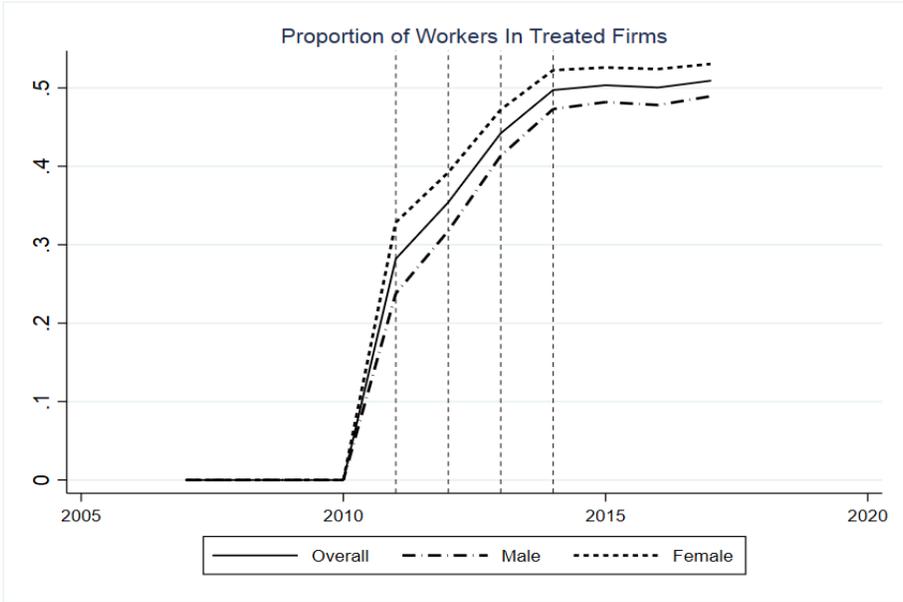


A Online Appendix

A.1 Other Summary Figures

Figure A1: Proportion of Workers Employed in Treated Establishments



Online Appendix - Does Pay Transparency Affect the Gender Wage Gap? Evidence from Austria
A. Gulyas, S. Seitz, S. Sinha

Table A1: Income Report for 2016: All Federal Services

The following table is from "Einkommensbericht 2017" of the Austrian Federal Government, Public Administration. It is publicly available at Einkommensbericht, 2017. The table illustrates how an income report can be written. The first column depicts the occupational groups/task groups as defined by collective bargaining agreements. The rows printed in bold summarize the statistics averaged for each occupation.task group. The same is repeated for employees in training and those who previously worked for the government, but are now employed in a (semi-) private company, e.g. postal services or telecommunications. All these tables are accompanied by brief discussion on why there are wage differences and measures taken to reduce differences that stem from factors not related to the seniority structure or composition within task groups (for example: office clerks and technicians are in the same group but technicians are paid more. The former group is mostly female, while the latter is mostly male, which explains some of the differences in remuneration schedules by group.

Occupation Clusters	Number of Workers		Median Gross Income/Yr		Mean Age		Gender Pay Gap	Age Diff
	Men	Women	Men	Women	Men	Women	%	(Men-Women)
Central Administration	23872	27002	45637	35799	49.2	46.1	21.6%	3.1
A1, v1	4157	3211	75141	61482	48.6	44.0	18.2%	4.6
A2, v2	7598	6454	57201	47898	49.7	45.9	16.3%	3.8
A3, v3, h1	6401	10721	38151	34285	49.8	46.7	10.1%	3.1
A4-7, v4-5, h2-5	4421	5962	28336	25749	46.5	45.1	9.1%	1.5
Service Rank: Central Administration	756	553	78994	65742	57.3	56.0	16.8%	1.4
Data Services and Management	539	101	60305	56189	46.7	48.5	6.8%	-1.8
Police and Law Enforcement (Executive)	27484	5230	51504	40776	44.8	34.2	20.8%	10.5
E1	649	42	81756	64668	52.3	44.4	20.9%	7.9
E2a	9742	975	58561	46584	50.3	39.7	20.5%	10.6
E2b, Lowest Rank Officer	15344	3519	48284	40797	43.0	34.5	15.5%	8.5
E2c, Aspirant	1705	694	17442	17442	26.3	24.5	0.0%	1.8
Service Rank, Executive Office	44	0	54334	-	54.8	-	-	-
Judges, District Attorneys (Judiciary)	1491	1746	91417	80341	48.4	43.9	12.1%	4.5
R3, III	96	37	144402	123945	55.9	51.5	14.2%	4.4
R2, II	106	85	111366	106649	54.0	52.3	4.2%	1.7
R1a, R1b, I	739	1011	88651	80341	48.4	44.7	9.4%	3.7
Federal Court Judges	225	195	96489	99331	52.4	50.9	-3.0%	1.4
Judge Aspirants	71	136	34192	34192	29.8	28.6	0.0%	1.2
Procurator General's Office	12	6	128815	125434	52.7	49.5	2.6%	3.2
St2, STII	55	30	90827	84100	46.3	45.1	7.4%	1.2
St1, STI	187	246	81175	70271	43.9	39.3	13.4%	4.6
Military Service	15661	421	41589	28777	41.6	31.1	30.8%	10.4
MBO1, MZO1	735	45	91956	78806	48.7	45.2	14.3%	3.4
MBO2, MZO2	2160	23	56766	43759	45.3	33.5	22.9%	11.8
MBUO1, MZUO1	6673	63	44411	34442	49.6	37.3	22.5%	12.3
MBUO2, MZUO2, MZO3	2477	92	34108	29580	33.1	31.6	13.3%	1.5
MZ Charge	1684	171	27910	22792	24.1	25.3	18.3%	-1.3
Service Rank: Military Service	557	0	42654	-	55.1	-	-	-
International Strike Force	1375	27	29231	27493	24.1	26.2	5.9%	-2.1
Teachers	19339	30109	60584	52635	48.2	45.4	13.1%	2.8
L1, I1	14837	23628	64858	55453	49.0	46.1	14.5%	3.0
L2, I2	4156	5750	48396	43609	46.7	44.9	9.9%	1.8
L3, I3	123	118	24360	24599	45.9	47.0	-1.0%	-1.2
Foreign Exchange Teachers	223	523	17154	17293	25.5	24.7	-0.8%	0.8
Lecturers (University)	679	852	69591	65002	52.4	50.9	6.6%	1.5
Educational Board	171	143	85325	83103	56.6	56.0	2.6%	0.6
Nursing and Health Services	91	175	44317	39369	48.1	47.8	11.2%	0.4
K2, k2	25	28	49982	43525	48.7	44.7	12.9%	4.0
K3, k3	7	11	56430	55410	55.2	55.8	1.8%	-0.7
K4, k4	43	95	42875	40192	47.6	46.4	6.3%	1.2
K5, k5	8	-	40734	-	49.1	-	-	-
K6, k6	15	34	32272	33825	46.6	50.7	-4.8%	-4.1
Others	184	452	106960	106960	53.5	51.3	0.0%	2.2
Medical professionals	168	449	106960	106960	55.4	51.4	0.0%	4.0
Others	16	3	25269	27723	33.7	34.0	-9.7%	-0.3

