# The Baltic **regional** higher educational institutions for territorial cohesion

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# Focus & main questions

- Estonian science & innovation evaluation programme → subtheme 4.5:
- **The role of regional HEIs in local/regional development**
  - to describe the role of non-metropolitan higher educational institutions (HEI) in the framework of the Regional Innovation System (RIS),
  - in parallel with other regional knowledge institutions (KI): R&D units, business advisory services (BAS),
  - and their interaction with local/regional authorities and business organizations.

# What are regional HEIs, what tasks they perform?

- *Located outside traditional university centres*
- *Main tasks:*
  - *knowledge transfer*
    - *through education* and human resources development
  - *knowledge creation*
    - through research and technology transfer
    - **innovation**
  - ***cultural and community development***

*OECD 2007*

# Outline

- Focus & main questions
- Theoretical background
- Baltic & Nordic comparison
- Some micro-level evidences
  - Possibilities for smart regional specialisation
- Recommendations for further ESPON research, spatial policy-making, governance and territorial cohesion

# Theoretical foundations

- evolutionary economic geography
- path dependency (Nelson & Winter 1982)
- national innovation systems (Lundvall 1992)
- social networks (Camagni 1995)
- lock-ins (Liebowitz et al. 1995)
- learning region (Morgan 1997)
- triple helix (Etzkowitz 1997)
- RIS (Cooke et al 1998)
- knowledge spillovers (Jaffe 1989)

# Cont...

- co-evolution (Murmann 2003)
- local ‘sticky’ and global ‘ubiquitous’ knowledge (Asheim & Isaksen 2002)
- local buzz & global pipeline (Bathelt, Malmberg and Maskell 2004)
- organizational proximity (Boschma 2005)
- related variety (Frenken et al 2007)
- cluster life cycles (Bergman 2007)
- Regional resilience (Martin, Pendall ... 2010)
- institutional environment (Hassink 2010)
- geographical proximity (Graf 2010)
- smart specialisation (Foray, McCann 2011)

# R&D ≠ Innovation

- High investment to the R&D does not guarantee innovation and development of the regions (Capella 2011)
  - Tartu case: bioscience versus software
- Geography matters: knowledge and new values take roots in close interaction of PEOPLE not between institutions
  - The importance of CLOSE life long learning
  - Where is the reasonable dividing line on the geographical scale???

# R&D versus broadly based innovation policy

***'One size does not fit all!'***

*Tödtling & Tripple 2005*

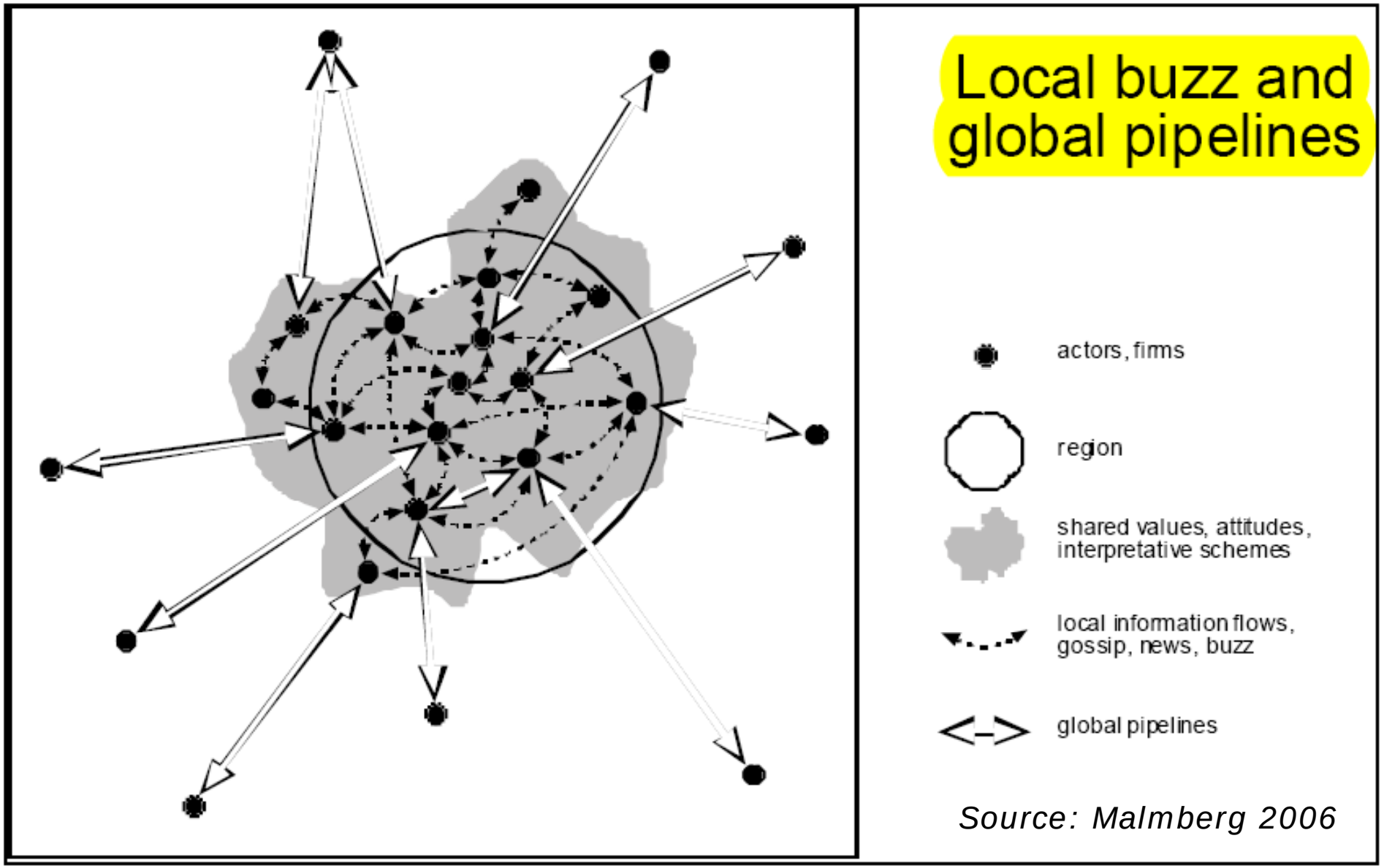
***STI** (Science, Technology, Innovation)*

- high-tech / science push / supply driven
- → "Big science" & Transnational corporations

***DUI** (Doing, Using, Interacting)*

- Competence building / organisational innovations / social innovations / market - demand - user driven
- Broadly based innovation policy
  - → **Regional HEIs** *Lorenz & Lundvall 2006*

# The role of regional HEI / KI



# NEW MANTRA from the EC
# Smart specialisation (SS)

- SS is expected to create more diversity among regions than a regime in which each region tries to create more or less the same strengths in an imitative manner

  *David, Foray, Hall 2009*

- 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)

  *McCann 2011*

# Conclusions from ESPON for a ‘smart specialisation’

- The geography of innovation is much more complex that a core-periphery model
- The preconditions for knowledge creation, for turning knowledge into innovation, and for turning innovation into growth are all **embedded in the territorial culture of each region**
- This means that each region follows its own path in performing the different abstract phases of the innovation process, depending on the context conditions: its **own ‘pattern of innovation**

