

The Future of Industry in Europe

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CoR Workshop

The Future of Industry in Europe
Challenges and Instruments for Local and Regional Authorities
Brussels 2nd May 2017



**European Committee
of the Regions**

Structure of the report:

- **Chapter 1:** Industry in Europe and its regions
- **Chapter 2:** The future of traditional industries and industries of the future
- **Chapter 3:** Key challenges for European industry and their territorial implications
- **Chapter 4:** How LRAs are responding to the challenges
- **Chapter 5:** Conclusions and recommendations

Methodology: data analysis (mainly Eurostat), desk analysis (academic research, EC reports,..), case studies (Nord-Pas de Calais, Podkarpackie Voivodship, Saxony, Southern Denmark), interviews (regional experts, academic), maps

Significance of industry in Europe:

- In terms of value added, makes up **17.3% of European GDP** (2015);
- **23.6% of European workers;**
- each additional job in manufacturing **creates 0.5-2 jobs in other sectors;**
- accounts for over **80% of Europe's exports** (€365 billion surplus);
- high **domestic content** of manufacturing exports (around 85% of value added);
- **80% of private sector R&D** investment comes from industry
- EU is a major producer of new knowledge in **Key Enabling Technologies** (KETs).

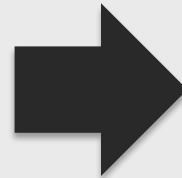
...but declining trend...

Value added industry/GDP:

21% in 1995

18% in 2005

17.3% in 2015

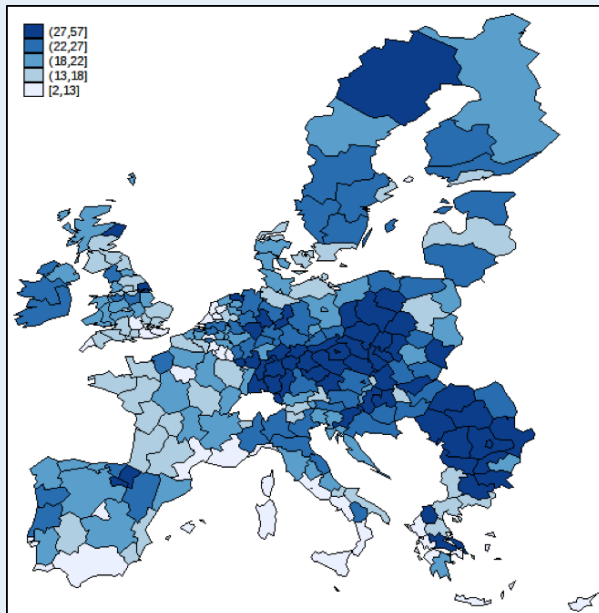


**Aim of the EC:
20% by 2020**

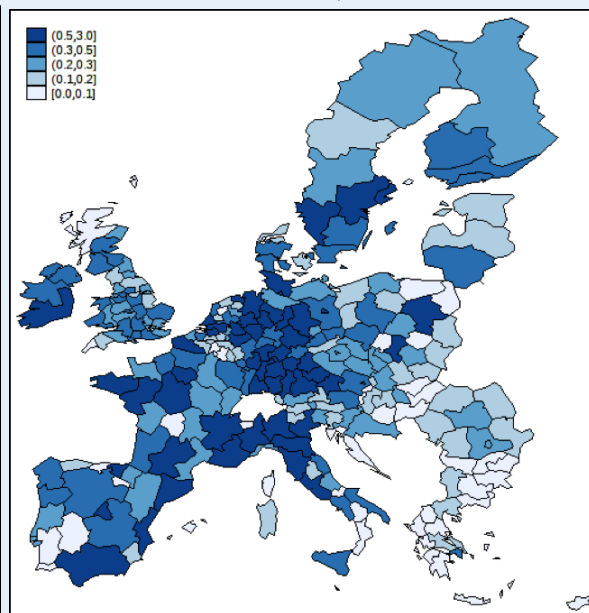
Chapter 1: Industry in the European regions: an overview

Industrial production has been relocated eastward towards new member countries and emerging peripheral regions in central Europe. However, there is a common trend towards the tertiary sector.

