

# The Economic Fundamentals of Smart Specialisation

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# The Economic Fundamentals of Smart Specialisation

- Smart specialisation
  - powerful lens through which to ensure thematic prioritisation and concentration
  - emphasises strategic and specialised diversification
  - promotes clear *self*-awareness of the key bottlenecks and missing links
  - engagement and institutional learning
  - an excellent tool for results-oriented policy-making

# Smart Specialisation Strategies for Regional Growth: Origins

- *Europe 2020 Flagship Initiative Innovation Union [COM(2010)546]*
- *The EU Budget Review [COM(2010)700]*
- *Regional Policy Contributing to Smart Growth in Europe [COM(2010)553]*
- *Investing in Europe's Future: Fifth Report on Economic, Social and Territorial Cohesion, 2010*

# Proposed General Regulations for Cohesion Policy

## Thematic Ex Ante Conditionalities

Thematic Objectives	Ex Ante Conditionality	Ex Ante Criteria for Fulfilment
1. Strengthening research, Technological development and innovation (R&D target) (referred to in Article 9(1) )	1.1. Research and innovation: The existence of a national or regional research and innovation strategy for <i>smart specialisation</i> in line with the National Reform Program, to leverage private research and innovation expenditure, which complies with the features of well-performing national or regional research and innovation systems.	<ul style="list-style-type: none"> <li>– A national or regional research and innovation strategy for <i>smart specialisation</i> is in place that: <ul style="list-style-type: none"> <li>– is based on a SWOT analysis to concentrate resources on a limited set of research and innovation priorities;</li> <li>– outlines measures to stimulate private RTD investment;</li> <li>– contains a monitoring and review system.</li> </ul> </li> <li>– A Member State has adopted a framework outlining available budgetary resources for research and innovation;</li> <li>– A Member State has adopted a multi-annual plan for budgeting and prioritization of investments linked to EU priorities (European Strategy Forum on Research</li> </ul>

# Smart Specialisation Strategies for Regional Growth: Origins

- *Knowledge For Growth* Expert Group – nine policy briefs 2006-2009: Bart van Ark and Dominique Foray – subsequently developed by Paul David, Bronwyn Hall
- Transatlantic productivity gap observations
- Post 1995: ICT-producing sectors
- Post 2000: ICT-using sectors
- Dissemination of GPTs is critical

# Smart Specialisation Strategies for Regional Growth: Principles

- Critical role of adopting and adapting new knowledge, technologies, concepts and ideas
- Smart Specialisation elements:
  - Entrepreneurial search processes
  - Domain
  - Relevant size
  - Connectedness

# Smart Specialisation Strategies for Regional Growth: Principles

- Process of discovery – entrepreneurial search – involves experimentalism
- Entrepreneurs – firms, universities, inventors, independent innovators
- Policy is to foster experimentalism, gather and aggregate decentralised information, and to promote what has been discovered
- Bottom-up approach and top-down

# Smart Specialisation Strategies for Regional Growth: Principles

- Learning and experimenting
- Demonstration effects and dissemination
- Trial and error is fundamental to all processes of innovation
- Hard and soft infrastructure
- Capacity and capabilities
- Incentives



# Smart Specialisation Strategies for Regional Growth: Regional Context

- Shift from a sectoral discourse to a regional discourse
- *Measuring Smart Specialisation: The Concept and the Need for Indicators*, David, P., Foray, D., and Hall, B., 2009
- Philip McCann and Raquel Ortega-Argilés: *Smart Specialisation, Regional Growth and Applications to EU Cohesion Policy*

[http://ec.europa.eu/regional\\_policy/cooperate/regions\\_for\\_economic\\_change/index\\_en.cfm#4](http://ec.europa.eu/regional_policy/cooperate/regions_for_economic_change/index_en.cfm#4)

# Smart Specialisation Strategies for Regional Growth: Regional Context

- Smart Specialisation elements:  
Entrepreneurial search processes;  
Relevant domains; Connectedness
- In a *regional* context this translates to:
  - Embeddedness
  - Related variety
  - Connectivity