*(Source: ESPON/KIT, Capella 2012)*

# The dilemma of regional HEIs in policy making

- two controversial opinions about HEIs outside old university centres:
  - wasting resources (ITPS 2004 Deschryvere, 2009)
  - regional economy needs HEIs for economic restructuring (OECD 2007, Nordregio 2009)
- direct effects that universities may have on regional development are difficult to measure or prove (ITPS 2004)
  - → **message to ESPON**

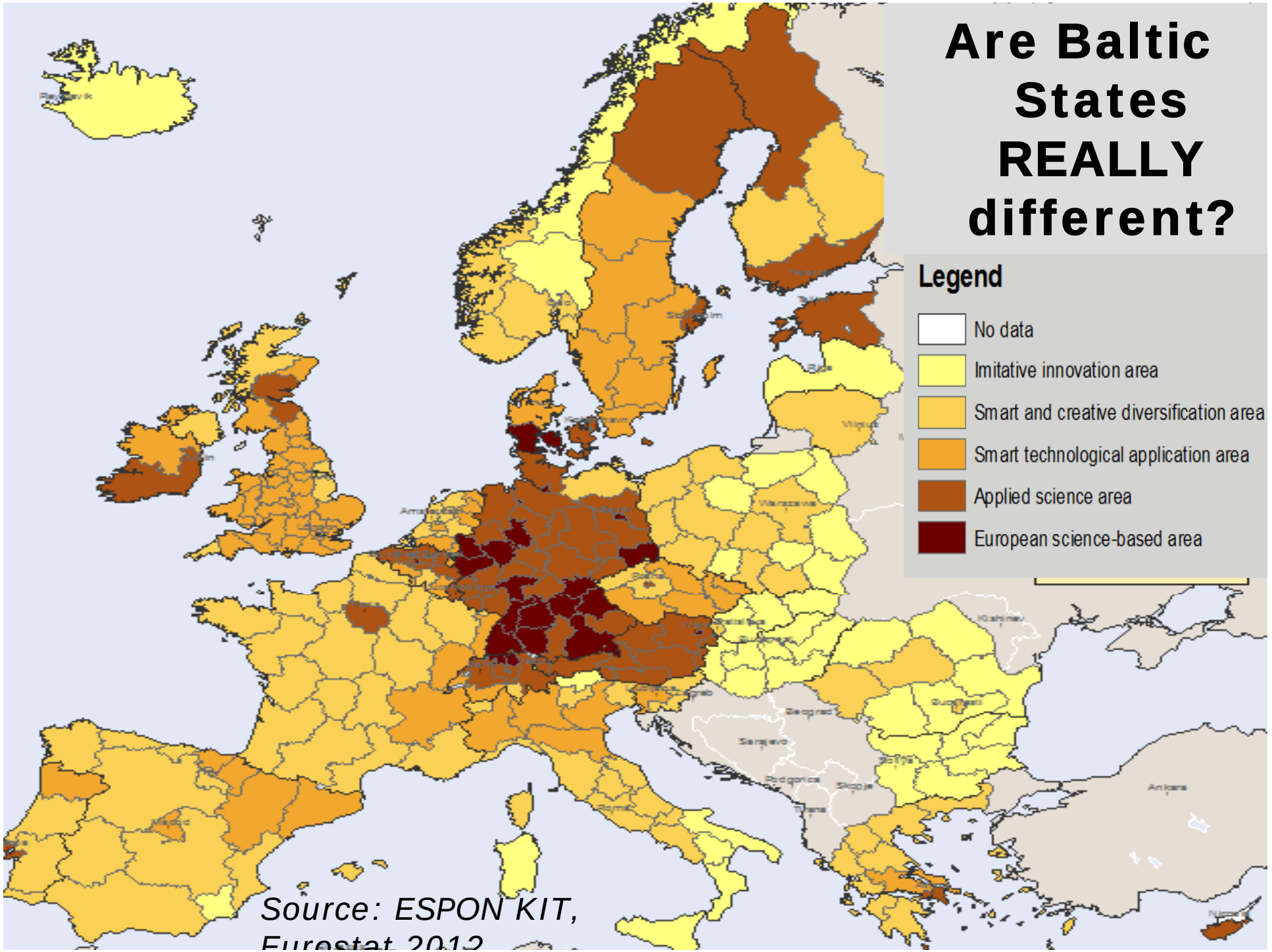
# Macro level studies have conflicting results

- resources allocated to universities do not have influence on the specialization of companies. **The relationship between expenses for education and research and knowledge-intensive businesses** is non-existent in regions with less than one million inhabitants (ITPS 2004)
- universities may be important drivers pushing forward regional development, since a **regional centre with a university is better off** in respect of occupational and demographic development than a regional centre that lacks such a facility (Hanell & Neubauer 2006)
- **→ message to ESPON → go to the micro level**

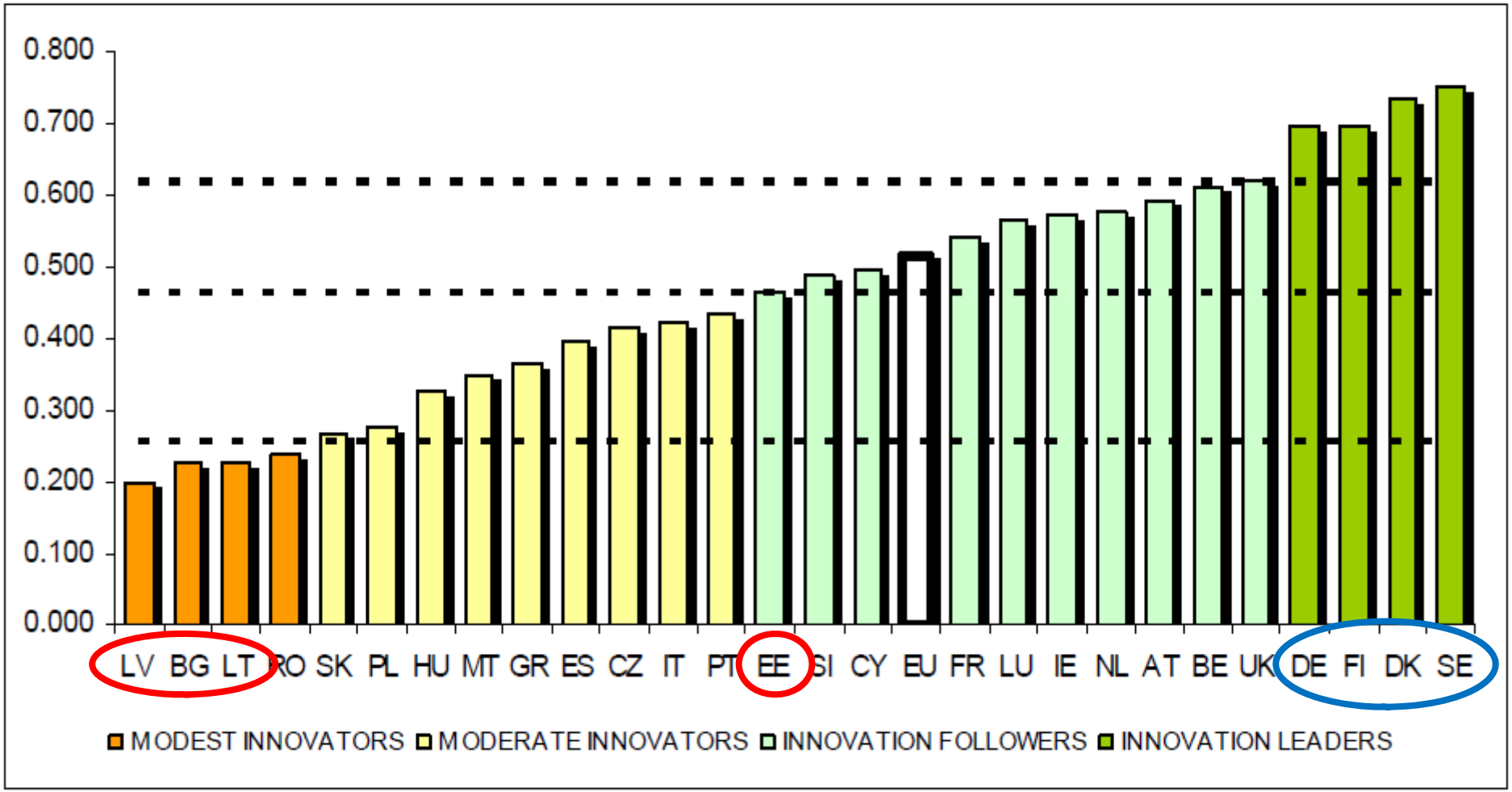
# The Baltic States comparison & with the Nordic Countries

Are the Baltic States really different?