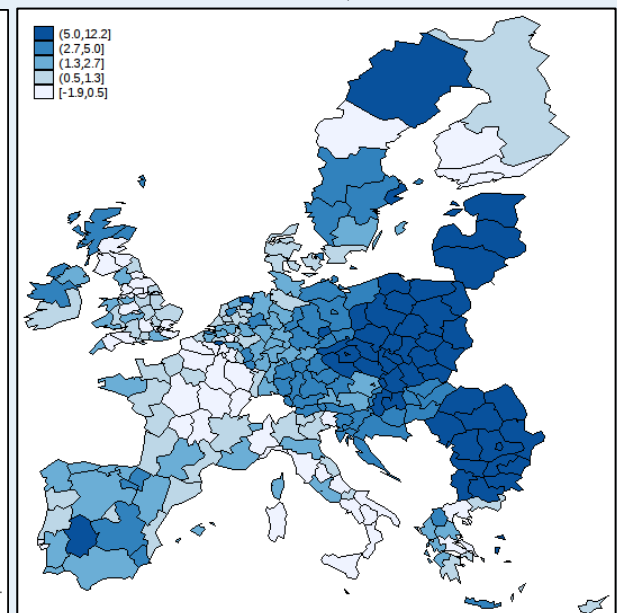
Industry share of total value added by region (% , 2013)



Regional industry share of total European industrial value added (% , 2013)



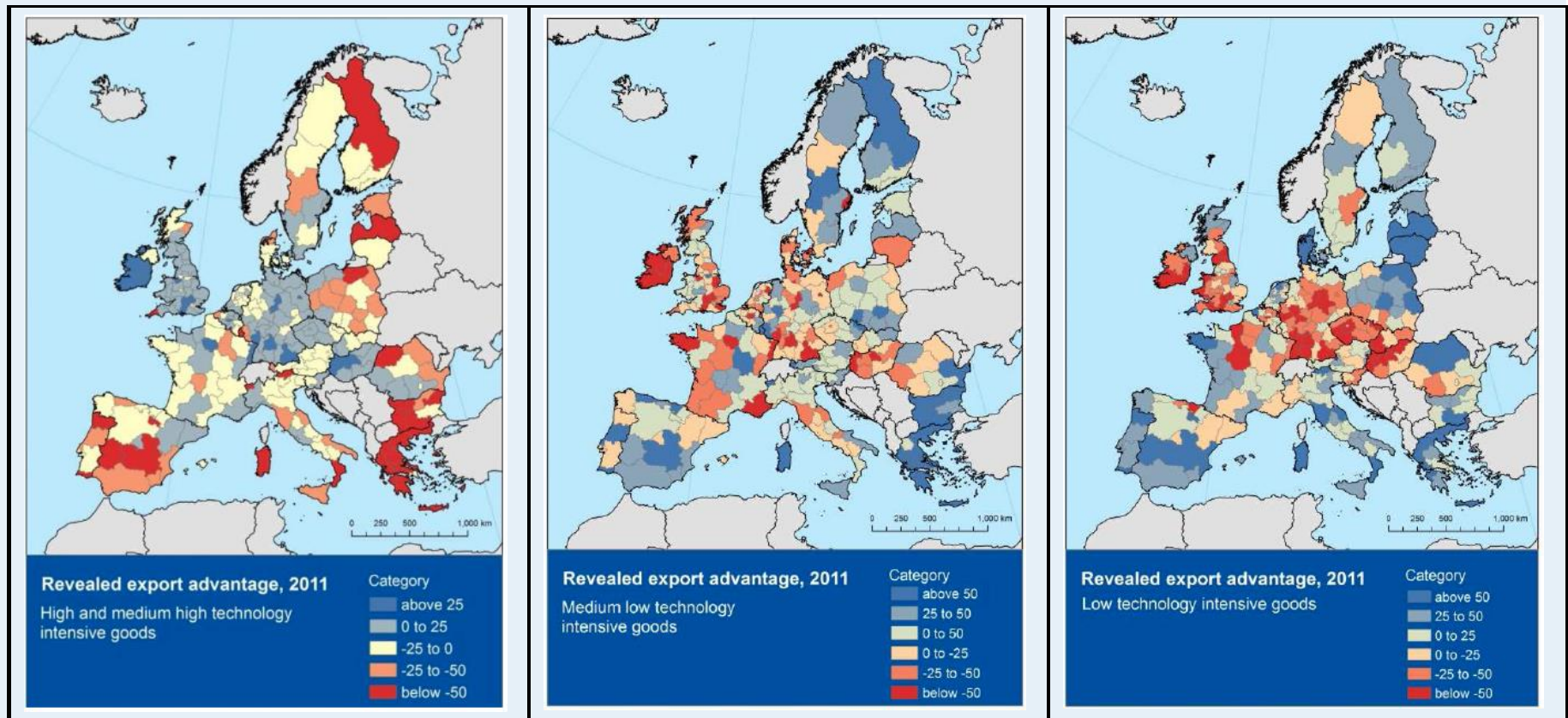
Industry value added growth (% yearly average change, 2002-2014)



