

Figure B.3 Survey outcomes and matching: Common support

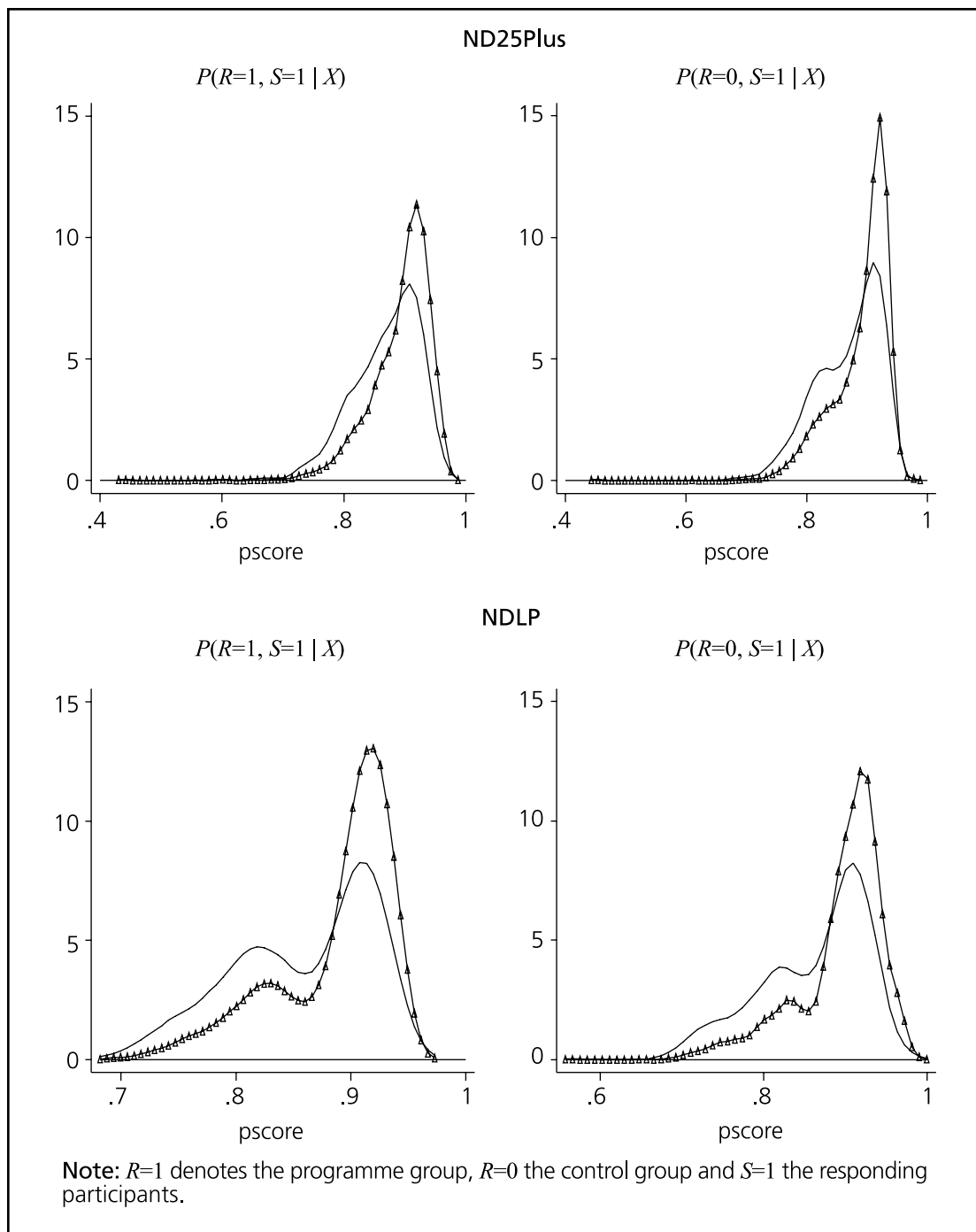


Table B.3 Survey outcomes: Matching quality allowing for non-response, separate common support

