

Internet Appendix to “Who Works for Startups? The Relation between Firm Age, Employee Age, and Growth”*

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This appendix contains additional results mentioned in the paper but not reported. For each table, we briefly describe the estimation results. The tables can be found at the end of the document.

*Ouimet and Zarutskie, 2014, Internet Appendix to “Who Works for Startups? The Relation between Firm Age, Employee Age, and Growth,” *Journal of Financial Economics* 112, 386-407.

IA.1. Separate estimations for the sample of growing firms and the sample of non-growing firms

We document a positive relation between firm age and new hire age. However, we are only able to observe the age distribution of new hires at the sample of firms which are hiring. Since growing firms are hiring, by definition, this sample may be biased towards growing firms. On the other hand, Brown and Matsa (2013) find evidence indicating firms in distress experience higher employee turnover, suggesting declining firms may have large hiring needs as workers voluntarily leave to seek out better opportunities. If the sample of firms with new hires has an over-representative distribution of either growing or non-growing firms, this could bias our results if the relation between firm age and employee age depends on firm growth rates.

In Tables IA.1 and IA.2, we directly test this assumption. In Table IA.1, we test the relation between firm age and new hire age using only a sample of growing firms in Panel A and only a sample of non-growing firms in Panel B. In Table IA.2, we repeat these tests but limit the sample to only public firms. Growing firms include startups, or first-year firms, and older firms which have employment growth rates between 0.10 and one. Employment growth is defined as the change in employment over two consecutive years divided by the average employment at the firm over the same time period. Non-growing and shrinking firms are defined as those whose employment growth rates are zero or negative.

We find similar correlations between firm age and new hire age in both the sample of growing and non-growing firms, suggesting that differences in growth rates will not bias our findings.

IA.2. Employees under 25 years of age

In the paper, we report results only for workers over the age of 25. The youngest workers are likely to still be completing their educations and, thus, working part-time or in temporary positions. To the extent that firms and/or employees have different preferences regarding part-time and temporary workers and/or part-time and temporary employment, employees under 25 may exhibit different match rates by firm age as compared to workers over 25 years of age who are more likely to be working in full-time permanent positions. Given the different interpretation of any results involving employees under the age of 25, we present the results here in the online appendix as opposed to in the main paper.

In Table IA.3, we document the average fraction of workers and new hires under 25 by firm age. Panel A uses the full sample and Panel B is limited to just public firms. We find employees under 25 make up a larger fraction of the total workforce at the youngest firms, firms aged one to five, and that the fraction of workers under 25 decreases as firm age increases. We find this same pattern in the full sample and in the sample of just public firms. However, a different pattern is evident when looking at new hires. The fraction of new hires who are under the age of 25 is lowest at firms aged one to five in both the full sample and sample of public firms.

In Table IA.4, we explore the relation between the fraction of workers or new hires under the age of 25 and firm age in a regression setting. As in Tables 2 and 4 in the paper, we control for firm size as well as industry, state, and year fixed effects. Panel A uses the full sample and Panel B is limited to just public firms. As suggested by the results in Table IA.3, workers under 25 represent a larger fraction of the workforce at younger firms. Considering either the full sample or sample of public firms, we find firms aged one to five employ the largest fraction of employees under the age of 25 and the fraction of workers under 25 declines monotonically as

the firm ages. For new hires, the evidence is more mixed. We find that new hires under 25 make up a significantly greater fraction of total new hires at firms one to five years of age, as compared to firms over 20 years of age, when considering the full sample. However, the fraction of new hires under the age of 25 does not decline monotonically with firm age. Alternatively, we do find a more monotonic relation between the fraction of new hires under the age of 25 and firm age when looking just at the sample of public firms.

Table IA.5 explores the relation between wages for employees under the age of 25 and firm age. Table IA.5 mirrors Table 5 in the paper. The dependent variable in column 1 is the natural logarithm of the average wage per employee under the age of 25. The dependent variable in column 2 is the natural logarithm of the average wage per new hire under the age of 25. The independent variables in the regressions include the four youngest firm age categorical variables as well as the lagged natural logarithm of one plus total firm employees, industry, state and year fixed effects. To preserve space, we only report the coefficient on the firms aged one to five categorical variable which should be interpreted as the mean difference in the dependent variable for the youngest firm age category as compared to firms aged over 20 years, after controlling for firm size and industry, state and year fixed effects. Panel A uses the full sample and Panel B is limited to just public firms.

