

Extract from “The Gender Gap Between Earnings Distributions”

Esfandiar Maasoumi and Le Wang

Econ 350, Winter 2021

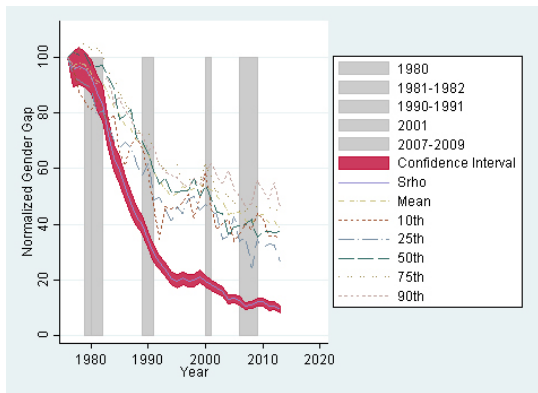
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Figure 1: Measures of The Gender Gap

Year	$S_p \times 100$ (1)	Mean (2)	10th (3)	25th (4)	50th (5)	75th (6)	90th (7)
Panel A: Actual Estimates							
1976	10.506	0.432	0.311	0.427	0.461	0.461	0.486
1977	10.110	0.419	0.297	0.397	0.470	0.465	0.470
1978	10.247	0.425	0.272	0.392	0.465	0.472	0.465
1979	10.127	0.421	0.262	0.386	0.468	0.487	0.474
1980	9.857	0.408	0.252	0.382	0.446	0.475	0.448
1981	9.221	0.395	0.263	0.338	0.447	0.477	0.440
1982	8.823	0.394	0.254	0.345	0.448	0.467	0.443
1983	7.645	0.376	0.240	0.323	0.427	0.439	0.451
1984	6.747	0.356	0.247	0.298	0.412	0.427	0.405
1985	6.258	0.343	0.208	0.288	0.357	0.401	0.414
1986	5.607	0.327	0.189	0.297	0.366	0.387	0.393
1987	5.023	0.322	0.214	0.288	0.376	0.365	0.378
1988	4.526	0.305	0.222	0.264	0.329	0.353	0.354
1989	4.215	0.298	0.210	0.244	0.323	0.324	0.352
1990	3.645	0.283	0.183	0.265	0.303	0.336	0.324
1991	3.109	0.254	0.143	0.208	0.273	0.307	0.330
1992	2.784	0.241	0.107	0.211	0.251	0.285	0.299
1993	2.518	0.228	0.145	0.194	0.262	0.274	0.285
1994	2.153	0.215	0.142	0.175	0.235	0.262	0.281
1995	2.048	0.221	0.143	0.197	0.239	0.283	0.276
1996	2.165	0.231	0.148	0.186	0.240	0.248	0.264
1997	2.071	0.227	0.158	0.210	0.241	0.262	0.259
1998	2.082	0.228	0.131	0.214	0.261	0.250	0.274
1999	2.236	0.235	0.154	0.192	0.231	0.251	0.262
2000	2.059	0.232	0.182	0.202	0.247	0.285	0.284
2001	1.913	0.226	0.143	0.192	0.227	0.261	0.300
2002	1.781	0.216	0.117	0.185	0.205	0.236	0.278
2003	1.684	0.208	0.125	0.147	0.203	0.238	0.265
2004	1.353	0.188	0.130	0.153	0.164	0.230	0.288
2005	1.393	0.190	0.105	0.182	0.180	0.219	0.255
2006	1.321	0.191	0.113	0.145	0.182	0.204	0.243
2007	1.102	0.180	0.125	0.153	0.183	0.206	0.227
2008	1.149	0.172	0.118	0.103	0.192	0.214	0.229
2009	1.275	0.186	0.136	0.148	0.163	0.212	0.270
2010	1.275	0.187	0.131	0.134	0.173	0.220	0.254
2011	1.118	0.175	0.111	0.140	0.173	0.211	0.236
2012	1.129	0.178	0.111	0.139	0.170	0.215	0.266
2013	0.974	0.167	0.108	0.113	0.172	0.198	0.223
Panel B: Average annual percentage changes by Measures							
Pre-1994	-0.080	-0.037	-0.035	-0.043	-0.031	-0.029	-0.030
Post-1994	-0.043	-0.015	-0.007	-0.014	-0.018	-0.014	-0.009
Whole Period	-0.060	-0.025	-0.020	-0.027	-0.024	-0.021	-0.019

Data Source: IPUMS CPS (<http://cps.ipums.org/cps/>). Column (1) reports the entropy gender gap ($\times 100$). Columns (2)-(6) report conventional measures.

Figure 2: The Trend of Gender Wage Gap



(Shaded Areas correspond to the recession periods announced by NBER)

Figure 3: An Example of Stochastic Dominance Results (Female v.s. Male Wage Distributions)

Year	SD	$d_{1,max}$	$d_{2,max}$	d	$Pr[d \leq 0]$	$s_{1,max}$	$s_{2,max}$	s	$Pr[s \leq 0]$
2013	FSD	14.42	-0.64	-0.64	1.00	2018.33	-0.64	-0.64	1.00

We find first-order dominance in all years with probability 1. The equality in the limits of CDFs at the end points is anticipated by the test procedure. In the interest of space, only the most recent year is reported as an example. Other results are available in the extended working paper version.

