



G+20 prozesuaren II fasea / La fase II del proceso G+20
January 29th 2010 – Kursaal, Donostia – San Sebastian

Competitiveness of the EU regions: determinants and strategies for the future

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- What are the determinants of regional economic success?
 - Old and new 'buzz' words:
Infrastructure and R&D investments



Infrastructure as a key for success (1)

- **“Building bridges and roads to everywhere”** (FT, January 20 2009): President Obama has put infrastructure at the heart of his fiscal stimulus package:
 - **Bi-partisan consensus:** “It will help create jobs while pumping up our economy. It’s hitting two home runs with one swing” (Arnold Schwarzenegger)
 - **Strong support from lobbies** which commissioned a survey suggesting that “Eight in 10 people would be willing to pay and extra 1% point in taxes to fund infrastructure improvements (Energy facilities followed by roads)
 - **State governors have lined up with \$136bn of requests and city mayors have proposed a further \$73bn** (mainly roads and bridges, sewers, power grid improvements and broadband access)

Infrastructure as a key for success (2)

- **Transport infrastructure has become a very popular policy for the EU:**
 - Article 154 of the Treaty: “Establishment and development of trans-European networks in the area of transport, telecommunications and energy infrastructure” as a tool for:
 - Market integration
 - Economic and social cohesion
 - Infrastructure represents roughly 50% of all investment in regional development in the periphery (Rodríguez-Pose and Fratesi, 2004)
 - Half of the Cohesion Fund dedicated to infrastructure

R&D as a key for success

- “Innovation is **essential to the UK’s future economic prosperity and quality of life**. To raise productivity, foster competitive businesses, meet the challenges of globalisation and to live within our environmental and demographic limits, **the UK must excel at all types of innovation**” (*DIUS 2008*)
- Lisbon European Council (2000): goal of **making the EU “the most competitive and dynamic knowledge-based economy in the world**, capable of sustainable economic growth with more and better jobs and greater social cohesion” (*Presidency Conclusions, Lisbon European Council, 23 and 24 March 2000, par.5*).

...‘buzz’ words and financial allocations

- **Development axes in Objective 1 regions (Rodríguez-Pose and Fratesi 2004):**
 - Support to agriculture and rural promotion (8%)
 - Business and tourism support (23.2%)
 - Investment in education, re-qualification and measures targeting the human capital of the region (13.3%)
 - Investment in infrastructure, transport, and environment (49.6%)
 - Other categories (5.9%)

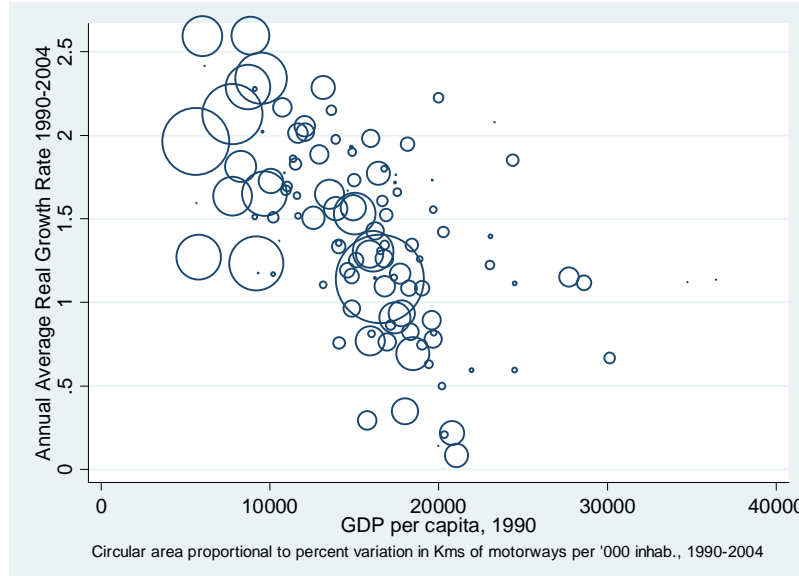
Outline

- The determinants of regional economic success:
What can we learn from the EU regions?
- Regional development: an integrated approach
- Better and more effective regional development strategies:
 - Balancing infrastructure and R&D investment with Socio-Institutional conditions and human capital.
 - Coordinating internal and external factors

What can we learn from the EU regions?

