l'innovazione
NON SI FA DA SOLI
RICERCA, UNIVERSITÀ, IMPRESA, ENTI PUBBLICI:
FARE RETE PER FARE SVILUPPO

Smart Specialization Strategy per Europa 2020

Andrea Conte

European Commission

Joint Research Centre

Progetto "Creare impresa e diffondere tecnologia a partire dalla ricerca" - Attività cofinanziata dall'Unione Europea a valere sul PO FESR 2007-2013, ASSE I, Linea di intervento 1.2, Azione 1.2.3 "Rete Regionale per il Trasferimento di Conoscenza"

Struttura della Presentazione

- Introduzione sul JRC
- La Strategia di Specializzazione Intelligente
- Il Contesto Politico / Economico
    1. Il Nuovo Budget Europeo
    2. La Strategia Europa 2020
    3. La Nuova Governance Economica
- Innovazione, Governance, Sfide Future

Supporto Scientifico alle decisioni politiche

- Oltre il 25% di tutta la legislazione EU ha una base scientifica e tecnologica:
  i.e. prodotti chimici, energia, ambiente, sicurezza alimentare e dei prodotti

- Il JRC é una delle Direzioni Generali (DG) della Commissione Europea
- Il JRC fornisce supporto scientifico e tecnico al processo decisionale politico in sede Comunitaria

La *Mission* del JRC

… supporto scientifico e tecnico per l'ideazione, sviluppo, implementazione e monitoraggio delle politiche UE

…centro di referenza scientifica e tecnologica per la UE indipendente da interessi privati e nazionali...

…intensa attivitá di *networking* con istituzioni pubbliche e private nella EU27 e oltre..

i.e., la European Research Area e AOSTI

La Struttura del JRC

7 Institutes in 5 Member States

IRMM – Geel, Belgium
- Institute for Reference Materials and Measurements

Staff: ≅ 250

IE – Petten, The Netherlands
- Institute for Energy

Staff: ≅ *180*

ITU – Karlsruhe, Germany
- Institute for Transuranium elements

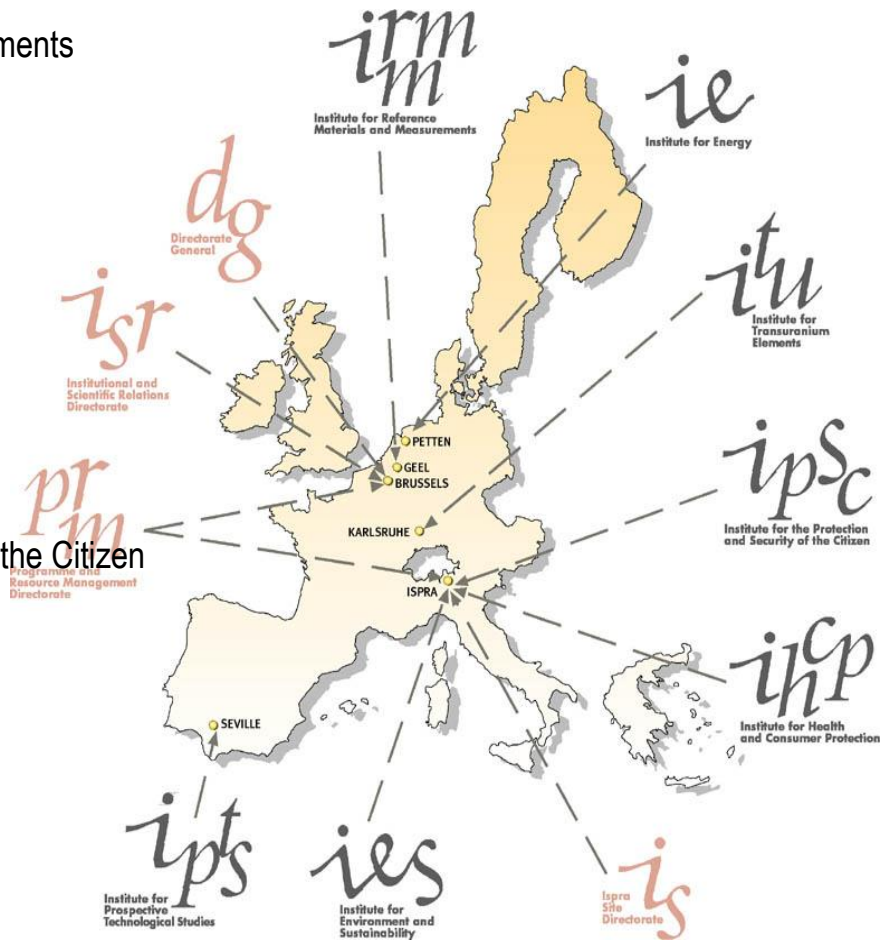
Staff: ≅ 250

IPSC - IHCP - IES – Ispra, Italy
- Institute for the Protection and the Security of the Citizen
- Institute for Health and Consumer Protection
- Institute for Environment and Sustainability

Staff: ≅ 350, 250, 370

IPTS – Seville, Spain
- Institute for Prospective Technological Studies

Staff: ≅ 300



Total staff: ~ 2500 people

Institute for Prospective Technological Studies (IPTS)

Institute for Prospective Technological Studies (IPTS)

- A Siviglia dal 1994
- da Centro di Previsione a "Policy Studies Institute"

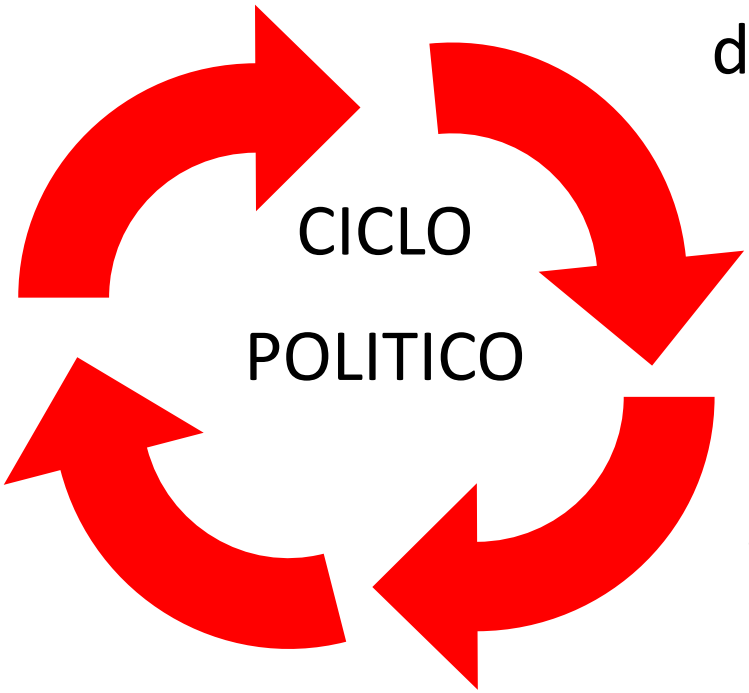
- Aree tematiche:
  - *knowledge for growth*
  - *information society*
  - *sustainability*

    “Seville Process” – ECoB ≈ OMC
  - *agriculture and rural development*
  - *regional policy*

Ricerca in supporto del Ciclo Politico

A. Analisi di Impatto e Previsione

B. Design & Formulazione della Legislazione

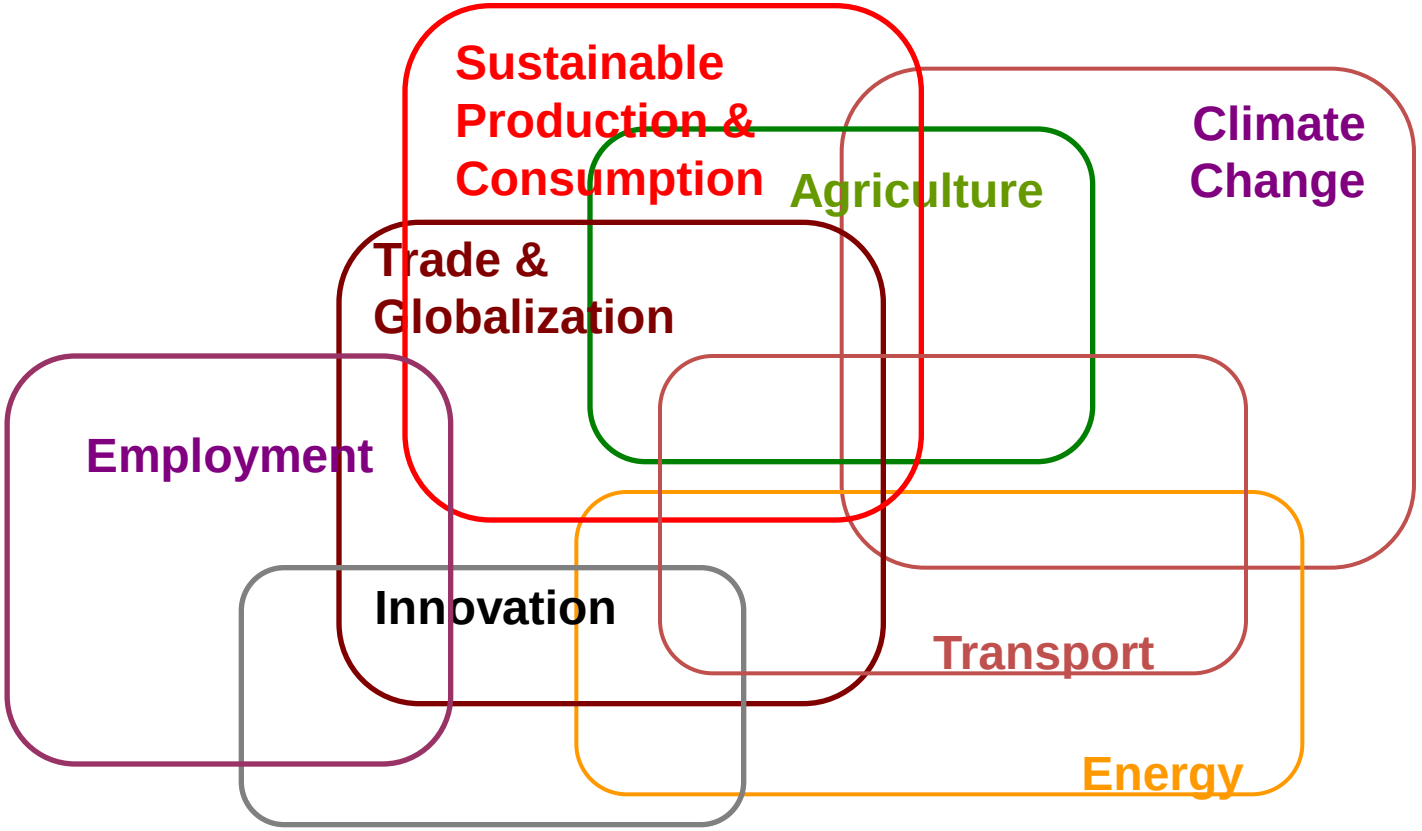


D. Valutazione e Revisione della legislazione

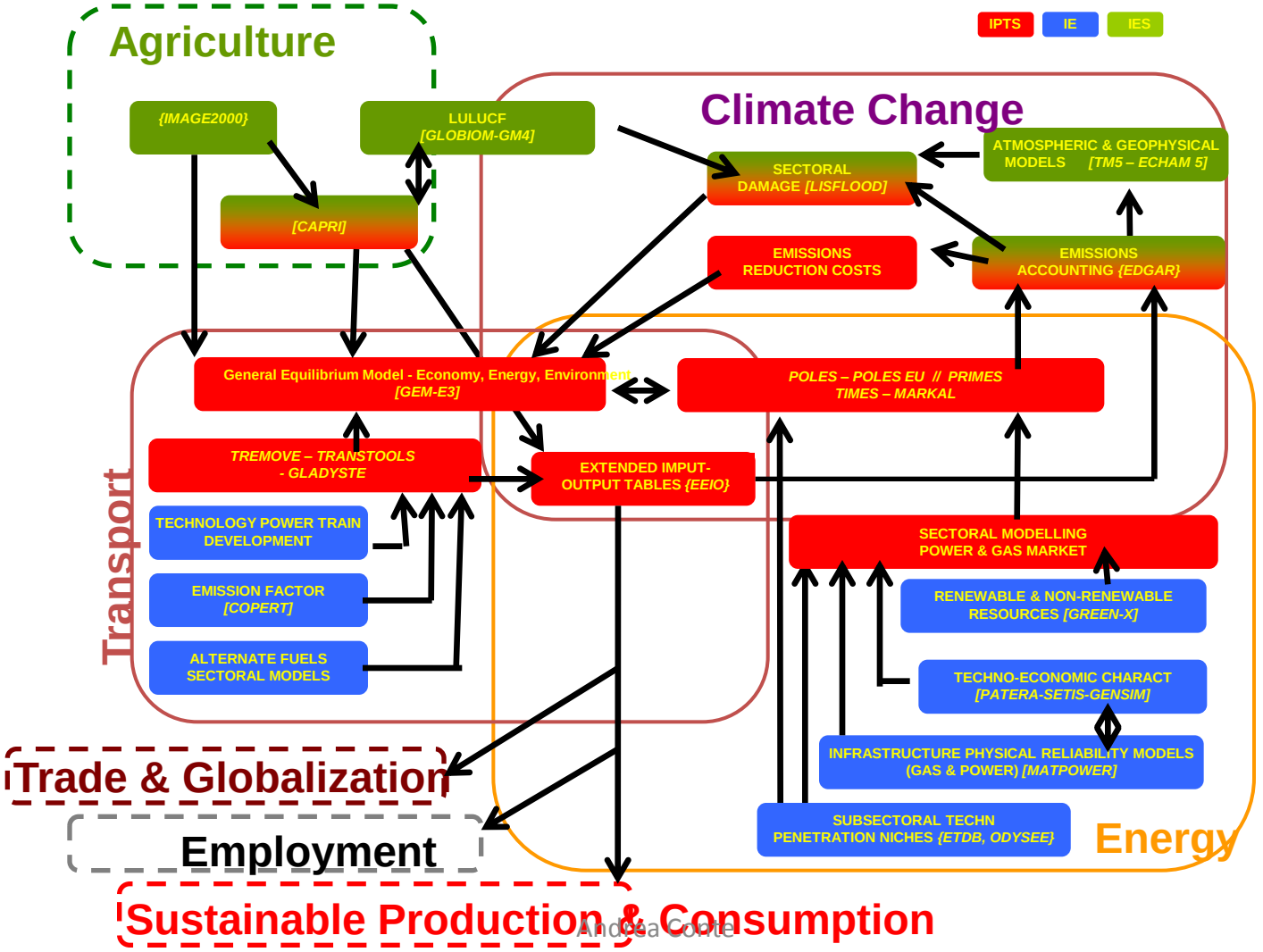
C. implementazione della legislazione

Strumenti Analitici per il *Policy Making*

i.e. Modelli ed analisi statistico / econometrica



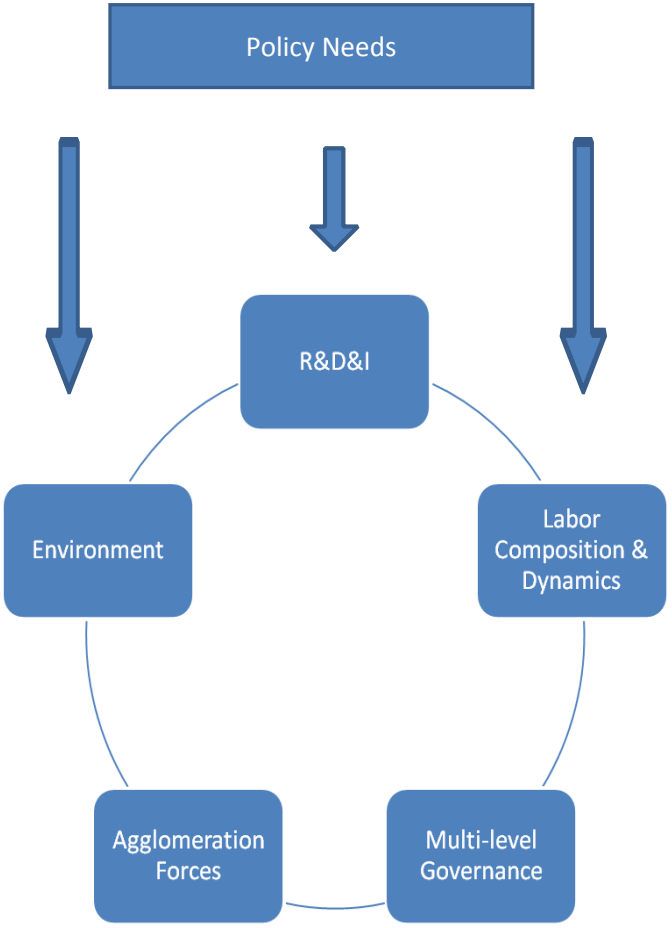
Modelling


IPTS
IE
IES
Agriculture
{IMAGE2000}
LULUCF
[GLOBIOM-GM4]
[CAPRI]
Climate Change
SECTORAL DAMAGE [LISFLOOD]
ATMOSPHERIC & GEOPHYSICAL MODELS [TM5 – ECHAM 5]
EMISSIONS REDUCTION COSTS
EMISSIONS ACCOUNTING {EDGAR}
General Equilibrium Model - Economy, Energy, Environment
[GEM-E3]
POLES – POLES EU // PRIMES
TIMES – MARKAL
Transport
TREMOVE – TRANSTOOLS
- GLADYSTE
EXTENDED IMPUT-OUTPUT TABLES {EEIO}
TECHNOLOGY POWER TRAIN DEVELOPMENT
EMISSION FACTOR
[COPERT]
ALTERNATE FUELS SECTORAL MODELS
SECTORAL MODELLING POWER & GAS MARKET
RENEWABLE & NON-RENEWABLE RESOURCES [GREEN-X]
TECHNO-ECONOMIC CHARACT
[PATERA-SETIS-GENSIM]
INFRASTRUCTURE PHYSICAL RELIABILITY MODELS (GAS & POWER) [MATPOWER]
SUBSECTORAL TECHN PENETRATION NICHES {ETDB, ODYSEE}
Energy
Trade & Globalization
Employment
Sustainable Production & Consumption