So soon?

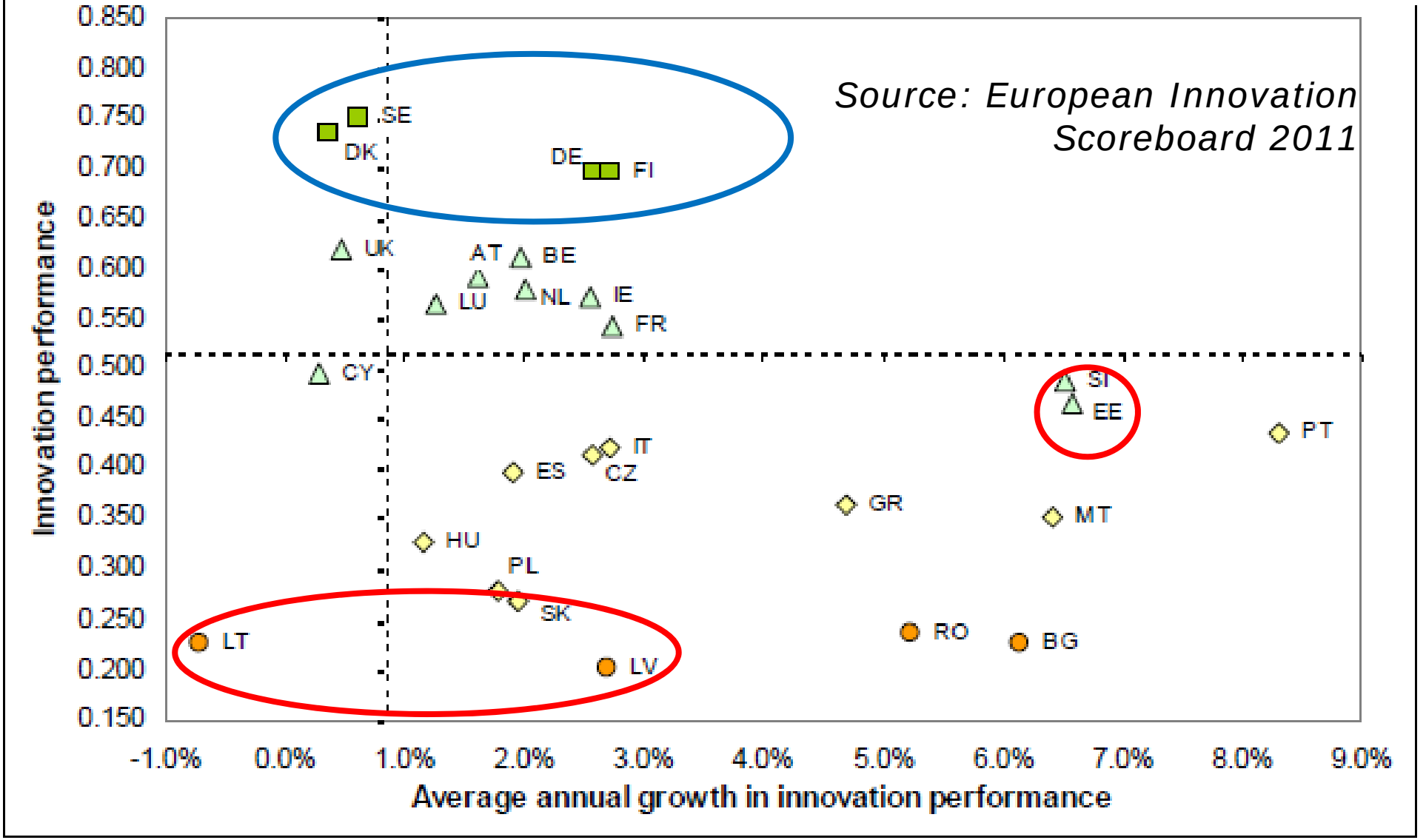

Are Baltic States REALLY different?
Legend
No data
Imitative innovation area
Smart and creative diversification area
Smart technological application area
Applied science area
European science-based area
Source: ESPON KIT, Eurostat 2013

