

VISION & VALUE



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**“RESEARCH, DEVELOPMENT AND INNOVATION PROJECTS  
CARRIED OUT UNDER LAW 46/1982 IN THE CONTEXT OF THE  
NOP RESEARCH AND COMPETITIVENESS - ERDF 2007-2013”.  
EVALUATION OF THE EFFECTIVENESS OF THE  
INTERVENTIONS AND THE EFFICIENCY OF THE  
IMPLEMENTATION TOOLS.**



**EXECUTIVE SUMMARY**

This evaluation project concerns the financing of RD&I projects in the context of ERDF 2007-2013. The policy was delivered through two calls for proposals, carried out in favor of enterprises located in the Italian “convergence regions” (Calabria, Campania, Apulia and Sicily). In both cases, the objective of the calls is the increase in competitiveness through innovation, in the Mezzogiorno’s enterprises, by supporting experimental development programs concerning product and/or process innovations, the development of new knowledge (new products, processes or services), and the implementation of the results of industrial research (pilot projects, prototypes). The first call ("Factual Analysis Counter") focuses on four specific, pre-identified areas (energy from renewable sources; energy efficiency; nanotechnologies; ICT), the second call ("Generalist counter") is aimed at companies operating in all other industrial sectors (so-called “residual sectors”).

The evaluation plan included four set of activities:

1. The analysis of the context, of the ratio (i.e. the implicit “theory of change”) and of the implementation mechanisms of the policy;
2. The analysis of the actual process of implementation: leverage effect generated on the investments of the beneficiaries; criticalities in the selection of projects; objectives’ achievement; evaluation mechanisms, etc.;
3. A quantitative, counterfactual analysis;
4. A qualitative analysis of four case studies.

In particular, the counterfactual analysis aims at identifying the incremental effect of the benefits (increased profitability, innovation capacity, access to credit; reduced default probability; increased employment) through the construction of an appropriate control sample and the comparison with the results obtained by the beneficiaries. In the present work, the focus is on the methodology of the difference in differences (DiD) and on matching techniques. Overall, the counterfactual analysis shows that the policy has a fragmented effect, with an impact mainly on turnover and access to credit. Weak results are present with regard to the increase in skilled labor, while the other variables do not show any significant effect. Small enterprises, i.e. those with a turnover of between € 2 and 10 million, seem to benefit more in terms of skilled labor growth. For medium to large enterprises, these effects are not equally visible and in any case are particularly difficult to grasp, given the low number of companies.

In relation to the case studies, analyzed impacts concern innovation (structural changes in behavior), competitiveness (market performance), employment and the relations with other enterprises and with the scientific research system. Cases have been selected by identifying sectors with significant dynamics of expansion and innovative problems, i.e. ICT and industrial machinery. Looking at the territorial dimension, we tried to distinguish companies operating in a "central" area (Naples) compared to those ones located in a "peripheral" area (Cosenza and Salerno). Four in-depth case studies have been eventually realized.

This evaluation project emphasizes the limitations deriving from the inadequate **availability of quantitative and qualitative data** and suggests the provision of a systematic collection

of information on beneficiaries as an integral part of the policy design. Data collection should take place timely and systematically (e.g. making it possible to define possible control groups from the beginning).

Important lessons concern the question of the **selectivity** in innovation policy. In fact, there has been an attempt to select technological areas, based on an original background study that had led to the identification of their strategic nature. This derived from the intersection of a shared diagnosis of shortcomings and difficulties, on the one hand, and of an assessment of existing potentials, on the other hand. However, the actual policy design preferred to mitigate selectivity, by adding a second call addressed to companies operating in all “other” sectors. This seems to fit with the view that in an era of rapid evolution of technological scenarios, it appears prudent to maintain an opportunity for companies positioned on different innovation trajectories and not intercepted by the ex-ante analysis.

Nonetheless, the need for selectivity remains. The real problem, however, stems not from the level, but from the nature of the selectivity that has been achieved. A serious distortion is, in fact, the result of the choice of the “counterfactual method” adopted for the calls. According to this, a selection is made essentially on the basis of the verification of economic and technical sustainability on a “first come, first served” basis. Thus, the real selection takes place as consequence of the time constraint. The forecast of rapid exhaustion of funds (as it actually occurred) has rewarded companies that are capable of presenting their project in a very short time. This suggests that the time for the preparation of the applications have been accelerated, even to the detriment of the quality of the projects, or that projects have been submitted only when already mature and ready, “pulled out of the drawer” and possibly likely to be realized even in absence of the policy.

