restricted to include only workers of diversified firms that are not present in wage quintiles 4 or 5. Column 5 contains workers of diversified firms that have no establishments in wage quintiles 3 to 5. Finally, Column 6 reports the average hourly wage for workers of firms that are diversified within industries of wage quintile 1.

	(1)	(2)	(3)	(4)	(5)	(6)
		Diversified				
Wage Quintile	Stand Alone	All	Not Present in q5	Not Present in q4 or q5	Not Present in q3 to q5	Not Present in q2 to q5
1	7.90	11.69	10.12	9.21	8.90	8.19
2	8.75	11.92	10.83	9.97	9.54	.
3	10.90	14.21	12.76	11.83	.	.
4	13.33	16.69	13.89	.	.	.
5	15.21	20.57	.	.	.	.
Total	12.58	16.62	12.77	10.71	9.43	8.19

Figure H.I: The Evolution of Manufacturing Employment in the United States

This figure plots the evolution of manufacturing employment in the United States between 1975 and 2005. The data is obtained from the Federal Reserve Economic Data (FRED) at the St. Louis Fed. The data corresponds to the monthly series of all employees in manufacturing (in thousands), seasonally adjusted (variable MANEMP).