Figure 4: The Goodness of fit for Quantile Selection Models: the Quantiles of Full-time Workers with and without correction for selection

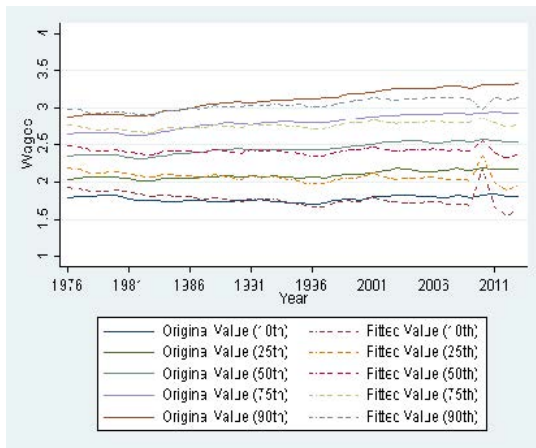


Figure 5: Measures of The Gender Gap (Corrected for Selection)

Year	$S_p \times 100$ (1)	Mean (2)	10th (3)	25th (4)	50th (5)	75th (6)	90th (7)
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2001	1.913	0.226	0.143	0.192	0.227	0.261	0.300
2002	1.781	0.216	0.117	0.185	0.205	0.236	0.278
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2004	1.353	0.188	0.130	0.153	0.164	0.230	0.288
2005	1.393	0.190	0.105	0.182	0.180	0.219	0.255
2006	1.321	0.191	0.113	0.145	0.182	0.204	0.243
2007	1.102	0.180	0.125	0.153	0.183	0.206	0.227
2008	1.149	0.172	0.118	0.103	0.192	0.214	0.229
2009	1.275	0.186	0.136	0.148	0.163	0.212	0.270
2010	1.275	0.187	0.131	0.134	0.173	0.220	0.254
2011	1.118	0.175	0.111	0.140	0.173	0.211	0.236
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2013	0.974	0.167	0.108	0.113	0.172	0.198	0.223
Panel B: Average annual percentage changes by Measures							
Pre-1994	-0.080	-0.037	-0.035	-0.043	-0.031	-0.029	-0.030
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Whole Period	-0.060	-0.025	-0.020	-0.027	-0.024	-0.021	-0.019

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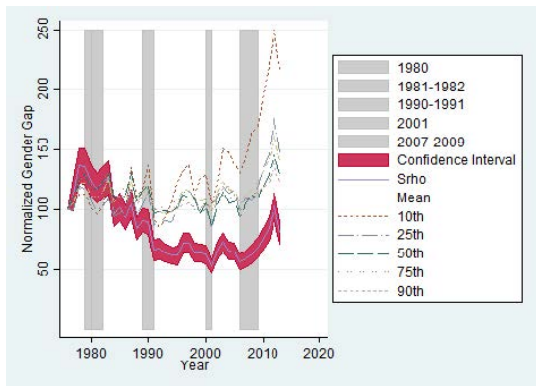


Figure 6: Estimated ρ and Implied Pattern of Selection into Employment

Year	ρ	Implied Selection	Year	ρ	Implied Selection	Year	ρ	Implied Selection	Year	ρ	Implied Selection
1976	2.164	N	1986	0.602	N	1996	-1.098	P	2006	-1.098	P
1977	1.747	N	1987	-0.241	P	1997	-1.098	P	2007	-1.548	P
1978	1.034	N	1988	0.360	N	1998	-0.664	P	2008	-1.884	P
1979	0.909	N	1989	0.120	N	1999	-0.543	P	2009	-1.953	P
1980	1.416	N	1990	-0.603	P	2000	-0.726	P	2010	0.060	N
1981	1.416	N	1991	0.240	N	2001	-0.181	P	2011	-2.534	P
1982	1.097	N	1992	-0.001	P	2002	-1.098	P	2012	-3.539	P
1983	0.542	N	1993	-0.061	P	2003	-1.748	P	2013	-2.688	P
1984	1.097	N	1994	-0.421	P	2004	-1.614	P			
1985	0.663	N	1995	-0.603	P	2005	-1.482	P			

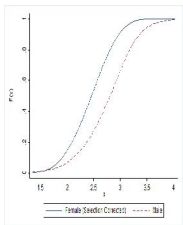
N denotes negative selection, while **P** denotes positive selection.

Figure 7: The Trend of Gender Wage Gap (Corrected for Selection into Employment)

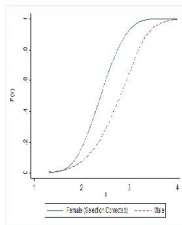


Note: Year 2010 is excluded to better reflect the time trend.

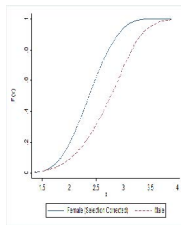
CDF Comparisons of Female (Selection Corrected) and Male Wage Distributions For Select Years



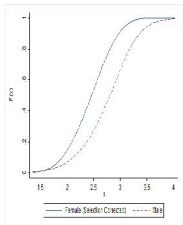
(a)



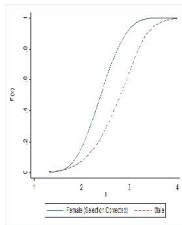
(b)



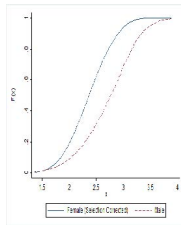
(c)



(d)



(e)



(f)