# Differences in Baltic and Nordic Innovation performance

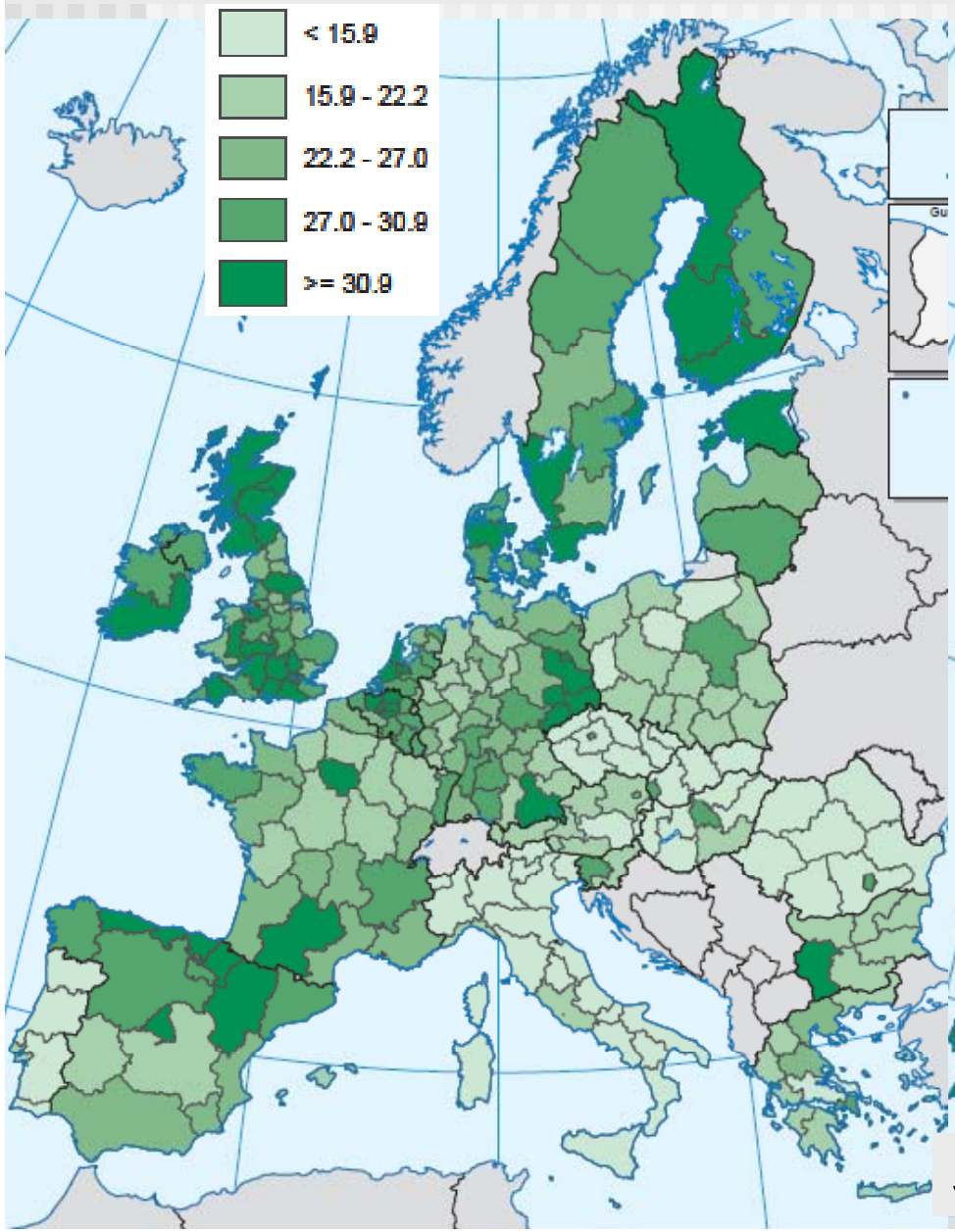


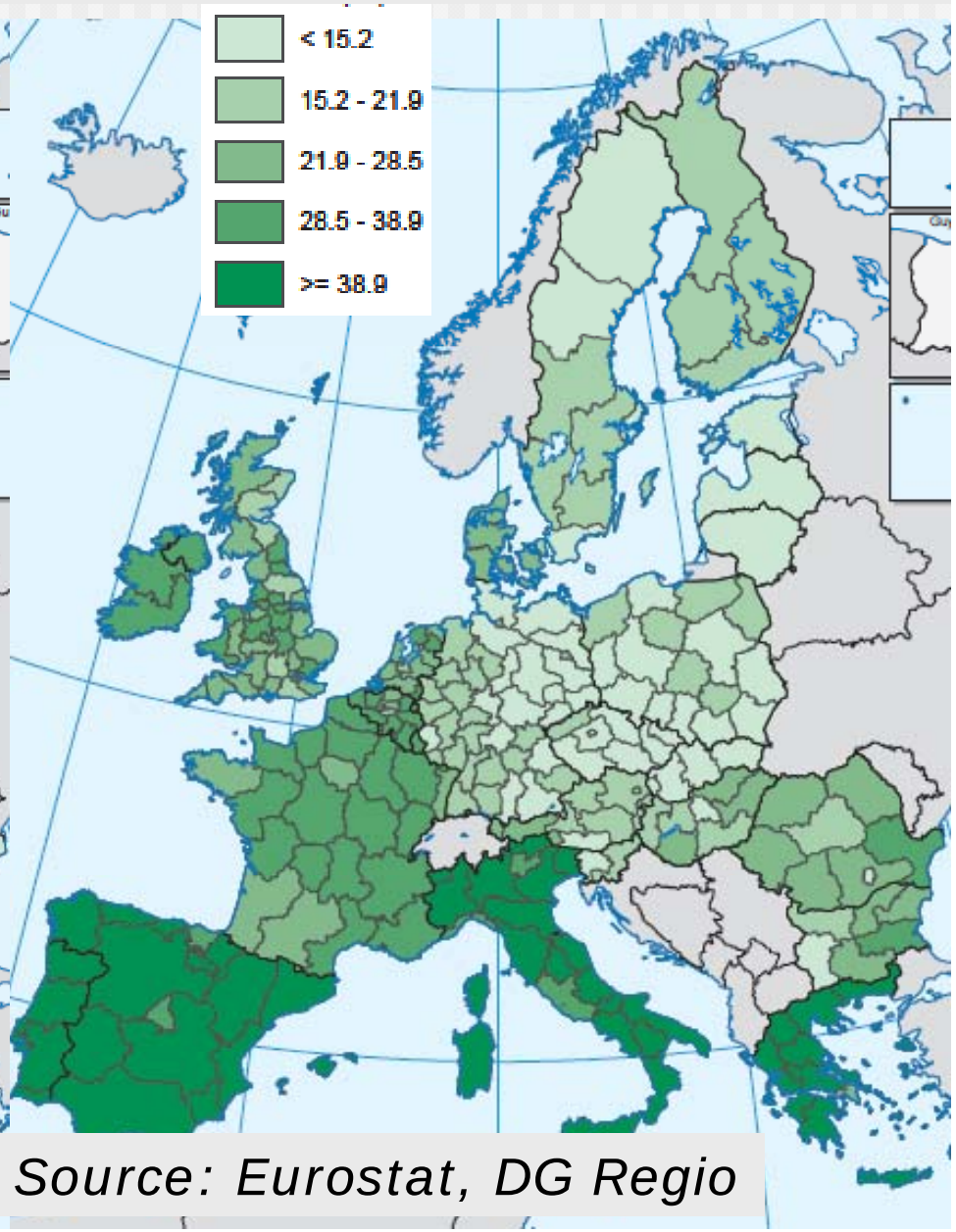

*Source: European Innovation Scoreboard 2011*

# Convergence in innovation performance



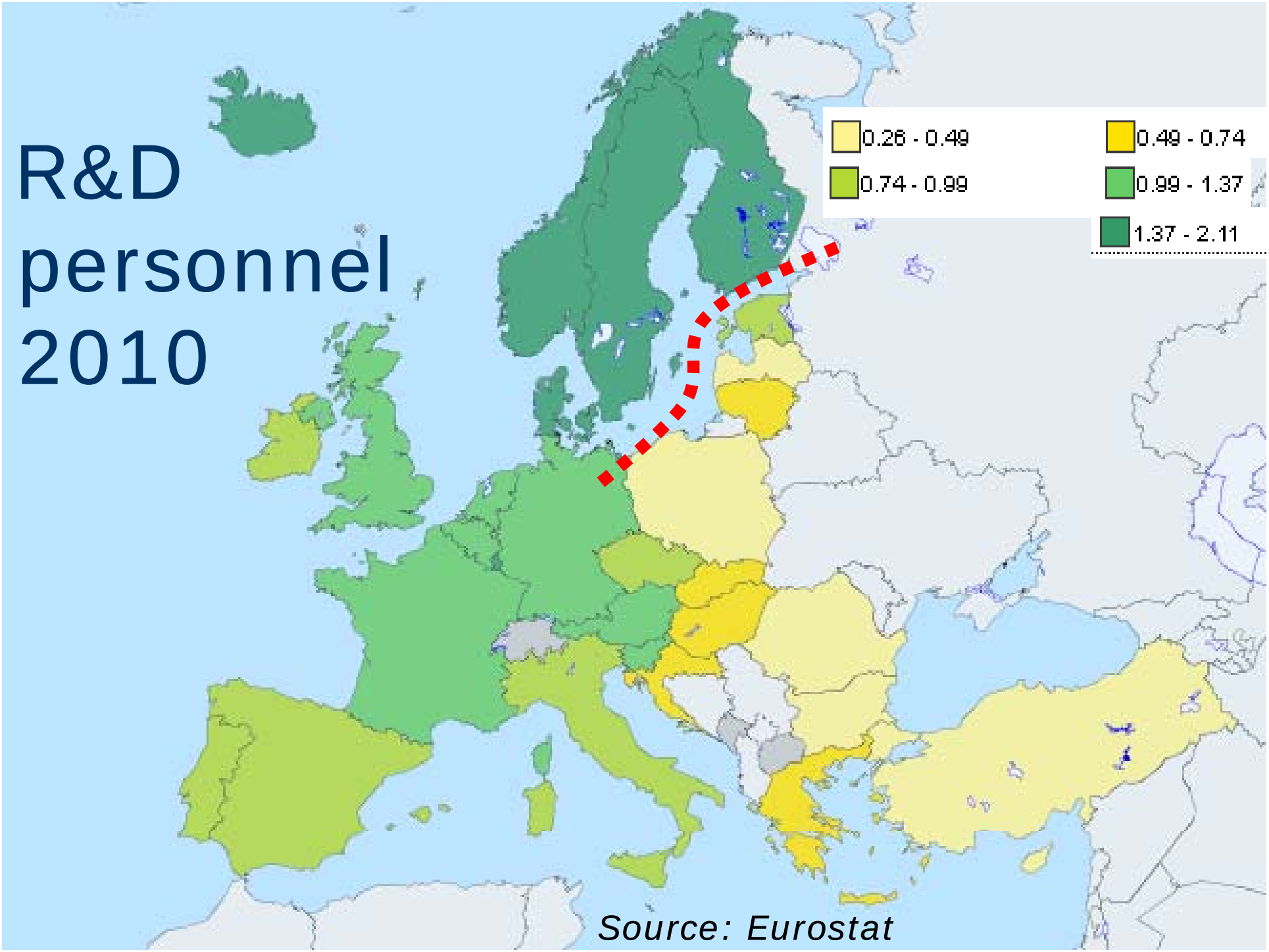
# Higher educated VS elementary % of 25-65



