

Internet Appendix

For

“Drivers of Effort: Evidence from Employee Absenteeism”*

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This Internet Appendix reports the results of robustness tests and supplementary results as described below:

Table IA1: Robustness test to main results reported in main Table 4

Table IA2: Robustness test to results reported in Table A1

Table IA3: Correlation between main variables used in analysis

Table IA4: Robustness test to results reported in main Table 7

Table IA5: Robustness test to results reported in main Table 8

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Table IA1

The effects of absenteeism on productivity, excluding employees with hospitalization

The sample consists of the limited liability firms in Denmark that are covered by the administrative survey of employee absenteeism conducted by Danish Statistics. It contains 4,140 unique firms and 665,661 full-time employees, representing approximately 60% of full-time employees in the private sector in Denmark. This table presents the effect of employee absence on OROA (Panel A) and Sales per Employee (Panel B) as in main results Table 4, excluding all hospitalized employees. The considered variables are defined as in Table 4. Columns 2-3 only include firms with 50 or more employees. Heteroscedasticity-robust standard errors (in parentheses) are clustered at the firm level. ***, **, and * correspond to statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: OROA			
	(1)	(2)	(3)
Absence	-0.0008*** (0.0003)	-0.0010** (0.0004)	-0.0009* (0.0005)
Firm age	-0.0001 (0.0001)	0.0000 (0.0001)	-0.0040*** (0.0009)
Assets	-0.0000** (0.0000)	-0.0000** (0.0000)	-0.0000 (0.0000)
Observations	10,203	7,538	7,538
<i>R</i> -squared	0.013	0.024	0.718
No. firms	3,191	2,086	2,086
Panel B: Sales per employee			
	(1)	(2)	(3)
Absence	-0.1048*** (0.0273)	-0.1590*** (0.0397)	-0.1150** (0.0473)
Firm age	0.0044 (0.0075)	0.0058 (0.0085)	-0.1421** (0.0610)
Assets	0.0448 (0.0413)	0.0487 (0.0432)	0.0663 (0.0809)
Observations	9,032	6,659	6,659
<i>R</i> -squared	0.050	0.054	0.825
No. firms	2,914	1,893	1,893
Year FE	Yes	Yes	Yes
Firm FE	No	No	Yes
Industry FE	Yes	Yes	No

Table IA2

Promotion and separation with absence, excluding employees with hospitalization

The sample consists of the limited liability firms in Denmark that are covered by the administrative survey of employee absenteeism conducted by Danish Statistics. It contains 4,140 unique firms and 665,661 full-time employees, representing approximately 60% of full-time employees in the private sector in Denmark. This table reports the estimated effect of absence on promotion and separation as in Table A1, excluding employees who were ever hospitalized. Columns 1 and 3 do not include employee fixed effects. The firm controls included are firm age and assets. Employee controls include age, number of children, wage and hospitalization. Heteroscedasticity-robust standard errors (in parentheses) are clustered at the firm level. ***, **, and * correspond to statistical significance at the 1%, 5%, and 10% levels, respectively.

	Promotion		Separation	
	(1)	(2)	(3)	(4)
Days absent _{<i>t</i>-1}	-0.0003*** (0.0001)	-0.0001** (0.0001)	0.0006*** (0.0001)	0.0002** (0.0001)
Observations	880,546	880,546	973,806	973,806
<i>R</i> -squared	0.0684	0.3904	0.0182	0.6686
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Employee characteristics	Yes	Yes	Yes	Yes
Employee FE	No	Yes	No	Yes
Firm controls	Yes	Yes	Yes	Yes

Table IA3
Correlation matrix

The sample consists of the limited liability firms in Denmark that are covered by the administrative survey of employee absenteeism conducted by Danish Statistics. It contains 4,140 unique firms and 665,661 full-time employees, representing approximately 60% of full-time employees in the private sector in Denmark. This table presents the correlation matrix of the considered firm and industry characteristics. The definitions of the variables are presented in Appendix C. ***, **, and * correspond to statistical significance at the 1%, 5%, and 10% levels, respectively.

	Wage sensitivity	End sensitivity	Promotion sensitivity	HHI	Size	Hierarchy	Total debt to assets	PE	Family	Single owned
Wage sensitivity	1									
End sensitivity	0.169***	1								
Promotion sensitivity	0.0415	0.218***	1							
HHI	0.00270	0.0181	0.0289	1						
Size	0.00626	0.251***	0.307***	0.00754	1					
Hierarchy	0.00786	0.225***	0.263***	-0.0411	0.352***	1				
Total debt to assets	0.00739	-0.0225	-0.0126	0.00104	-0.0868**	-0.107***	1			
PE firms	-0.0170	0.0263	0.0213	-0.0171	0.142***	0.0480	-0.0129	1		
Family firms	-0.0621*	-0.122***	-0.158***	0.0205	-0.247***	-0.147***	0.0157	-0.0492	1	
Single owned firms	0.0165	-0.0711*	-0.113***	-0.00170	-0.198***	-0.0996***	0.0249	-0.00860	0.249***	1