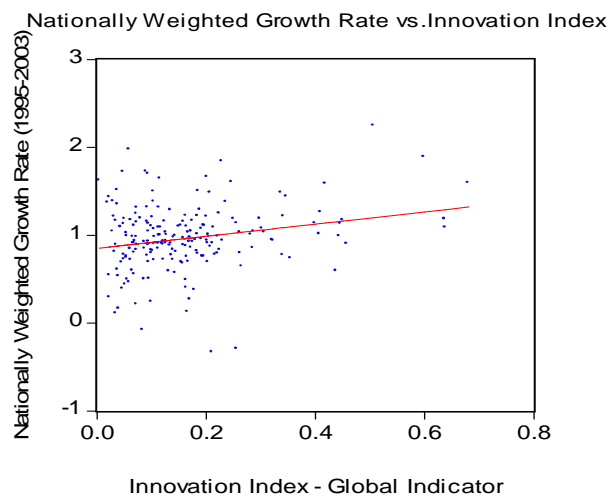


EU-15: Initial GDP conditions, regional growth and infrastructure development, 1990-2004



Source: Crescenzi and Rodriguez-Pose 2008

EU regions nationally weighted average growth rate (1995-2003) vs. the innovation index



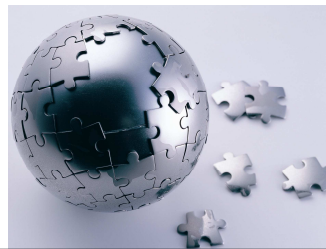
Source: Crescenzi 2005

What do we really know about the determinants of regional economic performance?

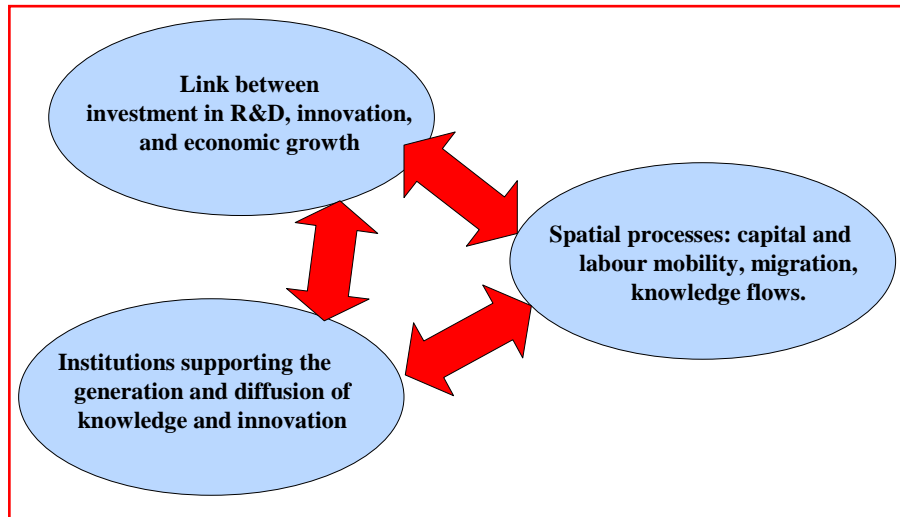
Old and new 'buzz' words **ALONE** are not strong predictors for regional economic performance

Very simple conclusions often resulting in unbalanced strategies

- Regional development: an integrated approach



Integrated approach to regional economic performance (1)



Factors behind regional economic development

- Regional economic development (proxied by GDP growth) is affected **SIMULTANEOUSLY** by a multitude of factors:
 - Innovative capacity
 - Human capital accumulation
 - Sectoral specialisation
 - Institutions
 - Geographical location
 - Infrastructure
 - Migration
- An **integrated perspective** needs to analyze how ALL THESE FACTORS interact with each other and with other local factors
- But also with developments in neighbouring areas
- Final aim: providing some policy lessons

- Better and more effective regional development strategies



Not only roads ...

- Investment in transport infrastructure interacts with other local factors
 - Concentration of innovative activities
 - Diffusion of knowledge
 - Skills of individuals
 - Agglomeration economies
 - Mobility
- But also with **external** factors:
 - Transport infrastructure improves connectivity
 - So there is a need for a spatial perspective
 - Conditions in other areas may have ripple effects
 - But they are also affected by distance decay effects

In the regions of the EU25...(1)

When looking at the **determinants of regional economic performance of all the regions of the EU-25** in this 'integrated perspective' by means of an econometric analysis Crescenzi and Rodriguez-Pose (2008) find that:

- A good infrastructure endowment is a precondition for economic development
- But additional investment in infrastructure seems to be completely disconnected from growth
- Regions benefit from being surrounded by regions with good infrastructural endowments
- But additional investment in neighbouring regions is, on the whole, negatively associated with regional growth