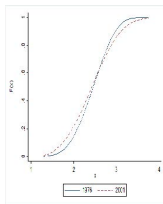


Figure 8: Stochastic Dominance Results with Correction for Selection (Female vs. Male Wage Distributions)

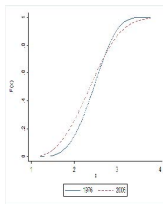
Year	SD	d	$Pr[d \leq 0]$	s	$Pr[s \leq 0]$	Year	SD	d	$Pr[d \leq 0]$	s	$Pr[s \leq 0]$
1976	N	0.74	0.67	15.65	0.67	1995	F	-0.83	1.00	-0.83	1.00
1977	F	1.09	0.12	35.34	0.12	1996	F	-0.81	1.00	-0.81	1.00
1978	F	-0.78	0.99	-0.78	0.99	1997	F	-0.81	1.00	-0.81	1.00
1979	F	-0.84	0.89	-0.92	0.89	1998	F	-0.84	1.00	-0.84	1.00
1980	N	0.97	0.37	24.66	0.37	1999	F	-0.80	1.00	-0.94	1.00
1981	N	0.98	0.49	12.98	0.49	2000	F	-0.88	1.00	-0.88	1.00
1982	F	-0.81	0.82	-0.85	0.82	2001	F	-1.08	1.00	-1.08	1.00
1983	F	-0.79	1.00	-0.87	1.00	2002	F	-1.02	1.00	-1.02	1.00
1984	F	-0.78	0.93	-0.89	0.93	2003	F	-1.01	1.00	-1.14	1.00
1985	F	-0.80	0.94	-0.81	0.94	2004	F	-1.07	1.00	-1.07	1.00
1986	F	-0.80	0.90	-0.80	0.90	2005	F	-0.92	1.00	-1.00	1.00
1987	F	-0.79	1.00	-0.79	1.00	2006	F	-1.07	1.00	-1.07	1.00
1988	F	-0.87	1.00	-0.90	1.00	2007	F	-1.03	1.00	-1.03	1.00
1989	F	-0.56	0.97	-0.84	0.97	2008	F	-0.99	1.00	-1.06	1.00
1990	F	-0.91	1.00	-0.91	1.00	2009	F	-0.83	1.00	-1.02	1.00
1991	F	-0.87	1.00	-0.93	1.00	2010	N	5.98	1.00	340.39	1.00
1992	F	-0.87	0.99	-0.99	0.99	2011	F	-0.96	1.00	-0.98	1.00
1993	F	-0.84	1.00	-0.93	1.00	2012	F	-0.96	1.00	-0.98	1.00
1994	F	-0.86	1.00	-0.86	1.00	2013	F	-0.97	1.00	-1.02	1.00

Only the d and s statistics and corresponding p-values are reported. **N** denotes no (first- or second-order) dominance found, while **F** denotes First-order dominance.

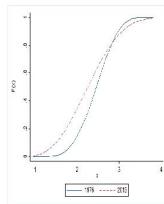
CDF Comparisons of Women's Wage Distributions Over Time



(a) 1976 vs 2006

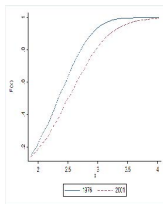


(b) 1976 vs 2006

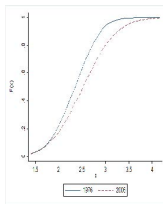


(c) 1976 vs 2013

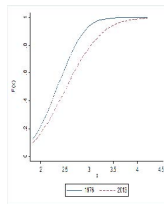
Panel A: Corrected for Selection



(d) 1976 vs 2006



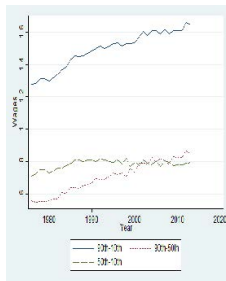
(e) 1976 vs 2006



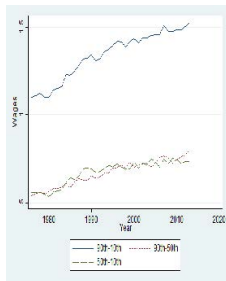
(f) 1976 vs 2013

Panel B: Without Correcting for Selection

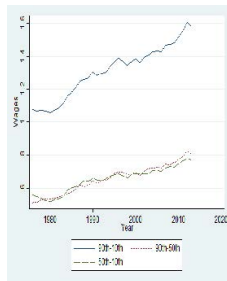
Wage Inequality: 90th–10th, 90th–50th, and 50th–10th Percentiles of the Distributions



(a) Male

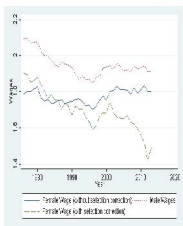


(b) Female
(without selection correction)

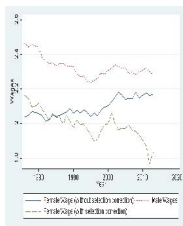


(c) Female
(with selection correction) excluding 2010

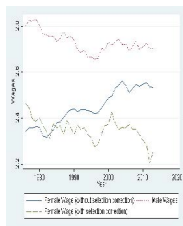
CDF Comparisons of Women's Wage Distributions Over Time



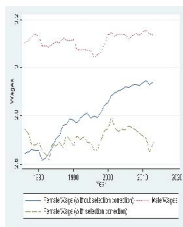
(a) $\tau = 10^{th}$



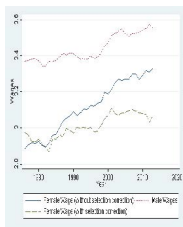
(b) $\tau = 25^{th}$



(c) $\tau = 50^{th}$



(d) $\tau = 75^{th}$



(e) $\tau = 90^{th}$

Note: Year 2010 is excluded to better reflect the time trend.

