



Proposal for the special session S10: Counterfactual methods for regional policy evaluation

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Evaluation of occupational safety and health incentives: Preliminary results on the impact of the ISI calls

Abstract

No one, neither in politics nor in sciences dares to argument against the necessity to fight to reduce the impact of working conditions on worker's health. Perhaps such a wide consensus on the importance of this goal is one explanation for the general lack of evaluation studies (The European Agency for Health and Safety at Work 2013) on occupational safety and health policies (OSH). Nevertheless, acquiring more information on the effectiveness of the different tools available for the policy maker could help to afford those situations that are refractory to change and move towards a more effective policy mix. At present this last is heavily unbalanced, with the greatest majority of interventions concentrated in regulation and related enforcement mechanisms (inspections and sanctions).

The Italian case offers us an interesting case study, because in 2008, a system of economic incentives has been introduced, providing grants to SMEs that invest in the OSH field. This represents a sort of revolution, because it leverages the corporate social responsibility towards their workers. This experimental policy, called the "ISI calls" (bandi ISI) is the most long lasting (12 years), richest in terms of money granted (2

billion euros) and widest in terms of firms involved OHS policy based on incentives. Despite this, at the policy level the balance is still leaning in favor of sticks rather than carrots.

Up to now, the evaluation analyses performed by Inail on the ISI calls mainly concerned implementation processes and performance monitoring, reporting, and accounting. Recently, the need for an ex-post evaluation of the impacts emerged. Therefore, Inail is funding a research project aimed at identifying appropriate models to assess the impact of ISI incentives and to highlight their strengths and criticalities as an economic support to SMEs. The ISI call, implemented through the mechanisms of the click-day, represent a case of natural experiment, nevertheless, many evaluation challenges (previously discussed in Colagiacomo et al. 2018) are present for this type of policies, in which the literature is practically non-existent.

In this paper we will present the first results of the impact evaluation of the ISI calls, based on administrative data on participating firms. A profiling of the several subgroups of firms (selected or non-admitted, funded or not funded) will be provided. Moreover, if already available, we will integrate this analysis with data on the safety profile of the firms.

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Keywords

Impact evaluation, counterfactual, natural experiment, occupational safety and health, incentives to firms

Extended abstract

This paper introduces both methodological and applied aspects related to the evaluation of policies that promote safety and health in the workplace (OSH policies). In particular, the reflection is concretely based on the case of the calls for OSH investments promoted by Inail, the Italian national insurance institution for occupational accidents.

Actually, there is quite unanimous consensus on the need of policy interventions aimed at promoting and improving occupational safety and health, but there is no convergence on the most appropriate way to achieve the goal. Partly, this lack of knowledge is due to the almost complete absence of evaluation studies on this class of policies. The European Agency for Health and Safety at Work (2013) underlines that the development and implementation of OSH interventions, including policies, programs and their effects, are not evaluated by means of rigorous and scientific evidence-based research, denoting a general lack of quality in OSH intervention. Even if there is no need to justify the importance on a public intervention in this field, acquiring more information on the effectiveness of the different tools available for the policy maker could help to afford those situations that are refractory to change and move towards a more effective policy mix. At present this last is heavily unbalanced, with the greatest majority of interventions concentrated in regulation and related enforcement mechanisms (inspections and sanctions).

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because it leverages the corporate social responsibility towards their workers. This experimental policy, called the “ISI calls” (bandi ISI) is the most long lasting (12 years), richest in terms of money granted (2 billion euros) and widest in terms of firms involved OHS policy based on incentives. Despite this, at the policy level the balance is still leaning in favor of sticks rather than carrots (Ragazzi 2020).

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The ISI calls are particularly appropriate for counterfactual impact evaluation, since the granting mechanism is based on the so-called click-day, which configures as a natural experiment, with a control group identified among the participants that were not selected by the click.

However, this counterfactual exercise on the ISI calls has some important methodological challenges (previously discussed in Colagiaco et al. 2018) are present for this type of policies, in which the literature is practically non-existent.

1. The identification of the proper outcomes

As with any policy, even for the ISI calls it is possible to identify a direct output (e.g., the decibel reduction obtained by replacing a noisy machinery with a quieter one) and one or more outcomes, which are indirect and mediated by other factors (in our example, the reduction of hearing-related professional diseases). The impact assessment lies in appreciating the change in the outcome that is generated by the incentive system. However, this assessment is not immediate. In fact, in the case of investments aimed at preventing accidents in the workplace, it is possible to identify indicators of the frequency of accidents based on the administrative data. But it is much more difficult to observe the change generated by the investment, when this affects the exposure to risk factors that generate occupational diseases occurring only in the long run; moreover, it is often difficult to determine the actual level of risk exposure of an individual worker over the course of his career. Furthermore, the analysis of the ISI monitoring data do not always allow to identify *a priori* the objective of the investment, unless analyzing the single investment projects, which makes very complex the attribution of each grant application to the right class, which in turn corresponds to a specific evaluation design (see the following point).

2. The identification of the causal relation

An evaluation design produces credible results the more the causal relation binding the tool (i.e., the incentive) with the objective (improving OSH) is strong and clearly distinguishable from the remaining dynamics that affect the phenomenon. First of all, this implies the necessity to provide different evaluation designs according to the type of investment and the risk which it intends to reduce. It is not possible to set up a generic "evaluation of the ISI calls", but multiple evaluations are needed based on the various risk categories met by the grant (e.g., prevention of falling from above rather than vibration reduction). Secondly, this means that it is unrealistic to think that the investment financed by the ISI call is producing a measurable change in variables describing general aspects of the firm attitude towards OSH, such as the safety culture or the maturity of its management system.

3. The problem of self-candidacy to the treatment and the external validity (Ragazzi Sella 2018)

The assignment-to-treatment mechanism based on the click assimilates the exercise to a natural experiment, allowing to compare the firms that applied but did not obtain the grant due to the click to those that applied and had the grant. However, this design is based on a random assignment of those firms that decided to apply to the grant. Hence, it is possible to exclude the risk of self-selection into the treatment, but it cannot be assumed that the applicants are effectively representative of the universe of the target companies (external validity). In such framework, it is necessary to assess whether the impact results can be extended to the whole population.

4. The problem of validating and correctly exploiting administrative data

In this paper we will present the first results of the impact evaluation of the ISI calls, based on administrative data on participating firms. A profiling of the several subgroups of firms (selected or non-admitted, funded or not funded) will be provided. Moreover, if already available, we will integrate this analysis with data on the safety profile of the firms.

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