**SUPPLEMENTARY INFORMATION**

Supplementary information 1: Profiling systems in the two regions

*Lombardy*

The client’s score determines the group to which s/he will be assigned from among the following three groups:

- payment group 1 (1–49 points; up to 1,950 euros): clients who can be placed in the labour market or reintegrated into it independently or with minimal support;

- payment group 2 (50–74 points; up to 2,950 euros): clients who need intensive services;

- payment group 3 (75–100 points; up to 3,850 euros): clients who need intensive services for a medium-long/long period and strong individual support for employment placement.

Since the year 2015, the configuration of the ‘*dote* system’ has been progressively updated by regional policymakers. It is possible to register further changes in the composition of targets. The consideration of the most disadvantaged groups in the labour market has led to the introduction of a new payment group corresponding to a new specific level of assistance. This has been the case of the new payment group ‘3 Plus’, which is a particular ‘spin-off’ from the payment group3*.* This measure has been addressed to unemployed people in strong conditions of disadvantage on the basis of the following criteria: unemployment exceeding 36 months; family income not exceeding 18,000 euros; and not being recipients of benefits.

As a consequence, payment groups have been reorganised as follows:

payment group 1, up to 1,265 euros;

payment group 2, up to 2,178 euros;

payment group 3, up to 3,850 euros;

payment group 3+, up to 4,750 euros.

*Emilia-Romagna*

Until 2016 there was no profiling system in Emilia-Romagna, and client diagnosis was left to the counsellor’s judgement. The first (and only) profiling method was introduced in February 2016 by regional government decree no. 191, but it did not relate solely to PES. The measurement of a ‘fragility profile’ is based on ‘domains’ and related ‘items’ shared between different services (social, health and employment services); with the constant mediation of the counsellor. It identifies four ‘thresholds’ of scores; and on the basis of these, the following options are envisaged for the client: continuation of assistance within the access service; deviation from the access service and referral to the service deemed most suitable for the needs identified; and referral to the pathway of the integrated services.

Supplementary information 2: Administrative archives

Three administrative archives have been integrated.

Jobseekers need to register as unemployed at the public employment offices, which release a specific ‘unemployment certification’ (*dichiarazione di immediata disponibilità al lavoro*). Such information is useful for reconstructing the entire population of unemployed people in a particular area.

The public employment offices collect the ‘compulsory communications’ (*comunicazioni obbligatorie*) that employers have to send them whenever an employment relationship is started, modified, renewed or terminated. This information is important for building outcome variables and reconstructing employment careers before and after the treatment.

The third archive contains the records on the treatments, including all the measures delivered for each assisted jobseeker. The measures considered ‘treatments’ are limited to all the initiatives correspondingly financed with the European Social Fund (ESF) in both cases. The ESF is the largest (almost the only) source of funding used by the Italian regions to finance their PES.

The samples do not include subjects with disabilities, who are collected in specific archives.

Supplementary information 3: Participants’ distribution between employment assistance and training in the two samples.

|  |  |  |
| --- | --- | --- |
|  | Lombardy | Emilia-Romagna |
| Measures | No. participants | (%) | No. participants | (%) |
| Employment Assistance | 5,706 | (83.15) | 6,598 | (93.73) |
| Training | 1,156 | (16.85) | 438 | (6.22) |

Supplementary information 4: Descriptive statistics of the two samples

|  |  |  |
| --- | --- | --- |
|  | Lombardy [N=33,389] | Emilia-Romagna [N=20,014] |
| Variables | No. | (%) | No. | (%) |
| Age |  |  |  |  |
| 15-24 | 4,433 | (13.28) | 2,626 | (13.12) |
| 25-34 | 8,408 | (25.18) | 5,195 | (25.96) |
| 35-44 | 8,309 | (24.89) | 5,066 | (25.31) |
| 45-54 | 7,526 | (22.54) | 4,682 | (23.39) |
| 55-64 | 4,713 | (14.12) | 2,445 | (12.22) |
| Gender |  |  |  |  |
| female | 17,457 | (52.28) | 10,700 | (53.46) |
| Education |  |  |  |  |
| compulsory | 14,263 | (42.72) | 7,097 | (35.46) |
| diploma  | 14,409 | (43.15) | 8,419 | (42.07) |
| university degree | 4,717 | (14.13) | 4,498 | (22.47) |
| Citizenship |  |  |  |  |
| foreigner | 11,431 | (34.24) | 5,256 | (26.26) |
| Unemployment Spell |  |  |  |  |
| ≤ 3 months | 11,841 | (35.46) | 11,882 | (59.37) |
| 3-6 months | 956 | (2.86) | 1,196 | (5.98) |
| 6-12 months | 1,234 | (3.70) | 862 | (4.31) |
| 1-2 years | 1,573 | (4.71) | 1,844 | (9.21) |
| > 2 years | 17,785 | (53.27) | 4,230 | (21.14) |
| Month of registration |  |  |  |  |
| January | 5,147 | (15.42) | 2,249 | (11.24)  |
| February | 3,780 | (11.32) | 2,243 | (11.21) |
| March | 4,108 | (12.30) | 2,412 | (12.05) |
| April | 3,090 | (9.25)  | 2,319 | (11.59) |
| May | 3,547 | (10.62) | 2,271 | (11.35) |
| June | 3,515 | (10.53) | 1,994 | (9.96) |
| July | 3,965 | (11.88) | 2,272 | (11.35) |
| August | 2,006 | (6.01) | 1,673 | (8.36) |
| September | 4,231 | (12.67) | 2,581 | (12.90) |

Supplementary information 5: Probit regression for the estimation of the propensity score

|  |  |  |
| --- | --- | --- |
| Variables | Lombardy | Emilia-Romagna |
|   |  |  |
| **Age** |  |  |
| 15-24 [ref.] |  |  |
| 25-34 | -0.238\*\*\* | -0.045 |
|  | [-0.289 -0.186] | [-0.107 0.018] |
| 35-44 | -0.484\*\*\* | -0.084\*\*\* |
|  | [-0.536 -0.430] | [-0.147 -0.020] |
| 45-54 | -0.520\*\*\* | 0.067\*\* |
|  | [-0.574 -0.466] | [0.002 0.131] |
| 55-64 | -1.056\*\*\* | -0.043 |
|  | [-1.125 -0.985] | [-0.117 0.031] |
| **Gender** |  |  |
|  |  |  |
| female | -0.127\*\*\* | 0.016 |
|  | [-0.160 -0.092] | [-0.020 0.052] |
| **Education** |  |  |
| compulsory[ref.] |  |  |
| diploma | 0.219\*\*\* | 0.076\*\*\* |
|  | [0.178 0.259] | [0.033 .0118] |
| university degree | 0.362\*\*\* | 0.068\*\*\* |
|  | [0.308 0.415] | [0.016 0.120] |
| **Citizenship** |  |  |
|  |  |  |
| foreigner | -0.942\*\*\* | 0.379\*\*\* |
|  | [-0.988 -0.894] | [0.338 0.419] |
| **Unemployment spell** |  |  |
| ≤ 3 months[ref.] |  |  |
| 3-6 months | 0.534\*\*\* | 0.123\*\*\* |
|  | [0.445 0.622] | [0.045 0.199] |
| 6-12 months | 0.488\*\*\* | -0.087\* |
|  | [0.408 0.567] | [-0.178 0.004] |
| 1-2 years | 0.313\*\*\* | -0.189\*\*\* |
|  | [0.238 0.387] | [-0.254 -0.122] |
| > 2 years  | -0.016 | 0.034 |
|  | [-0.054 0.022] | [-0.012 0.081] |
| **Month of registration** |  |  |
| January [ref.] |  |  |
| February | -0.051 | -0.088\*\* |
|  | [-0.112 0.011] | [-0.164 -0.011] |
| March | -0.158\*\*\* | -0.105\*\*\* |
|  | [-0.219 -0.095] | [-0.180 -0.029] |
| April | -0.934\*\*\* | 0.018 |
|  | [-1.022 -0.845] | [-0.058 0.093] |
| May | -0.065\*\* | 0.010 |
|  | [-0.128 -0.001] | [-0.065 0.086] |
| June | -0.055\* | 0.103\*\*\* |
|  | [-0.118 0.008] | [0.025 0.181] |
| July | -0.372\*\*\* | 0.160\*\*\* |
|  | [-0.436 -0.307] | [0.084 0.235] |
| August | -0.358\*\*\* | 0.081\* |
|  | [-0.440 -0.275] | [-0.001 0.162] |
| September | -0.042 | 0.098\*\*\* |
|  | [-0.101 0.018] | [0.024 0.171] |
| Constant | -0.158\*\*\* | -0.105\*\*\* |
|  | [-0.254 -0.111] | [-0.626 -0.460] |
|  |  |  |
| Observations | 33,389 | 20,014 |

Confidence intervals in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.01

Supplementary information 6: Indicators of covariates balancing, before and after matching

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sample | No. Treated Before | No. Nontreated Before | Probit psR2 Before(1) | Probit psR2 After(2) | Pr > χ2 After(3) | Mean Standardized Bias Before(4) | Mean Standardized Bias After(5) | No. Lost to CS After (6) |
| Lombardy | 6,862 | 26,527 | 0.169 | 0.001 | 0.790 | 19.0 | 1.3 | 0 |
| Emilia-Romagna | 7,036 | 12,978 | 0.020 | 0.000 | 1.000 | 5.0 | 0.5 | 2 |

(1) Pseudo-*R*2 from probit estimation, giving an indication of how well the regressors X explain the participation probability

(2), (3), and (5) are postmatching indicators based on radius matching (1% caliper)

(2) Pseudo-*R*2 from a probit of *T* on *X* on the matched samples, to be compared with (1)

(3) *P*-value of the likelihood ratio test after matching. The joint significance of the regressors is always rejected (Before matching it was never rejected at any significance level, with Pr > χ2 = 0.000 always)

(4)(5) Mean standardized bias before and after matching. It is defined as the average difference of sample means in the treated and matched control subsamples as a percentage of the square root of the average of sample variances in both groups.

(6) Number of treated individuals falling outside of the common support (based on a caliper of 1%).

