

Online Appendix for:
A Field Experiment on Labor Market Speeddates for
Unemployed Workers

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A. Supplementary tables and figures

Table A.1: Overview matching events

#	Location	Date	Type	Size	Treatment	Attendance
1	Doetinchem	4-Jul-14	General	187	51%	18%
2	Doetinchem	5-Sep-14	Technical	166	48%	18%
3	Leeuwarden	17-Sep-14	General	4,091	76%	22%
4	Eindhoven	18-Sep-14	Technical, Transport, Logistics, Industry, Security, Construction, ICT	932	50%	24%
5	Leeuwarden	12-Nov-14	General	2,222	83%	31%
6	Venlo	22-Jan-15	General	312	80%	38%
7	Zwolle	4-Feb-15	General	345	80%	13%
8	Groningen	19-Mar-15	Commercial services	478	80%	19%
9	Tiel	11-Jun-15	General	296	80%	11%
10	Veghel	10-Jun-15	General	680	75%	24%
11	Steenwijk	28-Aug-15	General	412	70%	16%
12	Groningen	17-Sep-15	Technical, Engineering, Construction	446	80%	14%
13	Venray	5-Nov-15	General	162	80%	42%
14	Venray	14-Jan-16	General	183	80%	44%
15	Venlo	21-Jan-16	General	427	80%	38%
16	Groningen	18-Feb-16	Technical, Engineering, Construction	711	81%	15%
17	Venray	25-Feb-16	General	390	80%	33%
18	's Hertogenbosch	25-Feb-16	General	170	82%	41%

Table A.2: Comparison of survey respondents to full sample

	Full sample	Survey respondents	<i>p</i> -value
Female	0.36 (0.48)	0.35 (0.48)	0.50
Age	41.09 (11.94)	41.40 (11.69)	0.20
Primary/lower secondary education	0.25 (0.43)	0.28 (0.45)	0.00
Higher secondary education	0.55 (0.50)	0.66 (0.48)	0.00
College/university education	0.20 (0.40)	0.06 (0.24)	0.00
Observations	12,610	2,888	

NOTE – Column (1) and (2) report means, with standard deviations in parentheses. Column (3) shows *p*-values of two-sided difference-in-means tests.

Table A.3: Descriptive statistics and balancing

	Control group	Treatment group	<i>p</i> -value
Female	0.36 (0.48)	0.35 (0.48)	0.56
Age	40.96 (11.91)	41.21 (11.97)	0.32
Married	0.43 (0.50)	0.43 (0.49)	0.81
Primary/lower secondary education	0.25 (0.43)	0.25 (0.43)	0.53
Higher secondary education	0.56 (0.50)	0.54 (0.50)	0.20
College/university education	0.19 (0.40)	0.20 (0.40)	0.36
Benefits (prev. 3 months)	1663.00 (1986.35)	1623.74 (1982.75)	0.34
Earnings (prev. 3 months)	3945.39 (3926.64)	3880.03 (3839.04)	0.42
Workdays (prev. 3 months)	30.53 (21.32)	30.25 (21.45)	0.53
Perm. contract (prev. 3 months)	0.23 (0.42)	0.22 (0.41)	0.18
Temp agency work (prev. 3 months)	0.36 (0.48)	0.37 (0.48)	0.41
Remaining benefit days	403.15 (392.15)	399.38 (388.97)	0.64
Observations	3,054	9,556	

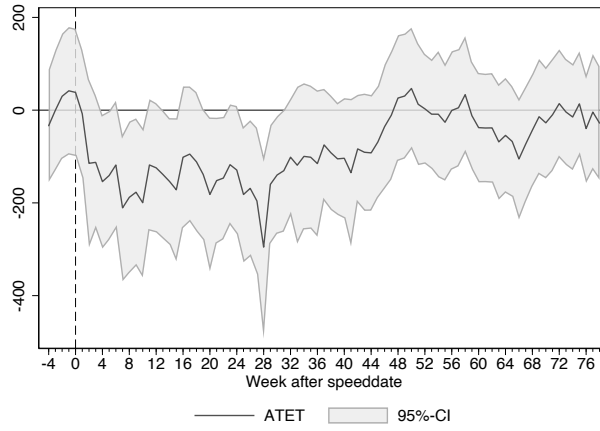
NOTE – All estimates are weighted by inverse treatment assignment probabilities. Columns (1) and (2) report means, with standard deviations in parentheses. Column (3) shows *p*-values of two-sided difference-in-means tests.