In the regions of the EU25...(2)

- The positive effects of infrastructure endowment on growth are short lived
- Infrastructure endowment and investment appear also to be less relevant for growth in the medium-term than other factors
- Investment in R&D in neighbouring regions matters more
- But the overall **endowment of education** is the best predictor for high economic performance

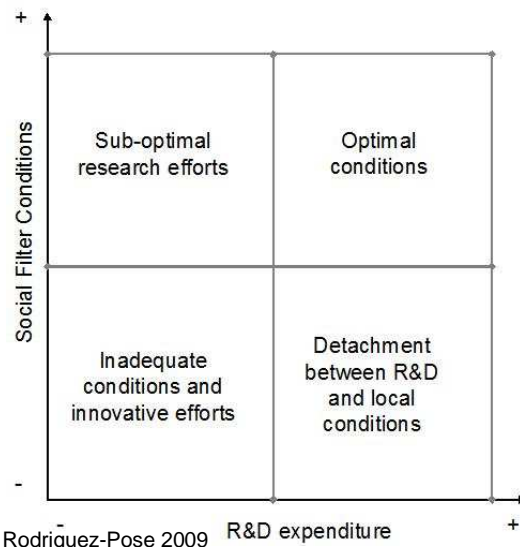
What can we learn?

- **Policy implications:**
- Infrastructure investment has to be coordinated with policies aimed at developing human capital, the innovative potential of regions, and with other policies (business support, institutions)
- The timing of infrastructure investment is crucial
 - Invest too early and you will leave uncompetitive economies/actors exposed and unable to compete
 - Invest too late and you may remain lagging for a long time
- Only by combining space and time effects the benefits of greater accessibility will be maximised and the risks of exposure of lagging areas minimised.

Not only R&D...

- R&D investment is crucial for regional economic performance
- HOWEVER a set of structural systemic pre-conditions - the 'social filter' - act as key predictors of regional innovative performance;
- The 'social filter' is the combination of a complex set of economic, social, political and institutional features that determine the capacity of every society to translate innovation into economic activity
- These features include: EDUCATION, LIFE-LONG LEARNING, YOUNG PEOPLE, DYNAMIC SECTORS
- The regions where the **optimal combination** of the social filter components is in place show not only a remarkably higher potential to translate their innovative efforts into economic growth.

