

REGIONAL PATTERNS OF KIS (KNOWLEDGE-INTENSIVE SERVICES) ACTIVITIES: A EUROPEAN PERSPECTIVE



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Focus of the presentation

Point of departure

- Knowledge-intensive services (KIS) and in particular knowledge-intensive business services (KIBS) are considered to be drivers of future growth in Europe
- KI(B)S activities rely to a high extent on knowledge creation, processing and application and creativity
- KI(B)S not only support innovation in their client companies, but are also highly innovative themselves
- It is still hard to measure innovative KIBS activities, especially at the regional level
- Policy recommendations about how to support KI(B)S are needed

We want to give an overview of

- Spatial patterns of KIS and KIBS in Europe
- Focus on the following points:
 - KI(B)S relation to employment
 - Their spatial specialisation and growth dynamics
 - Territorial patterns of KI(B)S activities

Statistical classification

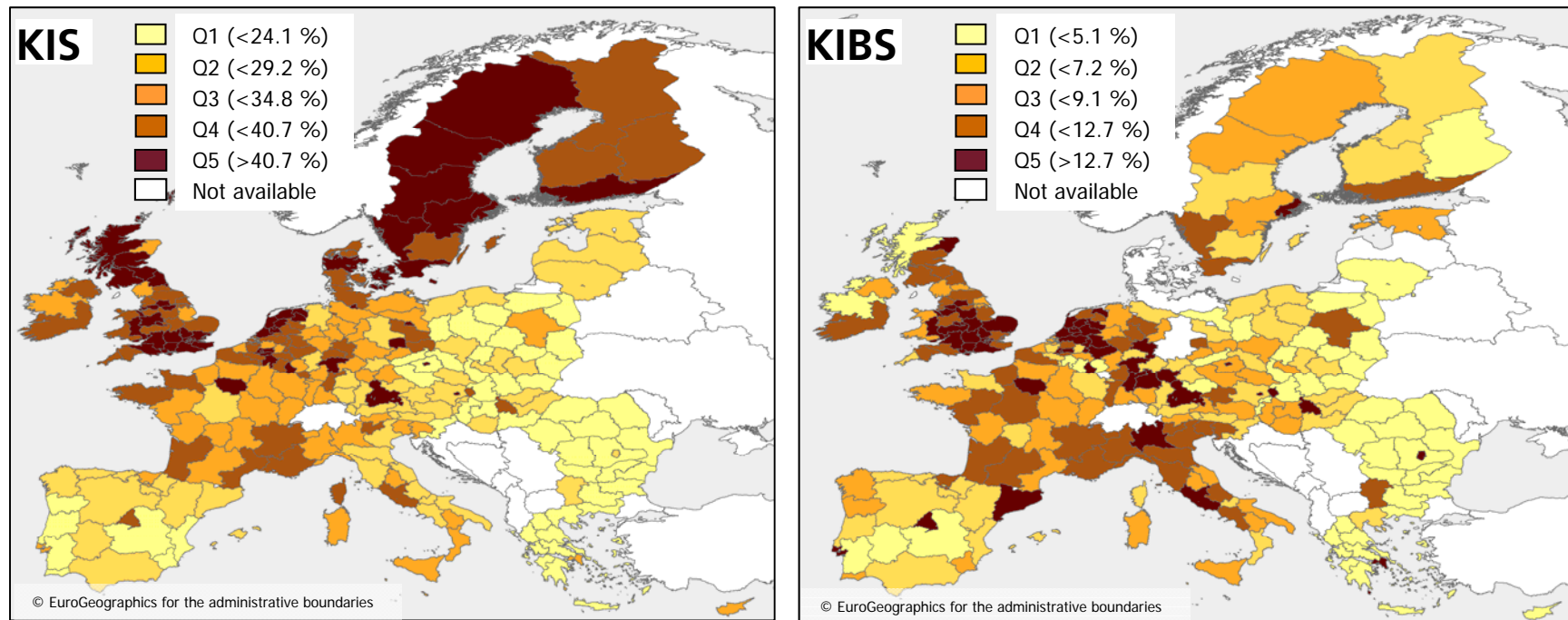
- KIS (Knowledge-intensive services): NACE 61, 62, 64-67, 70-74
- KIBS: NACE 72, 73, 74.1-4