Supplementary information 7: Effect of age and treatment on probability of obtaining a contract lasting for a maximum of 1 year as the first employment after the treatment, estimated with age x treatment interaction

|  |  |  |
| --- | --- | --- |
| Variables | Lombardy | Emilia-Romagna |
|   |  |  |
| **Age** |  |  |
| 15-24 [ref.] |  |  |
| 25-34 | -0.674\*\*\* | -0.006 |
|  | [-0.795 -0.552] | [-0.138 0.124] |
| 35-44 | -1.036\*\*\* | -0.0973 |
|  | [-1.175 -0.896] | [-0.231 0.036] |
| 45-54 | -1.316\*\*\* | -0.409\*\*\* |
|  | [-1.467 -1.164] | [-0.548 -0.269] |
| 55-64 | -1.926\*\*\* | -1.029\*\*\* |
|  | [-2.140 -1.710] | [-1.211 -0.846] |
| **Treatment** |  |  |
| Treated | 0.820\*\*\* | -0.080 |
|  | [0.676 0.963] | [-0.303 0.142] |
| **Treatment\*Age** |  |  |
| T\*25-34 | 0.578\*\*\* | 0.091 |
|  | [0.401 0.754] | [-0.121 0.304] |
| T\*35-44 | 1.088\*\*\* | -0.201\* |
|  | [0.886 1.288] | [-0.421 0.019] |
| T\*45-54 | 0.868\*\*\* | -0.120 |
|  | [0.651 1.083] | [-0.346 0.106] |
| T\*55-64 | 0.793\*\*\* | 0.064 |
|  | [0.445 1.140] | [-0.237 0.366] |
| **Gender** |  |  |
|  |  |  |
| female | -0.0420 | -0.252\*\*\* |
|  | [-0.105 0.021] | [-0.317 -0.186] |
| **Education** |  |  |
| compulsory[ref.] |  |  |
| diploma | 0.413\*\*\* | 0.136\*\*\* |
|  | [0.332 0.494] | [0.057 0.214] |
| university degree | 0.852\*\*\* | 0.049 |
|  | [0.749 0.954] | [-0.045 0.143] |
| **Citizenship** |  |  |
|  |  |  |
| foreigner | -0.207\*\*\* | -0.443\*\*\* |
|  | [-0.311 -0.102] | [-0.551 -0.334] |
| **Unemployment spell** |  |  |
| ≤ 3 months[ref.] |  |  |
| 3-6 months | 0.441\*\*\* | -0.303\*\*\* |
|  | [0.283 0.598] | [-0.448 -0.156] |
| 6-12 months | 0.276\*\*\* | -0.171\*\* |
|  | [0.132 0.419] | [-0.335 -0.005] |
| 1-2 years | -0.342\*\*\* | -0.607\*\*\* |
|  | [-0.481 -0.201] | [-0.739 -0.473] |
| > 2 years  | -0.489\*\*\* | -0.200\*\*\* |
|  | [-0.558 -0.418] | [-0.284 -0.116] |
| **Month of registration** |  |  |
| January [ref.] |  |  |
| February | -0.035 | -0.103 |
|  | [-0.159 0.088] | [-0.240 0.034] |
| March | 0.087 | -0.102 |
|  | [-0.033 0.207] | [-0.236 0.033] |
| April | 0.215\*\*\* | -0.132\* |
|  | [0.061 0.368] | [-0.266 0.003] |
| May | 0.118\* | -0.135\* |
|  | [-0.005 0.241] | [-0.271 0.001] |
| June | 0.282\*\*\* | -0.177\*\* |
|  | [0.161 0.402] | [-0.319 -0.033] |
| July | 0.251\*\*\* | -0.241\*\*\* |
|  | [0.128 0.373] | [-0.382 -0.100] |
| August | 0.308\*\*\* | -0.069 |
|  | [0.156 0.460] | [-0.216 0.077] |
| September | 0.175\*\*\* | 0.042 |
|  | [0.060 0.289] | [-0.088 0.172] |
| Weight | 0.383\*\*\* | 0.206 |
|  | [0.174 0.590] | [-0.135 0.546] |
| Constant | -1.433\*\*\* | -0.554\*\*\* |
|  | [-1.641 -1.225] | [-0.775 -0.333] |
|  |  |  |
| Observations | 33,389 | 20,012 |

Confidence intervals in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.01

Supplementary information 8: Effect of gender and treatment on probability of obtaining a contract lasting for a maximum of 1 year as the first employment after the treatment, estimated with gender x treatment interaction

|  |  |  |
| --- | --- | --- |
| Variables | Lombardy | Emilia-Romagna |
| **Age** |  |  |
| 15-24 [ref.] |  |  |
| 25-34 | -0.353\*\*\* | 0.024 |
|  | [-0.446 -0.259] | [-0.082 0.131] |
| 35-44 | -0.497\*\*\* | -0.164\*\*\* |
|  | [-0.446 -0.259] | [-0.274 -0.053] |
| 45-54 | -0.846\*\*\* | -0.450\*\*\* |
|  | [-0.956 -0.736] | [-0.563 -0.336] |
| 55-64 | -1.448\*\*\* | -1.008\*\*\* |
|  | [-1.615 -1.279] | [-1.156 -0.860] |
| **Gender** |  |  |
|  |  |  |
| Female | -0.003 | -0.239\*\*\* |
|  | [-0.084 0.078] | [-0.319 -0.157] |
| **Treatment** |  |  |
| Treated | 1.217\*\*\* | -0.098 |
|  | [1.092 1.341] | [-0.277 0.080] |
| **Treatment\*Gender** |  |  |
| T\*female | -0.003 | -0.037 |
|  | [-0.131 0.124] | [-0.173 0.098] |
| **Education** |  |  |
| compulsory[ref.] |  |  |
| diploma | 0.357\*\*\* | 0.137\*\*\* |
|  | [0.276 0.436] | [0.058 0.215] |
| university degree | 0.767\*\*\* | 0.051 |
|  | [0.665 0.867] | [-0.043 0.145] |
| **Citizenship** |  |  |
|  |  |  |
| foreigner | -0.113\*\* | -0.441\*\*\* |
|  | [-0.215 -0.010] | [-0.548 -0.333] |
| **Unemployment spell** |  |  |
| ≤ 3 months[ref.] |  |  |
| 3-6 months | 0.381\*\*\* | -0.304\*\*\* |
|  | [0.225 0.537] | [-0.449 -0.158] |
| 6-12 months | 0.217\*\*\* | -0.172\*\* |
|  | [0.075 0.359] | [-0.337 -0.007] |
| 1-2 years | -0.352\*\*\* | -0.603\*\*\* |
|  | [-0.491 -0.212] | [-0.735 -0.469] |
| > 2 years  | -0.470\*\*\* | -0.198\*\*\* |
|  | [-0.540 -0.400] | [-0.281 -0.113] |
| **Month of registration** |  |  |
| January [ref.] |  |  |
| February | -0.027 | -0.104 |
|  | [-0.151 0.096] | [-0.240 0.033] |
| March | 0.103\* | -0.099 |
|  | [-0.017 0.222] | [-0.233 0.035] |
| April | 0.328\*\*\* | -0.130\* |
|  | [0.177 0.479] | [-0.264 0.004] |
| May | 0.121\* | -0.133\* |
|  | [-0.001 0.244] | [-0.268 0.003] |
| June | 0.281\*\*\* | -0.174\*\* |
|  | [0.160 0.401] | [-0.316 -0.030] |
| July | 0.291\*\*\* | -0.240\*\*\* |
|  | [0.169 0.413] | [-0.380 -0.098] |
| August | 0.349\*\*\* | -0.062 |
|  | [0.197 0.501] | [-0.209 0.084] |
| September | 0.161\*\*\* | 0.046 |
|  | [0.046 0.275] | [-0.084 0.176] |
| Weight | 0.834\*\*\* | 0.186 |
|  | [0.645 1.023] | [-0.150 0.523] |
| Constant | -1.984\*\*\* | -0.539\*\*\* |
|  | [-2.171 -1.797] | [-0.749 -0.328] |
|  |  |  |
| Observations | 33,389 | 20,012 |

Confidence intervals in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.01

Supplementary information 9: Effect of education and treatment on probability of obtaining a contract lasting for a maximum of 1 year as the first employment after the treatment, estimated with education x treatment interaction

|  |  |  |
| --- | --- | --- |
| Variables | Lombardy | Emilia-Romagna |
| **Age** |  |  |
| 15-24 [ref.] |  |  |
| 25-34 | -0.371\*\*\* | 0.024 |
|  | [-0.465 -0.277] | [-0.083 0.131] |
| 35-44 | -0.589\*\*\* | -0.164\*\*\* |
|  | [-0.692 -0.486] | [-0.274 -0.053] |
| 45-54 | -0.948\*\*\* | -0.450\*\*\* |
|  | [-1.059 -0.836] | [-0.563 -0.336] |
| 55-64 | -1.550\*\*\* | -1.008\*\*\* |
|  | [-1.719 -1.381] | [-1.156 -0.860] |
| **Gender** |  |  |
|  |  |  |
| Female | 0.008 | -0.251\*\*\* |
|  | [-0.054 0.071] | [-0.316 -0.185] |
| **Education** |  |  |
| compulsory[ref] |  |  |
| diploma | 0.723\*\*\* | 0.181\*\*\* |
|  | [0.615 0.829] | [0.084 0.276] |
| university degree | 1.333\*\*\* | 0.041 |
|  | [1.204 1.461] | [-0.072 0.155] |
| **Treatment** |  |  |
| Treated | 2.199\*\*\* | -0.0615 |
|  | [2.013 2.384] | [-0.254 0.131] |
| **Treatment\*Education** |  |  |
| T\*diploma | -0.902\*\*\* | -0.126 |
|  | [-1.065 -0.737] | [-0.283 0.031] |
| T\*university degree | -1.377\*\*\* | 0.028 |
|  | [-1.572 -1.182] | [-0.155 0.211] |
| **Citizenship** |  |  |
|  |  |  |
| foreigner | -0.107\*\* | -0.439\*\*\* |
|  | [-0.209 -0.004] | [-0.546 -0.331] |
| **Unemployment spell** |  |  |
| ≤ 3 months[ref.] |  |  |
| 3-6 months | 0.432\*\*\* | -0.305\*\*\* |
|  | [0.275 0.589] | [-0.450 -0.159] |
| 6-12 months | 0.260\*\*\* | -0.172\*\* |
|  | [0.117 0.401] | [-0.337 -0.007] |
| 1-2 years | -0.334\*\*\* | -0.602\*\*\* |
|  | [-0.473 -0.195] | [-0.735 -0.469] |
| > 2 years  | -0.451\*\*\* | -0.197\*\*\* |
|  | [-0.520 -0.380] | [-0.280 -0.112] |
| **Month of registration** |  |  |
| January [ref.] |  |  |
| February | -0.025 | -0.105 |
|  | [-0.149 0.098] | [-0.241 0.031] |
| March | 0.103\* | -0.102 |
|  | [-0.017 0.222] | [-0.236 0.032] |
| April | 0.248\*\*\* | -0.130\* |
|  | [0.095 0.399] | [-0.265 0.004] |
| May | 0.135\*\* | -0.134\* |
|  | [0.011 0.257] | [-0.269 0.001] |
| June | 0.285\*\*\* | -0.174\*\* |
|  | [0.163 0.405] | [-0.317 -0.031] |
| July | 0.235\*\*\* | -0.240\*\*\* |
|  | [0.112 0.357] | [-0.381 -0.099] |
| August | 0.305\*\*\* | -0.063 |
|  | [0.152 0.457] | [-0.210 0.083] |
| September | 0.181\*\*\* | 0.046 |
|  | [0.066 0.296] | [-0.084 0.176] |
| Weight | 0.475\*\*\* | 0.170 |
|  | [0.279 0.669] | [-0.166 0.507] |
| Constant | -2.101\*\*\* | -0.541\*\*\* |
|  | [-2.287 -1.914] | [-0.752 -0.329] |
|  |  |  |
| Observations | 33,389 | 20,012 |