Figure 9: Measures of The Entropy Gender Gap by Educational Groups

Year	Without Selection Correction				With Selection Correction			
	Less Than High-School (1)	High School (2)	Some College (3)	College & Above (4)	Less Than High-School (5)	High School (6)	Some College (7)	College & Above (8)
1976	16.11	13.71	10.53	9.44	10.35	8.35	8.22	9.49
1977	14.34	12.82	10.70	9.14	12.42	9.54	9.88	10.29
1978	13.62	12.64	10.24	9.90	11.90	12.24	11.14	12.47
1979	12.36	12.11	10.57	10.00	12.93	11.63	11.41	11.64
1980	13.41	12.22	10.46	9.24	11.60	11.26	10.55	10.43
1981	11.56	11.25	9.70	9.19	10.93	10.59	10.75	10.16
1982	9.81	10.64	9.93	9.21	10.13	10.40	11.14	11.47
1983	11.81	9.45	8.09	8.22	15.17	10.89	11.00	11.05
1984	9.60	8.06	7.65	8.01	9.36	7.61	8.76	9.28
1985	8.45	7.62	6.89	7.97	9.66	8.65	9.03	10.31
1986	8.16	6.41	7.58	7.13	9.39	6.89	9.77	9.29
1987	6.74	6.19	6.52	5.92	10.44	8.79	10.19	9.71
1988	7.10	5.49	4.84	6.28	10.06	7.10	7.42	9.03
1989	6.51	5.84	4.53	5.54	9.88	8.51	8.03	9.31
1990	5.04	4.85	4.82	4.82	10.01	8.69	8.89	8.61
1991	5.03	4.07	4.61	4.59	7.19	5.91	7.55	7.34
1992	6.05	4.03	3.67	4.06	9.13	6.35	7.10	6.83
1993	4.95	3.46	3.29	4.06	8.17	5.93	6.44	6.91
1994	3.89	3.25	2.87	3.37	6.26	6.15	6.10	6.13
1995	4.88	3.08	2.82	3.09	8.69	6.01	6.27	6.10
1996	2.88	3.17	2.90	3.71	8.24	7.51	7.00	7.47
1997	2.84	3.70	2.92	3.15	8.26	8.20	7.79	6.91
1998	3.41	3.43	3.25	3.01	7.36	7.22	7.59	6.44
1999	4.13	3.26	3.16	3.87	6.85	6.19	6.86	7.29
2000	3.94	3.57	2.96	3.31	6.15	6.87	7.36	6.79
2001	3.16	3.13	3.05	3.30	4.97	5.83	6.78	6.69
2002	2.46	2.85	3.09	3.18	7.03	6.87	8.05	7.59
2003	3.57	2.41	2.91	3.28	9.97	7.24	8.90	7.89
2004	3.26	2.32	2.35	2.67	9.12	7.09	8.35	7.06
2005	2.93	2.40	2.63	3.00	8.40	7.39	8.12	7.71
2006	4.58	2.50	2.31	3.10	8.28	6.39	6.79	7.17
2007	3.31	2.35	1.92	2.69	7.86	7.06	6.73	7.14
2008	3.04	2.25	2.18	2.80	9.09	7.66	7.61	7.53
2009	3.43	2.55	2.34	3.14	9.50	8.31	8.01	7.84
2010	3.93	2.60	2.77	2.54	43.77	37.69	35.42	42.19
2011	3.91	2.37	2.16	2.46	13.29	10.79	9.41	7.60
2012	3.30	2.42	2.19	2.61	14.85	13.17	11.72	8.90
2013	2.56	2.28	2.13	2.31	11.04	10.73	9.61	7.29

Data Source: IPUMS CPS (<http://cps.ipums.org/cps/>). Columns (1)-(4) report the entropy gender gap (x100) without selection correction by educational groups (below high school education, high school, some college, and college and above). Columns (5)-(8) report the results with selection correction.

Figure 10: Stochastic Dominance Results (Male vs Female Potential Wage Distributions corrected for selection) by Education