Table A.4: Descriptive statistics and balancing (Sample of survey respondents)

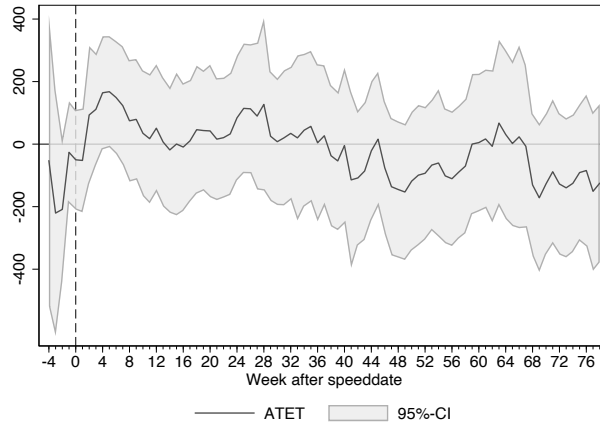
	Control group	Treatment group	<i>p</i> -value
Female	0.40 (0.49)	0.42 (0.49)	0.33
Age	45.82 (11.17)	46.04 (10.97)	0.67
Married	0.52 (0.50)	0.52 (0.50)	0.81
Primary/lower secondary education	0.19 (0.39)	0.19 (0.39)	0.86
Higher secondary education	0.50 (0.50)	0.52 (0.50)	0.31
College/university education	0.31 (0.46)	0.29 (0.45)	0.34
Benefits (prev. 3 months)	1963.89 (2295.66)	1870.07 (2256.54)	0.35
Earnings (prev. 3 months)	4729.62 (4915.27)	4311.85 (4518.73)	0.05
Workdays (prev. 3 months)	30.24 (21.83)	29.51 (21.96)	0.45
Perm. contract (prev. 3 months)	0.30 (0.46)	0.28 (0.45)	0.23
Temp agency work (prev. 3 months)	0.23 (0.42)	0.27 (0.44)	0.06
Remaining benefit days	579.37 (396.15)	580.73 (391.04)	0.94
Observations	675	2,213	

NOTE – All estimates are weighted by inverse treatment assignment probabilities. Columns (1) and (2) report means, with standard deviations in parentheses. Column (3) shows *p*-values of two-sided difference-in-means tests.

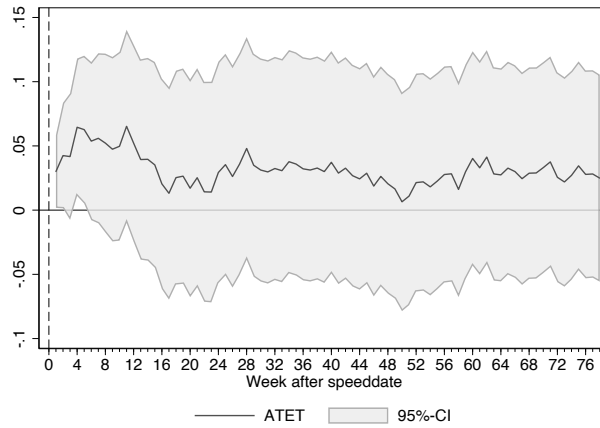
Figure A.1: ATET estimates by week after matching event



(a) Monthly UI benefits (in euros)



(b) Monthly earnings (in euros)



(c) Starting new work

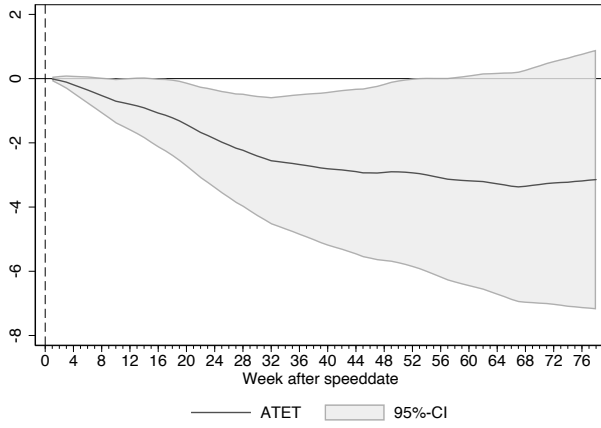
Note: For starting new work after the matching event, pre-treatment effects cannot be estimated.