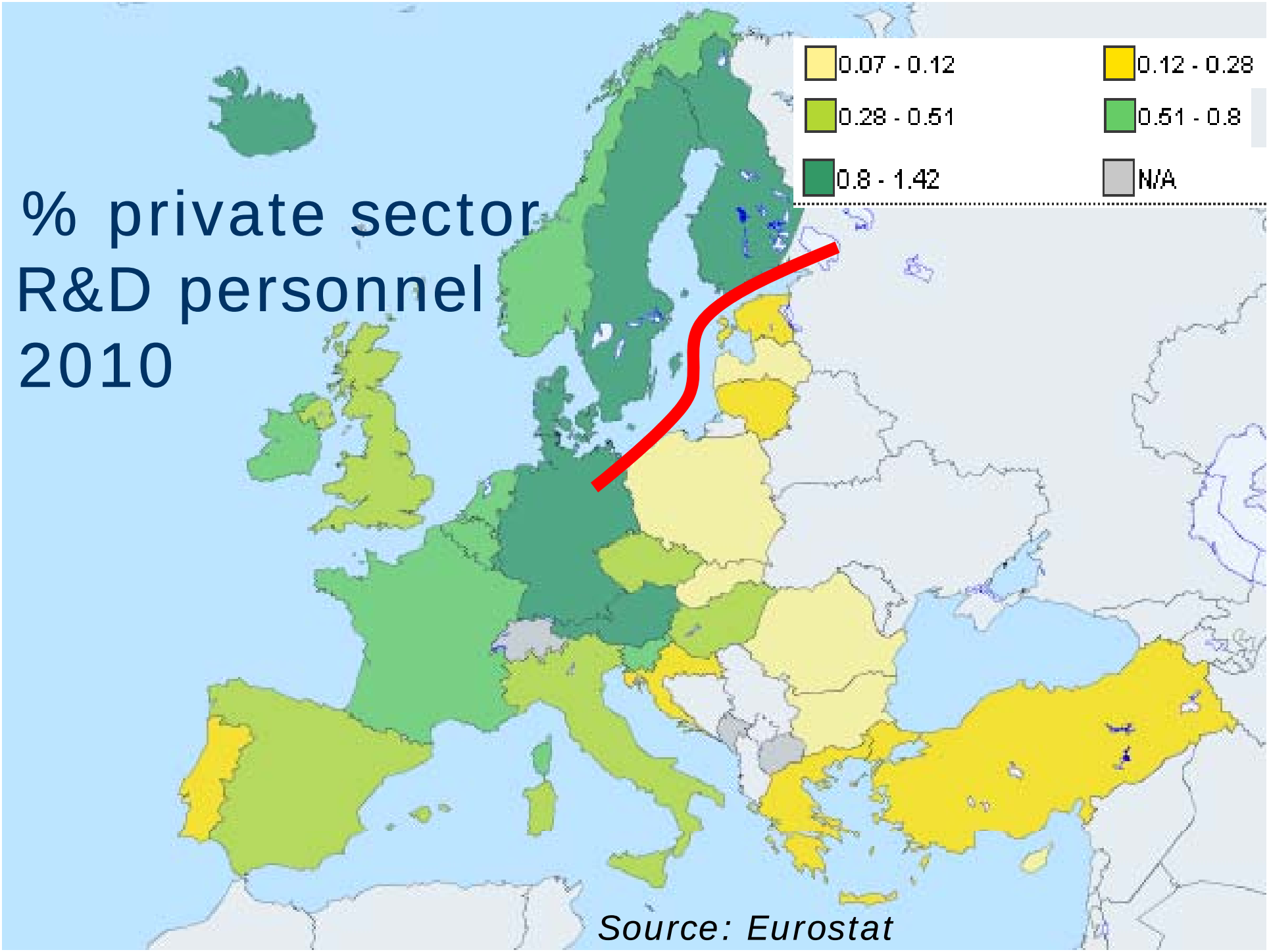




*Source: Eurostat, DG Regio*

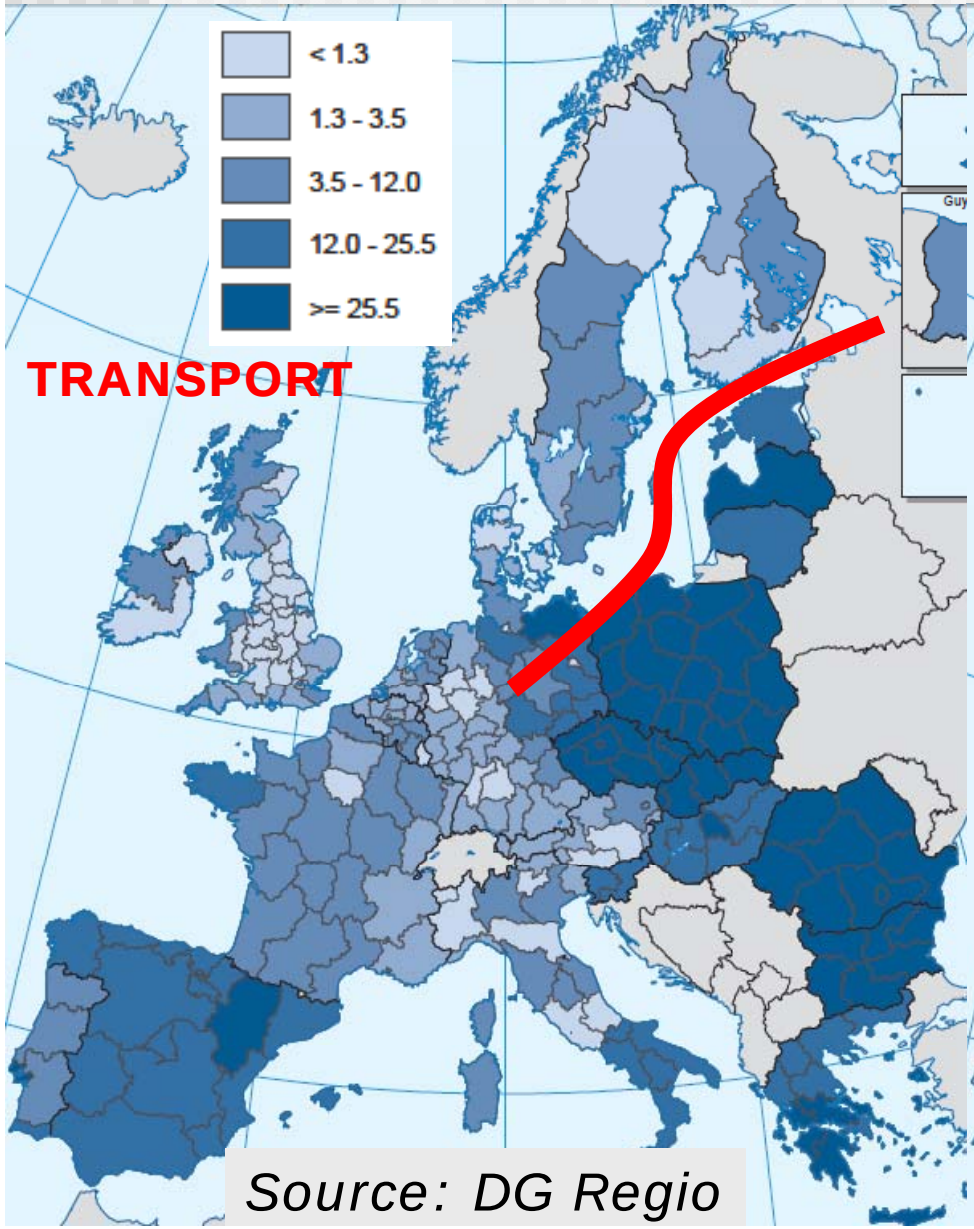
# R&D personnel 2010

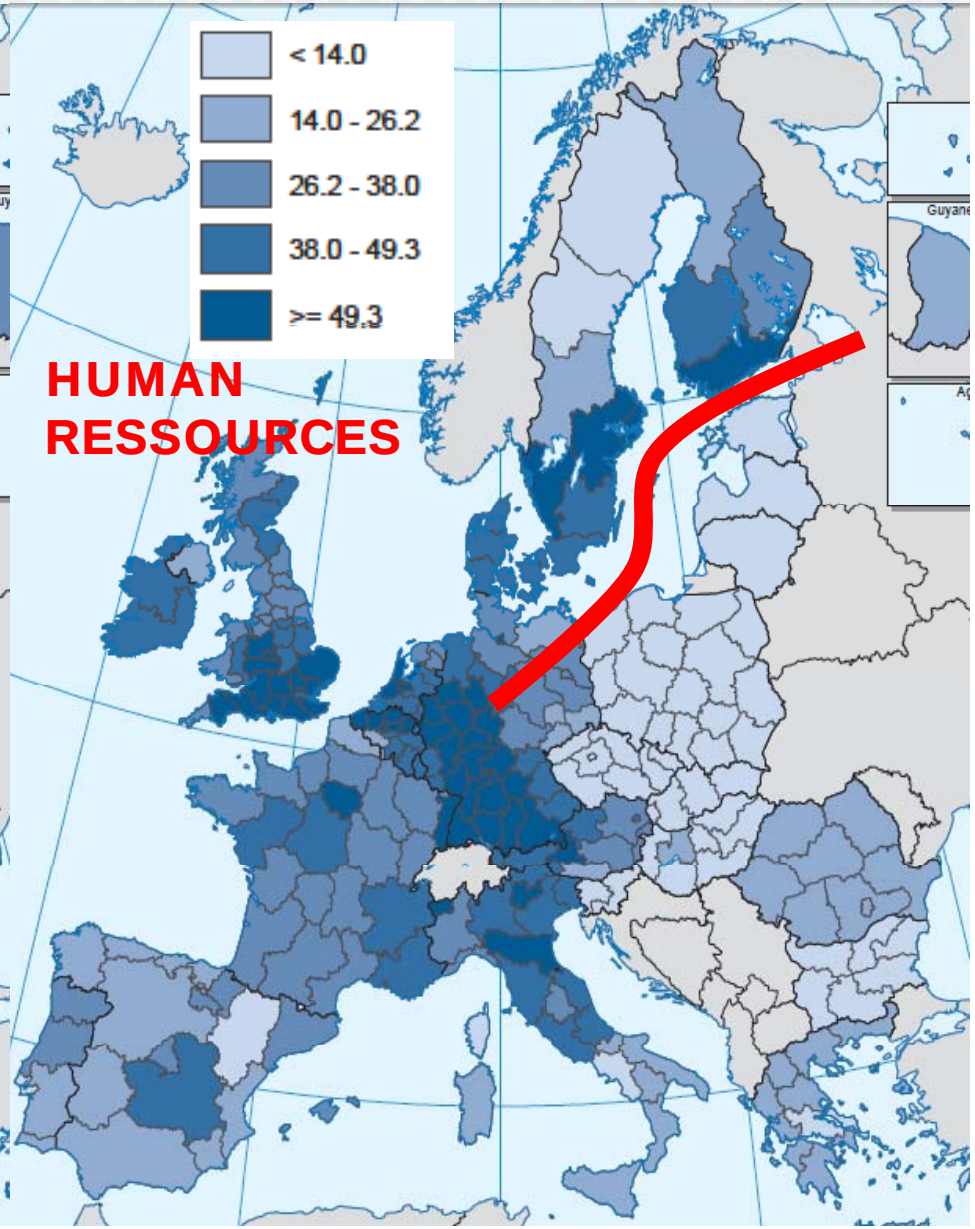



*Source: Eurostat*

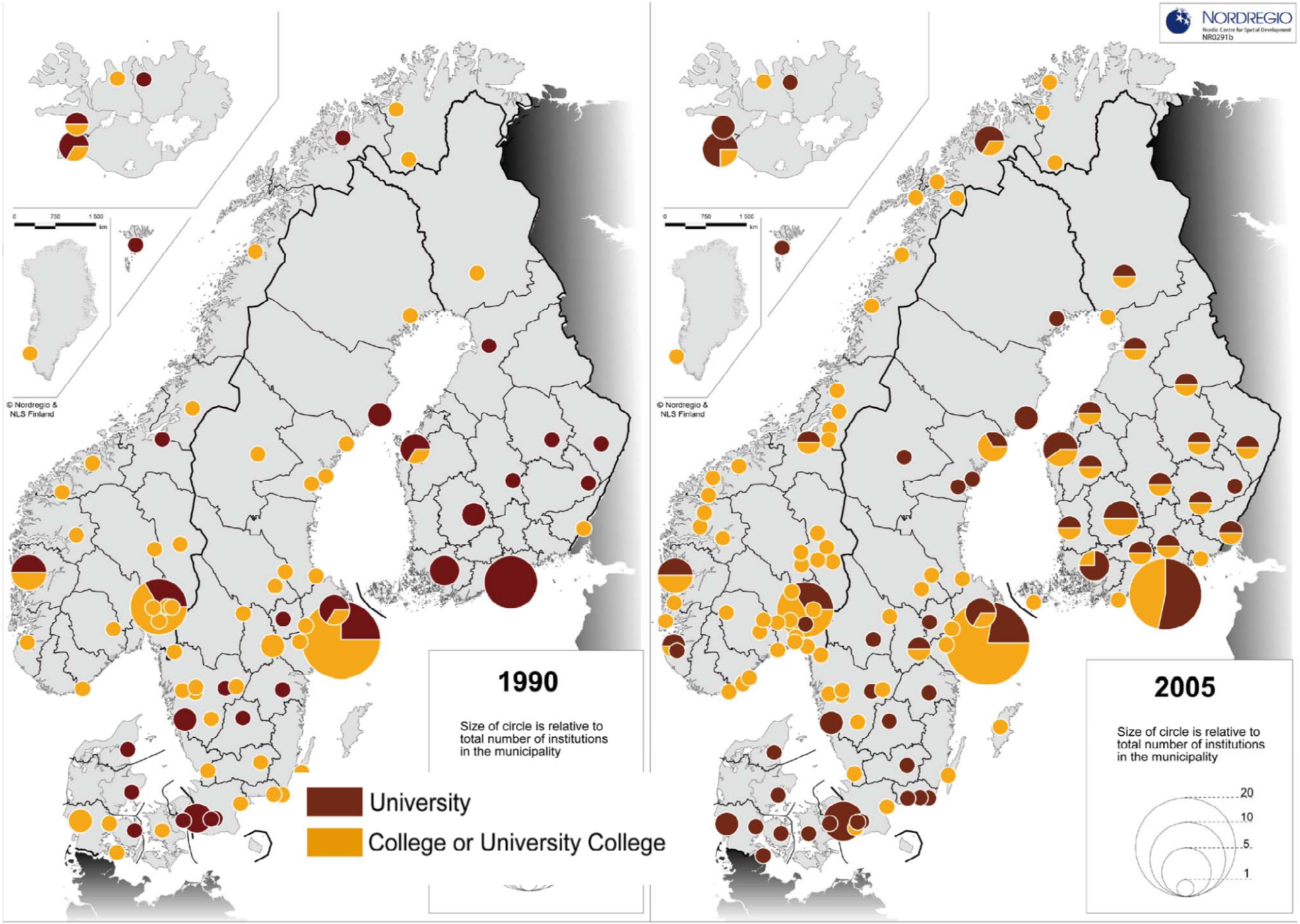

% private sector
R&D personnel
2010
0.07 - 0.12
0.12 - 0.28
0.28 - 0.51
0.51 - 0.8
0.8 - 1.42
N/A
Source: Eurostat

# "Asphalt VS Brains" - % of planned cohesion policy measures 2007-13




*Source: DG Regio*




Historical development of High Education Institutions Campuses in the Nordic Countries: 1990 to 2005