Confidence intervals in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.01

Supplementary information 10: Effect of citizenship and treatment on probability of obtaining a contract lasting for a maximum of 1 year as the first employment after the treatment, estimated with citizenship x treatment interaction

|  |  |  |
| --- | --- | --- |
| Variables | Lombardy | Emilia-Romagna |
| **Age** |  |  |
| 15-24 [ref.] |  |  |
| 25-34 | -0.352\*\*\* | 0.0219 |
|  | [-0.445 -0.258] | [-0.085 0.129] |
| 35-44 | -0.494\*\*\* | -0.169\*\*\* |
|  | [-0.596 -0.391] | [-0.280 -0.057] |
| 45-54 | -0.843\*\*\* | -0.446\*\*\* |
|  | [-0.952 -0.732] | [-0.560 -0.332] |
| 55-64 | -1.441\*\*\* | -1.011\*\*\* |
|  | [-1.609 -1.271] | [-1.159 -0.862] |
| **Gender** |  |  |
|  |  |  |
| Female | -0.00403 | -0.250\*\*\* |
|  | [-0.067 0.059] | [-0.316 -0.184] |
| **Education** |  |  |
| compulsory[ref] |  |  |
| diploma | 0.358\*\*\* | 0.141\*\*\* |
|  | [0.277 0.438] | [0.061 0.221] |
| university degree | 0.767\*\*\* | 0.055 |
|  | [0.665 0.867] | [-0.040 0.151] |
| **Citizenship** |  |  |
|  |  |  |
| foreigner | -0.091 | -0.389\*\*\* |
|  | [-0.215 0.032] | [-0.593 -0.185] |
| **Treatment** |  |  |
| Treated | 1.213\*\*\* | -0.054 |
|  | [1.100 1.324] | [-0.323 0.215] |
| **Treatment\*Citizenship** |  |  |
| T\*foreigner | -0.063 | -0.070 |
|  | [-0.274 0.147] | [-0.302 0.161] |
| **Unemployment spell** |  |  |
| ≤ 3 months[ref.] |  |  |
| 3-6 months | 0.377\*\*\* | -0.305\*\*\* |
|  | [0.220 0.534] | [-0.450 -0.158] |
| 6-12 months | 0.214\*\*\* | -0.172\*\* |
|  | [0.071 0.356] | [-0.337 -0.007] |
| 1-2 years | -0.353\*\*\* | -0.605\*\*\* |
|  | [-0.492 -0.213] | [-0.737 -0.471] |
| > 2 years  | -0.469\*\*\* | -0.196\*\*\* |
|  | [-0.539 -0.399] | [-0.279 -0.111] |
| **Month of registration** |  |  |
| January [ref.] |  |  |
| February | -0.028 | -0.109 |
|  | [-0.151 0.095] | [-0.247 0.028] |
| March | 0.103\* | -0.106 |
|  | [-0.017 0.223] | [-0.242 0.030] |
| April | 0.334\*\*\* | -0.127\* |
|  | [0.181 0.485] | [-0.262 0.007] |
| May | 0.122\* | -0.131\* |
|  | [-0.001 0.244] | [-0.266 0.004] |
| June | 0.281\*\*\* | -0.166\*\* |
|  | [0.160 0.401] | [-0.311 -0.020] |
| July | 0.295\*\*\* | -0.229\*\*\* |
|  | [0.171 0.417] | [-0.374 -0.083] |
| August | 0.352\*\*\* | -0.055 |
|  | [0.201 0.504] | [-0.204 0.093] |
| September | 0.160\*\*\* | 0.053 |
|  | [0.045 0.274] | [-0.079 0.185] |
| Weight | 0.857\*\*\* | 0.081 |
|  | [0.653 1.060] | [-0.414 0.576] |
| Constant | -2.003\*\*\* | -0.491\*\*\* |
|  | [-2.197 -1.809] | [-0.745 -0.236] |
|  |  |  |
| Observations | 33,389 | 20,012 |

Confidence intervals in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.01

Supplementary information 11: Effect of unemployment spell and treatment on probability of obtaining a contract lasting for a maximum of 1 year as the first employment after the treatment, estimated with unemployment spell x treatment interaction

|  |  |  |
| --- | --- | --- |
| Variables | **Lombardy** | **Emilia-Romagna** |
| **Age** |  |  |
| 15-24 [ref.] |  |  |
| 25-34 | -0.339\*\*\* | 0.027 |
|  | [-0.433 -0.245] | [-0.079 0.135] |
| 35-44 | -0.475\*\*\* | -0.159\*\*\* |
|  | [-0.577 -0.372] | [-0.269 -0.049] |
| 45-54 | -0.828\*\*\* | -0.448\*\*\* |
|  | [-0.938 -0.717] | [-0.561 -0.334] |
| 55-64 | -1.427\*\*\* | -1.004\*\*\* |
|  | [-1.595 -1.258] | [-1.152 -0.856] |
| **Gender** |  |  |
|  |  |  |
| Female | .000 | -0.251\*\*\* |
|  | [-0.063 0.063] | [-0.316 -0.185] |
| **Education** |  |  |
| compulsory[ref] |  |  |
| diploma | 0.364\*\*\* | 0.135\*\*\* |
|  | [0.283 0.444] | [0.056 0.213] |
| university degree | 0.771\*\*\* | 0.049 |
|  | [0.669 0.872] | [-0.045 0.143] |
| **Citizenship** |  |  |
|  |  |  |
| foreigner | -0.069 | -0.442\*\*\* |
|  | [-0.173 0.035] | [-0.549 -0.333] |
| **Unemployment spell** |  |  |
| ≤ 3 months[ref.] |  |  |
| 3-6 months | 0.365\*\*\* | -0.292\*\*\* |
|  | [0.143 0.585] | [-0.472 -0.111] |
| 6-12 months | 0.034 | -0.222\*\* |
|  | [-0.172 0.242] | [-0.422 -0.021] |
| 1-2 years | -0.442\*\*\* | -0.624\*\*\* |
|  | [-0.646 -0.238] | [-0.782 -0.465] |
| > 2 years  | -0.369\*\*\* | -0.255\*\*\* |
|  | [-0.456 -0.281] | [-0.358 -0.1517] |
| **Treatment** |  |  |
| Treated | 1.270\*\*\* | -0.169\* |
|  | [1.114 1.425] | [-0.338 0.000] |
| **Treatment\*Unemployment spell** |  |  |
| T\*3-6 months | -0.041 | -0.034 |
|  | [-0.355 0.272] | [-0.339 0.270] |
| T\*6-12 months | 0.301\*\* | 0.153 |
|  | [0.008 0.593] | [-0.200 0.506] |
| T\*1-2 years | 0.116 | 0.068 |
|  | [-0.168 0.401] | [-0.222 0.359] |
| T\*> 2 years  | -0.261\*\*\* | 0.162\* |
|  | [-0.404 -0.117] | [-0.005 0.329] |
| **Month of registration** |  |  |
| January [ref.] |  |  |
| February | -0.024 | -0.101 |
|  | [-0.147 0.099] | [-0.237 0.035] |
| March | 0.108\* | -0.095 |
|  | [-0.012 0.228] | [-0.230 0.039] |
| April | 0.354\*\*\* | -0.127\* |
|  | [0.202 0.506] | [-0.261 0.007] |
| May | 0.121\* | -0.130\* |
|  | [-0.002 0.243] | [-0.265 0.005] |
| June | 0.282\*\*\* | -0.173\*\* |
|  | [0.161 0.402] | [-0.315 -0.029] |
| July | 0.309\*\*\* | -0.236\*\*\* |
|  | [0.186 0.431] | [-0.377 -0.094] |
| August | 0.359\*\*\* | -0.059 |
|  | [0.206 0.510] | [-0.206 0.087] |
| September | 0.163\*\*\* | 0.048 |
|  | [0.048 0.277] | [-0.081 0.179] |
| Weight | 0.934\*\*\* | 0.202 |
|  | [0.733 1.134] | [-0.136 0.541] |
| Constant | -2.095\*\*\* | -0.531\*\*\* |
|  | [-2.284 -1.906] | [-0.741 -0.319] |
|  |  |  |
| Observations | 33,389 | 20,012 |

Confidence intervals in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.01

Supplementary information 12: Effect of age and treatment on probability of obtaining a contract lasting for more than 1 year as the first employment after the treatment, estimated with age x treatment interaction

|  |  |  |
| --- | --- | --- |
| Variables | Lombardy | Emilia-Romagna |
| **Age** |  |  |
| 15-24 [ref.] |  |  |
| 25-34 | -0.365\*\* | -0.211\*\*\* |
|  | [-0.681 -0.049] | [-0.359 -0.062] |
| 35-44 | -0.186 | -0.437\*\*\* |
|  | [-0.499 0.126] | [-0.591 -0.282] |
| 45-54 | -0.136 | -0.394\*\*\* |
|  | [-0.452 0.180] | [-0.553 -0.235] |
| 55-64 | -0.389\*\* | -0.909\*\*\* |
|  | [-0.742 -0.036] | [-1.112 -0.704] |
| **Treatment** |  |  |
| Treated | 3.713\*\*\* | -0.045 |
|  | [3.218 4.207] | [-0.302 0.211] |
| **Treatment\*Age** |  |  |
| T\*25-34 | 0.004 | 0.019 |
|  | [-0.361 0.370] | [-0.235 0.275] |
| T\*35-44 | -0.832\*\*\* | 0.327\*\* |
|  | [-1.228 -0.436] | [0.067 0.587] |
| T\*45-54 | -0.387\* | 0.327\*\* |
|  | [-0.777 0.002] | [0.065 0.589] |
| T\*55-64 | 0.317 | 0.681\*\*\* |
|  | [-0.166 0.801] | [0.356 1.005] |
| **Gender** |  |  |
|  |  |  |
| female | 0.517\*\*\* | -0.069\* |
|  | [0.410 0.623] | [-0.145 0.006] |
| **Education** |  |  |
| compulsory[ref.] |  |  |
| diploma | -0.341\*\*\* | 0.161\*\*\* |
|  | [-0.472 -0.208] | [0.070 0.252] |
| university degree | -0.072 | 0.282\*\*\* |
|  | [-0.249 0.103] | [0.174 0.388] |
| **Citizenship** |  |  |
|  |  |  |
| foreigner | 0.951\*\*\* | 0.241\*\*\* |
|  | [0.786 1.116] | [0.125 0.357] |
| **Unemployment spell** |  |  |
| ≤ 3 months[ref.] |  |  |
| 3-6 months | -0.486\*\*\* | -0.173\*\* |
|  | [-0.776 -0.196] | [-0.334 -0.011] |
| 6-12 months | -0.840\*\*\* | -0.328\*\*\* |
|  | [-1.131 -0.547] | [-0.529 -0.127] |
| 1-2 years | -0.745\*\*\* | -0.428\*\*\* |
|  | [-1.013 -0.476] | [-0.576 -0.279] |
| > 2 years  | -0.793\*\*\* | -0.248\*\*\* |
|  | [-0.903 -0.683] | [-0.346 -0.148] |
| **Month of registration** |  |  |
| January [ref.] |  |  |
| February | 0.006 | -0.034 |
|  | [-0.191 0.205] | [-0.188 0.119] |
| March | -0.066 | -0.039 |
|  | [-0.262 0.129] | [-0.190 0.112] |
| April | -0.102 | 0.101 |
|  | [-0.340 0.136] | [-0.048 0.249] |
| May | 0.211\*\* | -0.056 |
|  | [0.019 0.402] | [-0.209 0.096] |
| June | 0.160 | -0.091 |
|  | [-0.033 0.354] | [-0.253 0.070] |
| July | -0.116 | -0.148\* |
|  | [-0.321 0.090] | [-0.308 0.011] |
| August | -0.058 | -0.170\* |
|  | [-0.311 0.195] | [-0.341 0.001] |
| September | 0.149 | -0.497\*\*\* |
|  | [-0.035 0.333] | [-0.659 -0.333] |
| Weight | -1.679\*\*\* | -0.541\*\*\* |
|  | [-2.300 -1.058] | [-0.918 -0.163] |
| Constant | -3.305\*\*\* | -0.873\*\*\* |
|  | [-3.713 -2.895] | [-1.121 -0.624] |
|  |  |  |
| Observations | 33,389 | 20,012 |