Table A.5: ITT estimates for main outcomes

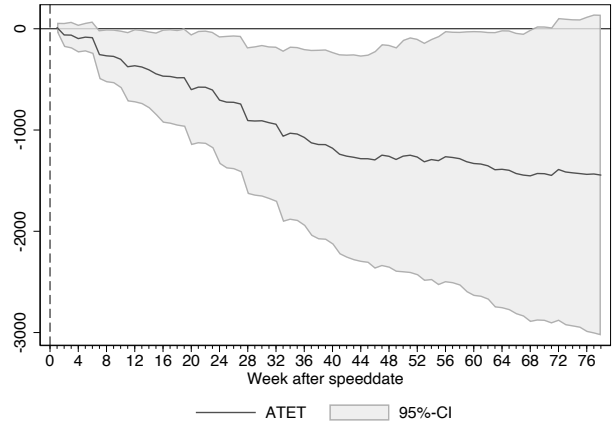
	Collecting benefits			Monthly benefits			New work - Temp. agency		
	+1m	+6m	+12m	+1m	+6m	+12m	+1m	+6m	+12m
ITT	-0.019** (0.009)	-0.021** (0.010)	-0.005 (0.009)	-36.154** (17.184)	-39.559** (17.529)	0.665 (14.187)	0.009** (0.004)	0.010 (0.008)	0.004 (0.009)
<i>Control group mean and standard deviation of outcomes</i>									
Mean	0.706	0.416	0.335	922.43	589.94	399.71	0.033	0.156	0.234
SD	(0.455)	(0.493)	(0.472)	(902.20)	(921.02)	(717.44)	(0.179)	(0.363)	(0.424)
	New work - Regular			Monthly working days			Monthly earnings		
	+1m	+6m	+12m	+1m	+6m	+12m	+1m	+6m	+12m
ITT	0.010* (0.005)	0.003 (0.010)	0.010 (0.010)	0.393** (0.185)	0.177 (0.200)	-0.057 (0.182)	38.508* (21.559)	26.497 (24.708)	-21.871 (25.434)
<i>Control group mean and standard deviation of outcomes</i>									
Mean	0.067	0.339	0.489	7.827	11.231	10.232	785.38	1187.23	1298.27
SD	(0.251)	(0.474)	(0.500)	(9.396)	(10.002)	(9.915)	(1090.76)	(1241.75)	(1308.37)

NOTE – $N = 12,610$. ITT estimates are obtained through OLS regressions. Outcomes are measured one (“+1m”), six (“+6m”) and twelve (“+12m”) months after the matching event. All regressions control for matching event fixed effects as well as a set of individual characteristics (gender, age, marital status, education) and previous job characteristics (earnings, benefits, permanent contract, working days) measured in the three months before the matching event. Robust standard errors are reported in parentheses. * significant at 10% level, ** significant at 5% level, *** significant at 1% level.

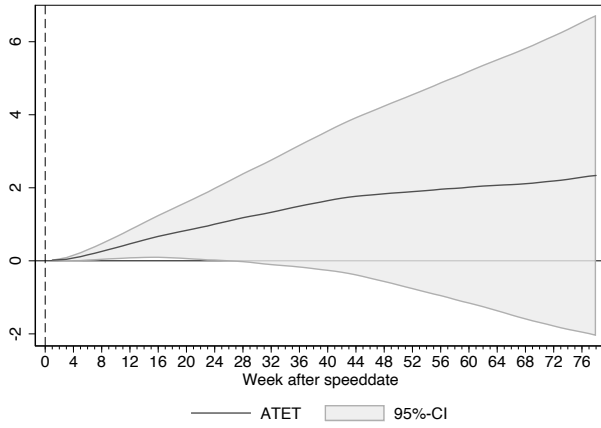
Figure A.2: ATET estimates for cumulative outcomes



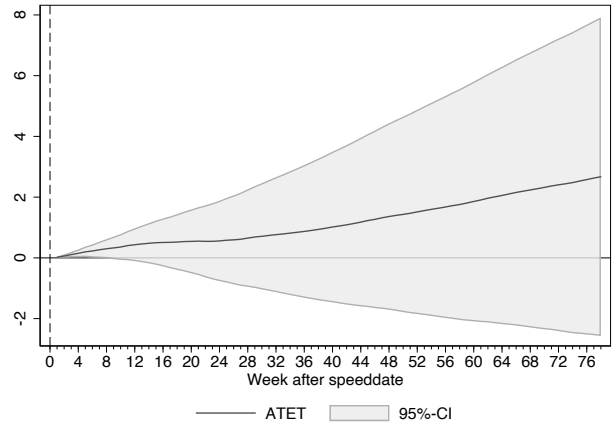
(a) Cumulative weeks UI benefit receipt



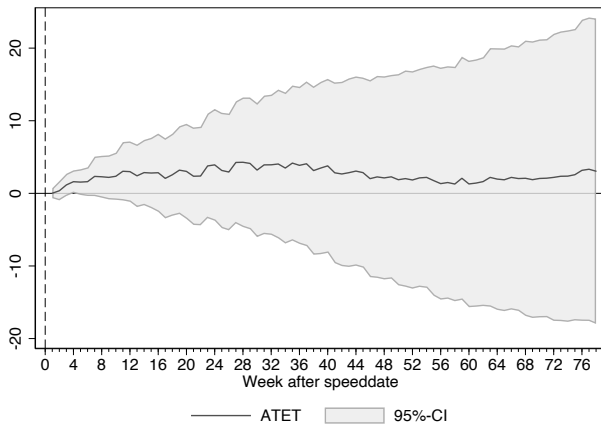
(b) Cumulative UI benefits (in euros)