Regional Patterns of KIS and KIBS activities in Europe

- FINDINGS -

Spatial pattern of KIS and KIBS employment

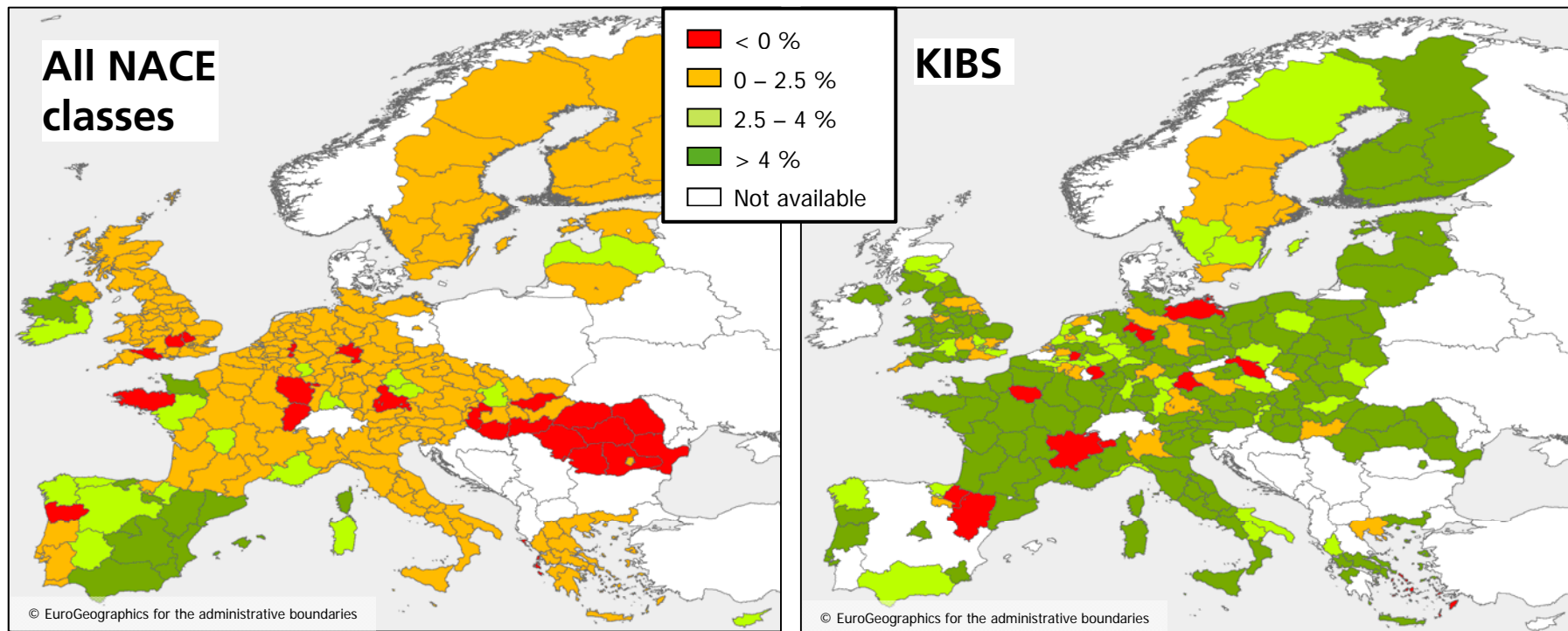
Share of KI(B)S in total employment (Quintiles, 2007)



Presentation: Fraunhofer ISI. Data source: Eurostat

- Concentration of KIS employment in core regions and northern countries
- Strong focus on capital and core regions, also in NMS (e.g.: Prague, Bucharest, Bratislava, Budapest)

