Effectiveness evaluation of training programmes for disadvantaged targets

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Presentation outlines

- Hints on VT as an instrument for social inclusion in Italy

- Dataset and some methodology

- Some results on VT effectiveness showing the importance of net impact evaluation

- Net impact, disadvantage and selection bias

- Conclusions

2

Vocational training policies and disadvantage in Italy (Piedmont)

- Specific VT historical mission centred on social and labour inclusion:
  - ✓ Not only development of skills
  - ✓ But also enhancement of social abilities
  - ✓ New pedagogical methods based on experience, closeness to the working environment, personalised services.
- Policies specialised in recovering the employment gap of weak subjects
- High concentration of disadvantaged subjects
- This can turn in a problem when evaluating the impact of these policies because this special target has not the same characteristics of the general work force.

3

Dataset and methodology

- Object: a subgroup of VT courses, designed for unemployed people (full-time courses lasting at least one year, including some apprenticeship and attesting a final qualification)

- Non-experimental counterfactual evaluation

- Main group (treated – students): a representative sample of not employed individuals attending a VT course in Piedmont in 2011

- Stratified sampling design (VT typology x ALMP participation) and controlling for gender, age, nationality

- Factual: 1,532 out of 9,605

- Counterfactual: 491 out of 1,568

- CATI & administrative and monitoring micro-data

VT gross impact

Gross placement indicators of VT students in Piedmont in October 2012 (%)

Target group:	Females	Non EU citizens	Young people (<25)	All students
Employment rate	42.8	37.0	34.7	40.3
Success rate	48.5	39.8	44.8	46.7

VT net impact

- Average marginal effect of training is about +14,5. Deadweight is present
- Females and foreigners do have strong disadvantage (which doesn't appear in gross impact), respectively (-11% and -10,3%), which is recovered by training.

The problem of the comparison group

- Reliable net impact evaluation requires that the control group differs only by the treatment (training)

- This happens in case of randomised control group

- In case of quasi experimental evaluation (e*x post* selection of a comparison sample) selection bias appears when the main and the counterfactual group do differ also for some other variable

- Dealing with selection bias is particularly complex when these variables are unobservable

- Disadvantaged individuals are characterised by both types of differences. Unobservables are linked to weaknesses in relational and social skills which turn in very low attractiveness on the labour market

How we dealt with the problem: to observe the weakness

- Multiple sets of variables where collected for each individual, with the possibility to create complex indicators:

  - ✓ the family background (parents' education and job),
  - ✓ the living environment (housing and quality of the living area),
  - ✓ the endowment of material resources (driving license, vehicle, pc, internet access)

- Uneffective. No single variable (or group of variables) resulted significant in explaining employment probability.

7

How we dealt with the problem: selection of a comparison group very close to the main group

- The control group was selected by the list of *no shows* (individuals who enrolled without attending or completing the course).

- PROS: •They share the same eligibility criteria

    • and the same attitude towards training.

- CONS • We expect that, if selection bias persists, it is negative (lower employability of trainees) because many drop-outs left because they found a job.

    • The dimension of the control group is limited by the small size of the no show list; so some evaluation on specific target groups could prove not statistically significant.

- Counterfactual: 491 out of 1,568

The problem of selection bias: on-going research

- There is the possibility to extract a comparison group by (very large and complex) unemployment lists of employment centres

- Even adopting propensity score techniques, it is likely that the presence of unobservables will induce selection bias.

- The comparison between the two techniques will give robust indications on the direction of this bias and on the effectiveness of the methods to detect and to correct it.

9

Selection bias: main facts

- To verify the absence of selection bias, the Heckman (1999) model was adopted.

- Two equations are estimated, one for the probability to attend the course and one for employability.

- A parameter ρ is estimated, measuring the interdependence between the two equations. If it is negative, treated individuals show a disadvantage with reference to the target variable (the probability to find a job)

- Results give back a value of ρ of -0. 3105 *(LR test of indep. eqns. (ρ = 0): chi2(1) = 3.24 Prob > chi2 = 0.0718)*. The ρ has a negative sign but it is not significant, i.e. there is no correlation between the choice to attend a course and the probability to find a job; the negative detected **selection bias is not significant**.

Conclusions

- VT training policies have a positive effect on employability.
- In accordance with VT mission: stronger effects for some weak targets (women, non-EU migrants)
- But these positive effects are much lower than gross effects
- It is possible to estimate unbiased net impact because tests show the absence of selection bias
- This was possible thanks to the choice of a comparison group of individuals sharing the same observable and unobservable characteristics, extracted by the list of *no shows*.
- Further research is ongoing to test the effectiveness of different estimating procedures (Propensity score matching) and to quantify and qualify the selection bias of trainees with respect to other unemployed people.

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