Employees under the age of 25 earn relatively higher wages at firms aged one to five as compared to firms aged 20 years or greater, when estimated using the full sample. When looking just at public firms, we find an insignificant relation between the average wages of employees under the age of 25 and firms aged one to five. Looking at new hires, we find new hires under the age of 25 earn relatively higher wages at firms aged one to five as compared to at firms over

20 years of age. This relation holds when considering the full sample or the sample of just public firms.

IA.3. Firm fixed effects

In Table IA.6, we repeat Table 2 in the paper with firm fixed effects. With firm fixed effects, we can exclude the possibility that our results are driven by changes in the distribution of firm characteristics over time. However, by including firm fixed effects, we dramatically reduce the power of our tests due to the short time series available. The average firm is observed for only 4.6 years. With firm fixed effects, we still find a positive employee age-firm age pattern, albeit with weaker statistical significance.

In Table IA.7, we repeat Table 4 in the paper with firm fixed effects. We find that the share of new hires aged 25 to 34 is higher when firms are aged one to five years, compared to firms older than 20 years, in the full sample of firms. For the sample of public firms, the difference is still positive, however, not statistically significant. Overall, we find weaker but still often significant results when looking at new hires using the full sample. We find insignificant differences when looking at new hires and the full sample. The loss of power is likely driven by the limited within-firm variation in age in this sample.

We also find that the wage results reported in Table 5, Panel A of the paper are generally robust to the inclusion of firm fixed effects in the estimation. Results are reported in Table IA.8. Wage results using new hires or public firms are weaker once firm fixed effects are included.

Table IA.1

The relation between firm age and new hire age for growing and non-growing firms

This table presents robustness tests of the results reported in Table 4, Panel A, in the paper. Panel A presents OLS regression estimates for a sample of growing firms. Growing firms include startups, or first-year firms, and older firms which have employment growth rates between 0.10 and 1, where employment growth is defined as the change in employment over two consecutive years divided by the average employment at the firm over the same time period. Panel B presents OLS regression estimates for a sample of non-growing and shrinking firms. Non-growing and shrinking firms are those whose employment growth rates are zero or negative. The unit of observation is a firm-year. *t*-Statistics adjusted for clustering by firm are reported in parentheses. *** Indicates statistical significance at the 1% level.

<i>Panel A: Growing firms</i>				
<i>Dependent variable</i>	(1) Fraction of new hires aged 25–34	(2) Fraction of new hires aged 35–44	(3) Fraction of new hires aged 45–54	(4) Fraction of new hires aged ≥55
Firm age 1–5 years	0.034 *** (58.21)	0.013 *** (23.30)	-0.007 *** (-15.01)	-0.023 *** (-56.45)
Firm age 6–10 years	0.021 *** (36.46)	-0.006 *** (-11.92)	-0.018 *** (-40.45)	-0.024 *** (-61.48)
Firm age 11–15 years	0.012 *** (19.95)	-0.006 *** (-9.88)	-0.013 *** (-26.72)	-0.018 *** (-43.20)
Firm age 16–20 years	0.004 *** (6.94)	-0.004 *** (-5.92)	-0.006 *** (-11.48)	-0.010 *** (-23.23)
Lagged log(1+firm employees)	0.012 *** (86.40)	-0.008 *** (-63.50)	-0.010 *** (-93.02)	-0.010 *** (-117.19)
Industry fixed effects?	Yes	Yes	Yes	Yes
State fixed effects?	Yes	Yes	Yes	Yes
Year fixed effects?	Yes	Yes	Yes	Yes
N	4,434,468	4,434,468	4,434,468	4,434,468
R ²	0.022	0.016	0.021	0.028
<i>Panel B: Non-growing and shrinking firms</i>				
<i>Dependent variable</i>	(1) Fraction of new hires aged 25–34	(2) Fraction of new hires aged 35–44	(3) Fraction of new hires aged 45–54	(4) Fraction of new hires aged ≥55
Firm age 1–5 years	0.032 *** (61.43)	0.001 *** (1.89)	-0.022 *** (-53.58)	-0.038 *** (-105.19)
Firm age 6–10 years	0.022 *** (47.90)	-0.001 *** (-2.19)	-0.018 *** (-48.23)	-0.031 *** (-91.93)
Firm age 11–15 years	0.014 *** (28.31)	-0.003 *** (-5.66)	-0.012 *** (-30.20)	-0.023 *** (-66.47)
Firm age 16–20 years	0.006 *** (12.49)	-0.003 *** (-6.33)	-0.006 *** (-14.16)	-0.013 *** (-36.62)
Lagged log(1+firm employees)	0.014 *** (94.86)	-0.002 *** (-14.29)	-0.008 *** (-62.90)	-0.014 *** (-131.54)
Industry fixed effects?	Yes	Yes	Yes	Yes
State fixed effects?	Yes	Yes	Yes	Yes
Year fixed effects?	Yes	Yes	Yes	Yes
N	5,434,892	5,434,892	5,434,892	5,434,892
R ²	0.019	0.011	0.016	0.030