A.2 Sample Income Report from the Public Sector

A.3 Bunching of Establishments

Figure A2: Establishments Violating Intended Treatment Status based on Size Rule

The figure below shows the establishment-size weighted fraction of establishments that violate intended treatment rule based on their firm sizes in 2010 and 2013, separately. Establishments would violate their intended treatment rule if they enter treatment either before the intended start year because of an increase in firm size, or they manage to delay treatment beyond their intended year by reducing firm size.

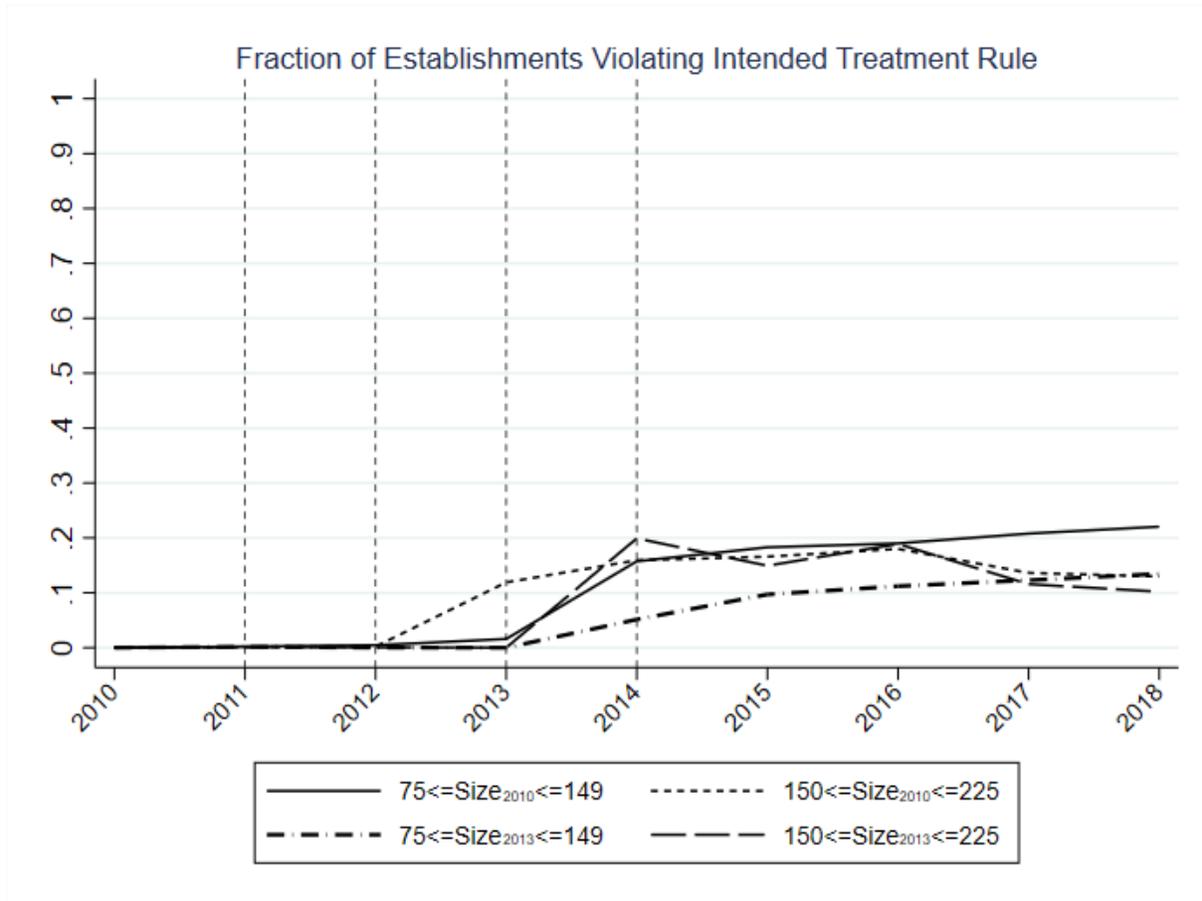
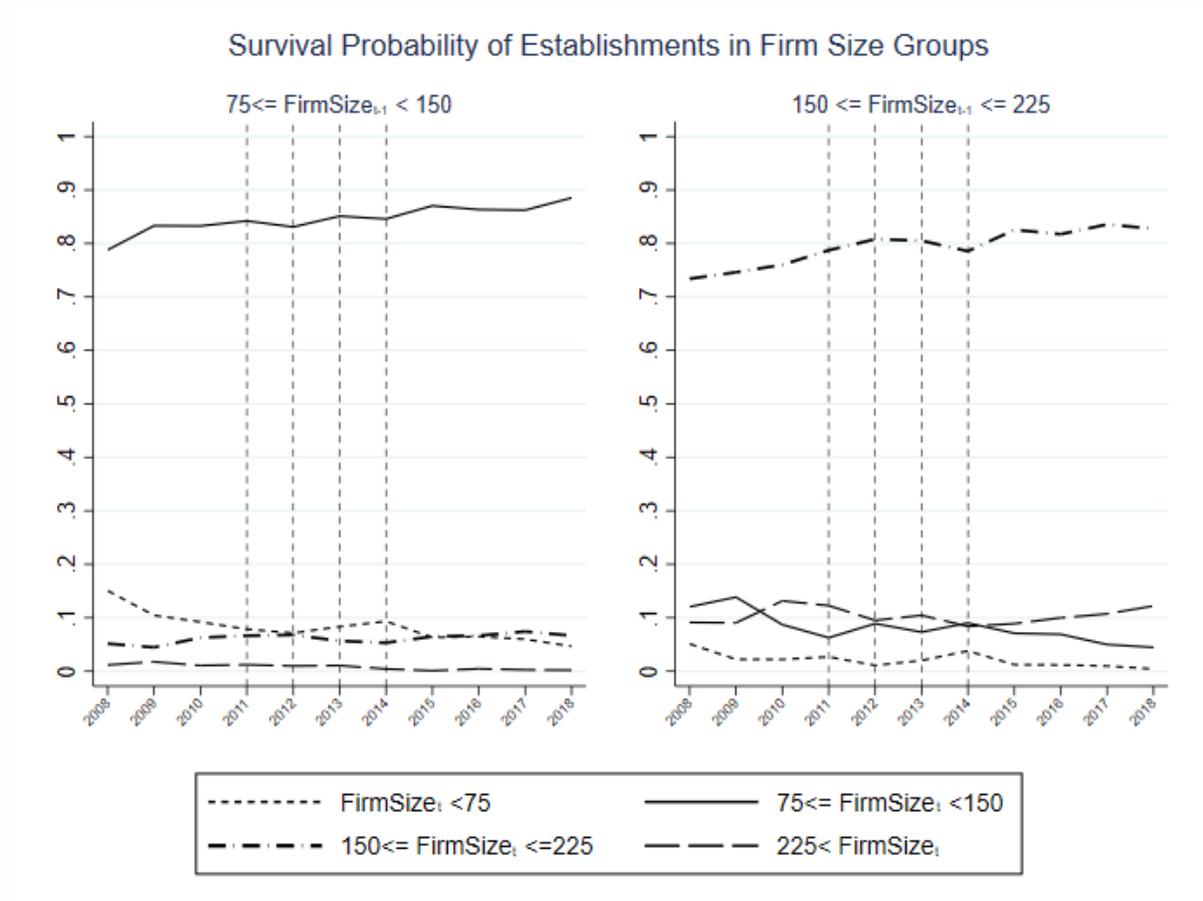


