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Do You Really Want to Share Everything? The Wellbeing of Work-Linked Couples

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Work-Linked Couples

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Uğur Şahin and Özlem Türeci

Source. Wikimedia

Ruth Bader and Martin Ginsburg

Previous Literature and Contribution

- Surprisingly little is known about wellbeing of couples where working life and partnership intersect
- Only a very few studies in psychology, based on small context-specific (hence non-representative) samples, endogeneity issues not considered (e.g. Ferguson et al. (2015))

This Paper

What is the effect of being work-linked on subjective well-being?

- Consideration of industry links and occupation links (not firm links!)
- Study of overall life satisfaction and satisfaction obtained from various life domains

Theoretical Considerations

Work link and job satisfaction and income satisfaction

+ Assortative matching (complementarities: networks, information sharing, nepotism) $\Rightarrow$ higher income, better job characteristics / career opportunities
- But correlated earnings risks $\Rightarrow$ higher income volatility

Work link and family life satisfaction and leisure satisfaction

+ Mutual understanding, emotional support
- But blurred boundaries, lack of flexibility

German Socio-Economic Panel 1985 - 2018

- **Sample:** Both partners of couples in the SOEP who...
  - ... are cohabiting (married or unmarried)
  - ... live in traditional 2-adult households (with or without children)
  - ... heterosexual *(motivation: instrument)*
  - ... dual-earners (both partners employed/self-employed)
  - ... both between 25 and 64
  - ... both have valid personal interviews (all variables observed)

- **122,456 observations** for **24,013 individuals** (11,987 households)

Explanatory Variable - Work Links

- Definition: A couple is work-linked if both partners work
  - ... in the **same occupation** according to the classification of occupations by the German Federal Statistical Office ("KldB92"), at 3-digit level (369 occupations, 352 are observed in sample ▶)
    and/or
  - ...the **same industry** according to Statistical Classification of Economic Activities in the European Community (NACE), 2-digit level (88 divisions, 58 are observed in sample)

	Combined Link		Occupation Link		Industry Link	
	No	Yes	No	Yes	No	Yes
N	116,040	6,416	114,762	7,694	99,380	23,076
%		5.24		6.28		18.84
n		1,877		2,283		5,858

Source: Source: SOEP version 35_int, years 1985 - 2018.

Summary Statistics By Occupations By Industry

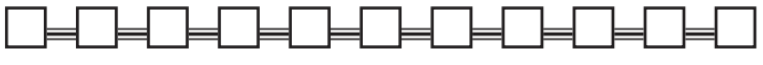
Outcome Variables

- **Outcome:** Self-reported life, job, leisure, family and income satisfaction
  - Surveyed **annually** since 1984 (life, job, leisure), since 2004 (income) or since 2006 (family)
  - Measured on an **11-point Likert scale** ranging from completely dissatisfied to completely satisfied (0-10)
  - Assumed to be **continuous** for the empirical analysis

175. In conclusion, we would like to ask you about your satisfaction with your life in general.

☞ *Please answer on a scale from 0 to 10,*
*where **0** means completely **dissatisfied** and **10** means completely **satisfied**.*

How satisfied are you with your life, all things considered?



0 completely ***dissatisfied*** **1** **2** **3** **4** **5** **6** **7** **8** **9** **10** completely ***satisfied***

Source: SOEP questionnaire 2016

Domain-specific question 2016 Histograms

Reduced-Form Linear OLS Estimation

$$WB_{it} = \beta_1 + \beta_2 WL_{it} + \beta_3 HH_{it} + \beta_4 IC_{it} + \beta_5 PC_{it} + \beta_6 O_{it} + \beta_7 I_{it} + \beta_8 T_i + \beta_9 R_{it} + \epsilon_{it}$$

- Components:
  - WB_{it} is the satisfaction of individual i (life/domain)
  - WL_{it} is the indicator for whether i is work-linked to i's partner
  - HH_{it} - household: marital status, children, relationship length
  - IC_{it} - individual i's demographics (age, gender, education years) and work attributes (self-employment (D), trained occupation (D), fixed-term contract (D), tenure, firm size, full-time (D))
  - PC_{it} - i's partner's demographics and work attributes
  - T_i - time fixed effects and R_{it} - regional controls (federal state, rural (D))
  - O_{it} - occupation fixed effects and I_{it} - industry fixed effects
- Standard errors clustered on household level

Instrumental Variable Approach

- In a linear regression model with endogenous binary treatment, estimated via Maximum Likelihood Estimator (STATA: `etregress`)
- Two alternative instruments z_{it}
  1. Gender disparity in the own occupation and industry calculated based on administrative data from the German Federal Employment Agency
  2. Predicted work-link probability based on partner's paternal occupation (PPO) (assuming inter-generational transmission of occupational choice for the partner)