Confidence intervals in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.01

Supplementary information 13: Effect of gender and treatment on probability of obtaining a contract lasting for more than 1 year as the first employment after the treatment, estimated with gender x treatment interaction

|  |  |  |
| --- | --- | --- |
| Variables | Lombardy | Emilia-Romagna |
| **Age** |  |  |
| 15-24 [ref.] |  |  |
| 25-34 | -0.383\*\*\* | -0.203\*\*\* |
|  | [-0.544 -0.221] | [-0.327 -0.078] |
| 35-44 | -0.530\*\*\* | -0.325\*\*\* |
|  | [-0.701 -0.359] | [-0.453 -0.196] |
| 45-54 | -0.355\*\*\* | -0.282\*\*\* |
|  | [-0.527 -0.183] | [-0.411 -0.152] |
| 55-64 | -0.450\*\*\* | -0.662\*\*\* |
|  | [-0.667 -0.233] | [-0.823 -0.500] |
| **Gender** |  |  |
|  |  |  |
| Female | 1.032\*\*\* | -0.121\*\* |
|  | [0.862 1.201] | [-0.2141 -0.027] |
| **Treatment** |  |  |
| Treated | 4.188\*\*\* | 0.078 |
|  | [3.709 4.666] | [-0.119 0.277] |
| **Treatment\*Gender** |  |  |
| T\*female | -0.995\*\*\* | 0.153\* |
|  | [-1.218 -0.771] | [-0.003 0.310] |
| **Education** |  |  |
| compulsory[ref.] |  |  |
| diploma | -0.284\*\*\* | 0.165\*\*\* |
|  | [-0.414 -0.152] | [0.074 0.255] |
| university degree | 0.0450 | 0.290\*\*\* |
|  | [-0.126 0.216] | [0.182 0.396] |
| **Citizenship** |  |  |
|  |  |  |
| foreigner | 0.930\*\*\* | 0.241\*\*\* |
|  | [0.768 1.090] | [0.124 0.356] |
| **Unemployment spell** |  |  |
| ≤ 3 months[ref.] |  |  |
| 3-6 months | -0.498\*\*\* | -0.166\*\* |
|  | [-0.787 -0.209] | [-0.327 -0.004] |
| 6-12 months | -0.829\*\*\* | -0.336\*\*\* |
|  | [-1.121 -0.538] | [-0.537 -0.135] |
| 1-2 years | -0.753\*\*\* | -0.442\*\*\* |
|  | [-1.021 -0.485] | [-0.589 -0.293] |
| > 2 years  | -0.785\*\*\* | -0.252\*\*\* |
|  | [-0.895 -0.675] | [-0.351 -0.153] |
| **Month of registration** |  |  |
| January [ref.] |  |  |
| February | 0.002 | -0.038 |
|  | [-0.195 0.200] | [-0.192 0.114] |
| March | -0.061 | -0.046 |
|  | [-0.257 0.133] | [-0.196 0.105] |
| April | -0.105 | 0.094 |
|  | [-0.342 0.133] | [-0.053 0.243] |
| May | 0.215\*\* | -0.063 |
|  | [0.023 0.406] | [-0.216 0.088] |
| June | 0.155 | -0.101 |
|  | [-0.038 0.348] | [-0.263 0.061] |
| July | -0.122 | -0.159\* |
|  | [-0.327 0.083] | [-0.318 0.001] |
| August | -0.0681 | -0.182\*\* |
|  | [-0.321 0.185] | [-0.352 -0.010] |
| September | 0.148 | -0.513\*\*\* |
|  | [-0.036 0.332] | [-0.675 -0.350] |
| Weight | -1.839\*\*\* | -0.492\*\*\* |
|  | [-2.422 -1.255] | [-0.864 -0.120] |
| Constant | -3.506\*\*\* | -0.944\*\*\* |
|  | [-3.824 -3.186] | [-1.181 -0.706] |
|  |  |  |
| Observations | 33,389 | 20,012 |

Confidence intervals in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.01

Supplementary information 14: Effect of education and treatment on probability of obtaining a contract lasting for more than 1 year as the first employment after the treatment, estimated with education x treatment interaction

|  |  |  |
| --- | --- | --- |
| Variables | Lombardy | Emilia-Romagna |
| **Age** |  |  |
| 15-24 [ref.] |  |  |
| 25-34 | -0.416\*\*\* | -0.206\*\*\* |
|  | [-0.578 -0.253] | [-0.330 -0.081] |
| 35-44 | -0.506\*\*\* | -0.330\*\*\* |
|  | [-0.677 -0.333] | [-0.458 -0.201] |
| 45-54 | -0.308\*\*\* | -0.277\*\*\* |
|  | [-0.480 -0.134] | [-0.407 -0.147] |
| 55-64 | -0.385\*\*\* | -0.655\*\*\* |
|  | [-0.603 -0.166] | [-0.816 -0.493] |
| **Gender** |  |  |
|  |  |  |
| Female | 0.465\*\*\* | -0.0673\* |
|  | [0.358 0.570] | [-0.143 0.008] |
| **Education** |  |  |
| compulsory[ref] |  |  |
| diploma | -0.805\*\*\* | 0.212\*\*\* |
|  | [-1.011 -0.598] | [0.099 0.323] |
| university degree | -0.917\*\*\* | 0.370\*\*\* |
|  | [-1.282 -0.552] | [0.240 0.498] |
| **Treatment** |  |  |
| Treated | 2.229\*\*\* | 0.286\*\*\* |
|  | [1.696 2.761] | [0.074 0.497] |
| **Treatment\*Education** |  |  |
| T\*diploma | 1.035\*\*\* | -0.125 |
|  | [0.748 1.322] | [-0.306 0.0558] |
| T\*university degree | 1.521\*\*\* | -0.226\*\* |
|  | [1.091 1.949] | [-0.435 -0.015] |
| **Citizenship** |  |  |
|  |  |  |
| foreigner | 1.004\*\*\* | 0.248\*\*\* |
|  | [0.841 1.167] | [0.131 0.363] |
| **Unemployment spell** |  |  |
| ≤ 3 months[ref.] |  |  |
| 3-6 months | -0.520\*\*\* | -0.163\*\* |
|  | [-0.808 -0.230] | [-0.324 -0.001] |
| 6-12 months | -0.854\*\*\* | -0.335\*\*\* |
|  | [-1.145 -0.562] | [-0.535 -0.133] |
| 1-2 years | -0.764\*\*\* | -0.444\*\*\* |
|  | [-1.032 -0.495] | [-0.591 -0.296] |
| > 2 years  | -0.810\*\*\* | -0.250\*\*\* |
|  | [-0.919 -0.699] | [-0.349 -0.151] |
| **Month of registration** |  |  |
| January [ref.] |  |  |
| February | 0.007 | -0.043 |
|  | [-0.190 0.205] | [-0.196 0.109] |
| March | -0.068 | -0.046 |
|  | [-0.264 0.127] | [-0.197 0.104] |
| April | -0.032 | 0.094 |
|  | [-0.269 0.205] | [-0.054 0.243] |
| May | 0.207\*\* | -0.063 |
|  | [0.015 0.397] | [-0.216 0.089] |
| June | 0.156 | -0.103 |
|  | [-0.037 0.348] | [-0.264 0.059] |
| July | -0.070 | -0.155\* |
|  | [-0.276 0.135] | [-0.315 0.004] |
| August | -0.018 | -0.179\*\* |
|  | [-0.272 0.235] | [-0.350 -0.008] |
| September | 0.142 | -0.511\*\*\* |
|  | [-0.042 0.326] | [-0.673 -0.348] |
| Weight | -0.918\*\*\* | -0.532\*\*\* |
|  | [-1.510 -0.325] | [-0.903 -0.159] |
| Constant | -3.111\*\*\* | -0.991\*\*\* |
|  | [-3.404 -2.817] | [-1.230 -0.752] |
|  |  |  |
| Observations | 33,389 | 20,012 |

Confidence intervals in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.01

Supplementary information 15: Effect of citizenship and treatment on probability of obtaining a contract lasting for more than 1 year as the first employment after the treatment, estimated with citizenship x treatment interaction

|  |  |  |
| --- | --- | --- |
| Variables | Lombardy | Emilia-Romagna |
| **Age** |  |  |
| 15-24 [ref.] |  |  |
| 25-34 | -0.394\*\*\* | -0.188\*\*\* |
|  | [-0.554 -0.234] | [-0.313 -0.063] |
| 35-44 | -0.505\*\*\* | -0.295\*\*\* |
|  | [-0.675 -0.334] | [-0.425 -0.165] |
| 45-54 | -0.290\*\*\* | -0.305\*\*\* |
|  | [-0.461 -0.118] | [-0.435 -0.174] |
| 55-64 | -0.245\*\* | -0.643\*\*\* |
|  | [-0.463 -0.027] | [-0.805 -0.481] |
| **Gender** |  |  |
|  |  |  |
| Female | 0.492\*\*\* | -0.074\* |
|  | [0.386 0.598] | [-0.150 0.001] |
| **Education** |  |  |
| compulsory[ref] |  |  |
| diploma | -0.314\*\*\* | 0.137\*\*\* |
|  | [-0.444 -0.183] | [0.044 0.229] |
| university degree | -0.0528 | 0.265\*\*\* |
|  | [-0.224 0.119] | [0.156 0.372] |
| **Citizenship** |  |  |
|  |  |  |
| foreigner | 1.975\*\*\* | -0.053 |
|  | [1.671 2.277] | [-0.281 0.174] |
| **Treatment** |  |  |
| Treated | 2.933\*\*\* | -0.217 |
|  | [2.516 3.350] | [-0.523 0.089] |
| **Treatment\*Citizenship** |  |  |
| T\*foreigner | -1.658\*\*\* | 0.395\*\*\* |
|  | [-2.036 -1.280] | [0.137 0.651] |
| **Unemployment spell** |  |  |
| ≤ 3 months[ref.] |  |  |
| 3-6 months | -0.569\*\*\* | -0.163\*\* |
|  | [-0.856 -0.281] | [-0.324 -0.001] |
| 6-12 months | -0.892\*\*\* | -0.337\*\*\* |
|  | [-1.181 -0.602] | [-0.537 -0.135] |
| 1-2 years | -0.804\*\*\* | -0.428\*\*\* |
|  | [-1.070 -0.536] | [-0.576 -0.280] |
| > 2 years  | -0.759\*\*\* | -0.264\*\*\* |
|  | [-0.868 -0.648] | [-0.363 -0.164] |
| **Month of registration** |  |  |
| January [ref.] |  |  |
| February | -0.003 | -0.005 |
|  | [-0.200 0.194] | [-0.160 0.148] |
| March | -0.047 | -0.004 |
|  | [-0.242 0.147] | [-0.157 0.148] |
| April | 0.050 | 0.078 |
|  | [-0.187 0.288] | [-0.070 0.227] |
| May | 0.229\*\* | -0.073 |
|  | [0.038 0.419] | [-0.226 0.079] |
| June | 0.178\* | -0.147\* |
|  | [-0.014 0.370] | [-0.312 0.017] |
| July | -0.035 | -0.220\*\*\* |
|  | [-0.241 0.170] | [-0.385 -0.054] |
| August | 0.013 | -0.223\*\* |
|  | [-0.240 0.266] | [-0.396 -0.049] |
| September | 0.161\* | -0.554\*\*\* |
|  | [-0.022 0.344] | [-0.719 -0.389] |
| Weight | -0.017 | 0.120 |
|  | [-0.670 0.635] | [-0.435 0.675] |
| Constant | -4.231\*\*\* | -1.211\*\*\* |
|  | [-4.640 -3.822] | [-1.498 -0.923] |
|  |  |  |
| Observations | 33,389 | 20,012 |