Compound annual growth rates (CAGR) of all industries and KIBS 2002-2007

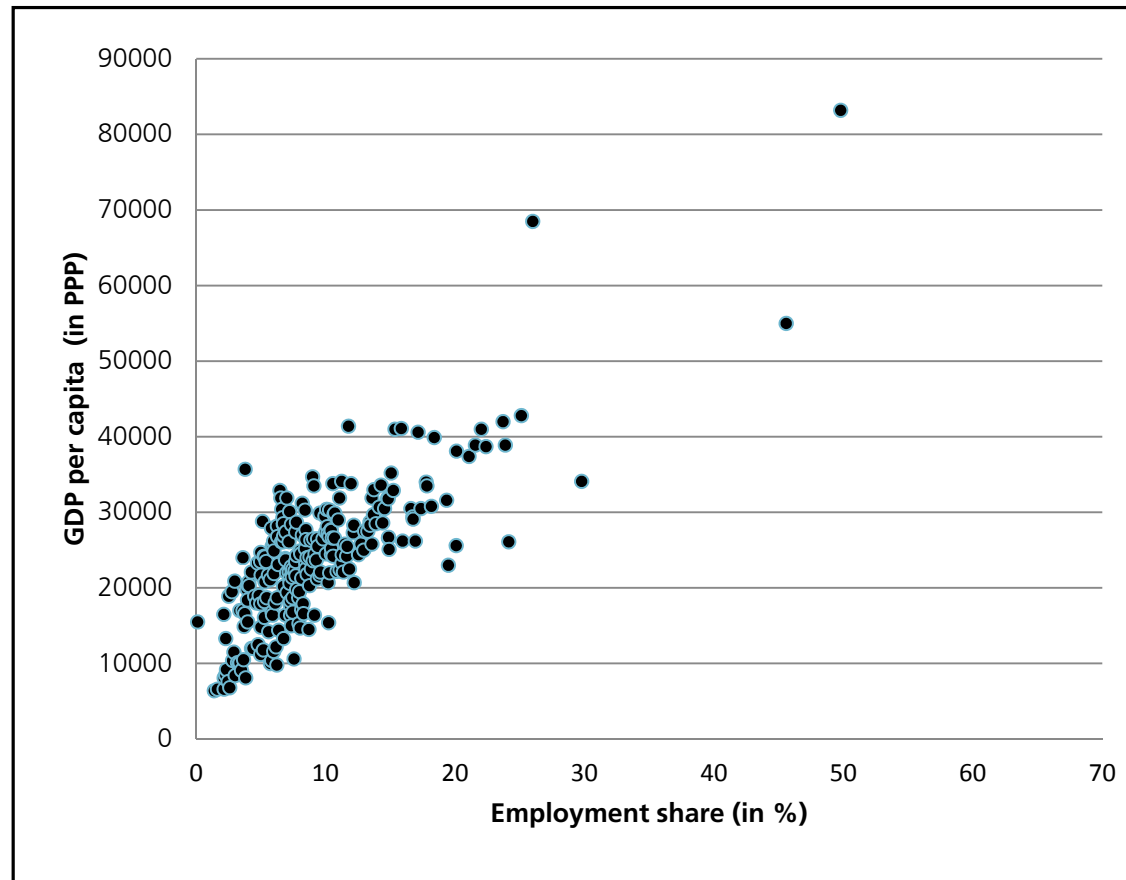


Presentation: Fraunhofer ISI. Data source: Eurostat

- KIBS as growth drivers, not only in core regions
- Strong growth in France, south and east Germany, Austria, UK, Greece, Italy, Romania, Poland, Baltic States, Finland

Relation of KIBS employment and GDP

GDP per capita (in PPP) and employment share of KIBS (2007)