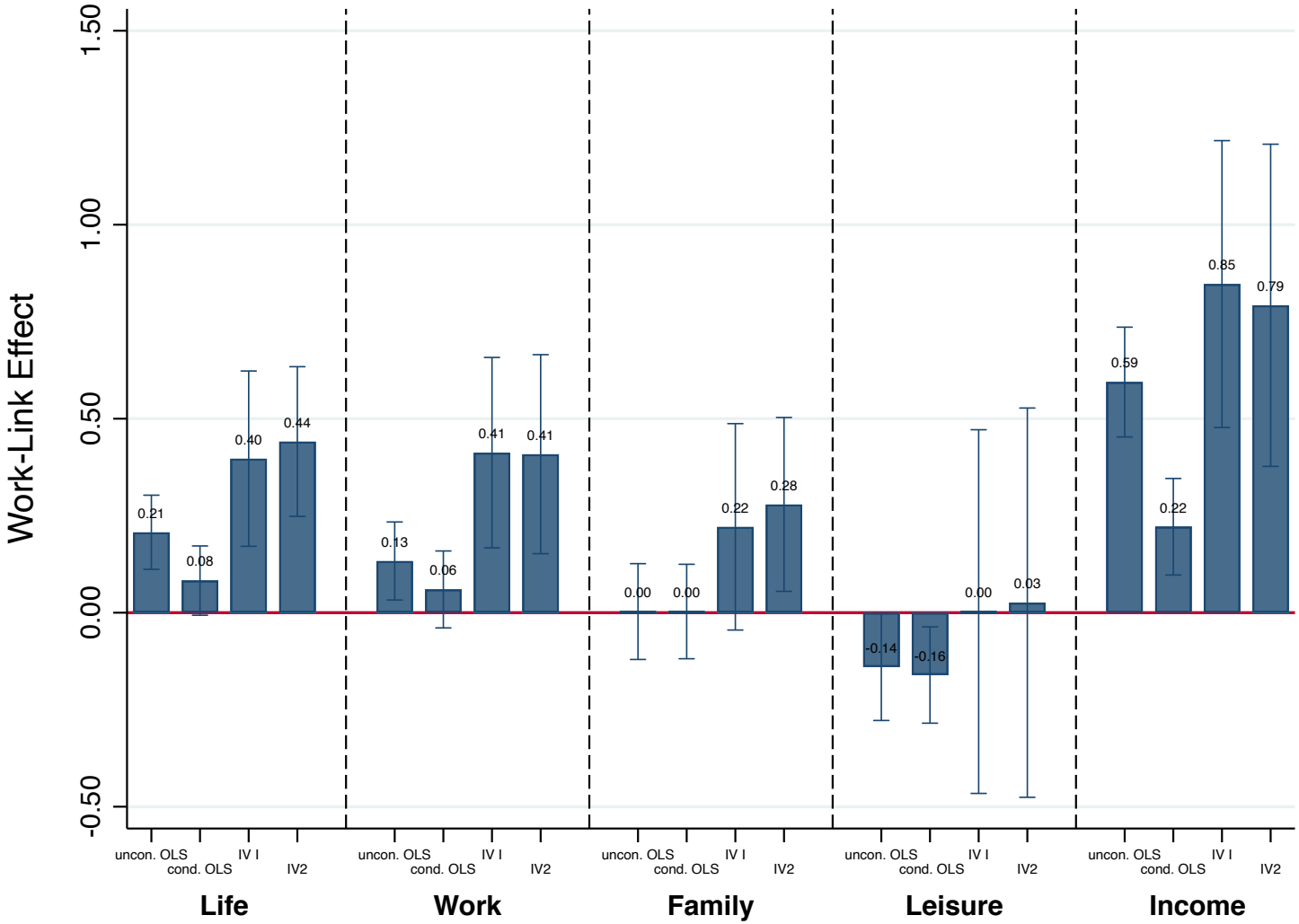
$$
\begin{aligned}
WB_{it} &= \beta_1 WL_{it} + \mathbf{X}_{it}^{'}\beta_2 + \epsilon_{it} \\
WL_{it}^{*} &= \mathbf{X}_{it}^{'}\pi_1 + \pi_2 z_{it} + \upsilon_{it} \\
WL_{it} &= \begin{cases} 1 & \text{if } WL_{it}^{*} > 0 \\ 0 & \text{otherwise} \end{cases}
\end{aligned}
$$

- $\mathbf{X}_{it}^{'}$ equivalent to baseline OLS estimation, standard errors clustered on household level (or occupation level)