The motivation for that choice is to speed up the processing of applications. At the same time, however, policy makers renounced to any kind of comparative assessment of the proposed projects. It is evident that this reflects a radical distrust, deriving from the history of industrial policies in Italy, about the efficiency of bureaucratic processes. The “counter method” may be considered as a compromise between long and uncertain approval processes and automatism, but also between efficiency (i.e. speed) and effectiveness. The policy experience here examined warns, however, that also speed objectives may not be fully guaranteed.

Various opportunities for evolution emerge from our reflection, even in the face of reconfirmation of the “counter approach”. Greater selectivity could be introduced with reference to the dimensional variable, if one accepts the hypothesis, corroborated by our counterfactual analysis, of a greater significance of the intervention for small enterprises (2-10 million euros turnover). This would, therefore, suggest that both medium-large and very small companies should be excluded from this type of contribution.

A higher level of selectivity could also be achieved through integration with the priorities that are identified in the national and regional “smart specialization strategies”, as approved with reference to the next 2014-2020 programming phase.

Finally, greater selectivity could also apply to the structure of the participating networks, e.g. by requiring the presence of certain actors (such as universities, research centers, end-users, other local companies etc.) as an element qualifying the proposal.

Questions emerge also concerning the policy **additionality**. There has been an important and systematic delay in deliberations and payments to beneficiaries with respect to the decision to innovate, which companies have clearly taken in advance. The time between the application and the date of the formal acceptance of the submitted project (and therefore its eligibility for financing), has often exceeded the threshold of three years, a time in which, moreover, a lot can happen (change in the market conditions and business strategies, and even obsolescence of technological solutions).

The companies therefore had to start the investments without any certainty that they would be able to benefit from the policy provisions. Of course, in many cases companies may have been reassured about the adequacy of their project and therefore a "reasonable expectation" had been created on the granting of aid. Uncertainty remains an issue on which serious reflection seems necessary, as it calls into question the implicit "theory of change" underlying the policy under consideration, namely the additionality of public policy, that is realized by innovative behaviors which would have not taken place without the policy. This simplified vision must be abandoned, not only because it is not reflected in the facts, but also because facts suggest that policy, in more complex forms, still achieves a high level of positive additionality, also shown by the case studies. In particular:

- the policy allowed for an acceleration (and sometimes it has also become a scale multiplier) of innovative programs which were already under way or planned, but which, since they can only rely on ordinary resources (and shared with other company activities), would have taken longer;
- the policy allowed for the mobilization of additional resources and in particular of relational resources (e.g. with research institutions), likely to broaden the spectrum of potential developments;
- the policy has defended the beneficiary company against possible financial risks, also linked to the implementation of the of innovation projects, as shown by an increase in access to credit;
- the policy has replaced the banking system's inability to finance innovative projects effectively. For companies participating in several projects over time, we can even assume that public funding risks being almost experienced as a "revolving fund", de facto supporting not the projects that are already settled, but the next ones;
- the policy has legitimized the beneficiaries in their role as innovators, both by giving them visibility nationwide and - as explicitly emerged from the interviews - with the market, with a reputational effect that has expanded from the specific innovative project to the company's entire range of products and knowledge assets.

Therefore, we can speak about additionality (and set it as a policy objective) not in terms of broadening the innovative component of the production system, but in the sense of

consolidating the competitiveness of those companies that show an innovative behaviour, both vis-à-vis their (especially human and relational) resources and their positioning in markets and global value chains. This should also be reflected in the evaluation exercises, with the objective not only of verifying the impacts, but also, the in-progress changes induced in the expectations and behaviors of the actors.

From this point of view, we believe that particular attention should be paid to the systems of relations in which the company fits in and that can help to strengthen. In our opinion, this theme suggests the opportunity to think about accompanying policies: in the phases of project preparation, forms of communication that are not limited to the technicalities of the financing procedures and financial support for studies and consulting; following the granting of the incentive, forms of accompaniment for the marketing of the products, the exploitation of the potential for inclusion in value chains and the evaluation of the opportunity to patent innovations.

Our analysis confirms that one of the weak points of the policy - of this as of many others - is to conceive it in a one-shot logic. Any successful industrial policy should instead be characterized by greater **continuity**. For companies, participation in a call for proposals is an opportunity for learning that can and must be put to good use also by giving continuity in time to the windows of opportunity that public policies open up. Coordinated management of a set of calls for proposals which will come out over, for example, a five-year period, could thus become an excellent opportunity to design a policy more appropriate to the "theory of change" to which reference was made. The report also suggests a possible alternative approach, based on the provision of financial guarantees and a greater role of the banking sector.

As a further possibility of improvement in this perspective, reference could be made to the Technology Readiness Levels (TRL) by differentiating the calls for proposals with a minimum level of TRL to provide a better framework for the level of market readiness of the projects submitted.