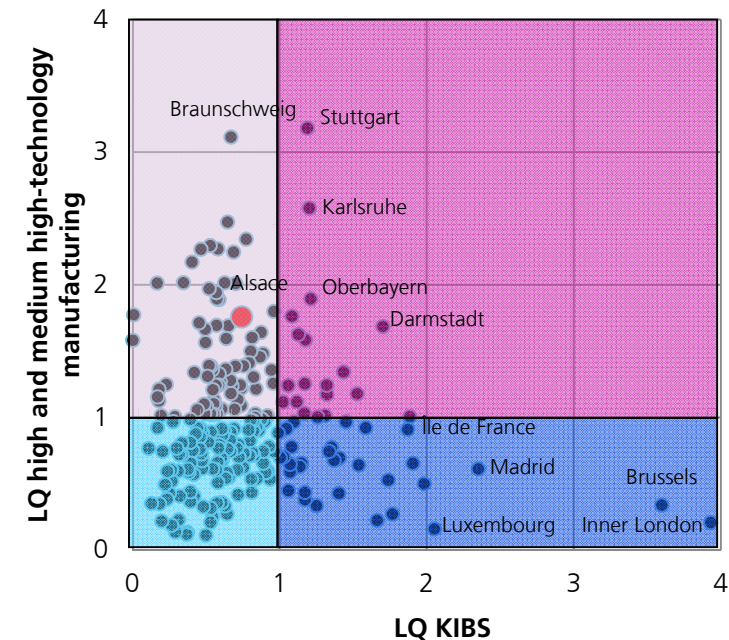
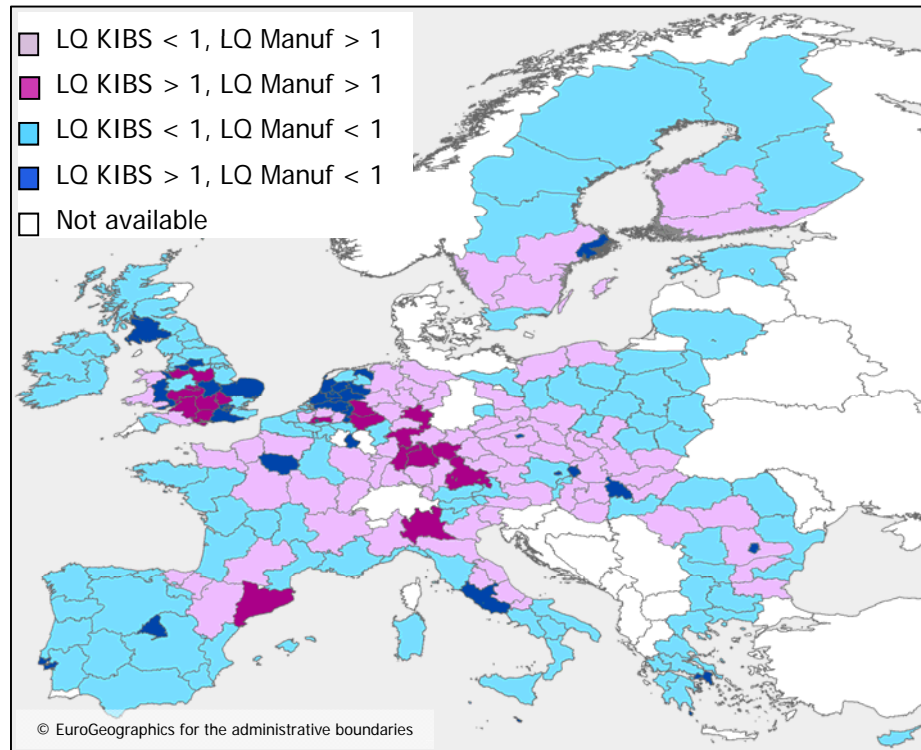


High shares of KIBS employment are linked to high GDP per capita figures

Presentation: Fraunhofer ISI. Data source: Eurostat

Regional specialisation (manufacturing/KIBS)