Confidence intervals in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.01

Supplementary information 16: Effect of unemployment spell and treatment on probability of obtaining a contract lasting for more than 1 year as the first employment after the treatment, estimated with unemployment spell x treatment interaction

|  |  |  |
| --- | --- | --- |
| Variables | **Lombardy** | **Emilia-Romagna** |
| **Age** |  |  |
| 15-24 [ref.] |  |  |
| 25-34 | -0.429\*\*\* | -0.207\*\*\* |
|  | [-0.589 -0.267] | [-0.331 -0.082] |
| 35-44 | -0.588\*\*\* | -0.331\*\*\* |
|  | [-0.758 -0.417] | [-0.459 -0.203] |
| 45-54 | -0.389\*\*\* | -0.278\*\*\* |
|  | [-0.560 -0.217] | [-0.407 -0.148] |
| 55-64 | -0.480\*\*\* | -0.657\*\*\* |
|  | [-0.696 -0.262] | [-0.818 -0.495] |
| **Gender** |  |  |
|  |  |  |
| Female | 0.498\*\*\* | -0.066\* |
|  | [0.391 0.604] | [-0.142 0.009] |
| **Education** |  |  |
| compulsory[ref] |  |  |
| diploma | -0.315\*\*\* | 0.170\*\*\* |
|  | [-0.445 -0.184] | [0.079 0.260] |
| university degree | -0.011 | 0.294\*\*\* |
|  | [-0.183 0.160] | [0.187 0.401] |
| **Citizenship** |  |  |
|  |  |  |
| foreigner | 0.937\*\*\* | 0.257\*\*\* |
|  | [0.773 1.099] | [0.140 0.373] |
| **Unemployment spell** |  |  |
| ≤ 3 months[ref.] |  |  |
| 3-6 months | -0.229 | -0.165 |
|  | [-0.879 0.422] | [-0.367 0.038] |
| 6-12 months | -0.894\*\* | -0.485\*\*\* |
|  | [-1.608 -0.179] | [-0.740 -0.228] |
| 1-2 years | -0.907\*\*\* | -0.546\*\*\* |
|  | [-1.469 -0.345] | [-0.726 -0.365] |
| > 2 years  | -0.754\*\*\* | -0.208\*\*\* |
|  | [-0.903 -0.604] | [-0.328 -0.087] |
| **Treatment** |  |  |
| Treated | 3.696\*\*\* | 0.180\* |
|  | [3.203 4.189] | [-0.002 0.362] |
| **Treatment\*Unemployment spell** |  |  |
| T\*3-6 months | -0.350 | 0.011 |
|  | [-1.077 0.378] | [-0.321 0.344] |
| T\*6-12 months | 0.044 | 0.429\*\* |
|  | [-0.739 0.828] | [0.014 0.843] |
| T\*1-2 years | 0.176 | 0.331\*\* |
|  | [-0.465 0.818] | [0.015 0.646] |
| T\*> 2 years  | -0.095 | -0.122 |
|  | [-0.314 0.123] | [-0.323 0.079] |
| **Month of registration** |  |  |
| January [ref.] |  |  |
| February | 0.010 | -0.042 |
|  | [-0.187 0.208] | [-0.195 0.111] |
| March | -0.066 | -0.048 |
|  | [-0.261 0.129] | [-0.199 0.102] |
| April | -0.117 | 0.102 |
|  | [-0.354 0.121] | [-0.047 0.250] |
| May | 0.219\*\* | -0.060 |
|  | [0.027 0.410] | [-0.213 0.092] |
| June | 0.164\* | -0.096 |
|  | [-0.029 0.357] | [-0.258 0.066] |
| July | -0.116 | -0.147\* |
|  | [-0.321 0.089] | [-0.307 0.013] |
| August | -0.058 | -0.170\* |
|  | [-0.311 0.194] | [-0.341 0.006] |
| September | 0.160\* | -0.502\*\*\* |
|  | [-0.024 0.344] | [-0.664 -0.338] |
| Weight | -1.934\*\*\* | -0.571\*\*\* |
|  | [-2.534 -1.334] | [-0.945 -0.197] |
| Constant | -3.069\*\*\* | -0.934\*\*\* |
|  | [-3.369 -2.768] | [-1.173 -0.695] |
|  |  |  |
| Observations | 33,389 | 20,012 |

Confidence intervals in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.01

Supplementary information 17: Results from estimating the effect of age and treatment on probability of obtaining a contract lasting for a maximum of 1 year as the first employment after the treatment using LPM, with age x treatment interaction

|  |  |  |
| --- | --- | --- |
| *Variables* | Lombardy | Emilia-Romagna |
|   |  |  |
| **Age** |  |  |
| 15-24 [ref.] |  |  |
| 25-34 | -0.103\*\*\* | -0.004 |
|  | [-0.119 -0.085] | [-0.030 0.021] |
| 35-44 | -0.138\*\*\* | -0.023\* |
|  | [-0.156 -0.120] | [-0.049 0.002] |
| 45-54 | -0.155\*\*\* | -0.080\*\*\* |
|  | [-0.173 -0.136] | [-0.107 -0.054] |
| 55-64 | -0.174\*\*\* | -0.168\*\*\* |
|  | [-0.195 -0.152] | [-0.198 -0.137] |
| **Treatment** |  |  |
| Treated | 0.206\*\*\* | -0.012 |
|  | [0.182 0.229] | [-0.054 0.029] |
| **Treatment\*Age** |  |  |
| T\*25-34 | 0.098\*\*\* | 0.018 |
|  | [0.070 0.126] | [-0.023 0.061] |
| T\*35-44 | 0.143\*\*\* | -0.037\* |
|  | [0.112 0.173] | [-0.079 0.005] |
| T\*45-54 | 0.031\* | -0.018 |
|  | [-0.001 0.062] | [-0.061 0.024] |
| T\*55-64 | -0.086\*\*\* | 0.010 |
|  | [-0.131 -0.040] | [-0.039 0.060] |
| **Gender** |  |  |
|  |  |  |
| female | -0.001 | -0.046\*\*\* |
|  | [-0.009 0.006] | [-0.058 -0.033] |
| **Education** |  |  |
| compulsory[ref.] |  |  |
| diploma | 0.037\*\*\* | 0.026\*\*\* |
|  | [0.028 0.046] | [0.011 0.040] |
| university degree | 0.109\*\*\* | 0.009 |
|  | [0.095 0.122] | [-0.007 0.027] |
| **Citizenship** |  |  |
|  |  |  |
| foreigner | -0.017\*\*\* | -0.076\*\*\* |
|  | [-0.029 -0.005] | [-0.095 -0.057] |
| **Unemployment spell** |  |  |
| ≤ 3 months[ref.] |  |  |
| 3-6 months | 0.097\*\*\* | -0.054\*\*\* |
|  | [0.073 0.121] | [-0.080 -0.028] |
| 6-12 months | 0.061\*\*\* | -0.032\*\* |
|  | [0.040 0.082] | [-0.062 -0.002] |
| 1-2 years | -0.047\*\*\* | -0.098\*\*\* |
|  | [-0.066 -0.028] | [-0.120 -0.077] |
| > 2 years  | -0.058\*\*\* | -0.038\*\*\* |
|  | [-0.066 -0.050] | [-0.054 -0.022] |
| **Month of registration** |  |  |
| January [ref.] |  |  |
| February | -0.002 | -0.019 |
|  | [-0.017 0.011] | [-0.044 0.005] |
| March | 0.013\* | -0.019 |
|  | [-0.001 0.027] | [-0.044 0.005] |
| April | 0.027\*\*\* | -0.024\* |
|  | [0.010 0.044] | [-0.049 0.001] |
| May | 0.016\*\* | -0.024\* |
|  | [0.001 0.030] | [-0.049 0.001] |
| June | 0.035\*\*\* | -0.031\*\* |
|  | [0.020 0.050] | [-0.058 -0.005] |
| July | 0.030\*\*\* | -0.042\*\*\* |
|  | [0.015 0.045] | [-0.068 -0.017] |
| August | 0.037\*\*\* | -0.011 |
|  | [0.019 0.056] | [-0.038 0.016] |
| September | 0.022\*\*\* | 0.010 |
|  | [0.008 0.036] | [-0.014 0.035] |
| Weight | 0.056\*\*\* | 0.030 |
|  | [0.028 0.085] | [-0.029 0.091] |
| Constant | 0.212\*\*\* | 0.361\*\*\* |
|  | [0.184 0.239] | [0.319 0.402] |
|  |  |  |
| Observations | 33,389 | 20,012 |

Confidence intervals in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Supplementary information 18: Results from estimating the effect of gender and treatment on probability of obtaining a contract lasting for a maximum of 1 year as the first employment after the treatment using LPM, with gender x treatment interaction

|  |  |  |
| --- | --- | --- |
| *Variables* | Lombardy | Emilia-Romagna |
| **Age** |  |  |
| 15-24 [ref.] |  |  |
| 25-34 | -0.069\*\*\* | 0.002 |
|  | [-0.082 -0.055] | [-0.018 0.023] |
| 35-44 | -0.099\*\*\* | -0.036\*\*\* |
|  | [-0.113 -0.085] | [-0.057 -0.014] |
| 45-54 | -0.135\*\*\* | -0.087\*\*\* |
|  | [-0.150 -0.120] | [-0.109 -0.065] |
| 55-64 | -0.160\*\*\* | -0.165\*\*\* |
|  | [-0.177 -0.141] | [-0.189 -0.140] |
| **Gender** |  |  |
|  |  |  |
| Female | -0.001 | -0.044\*\*\* |
|  | [-0.009 0.007] | [-0.059 -0.029] |
| **Treatment** |  |  |
| Treated | 0.262\*\*\* | -0.016 |
|  | [0.242 0.281] | [-0.048 0.015] |
| **Treatment\*Gender** |  |  |
| T\*female | 0.007 | -0.004 |
|  | [-0.010 0.026] | [-0.029 0.020] |
| **Education** |  |  |
| compulsory[ref.] |  |  |
| diploma | 0.034\*\*\* | 0.026\*\*\* |
|  | [0.025 0.044] | [0.012 0.040] |
| university degree | 0.109\*\*\* | 0.010 |
|  | [0.096 0.122] | [-0.006 0.027] |
| **Citizenship** |  |  |
|  |  |  |
| foreigner | -0.019\*\*\* | -0.076\*\*\* |
|  | [-0.031 -0.007] | [-0.095 -0.057] |
| **Unemployment spell** |  |  |
| ≤ 3 months[ref.] |  |  |
| 3-6 months | 0.099\*\*\* | -0.054\*\*\* |
|  | [0.075 0.122] | [-0.080 -0.028] |
| 6-12 months | 0.061\*\*\* | -0.033\*\* |
|  | [0.040 0.082] | [-0.062 -0.003] |
| 1-2 years | -0.047\*\*\* | -0.098\*\*\* |
|  | [-0.065 -0.028] | [-0.119 -0.076] |
| > 2 years  | -0.057\*\*\* | -0.038\*\*\* |
|  | [-0.065 -0.048] | [-0.053 -0.022] |
| **Month of registration** |  |  |
| January [ref.] |  |  |
| February | -0.003 | -0.019 |
|  | [-0.018 0.010] | [-0.045 0.005] |
| March | 0.013\* | -0.018 |
|  | [-0.001 0.027] | [-0.043 0.006] |
| April | 0.028\*\*\* | -0.023\* |
|  | [0.012 0.045] | [-0.048 0.001] |
| May | 0.016\*\* | -0.023\* |
|  | [0.001 0.031] | [-0.049 0.001] |
| June | 0.036\*\*\* | -0.031\*\* |
|  | [0.021 0.051] | [-0.057 -0.005] |
| July | 0.031\*\*\* | -0.042\*\*\* |
|  | [0.016 0.045] | [-0.068 -0.016] |
| August | 0.038\*\*\* | -0.010 |
|  | [0.020 0.057] | [-0.037 0.017] |
| September | 0.021\*\*\* | 0.010 |
|  | [0.007 0.036] | [-0.014 0.035] |
| Weight | 0.063\*\*\* | 0.028 |
|  | [0.036 0.090] | [-0.031 0.087] |
| Constant | 0.187\*\*\* | 0.364\*\*\* |
|  | [0.162 0.210] | [0.324 0.402] |
|  |  |  |
| Observations | 33,389 | 20,012 |

