

## **EU Macro-Regional Strategies: Can We Assess Their Impact?**

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*Abstract.* EU macro-regional strategies represent frameworks adopted by countries from a specific geographical area and used to address common challenges. They serve as a strengthened mechanism aiming to achieve better economic, social and territorial cohesion. The climate change, pollution or lack of connectivity are borderless challenges that request common policies and measures as well as finer cooperation when tackled. These are exactly the aiming reasons of why EU macro-regions were enacted. However, the EU funding instruments devoted to macro-regional frameworks fit into many EU headings and often cannot be disentangled from other funds. This means that a specific macro-regional action can be subsidized by an European Social Fund, an European Territorial Cooperation instrument, an Connecting Europe Facility as well as any other funding programme, which makes any monetary quantification of macro-regional strategic activities, along with the assessment of their impact, extremely difficult.

This paper builds on the latter problem. Basically, given the lack of information of explicit funding devoted to specific regions within the macro-regional strategic framework, we use the synthetic control method and try to assess potential impacts of such strategic alliances in boosting regional growth. Abadie and Gardeazabal (2003) proposed the synthetic control method, as a helpful data-driven approach in assessing the effect of a so-called treatment. Basically, any policy change (like for example an introduction of a new tax or a new environmental legislation) as well as any change in an institutional setting (like for example adoption of euro as official currency or EU entrance) may be considered as a treatment. It is obvious that such a treatment changes, among others, the economic behaviour of agents and leads to a different pattern of economic variables. The synthetic control method allows to estimate the (economic) effect of such a treatment. This approach has been widely used on a national (state) level in discussing policy interventions and changes, such as anti-smoking legislation (Abadie et al., 2010), minimum wages (Sabia et al., 2012; Dube and Zipperer, 2015; among others), trade liberalisation (Billmeier and Nanicini, 2013), immigration laws (Bohn et al., 2014), tourism policies (Castillo et al., 2017; among others), EU integration (Campos et al., 2014; among others), and others.

This paper aims at assessing the effect of EU macro-regional strategies in the synthetic control fashion on a regional-level. For the synthetic control method to work properly, there is a need for a control pool, i.e. EU regions in our case, that represent cases “not being treated” or not being included in any of the macro-regional strategies. To achieve this aim our paper focuses in particular on the EUSAIR (EU strategy for the Adriatic and Ionian region), the EUSALP (EU strategy for the Alpine region) and the EUSBSR (EU strategy for the Baltic Sea Region), with a particular attention on Italy, Germany and France. Namely, latter countries constitute a good set of regions in terms of treatment and control groups. All of the three countries include regions which are not part of any of the EU macro-regional strategy (control pool), regions which are part of just one EU macro-strategy, with an addition in case of Italy and Germany, also regions which are part of two EU macro-regional strategies. This allows us to disentangle the actual path of an economic indicator (GDP for example) from a “synthetic” one, which would have occurred in case of “no treatment”, i.e. in case of taking no part to an EU macro-regional strategy. The discrepancy between the actual and synthetic paths point to the effect of a particular EU macro-regional strategy on a regional level.

*Keywords:* EU macro-regional strategies, EUSAIR, EUSALP, EUSBSR, growth, synthetic control

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