Chapter 1: Trade specialisation and attractiveness of European regions

High-income regions on average tend to specialise in high-technology intensive exports, while low-income regions in medium-low and low-technology-intensive exports

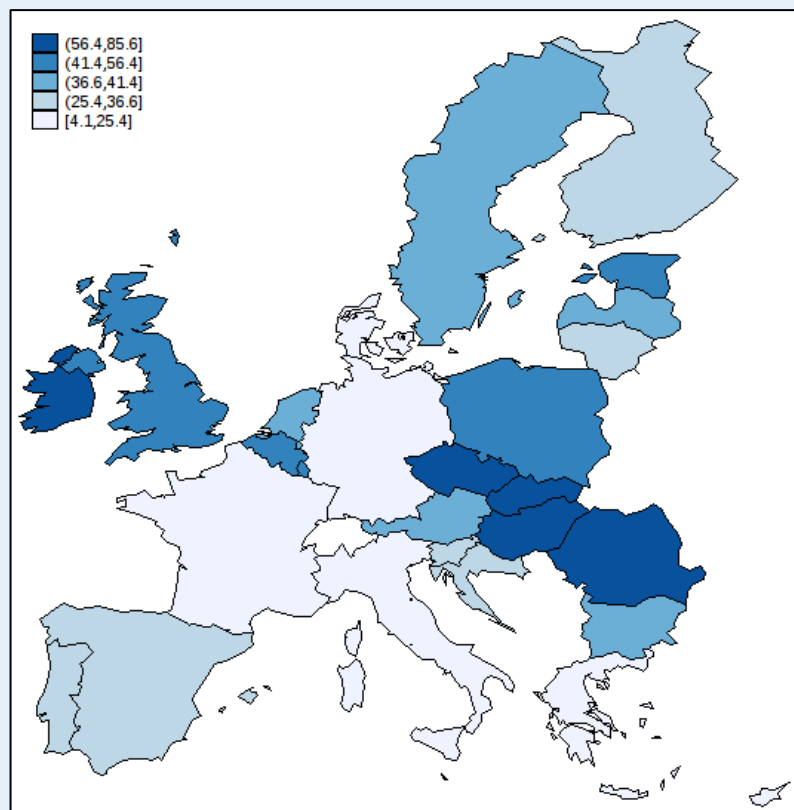
Revealed export advantages in different technology-intensive goods (2011)



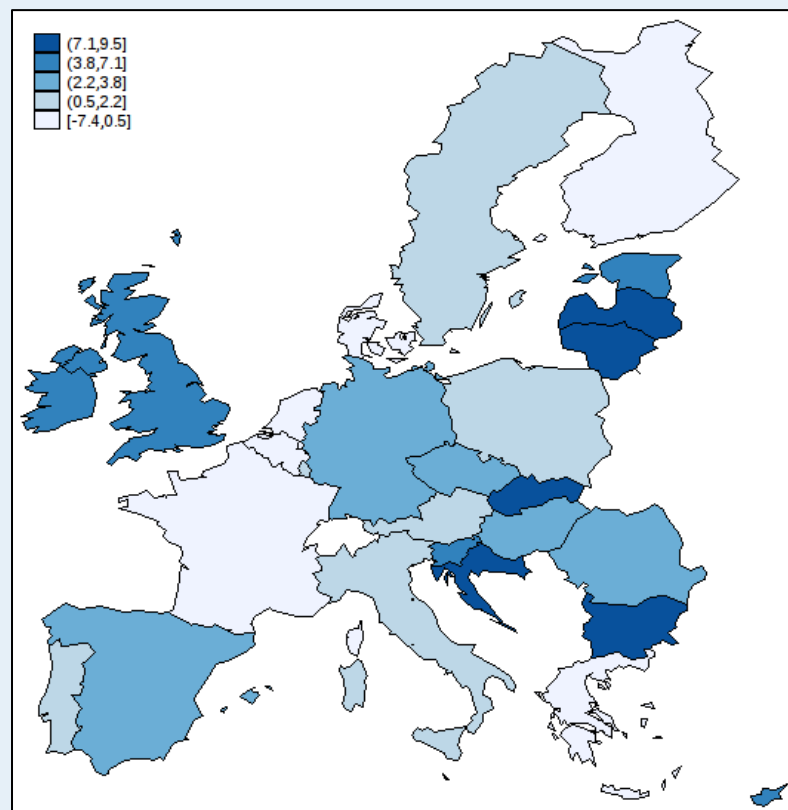
Chapter 1: Trade specialisation and attractiveness of European regions