IV requirements

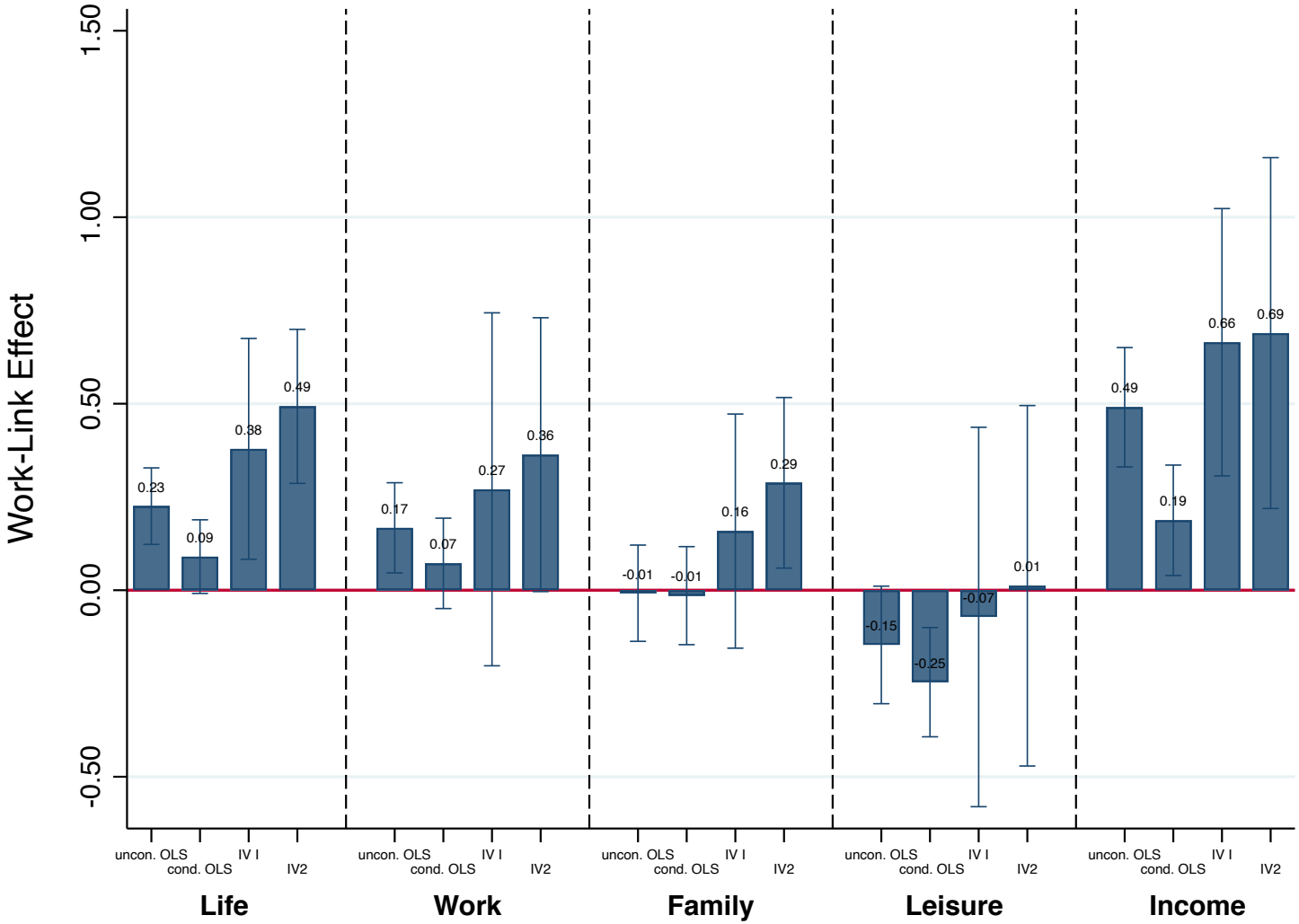
- Exclusion Restriction / Endogeneity
  - Gender disparity/partner's paternal occupation show no association with wellbeing measures (work link controlled for)
  - Control variables from pooled OLS are included again - capture potential other channels from instruments to wellbeing
  - Most importantly, occupation/industry controls included at higher level
  - No connection between life satisfaction at age 17 and gender disparity in later occupation
- Instrument Relevance / Strong first stage
  - Gender heterogeneity with respect to the relevance of the two instruments (IV 1 for men and IV 2 for women with a stable F $>$ 10)
  - Lee et al. (2020) - tF test procedure for weak instrument (largely) holds

