



Master's degree in *Statistics for Economics, Business and Finance*
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Abstract:

**Evaluation Design *versus* Evaluation Analysis of a Job Market
Policy in the Veneto Region**

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Many government policies affect directly employment and wages. Particularly the so called “active” job policies which are generally targeted toward long term unemployed or workers with short or unqualified work experience as well as the poorly educated (usually those who have completed their formal schooling at a low level). These policies aim to intervene into the job market promoting employment and/or wage growth among the target population rather than just providing income support (“passive” job policies).

In the recent past in Europe (as happened two decades ago in the U.S.), a growing demand for “objective” knowledge about the effects of such policies was observed. Different groups may benefit or lose from such government programs and for this reason policy evaluators are more often called to answer questions which play critical roles in the policy decision-making: (i) do participants in the government employment and training programs benefit from these policies? (ii) what could be the alternative in the job market for the target population? and (iii) are these programs worthwhile social investments? Assessment of these benefits and losses are the objective of this thesis that focus on the definition of the most appropriate instruments to identify the *net* contribution of a policy to the modifications of the job market status.

This thesis analyses a job policy implemented in 2005 by the government of the Veneto region (one of the most industrialized areas of Italy) which aimed to reduce the unemployment rate among women with low education or little work experience who were at risk of experiencing long spells of unemployment. The programme, called “More opportunities”, first took place in a selected pilot area which covers the territory of seven public employment centres of the 41 present in the region. No admission limits were set up for the age, education or nationality of the applicants (some 25% of participants were non-Italian citizens): the only requirement for admission was to be unemployed for at least 8 months (according to ILO definition) before the start of the program.

The selected participants were provided with the following set of instruments to help them break into the job market: (i) vocational training scholarship (in order to provide workers with the additional skills necessary to get a job strongly required by the market); (ii) subsidized employment with private employers (to reintroduce drop out worker into the job market), and (iii) internship expenses reimbursement for young workers. All participants were provided with advice and guidance to identify the proper training or internship. Around 600 women took part in the program voluntarily, with the aim to increase their chances of getting a job.

Data on this program were extracted from *Netlabor*, the administrative database of the public employment service, which collects all mandatory data on private firm's employees from the region, for a total of over 4 million workers. Upon exploitation of the information provided by *Netlabor*, in particular the work experience, some 32 comparison groups for the participants were identified through appropriate matching techniques starting from a reference population of 15.000 women with similar educational and working background.

Following the approach described by Heckman *et al*¹ (1999), this evaluation design provides an analysis of pre-policy differences between participants and control groups, based both on observable and unobservable variables, in order to carry out a consistent evaluation of the programme *net* effect, preventing estimation bias due to the selection procedure of the comparison groups.

The method which provides the best results is the use of difference-in-difference estimators combined with weighted probit regressions. This technique demonstrates that it is possible to check for all differences (including unobservable ones) between groups with a minor recourse to untestable assumptions. A sensitivity analysis, including estimations with propensity score matching and other probit regression, provides additional evidence of the robustness of the result achieved with the above method².

The thesis is organized as follows. Chapter 1 discusses the main evidence about female participation in the job market, including strategies to promote equal opportunities and vocational trainings. The following chapter describes in detail the main aspects of the analyzed policy (including the selection procedure of participants), while Chapter 3 describes the data used in the analysis. A short summary is available at the end of both this two chapters, providing all the essential information to understand the rest of the thesis; a first read can exclude those two chapters but not the respective synthesis. Chapter 4 describes the statistical and econometric methods used for the analysis. The last Chapter presents the results through two sets of graphs. This chapter includes four Appendices presenting the results obtained by the different methods tested during the sensitivity analysis. The conclusions present some final remarks of the results achieved.

Full text of this thesis is available (only in Italian) at:
<http://tesi.cab.unipd.it/archive/00000605/01/frison.pdf>

¹ Heckman, J., Lalonde, R. J. and Smith, J. A. (1999), "The Economic and Econometric of Active Labour Market Programs", *Handbook of Labour Economics*, Volume III.

² Due to unavailability of post-treatments data (end 2006 was the established deadline for participant's admission), this thesis presents one method and tests several alternative techniques to calculate a consistent and reliable programme effect, but does not evaluate the policy itself. This could be done, by applying the design presented here, once all post treatment data for participants will be available.