# Review of Washington State Employment Security Department, "Net Impact Study of the Training Benefits Program, 2002–2016" (draft report) by Jose Antonio Hernandez, Daegoon Lee, and Matthew Klein

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## **Purpose and summary**

The purpose of this document is to provide an independent peer review and appraisal of the Washington Employment Security Department's (ESD) evaluation of their unemployment insurance (UI) training benefits (TB) program. This peer review focuses primarily on the methodological appropriateness of the program evaluation methods used by ESD in their report.

ESD's report estimates the effects of the Washington State UI TB program on participation in training and subsequent employment and earnings. To accomplish this, ESD researchers implement a difference-in-differences analysis that compares the employment and training outcomes of TB participants following training to the outcomes of a four alternative control groups, while holding constant time-invariant differences between participants and controls.

The analysis makes use of four alternative control groups in order to check the robustness of the estimates. The preferred control group is obtained using a statistical method that matches controls to participants using an estimated propensity score. Other methods used to choose a control group are the Mahalanobis distance matching technique, the coarsened exact matching technique, and an innovative (and quite convincing) approach that uses rejected program applicants as a control group.

In the absence of random assignment to a training program, a control group needs to be constructed carefully in order for its outcomes to represent a credible counterfactual to what the employment outcomes of the participants would have been in the absence of training. In my assessment, the methods considered by ESD to estimate the effects of TB program on training and employment outcomes represent leading-edge techniques in program evaluation. That the

estimated effects of TB program participation are robust to different methods of selecting a control group makes the conclusions of report credible and convincing.

# Main findings

The main results are as follows. During the period that the TB program participants spent in training, their employment and earnings were lower than those of the control group. After the training period was over, TB program participants were overall somewhat more likely to be employed than the controls. However, the post-training earnings of TB participants were not systematically greater than those of the controls. Given that the TB participants' earnings were lower during the training period, the net effect of the program on earnings was negative.

Although the overall effects of the TB program on employment were small (and negative with respect to earnings), some subgroups of TB participants experienced net gains. Specifically, both the employment and earnings of the 2002 and 2003 cohorts of TB program participants improved relative to the control group. Similarly, the earnings of younger TB participants (defined as ages 35 of less at the start of training) and TB participants with low baseline earnings tended to improve as a result of the TB program.

### Assessment of the analysis

Overall, the analysis conducted by ESD is first-rate. Evaluating the TB program involves many considerations about the choice of a control group, and these considerations are presented clearly and informatively. That the estimated program effects are similar when different control groups are used makes this a convincing analysis. The matching methods used in the report meet the highest standards of currently used program evaluation techniques, and ESD's use of a control

group consisting of rejected TB applicants is innovative. This last approach is a method that should be used more widely in program evaluation, and ESD is to be commended for taking advantage of it.

# **Background information**

Marta Lachowska is a Senior Economist at the W.E. Upjohn Institute for Employment Research. She completed her Ph.D. in Economics at Stockholm University in 2010. Much of her research has focused on the impact of unemployment insurance on labor market outcomes. Her work has been published in leading peer-reviewed economics journals such as *American Economic Review*, *American Economic Journal: Economic Policy*, *Journal of Human Resources*, *Labour Economics*, and *Oxford Economic Papers*, among others. She has been the PI or co-PI of several investigator-initiated grants, including projects funded by the U.S. Department of Labor, the William T. Grant Foundation, and the Washington Center for Equitable Growth.

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