Results OLS + IV, full sample



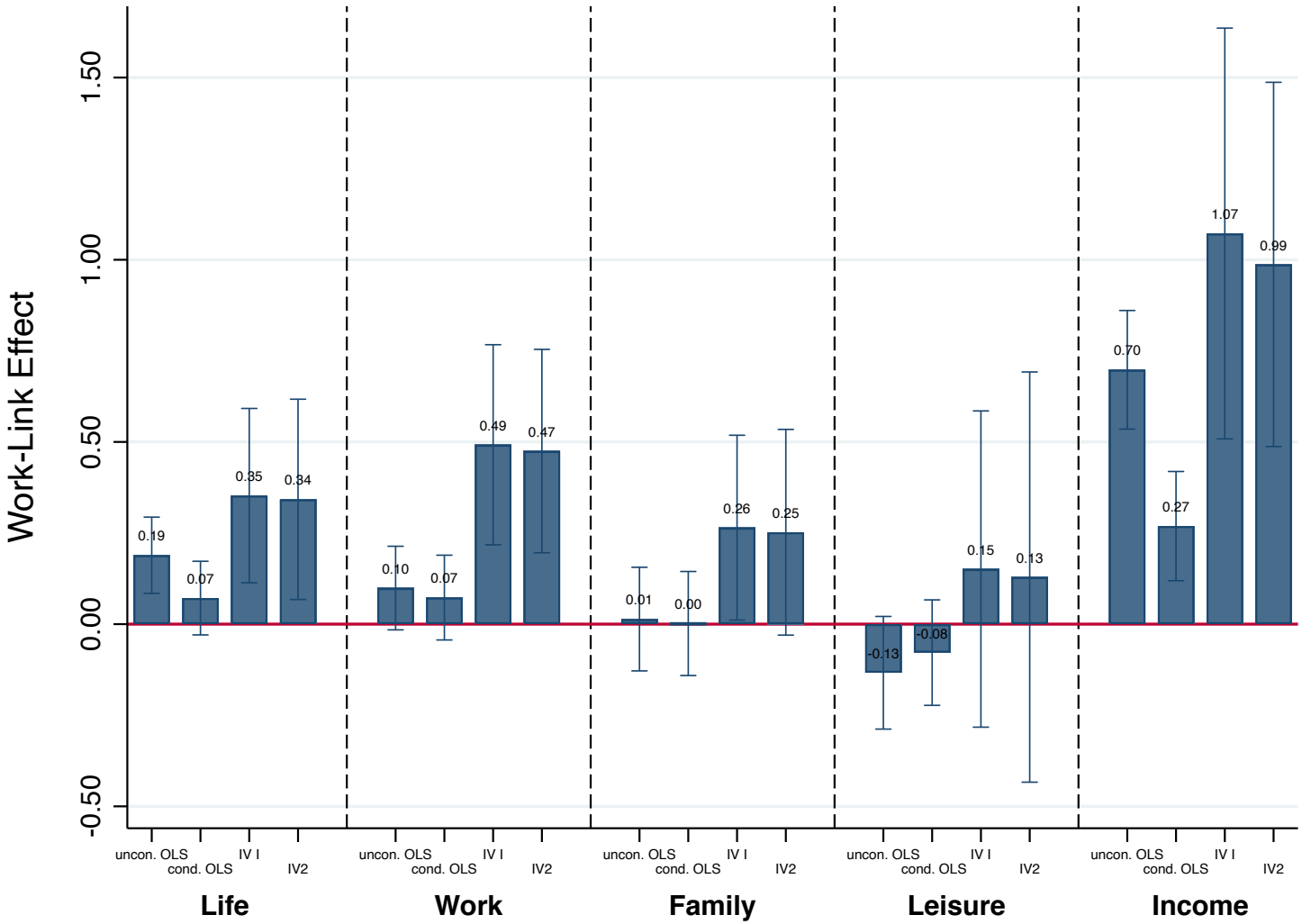
Source: SOEP version 35, 1985 - 2018

Results OLS + IV, male sample



Source: SOEP version 35, 1985 - 2018

Results OLS + IV, female sample



Source: SOEP version 35, 1985 - 2018

Potential mediators

- **Occupational Autonomy:** Work link increases autonomy; OLS and IV results robust against controlling for autonomy level, but effect sizes slightly reduce
- **Income:** Work link increases earnings; OLS and IV results robust against controlling for labor income, future labor income and net HH equivalent income, but effect sizes slightly reduce
- **Working hours:** Work link increases hours; hours worked explain negative effect on leisure satisfaction in OLS, IV results robust against controlling for hours worked
- **Job security:** Work link weakly related to probability of having no concerns about job security.

Heterogeneity Analysis

- **Tunnel effect?** Positive income satisfaction effect driven by individuals who earn less than their partners, also when controlling for HH equivalence income and also for men
- **Academic power couples?** Positive effects on life, work and income satisfaction only for individuals with college degree / high-earner couples
- **Closest link = optimal link?** Positive life and income satisfaction effect only for paid-employed individuals, positive effects not found in agriculture
- **Correlated earnings risks?** Same results if not employed/unemployed individuals are included, same results in subsample of relatively risk-averse workers

Concluding Remarks

- Being work-linked benefits (male) life satisfaction, income satisfaction, (female) job satisfaction
  $\Rightarrow$ assortative matching of complementary partners
- No robust effects on leisure satisfaction and family life satisfaction
  $\Rightarrow$ counteracting effects (mutual support and understanding but higher working hours, blurred boundaries)
- Closest possible link not necessarily optimal (self-employed couples, agriculture)
- Results supportive of dual career policies at multinationals / universities

Thank you for your attention!

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Comments are highly welcome.

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References

Ferguson, M., Carlson, D., Kacmar, K. M., and Halbesleben, J. R. B. (2015). The Supportive Spouse at Work : Does Being Work-Linked Help ? *Journal of Occupational Health Psychology*, (August 3).

Lee, D. S., McCrary, J., Moreira, M. J., and Porter, J. (2020). Valid t-ratio Inference for IV.

Summary Statistics

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	All mean	**No WL** mean	**WL** mean	**t-test** p-value
Age	43.24	43.23	43.51	0.01
Years of Education	12.57	12.51	13.65	0.00
No. Children under 14 in HH	0.69	0.69	0.72	0.00
Self-Employed	0.09	0.09	0.16	0.00
Rural Area	0.33	0.33	0.33	0.84
Partnership Length	7.75	7.81	6.68	0.00
Net Labor Income	1644.91	1625.26	2000.17	0.00
Net Household Income	3513.67	3477.86	4161.26	0.00
Occupational Autonomy				
Untrained	0.14	0.14	0.11	0.00
Low level	0.27	0.28	0.15	0.00
Executive Level	0.31	0.31	0.27	0.00
Middle Level	0.24	0.23	0.37	0.00
Upper Level	0.05	0.04	0.09	0.00
Working Hours	37.37	37.22	40.09	0.00

Source: Source: SOEP version 35, years 1985 - 2018.

Occupational Classification - Example

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Vh	Social and teaching occupations and other not categorized arts and natural sciences professions (86-89)
86	**Social welfare professions**
861	Social workers, social education workers
862	Remedial teachers
863	Early Childhood Teachers
864	Geriatric nurses
...	...
87	**Teachers**
870	Teachers without designation
871	University lecturers
872	Grammar school teachers
873	Primary, junior high, secondary, special school teachers
874	Vocational school teachers
875	Music teachers
876	Sports teachers
878	Driving, traffic instructors
879	Other teachers
88	**Arts and natural sciences professions**
880	Academics without designation
881	Economic scientists
8810	Economists without further specification
8812	Graduate economists without further specification
8814	Graduate business economist without further specification
8815	Business economists without further specification
...	...
882	Arts and humanities academics
883	Natural scientists
884	Social scientists
885	Educational scientists
886	Psychologists
887	Statisticians, market researchers and related professions