Table IA4

Decomposition of absence, excluding employees with hospitalization

The sample consists of the limited liability firms in Denmark that are covered by the administrative survey of employee absenteeism conducted by Danish Statistics. It contains 4,140 unique firms and 665,661 full-time employees, representing approximately 60% of full-time employees in the private sector in Denmark. This table repeats the analysis of main Table 7, excluding employees who were ever hospitalized. The dependent variable is the annual number of days absent. The sample includes movers and non-movers. The sample excludes employees who were ever hospitalized. Panel A is based on estimation of equation (1) of the main paper without including the employee time-varying controls, and Panel B is based on estimation of equation (1) of the main paper, which includes controls for age, number of children, wage, and hospitalization. Each column defines a set of firms R and R' based on percentiles of average absence. The first row reports the difference in average days absent overall between the two groups $y_R - y_{R'}$; the second row reports the difference due to incentives $\gamma_R - \gamma_{R'}$; the third row reports the difference due to selection $\alpha_R - \alpha_{R'}$; the fourth row reports the share of the difference in average absence between two sets of firms that is due to incentives $S_{incentives}(R; R')$. The last row reports the share of the difference in average absence between two sets of firms that is due to selection $S_{selection}(R; R')$. The standard error of the share is calculated by bootstrap of 50 repetitions, and reported in parentheses.

Panel A: Base

	Above/below median	Top/bottom 25%	Top/bottom 10%	Top/bottom 5%
	(1)	(2)	(3)	(4)
<i>Difference in absence</i>				
Overall	4.8985	8.0517	12.2189	15.7718
Due to incentives	2.8022	4.4477	6.5466	8.5819
Due to selection	2.0963	3.6040	5.6723	7.1899
<i>Share of difference</i>				
Due to incentives	0.5721 (0.0723)	0.5524 (0.0701)	0.5358 (0.0682)	0.5441 (0.0979)
Due to selection	0.4279	0.4476	0.4642	0.4559

Panel B: w/ Person controls

	Above/below median	Top/bottom 25%	Top/bottom 10%	Top/bottom 5%
	(1)	(2)	(3)	(4)
<i>Difference in absence</i>				
Overall	4.8972	8.0499	12.2195	15.7735
Due to incentives	2.7996	4.4519	6.5593	8.6058
Due to selection	2.0976	3.5980	5.6602	7.1676
<i>Share of difference</i>				
Due to incentives	0.5717 (0.0723)	0.5530 (0.0700)	0.5367 (0.0684)	0.5456 (0.0981)
Due to selection	0.4283	0.4469	0.4632	0.4544

Table IA5

Decomposition of absence of managers and nonmanagers, excluding employees with hospitalization

The sample consists of the limited liability firms in Denmark that are covered by the administrative survey of employee absenteeism conducted by Danish Statistics. It contains 4,140 unique firms and 665,661 full-time employees, representing approximately 60% of full-time employees in the private sector in Denmark. This table repeats the analysis of main Table 8, excluding employees who were ever hospitalized. The dependent variable is the annual number of days absent. The sample includes movers and non-movers. The sample excludes employees who were ever hospitalized. Both panels are based on estimation of equation (1) of the main analysis and also include controls for age, number of children, wage, and hospitalization. Panel A is based on managers, and Panel B is based on non-managerial employees. Each column defines a set of firms R and R' based on percentiles of average absence. The first row reports the difference in average days absent overall between the two groups $y_R - y_{R'}$; the second row reports the difference due to incentives $\gamma_R - \gamma_{R'}$; the third row reports the difference due to selection $\alpha_R - \alpha_{R'}$; the fourth row reports the share of the difference in average absence between two sets of firms that is due to incentives $S_{incentives}(R; R')$. The last row reports the share of the difference in average absence between two sets of firms that is due to selection $S_{selection}(R; R')$. The standard error of the share is calculated by bootstrap of 50 repetitions, and reported in parentheses.

Panel A: Managers				
	Above/below median	Top/bottom 25%	Top/bottom 10%	Top/bottom 5%
	(1)	(2)	(3)	(4)
<i>Difference in absence</i>				
Overall	3.8157	6.3141	9.6795	12.4270
Due to incentives	2.4140	3.8116	6.3602	8.6773
Due to selection	1.4017	2.5025	3.3194	3.7498
<i>Share of Difference</i>				
Due to incentives	0.6326 (0.0888)	0.6037 (0.0837)	0.6571 (0.0855)	0.6983 (0.1031)
Due to selection	0.3674	0.3963	0.3429	0.3017
Panel B: Nonmanagers				
	Above/below median	Top/bottom 25%	Top/bottom 10%	Top/bottom 5%
	(1)	(2)	(3)	(4)
<i>Difference in absence</i>				
Overall	5.5129	9.0869	13.9387	18.1695
Due to incentives	3.2069	5.1066	8.2031	12.6879
Due to selection	2.3060	3.9803	5.7356	5.4816
<i>Share of difference</i>				
Due to incentives	0.5817 (0.0612)	0.5620 (0.0556)	0.5885 (0.0803)	0.6983 (0.1087)
Due to selection	0.4183	0.4380	0.4115	0.3017