Confidence intervals in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Supplementary information 19: Results from estimating the effect of education and treatment on probability of obtaining a contract lasting for a maximum of 1 year as the first employment after the treatment using LPM, with education x treatment interaction

|  |  |  |
| --- | --- | --- |
| *Variables* | Lombardy | Emilia-Romagna |
| **Age** |  |  |
| 15-24 [ref.] |  |  |
| 25-34 | -0.070\*\*\* | 0.002 |
|  | [-0.083 -0.056] | [-0.018 0.023] |
| 35-44 | -0.106\*\*\* | -0.036\*\*\* |
|  | [-0.120 -0.091] | [-0.057 -0.014] |
| 45-54 | -0.142\*\*\* | -0.087\*\*\* |
|  | [-0.156 -0.127] | [-0.109 -0.065] |
| 55-64 | -0.167\*\*\* | -0.165\*\*\* |
|  | [-0.185 -0.149] | [-0.189 -0.140] |
| **Gender** |  |  |
|  |  |  |
| Female | 0.001 | -0.045\*\*\* |
|  | [-0.006 0.008] | [-0.057 -0.033] |
| **Education** |  |  |
| compulsory[ref] |  |  |
| diploma | 0.048\*\*\* | 0.035\*\*\* |
|  | [0.038 0.058] | [0.017 0.052] |
| university degree | 0.141\*\*\* | 0.008 |
|  | [0.125 0.156] | [-0.012 0.029] |
| **Treatment** |  |  |
| Treated | 0.345\*\*\* | -0.008 |
|  | [0.318 0.371] | [-0.042 0.025] |
| **Treatment\*Education** |  |  |
| T\*diploma | -0.073\*\*\* | -0.024\* |
|  | [-0.096 -0.050] | [-0.052 0.004] |
| T\*university degree | -0.125\*\*\* | 0.005 |
|  | [-0.154 -0.095] | [-0.028 0.039] |
| **Citizenship** |  |  |
|  |  |  |
| foreigner | -0.021\*\*\* | -0.076\*\*\* |
|  | [-0.033 -0.009] | [-0.095 -0.057] |
| **Unemployment spell** |  |  |
| ≤ 3 months[ref.] |  |  |
| 3-6 months | 0.102\*\*\* | -0.054\*\*\* |
|  | [0.078 0.126] | [-0.080 -0.028] |
| 6-12 months | 0.064\*\*\* | -0.032\*\* |
|  | [0.043 0.085] | [-0.062 -0.003] |
| 1-2 years | -0.046\*\*\* | -0.098\*\*\* |
|  | [-0.064 -0.027] | [-0.119 -0.076] |
| > 2 years  | -0.056\*\*\* | -0.037\*\*\* |
|  | [-0.064 -0.047] | [-0.053 -0.021] |
| **Month of registration** |  |  |
| January [ref.] |  |  |
| February | -0.004 | -0.020 |
|  | [-0.018 0.010] | [-0.045 0.005] |
| March | 0.013\* | -0.019 |
|  | [-0.001 0.027] | [-0.044 0.005] |
| April | 0.024\*\*\* | -0.023\* |
|  | [0.007 0.040] | [-0.048 0.001] |
| May | 0.017\*\* | -0.024\* |
|  | [0.002 0.032] | [-0.049 0.001] |
| June | 0.036\*\*\* | -0.031\*\* |
|  | [0.021 0.051] | [-0.057 -0.005] |
| July | 0.027\*\*\* | -0.042\*\*\* |
|  | [0.012 0.042] | [-0.068 -0.017] |
| August | 0.035\*\*\* | -0.010 |
|  | [0.017 0.054] | [-0.038 0.016] |
| September | 0.023\*\*\* | 0.010 |
|  | [0.008 0.037] | [-0.014 0.035] |
| Weight | 0.037\*\*\* | 0.024 |
|  | [0.010 0.064] | [-0.034 0.084] |
| Constant | 0.188\*\*\* | 0.363\*\*\* |
|  | [0.164 0.212] | [0.323 0.401] |
|  |  |  |
| Observations | 33,389 | 20,012 |

Confidence intervals in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Supplementary information 20: Results from estimating the effect of citizenship and treatment on probability of obtaining a contract lasting for a maximum of 1 year as the first employment after the treatment using LPM, with citizenship x treatment interaction

|  |  |  |
| --- | --- | --- |
| *Variables* | Lombardy | Emilia-Romagna |
| **Age** |  |  |
| 15-24 [ref.] |  |  |
| 25-34 | -0.068\*\*\* | 0.002 |
|  | [-0.082 -0.054] | [-0.019 0.023] |
| 35-44 | -0.098\*\*\* | -0.036\*\*\* |
|  | [-0.112 -0.083] | [-0.058 -0.015] |
| 45-54 | -0.134\*\*\* | -0.087\*\*\* |
|  | [-0.148 -0.119] | [-0.108 -0.065] |
| 55-64 | -0.157\*\*\* | -0.165\*\*\* |
|  | [-0.174 -0.138] | [-0.190 -0.140] |
| **Gender** |  |  |
|  |  |  |
| Female | 0.000 | -0.045\*\*\* |
|  | [-0.007 0.007] | [-0.057 -0.033] |
| **Education** |  |  |
| compulsory[ref] |  |  |
| diploma | 0.035\*\* | 0.027\*\*\* |
|  | [0.025 0.044] | [0.012 0.041] |
| university degree | 0.109\*\*\* | 0.011 |
|  | [0.096 0.122] | [-0.006 0.028] |
| **Citizenship** |  |  |
|  |  |  |
| foreigner | -0.015\*\* | -0.069\*\*\* |
|  | [-0.028 -0.002] | [-0.105 -0.033] |
| **Treatment** |  |  |
| Treated | 0.265\*\*\* | -0.009 |
|  | [0.247 0.282] | [-0.058 0.038] |
| **Treatment\*Citizenship** |  |  |
| T\*foreigner | -0.025 | -0.009 |
|  | [-0.057 0.005] | [-0.051 0.031] |
| **Unemployment spell** |  |  |
| ≤ 3 months[ref.] |  |  |
| 3-6 months | 0.097\*\*\* | -0.054\*\*\* |
|  | [0.073 0.121] | [-0.080 -0.028] |
| 6-12 months | 0.060\*\*\* | -0.033\*\* |
|  | [0.039 0.081] | [-0.062 -0.003] |
| 1-2 years | -0.047\*\*\* | -0.098\*\*\* |
|  | [-0.066 -0.028] | [-0.119 -0.077] |
| > 2 years  | -0.056\*\*\* | -0.037\*\*\* |
|  | [-0.065 -0.048] | [-0.053 -0.021] |
| **Month of registration** |  |  |
| January [ref.] |  |  |
| February | -0.004 | -0.020 |
|  | [-0.018 0.010] | [-0.046 0.005] |
| March | 0.013\* | -0.019 |
|  | [-0.001 0.027] | [-0.045 0.005] |
| April | 0.030\*\*\* | -0.023\* |
|  | [0.013 0.047] | [-0.048 0.001] |
| May | 0.016\*\* | -0.023\* |
|  | [0.002 0.031] | [-0.048 0.001] |
| June | 0.036\*\*\* | -0.030\*\* |
|  | [0.021 0.051] | [-0.057 -0.003] |
| July | 0.031\*\*\* | -0.041\*\*\* |
|  | [0.016 0.046] | [-0.068 -0.014] |
| August | 0.039\*\*\* | -0.009 |
|  | [0.021 0.057] | [-0.037 0.018] |
| September | 0.021\*\*\* | 0.011 |
|  | [0.007 0.036] | [-0.013 0.036] |
| Weight | 0.070\*\*\* | 0.013 |
|  | [0.042 0.098] | [-0.075 0.101] |
| Constant | 0.180\*\*\* | 0.370\*\*\* |
|  | [0.155 0.204] | [0.323 0.416] |
|  |  |  |
| Observations | 33,389 | 20,012 |

Confidence intervals in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Supplementary information 21: Results from estimating the effect of unemployment spell and treatment on probability of obtaining a contract lasting for a maximum of 1 year as the first employment after the treatment using LPM, with unemployment spell x treatment interaction