	Eligibles vs responding programme group				Eligibles vs responding control group												
	Prob>chi		Pseudo R2		Median bias		% lost to CS		Prob>chi		Pseudo R2		Median bias		% lost to CS		
	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	
ND25																	
All	0.000	0.000	0.030	0.005	4.2	1.3	0.3	0.000	0.000	0.033	0.006	3.9	1.4	1.2			
Scotland	0.976	1.000	0.029	0.007	4.4	1.3	1.8	0.896	1.000	0.037	0.005	5.3	1.9	4.0			
North East England	0.387	1.000	0.045	0.003	5.3	1.0	11.5	0.628	0.969	0.041	0.009	5.0	1.8	3.5			
North West England	0.915	0.610	0.031	0.009	7.0	2.7	3.2	0.675	0.022	0.038	0.015	6.1	2.3	1.7			
Wales	0.930	1.000	0.043	0.004	6.1	1.5	9.9	0.994	1.000	0.032	0.002	5.2	0.8	6.3			
East Midlands	0.888	0.352	0.028	0.010	4.4	2.0	1.4	0.775	0.077	0.030	0.012	3.1	1.4	1.3			
London	0.461	0.000	0.037	0.017	5.0	2.1	1.4	0.269	0.090	0.044	0.011	7.2	2.1	7.4			
NDLP																	
All	0.000	0.000	0.036	0.006	2.9	1.1	0.1	0.000	0.000	0.042	0.008	3.4	1.1	0.6			
Scotland	1.000	1.000	0.034	0.004	6.3	1.3	2.7	0.985	1.000	0.046	0.003	6.8	1.5	14.2			
North East England	0.988	0.987	0.025	0.007	4.0	1.4	6.9	0.990	1.000	0.028	0.005	5.9	1.1	7.6			
North West England	0.975	1.000	0.033	0.004	6.0	1.6	5.2	0.804	1.000	0.047	0.009	7.8	1.4	5.4			
Wales	0.950	1.000	0.043	0.004	5.1	1.5	3.9	0.752	1.000	0.054	0.005	5.6	1.7	9.1			
East Midlands	0.974	0.447	0.027	0.009	5.4	1.6	1.7	0.980	0.258	0.027	0.010	3.5	1.6	9.7			
London	0.953	0.002	0.029	0.017	4.7	2.4	3.0	0.849	0.978	0.034	0.007	7.4	2.0	10.6			

Notes:

Prob>chi: *p*-value of the likelihood-ratio test before (after) matching, testing the hypothesis that the regressors are jointly insignificant, i.e. well balanced in the two (matched) groups.

Pseudo R²: from probit estimation of the conditional probability of being a non-participant (before and after matching), giving an indication of how well the observables explain non-participation.

Median bias: median absolute standardised bias before and after matching, median taken over all the regressors. Following Rosenbaum and Rubin (1985), for a given covariate, the standardised difference **before** matching is the difference of the sample means in the non-participant and participant subsamples as a percentage of the square root of the average of the sample variances in the two groups. The standardised difference **after** matching is the difference of the sample means in the matched non-participants (i.e. falling within the common support) and matched participant subsamples as a percentage of the square root of the average of the sample variances in the two original groups.

% lost to CS: Share of the group of non-participants falling outside of the common support.

Sample sizes: see Tables A.12 and A.13.

Table B.4 Survey outcomes: Matching quality not allowing for non-response, joint common support