Figure A3: Transitions of Establishments Across Firm Size Groups

The figure below plots the fraction of establishments, weighted by establishment size, that survive in the same firm size group or transition to other firm size groups, relative to the number of establishments in each size group for the previous year. We do this exercise for the treated and control groups of establishments which represent those just above and below the 150 firm size-cutoff respectively.



A.4 Robustness Checks

Figure A4: Effects of Pay Transparency on Adjusted Gender Wage Gap (By Treatment Status)

The figure below shows the evolution of the gender wage gap, separately for the treated and control group of establishments. The sample includes only establishments of firms which had between 75 and 225 employees in 2013, the year before treatment. Establishments of firms which had more than 150 employees in 2013, were assigned to treatment status, and others to the control group.

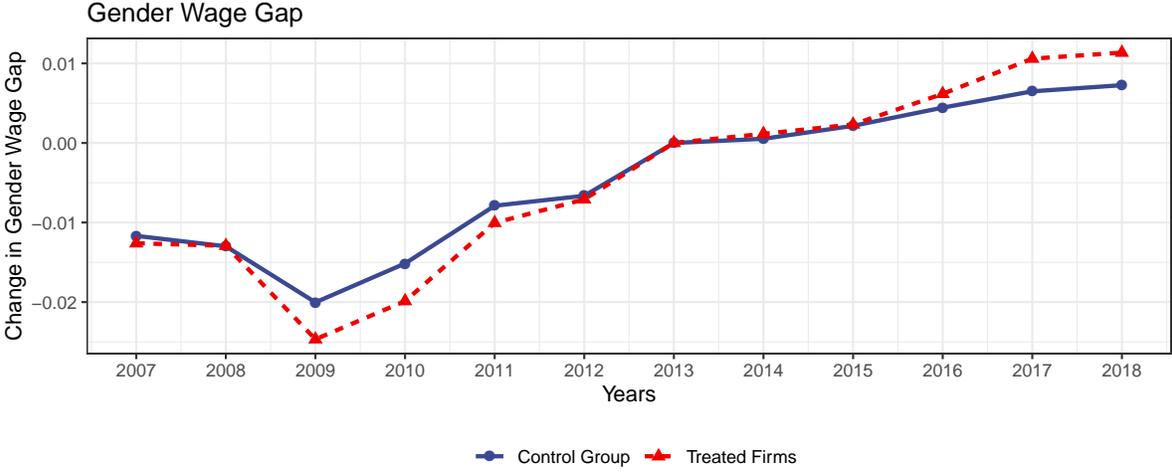
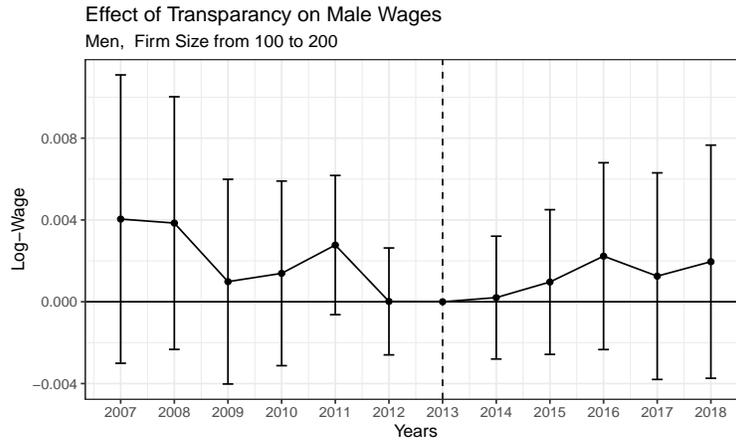


Figure A5: Effects of Transparency on GWG and Daily Wage ($100 \leq \text{Firm Size} \leq 200$)

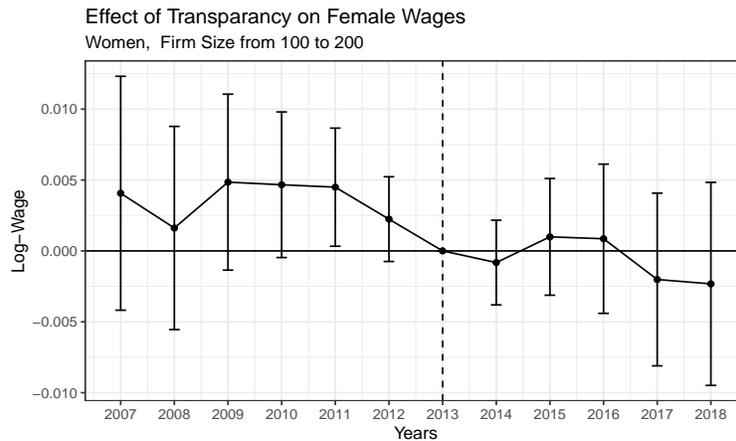
The figure below plots the effects of transparency on gender wage gap (Panel (a)), and daily wages for male (Panel (b)) and female (Panel (c)) workers separately, in establishments of firms which had between 100-200 employees in 2013 (Eq. 1). Treatment is assigned to establishments of firms which had more than 150 workers in 2013. Standard errors are clustered at establishment level. The standard error spikes represent 95% CI.