# Smart Specialisation Strategies for Regional Growth: Regional Context

- *Embeddedness*: can be captured by regional CGE models, regional Input-Output models, location quotients, case studies, longevity, social capital etc.
- *Relatedness*: It is not about specialisation but *diversification – specialised technological diversification*

Embeddedness + Relatedness =  
Relevant Size Domain

# Smart Specialisation Strategies for Regional Growth: Regional Context

- The sectoral approach interprets connectedness in terms of networking and access to learning
- Regional approach and economic geography - sees connectivity in terms of access to markets – danger of the *Krugman shadow effect* on non-core regions
- Critical development of local linkages

# Smart Specialisation Strategies for Regional Growth: Regional Context

- A smart specialisation approach to regional policy should be about promoting the *generation, exploitation, and dissemination of local ideas* and knowledge
- Maximising both *intra- and inter-regional knowledge spillovers* in the relevant scale domains (embeddedness + relatedness)

# Smart Specialisation Strategies for Regional Growth: Regional Context

- Newness, renewal, transformation, novelty and niches
- All actors involved – competences and capabilities
- Develop a local vision on the basis of what works locally
- Governance experimentalism + innovation
- ‘Self discovery’ (Hausman and Rodrik 2004)

# Smart Specialisation Strategies for Regional Growth: Regional Context

- Prioritisation and concentration
- Good matching, good fit, and potential
- Analysis of missing links, bottlenecks
- Explicitly takes account of the region's strengths, history, skills profile
- Focuses on issues of coordination and governance
- Close alignment with the Barca (2009) report

# Smart Specialisation Strategies for Regional Growth: Regional Context

- Iterative approach – feedback, monitoring and learning
- Emphasis on results and outcomes as drivers of the process
- Use Results/Outcome Indicators is critical – not because outcomes are known in advance but in order to drive the policy process (Rodrik 2004)
- Results/indicators must be appropriate



## General Ex Ante Conditionalities

Area	Ex Ante Conditionality	Ex Ante Criteria for Filfilment
Statistical systems and result indicators	<p>The existence of a statistical system necessary to undertake evaluations to assess the effectiveness and impact of the programmes.</p> <p>The existence of an effective system of result indicators necessary to monitor progress towards results and to undertake impact evaluation.</p>	<p>A multi-annual plan for timely collection and aggregation of data is in place that includes:</p> <ul style="list-style-type: none"> <li>– the identification of sources and mechanisms to ensure statistical validation;</li> <li>– arrangements for publication and public availability.</li> <li>– an effective system of results indicators including:</li> <li>– the selection of <i>result indicators</i> for each programme providing information on those aspects of the well-being and progress of people that motivate policy actions financed by the programme;</li> <li>– the establishment of <i>targets</i> for these indicators;</li> <li>– the respect for each indicator of the following requisites: robustness and statistical validation, clarity of normative interpretation, responsiveness to policy, timely collection and public availability of data;</li> <li>– adequate procedures in place to ensure that all operations financed by the programme adopt an <i>effective system of indicators</i>.</li> </ul>

# Smart Specialisation Strategies for Regional Growth: Regional Context

- “Outcome Indicators and Targets – Towards a Performance Oriented EU Cohesion Policy,” and complementary Notes: “Meeting climate change and energy objectives” and “Improving the conditions for innovation, research and development”, (Fabrizio Barca and Philip McCann), 2011, *DGRegio Website*. Available at:
- [http://ec.europa.eu/regional\\_policy/sources/docgen/ener/evaluation/performance\\_en.htm](http://ec.europa.eu/regional_policy/sources/docgen/ener/evaluation/performance_en.htm)

# Smart Specialisation Strategies for Regional Growth: Regional Context

- Equally applicable to all dimensions of Europe2020
- An *integrated* place-based approach is multi-dimensional, tailored to place-specific features and outcomes
- Innovation strategy – knowledge and knowledge-application dimensions
- Environmental and energy dimensions
- Social and territorial inclusion dimensions