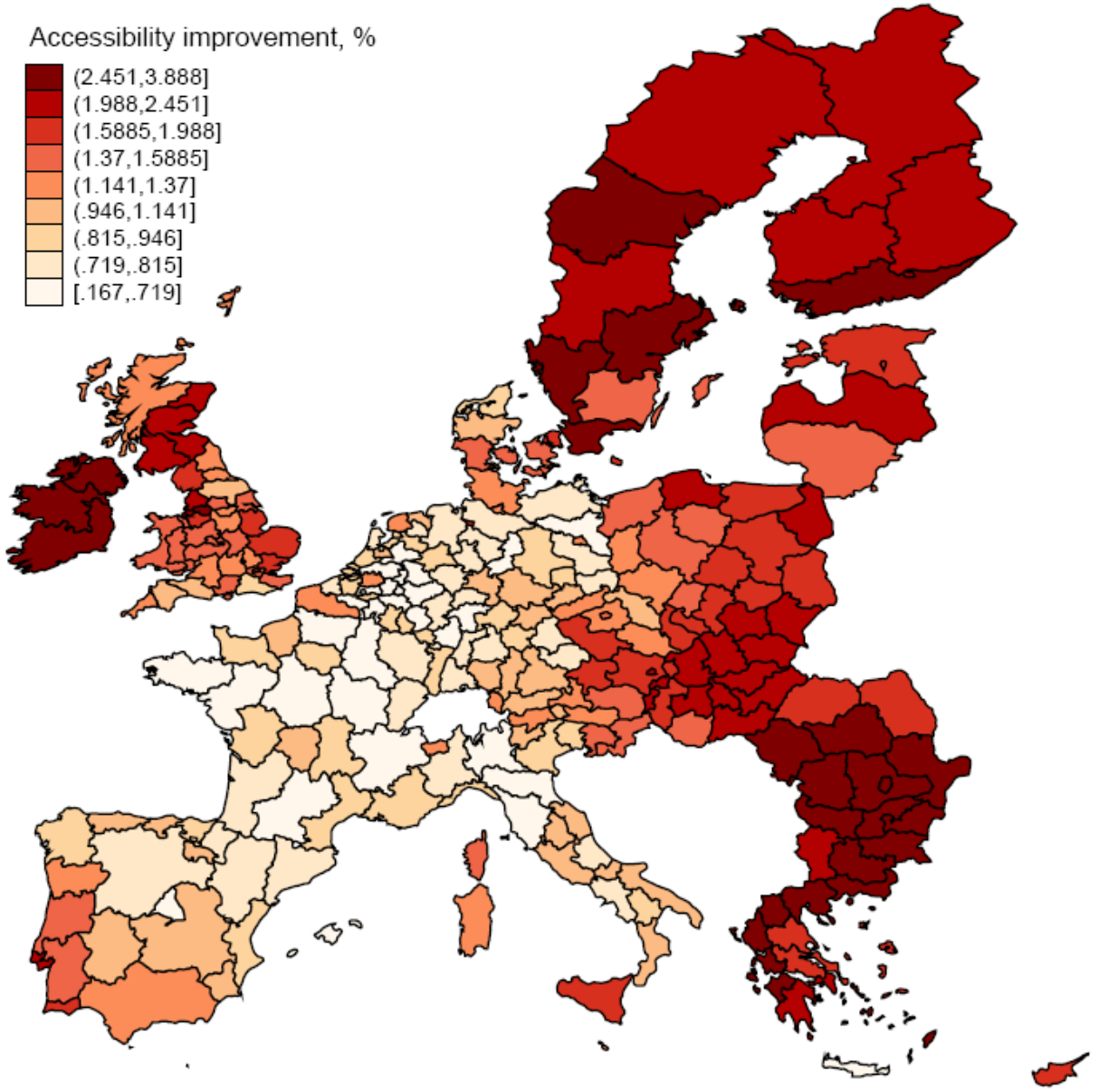
JRC Regional Analysis and Modelling in Support to REGIO 6th Cohesion report

Identification of Policy Needs

- Ad-Hoc Policy Modules
- Ex-ante Policy Evaluation (modelling)
- Ex post Policy Monitoring & Evaluation (Diff-in-diff)



Simulated Impact of TEN-T investments on a region's accessibility



SMART SPECIALIZATION STRATEGY

Lessons from past Regional Innovation Strategies (RISs)

Inward-looking

- Lack of international and trans-regional perspective
- Not taking into account multi-governance issues.

Lack of Policy Ownership

- Lack of understanding of RI systems as an interaction of interdependent players, policies and institutions. Driven by external consultants.
- Failure to set the networking process in motion or to keep it going.

Excessive focus on technology supply and R&D

- Too little emphasis on applications and diffusion.
- Lack of credibility for business sector.

Innovation policies are not in tune with the industrial and economic context

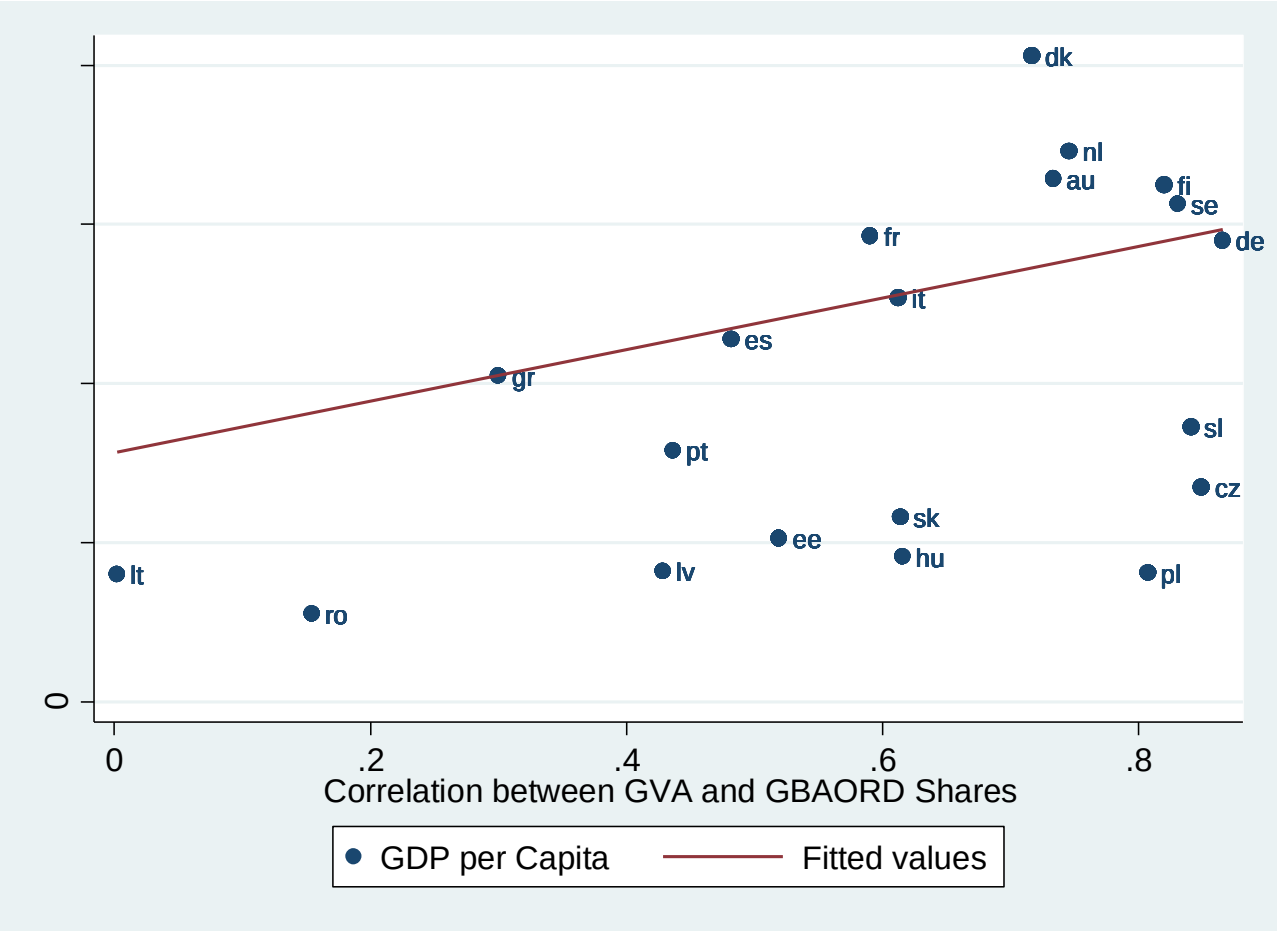
- No sound analysis of regional assets and strengths.
- Too much public intervention in R&D, not enough business-driven.
- 'Picking winners syndrome' (no priorities identified)

Streamlining Multi-level R&D Activities

Thematic & Territorial Dimensions

in support of

Smart Specialization Strategy



What is Smart Specialization?

- Ex-ante **conditionality** in the new cohesion policy 2014-2020.
- Evidence-based **priority** setting in times of scarce resources (value for money).
- Focus on regional **comparative advantage**, a limited set of research and innovation priorities (not necessarily on sectors).
- Accumulation of **critical mass**
- Strategies in line with **NRPs** and Europe 2020 Strategy.
- No top-down decision, but **entrepreneurial discovery process** involving key stakeholders
- **Sourcing** knowledge rather than re-inventing the wheel.
- Excel / Improve in something **specific**
- **Monitoring** and review system

No Funding Mechanism!!

What makes a Regional Innovation Strategy “Smart”?

R&I Strategies for Smart Specialisation (RIS3) are integrated, place-based economic transformation agendas…

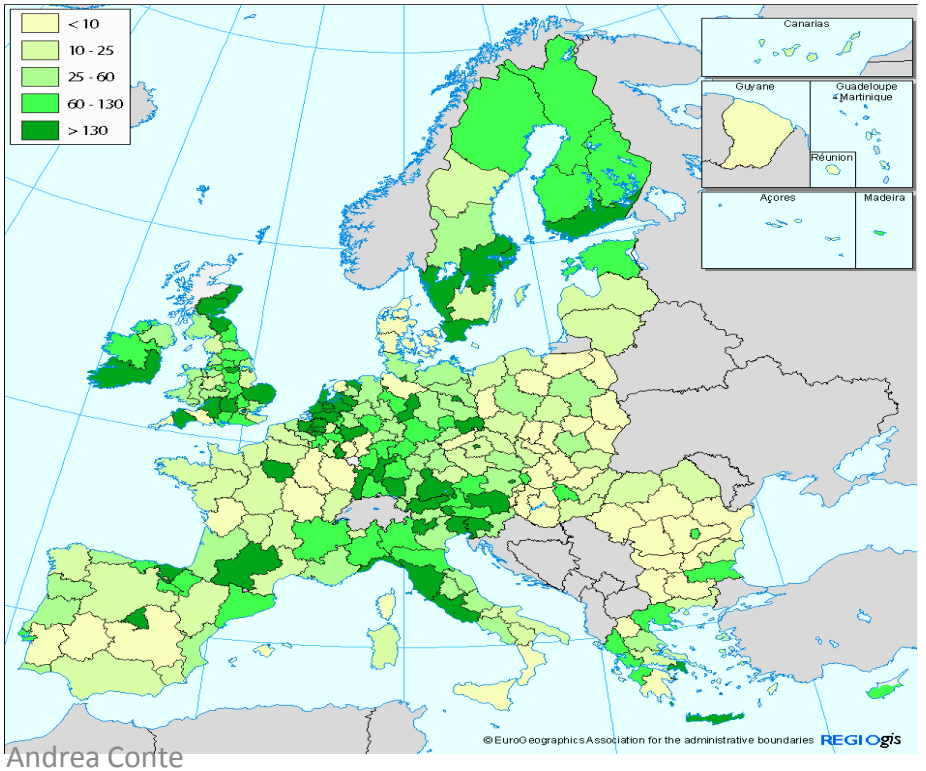
<u>Recognizing the Importance of Territorial Dimension</u>

- Strong Territorial Impact in space-blind policies
- For instance, less developed regions are less successful as FPs funding recipients

(Source: 5th Cohesion Report)

7th Framework Programme, average funding per head

Index, EU27 = 100



…place-based economic transformation agendas that

- Focus policy support and investments on key **national/regional priorities,** challenges and needs for knowledge-based development, including ICT-related measures;

THEMATIC OBJECTIVE 1 (R&D, Innovation)

The existence of a national or regional research and innovation strategy for smart specialisation in line with the National Reform Program. Based on analysis to concentrate resources on a limited set of research and innovation priorities; include measures to stimulate private R&D&I investment; monitoring and review system.

THEMATIC OBJECTIVE 2 (ICTs)

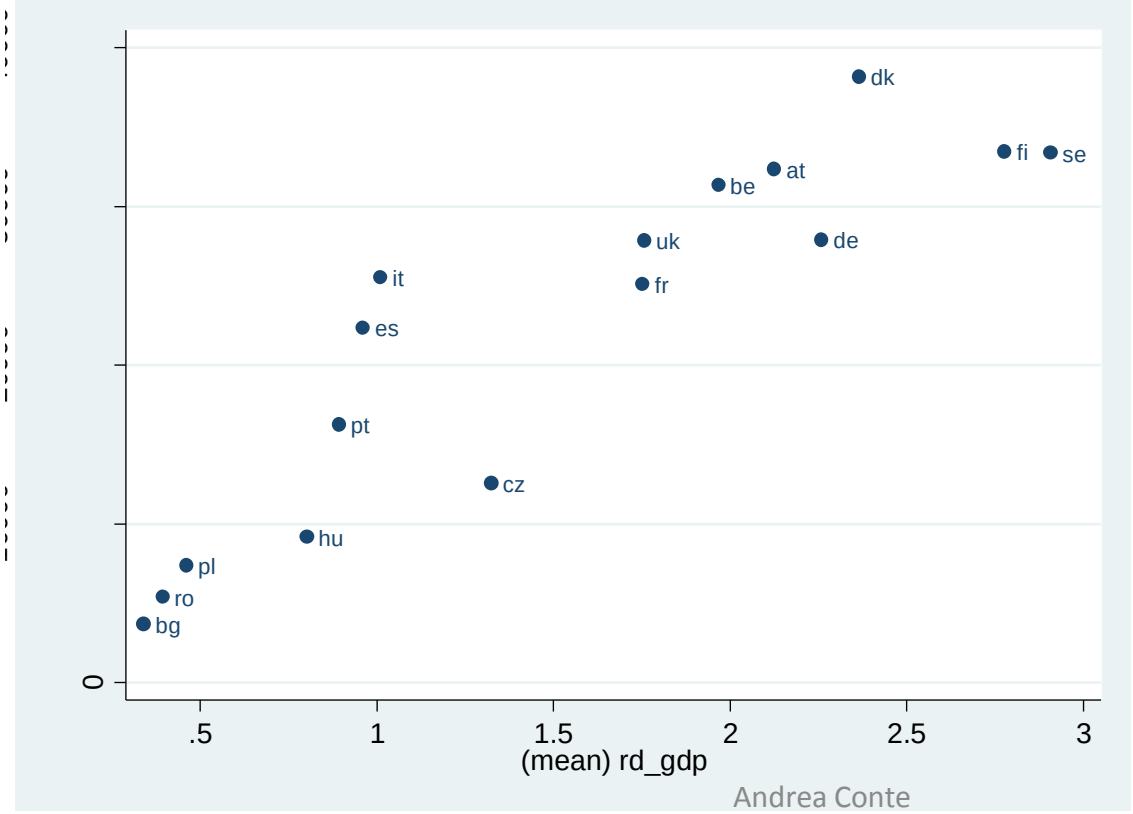
Existence within the national or regional innovation strategy for smart specialisation of an explicit chapter for digital growth.