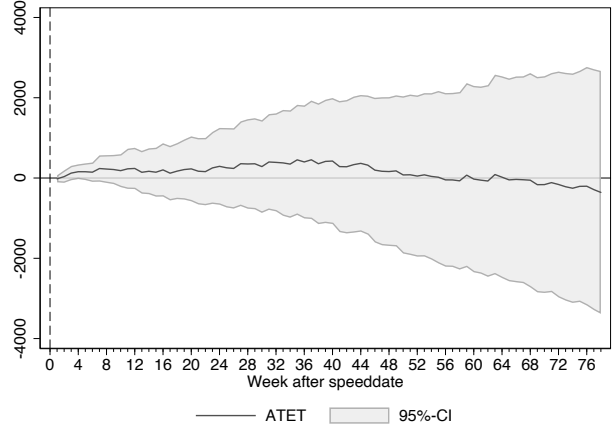
(c) Cumulative weeks since new work - Temp. agency



(d) Cumulative weeks since new work - Regular



(e) Cumulative workdays



(f) Cumulative earnings (in euros)

Table A.6: Impact by type of contract

	Monthly working days						Monthly earnings					
	Employment agency			Regular employment			Employment agency			Regular employment		
	+1m	+6m	+12m	+1m	+6m	+12m	+1m	+6m	+12m	+1m	+6m	+12m
<i>Intention-to-Treat Estimates (ITT)</i>												
Invited	0.109 (0.136)	0.186 (0.140)	0.065 (0.130)	0.284 (0.174)	-0.009 (0.205)	-0.122 (0.190)	4.38 (15.12)	16.67 (15.70)	-4.83 (15.85)	34.13* (19.64)	9.83 (24.52)	-17.04 (25.633)
<i>Treatment-on-the-Treated Estimates (ATET)</i>												
Attended	0.466 (0.579)	0.792 (0.598)	0.278 (0.553)	1.212 (0.745)	-0.037 (0.872)	-0.519 (0.810)	18.67 (64.41)	71.09 (66.88)	-20.61 (67.48)	145.535* (83.958)	41.90 (104.45)	-72.66 (109.12)
<i>Control group mean and standard deviation of outcomes</i>												
Mean	3.00	3.14	2.58	4.82	8.10	7.65	318.70	337.19	329.49	466.68	850.04	968.77
Standard deviation	(6.85)	(6.94)	(6.44)	(8.36)	(10.07)	(9.75)	(767.31)	(782.80)	(783.61)	(946.04)	(1220.20)	(1308.81)

NOTE – $N = 12,610$. ITT estimates are obtained through OLS regressions. ATET estimates involve IV regressions using treatment assignment as an instrument for attendance. Outcomes are measured one (“+1m”), six (“+6m”) and twelve (“+12m”) months after the matching event. All regressions control for matching event fixed effects as well as a set of individual characteristics (gender, age, marital status, education) and previous job characteristics (earnings, benefits, permanent contract, working days) measured in the three months before the matching event. Robust standard errors are reported in parentheses. * significant at 10% level, ** significant at 5% level, *** significant at 1% level.

Table A.7: Impact on monthly working days by benefit status

	Monthly working days (w/ benefits)			Monthly working days (w/o benefits)		
	+1m	+6m	+12m	+1m	+6m	+12m
<i>Intention-to-Treat Estimates (ITT)</i>						
Invited	0.091 (0.146)	0.019 (0.123)	-0.030 (0.116)	0.303* (0.171)	0.158 (0.206)	-0.027 (0.192)
<i>Treatment-on-the-Treated Estimates (ATET)</i>						
Attended	0.386 (0.621)	0.083 (0.525)	-0.127 (0.493)	1.291* (0.734)	0.673 (0.879)	-0.114 (0.817)
<i>Control group mean and standard deviation of outcomes</i>						
Mean	3.40	2.27	1.96	4.43	8.96	8.27
Standard deviation	(6.96)	(5.91)	(5.51)	(8.36)	(10.28)	(10.02)

NOTE – $N = 12,610$. ITT estimates are obtained through OLS regressions. ATET estimates involve IV regressions using treatment assignment as an instrument for attendance. Outcomes are measured one (“+1m”), six (“+6m”) and twelve (“+12m”) months after the matching event. All regressions control for matching event fixed effects as well as a set of individual characteristics (gender, age, marital status, education) and previous job characteristics (earnings, benefits, permanent contract, working days) measured in the three months before the matching event. Robust standard errors are reported in parentheses. * significant at 10% level, ** significant at 5% level, *** significant at 1% level.

