

Do Long-term Unemployed Workers Benefit from Targeted Wage Subsidies?

- Internet Appendix -

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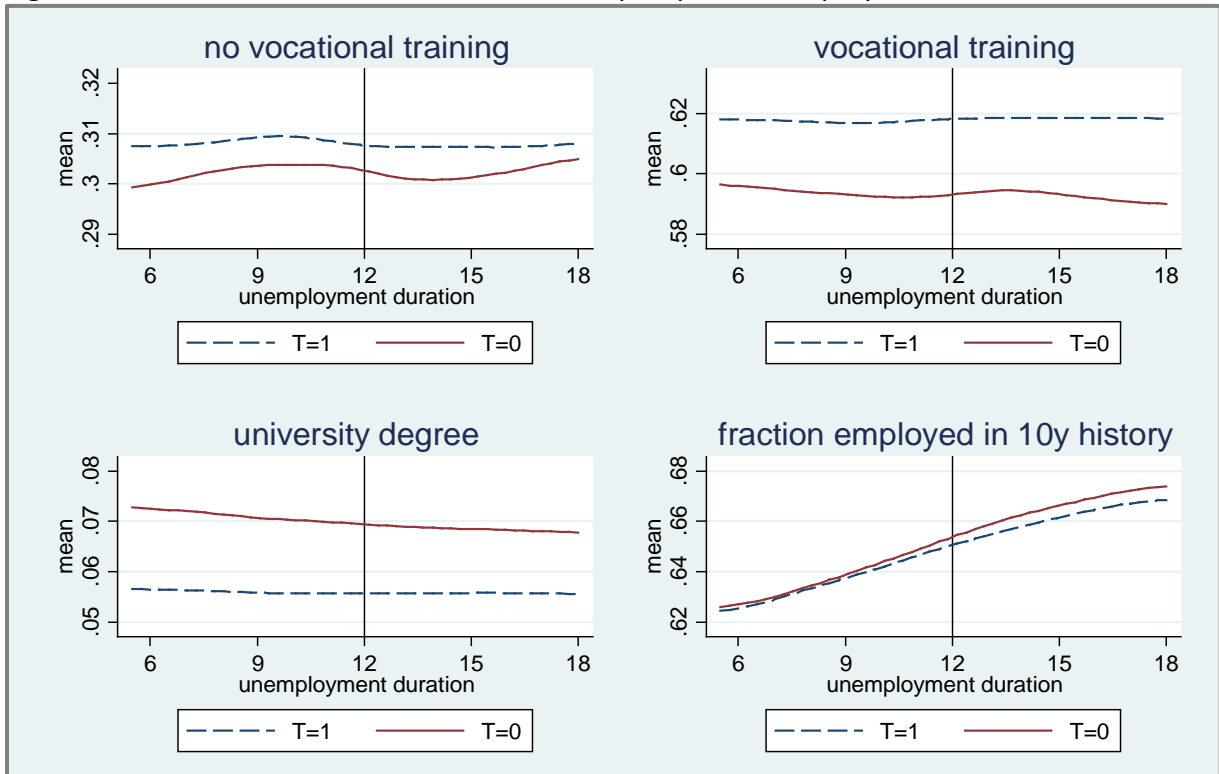
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This appendix contains supplementary material.

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A. Supporting evidence for the identification strategy

Figure IA.1: Means of selected characteristics by elapsed unemployment duration



Note: The means are based on samples including individuals that are at least X months unemployed. T=1 refers to entries in unemployment in 2000-2001 and T=0 to entries in 2002.