Industrial sector in the EU-15 mostly relies on national investments; in the EU-13, on the contrary, it relies more on FDI

Foreign controlled manufacturing firms value added over total manufacturing firms value added (% , 2014)



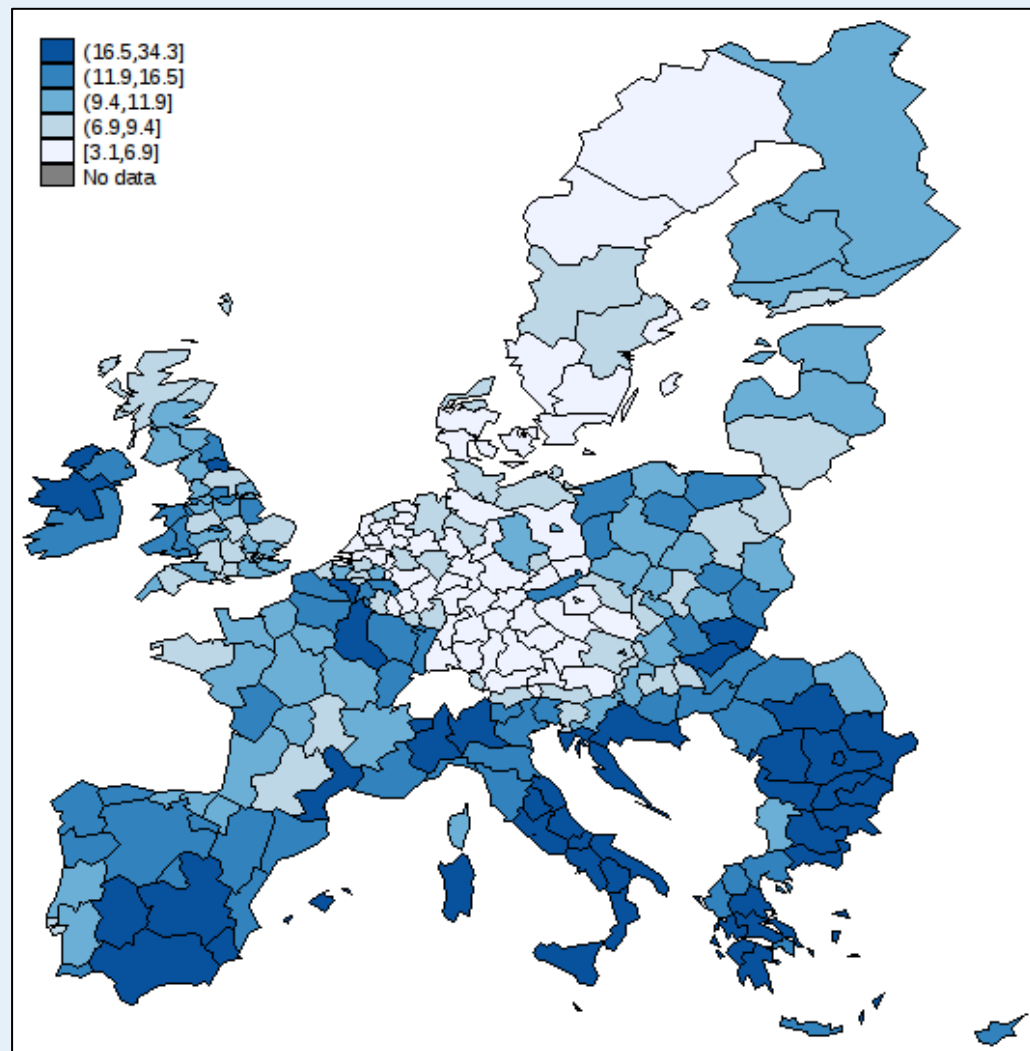
Foreign controlled manufacturing firms value added yearly average change (% , 2008-2014)



Chapter 1: Workers in industry

Southern and eastern less industrialised regions suffer from many young people Not in Education, Employment, or Training (NEETs).

