

Regional heterogeneous firm productivity in European regions

Smart specialisation is among the most prominent policy concepts in Europe for stimulating regional economic growth. A burgeoning empirical literature on one of the central building blocks of the concept – related variety – confirms that this concept is guiding in regional structural change and resilience, yet a large heterogeneity in effects over regions, industries, and innovative technologies suggests that more insight is needed in aspects explaining this heterogeneity. Recent research therefore turns to micro-foundations of relatedness and productivity, and captures regional heterogeneity in terms of technological readiness and institutions.

In this paper, we relate regional structural composition – related and unrelated variety – to firm level productivity in European regions, applying a Cobb-Douglas production function framework and using firm-, industry, and regional-level mixed hierarchical (multilevel) models. Data are obtained from the ORBIS-Amadeus database, providing financial and economic information on firms in almost all European countries, including balance sheets and income statements items, and a wide range of performance indices. Following earlier research, regions are characterised to their capacities in terms of knowledge accessibility, knowledge absorption and knowledge diffusion. Applying regional regimes, we estimate models on firm labour productivity, controlling for firm, regional and industry variability.

Our analyses indicate that regional related variety has a positive impact on firm productivity in European regions, especially for firms in high-tech and medium-tech regions – regions focused on by the smart specialisation strategy. These outcomes have implications for European policies on competitiveness and smart specialisation – as firms embedded in regions without these technological and institutional circumstances are systematically worse off in terms of productivity, and catching-up is not obvious for such regional economies. This regional heterogeneity complements firm heterogeneity, and makes best practices for all regions difficult to identify.