|  |  |  |
| --- | --- | --- |
| *Variables* | **Lombardy** | **Emilia-Romagna** |
| **Age** |  |  |
| 15-24 [ref.] |  |  |
| 25-34 | -0.065\*\*\* | 0.003 |
|  | [-0.079 -0.052] | [-0.018 0.024] |
| 35-44 | -0.092\*\*\* | -0.035\*\*\* |
|  | [-0.106 -0.078] | [-0.056 -0.014] |
| 45-54 | -0.129\*\*\* | -0.087\*\*\* |
|  | [-0.143 -0.114] | [-0.108 -0.065] |
| 55-64 | -0.152\*\*\* | -0.164\*\*\* |
|  | [-0.169 -0.134] | [-0.189 -0.139] |
| **Gender** |  |  |
|  |  |  |
| Female | 0.001 | -0.045\*\*\* |
|  | [-0.006 0.009] | [-0.058 -0.033] |
| **Education** |  |  |
| compulsory[ref] |  |  |
| diploma | 0.036\*\*\* | 0.026\*\*\* |
|  | [0.027 0.045] | [0.011 0.040] |
| university degree | 0.109\*\*\* | 0.010 |
|  | [0.096 0.122] | [-0.007 0.027] |
| **Citizenship** |  |  |
|  |  |  |
| foreigner | -0.006 | -0.076\*\*\* |
|  | [-0.019 0.005] | [-0.095 -0.057] |
| **Unemployment spell** |  |  |
| ≤ 3 months[ref.] |  |  |
| 3-6 months | 0.083\*\*\* | -0.055\*\*\* |
|  | [0.051 0.114] | [-0.087 -0.022] |
| 6-12 months | 0.022 | -0.042\*\* |
|  | [-0.005 0.049] | [-0.078 -0.006] |
| 1-2 years | -0.046\*\*\* | -0.102\*\*\* |
|  | [-0.068 -0.023] | [-0.126 -0.076] |
| > 2 years  | -0.033\*\*\* | -0.048\*\*\* |
|  | [-0.042 -0.023] | [-0.068 -0.029] |
| **Treatment** |  |  |
| Treated | 0.316\*\*\* | -0.028\* |
|  | [0.292 0.338] | [-0.058 0.001] |
| **Treatment\*Unemployment spell** |  |  |
| T\*3-6 months | -0.013 | 0.002 |
|  | [-0.061 0.035] | [-0.050 0.054] |
| T\*6-12 months | 0.049\*\* | 0.029 |
|  | [0.005 0.092] | [-0.034 0.093] |
| T\*1-2 years | -0.041\*\* | 0.010 |
|  | [-0.081 -0.001] | [-0.037 0.057] |
| T\*> 2 years  | -0.123\*\*\* | 0.030\* |
|  | [-0.144 -0.101] | [-0.001 0.061] |
| **Month of registration** |  |  |
| January [ref.] |  |  |
| February | -0.002 | -0.019 |
|  | [-0.017 0.011] | [-0.044 0.006] |
| March | 0.014\*\* | -0.018 |
|  | [0.001 0.028] | [-0.043 0.006] |
| April | 0.034\*\*\* | -0.023\* |
|  | [0.017 0.051] | [-0.048 0.001] |
| May | 0.016\*\* | -0.023\* |
|  | [0.001 0.031] | [-0.048 0.001] |
| June | 0.036\*\*\* | -0.031\*\* |
|  | [0.021 0.051] | [-0.057 -0.004] |
| July | 0.035\*\*\* | -0.042\*\*\* |
|  | [0.020 0.049] | [-0.067 -0.016] |
| August | 0.040\*\*\* | -0.009 |
|  | [0.022 0.059] | [-0.037 0.017] |
| September | 0.022\*\*\* | 0.011 |
|  | [0.008 0.037] | [-0.013 0.036] |
| Weight | 0.091\*\*\* | 0.029 |
|  | [0.063 0.119] | [-0.030 0.089] |
| Constant | 0.153\*\*\* | 0.365\*\*\* |
|  | [0.129 0.177] | [0.326 0.404] |
|  |  |  |
| Observations | 33,389 | 20,012 |

Confidence intervals in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Supplementary information 22: Results from estimating the effect of age and treatment on probability of obtaining a contract lasting for more than 1 year as the first employment after the treatment using LPM, with age x treatment interaction

|  |  |  |
| --- | --- | --- |
| *Variables* | Lombardy | Emilia-Romagna |
|   |  |  |
| **Age** |  |  |
| 15-24 [ref.] |  |  |
| 25-34 | -0.004 | -0.032\*\*\* |
|  | [-0.014 0.005] | [-0.055 -0.010] |
| 35-44 | 0.008 | -0.066\*\*\* |
|  | [-0.002 0.020] | [-0.089 -0.043] |
| 45-54 | 0.013\*\* | -0.060\*\*\* |
|  | [0.002 0.025] | [-0.083 -0.036] |
| 55-64 | 0.017\*\* | -0.118\*\*\* |
|  | [0.003 0.030] | [-0.144 -0.091] |
| **Treatment** |  |  |
| Treated | 0.146\*\*\* | -0.010 |
|  | [0.131 0.160] | [-0.046 0.026] |
| **Treatment\*Age** |  |  |
| T\*25-34 | -0.023\*\*\* | 0.005 |
|  | [-0.040 -0.006] | [-0.031 0.042] |
| T\*35-44 | -0.101\*\*\* | 0.050\*\*\* |
|  | [-0.120 -0.082] | [0.013 0.087] |
| T\*45-54 | -0.069\*\*\* | 0.050\*\*\* |
|  | [-0.088 -0.049] | [0.013 0.087] |
| T\*55-64 | -0.027\* | 0.087\*\*\* |
|  | [-0.056 0.001] | [0.043 0.130] |
| **Gender** |  |  |
|  |  |  |
| female | 0.024\*\*\* | -0.009\* |
|  | [0.019 0.028] | [-0.020 0.001] |
| **Education** |  |  |
| compulsory[ref.] |  |  |
| diploma | -0.017\*\*\* | 0.021\*\*\* |
|  | [-0.023 -0.011] | [0.009 0.034] |
| university degree | -0.009\*\* | 0.039\*\*\* |
|  | [-0.017 -0.001] | [0.024 0.054] |
| **Citizenship** |  |  |
|  |  |  |
| foreigner | 0.053\*\*\* | 0.034\*\*\* |
|  | [0.045 0.060] | [0.017 0.050] |
| **Unemployment spell** |  |  |
| ≤ 3 months[ref.] |  |  |
| 3-6 months | -0.036\*\*\* | -0.024\*\* |
|  | [-0.051 -0.021] | [-0.046 -0.002] |
| 6-12 months | -0.051\*\*\* | -0.043\*\*\* |
|  | [-0.064 -0.038] | [-0.069 -0.017] |
| 1-2 years | -0.043\*\*\* | -0.054\*\*\* |
|  | [-0.054 -0.031] | [-0.072 -0.035] |
| > 2 years  | -0.037\*\*\* | -0.034\*\*\* |
|  | [-0.042 -0.032] | [-0.048 -0.021] |
| **Month of registration** |  |  |
| January [ref.] |  |  |
| February | 0.000 | -0.005 |
|  | [-0.008 0.009] | [-0.027 0.017] |
| March | -0.000 | -0.005 |
|  | [-0.009 0.008] | [-0.027 0.016] |
| April | 0.009\* | 0.015 |
|  | [-0.001 0.020] | [-0.006 0.037] |
| May | 0.012\*\* | -0.008 |
|  | [0.002 0.021] | [-0.029 0.013] |
| June | 0.009\* | -0.012 |
|  | [-0.000 0.018] | [-0.035 0.009] |
| July | 0.001 | -0.020\* |
|  | [-0.008 0.009] | [-0.042 0.002] |
| August | 0.003 | -0.023\* |
|  | [-0.007 0.015] | [-0.047 0.000] |
| September | 0.006 | -0.062\*\*\* |
|  | [-0.002 0.015] | [-0.084 -0.041] |
| Weight | 0.0295\*\*\* | -0.077\*\*\* |
|  | [0.011 0.047] | [-0.130 -0.025] |
| Constant | 0.011 | 0.278\*\*\* |
|  | [-0.005 0.028] | [0.242 0.313] |
|  |  |  |
| Observations | 33,389 | 20,012 |

Confidence intervals in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Supplementary information 23: Results from estimating the effect of gender and treatment on probability of obtaining a contract lasting for more than 1 year as the first employment after the treatment using LPM, with gender x treatment interaction

|  |  |  |
| --- | --- | --- |
| *Variables* | Lombardy | Emilia-Romagna |
| **Age** |  |  |
| 15-24 [ref.] |  |  |
| 25-34 | -0.019\*\*\* | -0.030\*\*\* |
|  | [-0.027 -0.010] | [-0.048 -0.011] |
| 35-44 | -0.023\*\*\* | -0.048\*\*\* |
|  | [-0.031 -0.014] | [-0.066 -0.029] |
| 45-54 | -0.012\*\*\* | -0.042\*\*\* |
|  | [-0.021 -0.003] | [-0.060 -0.023] |
| 55-64 | -0.007 | -0.087\*\*\* |
|  | [-0.018 0.003] | [-0.109 -0.066] |
| **Gender** |  |  |
|  |  |  |
| Female | 0.027\*\*\* | -0.016\*\* |
|  | [0.021 0.032] | [-0.029 -0.003] |
| **Treatment** |  |  |
| Treated | 0.127\*\*\* | 0.010 |
|  | [0.115 0.139] | [-0.017 0.038] |
| **Treatment\*Gender** |  |  |
| T\*female | -0.025\*\*\* | 0.021\* |
|  | [-0.036 -0.013] | [-0.001 0.042] |
| **Education** |  |  |
| compulsory[ref.] |  |  |
| diploma | -0.014\*\*\* | 0.022\*\*\* |
|  | [-0.019 -0.008] | [0.009 0.034] |
| university degree | -0.002 | 0.040\*\*\* |
|  | [-0.010 0.006] | [0.025 0.055] |
| **Citizenship** |  |  |
|  |  |  |
| foreigner | 0.047\*\*\* | 0.033\*\*\* |
|  | [0.040 0.055] | [0.017 0.049] |
| **Unemployment spell** |  |  |
| ≤ 3 months[ref.] |  |  |
| 3-6 months | -0.033\*\*\* | -0.023\*\* |
|  | [-0.048 -0.018] | [-0.045 -0.001] |
| 6-12 months | -0.048\*\*\* | -0.044\*\*\* |
|  | [-0.061 -0.034] | [-0.070 -0.018] |
| 1-2 years | -0.042\*\*\* | -0.056\*\*\* |
|  | [-0.061 -0.034] | [-0.074 -0.037] |
| > 2 years  | -0.038\*\*\* | -0.035\*\*\* |
|  | [-0.043 -0.033] | [-0.049 -0.022] |
| **Month of registration** |  |  |
| January [ref.] |  |  |
| February | -0.000 | -0.005 |
|  | [-0.009 0.008] | [-0.027 0.016] |
| March | -0.001 | -0.006 |
|  | [-0.009 0.007] | [-0.028 0.015] |
| April | 0.004 | 0.014 |
|  | [-0.006 0.014] | [-0.007 0.036] |
| May | 0.012\*\* | -0.009 |
|  | [0.002 0.021] | [-0.031 0.012] |
| June | 0.008\* | -0.014 |
|  | [-0.001 0.018] | [-0.037 0.008] |
| July | -0.002 | -0.022\* |
|  | [0.011 0.007] | [-0.044 0.000] |
| August | 0.001 | -0.025\*\* |
|  | [-0.009 0.012] | [-0.049 -0.001] |
| September | 0.007\* | -0.065\*\*\* |
|  | [-0.001 0.016] | [0.087 -0.044] |
| Weight | 0.002 | -0.068\*\*\* |
|  | [0.014 0.018] | [-0.120 -0.016] |
| Constant | 0.040\*\*\* | 0.265\*\*\* |
|  | [0.025 0.055] | [0.231 0.298] |
|  |  |  |
| Observations | 33,389 | 20,012 |