Descriptives - Occupational Work-Links

		Occupation WL's %	Combined WL's %
Agricultural Occupations	1,990	16.08	13.57
Bank/building society/insurance specialists	5,708	15.59	14.68
Guard/Security services and Law and enforcement	4,926	10.92	10.07
Social welfare and teaching professions	13,040	10.78	9.69
Health care professions	8,924	9.5	9.26
Journalism, translation, librarian, artistic and related	2,012	8.45	5.86
Other service professions	7,586	6.32	4.47
Food manufacturing and processing professions	2,377	6.31	5.22
Engineers, Chemists, physicists, mathematicians	4,900	6.2	3.96
Management, administration and other office	26,409	4.45	2.87
Sales staff	10,058	3.7	3.26
Transport Professions	6,611	3.6	2.27
Electrical professions	2,361	2.29	2.2
Technicians and Technical specialists	4,449	2.2	1.71
Metal and plant engineering and related professions	6,189	1.45	1.13
...	...	...	...
Total	**122,456**	**6.28**	**5.24**

Source: Source: SOEP version 35, years 1985 - 2018.
Note: List shows all occupations (1digit level) with more than 1800 observed employees in the dataset.

Full list Details back

Descriptives - Industry Work-Links

	Freq.	Industry WL's %	Combined WL's %
Agriculture	1,962	31.19	12.95
Public Service	38,671	24.37	7.88
Financials/Private Services	16,288	20.41	8.77
Wholesale/Retail	14,698	17.7	2.94
Iron/Steel	6,024	16.9	3.05
Textile/Apparel	1,312	16.01	5.18
Construction	8,411	15.08	1.4
Chemicals/Pulp/Paper	6,312	14.96	2.85
Manufacturing	15,450	14.36	1.94
Transport/Communication	6,304	11.77	2.95
Mining, Quarrying, Energy	1,758	7.39	0.34
Not Categorized	5,266	11.09	4.03
Total	**122,456**	**18.84**	**5.24**

Source: Source: SOEP version 35, years 1985 - 2018.

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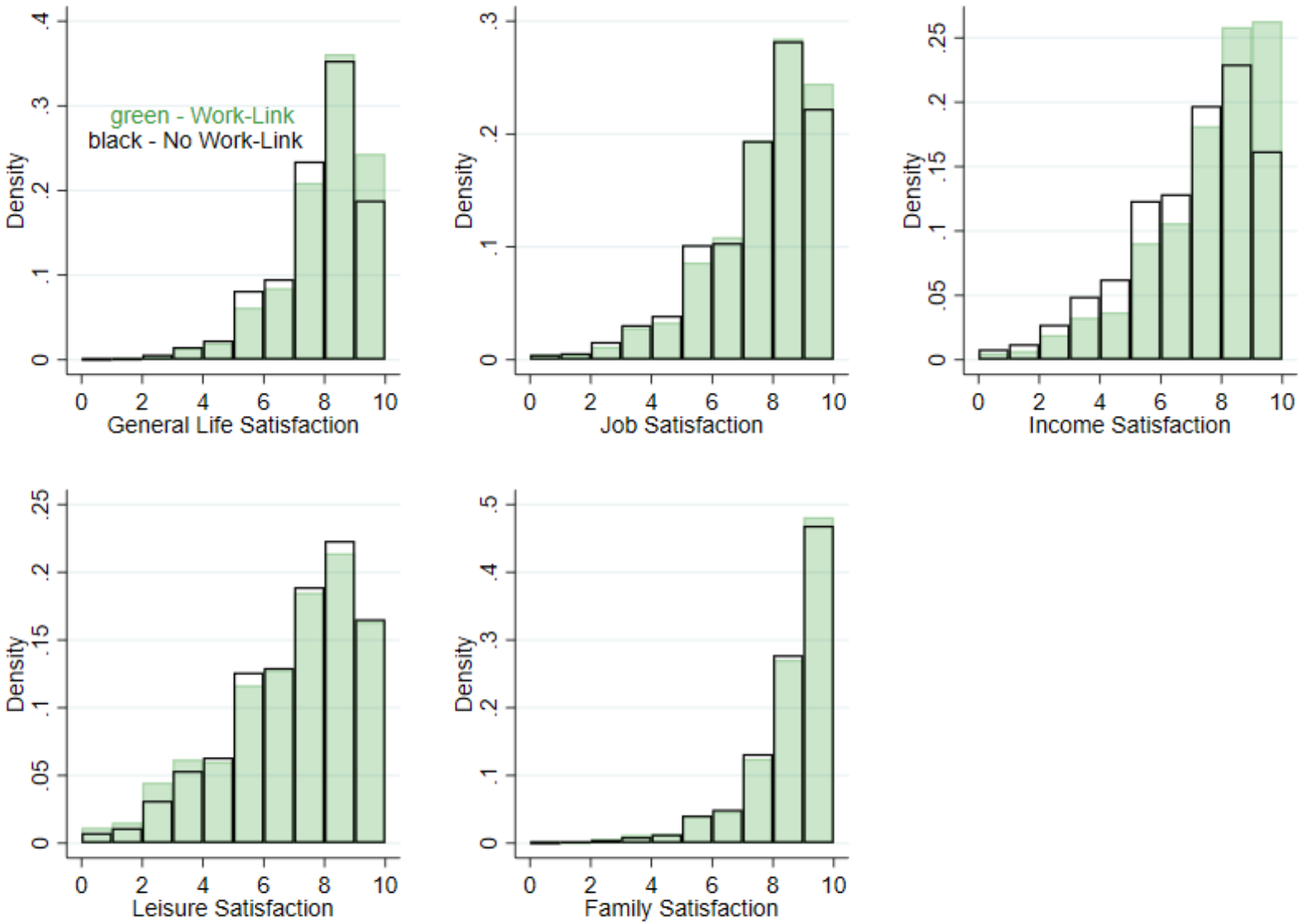
Outcome Variables - Histogram