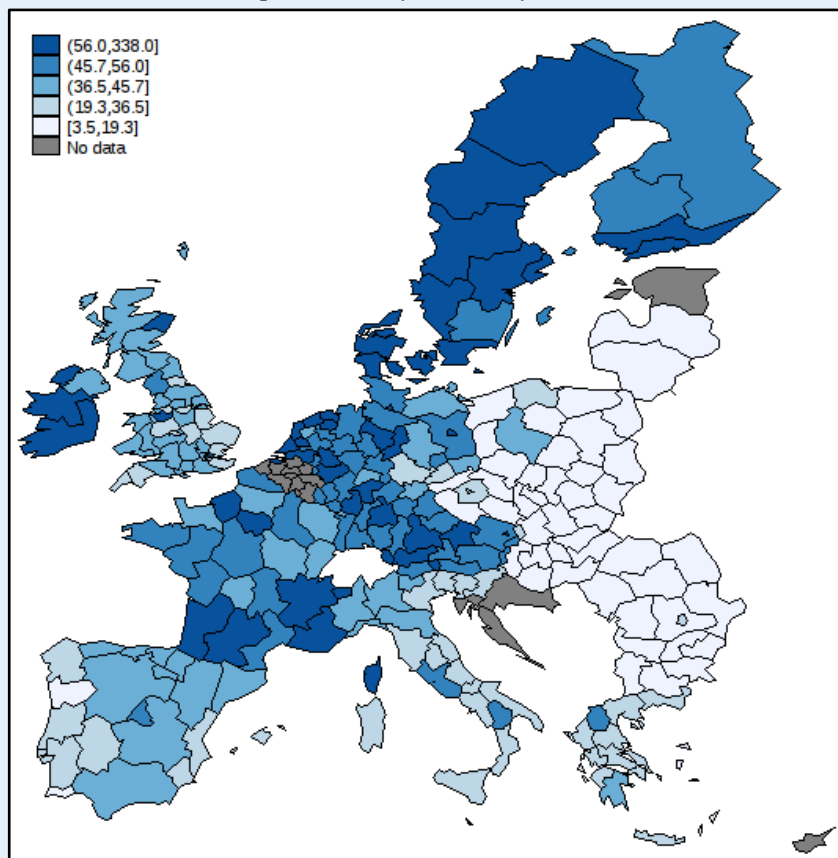
NEET rate for young people aged 15-24, 2015



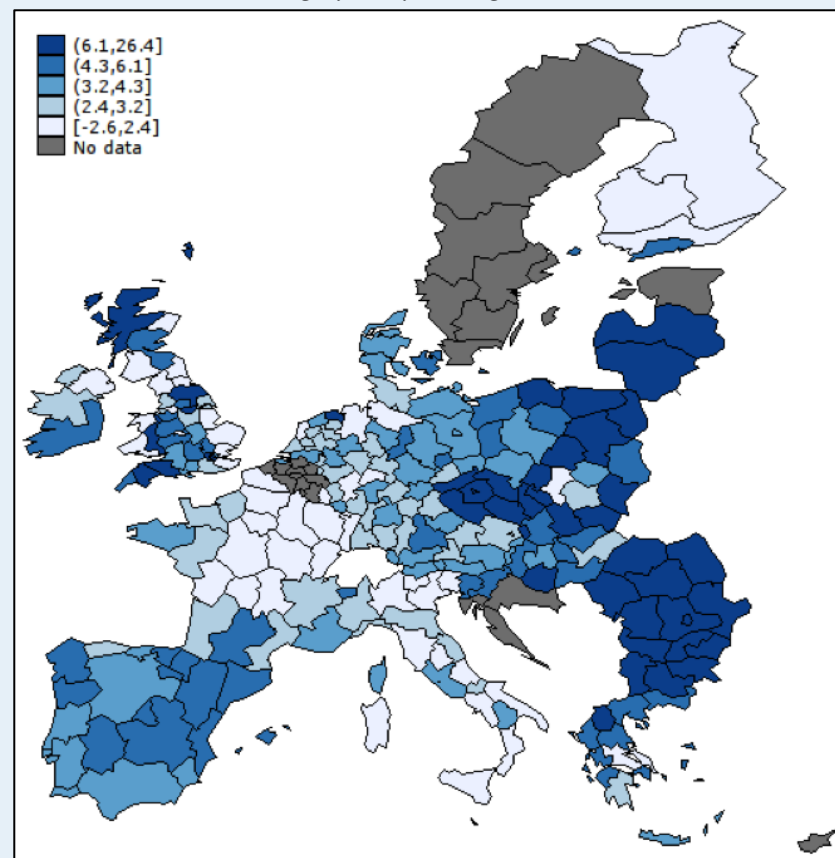
Chapter 1: Workers in industry

Highest values for labour productivity in industry are in northern and central Europe and southern French regions and Ireland; however, the highest labour productivity growth is in eastern regions.