Confidence intervals in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Supplementary information 24: Results from estimating the effect of education and treatment on probability of obtaining a contract lasting for more than 1 year as the first employment after the treatment using LPM, with education x treatment interaction

|  |  |  |
| --- | --- | --- |
| *Variables* | Lombardy | Emilia-Romagna |
| **Age** |  |  |
| 15-24 [ref.] |  |  |
| 25-34 | -0.019\*\*\* | -0.030\*\*\* |
|  | [-0.028 -0.011] | [-0.049 -0.012] |
| 35-44 | -0.020\*\*\* | -0.048\*\*\* |
|  | [-0.029 -0.011] | [-0.067 -0.030] |
| 45-54 | -0.009\*\* | -0.041\*\*\* |
|  | [-0.018 -0.001] | [-0.060 -0.022] |
| 55-64 | -0.004 | -0.087\*\*\* |
|  | [-0.015 0.006] | [-0.108 -0.065] |
| **Gender** |  |  |
|  |  |  |
| Female | 0.021\*\*\* | -0.009\* |
|  | [0.016 0.026] | [-0.020 0.001] |
| **Education** |  |  |
| compulsory[ref] |  |  |
| diploma | -0.022\*\*\* | 0.028\*\*\* |
|  | [-0.028 -0.016] | [0.013 0.043] |
| university degree | -0.025\*\*\* | 0.052\*\*\* |
|  | [-0.034 -0.015] | [0.034 0.070] |
| **Treatment** |  |  |
| Treated | 0.063\*\*\* | 0.039\*\*\* |
|  | [0.047 0.080] | [0.010 0.069] |
| **Treatment\*Education** |  |  |
| T\*diploma | 0.045\*\*\* | -0.017 |
|  | [0.030 0.059] | [-0.042 0.007] |
| T\*university degree | 0.088\*\*\* | -0.033\*\* |
|  | [0.070 0.106] | [-0.062 -0.003] |
| **Citizenship** |  |  |
|  |  |  |
| foreigner | 0.049\*\*\* | 0.034\*\*\* |
|  | [0.041 0.056] | [0.018 0.051] |
| **Unemployment spell** |  |  |
| ≤ 3 months[ref.] |  |  |
| 3-6 months | -0.035\*\*\* | -0.023\*\* |
|  | [-0.050 -0.020] | [-0.045 -0.001] |
| 6-12 months | -0.049\*\*\* | -0.044\*\*\* |
|  | [-0.062 -0.036] | [-0.070 -0.018] |
| 1-2 years | -0.043\*\*\* | -0.056\*\*\* |
|  | [-0.054 -0.031] | [-0.074 -0.037] |
| > 2 years  | -0.039\*\*\* | -0.035\*\*\* |
|  | [-0.044 -0.034] | [-0.049 -0.021] |
| **Month of registration** |  |  |
| January [ref.] |  |  |
| February | -0.000 | -0.006 |
|  | [-0.009 0.008] | [-0.028 0.015] |
| March | -0.001 | -0.006 |
|  | [-0.009 0.007] | [-0.028 0.015] |
| April | 0.006 | 0.014 |
|  | [-0.003 0.017] | [-0.007 0.036] |
| May | 0.011\*\* | -0.009 |
|  | [0.002 0.020] | [-0.031 0.012] |
| June | 0.008\* | -0.014 |
|  | [-0.001 0.018] | [-0.037 0.008] |
| July | 0.001 | -0.021\* |
|  | [-0.008 0.009] | [-0.044 0.001] |
| August | 0.003 | -0.025\*\* |
|  | [-0.007 0.014] | [-0.049 -0.001] |
| September | 0.006 | -0.065\*\*\* |
|  | [-0.002 0.015] | [-0.086 -0.043] |
| Weight | 0.018\*\* | -0.075\*\*\* |
|  | [0.001 0.035] | [-0.127 -0.023] |
| Constant | 0.042\*\*\* | 0.259\*\*\* |
|  | [0.028 0.057] | [0.224 0.292] |
|  |  |  |
| Observations | 33,389 | 20,012 |

Confidence intervals in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Supplementary information 25: Results from estimating the effect of citizenship and treatment on probability of obtaining a contract lasting for more than 1 year as the first employment after the treatment using LPM, with citizenship x treatment interaction

|  |  |  |
| --- | --- | --- |
| *Variables* | Lombardy | Emilia-Romagna |
| **Age** |  |  |
| 15-24 [ref.] |  |  |
| 25-34 | -0.019\*\*\* | -0.028\*\*\* |
|  | [-0.028 -0.011] | [-0.046 -0.009] |
| 35-44 | -0.024\*\*\* | -0.044\*\*\* |
|  | [-0.033 -0.015] | [-0.062 -0.025] |
| 45-54 | -0.013\*\*\* | -0.045\*\*\* |
|  | [-0.022 -0.004] | [-0.064 -0.026] |
| 55-64 | -0.008 | -0.085\*\*\* |
|  | [-0.020 0.002] | [-0.107 -0.063] |
| **Gender** |  |  |
|  |  |  |
| Female | 0.022\*\*\* | -0.010\* |
|  | [0.017 0.026] | [-0.021 0.000] |
| **Education** |  |  |
| compulsory[ref] |  |  |
| diploma | -0.014\*\*\* | 0.018\*\*\* |
|  | [-0.020 -0.008] | [0.005 0.030] |
| university degree | -0.002 | 0.036\*\*\* |
|  | [-0.010 0.005] | [0.021 0.052] |
| **Citizenship** |  |  |
|  |  |  |
| foreigner | 0.048\*\*\* | -0.007 |
|  | [0.040 0.056] | [-0.039 0.023] |
| **Treatment** |  |  |
| Treated | 0.116\*\*\* | -0.029 |
|  | [0.105 0.126] | [-0.071 0.012] |
| **Treatment\*Citizenship** |  |  |
| T\*foreigner | -0.004 | 0.056\*\*\* |
|  | [-0.024 0.015] | [0.020 0.091] |
| **Unemployment spell** |  |  |
| ≤ 3 months[ref.] |  |  |
| 3-6 months | -0.033\*\*\* | -0.023\*\* |
|  | [-0.048 -0.018] | [-0.045 -0.001] |
| 6-12 months | -0.048\*\*\* | -0.044\*\*\* |
|  | [-0.061 -0.034] | [-0.070 -0.018] |
| 1-2 years | -0.042\*\*\* | -0.054\*\*\* |
|  | [-0.054 -0.030] | [-0.072 -0.035] |
| > 2 years  | -0.038\*\*\* | -0.037\*\*\* |
|  | [-0.044 -0.033] | [-0.050 -0.023] |
| **Month of registration** |  |  |
| January [ref.] |  |  |
| February | -0.001 | -0.001 |
|  | [-0.009 0.008] | [-0.023 0.020] |
| March | -0.001 | -0.001 |
|  | [-0.009 0.007] | [-0.022 0.021] |
| April | 0.003 | 0.012 |
|  | [-0.006 0.014] | [-0.009 0.033] |
| May | 0.012\*\*\* | -0.010 |
|  | [0.002 0.021] | [-0.032 0.011] |
| June | 0.008\* | -0.021\* |
|  | [-0.001 0.018] | [-0.044 0.002] |
| July | -0.001 | -0.031\*\*\* |
|  | [-0.010 0.007] | [-0.054 -0.007] |
| August | 0.001 | -0.031\*\* |
|  | [-0.009 0.013] | [-0.055 -0.007] |
| September | 0.007\* | -0.071\*\*\* |
|  | [-0.001 0.016] | [-0.093 -0.049] |
| Weight | 0.001 | 0.016 |
|  | [-0.015 0.018] | [-0.060 0.093] |
| Constant | 0.044\*\*\* | 0.228\*\*\* |
|  | [0.028 0.059] | [0.187 0.268] |
|  |  |  |
| Observations | 33,389 | 20,012 |

Confidence intervals in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Supplementary information 26: Results from estimating the effect of unemployment spell and treatment on probability of obtaining a contract lasting for more than 1 year as the first employment after the treatment using LPM, with unemployment spell x treatment interaction

|  |  |  |
| --- | --- | --- |
| *Variables* | **Lombardy** | **Emilia-Romagna** |
| **Age** |  |  |
| 15-24 [ref.] |  |  |
| 25-34 | -0.019\*\*\* | -0.030\*\*\* |
|  | [-0.028 -0.011] | [-0.049 -0.012] |
| 35-44 | -0.023\*\*\* | -0.049\*\*\* |
|  | [-0.032 -0.014] | [-0.067 -0.030] |
| 45-54 | -0.013\*\*\* | -0.041\*\*\* |
|  | [-0.022 -0.004] | [-0.060 -0.022] |
| 55-64 | -0.010\* | -0.087\*\*\* |
|  | [-0.021 0.001] | [-0.108 -0.065] |
| **Gender** |  |  |
|  |  |  |
| Female | 0.022\*\*\* | -0.009\* |
|  | [0.017 0.027] | [-0.020 0.001] |
| **Education** |  |  |
| compulsory[ref] |  |  |
| diploma | -0.013\*\*\* | 0.022\*\*\* |
|  | [-0.018 -0.007] | [0.010 0.035] |
| university degree | -0.001 | 0.041\*\*\* |
|  | [-0.010 0.006] | [0.025 0.056] |
| **Citizenship** |  |  |
|  |  |  |
| foreigner | 0.049\*\*\* | 0.035\*\*\* |
|  | [0.042 0.057] | [0.019 0.052] |
| **Unemployment spell** |  |  |
| ≤ 3 months[ref.] |  |  |
| 3-6 months | -0.019\* | -0.023 |
|  | [-0.039 0.000] | [-0.051 0.004] |
| 6-12 months | -0.028\*\*\* | -0.061\*\*\* |
|  | [-0.045 -0.011] | [-0.092 -0.029] |
| 1-2 years | -0.026\*\*\* | -0.067\*\*\* |
|  | [-0.040 -0.012] | [-0.089 -0.045] |
| > 2 years  | -0.024\*\*\* | -0.030\*\*\* |
|  | [-0.029 -0.018] | [-0.046 -0.013] |
| **Treatment** |  |  |
| Treated | 0.171\*\*\* | 0.024\* |
|  | [0.157 0.185] | [-0.001 0.050] |
| **Treatment\*Unemployment spell** |  |  |
| T\*3-6 months | -0.061\*\*\* | 0.002 |
|  | [-0.091 -0.030] | [-0.043 0.047] |
| T\*6-12 months | -0.076\*\*\* | 0.053\* |
|  | [-0.103 -0.048] | [-0.002 0.109] |
| T\*1-2 years | -0.069\*\*\* | 0.038\* |
|  | [-0.094 -0.044] | [-0.002 0.079] |
| T\*> 2 years  | -0.079\*\*\* | -0.015 |
|  | [-0.092 -0.066] | [-0.042 0.012] |
| **Month of registration** |  |  |
| January [ref.] |  |  |
| February | 0.000 | -0.006 |
|  | [-0.008 0.009] | [-0.028 0.015] |
| March | -0.001 | -0.006 |
|  | [-0.010 0.007] | [-0.028 0.015] |
| April | 0.002 | 0.015 |
|  | [-0.008 0.012] | [-0.006 0.037] |
| May | 0.012\*\* | -0.008 |
|  | [0.002 0.021] | [-0.030 0.013] |
| June | 0.009\* | -0.013 |
|  | [-0.000 0.018] | [-0.036 0.009] |
| July | -0.001 | -0.020\* |
|  | [-0.010 0.007] | [-0.043 0.001] |
| August | 0.001 | -0.023\* |
|  | [-0.010 0.011] | [-0.047 0.000] |
| September | 0.008\* | -0.063\*\*\* |
|  | [-0.001 0.017] | [-0.085 -0.042] |
| Weight | -0.003 | -0.080\*\*\* |
|  | [-0.020 0.014] | [-0.132 -0.027] |
| Constant | 0.034\*\*\* | 0.266\*\*\* |
|  | [0.019 0.049] | [0.232 0.300] |
|  |  |  |
| Observations | 33,389 | 20,012 |

Confidence intervals in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1