# Baltic States attempting to follow the Nordic model

- 1990s transition period, over hundred of new regional HEIs: independent schools, university colleges, branches and the like were set up in the Baltic States outside traditional university campuses.
- However, quite different approaches were applied in the Baltic States

# Baltic HEI units by 2010

| | HEIs | Regional subunits | Total | Per mill. Inh. |
|---|---|---|---|---|
| Estonia | 33 | 23 | 56 | 42 |
| Latvia | 61 | 69 | 130 | 52 |
| Lithuania | 20 | 0 | 20 | 6 |

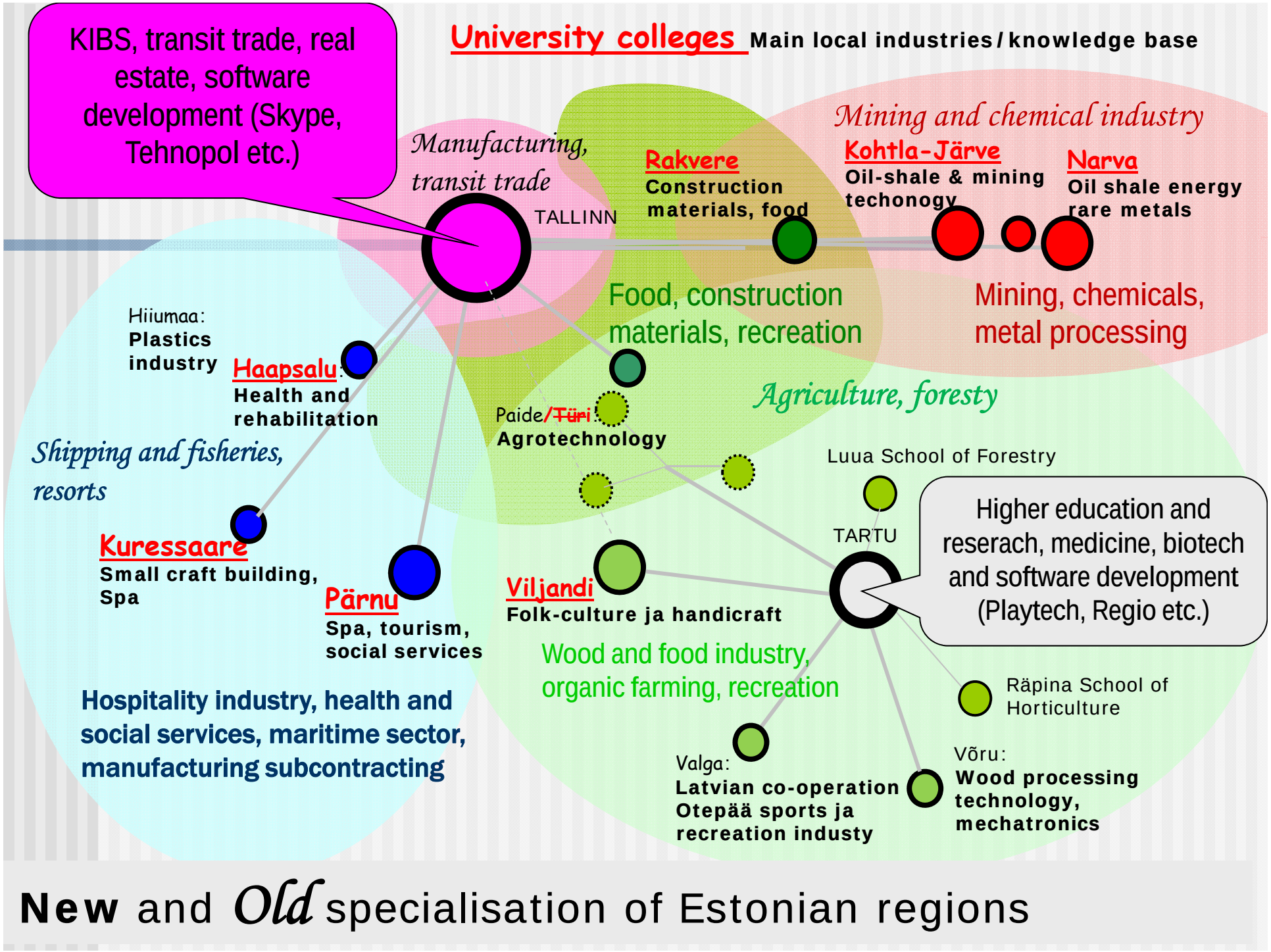
# Three different approaches

- Estonia and Latvia liberalized their educational market, Lithuania did not
  - Explosion of HE – “mass production”
- Estonian HEIs outside Tallinn and Tartu were set up mainly by the largest public universities since 1996
    - For performing university functions locally
- In Latvia, private HEIs took a lead and created a disperse HEI system of filials
    - For making money