Year	Less than High School			High School			Some College			College & Above		
	SD	<i>d</i>	<i>s</i>	SD	<i>d</i>	<i>s</i>	SD	<i>d</i>	<i>s</i>	SD	<i>d</i>	<i>s</i>
1976	N	0.42	1.33	F	-0.58	-0.93	N	0.68	4.49	N	0.58	4.45
1977	F	-0.29	-0.30	N	0.95	4.00	N	0.49	2.63	N	0.86	5.12
1978	F	-0.29	-0.46	F	-0.57	-0.58	F	-0.41	-0.76	N	0.52	2.3
1979	N	0.60	2.13	F	-0.89	-1.19	N	0.34	1.29	N	0.53	1.99
1980	N	0.54	2.22	N	0.80	2.94	F	-0.45	-0.46	N	0.64	3.83
1981	F	-0.30	-0.30	N	0.62	0.98	N	0.82	5.36	N	0.98	5.93
1982	N	0.26	0.58	F	-0.62	-0.91	N	0.52	1.52	N	0.75	4.15
1983	F	-0.26	-0.3	F	-0.57	-0.76	F	-0.41	-0.67	N	0.71	3.45
1984	N	0.47	1.26	F	-0.56	-0.56	N	0.66	2.68	N	0.53	2.08
1985	N	0.37	0.95	F	-0.59	-0.68	N	0.49	2	N	0.75	4.18
1986	F	-0.24	-0.31	N	0.56	1.00	N	0.54	2.84	N	0.86	4.78
1987	F	-0.21	-0.54	F	-0.58	-1.37	F	-0.4	-0.42	N	0.73	3.07
1988	F	-0.30	-0.30	F	-0.84	-1.24	N	0.45	1.3	N	0.76	3.3
1989	N	0.23	0.23	F	-0.78	-0.85	F	-0.4	-0.81	N	0.75	3.2
1990	F	-0.28	-0.28	F	-0.86	-1.19	F	-0.41	-0.72	N	0.58	1.95
1991	F	-0.26	-0.35	F	-0.62	-1.33	F	-0.41	-0.81	N	0.94	5.19
1992	N	0.29	0.35	F	-0.75	-1.33	N	0.62	1.84	N	0.96	4.52
1993	N	0.25	0.45	F	-0.6	-1.13	F	-0.43	-0.43	N	0.61	3.17
1994	N	0.17	0.04	F	-0.59	-0.89	F	-0.53	-0.99	N	0.44	1.04
1995	F	-0.2	-0.25	F	-0.81	-1.14	F	-0.48	-0.48	N	0.65	3.74
1996	F	-0.21	-0.22	F	-0.68	-0.82	F	-0.42	-0.83	F	-0.5	-0.64
1997	F	-0.21	-0.4	F	-0.64	-1.61	F	-0.41	-1.08	N	0.74	2.74
1998	F	-0.19	-0.37	F	-0.57	-0.7	F	-0.41	-0.76	N	0.55	1.05
1999	F	-0.23	-0.24	F	-0.68	-1.38	F	-0.58	-0.86	N	0.69	1.96
2000	F	-0.27	-0.34	F	-0.54	-0.87	F	-0.43	-0.6	N	0.69	2.24
2001	F	-0.24	-0.34	F	-0.72	-0.86	F	-0.69	-1.52	N	1.03	4.18
2002	F	-0.24	-0.34	F	-0.81	-1.05	F	-0.66	-1.33	N	0.6	0.79
2003	F	-0.27	-0.38	F	-0.67	-1.08	F	-0.58	-1.02	N	0.68	1.55
2004	F	-0.23	-0.23	F	-0.8	-1.08	F	-0.65	-1.13	N	0.86	2.93
2005	F	-0.25	-0.39	F	-0.7	-0.7	F	-0.53	-1.35	N	0.64	1.19
2006	F	-0.27	-0.6	F	-0.81	-0.88	F	-0.51	-1.14	N	0.69	1.46
2007	F	-0.25	-0.5	F	-0.77	-0.77	F	-0.53	-0.86	N	0.64	1.61
2008	F	-0.28	-0.39	F	-0.65	-1.14	F	-0.67	-0.75	F	-0.92	-0.92
2009	F	-0.19	-0.38	F	-0.66	-1.14	F	-0.55	-0.81	F	-1.1	-1.1
2010	N	3.75	22.14	N	4.97	22.09	N	5.06	24.72	N	14.39	97.97
2011	F	-0.22	-0.25	F	-0.74	-1.46	F	-0.67	-0.76	F	-0.56	-1.52
2012	F	-0.2	-0.23	F	-0.77	-1.34	F	-0.66	-0.91	F	-0.58	-2.04
2013	F	-0.21	-0.29	F	-0.73	-1.1	F	-0.52	-1.01	N	0.71	1.25

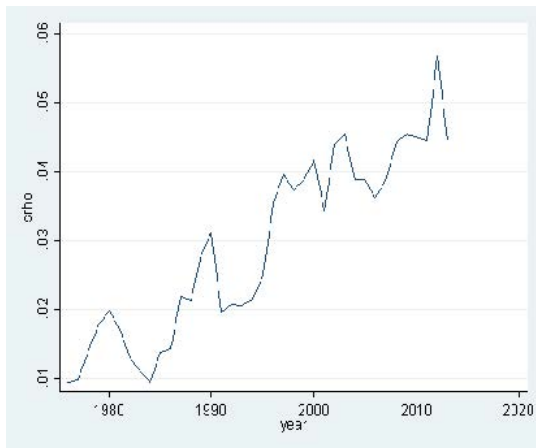
N denotes no (first- or second-order) dominance found, while F denotes First-order dominance. Only the *d* and *s* statistics are reported. Statistics in bold are significant at 90th percentile.