LINK BETWEEN RIS3, KETs AND SOCIAL INNOVATION

Many future goods and services will be driven by KETs such as semiconductors, advanced materials, photonics and nanotechnology. Moreover, these goods and services will be crucial in addressing the 'grand societal challenges' facing the EU, including energy supply, public health, ageing and climate change.

Smart Investments
Why do we care about (Societal) Innovation?

- Plenty of evidence of the positive relationship between R&D, education, innovation and growth…

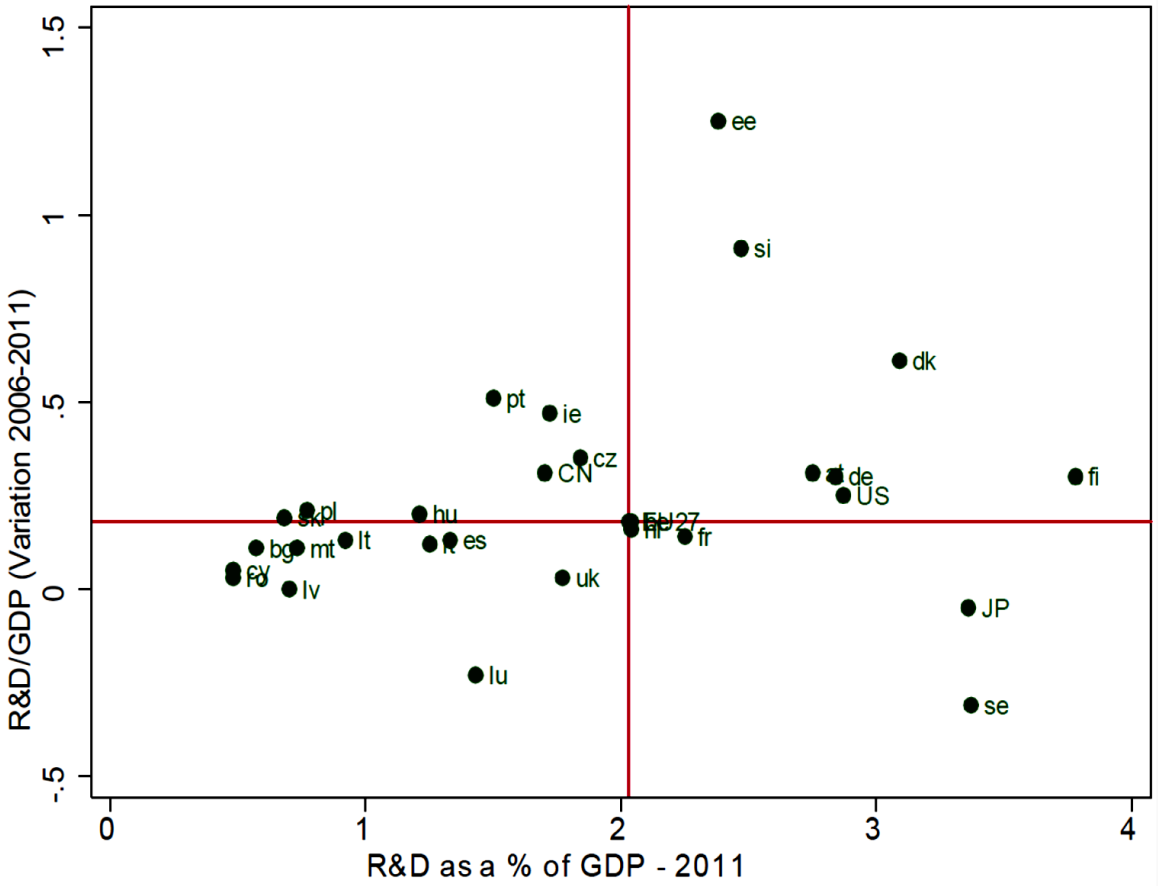


Higher R&D intensity correlates with higher GDP per capita 2011

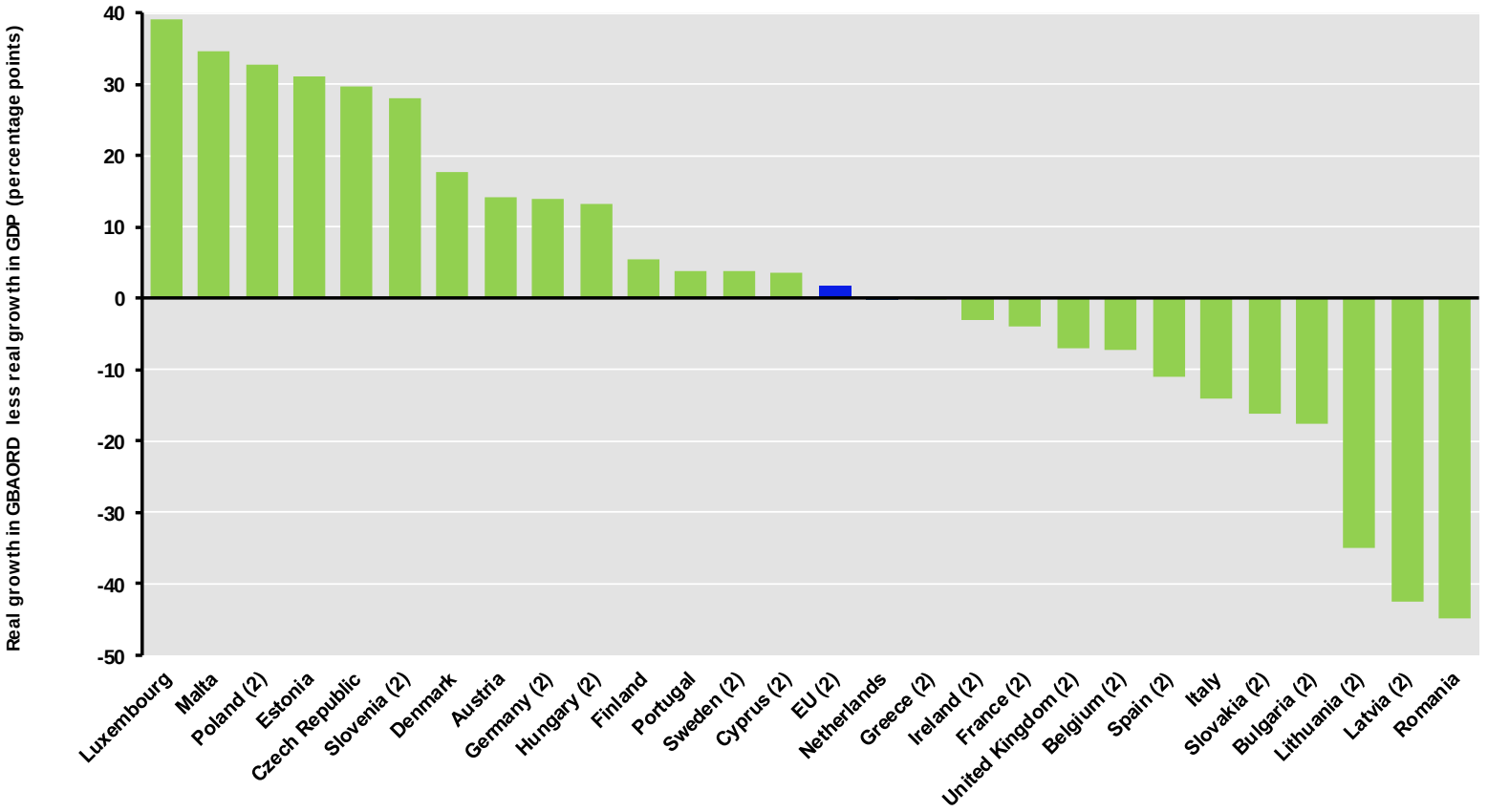
R&D Intensity

Competitiveness, wellbeing and societal challenges…

Climate change
Health and ageing
Use of natural resources
Energy security
Clean transport
Land use
….



Government investment in the future
The difference in percentage points between real growth (1) in Government budgets for R&D (GBAORD) and real growth (1) in GDP, 2008-2012 (2)



Source: DG Research and Innovation - Economic Analysis Unit

Data: Eurostat

Notes: (1) Real growth was calculated from values in PPS€ at constant 2000 prices and exchange rates.

(2) EL: 2007-2008; PL: 2009-2011; BE, BG, DE, IE, ES, FR, CY, LV, LT, HU, SI, SK, SE, UK, EU: 2008-2011; PL 2009-2011.

(3) Data for 2012 are provisional.

…place-based economic transformation agendas that

- **Prioritise** choices, based on past experience, existing assets and perspectives.
- Building on each country's/region's strengths, **competitive advantages** and potential for excellence.
- A **learning process** that brings on board the right partners allowing a process of **entrepreneurial discovery** of the region's future path, the knowledge domains in which a region can excel.
- Maximising the potential for **scale, scope and spillovers** in knowledge production and use.
- **Outward-oriented:** looking beyond the regional (and national) borders for both R&D competence and business partners.
- Support technological as well as **practice-based innovation** and aim to stimulate private sector investment;
- They get **stakeholders** fully involved and encourage innovation and experimentation; It is not 'business as usual' and, therefore, new tools and support mechanisms may be required (**risk component**).
- They are **evidence-based** and include sound monitoring and evaluation systems.

Main activities of the S³ Platform in 2012

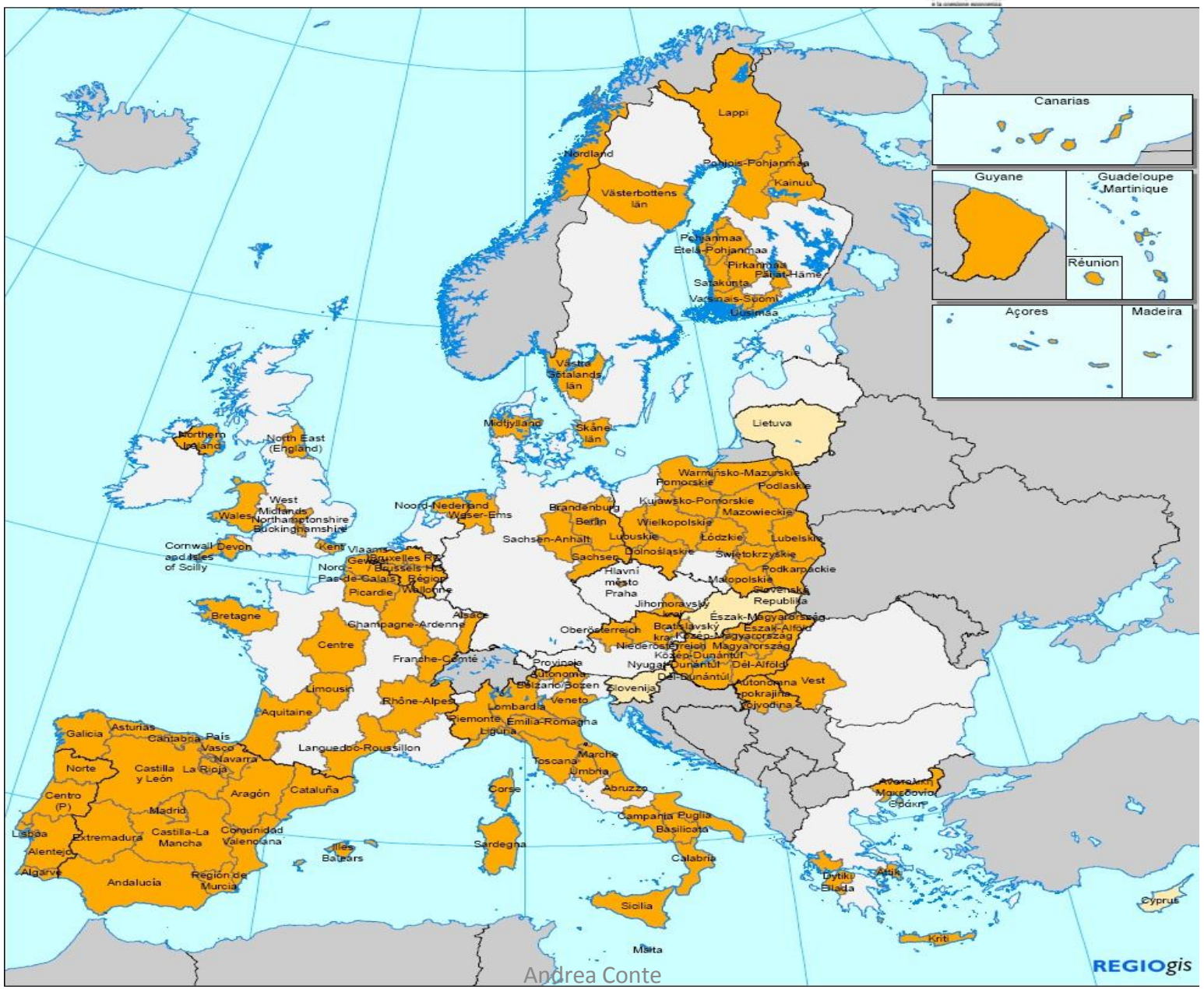
- Assist regions and Member States to develop, implement and review regional innovation strategies for smart specialisation (RIS3).

- Launched in June 2011. Fully operational by mid-2012. Established at the JRC – IPTS in Seville.

- Overseen by a Steering Team with European Commission officials from various DGs. Stakeholder advice provided through a Mirror Group.
- Update draft Guide to Regional Innovation Strategies for Smart Specialisation

- Seminars, Workshops-peer discussions, Training
- Development of analytical tools and Assessment of RIS3

s3platform.jrc.ec.europa.eu/


Canarias
Guyane
Guadeloupe
Martinique
Réunion
Açores
Madeira
Lappi
Nordland
Pohjois-Pohjanmaa
Kainuu
Västerbottens län
Pohjanmaa
Etelä-Pohjanmaa
Pirkanmaa
Päijät-Häme
Satakunta
Varsinais-Suomi
Uusimaa
Västra Götalands län
Midtjylland
Skåne län
Lietuva
Northern Ireland
North East (England)
West Midlands
Northamptonshire
Buckinghamshire
Wales
Cornwall Devon and Isles of Scilly
Kent
Vlaams Gewest
Bruxelles Hfdst. Brussels Hfdst. Gewest
Nord - Pas-de-Calais
Région Wallonne
Picardie
Noord-Nederland
Weser-Ems
Brandenburg
Berlin
Sachsen-Anhalt
Sachsen
Lubuskie
Dolnośląskie
Warmińsko-Mazurskie
Pomorskie
Podlaskie
Kujawsko-Pomorskie
Mazowieckie
Wielkopolskie
Łódzkie
Lubelskie
Świętokrzyskie
Podkarpackie
Małopolskie
Slovenská Republika
Hlavní město Praha
Jihomoravský kraj
Bratislavský kraj
Észak-Magyarország
Észak-Alföld
Közép-Magyarország
Közép-Dunántúl
Nyugat-Dunántúl
Dél-Dunántúl
Dél-Alföld
Oberösterreich
Niederösterreich
Provincie Autonome Bolzano/Bozen
Slovenija
Autonomna pokrajina Vojvodina
Vest
Bretagne
Champagne-Ardenne
Alsace
Centre
Franche-Comté
Limousin
Rhône-Alpes
Aquitaine
Lombardia
Veneto
Piemonte
Liguria
Emilia-Romagna
Galicia
Asturias
Cantabria
País Vasco
Navarra
Languedoc-Roussillon
Norte
Castilla y León
La Rioja
Aragón
Cataluña
Toscana
Marche
Umbria
Abruzzo
Corse
Centro (P)
Madrid
Lisboa
Extremadura
Castilla-La Mancha
Comunidad Valenciana
Alentejo
Algarve
Andalucia
Región de Murcia
Illes Balears
Sardegna
Campania
Puglia
Basilicata
Calabria
Sicilia
Malta
Dytiki Ellada
Attiki
Kriti
Cyprus
REGIOgis

The four Cs of smart specialization

- ***(Tough) Choices and Critical mass**:* limited number of priorities on the basis of own strengths and international specialisation – avoid duplication and fragmentation in the ERA – concentrate funding sources ensuring more effective budgetary management

- ***Competitive Advantage**:* mobilise talent by matching R&D&I capacities and business needs through an entrepreneurial discovery process

- ***Connectivity and Clusters***: develop world class clusters and provide arenas for related variety/cross-sector links internally in the region and externally towards specialised technological diversification

- ***Collaborative Leadership**:* efficient innovation systems as a collective endeavour based on public-private partnership – experimental platform to give voice to un-usual suspects

A stepwise approach for RIS3 design (1)

1. Analysis of the regional context and potential for innovation

Differentiation is at the very heart of RIS3. Exploit *related variety*, suggesting that a regional economy can build its competitive advantage by diversifying its unique, localised knowledge base (existing specialisation) into new combinations/innovations which are close or adjacent to it

2. Governance: Ensuring participation and ownership

Potential actors relevant to the RIS3 process span from public authorities to universities and other knowledge-based institutions, investors and enterprises, civil society actors, and external experts who can contribute to the benchmarking and peer review processes.