Table IA.2

The relation between firm age and new hire age for growing and non-growing public firms

This table presents robustness tests of the results reported in Table 4, Panel B in the paper. Panel A presents OLS regression estimates for a sample of growing firms. Growing firms include startups, or first-year firms, and older firms which have employment growth rates between 0.10 and 1, where employment growth is defined as the change in employment over two consecutive years divided by the average employment at the firm over the same time period. Panel B presents OLS regression estimates for a sample of non-growing and shrinking firms. Non-growing and shrinking firms are those whose employment growth rates are zero or negative. The unit of observation is a firm-year. *t*-Statistics adjusted for clustering by firm are reported in parentheses. *** Indicates statistical significance at the 1% level.

<i>Panel A: Growing public firms</i>				
<i>Dependent variable</i>	(1) Fraction of new hires aged 25–34	(2) Fraction of new hires aged 35–44	(3) Fraction of new hires aged 45–54	(4) Fraction of new hires aged ≥55
Time from IPO 1–5 years	0.042 *** (6.23)	-0.021 *** (-3.66)	-0.034 *** (-7.51)	-0.016 *** (-6.08)
Time from IPO 6–10 years	0.025 *** (5.46)	-0.010 *** (-2.42)	-0.031 *** (-9.71)	-0.017 *** (-8.91)
Time from IPO 11–15 years	0.018 *** (4.21)	-0.013 *** (-3.42)	-0.020 *** (-6.56)	-0.014 *** (-7.98)
Time from IPO 16–20 years	0.011 *** (3.19)	-0.001 *** (-0.31)	-0.010 *** (-3.90)	-0.009 *** (-5.76)
Lagged log(1+firm employees)	-0.005 *** (-4.91)	-0.008 *** (-8.55)	-0.006 *** (-8.62)	-0.003 *** (-5.74)
Industry fixed effects?	Yes	Yes	Yes	Yes
State fixed effects?	Yes	Yes	Yes	Yes
Year fixed effects?	Yes	Yes	Yes	Yes
N	13,686	13,686	13,686	13,686
R ²	0.129	0.067	0.082	0.094
<i>Panel B: Non-growing and shrinking public firms</i>				
<i>Dependent variable</i>	(1) Fraction of new hires aged 25–34	(2) Fraction of new hires aged 35–44	(3) Fraction of new hires aged 45–54	(4) Fraction of new hires aged ≥55
Time from IPO 1–5 years	0.032 *** (2.97)	0.004 *** (0.38)	-0.036 *** (-4.76)	-0.023 *** (-5.67)
Time from IPO 6–10 years	0.031 *** (5.45)	-0.012 *** (-2.18)	-0.021 *** (-4.44)	-0.016 *** (-5.46)
Time from IPO 11–15 years	0.025 *** (5.08)	-0.003 *** (-0.73)	-0.018 *** (-4.45)	-0.013 *** (-5.17)
Time from IPO 16–20 years	0.016 *** (3.82)	-0.003 *** (-0.70)	-0.012 *** (-3.48)	-0.006 *** (-2.72)
Lagged log(1+firm employees)	0.000 *** (-0.43)	-0.007 *** (-6.82)	-0.007 *** (-7.18)	-0.003 *** (-5.50)
Industry fixed effects?	Yes	Yes	Yes	Yes
State fixed effects?	Yes	Yes	Yes	Yes
Year fixed effects?	Yes	Yes	Yes	Yes
N	14,682	14,682	14,682	14,682
R ²	0.058	0.030	0.040	0.043

