Spatial Perspectives at Nuts-3 Level (SPAN-3) Interim Report Summary

SPAN-3 is a Priority 2 project. The stakeholders are the Provincial Council of Barcelona, Turin and Hérault (France). The project aims to develop regional forecasting methodologies and tools, which are appropriate to the regional-local scale but also consistent with a general EU-wide approach. The project is a development of the spatial scenarios work in ESPON 2006, project 3.2.

The project creates scenarios that look at the EU as a whole, but focus on Spain, France and Italy, and then at the Province of Barcelona. In essence SPAN-3 follows a sequence of steps:

- Qualitative thematic scenarios are created – e.g. for demography, energy, rural areas etc. These update similar scenarios from the 2006 project but build in account for the economic and financial crisis that emerged in 2008, and fluctuating energy prices, the growing power of Brazil, Russia, India and China, and changes in rural areas.

- These separate thematic scenarios are then combined, still in qualitative terms, into 3 integrated scenarios.

- The 3 scenarios then provide the input to an econometric model called MASST (MAcroeconomic, Sectoral, Social and Territorial) model – a combination of an econometric model of regional-national economic growth with a simulation algorithm – which predicts regional per capita income. A new sub-model, MAN-3 continues this process down from NUTS 2 to NUTS 3 level. Of course the precise forecasts are not what matters; rather the aim is to explore what kind of territorial pattern results under different assumptions. Although MASST is an *economic* model, and its outcome is mainly GDP growth rates and their spatial distribution, it can also give an indication of social and demographic changes associated with the economic change. Also MAAST shows the effects on regional growth that result from the performance of neighbouring regions. Geographical position matters. The model is basically a 'shift and share' approach that derives regional growth from a national growth component and a differential regional growth component.

- The structure of the Barcelona region is analysed. In the Final Report this will be combined with the model to produce scenarios for that region.

Territorial Capital is a key concept in this project. It is defined as "the complex set of elements that explain the competitiveness and performance of single regions". It is territorial capital that explains why a NUTS 2 region is performing better or worse than the country as a whole, or why a NUTS 3 region does better or worse than the rest of its NUTS 2 region.

The three scenarios

The scenarios look from 2005 to 2025. The Reference Scenario is not a trend scenario because it the researchers argue that recent structural changes (not just in the economy but with respect to climate change and energy) make it necessary to factor in something more than an extrapolation of the past. This means that the scenario is more frankly speculative that is often the case in such exercises. Thus the scenario assumes the emergence of the "green economy", though it is a difficult process: "Growing oil and gas prices favour investments in oil and gas exploration and discovery. The Arctic region becomes a strongly targeted region in this respect. Regional tensions and possible conflicts are not excluded. The expansion of nuclear energy is constrained by the progressive depletion of uranium resources. The profitability of renewable energy increases, but political support is insufficient to generate a radical change of the energy paradigm. The progress of renewable energy sources remains dispersed and fragmented, with low synergy effects. The economy hardly benefits from this process".

The Proactive Scenario assumes, amongst other things, a more resolute move towards the "green economy" along with a more stable international financial order.

In the Defensive Scenario the "green economy" fails to make a breakthrough, and Europe only makes a slow recovery from the economic crisis.

Some results

While the focus of the analysis is on France, Spain and Italy, there are some preliminary findings from the modeling that may be of interest for the UK. In the Reference Scenario (see map) most of the South of England and of Scotland achieve annual GDP growth rates of over 2% per annum, though West Wales, Northern Ireland and the North of England outside Manchester-Leeds, do notably less well. However, Wales, Northern Ireland, Devon and Cornwall and the East of England all do notably better on the Proactive Scenario. However the gains are notably less for the Highlands and Islands of Scotland, which may seem surprising given the potential of this area for renewable energy, and the prominence of the new "green economy" in this scenario.

The Defensive Scenario seems everywhere doing worse than in the Reference scenario, but within the UK the main losers are Cumbria and Yorkshire, followed by the Highlands and Islands.

Average annual GDP growth rates in the Reference Scenario.