Table IA.1: Time difference in mean characteristics around the threshold

Characteristic	Elapsed unemployment duration 11 months		Elapsed unemployment duration 12 months	
Age	0.6776***	(0.1823)	0.6947***	(0.1850)
Female	0.0314***	(0.0080)	0.0330***	(0.0082)
Single	-0.0265***	(0.0072)	-0.0254***	(0.0074)
Couple	-0.0013	(0.0028)	-0.0014	(0.0029)
Single parent	-0.0039	(0.0031)	-0.0041	(0.0032)
Married	0.0371***	(0.0079)	0.0393***	(0.0081)
No child	0.0053	(0.0070)	0.0089	(0.0072)
1 child	-0.0003	(0.0055)	-0.0023	(0.0056)
2 or more children	0.0113*	(0.0047)	0.0096*	(0.0048)
No school	-0.0114*	(0.0048)	-0.0130**	(0.0050)
Compulsory schooling	0.0135	(0.0080)	0.0115	(0.0082)
Upper secondary schooling degree	0.0192**	(0.0071)	0.0229**	(0.0073)
University entrance schooling degree	-0.0012	(0.0053)	-0.0006	(0.0055)
Last employment: technical occupation	-0.0111*	(0.0051)	-0.0122*	(0.0053)
Last employment: construction	0.0155***	(0.0047)	0.0130**	(0.0047)
Last employment: production	-0.0128**	(0.0040)	-0.0130**	(0.0041)
Last employment: service higher skilled	0.0026	(0.0078)	0.0068	(0.0080)
Last employment: service lower skilled	-0.0036	(0.0062)	-0.0048	(0.0064)
Last employment: wage (in EUR per half month)	-28.6304***	(8.1273)	-29.1939***	(8.3785)
Last employer: # employees	3.6040	(18.9577)	3.4489	(19.7271)
Last employer: firm age	-18.1275***	(3.8440)	-18.5278***	(3.9482)
Regional unemployment rate	0.0059***	(0.0010)	0.0060***	(0.0010)
Regional long term unemployment rate	0.0293***	(0.0016)	0.0298***	(0.0016)
Unemployment benefit claim in days	111.4850***	(4.1229)	116.5093***	(4.2537)
Unemployment benefit (in EUR per half month)	-0.2877	(2.5515)	-0.6559	(2.6221)
Observations	15933		15116	

Note: Standard errors in parentheses. *** 1% significance level, ** 5% significance level, * 10% significance level. Mean in sample of entries into unemployment in 2000-2001 minus mean in sample of entries into unemployment in 2002.

B. Probit model for the propensity score used for matching

Table IA.2: Estimated probit coefficients

Covariates	Coefficient	S.E.
Individual characteristics		
Age < 25	0.0217	(0.283)
Age 25-29	0.274	(0.234)
Age 30-34	0.309	(0.219)
Age 35-39	0.390*	(0.205)
Age 40-44	0.412**	(0.209)
Age 45-49	0.420***	(0.133)
Age > 50	Reference	
Compulsory schooling degree or no degree	Reference	
Upper secondary schooling degree	0.125	(0.114)
University entrance degree	0.0704	(0.152)
No vocational degree	-0.0675	(0.122)
Vocational degree or university degree	Reference	
Nationality: German	0.0773	(0.168)
Single	-0.0227	(0.111)
Health impairment	-0.194	(0.135)
Entry timing		
Entry into unemployment: Dec-Feb	Reference	
Entry into unemployment: Mar-May	-0.0575	(0.131)
Entry into unemployment: Jun-Aug	-0.0659	(0.126)
Entry into unemployment: Sep-Nov	-0.311**	(0.138)
Last firm characteristics		
Number of employees	-1.84e-05	(6.74e-05)
Share of temporary employed	-0.00378	(0.0345)
Firm age in half months	7.42e-05	(0.000220)
Medium-term labor market history		
Half months employed (3 years)	0.166**	(0.0762)
Half months employed (4 years)	-0.0610	(0.0396)
Half months unemployed (3 years)	0.175**	(0.0778)
Half months unemployed (4 years)	-0.0578	(0.0422)
Half months in program (4 years)	-0.0161	(0.0134)
Half months out of labor force (3 years)	0.148*	(0.0777)
Mean unemployment duration (3 years)	-0.0171	(0.0116)
Mean out of labor force duration (3 years)	0.00351	(0.0140)
Duration last program before unemployment entry	-0.00842	(0.0104)
Duration last out of labor force spell before unempl. entry	-0.00324	(0.00216)
Long-term labor market history		
Half months unemployed (6 years)	0.00172	(0.00805)
Half months unemployed (10 years)	-0.00268	(0.00333)
Half months out of labor force (6 years)	-0.00645	(0.00627)
Mean employment duration (10 years)	0.00136	(0.00102)
Mean unemployment duration (6 years)	0.00653	(0.00488)
Mean program duration (6 years)	0.0191	(0.0142)
Mean duration out of labor force (6 years)	0.00842	(0.00674)