Figure 11: The New Gender Gap Measure ($S_\rho \times 100$) and SD Tests (based on Female Potential and Reservation Wage)

Year	S_ρ	SD	d	s	Year	S_ρ	SD	d	s	Year	S_ρ	SD	d	s
	(1)	(2)	(3)	(5)		(5)	(6)	(7)	(8)		(9)	(10)	(11)	(12)
1976	0.95	N	6.64	15.5	1989	2.80	F	-0.88	-0.88	2002	4.39	F	-1.2	-1.63
1977	0.98	N	4.98	6.87	1990	3.11	F	-0.94	-0.94	2003	4.53	F	-1.47	-2.14
1978	1.36	S	1.89	-1.52	1991	1.96	F	-0.94	-1.46	2004	3.87	F	-1.14	-1.15
1979	1.78	S	1.16	-1.14	1992	2.09	F	-0.98	-0.99	2005	3.87	F	-1.35	-1.91
1980	1.98	N	1.06	3.43	1993	2.07	F	-1.19	-1.35	2006	3.61	F	-1.63	-2.63
1981	1.72	N	1.35	3.79	1994	2.15	F	-0.86	-0.86	2007	3.87	F	-1.09	-1.25
1982	1.29	N	1.32	3.75	1995	2.52	F	-1.58	-1.93	2008	4.41	F	-1.62	-1.67
1983	1.12	N	1.04	2.49	1996	3.54	F	-1.05	-1.05	2009	4.54	F	-1.12	-1.12
1984	0.95	N	1.38	6.7	1997	3.96	F	-1.09	-1.31	2010	16.64	N	19.14	119.05
1985	1.37	N	1.27	4.93	1998	3.73	F	-0.95	-0.96	2011	4.44	F	-1.01	-1.31
1986	1.44	N	1.21	5.21	1999	3.87	F	-1.19	-1.53	2012	5.67	F	-0.98	-1.02
1987	2.19	F	-0.82	-0.82	2000	4.16	F	-1.1	-1.2	2013	4.43	F	-0.96	-2.55
1988	2.14	F	-1.12	-1.23	2001	3.44	F	-1.2	-2.52					

N denotes no (first- or second-order) dominance found, while **F** denotes First-order dominance **S** denotes Second-order dominance. Only the d and s statistics and corresponding p-values are reported.

Figure 12: New Gender Gap Measure S_ρ : Male vs Female Wage (Potential and Reservation Wage) Distributions



Note: Year 2010 is excluded to better reflect the time trend.

Figure 13: Percentage of Full-time Female Workers and Absolute Value of the Estimated ρ (measuring selection)

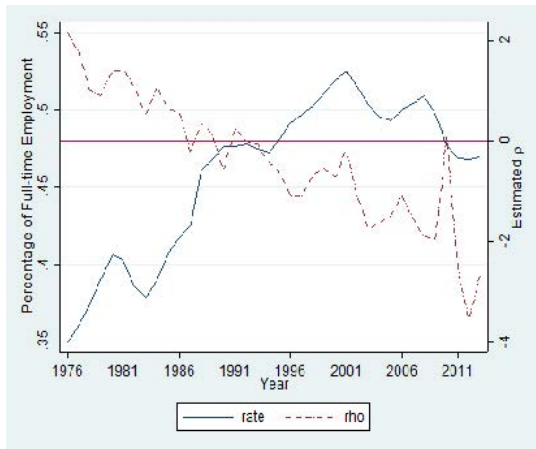


Figure 14: Tests of Blundell et al. (2007)'s Assumption (Working Females vs All Females)

Year	SD	d	s	Year	SD	d	s	Year	SD	d	s
1976	F	-0.55	-0.55	1989	N	1.28	43.77	2002	F	-0.91	-0.96
1977	S	0.69	-0.61	1990	F	-0.75	-0.76	2003	F	-0.5	-0.91
1978	S	1.01	-0.62	1991	N	1.16	28.69	2004	F	-0.89	-0.96
1979	S	1.06	-0.8	1992	N	1.12	21.75	2005	F	-0.88	-0.94
1980	S	1.05	-0.7	1993	N	0.93	17.54	2006	F	-0.89	-0.9
1981	S	1.02	-0.71	1994	F	-0.79	-0.79	2007	F	-0.92	-0.99
1982	S	1.2	-0.68	1995	F	-0.74	-0.78	2008	F	-0.95	-0.96
1983	N	1.92	99.12	1996	F	-0.67	-0.69	2009	F	-0.62	-0.89
1984	S	1.6	-0.87	1997	F	-0.71	-0.73	2010	N	14.86	901.37
1985	N	1.86	100.03	1998	F	-0.32	-0.73	2011	F	-0.89	-0.92
1986	N	1.31	64.2	1999	F	-0.74	-0.84	2012	F	-0.88	-0.88
1987	N	0.94	11.71	2000	F	-0.74	-0.75	2013	F	-0.86	-0.88
1988	N	1.4	51.25	2001	N	1.13	10.94				

N denotes no (first- or second-order) dominance found, while **F** denotes First-order dominance **S** denotes Second-order dominance. Only the d and s statistics and corresponding p-values are reported. During the period between 1976–1983, all women dominate working women in either first- or second-order senses. The opposite is observed for all years after 1994, except for 2001 and 2010. These interpretations are based on $d_{1,max}$, $d_{2,max}$, $s_{1,max}$, $s_{2,max}$ which are available in the extended working paper version.