(a) Gender Wage Gap



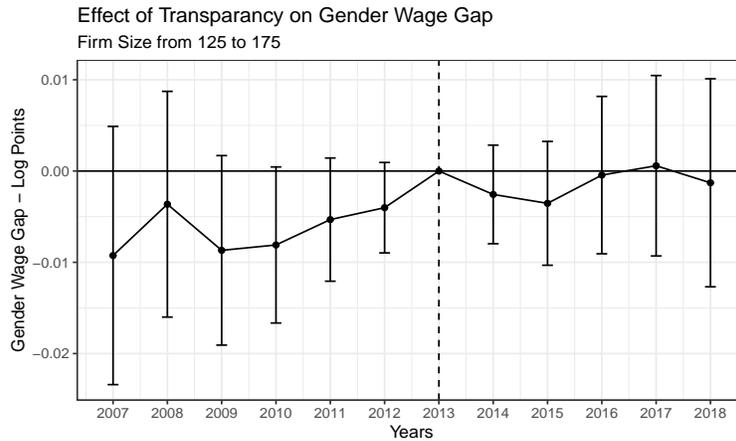
(b) Male Daily Wage



(c) Female Daily Wage

Figure A6: Effects of Transparency on GWG and Daily Wage ($125 \leq \text{Firm Size} \leq 175$)

The figure below plots the effects of transparency on the gender wage gap (Panel (a)), and on daily wages for male (Panel (b)) and female (Panel (c)) workers separately, in establishments of firms which had between 125-175 employees in 2013 (Eq. 1). Treatment is assigned to establishments of firms which had more than 150 workers in 2013. Standard errors are clustered at the establishment level. The standard error spikes represent 95% CI.



(a) Gender Wage Gap



(b) Male Daily Wage



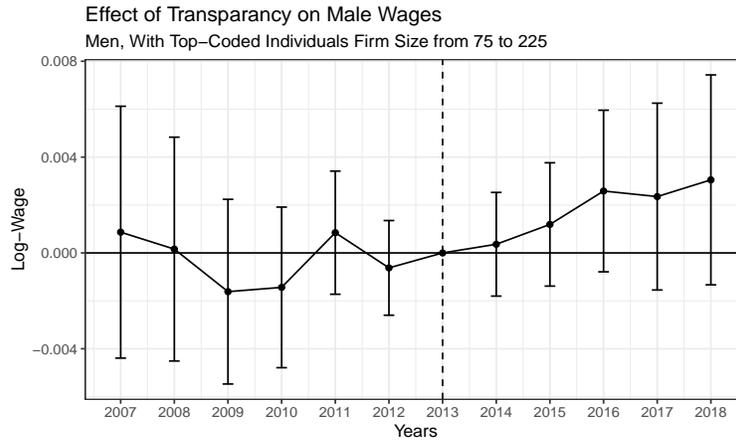
(c) Female Daily Wage

Figure A7: Effects of Transparency on GWG and Daily Wage (With Top-Coded)

The figure below plots the effects of transparency on the gender wage gap (Panel (a)), and on daily wages for male (Panel (b)) and female (Panel (c)) workers separately (Eq. 1). The sample is restricted to establishments of firms with 75-225 employees in 2013. All workers with top-coded daily wages are included in the sample, with their daily wage set to the year-specific top-coding. Standard errors are clustered at the establishment level. The standard error spikes represent 95% CI.



(a) Gender Wage Gap



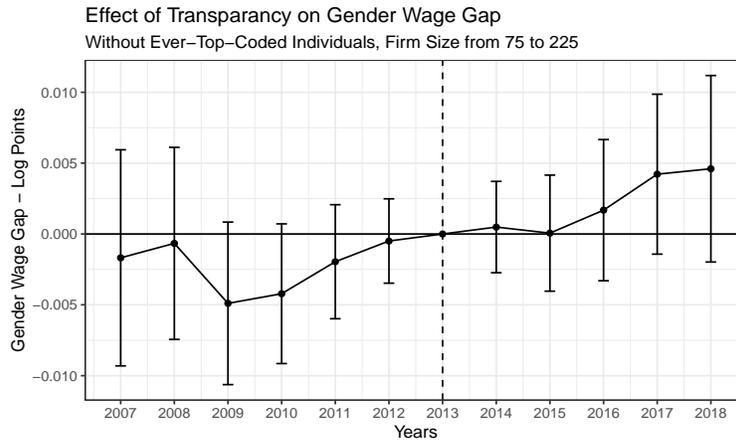
(b) Male Daily Wage



(c) Female Daily Wage

Figure A8: Effects of Transparency on GWG and Daily Wage (Without Ever-Top-Coded)

The figure below plots the effects of transparency on the gender wage gap (Panel (a)), and on daily wages for male (Panel (b)) and female (Panel (c)) workers separately (Eq. 1). The sample is restricted to establishments of firms with 75-225 employees in 2013. All workers who were ever top-coded in the sample period are dropped. Standard errors are clustered at the establishment level. The standard error spikes represent 95% CI.