Table IA.2: continued

Covariates	Coefficient	S.E.
Earnings history		
Mean wage in EUR (half month, 10 years)	0.000251	(0.000403)
Total wage income in EUR (10 years)	-2.80e-06	(1.75e-06)
Last wage in EUR (half monthly)	0.000132	(0.000171)
Unemployment benefit claim and unemployment benefit		
UB claim 0-9 months	0.0134	(0.159)
UB claim 10-12 months	Reference	
UB claim 13-18 months	0.175	(0.187)
UB claim >18 months	-0.0423	(0.226)
UB above 400€ per month	0.0132	(0.132)
Region dummies		
Baden-Wurttemberg	0.0823	(0.202)
Bavaria	-0.364	(0.260)
Lower-Saxony, Bremen	-0.103	(0.186)
North Rhine-Westphalia	Reference	
Schleswig-Holstein, Hamburg	-0.435	(0.352)
Hessen	0.353*	(0.182)
Rhineland-Palatinate, Saarland	0.0190	(0.230)
Berlin	-0.277	(0.236)
Brandenburg	0.0775	(0.213)
Mecklenburg-West Pomerania	-0.244	(0.300)
Saxony-Anhalt	-0.269	(0.244)
Saxony	-0.462*	(0.242)
Thuringia	0.0749	(0.231)
Regional characteristics		
Long-term unemployment rate	0.741	(0.640)
Rural area	0.457*	(0.256)
GDP per capita in 10.000 EUR	-0.0644	(0.0651)
Economic support per capita in 1000 EUR for 1995-2001	-0.0637	(0.135)
Constant term	-8.709**	(3.922)
# of observations	8,661	
Efron's Pseudo-R2	0.119	

Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1. The dependent variable is equal to one if a worker receives a subsidy and zero otherwise.