# Smart Specialisation Strategies for Regional Growth: Regional Context

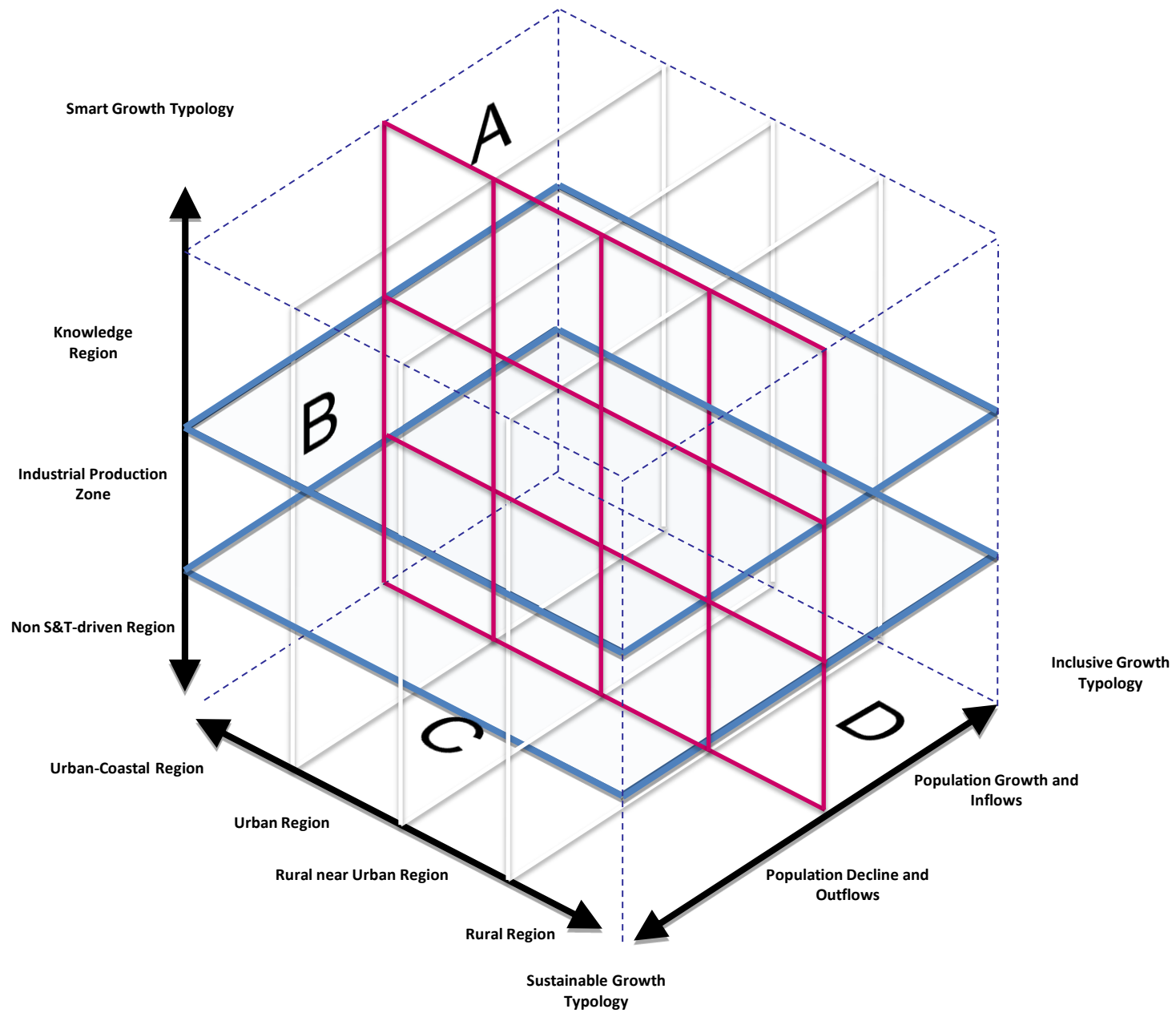
- OECD classification: *Regions at a Glance 2011*
- *PU* primarily urban, *PI* primarily intermediate, *PR* primarily rural
- EC (DGRegio) classification: metro, non-metro, degree of urban, close and remote intermediate and rural