Table IA.3

The relation between firm age and employee age: Employees under 25

The data are taken from the union of the LEHD and LBD databases between years 1992 to 2004. Panel A reports the average percentage of employees and new hires in a given employee age (row) firm age (column) category. Panel B reports the average percentage of employees and new hires in a given employee age (row) firm age (column) category for public firms only (i.e., those that can be linked to Compustat).

	Firm age					
	Ages 1–5	Ages 6–10	Ages 11–15	Ages 16–20	Ages >20	All ages
<i>Panel A: All firms</i>						
	(1)	(2)	(3)	(4)	(5)	(6)
<i>% Of employees aged</i>						
< 25 years	15.9%	13.9%	12.5%	11.2%	9.4%	13.0%
<i>% Of new hires aged</i>						
< 25 years	25.3%	29.3%	29.2%	28.7%	27.2%	27.4%
	Years since IPO					
	1–5 Years	6–10 Years	11–15 Years	16–20 Years	>20 Years	All years
<i>Panel B: Public firms only</i>						
	(1)	(2)	(3)	(4)	(5)	(6)
<i>% Of employees aged</i>						
< 25 years	12.0%	11.2%	10.8%	10.3%	9.8%	10.5%
<i>% Of new hires aged</i>						
< 25 years	18.7%	20.0%	21.1%	22.9%	23.1%	21.9%

Table IA.4

Firm age and employee age: Regression analysis employees under 25

Panel A reports OLS regressions using the fraction of employees in an age category as the dependent variable. The data are taken from the union of the LEHD and LBD data sets between years 1992 to 2004. Panel B reports OLS regressions using the fraction of employees in an age category as the dependent variable for public firms only. The data are taken from the set of firms that are matched to Compustat in the union of the LEHD and LBD databases between years 1992 to 2004. The independent variables in each regression, in both Panels A and B, are firm age categorical variables and the lagged logarithm of 1 plus total firm employees. The firm age category of over 20 years is omitted. Also included in each specification are four-digit SIC code fixed effects, state fixed effects, and year fixed effects. The unit of observation is a firm-year. t -Statistics adjusted for clustering by firm are reported in parentheses. *** Indicates statistical significance at the 1% level.

<i>Panel A: All firms</i>		
<i>Dependent variable</i>	(1) Fraction of employees aged <25	(2) Fraction of new hires aged <25
Firm age 1–5 years	0.068 *** (257.51)	0.005 *** (10.06)
Firm age 6–10 years	0.047 *** (188.84)	0.029 *** (66.81)
Firm age 11–15 years	0.032 *** (127.49)	0.025 *** (55.53)
Firm age 16–20 years	0.017 *** (76.21)	0.016 *** (36.72)
Lagged log(1+firm employees)	0.011 *** (128.93)	0.012 *** (104.37)
Industry fixed effects?	Yes	Yes
State fixed effects?	Yes	Yes
Year fixed effects?	Yes	Yes
N	16,343,058	11,404,068
R^2	0.086	0.066
<i>Panel B: Public firms only</i>		
<i>Dependent variable</i>	(1) Fraction of employees aged < 25	(2) Fraction of new hires aged < 25
Time from IPO 1–5 years	0.063 *** (11.21)	0.025 *** (3.51)
Time from IPO 6–10 years	0.048 *** (11.66)	0.020 *** (3.87)
Time from IPO 11–15 years	0.035 *** (9.18)	0.016 (3.20)
Time from IPO 16–20 years	0.014 *** (5.70)	0.005 *** (1.34)
Lagged log(1+firm employees)	0.012 *** (15.29)	0.018 *** (16.21)
Industry fixed effects?	Yes	Yes
State fixed effects?	Yes	Yes
Year fixed effects?	Yes	Yes
N	37,359	36,384
R^2	0.081	0.087