Table A.8: Additional heterogeneous effects - Monthly working days (ATET estimates)

	Size of general event		Education			Remaining UI duration	
	Small	Large	Low	Medium	High	More than 3 months	At least 3 months
After 1 month	0.815 (1.348)	2.679** (1.138)	0.772 (1.812)	1.473 (1.100)	2.882** (1.435)	1.218 (3.779)	1.198* (0.656)
After 6 months	-1.097 (1.446)	1.596 (1.218)	1.836 (1.973)	-0.159 (1.179)	1.317 (1.555)	5.177 (4.071)	-0.080 (0.777)
After 12 months	-0.701 (1.150)	-0.606 (1.177)	1.381 (1.775)	-0.604 (1.083)	-1.146 (1.360)	-3.044 (3.636)	-0.017 (0.709)
Observations	3,564	6,313	3,167	6,916	2,527	4,489	8,121

NOTE – Estimates are obtained through IV regressions using treatment assignment as an instrument for attendance. All regressions control for matching event fixed effects as well as a set of individual characteristics (gender, age, marital status, education) and previous job characteristics (earnings, benefits, permanent contract, working days) measured in the three months before the matching event. Education levels are defined as follows: elementary school or less (low), high school or/and secondary vocational school (medium), college or university (high). Effects reported by size of event are for general speeddates only. Speeddates with at least 1,000 invitees are classified as large. Robust standard errors are reported in parentheses. * significant at 10% level, ** significant at 5% level, *** significant at 1% level.

Table A.9: Sectors one year after treatment

	Control group	Treatment group	<i>p</i> -value
Temporary work	0.28 (0.45)	0.28 (0.45)	0.79
Commercial services	0.13 (0.34)	0.13 (0.33)	0.79
Health and social work	0.10 (0.30)	0.09 (0.29)	0.29
Metal- and technical industries	0.06 (0.24)	0.07 (0.25)	0.58
Port	0.04 (0.20)	0.04 (0.20)	0.76
Food services	0.04 (0.19)	0.04 (0.19)	0.86
Retail and crafts	0.03 (0.17)	0.04 (0.19)	0.06
Other sectors	0.55 (0.50)	0.56 (0.50)	0.70
Observations	3,054	9,556	

NOTE – All estimates are weighted by inverse treatment assignment probabilities. Columns (1) and (2) report means, with standard deviations in parentheses. Column (3) shows *p*-values of two-sided difference-in-means tests.

Table A.10: Impact on job search behavior (ITT estimates)

	# employment agencies registered	Job search motivation (standardized)	# applications sent (last 4 weeks)	# job talk invitations (last 4 weeks)	Reservation wage (month, in euros)
<i>Intention-to-Treat Estimates (ITT)</i>					
Treatment	0.265* (0.150)	0.105** (0.051)	-0.235 (0.203)	0.034 (0.057)	-88.20** (37.30)
<i>Control group mean and standard deviation of outcomes</i>					
Mean	3.510	3.610	6.421	0.800	2281.59
SD	(3.026)	(1.000)	(4.063)	(1.190)	(1063.97)

NOTE – $N = 2,888$. Observations are weighted by inverse probability weights to account for selective response. ITT estimates are obtained through OLS regressions. All outcomes are measured 2-3 weeks after the matching event. If individuals already found work, all outcomes except for column (2) refer to the previous job search period. Job search motivation is normalized to have a standard deviation of 1 in the control group. All regressions control for matching event fixed effects as well as a set of individual characteristics (gender, age, education). Robust standard errors are reported in parentheses. * significant at 10% level, ** significant at 5% level, *** significant at 1% level.

Figure A.3: Reported monthly reservation wage (weighted)

