

Horizon 2020 Twinning project ‘SmartEIZ’

Training Workshop on evaluations of innovation policies

Summary

21-22 November 2017

The Institute of Economics, Zagreb

The first day of the workshop was followed by various policy makers from Croatia and led to interesting discussions with them about what can be learned from these evaluation studies. It started with a presentation by **Pierre Mohnen from UNU-MERIT** of the reasons for innovation policy and the categorization of R&D tax credit programs. Two kinds of evaluation methods were distinguished, the ones based on counterfactuals and natural experiments and the ones based on structural models. He then presented three studies: one using the structural approach on the evaluation of R&D tax incentives in the Netherlands, one using the matching estimators approach on the evaluation of R&D grants in Canada and one on the evaluation of the effectiveness of the innovation box policy in the Netherlands using a difference-in-differences approach. He also emphasized the bang-for-the-buck concept and a benefit-cost analysis of program evaluations.

In the afternoon, **Irena Đokić from EIZ** presented the composition, the goals and the activities of the evaluation association in Croatia. **Mislav Jurišić and Ivana Crnić Duplančić from HAMAG-BICRO** presented a somewhat ad hoc evaluation of a proof of concept innovation policy in Croatia along the input, output, outcome and impact logic of evaluation. **Fernando Vargas** presented evaluations of three kinds of innovation policy in Chile, where, as in Croatia, access availability of good quality data remains challenge: the R&D tax incentive, the promotion of collaboration between industry and universities, and the innovation management capacity program.

The day ended with a round table discussion about the past, the present and the future of evaluation methods, a comparison between Croatia and Europe in general. **Jadranka Švarc from Ivo Pilar Institute**, one of panelists, argued in her short presentation that instead of evaluation, there have been 'administrative analyses' of various scientific and technology programs in Croatia, in the period from the nineties of the last century onwards. In the same period, there have only been a few evaluations in Croatia.

In terms of development of innovation programs and innovation instruments in Croatia, the main implication of existence of weak evaluation practice was that there have been a large number of programmes financed by national funds and recently by EU funds. At the same time these programs made a weak impact on innovation policy development. A common lesson that emerged from the discussion is that policy makers do more and more evaluations, often dictated by larger organizations

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like the World Bank, the OECD or the EU. The collection of data during the implementation so that an evaluation can be carried out afterwards is often lacking. Government adopts or changes innovation policies to some extent irrespective of the lessons learnt from past evaluations of existing programs. Political pressures often dominate economic rationality. We should be aware of the difficulty to evaluate complete systems or combinations of innovation policies. The lack of data and the access to administrative data are serious obstacles to the conduct of evaluations.

The second day was more devoted to a presentation and discussion of various empirical papers assessing the effectiveness of different innovation policies and was also more targeted to academic research. The day started with an introduction to various econometric methods that exist to evaluate treatment effects ranging from randomized control trials to regression methods that model at the same time to endogenous selection and the effect of the selection on economic outputs or outcomes. In between these two extreme methods, you have the matching estimators, the difference in differences and the regression discontinuity design. What is important in all this is to account for the endogeneity of the selection mechanism, i.e. whether a particular firm gets or does not get some kind of support for innovation. Some methods rely on strong assumptions regarding the functional form, the supposed distribution of random error terms or the conditional independence of selection and outcome.

After that theoretical review of the econometric methods available in the literature presented by **Pierre Mohnen**, a number of papers were presented on the impact of innovation policies in Croatia by members of the Croatian team (**Damir Anić, Zoran Aralica, Valerija Botrić, Sonja Radas, Stjepan Srhoj and Bruno Škrinjarić**). One difficulty that all these studies are facing is the access to administrative data, the small number of observations and the shortness of the data in the time dimension. The authors of the studies have done their best to deal with these problems and try to get statistically significant results that could be of use to policy makers. Some of these studies are already published and others are at an advanced stage. The brainstorming discussion of the papers should hopefully help the authors to finalize their studies. A proposal of a study of the effectiveness of innovation policies at the micro and macro levels was also presented by two persons from Slovenia (**Dejan Ravšelj and Marko Ropret**).

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