3. Elaboration of an overall vision for the future of the region

Development of a shared and compelling *Vision* on the economic development potential of the region and the main direction for its international positioning. It is a *highly political step*.

A stepwise approach for RIS3 design (2)

4. Identification of priorities

Channelling resources towards investments that have the potentially highest impact on the regional economy. Identification of a limited number of innovation- and knowledge-based development priorities.

5. Definition of coherent policy mix, roadmaps and action plan

It is good practice to combine the adoption of strategies with an agreement on an *Action Plan* and even the simultaneous launch of *pilot projects.* This planning process involves both the incorporation of existing programmes, *on the basis of evidence on their effectiveness and relevance*, and inclusion of new instruments.

6. Integration of monitoring and evaluation mechanisms (3 types of indicators):

- Context indicators scoring the region vs. the score of its MS or other similar regions.
- Result indicators selected for each component of the strategy.
- Output indicators measuring the progress of the actions undertaken.

Monitoring differs from evaluation in two main respects (scope and actors involved).

Il Contesto Politico / Economico

IL NUOVO BUDGET EUROPEO

Andrea Conte

Background Politico (1)

- Accordo sul Budget in sede di Consiglio Europeo (7-8.02.2013)

- Proposta rigettata dal Parlamento (506 a 161 – 13.03.2013)
  Disaccordo su: Deficit, Flessibilitá, Revisione, Risorse Proprie
  Accordo inter-istituzionale necessario tra EP, COM, COUN

- Proposta COM (10.2011): 1.033bn euros ≈ 1% PIL / 2% GVT
- Conclusioni COUN (02.2013): 0.960bn euros

- **Nuova Governance (Semestre Europeo) → AGS 2013**

Background Politico (2)

Nuovo *Multi-Annual Financial Framework*

- Sette Anni (2014-2020) per 28 Stati Membri (EU27+Croatia)

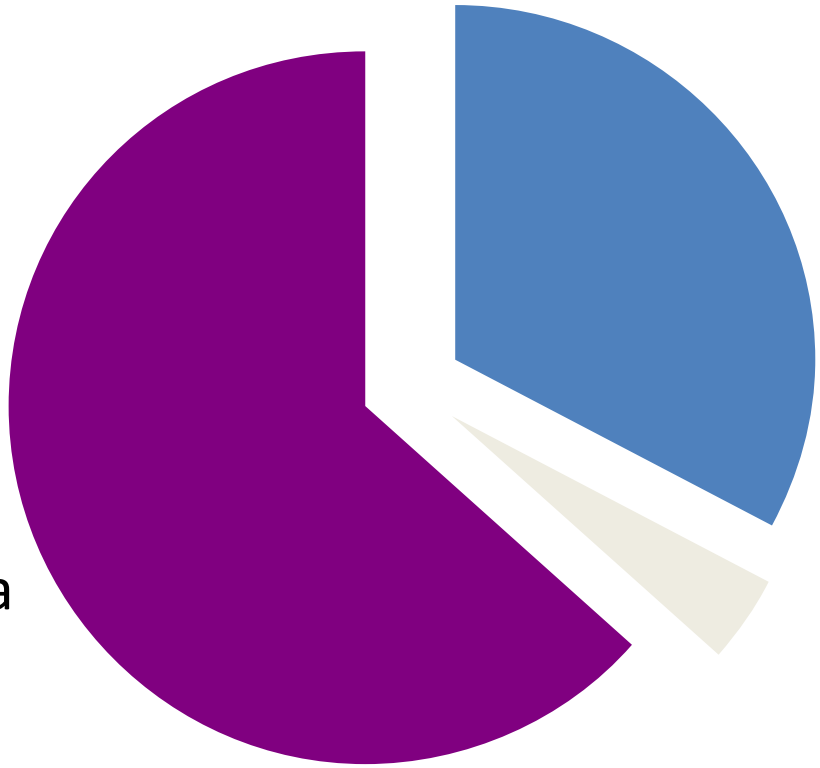
- **Sei Categorie**:

Heading 1A: Competitiveness for Growth and Jobs (≈ € 126 BL)
Heading 1B: Economic, Social and Territorial Cohesion (≈ € 325 BL)
Heading 2: Sustainable growth: Natural Resources (≈ € 373 BL)
Heading 3: Security and Citizenship (≈ € 16 BL)
Heading 4: Global Europe (≈ € 59 BL)
Heading 5: Administration (≈ € 62 BL)
Heading 6: Compensation

Struttura del Budget Europeo 2014-2020

POLITICA DI COESIONE

≈ 33% (≈ €320 BL.)



POLITICHE VARIE

Agricoltura, Ricerca, Politica ester(n)a etc.)

≈ 63% (€649 BL.)

CONNECTING EUROPE FACILITY

≈ 4% (€41 BL. inclusi €10 BL dai CFs)

Competitivitá per la Crescita e il Lavoro (€ 125614 ML)

2014	2015	2016	2017	2018	2019	2020
15605	16321	16726	17693	18490	19700	21079

Con l'inclusione di tre grandi progetti infrastrutturali (€ 12793 ML): Galileo: €6300 ML; ITER: €2707 ML; Copernicus: €3786 ML (giorno, notte) e supporto alle FETs (Graphene, Human Brain Project, ITFoM)

Connecting Europe Facility (€ 29299 ML)

- Transport - € 23174 ML (10000 from the CF)
- Energy - € 5126 ML
- Telecommunications - € 1000 ML

Coesione Economica, Sociale & Territoriale (€ 320148 ML)

2014	2015	2016	2017	2018	2019	2020
44678	45404	46045	46545	47038	47514	47925

Investimenti in favore della crescita e dell'occupazione - (€ 313197 ML)

Reference Figure: PIL p.c. PPP 2007-2009

- Regioni meno sviluppate (<75% EU) - € 164279 ML
- Regioni in transizione (tra 75-90%) - € 31677 ML
- Regioni piú sviluppate (>90% EU) - € 49492 ML

Fondo di Coesione (<90% EU) - € 66362 ML

Reference Figure : PNL p.c. PPP 2008-2010

Outermost Regions - € 1387 ML

Cooperazione territoriale europea - € 8948 ML

Metodo di Allocazione (LDRs)

- **Each Member State's allocation is the sum of the allocations for its individual eligible regions:**

- absolute amount (in €) by multiplying the pop of the region by the difference between that region's GDP p.c. in PPP and the EU27 average GDP p.c. (PPP);

- application of a % to the above absolute amount in order to:
  (1) determine that region's financial envelope
  (2) reflect the relative prosperity as compared to the EU 27 average (PPS), of the MS in which the eligible region is situated:
  (a) for regions in a MS where GNI p.c. < 82% of EU: 3.15%
  (b) for regions in a MS where GNI p.c. 82-99% of EU: 2.70%
  (c) for regions in a MS where GNI p.c. > 99% of EU: 1.65%

- premium of € 1300 per (exceeding) unemployed per year
- methodology subject to capping (2.35% GDP)

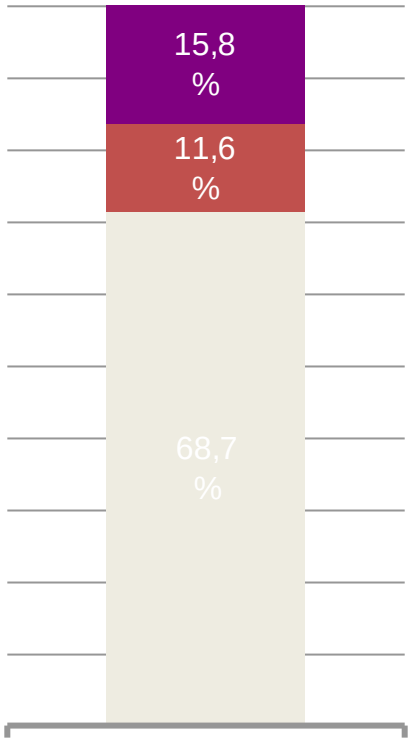
More coherent /efficient use of EU funds

- **Focus on results** → performance framework with clear and measurable milestones and targets, common & programme -specific indicators, monitoring, evaluation, cutting red tape
- **Financial management** → i.e. new system of annual accounts, harmonised rules on eligibility, greater use of simplified costs
- **Greater proportionality →** i.e. exemptions for low volume programmes
-
- **Common rules - Common Strategic Framework**
- **Performance reserve →** 5 % of national allocations (by Member State, fund and category of region)
- **Ex-ante conditionality →** Ensuring conditions for effective investment
- **Macro-economic conditionality →** Alignment with new economic governance

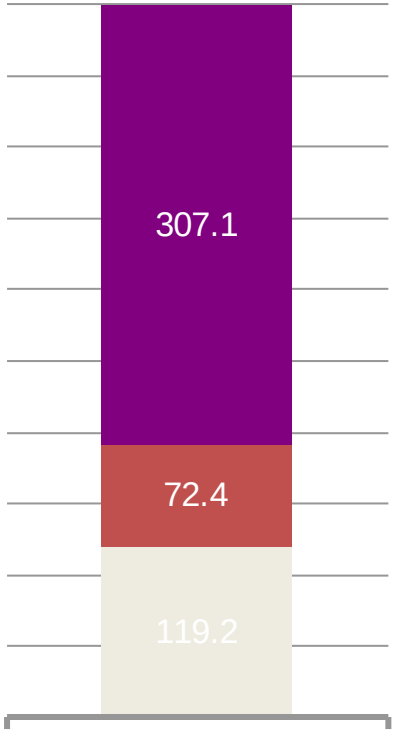
Distribuzione dei finanziamenti

Cohesion Fund[1]	≈ 66
Less developed regions	≈ 164
Transition regions	≈ 32
More developed regions	≈ 49
European Territorial Cooperation	≈ 9
Outermost regions and sparsely populated areas	≈ 1
Total	≈ ***336***

[1] **€10 billion from the Cohesion Fund will be allocated to the Connecting Europe Facility**



Budget allocation (in %)

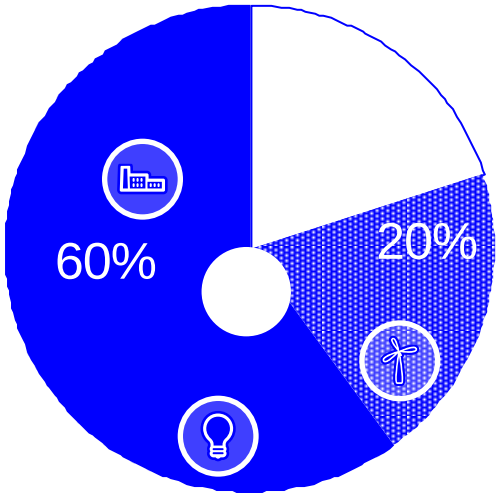


Population covered (in millions)

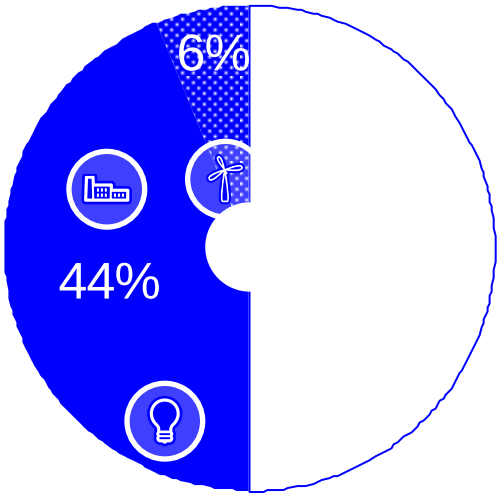
Less developed regions/MS Transition regions More developed regions

Concentrazione degli investimenti ERDF

Energy efficiency & renewable energy Research & innovation Competitiveness of SMEs



Regioni piú sviluppate e in transizione



Regioni meno sviluppate

Future cohesion policy - Research and innovation Investment priorities for ERDF

Strengthening research, technological development and innovation:

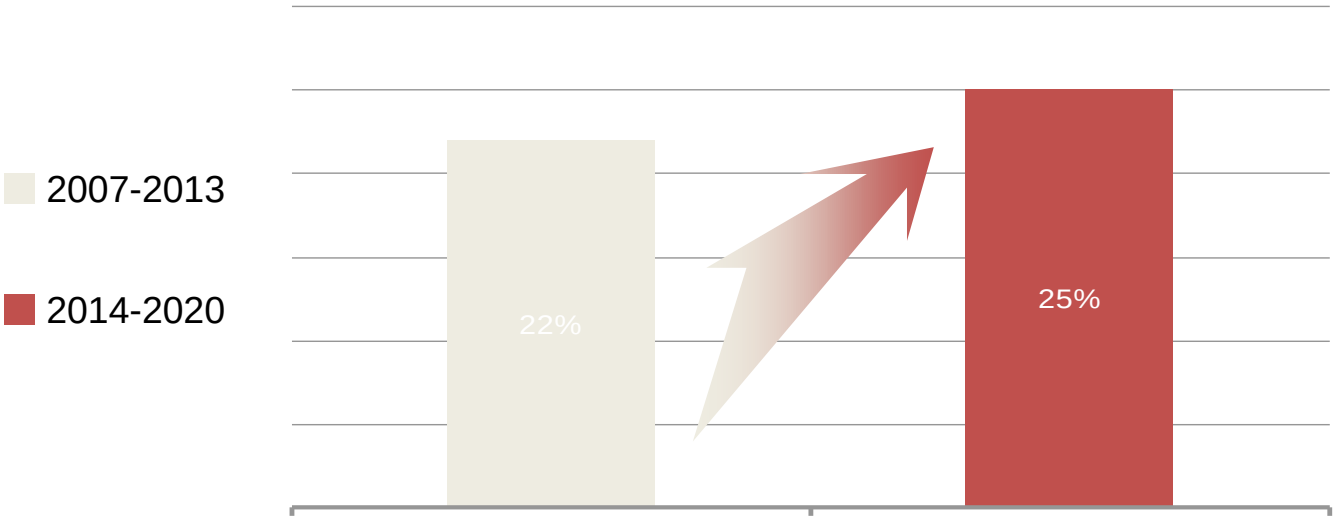
- Enhancing research and innovation infrastructure (R&I) and capacities to develop R&I excellence and promoting centres of competence, in particular those of European interest
- Promoting business R&I investment, product and service development, technology transfer, social innovation and public service application, demand simulation, networking, clusters and open innovation through smart specialisation
- Supporting technological and applied research, pilot lines, early product validation actions, advanced manufacturing capabilities and first production in Key Enabling Technologies and diffusion of general purpose technologies

R&D excellence & Cohesion Policy: two policies with complementary objectives

EU R&D Policy – future Horizon 2020	EU Cohesion Policy
To maximize the competitiveness impact of research and innovation and raising and spreading levels of **excellence** in the research base	**Focus on** creating endogenous growth on the basis of local assets, capabilities and economic potentialities.
Based on **individual R&D Projects** often of a pre-competitive nature aiming at improving leading edge **basic research**	Based on **multiannual Programmes** aiming at increased economic competitiveness through close to the market competitive R&D and **innovation** efforts
Awarded **directly to final beneficiaries** (firms, public and private R&D centres and Universities)	Awarded **through** shared management to national and regional **public intermediaries**
Competitive calls addressed to international groupings through peer review **based on excellence** criteria	**Non competitive attribution** addressed to regional players **based on strategic planning** negotiation

European Social Fund (ESF)

Quota del ESF all'interno del budget della Politica di Coesione



Del totale dei fondi strutturali (ERDF & ESF), ESF rappresenterá:

- 25 % nelle regioni meno sviluppate
- 40 % nelle regioni in transizione
- 52 % nelle regioni piú sviluppate

European Social Fund (ESF)