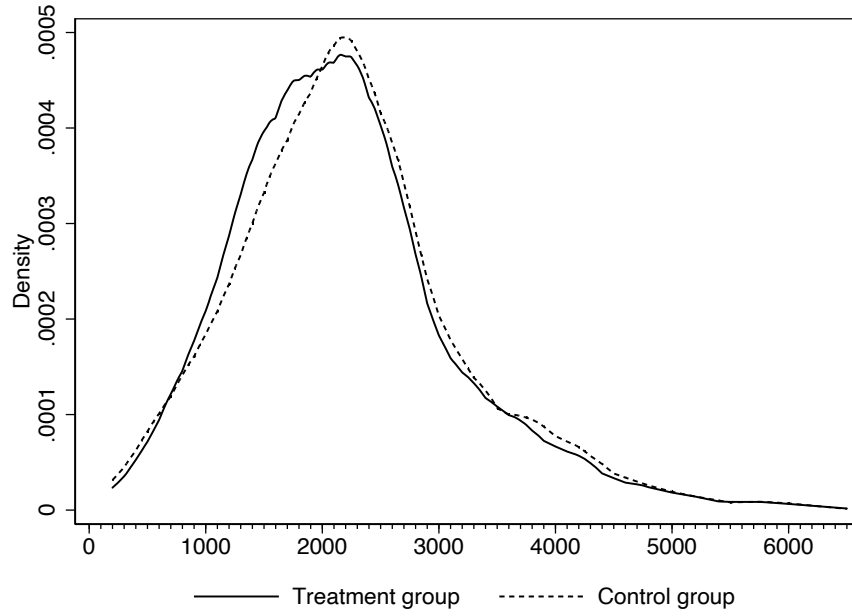
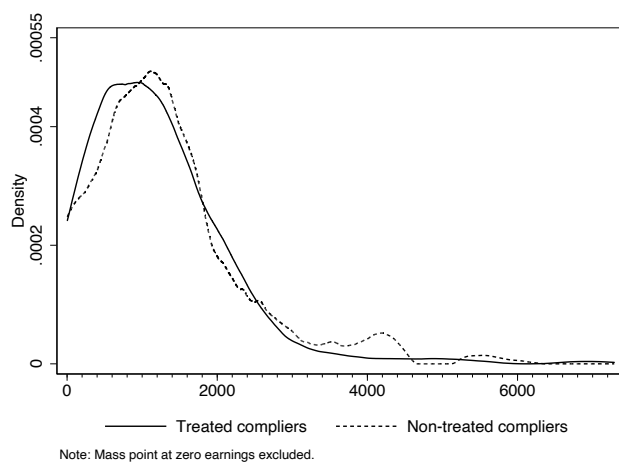
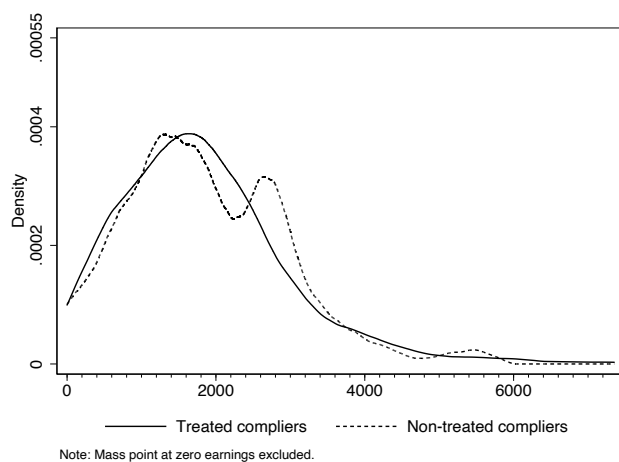


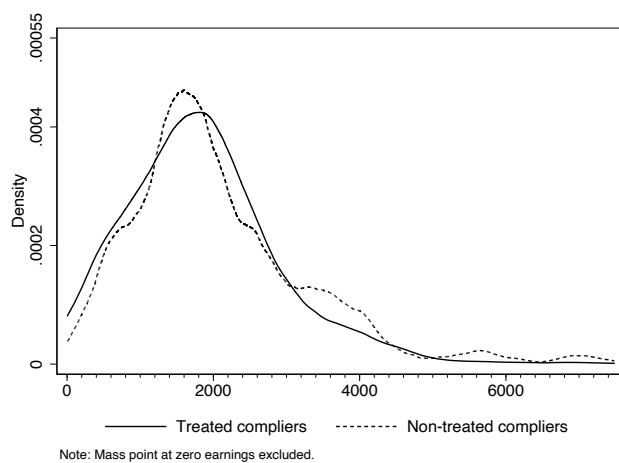
Figure A.4: Earnings distributions of compliers (Epanechnikov kernel)



(a) Earnings (in euros) after one month



(b) Earnings (in euros) after six months



(c) Earnings (in euros) after twelve months

B. Displacement effects

To examine the presence of displacement effects, we first compare job finding rates in the control groups of matching events with different treatment assignment probabilities. If displacement effects exist, job seekers should do, on average, worse when the relative size of the treatment group increases. Because the local UI offices choose the share of benefit recipients in the treatment group, we have to assume that the chosen size does not correlate with unobserved characteristics of the location or the job searchers. Figure B.1 shows the share of individuals who work six months after the matching event in treatment and control group, sorted by treatment assignment probability. The graphical evidence does not suggest that a higher share of treated individuals drives down the job finding rate in the control group.

To shed more light on potential displacement effects, we extend our sample by additional job seekers. For each local UI office in our sample, we use administrative data on benefit recipients during any of the months at which a matching event took place at another UI office. Adding these individuals to the control groups in our sample, the resulting panel includes benefit recipients at 11 locations in 12 different months. Table B.1 illustrates the corresponding panel structure. This allows us to compare the control groups to individuals at other locations where no matching event took place at a given date. Furthermore, we can compare the control groups to benefit recipients at the same location but at different points in time. Exploiting this panel structure, we estimate displacement effects in a difference-in-difference framework. The corresponding regression equation is given by