# Smart Specialisation Strategies for Regional Growth: Regional Context

- Europe 2020 Dimensions: Integrated Regional Typologies
- *Smart growth*: OECD regional innovation classification
- *Sustainable growth*: natural environment and built environment classification (OECD regional typology + 1)
- *Inclusive growth*: demographic classification (ESPON DEMIFER)

# Smart Specialisation Strategies for Regional Growth: Regional Context

- *OECD Innovation typology*: knowledge regions; industrial production zones; non S+T driven regions
- *Natural and built environment*: urban; urban-coastal; rural near urban; rural
- *Labour and demographics*: population inflows and growth; population outflows and decline



# Smart Specialisation Strategies for Regional Growth: Examples

- **Hypothetical Example 1:**

Region **A** is a knowledge region, is primarily urban in nature but is also situated on the coast, and faces population growth and population inflows.

- **Hypothetical Example 2:**

Region **B** is an industrial production region, an urban-coastal area, and a region which faces population decline and population outflows.



# Smart Specialisation Strategies for Regional Growth: Examples

- **Hypothetical Example 3:**

Region **C** is a non-S&T-driven lagging region, primarily urban region, and a region which faces population decline and population outflows.

- **Hypothetical Example 4:**

Region **D** is a rural area, a non-S&T-driven region, which faces population growth and population inflows.

# Smart Specialisation Strategies for Regional Growth: Examples

- **Region A *Challenges*:**  
transport and land-use congestion, social and territorial segregation; environmental damage including marine ecosystem
- **Region A *Opportunities and place-based policy priorities*:**  
**multi**-sectoral **smart specialisation** knowledge-enhancing projects in advanced R&D sectors; integrated infrastructure, environmental services; housing and public transport provision

# Smart Specialisation Strategies for Regional Growth: Examples

- **Region B *Challenges*:**  
declining transport and land-use usage,  
dereliction, non-operative real estate markets,  
skills outflows, declining credit availability,  
widespread reductions in social and territorial  
cohesion; environmental damage including  
marine ecosystem

# Smart Specialisation Strategies for Regional Growth: Examples

- **Region B *Opportunities and place-based policy priorities:***

smart specialisation policies targeted both at high and medium technology sectors and based on specialised technological diversification strategies in major embedded occupational and technological classes

local labour skills-enhancing programmes in related technologies

integrated land use reclamation and conversion programmes

# Smart Specialisation Strategies for Regional Growth: Examples

- **Region C Challenges:** declining transport and land-use usage, dereliction, non-operative real estate markets, skills outflows, declining credit availability, widespread reductions in social and territorial cohesion; environmental damage including marine ecosystem
- **Region C Opportunities and place-based policy priorities:** smart specialisation policies based focused on medium technology sectors; local labour skills-enhancing programmes in related technologies; integrated land use reclamation and conversion programmes

# Smart Specialisation Strategies for Regional Growth: Examples

- ***Region D Challenges:*** pressure on local resources and land use; social and territorial segregation; economic and geographic isolation
- ***Region D Opportunities and place-based policy priorities:*** smart specialisation policies based on communications infrastructure; preservation and upgrading of heritage and cultural assets; related skills enhancement policies focused on tourism and natural environmental arenas; renewable energy policies; social and territorial cohesion focused on integrated land use development and public transport planning

# Smart Specialisation Strategies for Regional Growth: Conclusions

- Smart specialisation emphasises strategic and specialised diversification
  - a excellent tool for place-based policy
  - promotes clear *self*-awareness of the key bottlenecks and missing links
  - powerful lens through which to ensure thematic prioritisation and concentration
  - engagement and institutional learning

# Smart Specialisation Strategies for Regional Growth: Conclusions

- Smart specialisation is ***not*** just about smart growth – but all aspects of growth and development being smart
- Need to focus on *integrated Europe2020* strategies
- Need to consider skills, opportunities, environment, knowledge, institutions, stakeholders, capabilities, sustainability



# Smart Specialisation Strategies for Regional Growth: Conclusions

- Consistent with the place-based approach
- Results/Outcome indicators are critical – ex ante goals and ongoing monitoring and evaluation
- Means to avoid scattered sectoral rent-seeking