(a) Gender Wage Gap



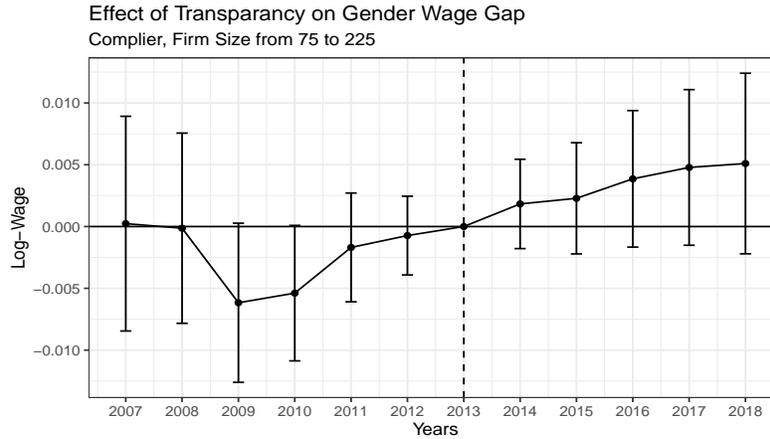
(b) Male Daily Wage



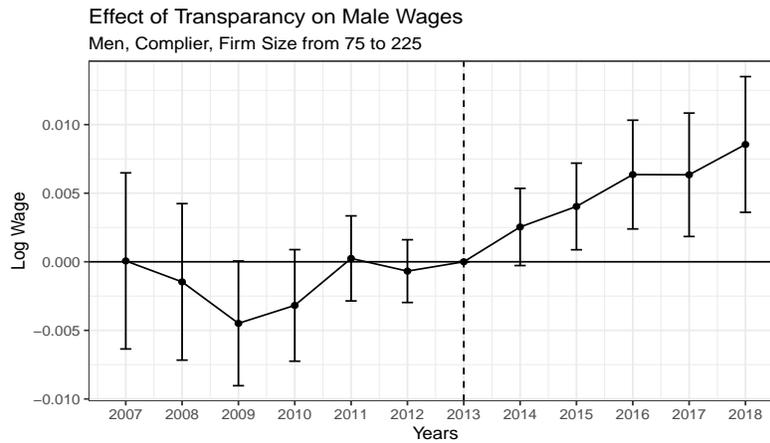
(c) Female Daily Wage

Figure A9: Effects of Transparency on GWG and Daily Wage (Complier Sample)

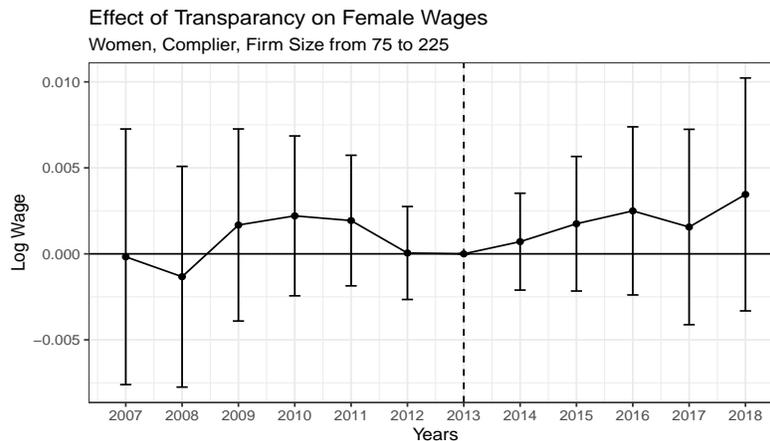
The figure below plots the effects of transparency on the gender wage gap (panel (a)), and on male (panel (b)) and female (panel (c)) workers separately, for those firms which do not change their treatment assignment after 2013. The sample includes only establishments of firms with 75-225 employees in 2013. Standard errors are clustered at the establishment level. The standard error spikes represent 95% CI.



(a) Gender Wage Gap



(b) Male Daily Wage



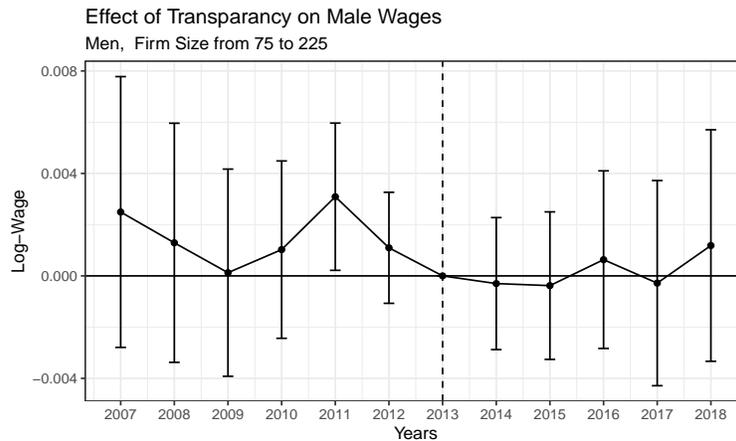
(c) Female Daily Wage

Figure A10: Effects of Transparency on GWG and Daily Wage (Treatment Defined as of 2010)

The figure below plots the effects of the transparency on gender wage gap (Panel (a)), and on daily wages for male (Panel (b)) and female (Panel (c)) workers separately. Treatment is assigned based on firm size in 2010, one year before the reform was announced. The rest is as specified in equation (1). Standard errors are clustered at the establishment level. The standard error spikes represent 95% CI.



(a) Gender Wage Gap



(b) Male Daily Wage



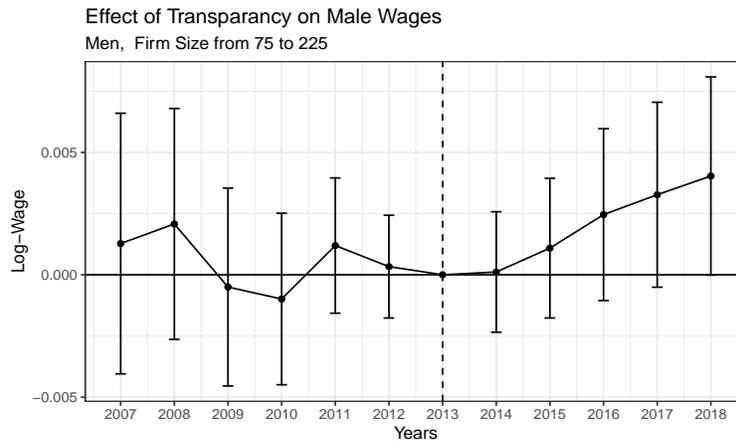
(c) Female Daily Wage

Figure A11: Effects of Transparency on GWG and Daily Wage (Worker-level Treatment)