$$Y_{ilt} = \kappa_l + \lambda_t + \pi D_{ilt} + V_{ilt}$$

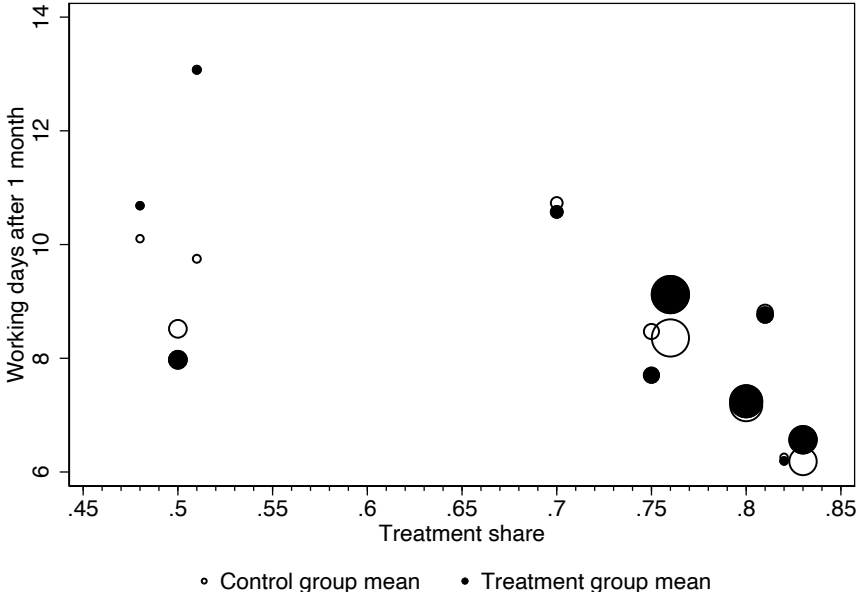
where Y_{ilt} denotes the labor market outcome of individual i in location l at time t . κ_l are location fixed effects and λ_t are month fixed effects. D_{ilt} is an indicator that equals one if there is a matching event at location l and month t . Finally, V_{ilt} represents the error term. The parameter π then denotes the difference-in-difference estimator of displacement effects. This approach requires two assumptions. First, labor market outcomes follow a common trend over time at all locations, and second, unemployed workers search for employment in their home region.

When comparing unemployed workers in the experiment to other benefit recipients, we have to account for the fact that the entire population of benefit recipients might

differ from the subset that was selected by the UI offices as eligible for a matching event. As shown in Table B.2, the two groups indeed differ in terms of observable characteristics.¹ Benefit recipients eligible for matching events are younger, more likely to be male and unmarried. They also have somewhat lower schooling levels and shorter unemployment spells. To account for these differences, we estimate for each job searcher the propensity to be eligible for a matching event and weigh our estimates accordingly using inverse-probability weights.²

Given that some matching events took place at the same location within a period of three months, we focus on the short-run impact to avoid confounding effects. Using monthly working days after one month as outcome, we find a small and insignificant difference-in-difference coefficient (p -value = 0.46). This supports our assumption that matching events do not affect the job finding rate of unemployed workers who are not invited to matching events.

Figure B.1: Monthly working days after one month by treatment share



¹Compared to our dataset on individuals in the experiment, the data on the full population contain fewer individual characteristics.

²The propensity score is estimated using the characteristics shown in Table B.2 as well as sector indicators. Figure B.2 shows that the estimated propensity scores of the control groups and the added sample of benefit recipients have a large area of common support.

Table B.1: Locations and dates (**X**'s indicate matching events)

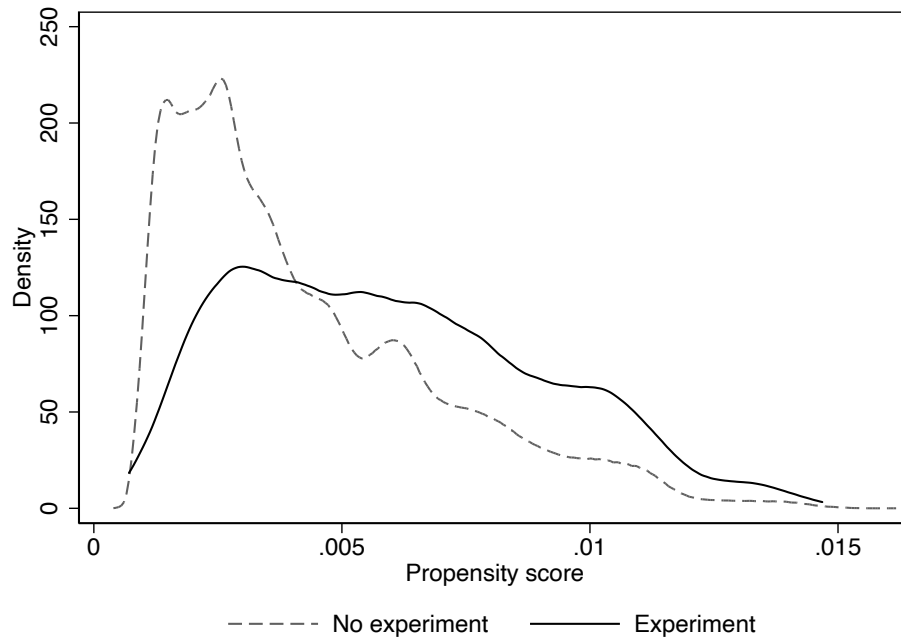
Location	Doetinchem	Leeuwarden	Eindhoven	Venlo	Zwolle	Groningen	Tiel	Veghel	Steenwijk	Venray	's Hertogenbosch
Month											
Jul-14	X										
Sep-14	X	X	X								
Nov-14		X									
Jan-15				X							
Feb-15					X						
Mar-15						X					
Jun-15							X	X			
Aug-15									X		
Sep-15						X					
Nov-15										X	
Jan-16			X							X	
Feb-16						X				X	X