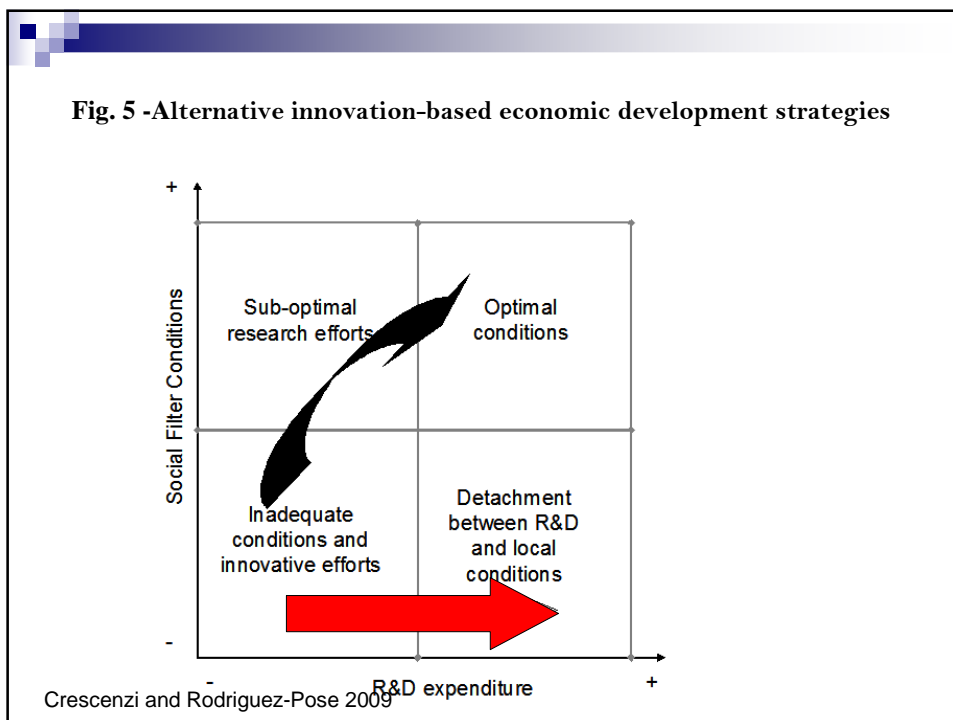
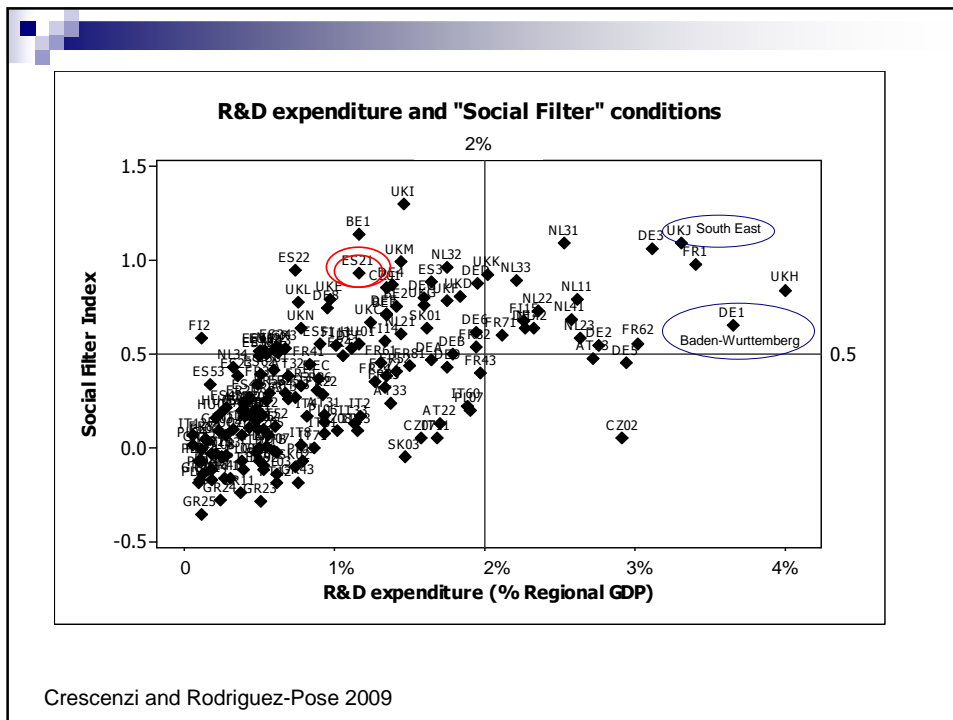
Fig.3 - Local innovative efforts and social filter conditions



In the regions of the EU25...

Crescenzi and Rodriguez-Pose (2009) look at the regional growth dynamics of the EU 25 and they find that:

- R&D investment helps explain differential regional growth patterns;
HOWEVER
- Knowledge flows are geographically bounded and they decay with distance;
 - Regions can rely upon the research strength of regions within a three hour drive (ca 200kms)
- Knowledge flowing from neighbouring regions improves regional growth performance;
- A variety of socio-economic factors influence the capacity of a regional space to “translate” innovation into economic growth: again the SOCIAL FILTER



What can we learn?

■ Policy implications:

- Innovation policies with human capital policies are mutually reinforcing
- Regions with good endowments of human capital, but weak R&D investment can achieve innovation
- The opposite case is less likely
- In cases of areas well below the technological threshold, human capital policies are the best way to assimilate innovation and reap technological spillovers

Conclusions

- Infrastructure development and R&D investment are still important ingredients of regional economic success;
- However they need to be considered within a framework of integrated and balanced strategies
- Infrastructure investment has to be coordinated with policies aimed at developing the innovative potential of regions and human capital endowment.
- Innovation-based policies need to address indigenous innovative activities and the socio-institutional context simultaneously
- In any case human capital is crucial.
- External (extra-regional) factors are also relevant and should be taken into account: coordination of development strategies

Key Reference

- Crescenzi R. (2005) Innovation and regional growth in the enlarged Europe: the role of local innovative capabilities, peripherality and education, *Growth and Change* 36(4), 471-507.
- Crescenzi R. and Rodríguez-Pose A. (2008) Infrastructure endowment and investment as determinants of regional growth in the European Union *European Investment Bank Papers*, 13(2), 62-101
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- Rodríguez-Pose, A. and Crescenzi, R. (2008) R&D, spillovers, innovation systems and the genesis of regional growth in Europe. *Regional Studies* 42(1), 51-67.



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