Occupations (1 digit)	Freq.	Occupational WL		Combined WL	
Management, consultancy, administration and other office professions	26,409	1,176	4.45	758	2.87
Social welfare and teaching professions	13,040	1,406	10.78	1,264	9.69
Sales staff	10,058	372	3.7	328	3.26
Health care professions	8,924	848	9.5	826	9.26
Other service professions	7,586	366	6.32	322	4.47
Transport Professions	6,611	238	3.6	150	2.27
Metal and plant engineering and related professions	6,189	90	1.45	70	1.13
Bank/building society/insurance specialists	5,708	890	15.59	838	14.68
Guard/Security services and Law and enforcement professions	4,926	538	10.92	496	10.07
Engineers, Chemists, physicists, mathematicians	4,900	304	6.2	194	3.96
Technicians and Technical specialists	4,449	98	2.2	76	1.71
Food manufacturing and processing professions	2,377	150	6.31	124	5.22
Electrical professions	2,361	54	2.29	52	2.2
Journalism, translation, librarian, artistic and related professions	2,012	170	8.45	118	5.86
Agricultural Occupations	1,990	320	16.08	270	13.57
Structural and civil engineering professions	1,699	12	0.71	8	0.47
Metal manufacturing and processing professions	1,542	32	2.08	24	1.56
Goods inspectors, dispatch workers	1,442	70	4.85	44	3.05
Installation and other metal professions	1,323	138	10.43	122	9.22
Extension building professions and interior decorators, upholsterers	1,208	6	0.5	6	0.5
Machine, plant operators and machine setters	1,165	16	1.37	6	0.52
Chemistry and Synthetic materials professions	1,160	58	5	58	5
Arts and natural science professions	1,072	86	5.69	58	5.41
Wood and synthetic materials processing professions	1,036	60	5.79	48	4.63
Unskilled workers	886	130	14.67	92	10.38
Paper manufacturing/processing and Print (processing) professions	743	22	2.96	22	2.96
Painters, varnishers and related professions	716	14	1.96	14	1.96
Textil manufacturing and processing professions	581	18	3.1	18	3.1
Ceramists and Glass manufacturing/processing professions	201	4	1.99	4	1.99
Leather manufacturing, leather/fur processing professions	170	2	1.18	0	0
Wood processing, wood/woven goods manufacturing professions	142	6	4.23	6	4.23
Mining Occupations	106	0	0	0	0
Stone processors and Construction material manufacturers	105	0	0	0	0

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Social welfare and teaching professions	Freq.	**Occupation WL's %**	**Combined WL's %**
Music teachers	148	22.97	18.92
Teachers without designation	1,948	21.77	21.36
Grammar school teachers	1,114	17.41	17.06
Primary, junior high, secondary, special school teachers	1,635	15.9	15.29
University lecturers	702	14.25	12.82
Priests	187	10.7	10.7
Remedial therapists	333	10.21	7.21
Social workers, social education workers	1,135	9.34	7.4
Remedial teachers	260	7.69	6.92
Vocational school teachers	554	6.86	6.86
Early Childhood Teachers	2,270	6.52	3.52
Geriatric nurses	1,547	4.78	4.78
Sports teachers	248	1.61	0.81
Other teachers	425	0.94	0.94
Other social welfare professions	354	0	0
Monks, nuns - spiritual/pastoral care	72	0	0
Family support workers, village helpers	50	0	0
Employment, careers advisors	200	0	0
Driving, traffic instructors	116	0	0
Child carers	309	0	0
Total	**13,607**	**10.73**	**9.69**

Source: Source: SOEP version 35, years 1985 - 2018.

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1. How satisfied are you today with the following areas of your life?