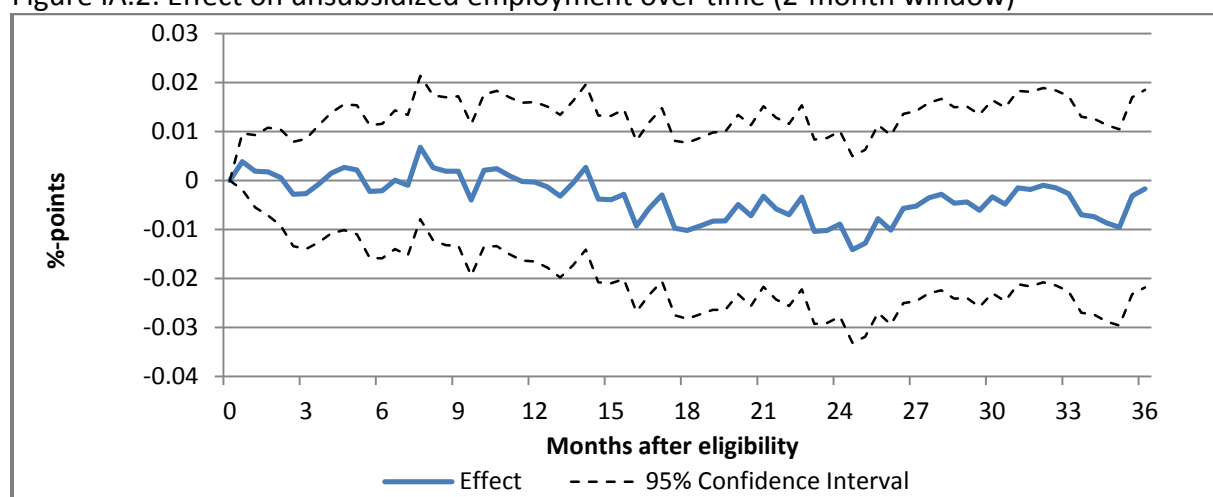
C. Sensitivity results

Table IA.3: Extending the window around the threshold

Dependent variable:	Exit to unsubsidized employment			Exit to regular employment		
	coefficient	S.E.	t-value	coefficient	S.E.	t-value
2 months below and above threshold						
Constant	0.061	0.0027	22.87	0.068	0.0029	23.91
Bias in T = 0	-0.01	0.0039	-2.58	-0.008	0.0042	-1.96
Time effect	-0.004	0.0035	-1.04	-0.006	0.0038	-1.47
Effect of eligibility (ITT)	0.000	0.0051	0.08	0.006	0.0055	1.14
# of observations	32018			32018		
3 months below and above threshold						
Constant	0.089	0.0031	28.96	0.099	0.0033	30.33
Bias in T = 0	-0.018	0.0045	-3.92	-0.016	0.0049	-3.26
Time effect	-0.004	0.004	-0.94	-0.004	0.0043	-0.99
Effect of eligibility (ITT)	-0.001	0.006	-0.2	0.004	0.0064	0.66
# of observations	33052			33052		
4 months below and above threshold						
Constant	0.118	0.0033	35.43	0.133	0.0036	37.31
Bias in T = 0	-0.032	0.005	-6.42	-0.031	0.0054	-5.76
Time effect	-0.002	0.0044	-0.43	-0.004	0.0047	-0.78
Effect of eligibility (ITT)	-0.001	0.0067	-0.22	0.006	0.0071	0.89
# of observations	34332			34332		

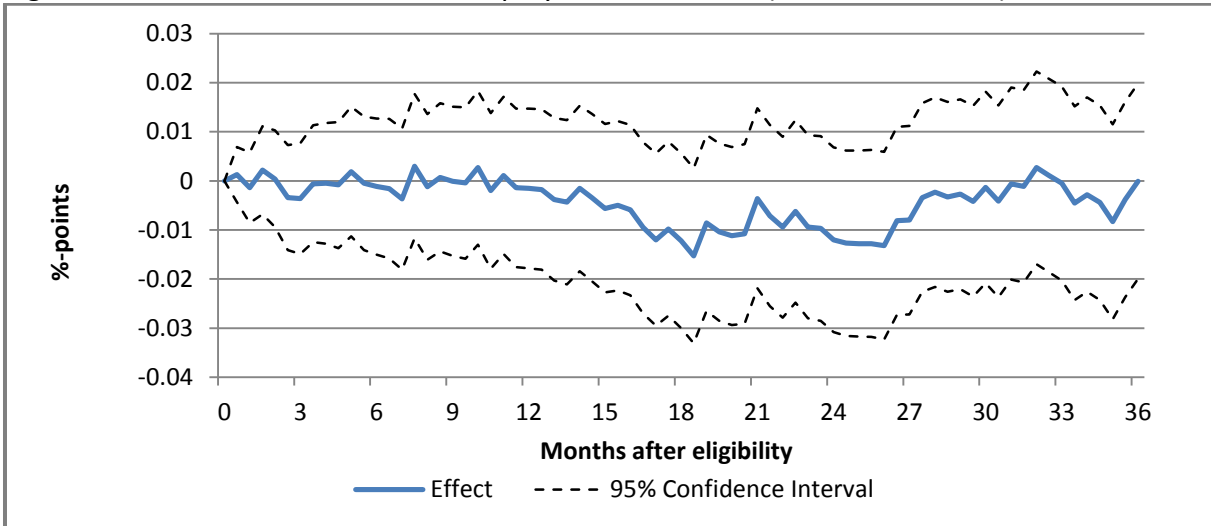
Note: For a window of x months, exit rates measure exit in the x months after determining eligibility, i.e. in months 12-x to 12 after becoming unemployed for ineligible and months 13 to 13+x for eligibles).

Figure IA.2: Effect on unsubsidized employment over time (2-month window)