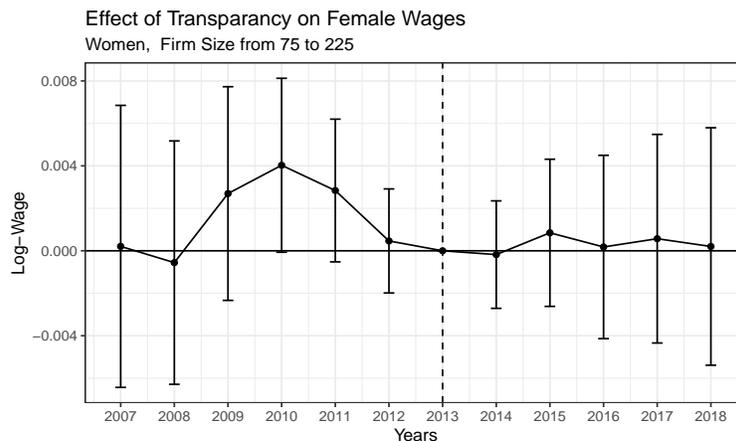
The figure below plots the effects of transparency on the gender wage gap (Panel (a)), and on daily wages for male (Panel (b)) and female (Panel (c)) workers separately. Individuals are assigned to treatment status if they worked in an establishment whose firm size exceeded 150 employees in 2013, and to the control group otherwise. The rest is as specified in equation (1). Standard errors are clustered at the establishment level. The standard error spikes represent 95% CI.



(a) Gender Wage Gap



(b) Male Daily Wage



(c) Female Daily Wage

Table A2: Effects of Pay Transparency on Gender Wage Gap

	<i>Dependent variable: ln(Daily Wage)</i>			
	(1)	(2)	(3)	(4)
Male	0.24*** (0.003)	0.32*** (0.004)		
Male*Treat	0.01 (0.01)	0.003 (0.01)	-0.01* (0.003)	
Male*Treat*1[t=2007]	-0.01 (0.01)	-0.01 (0.01)	-0.002 (0.004)	-0.001 (0.004)
Male*Treat*1[t=2008]	-0.01 (0.01)	-0.01 (0.01)	-0.001 (0.003)	0.001 (0.004)
Male*Treat*1[t=2009]	-0.01** (0.005)	-0.01** (0.005)	-0.01* (0.003)	-0.01* (0.003)
Male*Treat*1[t=2010]	-0.005 (0.004)	-0.01 (0.004)	-0.004* (0.002)	-0.01** (0.002)
Male*Treat*1[t=2011]	-0.004 (0.003)	-0.005 (0.003)	-0.002 (0.002)	-0.003 (0.002)
Male*Treat*1[t=2012]	-0.002 (0.002)	-0.002 (0.002)	-0.0004 (0.001)	-0.001 (0.001)
Male*Treat*1[t=2013]	0.00 -	0.00 -	0.00 -	0.00 -
Male*Treat*1[t=2014]	-0.01** (0.002)	-0.01** (0.002)	0.001 (0.002)	0.001 (0.002)
Male*Treat*1[t=2015]	-0.01** (0.003)	-0.01*** (0.003)	0.0002 (0.002)	0.001 (0.002)
Male*Treat*1[t=2016]	-0.01 (0.004)	-0.01* (0.004)	0.002 (0.003)	0.002 (0.003)
Male*Treat*1[t=2017]	-0.001 (0.004)	-0.002 (0.004)	0.004 (0.003)	0.003 (0.003)
Male*Treat*1[t=2018]	0.002 (0.004)	0.001 (0.004)	0.004 (0.003)	0.003 (0.003)
Treat*1[t=2007]	0.005 (0.004)	0.01 (0.004)	0.004 (0.003)	0.003 (0.003)
Treat*1[t=2008]	0.003 (0.004)	0.004 (0.004)	0.002 (0.003)	0.001 (0.003)
Treat*1[t=2009]	0.004 (0.003)	0.005 (0.003)	0.004 (0.003)	0.004 (0.003)
λ_j	✓	✓	✓	
f(Age)*1 ^m		✓	✓	✓
λ_i			✓	
λ_{ij}				✓

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Table A2 – continued from previous page

	(1)	(2)	(3)	(4)
Treat*1[t=2010]	0.003 (0.003)	0.003 (0.003)	0.003 (0.002)	0.004* (0.002)
Treat*1[t=2011]	0.01** (0.003)	0.01** (0.002)	0.003* (0.002)	0.003* (0.002)
Treat*1[t=2012]	0.002 (0.002)	0.002 (0.002)	0.0001 (0.001)	0.0002 (0.001)
Treat*1[t=2014]	0.004** (0.002)	0.005** (0.002)	-0.0004 (0.001)	-0.0003 (0.001)
Treat*1[t=2015]	0.01*** (0.003)	0.01*** (0.003)	0.001 (0.002)	0.001 (0.002)
Treat*1[t=2016]	0.01** (0.003)	0.01** (0.003)	0.001 (0.002)	0.0002 (0.002)
Treat*1[t=2017]	0.002 (0.004)	0.003 (0.004)	-0.002 (0.003)	-0.001 (0.003)
Treat*1[t=2018]	-0.0001 (0.004)	0.001 (0.004)	-0.001 (0.003)	-0.001 (0.003)
Male*1[t=2007]	0.01*** (0.003)	0.01** (0.003)	-0.04*** (0.003)	-0.04*** (0.003)
Male*1[t=2008]	0.01*** (0.003)	0.01** (0.003)	-0.03*** (0.002)	-0.04*** (0.002)
Male*1[t=2009]	0.001 (0.002)	-0.001 (0.002)	-0.04*** (0.002)	-0.04*** (0.002)
Male*1[t=2010]	0.001 (0.002)	-0.0001 (0.002)	-0.03*** (0.002)	-0.03*** (0.002)
Male*1[t=2011]	0.003 (0.002)	0.002 (0.002)	-0.02*** (0.001)	-0.02*** (0.001)
Male*1[t=2012]	-0.002 (0.001)	-0.002 (0.001)	-0.01*** (0.001)	-0.01*** (0.001)
Male*1[t=2014]	0.003* (0.001)	0.003* (0.001)	0.01*** (0.001)	0.01*** (0.001)
Male*1[t=2015]	0.003 (0.002)	0.002 (0.002)	0.01*** (0.001)	0.01*** (0.001)
Male*1[t=2016]	0.001 (0.002)	0.0001 (0.002)	0.02*** (0.002)	0.02*** (0.002)
Male*1[t=2017]	-0.002 (0.002)	-0.003 (0.002)	0.02*** (0.002)	0.02*** (0.002)
λ_j	✓	✓	✓	
f(Age)*I ^m		✓	✓	✓
λ_i			✓	
$\lambda_{i,j}$				✓