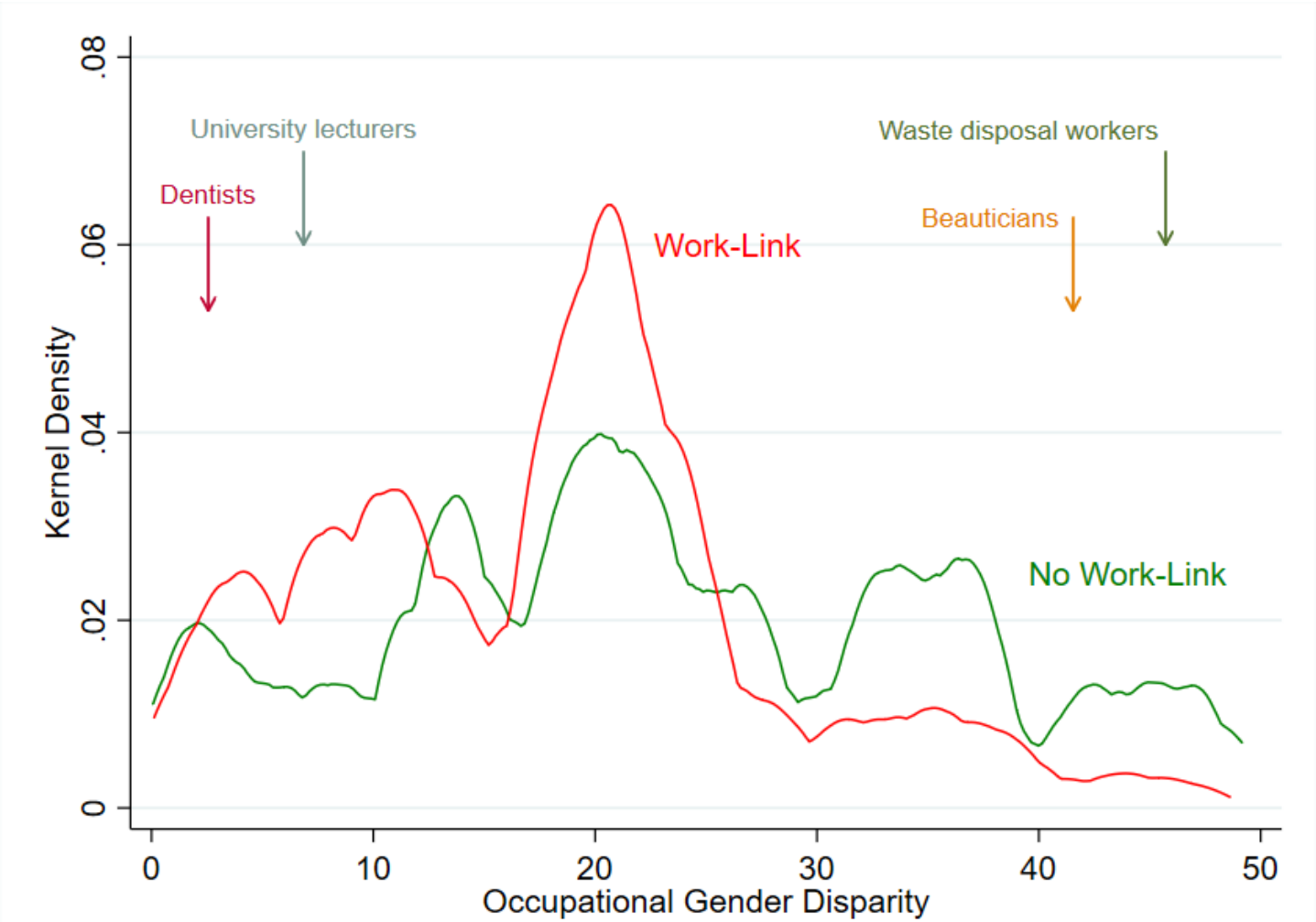
☞ *Please answer on a scale from 0 to 10, where **0** means **completely dissatisfied** and **10** means **completely satisfied.***

How satisfied are you with ...	completely ***dissatisfied***										completely ***satisfied***
– your health?	0	1	2	3	4	5	6	7	8	9	10
– your sleep?	0	1	2	3	4	5	6	7	8	9	10
(if employed) – your job?	0	1	2	3	4	5	6	7	8	9	10
(if you are a homemaker) – your work in the home?	0	1	2	3	4	5	6	7	8	9	10
– your household income?	0	1	2	3	4	5	6	7	8	9	10
– your personal income?	0	1	2	3	4	5	6	7	8	9	10
– your dwelling?	0	1	2	3	4	5	6	7	8	9	10
– your leisure time?	0	1	2	3	4	5	6	7	8	9	10
(if you have small children) – the childcare available?	0	1	2	3	4	5	6	7	8	9	10
– your social life?	0	1	2	3	4	5	6	7	8	9	10

Source: SOEP questionnaire 2016

Descriptives - Gender Disparities

$$GD = \left|50 - \left(\frac{female}{all} \times 100\right)\right| \qquad GD = [0, 50]$$