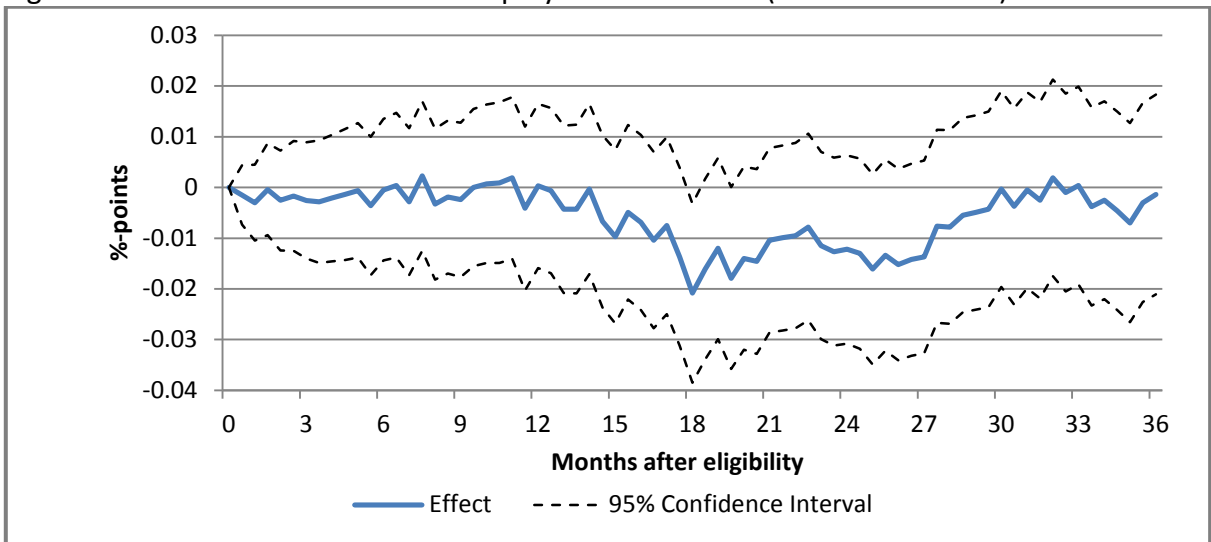
Note: The effect is obtained based on the proposed model in section IV.C estimated for each month. Eligibles are those with elapsed unemployment duration of 12 months, ineligible have previous unemployment duration of 11 months.

Figure IA.3: Effect on unsubsidized employment over time (3-month window)



Note: The effect is obtained based on the proposed model in section IV.C estimated for each month. Eligibles are those with elapsed unemployment duration of 12 months, ineligible have previous unemployment duration of 11 months.

Figure IA.4: Effect on unsubsidized employment over time (4-month window)



Note: The effect is obtained based on the proposed model in section IV.C estimated for each month. Eligibles are those with elapsed unemployment duration of 12 months, ineligible have previous unemployment duration of 11 months.

Table IA.4: Effect on unsubsidized employment

	Estimation sample		Persons with UI claim of 12 months included	
	Coeff.	S.E.	Coeff.	S.E.
Employed 6 months after eligibility	-0.0035	0.0070	0.0003	0.0060
Employed 12 months after eligibility	-0.0004	0.0083	0.0039	0.0070
Employed 18 months after eligibility	-0.0085	0.0092	-0.0012	0.0075
Employed 24 months after eligibility	-0.0048	0.0098	-0.0004	0.0078
Employed 30 months after eligibility	-0.0010	0.0101	0.0018	0.0080
Employed 36 months after eligibility	0.0031	0.0104	0.0036	0.0081
# of observations	31049		57186	

Note: Eligibles are those with elapsed unemployment duration of 12 months, ineligible have previous unemployment duration of 11 months. Standard errors (S.E.) are obtained from 4999 bootstrap replications. According to MacKinnon (2006) this avoids ties when computing the quantiles.

Table IA.5: Sensitivity checks

	Exit to unsubsidized employment		Exit to regular employment	
	Coeff.	S.E.	Coeff.	S.E.
Baseline	-0.001	0.0037	0.003	0.0040
Additionally control for unemployment duration	-0.001	0.0036	0.003	0.0039
Additionally control for other covariates*	-0.001	0.0036	0.003	0.0039
Observations	31049		31049	

Note: Eligibles are those with elapsed unemployment duration of 12 months, ineligible have previous unemployment duration of 11 months. Standard errors (S.E.) are obtained from 4999 bootstrap replications. According to MacKinnon (2006) this avoids ties when computing the quantiles. *Covariates are those also used for matching (see Table IA.2).

Table IA.6: Sample without excluding persons with UI claims of 12 months

	Exit to unsubsidized employment		Exit to regular employment	
	Coeff.	S.E.	Coeff.	S.E.
Baseline	0.001	0.0033	0.008	0.0035
Additionally control for unemployment duration	0.001	0.0032	0.008	0.0034
Additionally control for other covariates*	0.001	0.0032	0.008	0.0034
Observations	57186		57186	

Note: Eligibles are those with elapsed unemployment duration of 12 months, ineligible have previous unemployment duration of 11 months. Standard errors (S.E.) are obtained from 4999 bootstrap replications. According to MacKinnon (2006) this avoids ties when computing the quantiles. *Covariates are those also used for matching (see Table IA.2).