

Discussion : Are Training Programs More Effective When Unemployment is High by Michael Lechner and Conny Wunsch

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- ▶ The paper is about the cycle and the effect of training on employment outcome
- ▶ Part of a long term research project : a thorough analysis of training effect
- ▶ Already other papers "Long Run Effects of Public Sector Sponsored Training in West Germany" by the author and R. Miquel
- ▶ An incredible dataset - joint work with other ZEW members
- ▶ Berndt has presented a paper using this dataset
- ▶ The dataset allows to address and shed light into issues that were previously uncovered (this paper) or change our way of thinking on well covered issues

A word about “Long Run Effects of Public Sector Sponsored Training in West Germany”

- ▶ General opinion : training has negative effects on employment
- ▶ In the paper : training has a positive effect in the long run.
- ▶ Long run means 6 years or 8 years. Time period usually not available in standard datasets on trainees.
- ▶ Gains from adopting : matching. No constraints on the specification of effect through time.

- ▶ It is the same here. The authors examine an issue that requires a long panel of individual. They obtain results that were not previously available

Main results

- ▶ The effect of training programs is not constant through time
 - ▶ A first important result : when using similar data and applying the same estimation procedure but for spells beginning at different point in time does the results change
 - ▶ It is clear from the figures in the paper - It could also be tested formally. The assumption of stability would be certainly largely rejected.
- ▶ The effect is correlated with unemployment rate
 - ▶ When unemployment at the entry of program increases the long run effect increases
 - ▶ When unemployment at the date of outcome measurement increases the long run effect decreases
- ▶ It is a stimulating result
- ▶ I like this paper because it delivers a raw message to be interpreted : Macro conditions matter

Why could it be wrong? Robustness analysis

- ▶ No unemployed composition effect
- ▶ The correlation still persists when weighing the effect on specific population by a constant distribution
- ▶ Notice that estimation is however consistent with heterogenous effect correlated with treatment assignment
- ▶ No treatment composition effect
 - ▶ The composition of treatment between Long Training and Short Training is cyclical
 - ▶ It may account for part of the correlation : in fact the correlation is strengthened when accounting for this potential effect

Why could it be wrong : contamination bias

- ▶ The control group for treated assigned at date t_0 consist of individuals in unemployment at this date and that will not be assigned to treatment during a given period (11 months)
- ▶ However these individual may well be assigned to treatment in the future with a probability that may vary with unemployment
- ▶ If resources are constant then higher unemployment mean a smaller proportion of treated in the control

Estimation without contamination bias

If you consider $y(t_0)$ the potential output when assigned to treatment at date t_0 and y^0 the potential output without treatment. Assume it is unemployment duration. You may have a CIA like :

$$y^0 - t_0 \perp t - t_0 | x, y^0 \geq t_0, t \geq t_0$$

The conditional distribution of $y^0 - t_0$ is identified under this assumption and thus any feature of its distribution. The construction of a counterfactual not contaminated should be possible. Moreover the previous CIA implies

$$y^0 - t_0 \perp t - t_0 | s(x), y^0 \geq t_0, t \geq t_0$$

for any index function such that $l(t - t_0 | x) = l(t - t_0 | s(x))$
Generalizes the propensity score property to the case of a continuous treatment

Where does it comes from ?

- ▶ Difficult to asses whether the result reflects forces in which the unemployment rate plays a key role
- ▶ Mainly three periods : one of low employment, one of high employment and then one of low employment : not so much cycles
- ▶ Moreover the German reunification lead to an important increase in the supply of unskilled workers
- ▶ Also changes in the UI system in 1994
- ▶ Many possible explanations - the authors are very careful about how to interpret the result

How to interpret the result

- ▶ If macro conditions affect the effect of training then it is likely that the reverse effect is true.
- ▶ It is the reason why training is implemented
- ▶ Then one should think of general equilibrium effects
- ▶ How to account for possible interaction between trainees - peer effects for example
- ▶ How far can we push the use of matching estimator for this purpose