The long-run performance of R&D investment in a small open regional economy

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The European Structural Funds for many years have promoted the development and structural adjustment of lagging regions through investment in R&D. Direct R&D subsidies are now one of the main innovation policy tools in the European Union (EU) especially for regions under Objective 1.

In recent years the Regional Government of Sardinia has implemented policies that aim to increase the technological potential and the role of technologies through public investment in R&D. Therefore in this paper we investigate the long term-performance of R&D investment in Sardinia and the ability of R&D investment to improve regional competitiveness.

The analysis is performed by using a dynamic Computable General Equilibrium (CGE) where the public nature of knowledge as a factor of production is taken into account. R&D investments are intrinsically supply-side policies so that CGE models seem to be the appropriate modelling approach given that these models incorporate a full specification of the supply side. This allows us to discuss and investigate the hypothesis of over/under estimation of R&D public investment and the overall impact of the policy.

We compare two types of dynamic model specifications: myopic and perfect foresight models. Assuming myopic agents, results seem to suggest a very long adjustment process and, consequently, extended legacy effects. However under the perfect foresight case, the adjustment to the steady state is expected to be faster and consequently the legacy effects are estimated to be significantly less extended