	Non-participants vs responding programme group				Non-participants vs responding control group				% lost to CS				
	Prob>chi		Pseudo R ²		Median bias		Prob>chi			Pseudo R ²		Median bias	
	Before	After	Before	After	Before	After	Before	After		Before	After	Before	After
ND25													
All	0.000	1.000	0.094	0.003	4.5	1.2	0.000	1.000	0.098	0.004	5.3	1.4	0.8
Scotland	0.573	1.000	0.148	0.043	13.3	4.1	0.667	1.000	0.142	0.040	10.4	3.9	16.7
North East England	0.006	1.000	0.108	0.018	9.5	2.3	0.004	0.997	0.112	0.022	11.1	3.6	12.7
North West England	0.264	1.000	0.093	0.014	7.2	3.6	0.273	1.000	0.095	0.023	7.7	3.5	3.7
Wales	0.659	1.000	0.116	0.043	9.8	5.9	0.456	1.000	0.128	0.035	9.4	4.6	15.6
East Midlands	0.411	0.999	0.059	0.015	5.5	2.8	0.048	0.996	0.078	0.017	6.9	3.8	2.7
London	0.176	0.999	0.067	0.013	5.6	2.6	0.016	0.999	0.090	0.013	10.2	2.2	5.2
NDLP													
All	0.000	0.997	0.182	0.005	3.5	1.2	0.000	0.740	0.193	0.008	4.7	2.3	1.0
Scotland	0.999	1.000	0.216	0.255	10.7	6.5	0.779	0.458	0.358	1.000	20.5	13.5	40.0
North East England	0.576	1.000	0.063	0.018	6.4	3.0	0.685	0.999	0.066	0.022	5.8	4.0	12.7
North West England	0.997	1.000	0.113	0.029	8.8	5.1	0.641	1.000	0.209	0.092	14.0	7.8	26.5
Wales	0.937	1.000	0.089	0.026	5.1	4.8	0.171	1.000	0.164	0.066	10.0	6.1	24.4
East Midlands	0.785	1.000	0.044	0.008	6.7	1.9	0.828	0.953	0.043	0.013	3.8	1.8	8.7
London	0.094	1.000	0.084	0.013	5.7	2.5	0.052	0.973	0.090	0.024	9.2	4.3	13.8

Notes:

Prob>chi: p -value of the likelihood-ratio test before (after) matching, testing the hypothesis that the regressors are jointly insignificant, i.e. well balanced in the two (matched) groups.

Pseudo R²: from probit estimation of the conditional probability of being a non-participant (before and after matching), giving an indication of how well the observables explain non-participation.

Median bias: median absolute standardised bias before and after matching, median taken over all the regressors. Following Rosenbaum and Rubin (1985), for a given covariate, the standardised difference **before** matching is the difference of the sample means in the non-participant and participant subsamples as a percentage of the square root of the average of the sample variances in the two groups. The standardised difference **after** matching is the difference of the sample means in the matched non-participants (i.e. falling within the common support) and matched participant subsamples as a percentage of the square root of the average of the sample variances in the two original groups.

% lost to CS: Share of the group of non-participants falling outside of the common support.

Sample sizes: see Table A.17.

Appendix C

Power and validity of the instrument

Table C.1 First stage of the instrument

	ND25Plus		NDLP	
	F- statistic	<i>p</i> -value	F- statistic	<i>p</i> -value
Full sample (administrative outcome)				
Non-interacted linear model	11.8	0.001	19.0	0.000
Interacted non-linear model				
All Z terms	2.0	0.000	2.3	0.000
Z, Z ² , Z ³	1.4	0.231	3.8	0.009
XZ interactions	1.7	0.007	2.1	0.000
Survey-eligible sample (survey outcome)				
Non-interacted linear model	6.1	0.013	10.8	0.001
Interacted non-linear model				
All Z terms	2.0	0.000	2.2	0.000
Z, Z ² , Z ³	1.7	0.157	4.0	0.007
XZ interactions	1.8	0.002	2.1	0.000

Note: Sample sizes for full sample: 7,796 for ND25 Plus and 7,261 for NDLP.

Sample sizes for survey-eligible sample (i.e. sample of both participants and non-participants eligible for survey): 7,399 for ND25 Plus and 6,809 for NDLP.

Table C.2 Share of explained variance accounted for by the instrument in the participation equation (full sample)

	Share	<i>p</i> -value	(Pseudo)-R ²
ND25			
Logit	12.4	0.001	0.062
Regression	14.0	0.001	0.065
NDLP			
Logit	5.8	0.000	0.111
Regression	7.2	0.000	0.122

Note: Sample sizes: see Table C.1.

Table C.3 Testing part of the exclusion restriction

	ND25		NDLP	
	F-test	<i>p</i> -value	F-test	<i>p</i> -value
Full sample				
Days employed	0.8	0.364	0.5	0.502
Ever employed	0.1	0.731	0.0	0.998
Days on benefits	0.0	0.899	1.4	0.238
Survey-eligible sample				
Days employed	1.6	0.201	0.8	0.377
Ever employed	0.0	0.955	0.1	0.796
Days on benefits	0.0	0.915	2.3	0.129

Note: Sample sizes: see Table C.1.

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