Continued on next page

Table A2 – continued from previous page

	(1)	(2)	(3)	(4)
Male*1[t=2018]	-0.003 (0.003)	-0.01** (0.003)	0.03*** (0.002)	0.03*** (0.002)
1[t=2007]	-0.04*** (0.003)	-0.03*** (0.002)	-0.05*** (0.002)	-0.06*** (0.003)
1[t=2008]	-0.02*** (0.002)	-0.01*** (0.002)	-0.03*** (0.002)	-0.03*** (0.002)
1[t=2009]	-0.001 (0.002)	0.004** (0.002)	-0.01*** (0.002)	-0.01*** (0.002)
1[t=2010]	-0.003** (0.002)	0.001 (0.002)	-0.01*** (0.001)	-0.01*** (0.001)
1[t=2011]	-0.01*** (0.001)	-0.01*** (0.001)	-0.02*** (0.001)	-0.02*** (0.001)
1[t=2012]	-0.01*** (0.001)	-0.01*** (0.001)	-0.01*** (0.001)	-0.01*** (0.001)
1[t=2014]	0.01*** (0.001)	0.01*** (0.001)	0.02*** (0.001)	0.02*** (0.001)
1[t=2015]	0.02*** (0.002)	0.02*** (0.002)	0.03*** (0.001)	0.03*** (0.001)
1[t=2016]	0.03*** (0.002)	0.02*** (0.002)	0.04*** (0.001)	0.04*** (0.001)
1[t=2017]	0.03*** (0.002)	0.03*** (0.002)	0.05*** (0.002)	0.05*** (0.002)
1[t=2018]	0.04*** (0.002)	0.03*** (0.002)	0.07*** (0.002)	0.07*** (0.003)
Age		-0.04*** (0.01)		
AgeSq		0.73*** (0.03)	0.92*** (0.03)	1.05*** (0.03)
AgeCu		1.62*** (0.05)	1.35*** (0.05)	1.18*** (0.05)
AgeQuart		-4.37*** (0.10)	-3.99*** (0.09)	-3.95*** (0.09)
Male*Age		0.29*** (0.01)		
Male*AgeSq		-1.58*** (0.03)	-1.65*** (0.03)	-1.74*** (0.03)
λ_j	✓	✓	✓	
$f(\text{Age}) * \mathbb{I}^m$		✓	✓	✓
λ_i			✓	
λ_{ij}				✓

Continued on next page

Table A2 – continued from previous page

	(1)	(2)	(3)	(4)
Male*AgeCu		-0.76*** (0.05)	-0.60*** (0.05)	-0.42*** (0.05)
Male*AgeQuart		4.39*** (0.11)	3.69*** (0.09)	3.55*** (0.10)
Observations	4914038	4914038	4914038	4914038
R ²	0.46	0.49	0.92	0.94
Adjusted R ²	0.46	0.49	0.90	0.91

A.5 Analysis at the Establishment Level

In our main specification we estimate the effect of the Austrian pay transparency reform on individual (daily) wages. Here we present an alternative specification of our baseline model, in which we regress the gender pay gap of establishment j in year t (GPG_{jt}) on the interaction of the year indicator $\mathbf{1}[t = k]$ and the treatment indicator $Treat_{j(2013)}$. Thereby, we focus again on establishments of firms with 75-225 employees in 2013 and assign establishments with a firm size equal to or greater than 150 employees in 2013 to the treatment group:

$$GPG_{jt} = \sum_{k=2007}^{2018} \beta^k \mathbf{1}[t = k] * Treat_{j(2013)} + \lambda_j + \lambda_t + \epsilon_{jt}, \quad (1)$$

As in the baseline specification in equation (1), λ_j and λ_t denote the establishment and year fixed effects respectively. ϵ_{jt} denotes the idiosyncratic error term. As in the baseline specification, we drop the year 2013 from our estimation for β^k and λ_t due to collinearity concerns.

Figure A12 plots the β^k coefficients from estimating equation (1) for the establishments in our baseline sample. Overall, this analysis corroborates our baseline results: The Austrian pay transparency legislation had no discernible economic or statistically significant effect on the gender pay gap in treated establishments. Only in 2011 and 2012 we observe a small significant pre-trend in the gender pay gap. However, the gender pay gap is actually increasing rather than decreasing, such that we can rule out anticipation effects.

Figure A12: Effect of Transparency on Establishment Level Gender Wage Gap

The figure below plots the effects of pay transparency on the establishment-level gender wage gap using equation (1). The sample is restricted to establishments of firms with 75-225 employees in 2013. Standard errors are clustered at the establishment level. The standard error spikes represent 95% confidence intervals.