Table IA.5**Wages by Employee Age and Firm Age: Employees Under 25**

OLS regressions are estimated using the log wage (in year 2005 dollars) per worker in a given age category as the dependent variable. The independent variables are firm age categorical variables (i.e., firm age 1-5 years, firm age 6-10 years, firm age 11-15 years and firm age 16-20 years) and the lagged log(1+number of employees) at a firm. Included in each specification are four-digit SIC code fixed effects, state fixed effects, and year fixed effects. The coefficients on the other firm age categorical variables and the lagged log number of employees are not reported in the table. The unit of observation is a firm-year. The data are taken from the union of the LEHD and LBD data sets between years 1992 to 2004. Panel A reports results using the full sample of privately and publicly held firms. Panel B reports results using the sample of publicly held firms only. Column 1 reports results using all employees. Column 2 reports results using just new hires. T-statistics adjusted for clustering by firm are reported in parentheses. ***, **, And * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A - All Firms

	(1) Log(wage/employee) aged < 25	(2) Log(wage/new hire) aged < 25
Firm age 1–5 years	0.049 *** (26.20)	0.075 *** (43.56)
N	6,927,340	6,012,581
R ²	0.125	0.1031

Panel B - Public Firms Only

	(1) Log(wage/employee) aged < 25	(2) Log(wage/new hire) aged < 25
Time from IPO 1-5 years	0.024 (0.70)	0.050 ** (2.21)
N	34,020	33,052
R ²	0.092	0.081

Table IA.6

The relation between firm age and employee age: Regression analysis with firm fixed effects

Panel A reports OLS regressions using the fraction of employees in an age category as the dependent variable. The data are taken from the union of the LEHD and LBD data sets between years 1992 to 2004. Panel B reports OLS regressions using the fraction of employees in an age category as the dependent variable for public firms only. The data are taken from the set of firms that are matched to Compustat in the union of the LEHD and LBD databases between years 1992 to 2004. The independent variables in each regression, in both Panels A and B, are firm age categorical variables and the lagged log(1+ number of employees) at a firm. The firm age category of over 20 years is omitted. Also included in each specification are firm fixed effects and year fixed effects. The unit of observation is a firm-year. *t*-Statistics adjusted for clustering by firm are reported in parentheses. **, ***, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

<i>Panel A: All firms</i>					
<i>Dependent variable</i>	(1) Fraction of employees aged < 25	(2) Fraction of employees aged 25–34	(3) Fraction of employees aged 35–44	(4) Fraction of employees aged 45–54	(5) Fraction of employees aged ≥55
Firm age 1–5 years	0.004 *** (7.70)	0.015 *** (22.09)	0.006 *** (7.86)	-0.010 *** (-12.23)	-0.016 *** (-24.24)
Firm age 6–10 years	-0.002 *** (-5.38)	0.005 *** (8.74)	0.012 *** (16.68)	0.0003 (0.37)	-0.015 *** (-26.17)
Firm age 11–15 years	-0.005 *** (-13.65)	-0.001 ** (-2.12)	0.009 *** (14.64)	0.010 *** (16.67)	-0.013 *** (-26.38)
Firm age 16–20 years	-0.004 *** (-16.79)	-0.004 *** (-10.86)	0.002 *** (3.88)	0.013 *** (31.27)	-0.006 *** (-19.15)
Lagged log(1+firm employees)	0.004 *** (28.45)	0.005 *** (26.90)	0.003 *** (11.38)	-0.004 *** (-21.28)	-0.008 *** (-43.85)
Firm fixed effects?	Yes	Yes	Yes	Yes	Yes
Year fixed effects?	Yes	Yes	Yes	Yes	Yes
N	16,343,058	16,343,058	16,343,058	16,343,058	16,343,058
<i>R</i> ²	0.680	0.640	0.618	0.636	0.765
<i>Panel B: Public firms only</i>					
<i>Dependent variable</i>	(1) Fraction of employees aged < 25	(2) Fraction of employees aged 25–34	(3) Fraction of employees aged 35–44	(4) Fraction of employees aged 45–54	(5) Fraction of employees aged ≥55
Time from IPO 1–5 years	0.006 ** (1.95)	0.014 *** (2.92)	-0.014 *** (-3.12)	0.00002 (0.01)	-0.006 (-1.84)
Time from IPO 6–10 years	0.005 *** (2.51)	0.011 (3.84)	-0.004 (-1.37)	-0.006 ** (-2.26)	-0.006 ** (-2.15)
Time from IPO 11–15 years	0.001 (0.33)	0.004 (1.73)	0.002 (0.76)	-0.004 (-1.62)	-0.003 (-1.29)
Time from IPO 16–20 years	0.0003 (0.26)	-0.001 (-0.61)	0.003 (1.74)	-0.002 (-1.42)	0.00005 (0.04)
Lagged log(1+firm employees)	0.001 *** (2.66)	0.002 (1.73)	0.0003 (0.30)	-0.003 *** (-2.34)	-0.001 (-1.21)
Firm fixed effects?	Yes	Yes	Yes	Yes	Yes
Year fixed effects?	Yes	Yes	Yes	Yes	Yes
N	37,359	37,359	37,359	37,359	37,359
<i>R</i> ²	0.881	0.767	0.682	0.727	0.772