- Promoting employment & supporting labour mobility
- Investing in education, skills & life-long learning
- Promoting social inclusion & combating poverty
- Enhancing institutional capacity & efficient public administration

Reinforced social dimension

- 20 % of ESF allocations for social inclusion
- Greater emphasis on fighting youth unemployment
- Mainstreaming & specific support for gender equality & non-discrimination

Cohesion Fund

Investing in environment

- Climate change adaptation and risk prevention
- Water and waste sectors
- Biodiversity including through green infrastructures
- Urban environment
- Low carbon economy

Investing in transport

- Trans-European Transport Networks (TEN-T)
- Low-carbon transport systems and urban transport

Categorie di intervento

(2007-2013)

Categories	Regional Fund (ERDF)	Social Fund (ESF)	Cohesion Fund
Research and technological development (R&TD) and innovation[1]	X		
Support to firms' investments	X		
Information Society	X		
Transport	X		X
Energy	X		X
Environmental protection and risk prevention	X		X
Tourism	X		
Culture	X		
Urban and rural regeneration	X		
Adaptability of workers and firms, enterprises and entrepreneurs		X	
Access to employment and active and preventive labour market measures		X	
Social inclusion of less-favoured persons[2]		X	
Human capital (education, life-long training, high-level studies in R&TD)		X	
Social infrastructure[3]	X		
Partnership and networking		X	
Institutional capacity at national, regional and local level		X	
Reduction of additional costs of outermost Regions	X		
Technical assistance	X	X	X

Allocation of cohesion policy budget by categories & regions 2007-2013 (% shares)

	Lagging Regions and countries	Non-lagging Regions	Territorial cooperation	Total
Research and technological development (R&TD) and innovation[1]	13.0	21.9	16.3	14.5
Support to firms' investments	4.0	4.5	0.4	4.0
Information Society	4.4	4.2	7.1	4.4
Transport	25.7	4.5	13.2	22.0
Energy	3.1	3.3	4.3	3.1
Environmental protection and risk prevention	16.0	6.3	16.1	14.6
Tourism	1.8	1.5	7.4	1.8
Culture	1.7	1.5	6.0	1.7
Urban and rural regeneration	2.9	3.5	2.2	3.0
Adaptability of workers and firms, enterprises and entrepreneurs	3.0	10.4	1.8	4.2
Access to employment and active and preventive labour market measures	5.0	15.3	2.5	6.6
Social inclusion of less-favoured persons[2]	1.8	9.1	0.8	2.9
Human capital (education, life-long training, high-level studies in R&TD)	7.6	8.0	3.9	7.6
Social infrastructure[3]	5.5	1.5	5.7	4.9
Partnership and networking	0.2	0.7	2.8	0.4
Institutional capacity at national, regional and local level	1.1	0.2	3.5	1.0
Reduction of additional costs of outermost Regions	0.1	0.5	0.1	0.2
Technical assistance	3.1	3.1	5.9	3.1
Total	100.0	100.0	100.0	100.0

Allocation of cohesion policy budget by categories and sub-categories, 2007-2013 (ML euros at current prices; % shares)

Categories		Million euros	Overall share (%)	Share within category (%)
Research and technological development (R&TD) and innovation		50 046.5	14.5	100.0
Code	*Sub-categories*			
01	R&TD activities in research centres	5 783.3	1.7	11.6
02	R&TD infrastructure and centres of competence in a specific technology	9 899.4	2.9	19.8
03	Technology transfer and improvement of cooperation networks ...	5 578.0	1.6	11.1
04	Assistance to R&TD, particularly in SMEs (including access to R&TD services in research centres)	5 574.0	1.6	11.1
05	Advanced support services for firms and groups of firms	5 150.9	1.5	10.3
06	Assistance to SMEs for the promotion of environmentally-friendly products and production processes (...)	2 504.6	0.7	5.0
07	Investment in firms directly linked to research and innovation (...)	9 029.6	2.6	18.0
08	Other measures to stimulate research and innovation and entrepreneurship in SMEs	6 526.7	1.9	13.0

Support to firms' investment		13 605.4	3.9	100.0
Code	*Sub-categories*			
09	Support to firms' investment	13 605.4	3.9	100.0

Information society		15 284.7	4.4	100.0
Code	*Sub-categories*			
10	Telephone infrastructures (including broadband networks)	2 256.5	0.7	14.8
11	Information and communication technologies (...)	3 597.8	1.0	23.5
12	Information and communication technologies (TEN-ICT)	523.8	0.2	3.4
13	Services and applications for citizens (e-health, e-government, e-learning, e-inclusion, etc.)	5 225.1	1.5	34.2
14	Services and applications for SMEs (e-commerce, education and training, networking, etc.)	2 144.4	0.6	14.0
15	Other measures for improving access to and efficient use of ICT by SMEs	1 537.2	0.4	10.1

Transport		75 774.0	22.0	100.0
Code	*Sub-categories*			
16	Railways	4 105.3	1.2	5.4
17	Railways (TEN-T)	18 518.6	5.4	24.4
18	Mobile rail assets	558.8	0.2	0.7
19	Mobile rail assets (TEN-T)	695.6	0.2	0.9
20	Motorways	5 133.1	1.5	6.8
21	Motorways (TEN-T)	17 482.2	5.1	23.1
22	National roads	7 659.3	2.2	10.1
23	Regional/local roads	9 775.8	2.8	12.9
24	Cycle tracks	634.4	0.2	0.8
25	Urban transport	1 793.9	0.5	2.4
26	Multimodal transport	1 635.4	0.5	2.2
27	Multimodal transport (TEN-T)	446.8	0.1	0.6
28	Intelligent transport systems	1 089.8	0.3	1.4
29	Airports	1 851.1	0.5	2.4
30	Ports	3 532.5	1.0	4.7
31	Inland waterways (regional and local)	265.8	0.1	0.4
32	Inland waterways (TEN-T)	595.6	0.2	0.8

Adaptability of workers and firms, enterprises and entrepreneurs		14 427.9	4.2	100.0
Code	*Sub-categories*			
62	Development of life-long learning systems and strategies in firms; training and services for employees ...	9 752.9	2.8	67.6
63	Design and dissemination of innovative and more productive ways of organising work	1 898.0	0.6	13.2
64	Development of special services for employment, training and support in connection with restructuring of sectors ...	2 777.0	0.8	19.2

Access to employment and active and preventive labour market measures		22 638.5	6.6	100.0
Code	*Sub-categories*			
65	Modernisation and strengthening labour market institutions	2 375.5	0.7	10.5
66	Implementing active and preventive measures on the labour market	12 075.2	3.5	53.3
67	Measures encouraging active ageing and prolonging working lives	1 043.6	0.3	4.6
68	Support for self-employment and business start-up	3 247.2	0.9	14.3
69	Measures to improve access to employment and increase sustainable participation and progress of women ...	2 651.2	0.8	11.7
70	Specific action to increase migrants' participation in employment ...	1 245.9	0.4	5.5

Social inclusion of less-favoured persons		10 156.0	2.9	100.0
Code	*Sub-categories*			
71	Pathways to integration and re-entry into employment for disadvantaged people ...	10 156.0	2.9	100.0

Human capital		26 030.8	7.6	100.0
Code	*Sub-categories*			
72	Design, introduction and implementing of reforms in education and training systems ...	8 612.9	2.5	33.1
73	Measures to increase participation in education and training throughut the life-cycle ...	12 500.6	3.6	48.0
74	Developing human potential in the field of research and innovation, in particular through post-graduate studies ...	4 917.3	1.4	18.9

Social infrastructure		16 864.3	4.9	100.0
Code	*Sub-categories*			
75	Education infrastructure	7 356.2	2.1	43.6
76	Health infrastructure	5 211.0	1.5	30.9
77	Childcare infrastructure	555.7	0.2	3.3
78	Housing infrastructure	802.9	0.2	4.8
79	Other social infrastructure	2 938.5	0.9	17.4

Energy		10 756.2	3.1	100.0
Code	*Sub-categories*			
33	Electricity	272.8	0.1	2.5
34	Electricity (TEN-E)	313.2	0.1	2.9
35	Natural gas	658.6	0.2	6.1
36	Natural gas (TEN-E)	361.9	0.1	3.4
37	Petroleum products	171.6	0.0	1.6
38	Petroleum products (TEN-E)	0.0	0.0	0.0
39	Renewable energy: wind	787.6	0.2	7.3
40	Renewable energy: solar	1 071.6	0.3	10.0
41	Renewable energy: biomass	1 798.9	0.5	16.7
42	Renewable energy: hydroelectric, geothermal and other	1 129.8	0.3	10.5
43	Energy efficiency, co-generation, energy management	4 192.3	1.2	39.0

Institutional capacity at national, regional and local level		3 562.2	1.0	100.0
Code	*Sub-categories*			
81	Mechanisms for improving good policy and programme design, monitoring and evaluation ...	3 562.2	1.0	100.0

… Creativity in Gent , Creativity in Porto , Infrastructure in Cadiz

Il Contesto Politico / Economico

LA STRATEGIA EUROPA 2020

Priority areas for action at EU level

Strengthened EU economic governance

- Macro-economic & fiscal surveillance
- Regulation of financial services
- Targets and guidance for structural reforms

Europe 2020 flagships for smart, sustainable and inclusive growth

- Digital Agenda
- Youth on the Move
- Innovation Union
- New Industrial Policy
- New Skills and new Jobs
- Platform against Poverty
- Resource Efficiency

Modernised EU levers for growth and jobs

- Single Market Act
- Trade and external policies
- Structural Funds

Presentation of J.M. Barroso to the European Council, 23 October 2011

Strategia EUROPA 2020

1) Innalzare il tasso di occupazione della popolazione in etá 20-64 dal 69% ad almeno il 75%.

2) Riduzione degli abbandoni scolastici (early school leavers: 18-24) al 10% dall'attuale 15% e aumento della quota di popolazione (30-34) con un livello di *educazione terziaria* dal 31% ad almeno il 40%.

3) 3% in R&S/PIL (2/3) e nuovo indicatore di innovazione.

4) Riduzione del numero di persone sotto le soglie di povertá nazionali del 25% (circa 20 milioni di Europei).

5) Riduzione delle emissioni di gas serra di almeno il 20% rispetto ai livelli del 1990, aumento della quota di energia rinnovabile al 20%, e aumento del 20% l'efficienza energetica.

Strategic Policy Objectives

Europe 2020 – Innovation Union
- Industrial research and innovation;
- Regional economic modeling;
- ERA policies & analysis.

Europe 2020 – Fighting Poverty
- ICT for inclusion and minorities;
- Impact of revised CAP on small holders.

Europe 2020 – Digital Agenda
- Digital Economy analysis;
- Socio-economic Impacts of DA policies on Society.

Europe 2020 – Resource Efficient Europe
- 'Greening' agriculture & rural development;
- Agricultural trade and market policies;
- Integrated climate policy assessment;
- Sustainable production and consumption;
- European integrated pollution & prevention control.

Europe 2020 - Industrial Policy
- Smart specialisation platform;
- Competitiveness of ICT industry sector
- Energy & transport economic assessment.

Europe 2020 – New Skills and Jobs
- Digital Competences (ICT for learning, eSkills, …)

EU/Member States targets	Employment rate (in %)	R&D in % of GDP	CO^2 emission reduction targets[2]	Renewable energy	Energy efficiency – reduction of energy consumption in Mtoe	Early school leaving in %	Tertiary education in %	Reduction of population at risk of poverty or social exclusion in number of persons
EU headline target	75%	3%	-20% (compared to 1990 levels)	20%	20% increase in energy efficiency equalling 368 Mtoe	10%	40%	20,000,000
Estimated EU[3]	73.70-74%	2.65-2.72%	-20% (compared to 1990 levels)	20%	206.9 Mtoe	10.30-10.50%	37.50-38.0%	Result cannot be calculated because of differences in national methodologies
AT	77-78%	3.76%	-16%	34%	7.16	9.5%	38%	235,000
BE	73.2%	3.0%	-15%	13%	9.80	9.5%	47%	380,000
BG	76%	1.5%	20%	16%	3.20	11%	36%	260,000
CY	75-77%	0.5%	-5%	13%	0.46	10%	46%	27,000
CZ	75%	1% (public sector only)	9%	13%	n.a.	5.5%	32%	Maintaining the number of persons at risk of poverty or social exclusion at the level of 2008 (15.3% of total population) with efforts to reduce it by 30,000
DE	77%	3%	-14%	18%	38.30	<10%	42%	330,000 (long-term unemployed)
DK	80%	3%	-20%	30%	0.83	<10%	At least 40%	22,000 (household with low work intensity)
EE	76%	3%	11%	25%	0.71	9.5%	40%	Reduce the at risk of poverty rate (after social transfers) to 15% (from 17.5% in 2010)
EL	70%	to be revised	-4%	18%	2.70	9.7%	32%	450,000
ES	74%	3%	-10%	20%	25.20	15%	44%	1,400,000-1,500,000
FR	75%	3%	-14%	23%	34.00	9.5%	50%	Reduction of the anchored at risk of poverty rate by one third for the period 2007-2012 or by 1,600 000 people
HU	75%	1.8%	10%	14.65%	2.96	10%	30.3%	450,000
IE	69-71%	approx.2% (2.5% GNP)	-20%	16%	2.75	8%	60%	186,000 by 2016
IT	67-69%	1.53%	-13%	17%	27.90	15-16%	26-27%	2,200,000
LT	72.8%	1.9%	15%	23%	1.14	<9%	40%	170,000
LU	73%	2.3-2.6%	-20%	11%	0.20	<10%	40%	No target
LV	73%	1.5%	17%	40%	0.67	13.4%	34-36%	121,000

Key measures of Innovation Union

Education and skills

- Europe needs at least one million more researchers
- Universities need reform and closer links with business
- Member States to establish national strategies on training & careers
- Independent ranking system to benchmark universities

European Research Area

- Fragmentation and overlaps between national R&I systems (JPIs)
- Huge complexity of support system with different rules and timetables
- European Research Area framework to remove cross-border obstacles

Access to finance

- Few European SMEs grow into major companies
- Lack of finance and effect of the crisis (ECB Lending Survey)
- New generation of financial instruments with EIB (2014) addressing market gaps from venture capital to major innovation projects

Single innovation market

- EU Patent
- Slow standard setting
- Reform standardisation system (OHIM)
- Public procurement (17% of GDP) not oriented towards innovative products and services
- Member States invited to set procurement budgets for innovation, with EC technical/ financial support

Openness and creative potential

- Growing importance of open innovation
- Dormant knowledge and intellectual property
- Open access to become default principle for publications from EU Research FPs
- Ongoing Development of European knowledge market based on national experiences (e.g. patent pools)

Social and territorial cohesion

- Avoid an « innovation divide »
- Make best use of € 86 BL Structural Funds earmarked for R&I until 2013
- Member States / regions invited to use Structural Funds within S3 platform (dal 2011)
- Social innovation pilot programme (dal 2011)

European Innovation Partnerships & International cooperation

Innovation Union Information System

Semestre Europeo
Roadmap (1)

Ciclo annuale di coordinamento delle politiche economiche detto "semestre europeo".

Analisi dettagliata dei programmi di riforme strutturali ed economiche di ciascun paese dell'UE e rivolge loro delle raccomandazioni per i successivi 12-18 mesi.

Il semestre europeo inizia con l'adozione da parte della Commissione, di solito verso la fine dell'anno, dell'analisi annuale della crescita (AGS), che definisce le priorità per l'anno successivo in materia di promozione della crescita e dell'occupazione.

A **marzo**, sulla base dell'analisi annuale della crescita, i capi di Stato e di governo definiscono gli orientamenti dell'UE per le politiche nazionali. Partendo dalla stessa analisi, nel vertice di primavera il Consiglio europeo fa il punto su:
la situazione macroeconomica generale
i progressi registrati per conseguire i 5 obiettivi quantitativi dell'UE
i passi avanti compiuti nell'ambito delle iniziative prioritarie della strategia.
Elabora inoltre orientamenti strategici su aspetti macroeconomici, di bilancio e riguardanti le riforme strutturali e le misure di stimolo alla crescita.

Semestre Europeo
Roadmap (2)

Ad **aprile** gli Stati membri presentano i loro piani per il risanamento delle finanze pubbliche (programmi di stabilità o convergenza) e le riforme e misure che intendono adottare per conseguire una crescita intelligente, sostenibile e solidale (programmi nazionali di riforma).

A **maggio/giugno** la Commissione valuta questi programmi e rivolge a ciascun paese una serie di raccomandazioni. Il Consiglio discute e il Consiglio europeo approva tali raccomandazioni. Ciò significa che le indicazioni strategiche vengono fornite agli Stati membri prima che inizino ad ultimare i loro bilanci preventivi per l'anno successivo.

