Agricultural and economic convergence across the EU-15: a parametric and a spatial non-parametric perspective

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The paper contributes to the current debate moderated by the European Commission on the territorial dimension of the economic and social cohesion, analysing the agricultural and economic convergence process across a sample of 166 EU-15 regions at NUTS2 level from 1995-2005 and their possible relationship.

The empirical study starts considering results from GWR and OLS models of absolute and conditional β-convergence. The conditioning variables introduced are the CAP for the agricultural sector and human capital stock, investment, research and development, average annual growth rate of employment for the economy. GWR approach allows detecting the parameters spatial non stationarity and the role of spatial dependence and heterogeneity of regions. Results provide useful insights on important policy sensitive issues difficult to be predicted with the traditional global estimate and allowing to verify the prescriptions by the economic geography theory and new economic growth theory against the neoclassical approach to convergence. The spatial non parametric approach is promising also referring to the need for understanding the lines of a possible cooperation across regions. The GWR technique develops hypothesis on convergence clubs from the data as opposed to the traditional types of analysis in which data is used to test *a priori* hypothesis of groups of regions with similar initial conditions, which converge to the same steady state.

Once the agricultural and economic convergence models have been specified, the two speeds of convergence have been compared on the territorial level in order to investigate a possible relationship. The parameter of convergence for the agricultural sector and the overall economy of each region has been compared with the global value. Results have been mapped and the intensity of association summarised by the Spearman's rank correlation coefficient.