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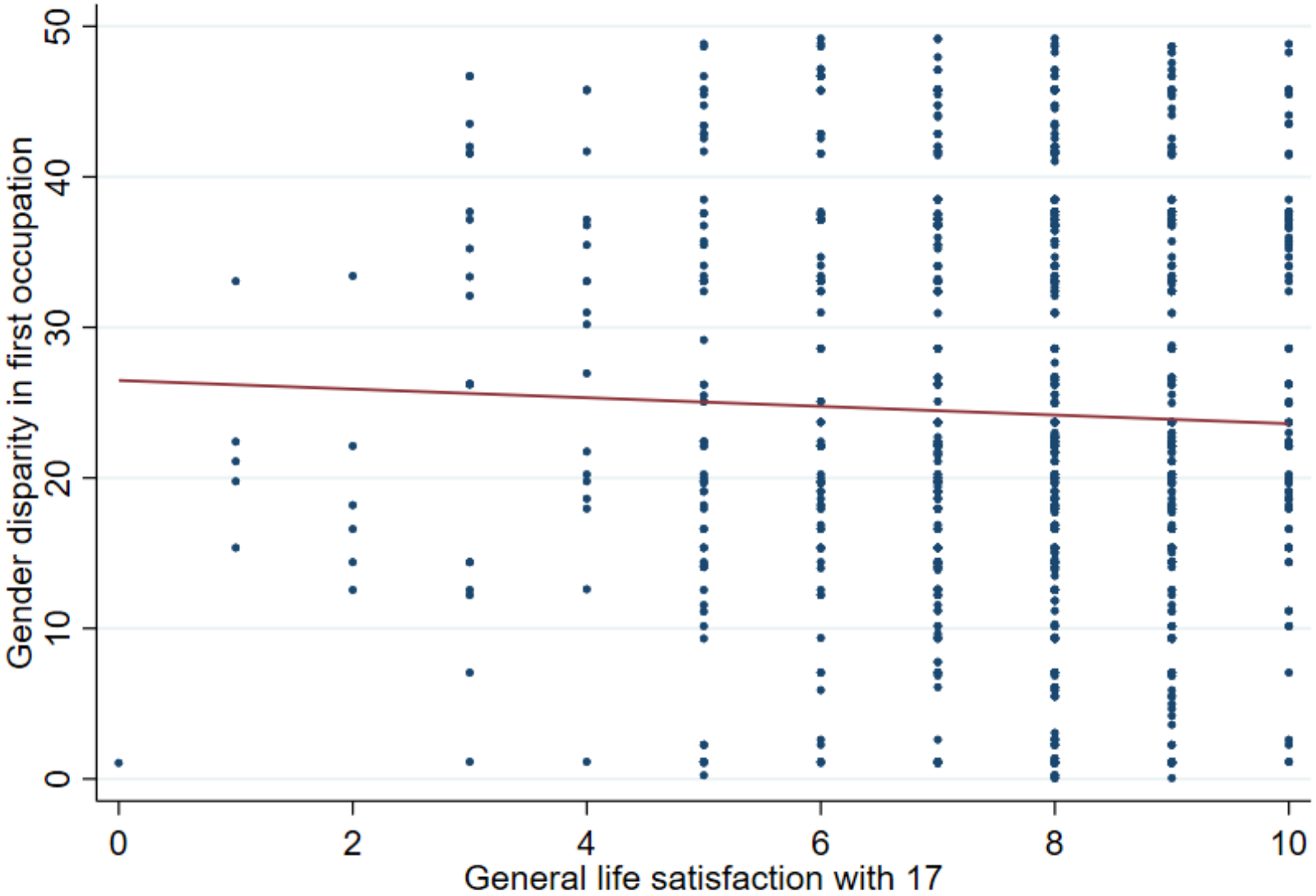

Notes: Sample of 1,178 adolescence with no own income at age 17 (2008-2018).

Main Estimation - IV First Stage

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	All	Men	Women
Occupational/industrial gender disparity	-0.011***	-0.015***	-0.006
	(0.003)	(0.003)	(0.004)
F-statistic	10.13	17.16	1.99
N	122,456	61,228	61,228
P(WL) in partner's paternal occupation in %	0.010***	0.008***	0.011***
	(0.002)	(0.003)	(0.003)
F-statistic	16.01	5.95	11.20
N	98,153	49,406	48,747
$\mathbf{X}_{it}$	✓	✓	✓

Source: SOEP version 35, years 1985 - 2018.
Notes: Standard Errors in parentheses. $^{*}\ p < 0.1$, $^{**}\ p < 0.05$, $^{***}\ p < 0.01$.
Observation Numbers: N = 122,456 (Life, Work), N = 111,288 (Leisure) , N = 68,782 (Family), N = 78,016 (Income).

▸ Lee et al. (2020) - tF test procedure for weak instrument

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tF test procedure for weak instrument nach Lee et al. (2020)

Table S.3: Robustness checks - tF test procedure for weak instrument

	Life		Work		Family		Leisure		Income	
	IV 1	IV 2	IV 1	IV 2	IV 1	IV 2	IV 1	IV 2	IV 1	IV 2
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
All										
First stage F-statistic	10.13	16.01	10.13	16.01	9.07	9.31	9.88	16.29	9.1	10.59
SQRT(F)	3.2	4.0	3.2	4.0	3.0	3.1	3.1	4.0	3.0	3.3
Critical t	3.39	2.8	3.39	2.8	3.65	3.51	3.51	2.8	3.65	3.29
b	0.397	0.441	0.412	0.408	0.221	0.279	0.003	0.026	0.847	0.792
tF 0.05 SE	0.199	0.140	0.216	0.187	0.253	0.204	0.428	0.366	0.352	0.356
tF corrected t	1.996	3.150	1.906	2.180	0.873	1.367	0.007	0.071	2.406	2.226
Men										
First stage F-statistic	17.16	5.95	17.16	5.95	13.51	2.65	16.28	6.07	13.34	3.66
Critical t	1.96	5.43	1.96	5.43	2.04	18.66	1.96	5.43	2.03	18.66
b	0.379	0.493	0.271	0.363	0.158	0.288	-0.072	0.012	0.665	0.689
tF 0.05 SE	0.151	0.291	0.241	0.518	0.167	1.114	0.259	0.684	0.190	2.285
tF corrected t	2.510	1.695	1.124	0.701	0.949	0.259	-0.278	0.018	3.509	0.302
Women										
First stage F-statistic	1.99	11.2	1.99	11.2	3.21	6.16	2.19	11.45	3.35	6.68
Critical t	3.19	3.11	3.19	3.11	2.71	4.92	3.11	3.11	2.63	4.25
b	0.353	0.342	0.492	0.475	0.265	0.252	0.151	0.129	1.072	0.987
tF 0.05 SE	0.199	0.222	0.228	0.225	0.178	0.361	0.351	0.455	0.386	0.553
tF corrected t	1.778	1.540	2.159	2.108	1.486	0.697	0.431	0.283	2.774	1.785

Source: SOEP (2019); Bundeagentur für Arbeit (2016a b) and Lee *et al.* (2020). Own calculations.
Note: Clustered standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.