Infine, **alla fine di giugno o all'inizio di luglio** il Consiglio adotta formalmente le raccomandazioni rivolte ai singoli paesi europei.

Per l'Italia, (1) rientro dal debito, (2) efficienza della spesa pubblica, (3) dualismo nel mercato del lavoro (giovani, skills, donne), (4) lotta all'evasione fiscale, (5) tassazione più equilibrata, (6) migliori *framework conditions*

TREND RECENTI

INNOVAZIONE
GOVERNANCE
CRESCITA

Cohesion report

Art. 175 TFEU

- « The Commission shall submit a report to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions every three years on the progress made towards achieving economic, social and territorial cohesion and on the manner in which the various means provided for in this Article have contributed to it. This report shall, if necessary, be accompanied by appropriate proposals.”

- Cohesion reports are complemented by yearly Progress reports (thematic approach – e.g. the territorial dimension of Europe 2020).

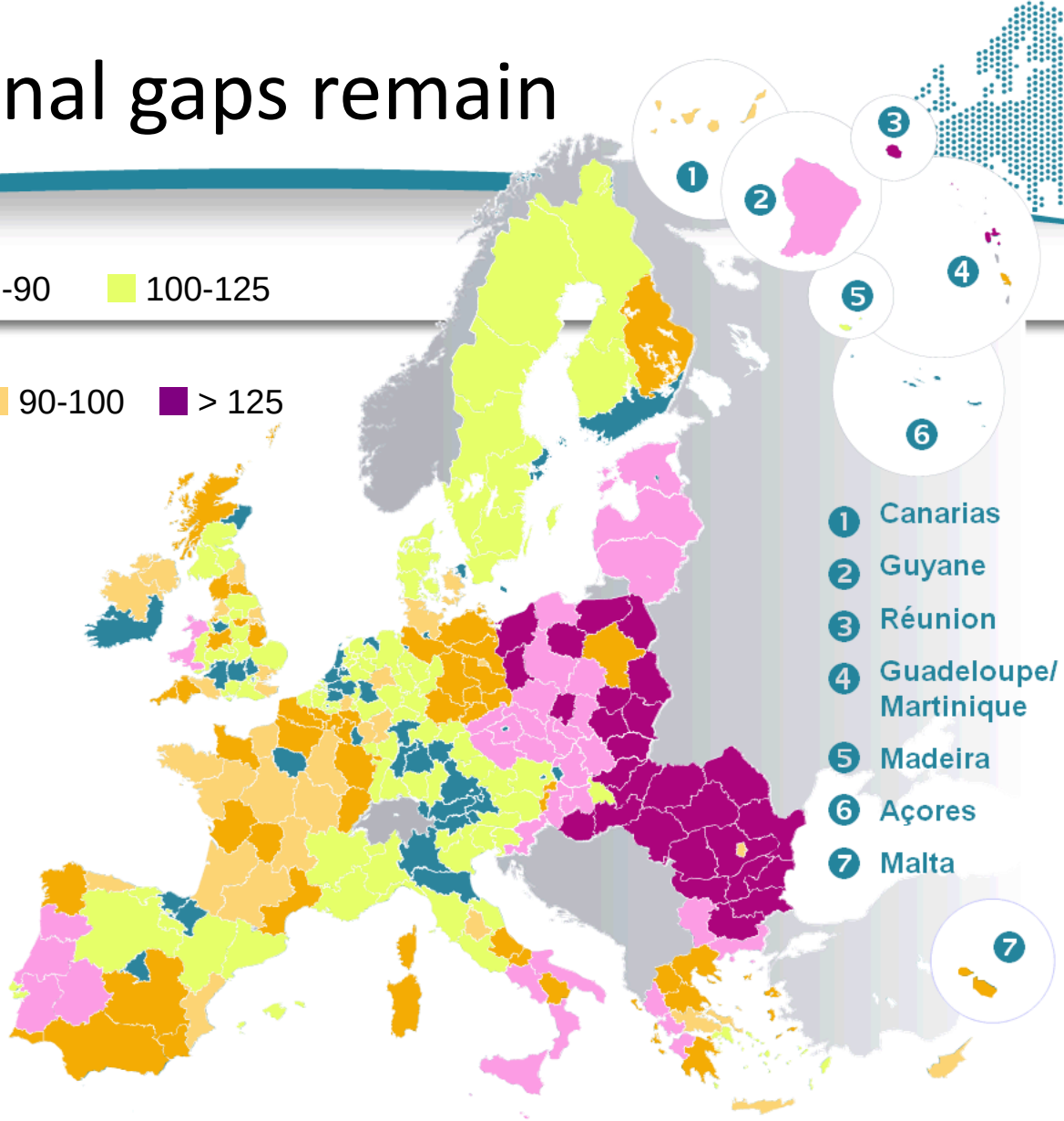
Regional gaps remain

GDP/capita* < 50 75-90 100-125

*index EU27=100 50-75 90-100 > 125

Average 2006-2008

3 Categories of Regions for Eligibility



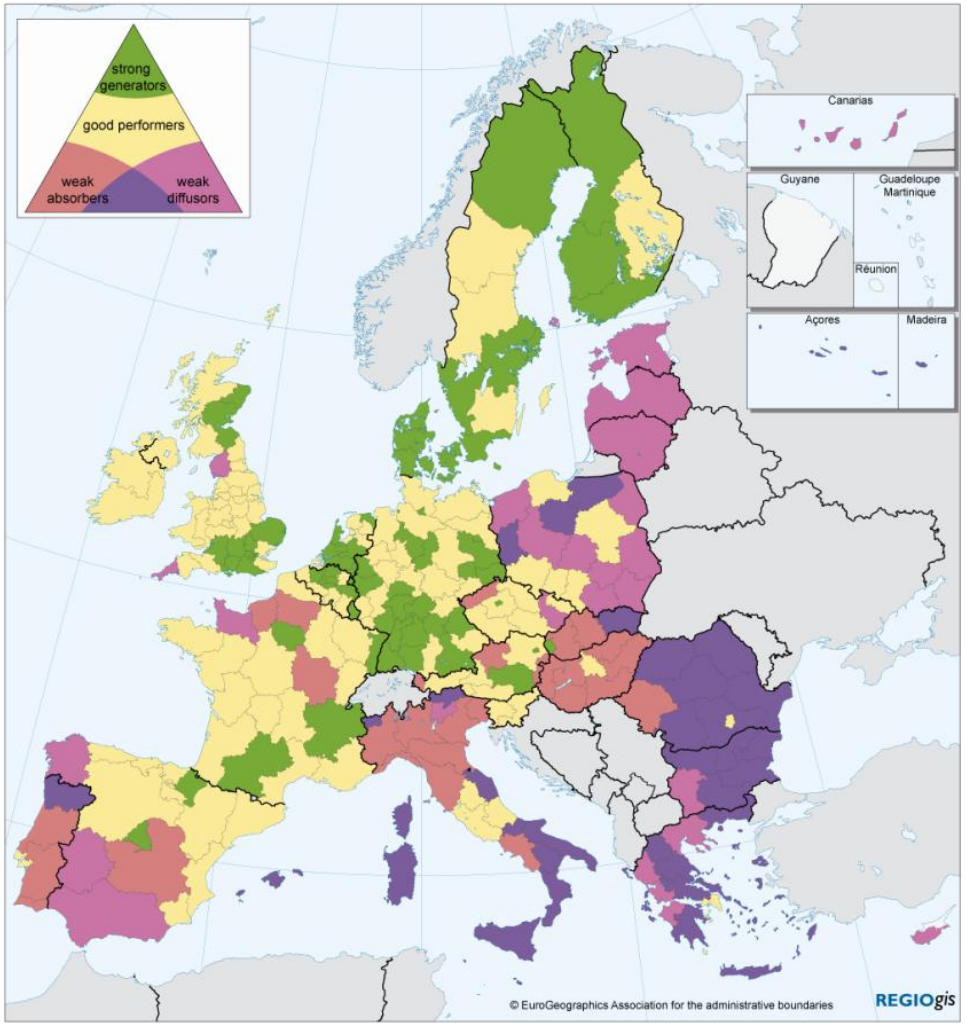
Regional GDP figures: 2006-07-08

Innovation potential & performance

- Generators should promote global cutting edge research
- Weak diffusers should invest in access to knowledge and technology
- Weak absorbers need to improve secondary and tertiary educations (both quality and quantity)

Source: 5th Report on economic, social & territorial cohesion

Regional innovation potential



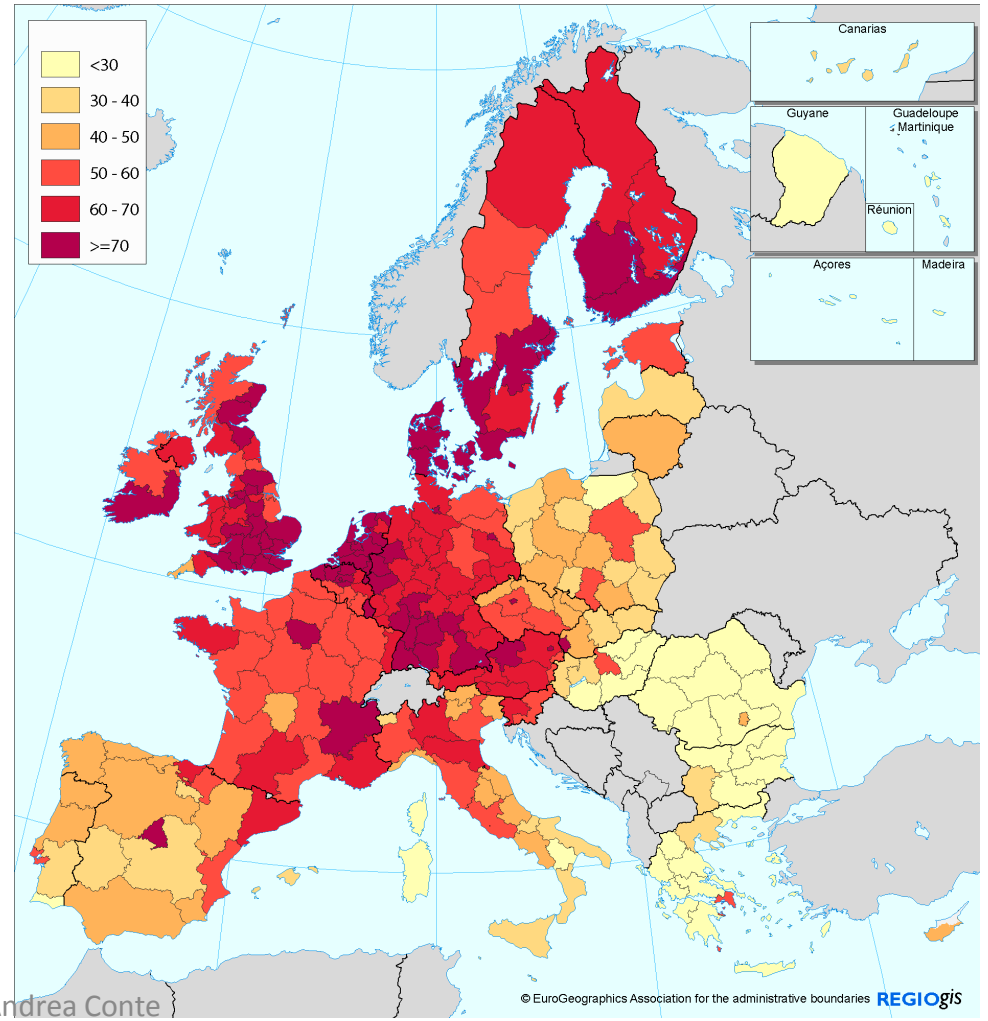
Competitive European Regions

- Focus in less developed regions:
  - Institutions
  - Quality of basic education
  - Basic infrastructure and
  - Health
- Focus in highly developed regions:
  - Business sophistication
  - Technology and innovation
- Focus in all regions
  - Higher education & training
  - Equal opportunities
  - Access to markets

Source: 5th Report on economic, social & territorial cohesion

Competitiveness Index, 2010

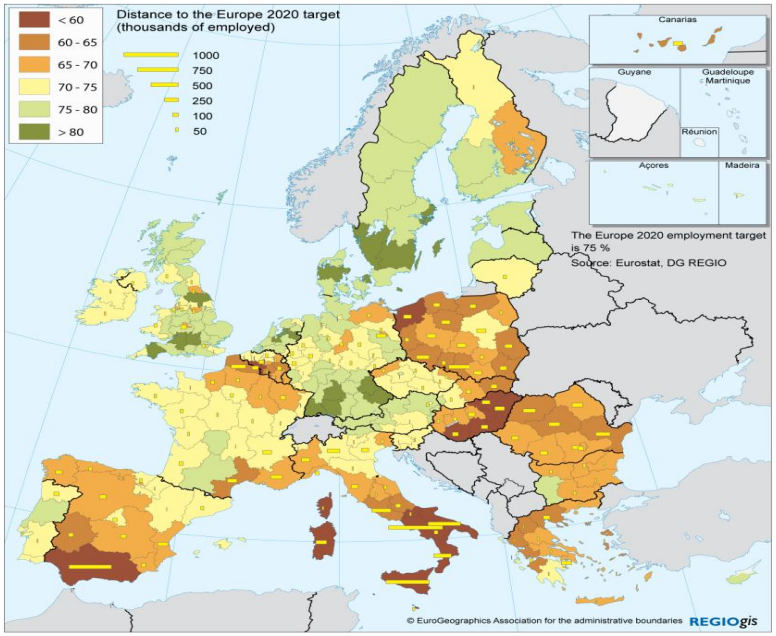
Index - Values range between 0 (low) and 100 (high)



More competitiveness can increases employment and GDP

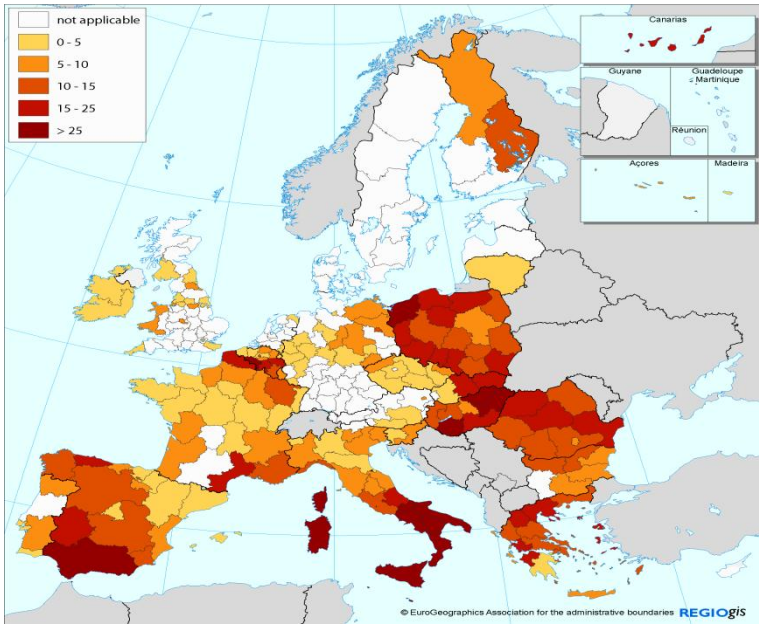
Employment rate aged 20-64 in 2008 and distance to the Europe 2020 target

Employment rate % of population 20-64



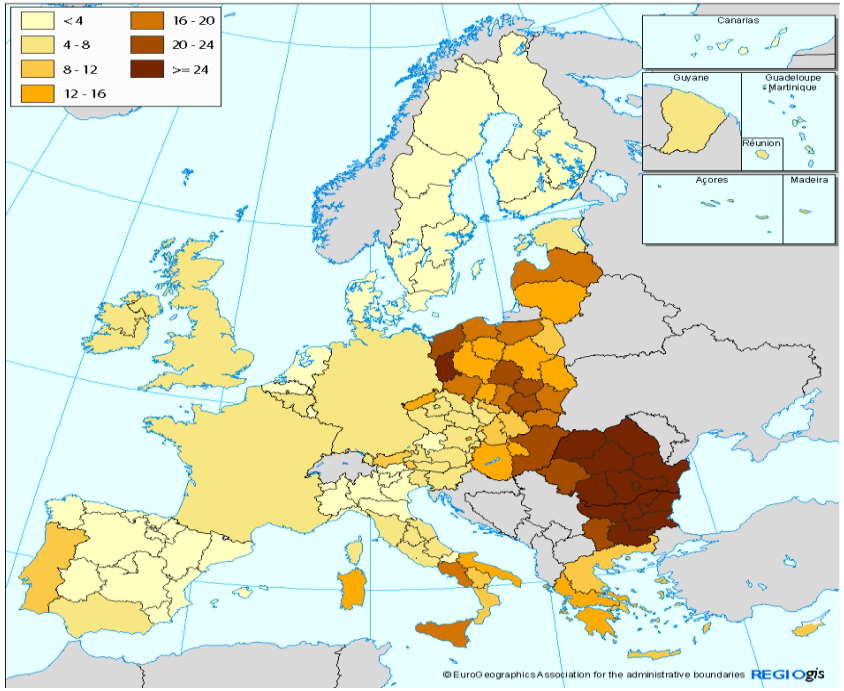
Potential increase in GDP per head from raising employment rate, 20-64, to 75%, 2007