Table B.2: Comparison of control group and entire population

	Population	Control group	<i>p</i> -value
Female	0.49 (0.50)	0.36 (0.48)	0.00
Age	44.37 (11.82)	40.97 (11.91)	0.00
Married	0.48 (0.50)	0.43 (0.50)	0.00
Level of education	5.78 (2.91)	5.66 (2.77)	0.02
Working (one month before)	0.38 (0.49)	0.48 (0.50)	0.00
Working (two months before)	0.45 (0.50)	0.60 (0.49)	0.00
Working (three months before)	0.51 (0.50)	0.75 (0.44)	0.00
Observations	708,296	3,055	

NOTE – Column (1) and (2) report means, with standard deviations in parentheses. Column (3) shows *p*-values of two-sided difference-in-means tests.

Figure B.2: Common support of propensity score estimates



C. Extract online questionnaire

English translation

Introduction

On behalf of the [Dutch] UI administration, VU University Amsterdam is conducting research on the effectiveness of services provided by the UI Administration and the chances of UI benefit recipients to find employment. For this purpose, we would like to ask you a few questions. Your answers are directly sent to researchers of VU University Amsterdam and will not be shared with the UI administration. The answers will be treated confidentially, will not be shared with third parties, and will not be used for other purposes than this specific research. It will not be possible to identify persons. We kindly ask you to fill in the complete questionnaire. For a successful evaluation, it is important to obtain a high response rate. Filling in the questionnaire takes just 10 minutes. If you have any questions about the questionnaire or the research, please contact the responsible researchers at VU University Amsterdam: [List of three researchers with contact details: name, email address, telephone number]. We thank you for your cooperation.

(1) Basic characteristics

- Gender, year of birth, highest completed level of education

(2) Current situation and last employment

- At how many temporary employment agencies are you currently registered?
(Possible answers: 0, 1, 2, 3, 4-6, 7-10, more than 10)
- What do you think are your chances to find employment within three months?
(Slider on a 0-100 [unlikely - very likely] percentage scale)

(3) Job search behavior (If already found work, asked retrospectively for last period of unemployment)

- How many application letters do/did you write in four weeks' time? (Possible answers: 0, 1-3, 4-7, 8-11, 12-15, 16-19, 20 or more)

- How often do/did you receive invitations for a job talk in four weeks' time? (Possible answers: 0, 1, 2, 3, 4, 5 or more)
- What is/was the minimal monthly pre-tax salary that you want/wanted to earn? (Fill in amount)
- How motivated are/were you to write applications? (Slider on a 1-5 [not motivated - very motivated] scale)

(4) Matching events (Questions only asked if applicable)

- Have you been invited to a matching event in the previous two months?
- With how many temporary employment agencies did you talk during the matching event. (Possible answers: 1-20)
- How long did a talk last on average? (Slider 0-30 minutes)
- Did you stay in contact with one or more temporary employment agencies after the matching event? (Possible answers: Yes, one ore more agencies contacted me; yes, I contacted one ore more agencies; no)

D. Invitation letter matching event

The exact phrasing of invitation letters differed somewhat between local offices of the UI administration but the content was very similar. Below we provide a translation of the invitation letter used in Leeuwarden.

English translation

Invitation - Speeddate with temporary work agencies

Dear Sir or Madam,

You receive UI benefits and you are searching for work. To support you, we organize a meeting with temporary work agencies for you: the Speeddate. You are cordially invited on

Date: XXX, Location: XXX, Time: XXX

What can you expect?

The goal of the Speeddate is to get you quickly in touch with multiple temporary work agencies offering jobs in various sectors. They would like to get to know you and find out whether there is work for you within their large network. Make sure that you are capable to present yourself briefly and powerful. It would be good to already think beforehand about what you want and to bring a sufficient number of CV printouts.

Your participation in the Speeddate can be registered as a job application activity. We count on your presence. If you cannot come, please send a message via your digital file.

Looking forward to seeing you at the Speeddate.

Please note: This letter is your entrance ticket, which you should hand in upon arrival. If you have to travel more than 15 km to the Speeddate location, you will receive a travel cost reimbursement.