Figure 15: The Entropy Gap between the Female and Counterfactual Distribution

Female vs Counterfactual Distributions																			
#1 (Structural)					#2 (Composition)					#1					#2				
Year	Selection		Correction		Year	Selection		Correction		Year	Selection		Correction						
	Yes (1)	No (2)	Yes (3)	No (4)		Yes (5)	No (6)	Yes (7)	No (8)		Yes (9)	No (10)	Yes (11)	No (12)					
1976	5.48	8.43	0.20	0.43	1989	5.02	3.49	0.14	0.48	2002	3.98	2.13	0.05	0.51					
1977	6.62	7.79	0.16	0.48	1990	5.19	3.12	0.13	0.35	2003	4.67	1.94	0.05	0.44					
1978	8.40	7.93	0.14	0.40	1991	3.49	2.73	0.11	0.39	2004	4.36	1.73	0.04	0.51					
1979	8.43	8.18	0.13	0.47	1992	3.54	2.49	0.11	0.39	2005	4.31	1.95	0.03	0.48					
1980	7.27	7.83	0.12	0.41	1993	3.26	2.38	0.13	0.38	2006	3.95	1.99	0.03	0.50					
1981	6.74	7.36	0.14	0.35	1994	3.30	2.16	0.13	0.32	2007	4.43	1.93	0.02	0.55					
1982	7.23	7.32	0.17	0.38	1995	3.66	2.29	0.11	0.33	2008	4.74	1.89	0.03	0.52					
1983	7.11	6.03	0.22	0.43	1996	4.19	2.19	0.10	0.30	2009	4.84	2.05	0.05	0.51					
1984	5.08	5.42	0.20	0.43	1997	4.43	2.33	0.09	0.50	2010	2.18	2.08	0.08	0.52					
1985	5.64	4.97	0.18	0.33	1998	3.62	2.23	0.06	0.44	2011	5.60	1.92	0.14	0.43					
1986	5.12	4.48	0.19	0.32	1999	3.72	2.43	0.06	0.41	2012	6.48	1.95	0.16	0.48					
1987	5.88	4.03	0.20	0.36	2000	3.54	2.03	0.06	0.46	2013	5.52	1.72	0.14	0.47					
1988	4.58	3.67	0.14	0.37	2001	3.12	2.12	0.04	0.45										

Notes: Counterfactual distribution #1 (based on male wage structure); counterfactual distributions #2 (based on male characteristics).



Figure 16: Stochastic Dominance Results (Female Wage Distribution and the Counterfactual Distribution #1 & #2)

Female vs. Counterfactual Distribution												
	#1 (Structural Effects)						#2 (Composition Effects)					
	Section Correction						Section Correction					
	Yes			No			Yes			No		
Year	SD	<i>d</i>	<i>s</i>	SD	<i>d</i>	<i>s</i>	SD	<i>d</i>	<i>s</i>	SD	<i>d</i>	<i>s</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1976	F	-6.57	-6.57	F	-0.54	-0.69	F	-6.06	-6.90	S	0.80	-0.69
1977	F	-7.32	-7.32	F	-0.64	-0.67	F	-6.17	-6.17	S	1.16	-0.74
1978	F	-9.44	-12.22	F	-0.95	-0.95	F	-6.20	-8.12	S	0.99	-0.74
1979	F	-10.56	-10.79	F	-0.95	-1.01	F	-6.74	-7.66	S	1.14	-0.89
1980	F	-8.39	-8.39	F	-0.75	-0.75	F	-7.00	-8.71	N	1.71	8.33
1981	F	-11.94	-11.94	F	-0.73	-1.02	F	-6.60	-6.60	N	1.65	2.37
1982	F	-8.42	-8.54	F	-0.80	-0.80	F	-6.42	-7.73	S	1.37	-0.83
1983	F	-7.54	-7.54	F	-0.81	-0.81	F	-7.09	-7.09	N	1.44	0.40
1984	F	-7.84	-8.45	F	-0.94	-1.14	F	-6.35	-6.35	N	1.74	0.66
1985	F	-8.26	-8.26	F	-0.72	-0.94	F	-6.85	-7.66	N	1.56	2.77
1986	F	-8.18	-8.18	F	-0.76	-0.85	F	-6.25	-6.25	S	1.36	-0.65
1987	F	-7.56	-11.15	F	-0.77	-0.89	F	-7.32	-8.03	S	1.47	-0.79
1988	F	-11.01	-11.01	F	-0.83	-0.88	F	-7.99	-7.99	N	1.51	9.40
1989	F	-9.16	-13.35	F	-0.77	-0.77	F	-6.41	-6.41	N	1.49	8.58
1990	F	-7.69	-7.76	F	-0.83	-0.88	F	-7.73	-7.73	N	1.62	8.57
1991	F	-10.95	-11.54	F	-1.28	-1.28	F	-7.14	-8.23	N	1.38	5.54
1992	F	-7.79	-14.18	F	-0.93	-0.93	F	-6.78	-6.78	N	1.37	5.25
1993	F	-7.70	-11.26	F	-0.88	-0.88	F	-6.53	-6.71	N	1.39	6.32
1994	F	-9.81	-10.32	F	-0.73	-0.73	F	-7.79	-7.79	N	1.12	4.28
1995	F	-9.62	-9.84	F	-0.83	-0.83	F	-6.65	-6.65	N	1.11	3.74
1996	F	-7.68	-10.61	F	-0.96	-1.44	F	-6.42	-6.42	N	1.05	2.47
1997	F	-8.04	-10.95	F	-0.76	-0.76	F	-6.39	-7.22	N	1.01	5.06
1998	F	-7.90	-7.90	F	-0.77	-0.77	F	-6.88	-7.30	N	0.93	2.44
1999	F	-7.44	-9.45	F	-0.79	-1.03	F	-6.63	-6.88	N	1.00	2.30
2000	F	-7.22	-7.91	F	-0.75	-0.75	F	-7.17	-7.17	N	1.26	4.42
2001	F	-10.98	-14.59	F	-1.13	-1.68	F	-9.16	-9.16	N	1.45	4.86
2002	F	-11.24	-11.24	F	-1.02	-1.15	F	-8.73	-9.98	N	1.31	3.70
2003	F	-9.68	-14.10	F	-1.03	-1.85	F	-8.25	-8.25	N	1.42	3.32
2004	F	-10.14	-10.14	F	-1.09	-1.09	F	-8.16	-8.22	N	1.26	5.07
2005	F	-9.58	-10.69	F	-1.07	-1.07	F	-7.90	-8.32	N	1.17	3.34
2006	F	-9.29	-14.23	F	-1.04	-1.67	F	-8.37	-8.44	N	1.60	4.47
2007	F	-9.08	-9.96	F	-0.98	-1.20	F	-8.04	-8.04	N	0.93	2.93
2008	F	-8.81	-14.10	F	-0.99	-0.99	F	-7.75	-7.75	N	1.25	2.59
2009	F	-10.57	-12.40	F	-1.09	-1.36	F	-8.24	-9.36	N	1.46	2.77
2010	F	-10.91	-12.83	F	-1.06	-1.52	F	-7.53	-7.78	N	1.44	3.53
2011	F	-11.21	-14.20	F	-1.11	-1.35	F	-7.98	-9.83	N	1.16	2.07
2012	F	-8.96	-11.44	F	-1.04	-1.04	F	-7.60	-8.72	N	1.09	3.10
2013	F	-8.76	-10.14	F	-1.06	-1.06	F	-8.66	-9.39	N	1.25	2.25