Percentage change

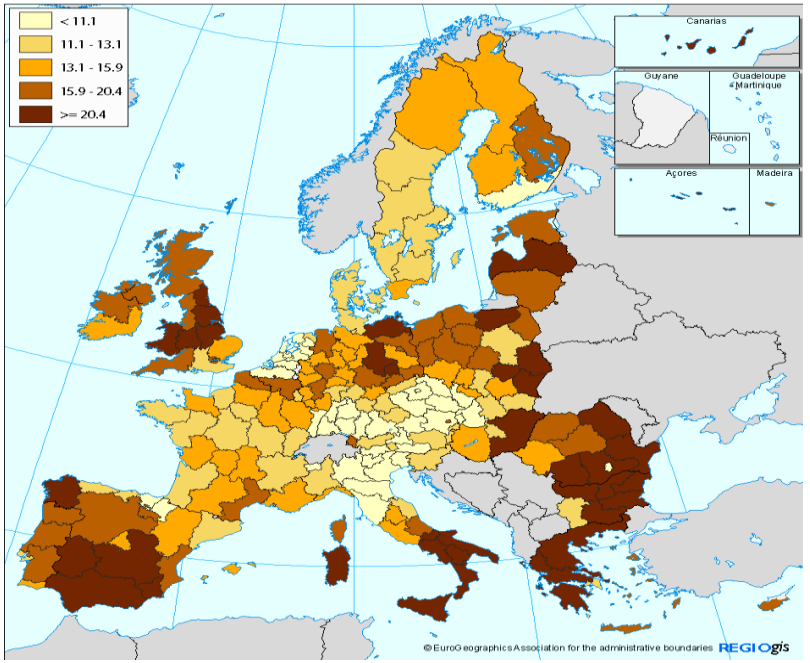


Poverty and deprivation have a strong regional dimension

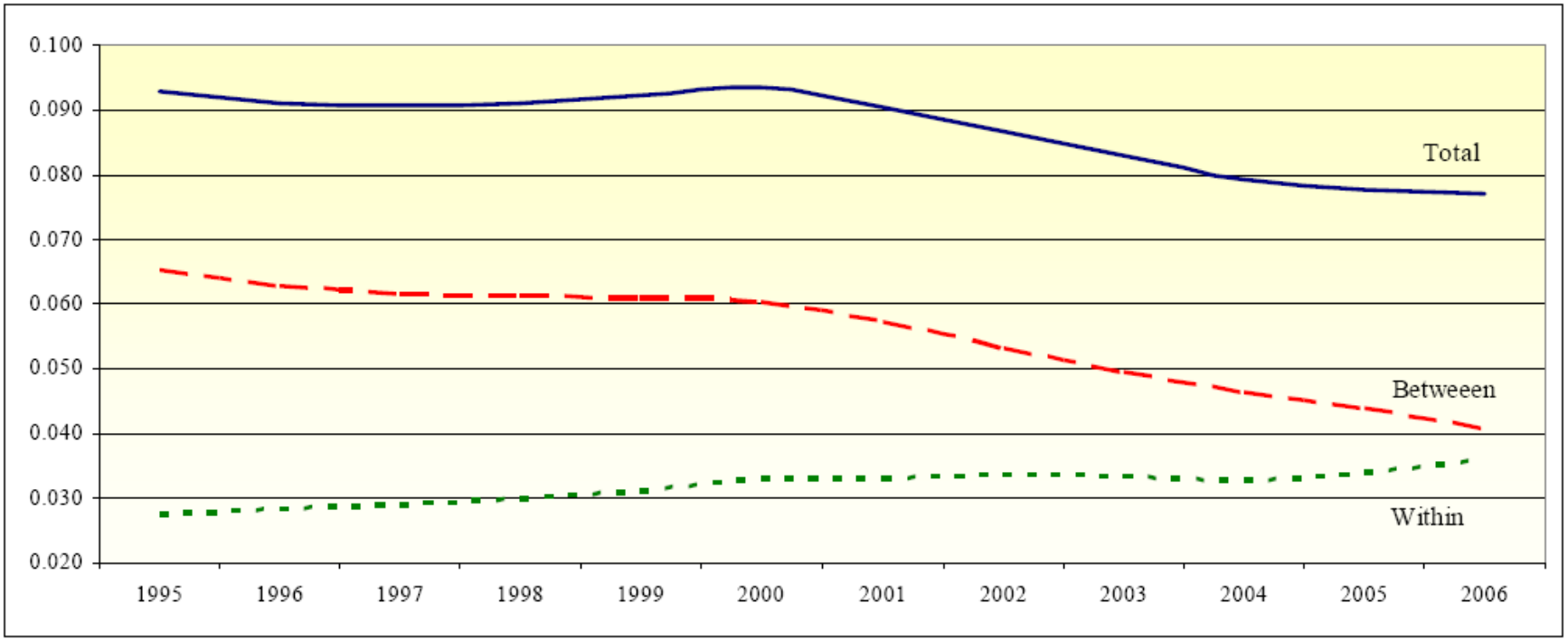
Severe material deprivation rate, 2008
in % of population



At-risk-of-poverty rate after social transfers (below 60% of national median), 2008
in % of total population

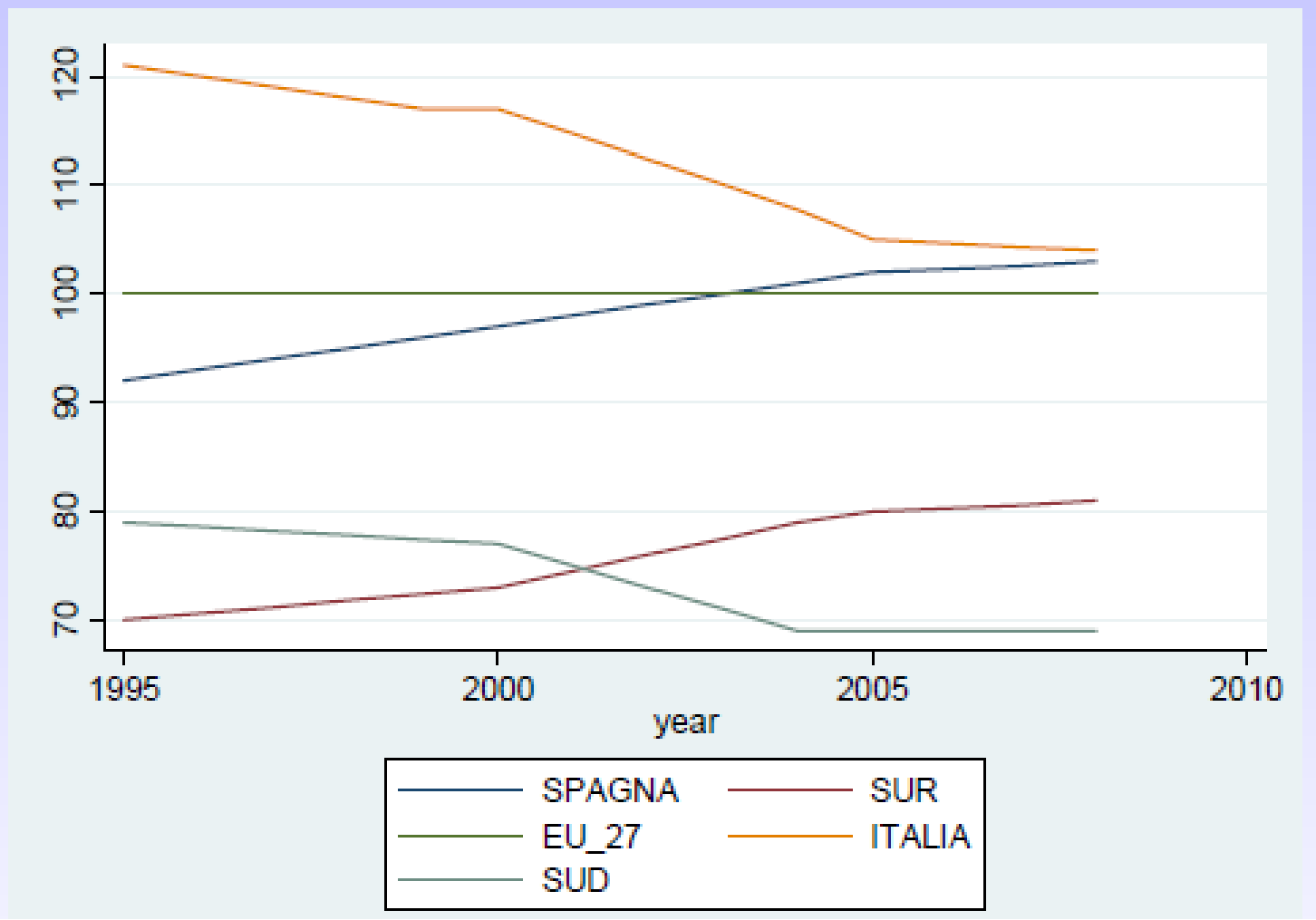


Regional per capita GDP dispersion for the whole EU in 1995-2006
BTW-WTH country Theil index

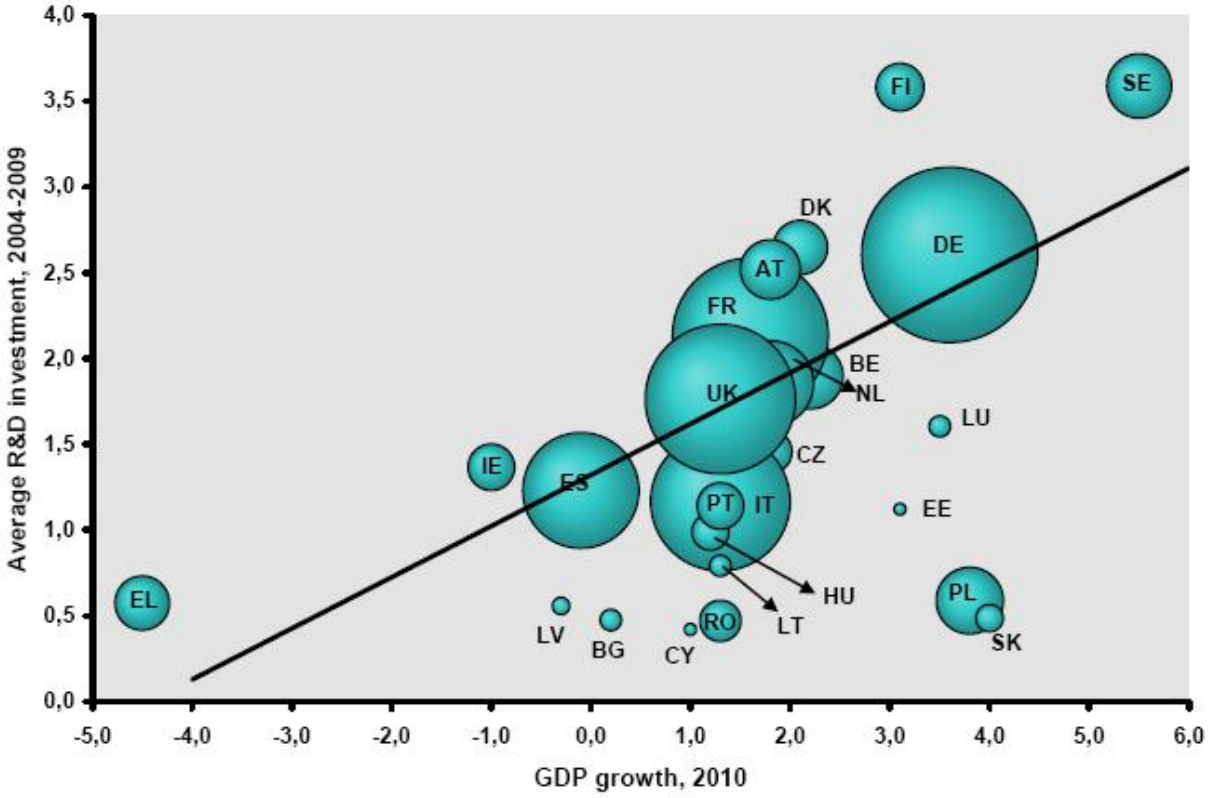


Source: Eurostat database. DG REGIO calculation.

Pre-crisis per capita GDP evolution in PPP (1995-2008) EU27=100



Source of Recovery

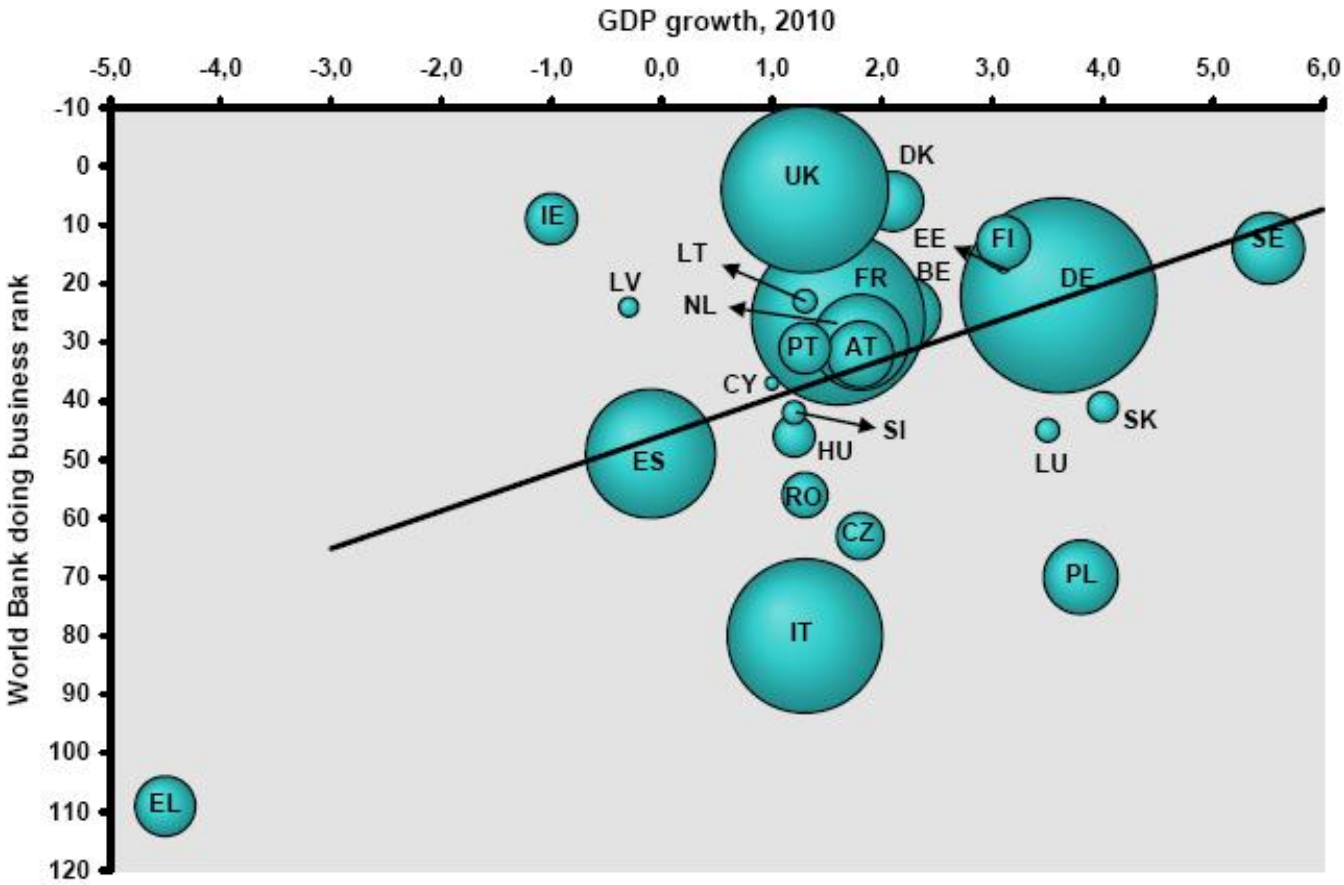


R&D investment and economic recovery

Quantity…

Source: State of Innovation Union Report 2011

Efficiency for Innovation Policy



Business environment and economic recovery

…and quality

Source: State of Innovation Union Report 2011

World Bank
Doing Business (2012)