# Some first micro-level evidences

Smart specialisation (??) examples from Estonia

Fitting HEIs to regional business framework




**New** and *Old* specialisation of Estonian regions

# Estonian university colleges 2011

| | Haapsalu | Kohtla-Järve | Kuressaare | Narva | Pärnu | Rakvere | *Türi* | Viljandi |
|---|---|---|---|---|---|---|---|---|
| No of Students | 294 | 550 | 191 | 700 | 1010 | 150 | *120* | 980 |
| Life long learning | 500 | 200 | 200 | 2400 | 2125 | 200 | | 400 |
| Staff | 16 | 96 | 15 | 50 | 51 | 17 | *13* | 142 |
| Budget Meur | 0,9 | 2,5 | 0,4 | 1,3 | 1,7 | 0,5 | *0,3* | 3,4 |
| Share of T&A % | 30 | 0,5 | … | … | 3,5 | … | | … |
| Devel. trend | Growing | Growing | Stable | Stable | Stable | Stable | *Closed 2011* | Growing ? |

** Preliminary data, subject to update*

# Estonian university colleges

| | **Haapsalu** | **Kohtla-Järve** | **Kuressaare** | **Narva** | **Pärnu** | **Rakvere** | ***Türi*** | **Viljandi** |
|---|---|---|---|---|---|---|---|---|
| Profile match when established | No | Yes | Yes | Yes /No | Yes | No | *No* | No --> Yes |
| Profile match **now** | No/Yes | Yes | Yes | Yes /No | Yes | No | *No* | Yes |
| Business links | Weak | Signifi-cant | Signifi-cant | Weak | Some links | Weak | *Weak* | Some links |
| Public linkages | Signifi-cant | Signifi-cant | Signif-icant | Weak | Weak | Significant | *Weak* | Significant |
| Impact to smart spe-cialisation | Signifi-cant | Signifi-cant | Signifi-cant | Small | Average | Small | *Small* | Significant |
| Local regional impact mainly through | Dev. projects | Human resources (students) | Human resources | NGO sector projects | Human resources | Some Dev. projects | *No impact* | Local policymaking |

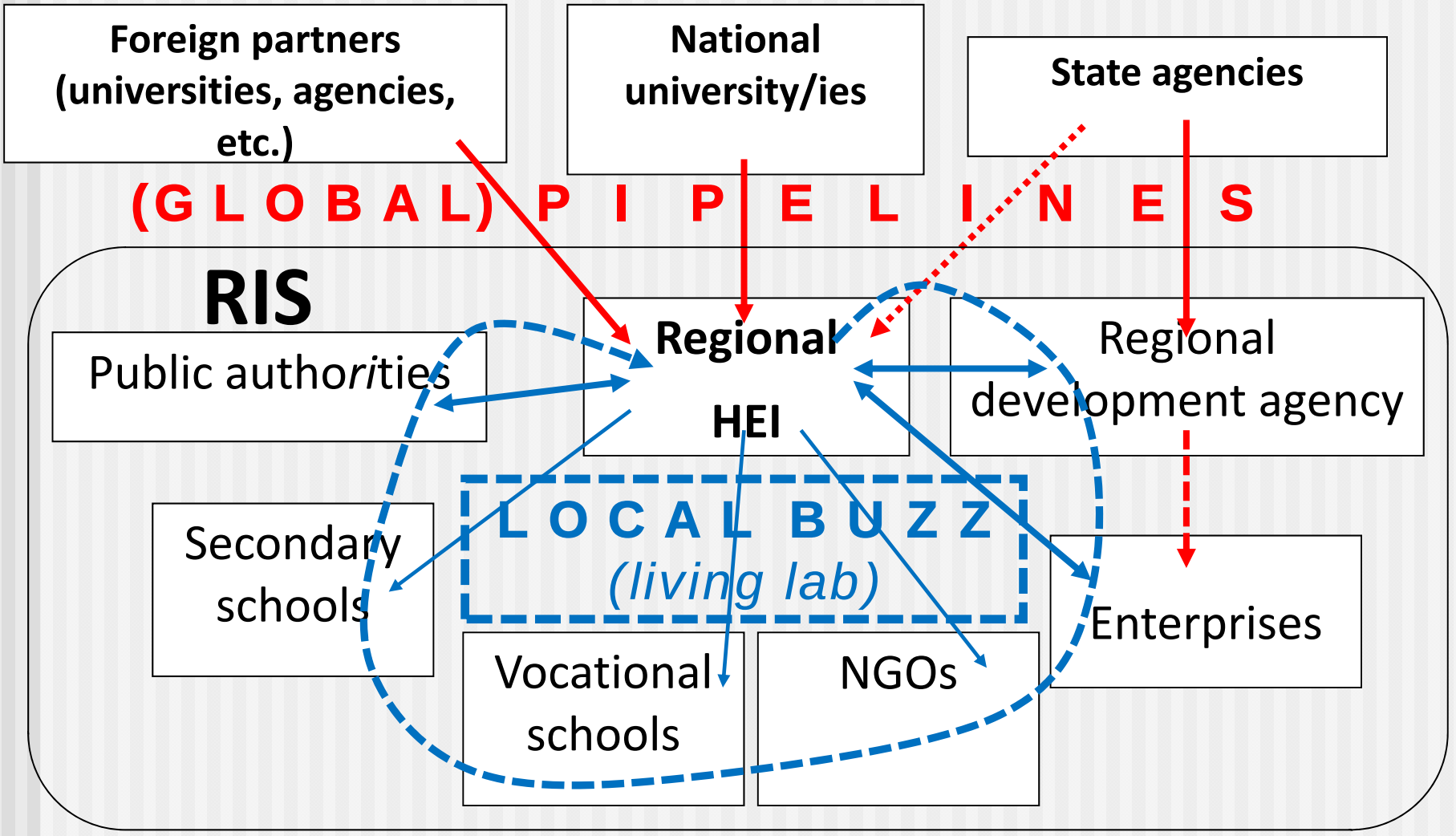
# Recommendations for further ESPON research

Go to the micro level! → **F2F**

Application of a **network approach**

Towards a **regional knowledge barometer**

# Studying the role of regional HEIs, networking



# Hypothesises

- The innovative performance of a region is place placed (proximity dependent) and it's depends on
  - **local institutional thickness**
  - **networking both locally and globally**
  - **smart specialisation**
- Nordic Countries (further also Baltic States?) have high innovative performance because of **geographically spread network of HEIs & KIs** closely co-operating with business sector (?)
- Regional HEIs can be successful only when their **profile is directly linked** with the local/regional enterprises profile of → smart specialisation

# Combining ‘hard’ & ‘soft’ indicators for a ‘barometer’

- **Statistical (quantitative) indicators** giving main characteristics of HEI/KIs and measuring their knowledge production, transfer and development activities.
- **Qualitative structural indicators** evaluating the contribution of HEI/KI(s) to local/regional institutional capacity
- **Qualitative impact indicators** evaluating the role of HEI/KI(s) to local/regional development

# Developing set of indicators
## (for regional knowledge barometer)

- **Basic information** about the HEI/KI
- I BASKET: HEI/KI **knowledge creation** & innovation activities, RIS
- II BASKET: **Human resource development**, knowledge transfer, integration with regional labour market
- III BASKET: **Regional embeddedness**: integration with the community, social capital & local buzz