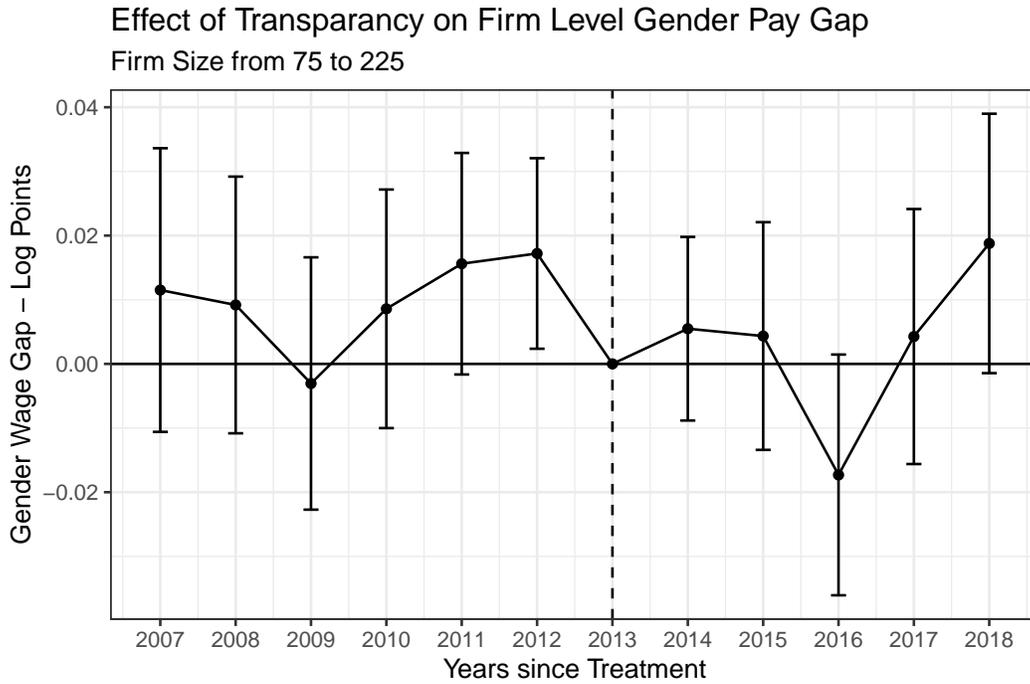


Figure A13: Gender-Specific Effects of Transparency on Daily Wages

[Above/Below Establishment-Level Gender-Specific Median Wage]

The figure below plots the effects of transparency on male and female wages, for workers who earn above (top panels) and below (bottom panels) their gender-specific establishment-level median wage in 2013 (Eq. (1)), the year before treatment. Standard errors are clustered at the establishment level. The standard error spikes represent 95% CI.



(a) Above Median Male



(b) Above Median Female



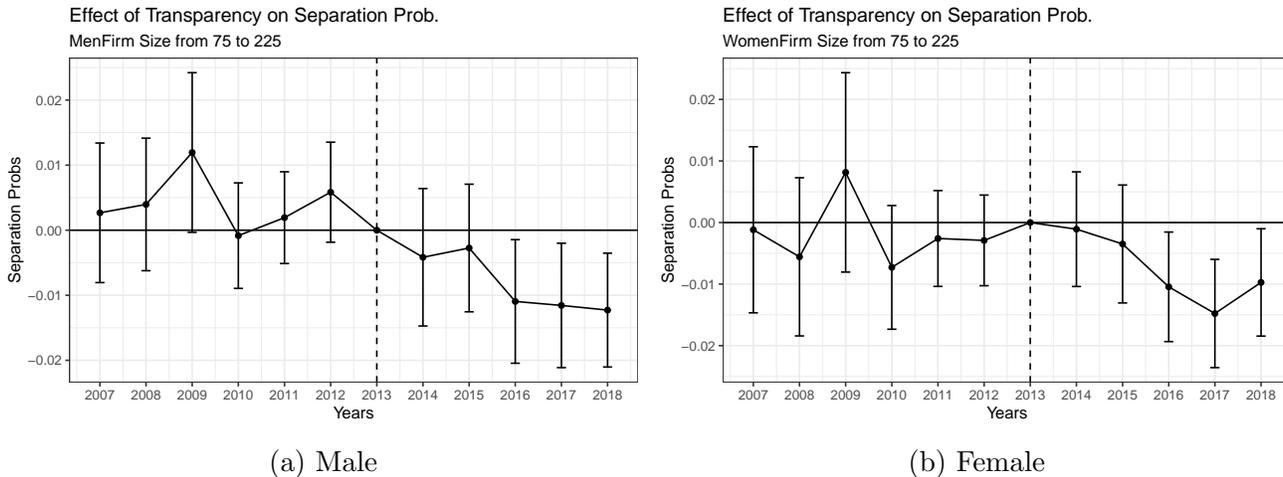
(c) Below Median Male



(d) Below Median Female

Figure A14: Effects of Transparency on Job Separation Rate

The figure below plots the effects of pay transparency on the year-on-year job separation rate for male and female workers (Eq. (4)). The sample is restricted to establishments of firms with 75-225 employees in 2013. Standard errors are clustered at the establishment level. The standard error spikes represent 95% confidence intervals.



A.6 Gender Wage Gap Decomposition

We decompose the overall gender wage gap into a sorting component, which captures the fact that men and women work for different establishments, and a within establishment component that contains the gender wage gap originating from differences in pay policies towards men and women, as well as gender differences in other characteristics. Let's define the wage in a given year of worker i with gender g working at establishment $j(i)$ as $w_{i,j(i)}^g$. Subtracting and adding the respective female or male establishment average wage as shown in the following equation, allows us to decompose the gender wage gap into a sorting component and a within establishment

component:

$$\begin{aligned}
\frac{1}{N_M} \sum w_{i,j(i)}^M - \frac{1}{N_w} \sum w_{i,j(i)}^W &= \bar{w}^M - \frac{1}{N_W} \sum_{i=1}^{N_W} (\bar{w}_{j(i)}^M - (\bar{w}_{j(i)}^M - w_{i,j(i)}^W)) \\
&= \underbrace{\bar{w}^M - \frac{1}{N_W} \sum_{i=1}^{N_W} \bar{w}_{j(i)}^M}_{\text{Sorting}} + \underbrace{\frac{1}{N_W} \sum_{i=1}^{N_W} (w_{i,j(i)}^W - \bar{w}_{j(i)}^M)}_{\text{Within Establishment GPG}} \quad (2) \\
&= \frac{1}{N_M} \sum_{i=1}^{N_M} (\bar{w}_{j(i)}^W + (w_{i,j(i)}^M - \bar{w}_{j(i)}^W)) - \bar{w}^W \\
&= \underbrace{\frac{1}{N_M} \sum_{i=1}^{N_M} \bar{w}_{j(i)}^W - \bar{w}^W}_{\text{Sorting}} + \underbrace{\frac{1}{N_M} \sum_{i=1}^{N_M} (w_{i,j(i)}^M - \bar{w}_{j(i)}^W)}_{\text{Within Establishment GPG}} \quad , \quad (3)
\end{aligned}$$

where \bar{w}^W and \bar{w}^M are average male and female wages, $w_{j(i)}^W$ and $w_{j(i)}^M$ is the average wage of females and male employees working at establishment $j(i)$. Table A3 reports the findings of this decomposition for all treated firms pooled over all pre-treatment periods.

Table A3: Decomposition Gender Wage Gap

The sample is restricted to establishments of firms with 75-225 employees in 2013 and includes years before treatment (2007-2013).

	Gender Wage Gap	Sorting	Within Establishment
Decomposition (female dist. eq. (2))	0.358	0.108	0.250
Decomposition (male dist. (3))	0.358	0.086	0.272