The Knowledge and Technological Relatedness of UK national and regional economies

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Abstract

Related variety and growth-complexity theories suggest that past events heavily influenced growth processes. Diversification is critical, but too much relatedness or diversity can facilitate or limit productivity growth. A region's ability to transition to other growth trajectories depends on the coherence of its capabilities. Regions can become 'locked in' to historical productivity growth trajectories. Breaking these patterns of transition to higher productivity growth is critical but challenging without a deep understanding of a region's past, present and future evolutionary processes.

The papers in this special session analyse regional diversification and related variety from different methodological and data perspectives. We will look into the knowledge composition of places by analysing labour market dynamism (employee mobility), in-demand skill composition (job advertising data), and their association with regional productivity growth. Secondly, looking at unconventional and underdeveloped technological activities (patent information), we analyse non-conventional and unrelated knowledge branching and their short and long-term growth potential. Finally, we exploit new methodologies on natural language processing to evaluate the diffusion and adoption of new processes of knowledge and technology (machine learning in websites).