N denotes no (first- or second-order) dominance found, while F denotes First-order dominance S denotes Second-order dominance. Only the *d* and *s* statistics are reported.

Figure 17: The Patterns of Changes in Measures of The Gender Gap

Year	$S_p \times 100$ (1)	Mean (2)	10th (3)	25th (4)	50th (5)	75th (6)	90th (7)
1977	D	D	D	D	I	I	D
1978	I	I	D	D	D	I	D
1979	D	D	D	D	I	I	I
1980	D	D	D	D	D	D	D
1981	D	D	I	D	I	I	D
1982	D	D	D	I	I	D	I
1983	D	D	D	D	D	D	I
1984	D	D	I	D	D	D	D
1985	D	D	D	D	D	D	I
1986	D	D	D	I	I	D	D
1987	D	D	I	D	I	D	D
1988	D	D	I	D	D	D	D
1989	D	D	D	D	D	D	D
1990	D	D	D	I	D	I	D
1991	D	D	D	D	D	D	I
1992	D	D	D	I	D	D	D
1993	D	D	I	D	I	D	D
1994	D	D	D	D	D	D	D
1995	D	I	I	I	I	I	D
1996	I	I	I	D	I	D	D
1997	D	D	I	I	I	I	D
1998	I	I	D	I	I	D	I
1999	I	I	I	D	D	I	D
2000	D	D	I	I	I	I	I
2001	D	D	D	D	D	D	I
2002	D	D	D	D	D	D	D
2003	D	D	I	D	D	I	D
2004	D	D	I	I	D	D	I
2005	I	I	D	I	I	D	D
2006	D	I	I	D	I	D	D
2007	D	D	I	I	I	I	D
2008	I	D	D	D	I	I	I
2009	I	I	I	I	D	D	I
2010	I	I	D	D	I	I	D
2011	D	D	D	I	I	D	D
2012	I	I	-	D	D	I	I
2013	D	D	D	D	I	D	D

Column (1) reports the entropy gender gap (x100). Columns (2)-(6) report conventional measures.

Figure 18: The Patterns of Changes in Measures of The Gender Gap (Corrected for Selection)

Year	$S_p \times 100$ (1)	Mean (2)	10th (3)	25th (4)	50th (5)	75th (6)	90th (7)
1977	I	I	I	D	I	I	I
1978	I	I	I	I	I	I	I
1979	D	I	I	D	I	I	I
1980	D	D	D	D	D	D	D
1981	D	D	D	D	D	D	D
1982	I	I	I	I	I	I	I
1983	I	I	I	I	I	I	I
1984	D	D	D	D	D	D	D
1985	I	I	I	I	D	I	I
1986	D	D	D	I	I	D	D
1987	I	I	I	I	I	I	I
1988	D	D	D	D	D	D	D
1989	I	I	I	I	I	I	I
1990	D	I	I	I	I	I	I
1991	D	D	D	D	D	D	D
1992	I	I	D	I	I	I	D
1993	D	D	I	D	D	D	D
1994	D	I	I	D	D	I	I
1995	I	I	I	I	I	I	I
1996	I	I	I	I	I	I	I
1997	D	D	I	I	D	I	I
1998	D	D	D	D	D	D	D
1999	D	D	I	D	D	D	I
2000	D	I	I	I	I	I	D
2001	D	D	D	D	D	D	I
2002	I	I	I	I	I	I	I
2003	I	I	I	I	I	I	I
2004	D	D	D	D	D	D	I
2005	D	D	D	I	I	I	D
2006	D	D	D	D	D	D	D
2007	I	I	I	I	I	I	I
2008	I	I	I	D	I	I	I
2009	I	I	I	I	D	I	I
2010	I	D	D	D	D	D	I
2011	D	I	I	I	I	I	D
2012	I	I	I	I	I	I	I
2013	D	D	D	D	D	D	D

Column (1) reports the entropy gender gap ($\times 100$). Columns (2)-(6) report conventional measures.