Table IA.7

The relation between firm age and employee age for new hires only: Firm fixed effects

Panel A reports OLS regressions using the fraction of new hires in an age category as the dependent variable. The data are taken from the union of the LEHD and LBD data sets between years 1992 to 2004. Panel B reports OLS regressions using the fraction of new hires in an age category as the dependent variable for public firms only. The data are taken from the set of firms that are matched to Compustat in the union of the LEHD and LBD databases between years 1992 to 2004. The independent variables in each regression, in both Panels A and B, are firm age categorical variables and the lagged log(1+number of employees) at a firm. The firm age category of over 20 years is omitted. Also included in each specification are firm fixed effects and year fixed effects. The unit of observation is a firm-year. *t*-Statistics adjusted for clustering by firm are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

<i>Panel A: All firms</i>					
<i>Dependent variable</i>	(1) Fraction of new hires aged < 25	(2) Fraction of new hires aged 25–34	(3) Fraction of new hires aged 35–44	(4) Fraction of new hires aged 45–54	(5) Fraction of new hires aged ≥55
Firm age 1–5 years	-0.006 *** (-4.36)	0.003 ** (1.95)	0.003 ** (2.19)	0.0006 (0.53)	-0.0003 (-0.36)
Firm age 6–10 years	-0.004 *** (-3.26)	0.0002 (0.19)	0.003 *** (3.18)	0.0003 (0.34)	-0.0004 (-0.49)
Firm age 11–15 years	-0.001 (-1.38)	-0.002 * (-1.89)	0.002 *** (2.79)	0.001 (1.46)	-0.0005 (-0.88)
Firm age 16–20 years	-0.0005 (-0.79)	-0.0021 *** (-3.27)	0.001 ** (1.94)	0.001 *** (2.90)	-0.00005 (-0.12)
Lagged log(1+firm employees)	0.011 *** (37.60)	0.003 *** (37.65)	-0.004 *** (-13.20)	-0.005 *** (-19.64)	-0.006 *** (-30.38)
Firm fixed effects?	Yes	Yes	Yes	Yes	Yes
Year fixed effects?	Yes	Yes	Yes	Yes	Yes
N	11,404,068	11,404,068	11,404,068	11,404,068	11,404,068
R ²	0.513	0.393	0.386	0.401	0.452
<i>Panel B: Public firms only</i>					
<i>Dependent variable</i>	(1) Fraction of new hires aged < 25	(2) Fraction of new hires aged 25–34	(3) Fraction of new hires aged 35–44	(4) Fraction of new hires aged 45–54	(5) Fraction of new hires aged ≥55
Time from IPO 1–5 years	-0.003 (-0.48)	0.006 (0.94)	-0.006 (-0.98)	0.002 (0.47)	0.0004 (0.14)
Time from IPO 6–10 years	0.006 (1.61)	-0.001 (-0.15)	-0.006 (-1.47)	-0.001 (-0.24)	0.001 (0.40)
Time from IPO 11–15 years	0.003 (1.03)	0.004 (1.12)	-0.006 (-1.70)	-0.0003 (-0.12)	-0.002 (-0.83)
Time from IPO 16–20 years	0.004 (1.87)	-0.001 (-0.39)	-0.001 (-0.56)	-0.002 (-0.75)	-0.0004 (-0.29)
Lagged log(1+firm employees)	0.006 (5.88)	0.0005 (0.37)	-0.002 (-1.81)	-0.002 (-2.35)	-0.002 (-3.22)
Firm fixed effects?	Yes	Yes	Yes	Yes	Yes
Year fixed effects?	Yes	Yes	Yes	Yes	Yes
N	36,384	36,384	36,384	36,384	36,384
R ²	0.727	0.493	0.442	0.446	0.427