Location quotients of KIBS and high/medium high technology manufacturing 2007



Presentation: Fraunhofer ISI. Data source: Eurostat

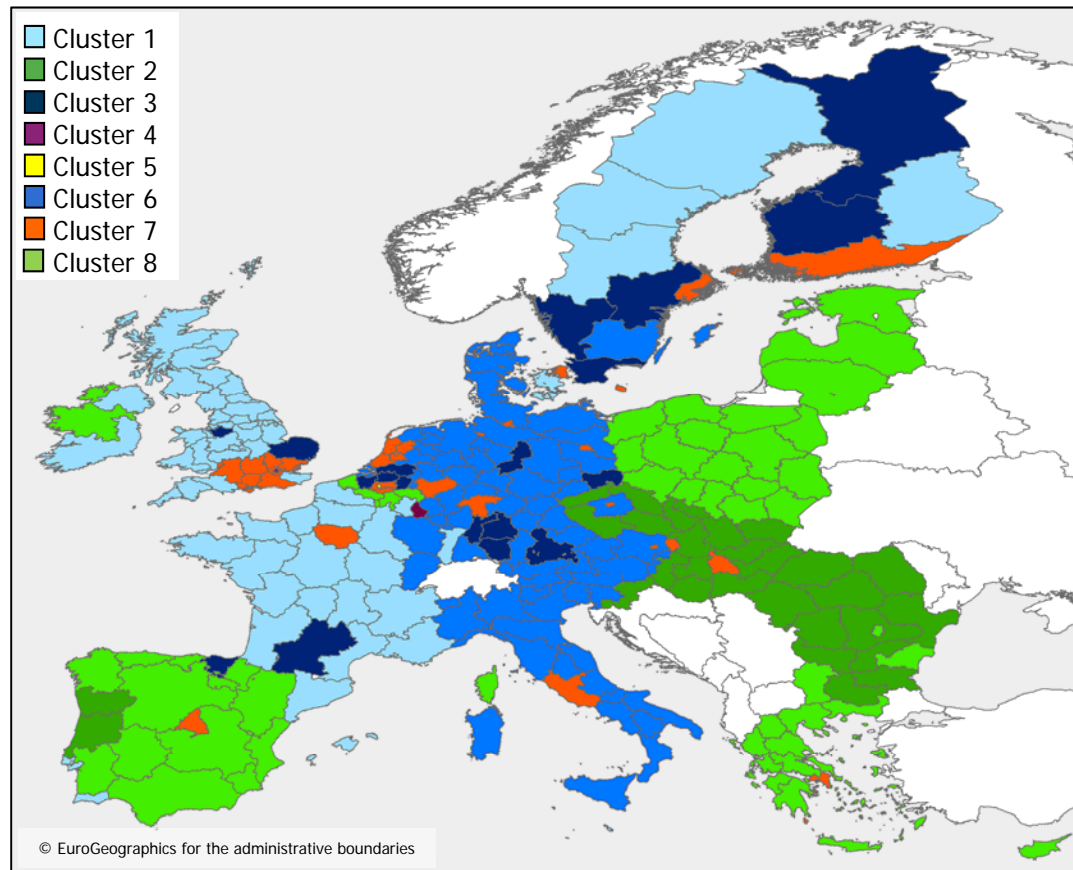
- Different specialisation patterns of European regions
- Some regions specialise in both KIBS and high-tech manufacturing

Typology of European regions: Our approach

Description of aim and methodology

- **Aim:** Comprehensive picture of European regions with respect to industrial characteristics, particularly their service sector, leading to a classification of regional types across Europe
- **Methodology:** Cluster analysis / NUTS 2 regions
- **Selection of indicators:** Typology is based on basic regional characteristics (e.g. GDP, GDP growth, population density), industrial characteristics (e.g. share of employment in different sectors), regional KIS characteristics (employment shares, specialisation of personnel, regional specialisation in terms of localisation quotients)
- **Time frame:** Data for 2007 and 2002 to 2007 for the growth indicators
- **Procedure:** 2-step analysis
 - 1. Hierarchical cluster analysis (aim: to determine the number of clusters)
 - 2. k-means cluster analysis (to include regions with missing values)

Results of our analysis: A typology of European regions



Cluster 1: **59 “average regions”**

Cluster 2: **Shaped by agriculture and industry (29 regions)**

Cluster 3: **Technology and business research-oriented regions (19 regions)**

Cluster 4: **London, Luxembourg (financial and service centres)**

Cluster 5: **Brussels**

Cluster 6: **Technical followers (71 regions)**

Cluster 7: **7 capital and city regions**

Cluster 8: **Service catching-up regions (55 regions)**

Summary: Empirical analysis reveals crucial insights into spatial patterns of KI(B)S activities

- KIS employment particularly high in central and northern Europe, and **a core-periphery gradient** is observable
- **Capital regions in New Member States** are **almost as equally specialised** in KI(B)S activities as those in other Member States
- **KIBS contributed significantly to employment growth** between 2002 and 2007, negative growth figures only in a few regions
- A **positive relationship** can be observed between **KIBS employment** shares and **GDP per capita**
- **Some regions are specialised in KIBS activities and high-tech manufacturing**, while others show no specialisation at all or specialise in only one of these activities
- Further, including data on structural and industrial activities as well as wealth and density indicators in the analysis reveals **quite different spatial patterns**