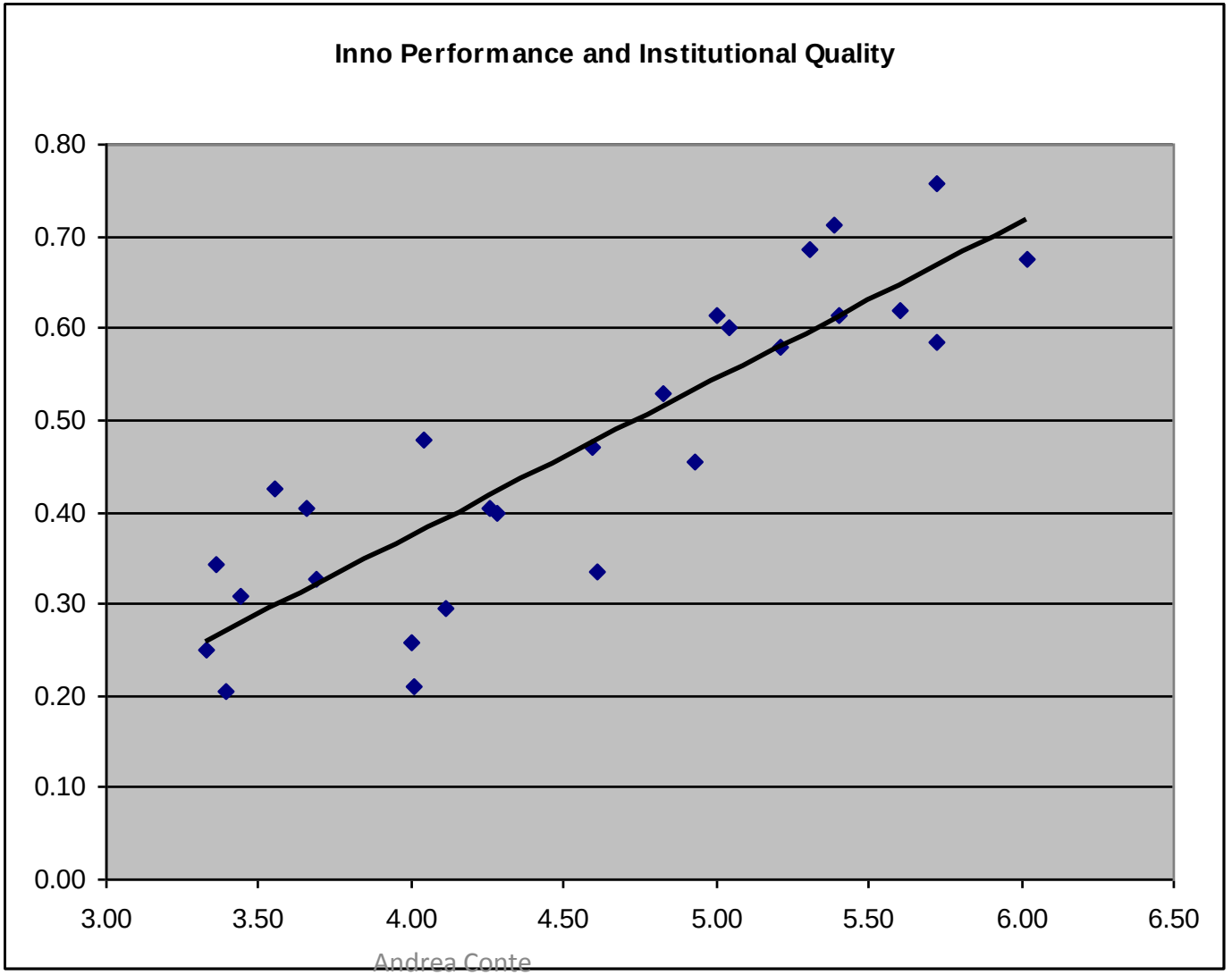
... OECD Product Market Regulation, European Late Payment Index, European Index of Quality of Government and Quality of Regulation

... beyond
(1) a pure spending approach
(2) self-standing innovation policy

(Swiss case)

Doing Business	2012	2011	Var.
TOT	87	83	-4
Starting a Business	77	67	-10
Dealing with Construction Permits	96	93	-3
Getting Electricity	109	108	-1
Registering Property	84	82	-2
Getting Credit	98	96	-2
Protecting Investors	65	60	-5
Paying Taxes	134	131	-3
Trading Across Borders	63	63	0
Enforcing Contracts	158	158	0
Resolving Insolvency	30	30	0

Governance Data from ***World Economic Forum*** *Innovation Performance from* ***European Innovation Scoreboard***



Efficiency Results - SFA

5 Top Performing Countries					
	Patents		Business Patents		Publications
Sweden	1.00	United States	1.00	Switzerland	1.00
Switzerland	0.94	Japan	1.00	Denmark	0.86
Austria	0.92	Sweden	0.99	United Kingdom	0.82
Finland	0.91	United Kingdom	0.99	Norway	0.76
United States	0.90	Finland	0.99	Finland	0.76
5 Worst Performing Countries					
	Patents		Business Patents		Publications
Slovakia	0.42	Slovenia	0.71	Lithuania	0.19
Poland	0.29	Latvia	0.68	Malta	0.18
Latvia	0.28	Turkey	0.66	Latvia	0.18
Turkey	0.27	Poland	0.57	Turkey	0.15
Romania	0.20	Romania	0.50	Romania	0.15

Source: Conte *et al.*, 2009, "An Analysis of the Efficiency of Public Spending and National Policies in the Area of R&D ", ECFIN Paper 54

Questions on 'Quality of Services'

4. *'How would you rate the quality of public education in your area?' (0-10)*
5. *'How would you rate the quality of the public health care system in your area?'*
6. *'How would you rate the quality of the police force in your area?'*

Questions on 'Impartiality of Services'

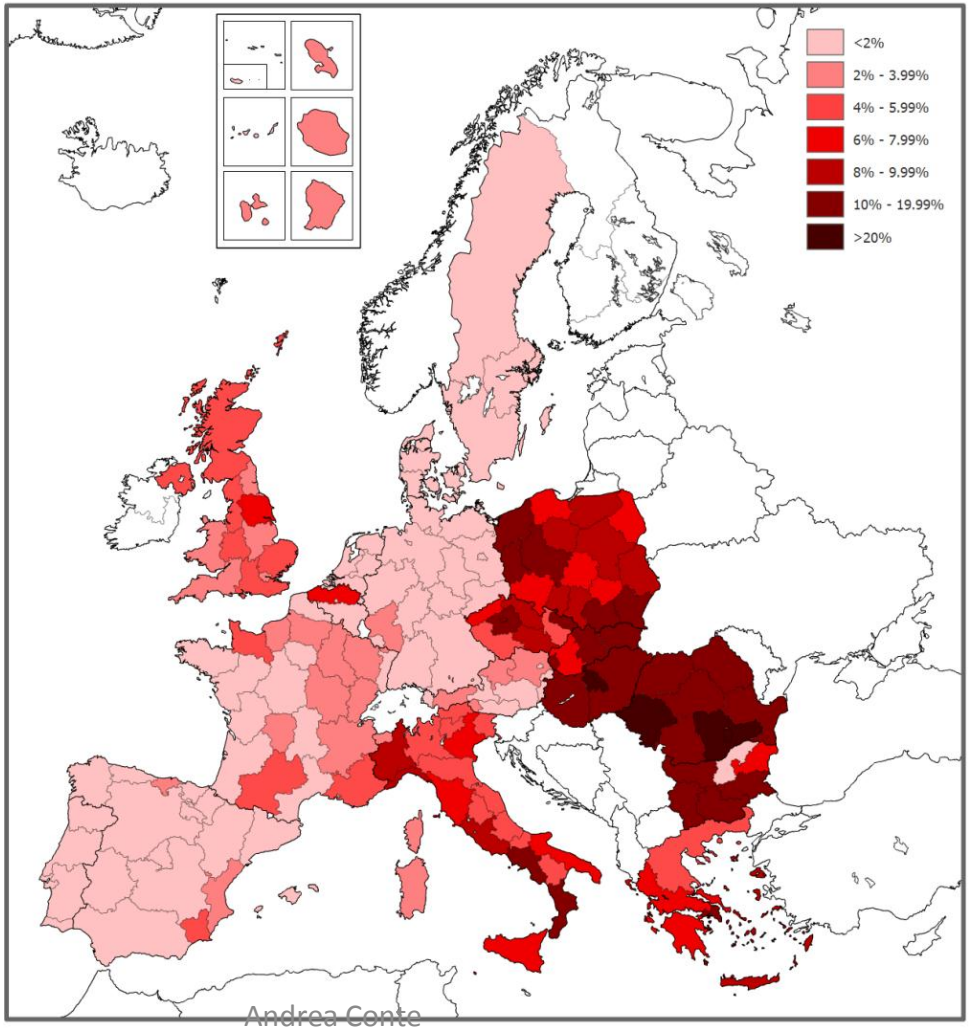
7. *"Certain people are given special advantages in the public education system in my area." (0-10)*
8. *"Certain people are given special advantages in the public health care system in my area."*
9. *"The police force gives special advantages to certain people in my area."*

10. *"All citizens are treated equally in the public education system in my area" (strongly agree, agree, disagree, strongly disagree)*
11. *"All citizens are treated equally in the public health care system in my area"*
12. *"All citizens are treated equally by the police force in my area"*

Source: QoGvt Institute, University of Gothenburg

Example: results from corruption in health care question

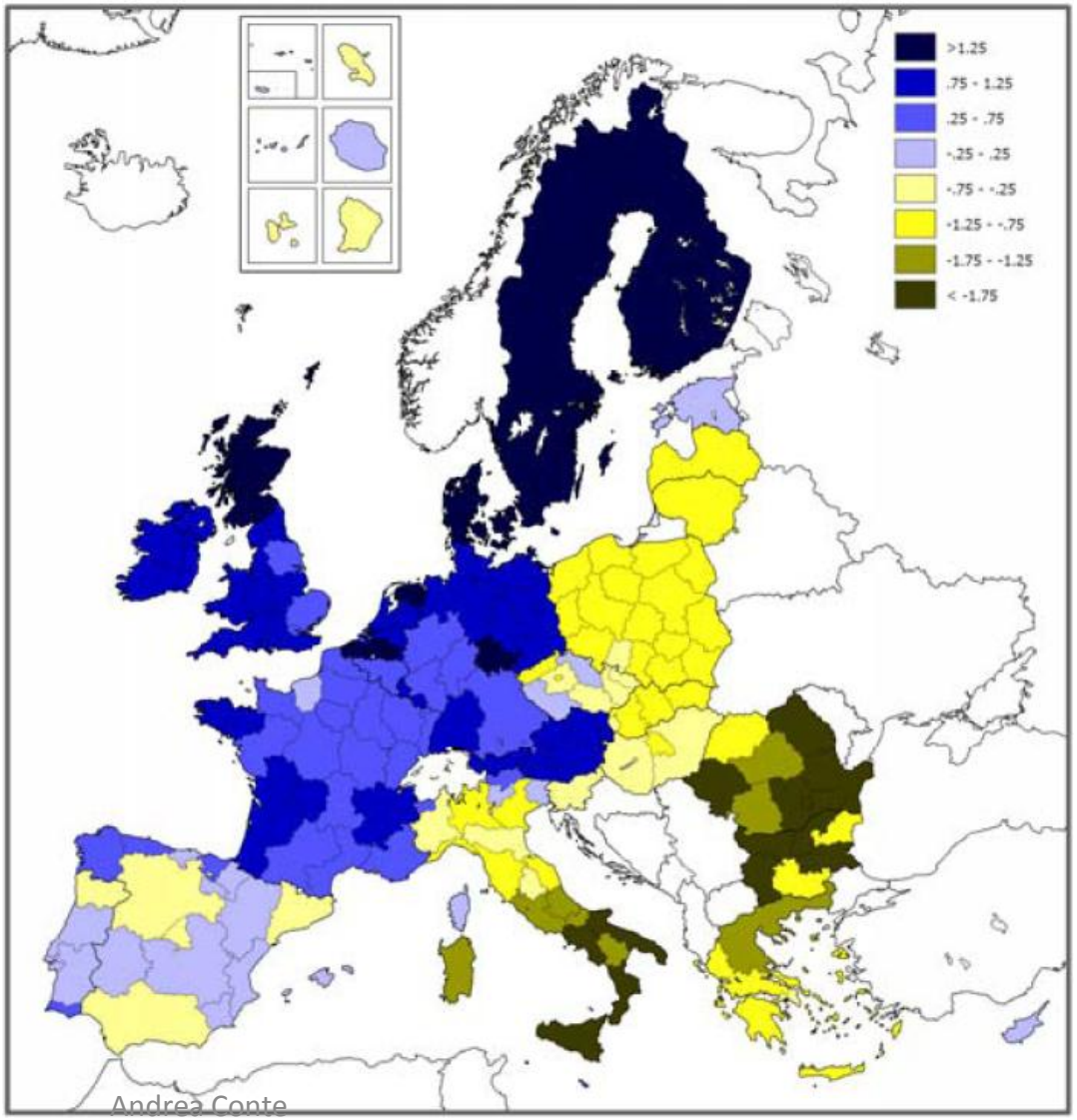
Source: QoGvt Institute, University of Gothenburg



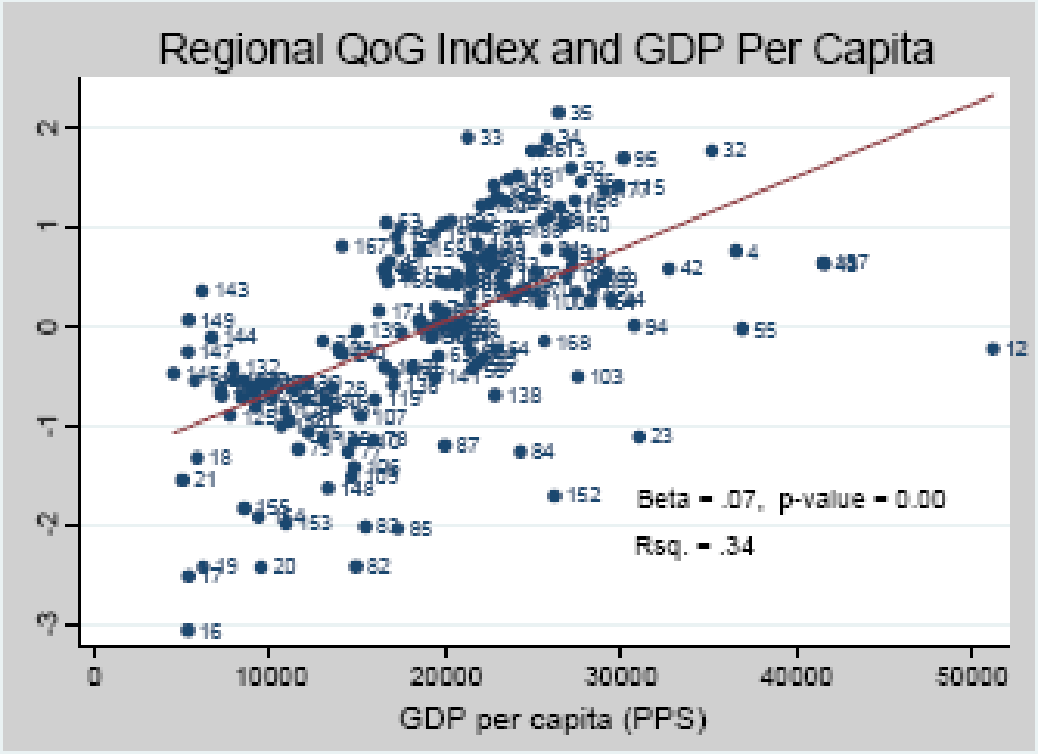
Quality of Gvt. Index

Rule of Law Corruption
Government effectiveness
Voice & Accountability

Source: QoGvt Institute, University of Gothenburg



Quality of Regional Policy



- Smart Specialization Strategies
- Institutional and other structural bottlenecks

Source: "Measuring the Quality of Government and Subnational Variation", QoG Institute, University of Gothenburg, Sweden

Competitive Teaming of Excellence

Could there be an Oxford University in southern Italy? Under the new proposal, host regions would have to assure their elite partners of a safe regulatory environment.

http://www.nature.com/news/european-ministers-back-research-buddy-plan-1.12080