Table IA.8

Wages by employee age and firm age: Firm fixed effects

OLS regressions are estimated using the log wage (in year 2005 dollars) per worker in a given age category as the dependent variable. The independent variables are firm age categorical variables (i.e., firm age 1-5 years, firm age 6-10 years, firm age 11-15 years and firm age 16-20 years) and the lagged log(1+number of employees) at a firm. Included in each specification are firm fixed effects and year fixed effects. The coefficients on the other firm age categorical variables and the lagged log number of employees are not reported in the table. The unit of observation is a firm-year. The data are taken from the union of the LEHD and LBD data sets between years 1992 to 2004. Panel A reports results for all employees using the full sample of privately and publicly held firms. Panel B reports results for all employees in the sample of publicly held firms only. Panel C reports results for the wages of new hires only using the full sample of private and public firms. Panel D reports results for the wages of new hires only using the sample of public firms only. *t*-Statistics adjusted for clustering by firm are reported in parentheses. *** Indicates statistical significance at the 1% level.

Panel A: All firms: Wages of all employees

	(1)	(2)	(3)	(4)	(5)	(6)
	Log(wage/employee) all employees	Log(wage/employee) aged < 25	Log(wage/employee) aged 25–34	Log(wage/employee) aged 35–44	Log(wage/employee) aged 45–54	Log(wage/employee) aged ≥55
Firm age 1–5 years	-0.001 (-0.60)	-0.009 (-1.59)	0.010 *** (3.78)	0.017 *** (6.60)	-0.004 (-1.34)	-0.048 *** (-14.27)
N	16,336,715	6,927,340	9,565,061	10,615,733	9,509,330	7,881,437
R ²	0.850	0.605	0.756	0.792	0.803	0.822

Panel B: Public firms: Wages of all employees

	(1)	(2)	(3)	(4)	(5)	(6)
	Log(wage/employee) all employees	Log(wage/employee) aged < 25	Log(wage/employee) aged 25–34	Log(wage/employee) aged 35–44	Log(wage/employee) aged 45–54	Log(wage/employee) aged ≥55
Time from IPO 1–5 years	-0.044 (-1.76)	-0.054 (-1.11)	-0.009 (-0.38)	-0.018 (-0.74)	-0.041 (-1.46)	-0.092 *** (-2.72)
N	37,359	34,020	36,402	36,781	36,526	35,141
R ²	0.707	0.474	0.665	0.703	0.691	0.705

Panel C: All firms: Wages of new hires

	(1)	(2)	(3)	(4)	(5)	(6)
	Log(wage/new hire) all employees	Log(wage/new hire) aged < 25	Log(wage/new hire) aged 25–34	Log(wage/new hire) aged 35–44	Log(wage/new hire) aged 45–54	Log(wage/new hire) aged ≥55
Firm age 1–5 years	-0.0003 (-0.12)	-0.003 (-0.61)	0.00003 (0.01)	0.002 (0.48)	0.003 (0.53)	0.020 *** (2.73)
N	11,355,225	6,927,340	6,269,452	5,664,829	4,104,194	2,760,070
R ²	0.719	0.588	0.733	0.736	0.746	0.749

Panel D: Public firms: Wages of new hires

	(1)	(2)	(3)	(4)	(5)	(6)
	Log(wage/new hire) all employees	Log(wage/new hire) aged < 25	Log(wage/new hire) aged 25–34	Log(wage/new hire) aged 35–44	Log(wage/new hire) aged 45–54	Log(wage/new hire) aged ≥55
Time from IPO 1–5 years	0.009 (0.56)	-0.003 (-0.18)	0.014 (0.98)	0.018 (0.92)	-0.005 (-0.22)	-0.008 (-0.23)
N	36,384	33,052	34,863	34,679	33,161	28,655
R ²	0.841	0.638	0.820	0.780	0.727	0.683