Labour productivity, industry, Euro, 2013



Labour productivity, industry, Euro, average yearly change, %, 2001-2013

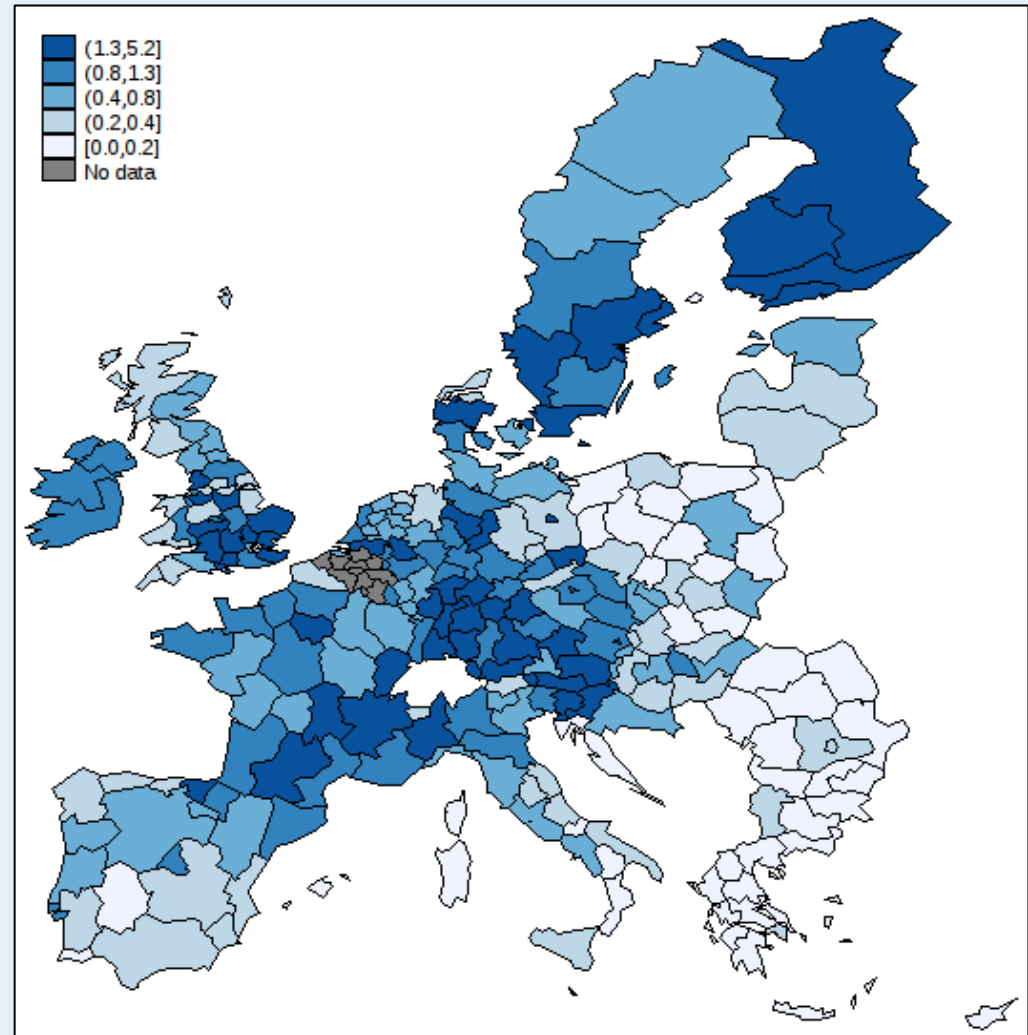


Chapter 1: Innovation in industry

Business enterprise sector R&D expenditure (GERD), % of GDP, average 2005-2014

Regions with the greatest expenditure on R&D are in capital regions and countries like Finland, Sweden, Denmark, the Netherlands, Germany, Austria, the United Kingdom, and France.

Some regions in southern and eastern Europe perform better in terms of product, process, marketing or organisational innovations.



Chapter 2: Towards a new vision for a future oriented EU industrial policy

↑ greater intra-European trade;
↑ exports to third (non-EU) countries;

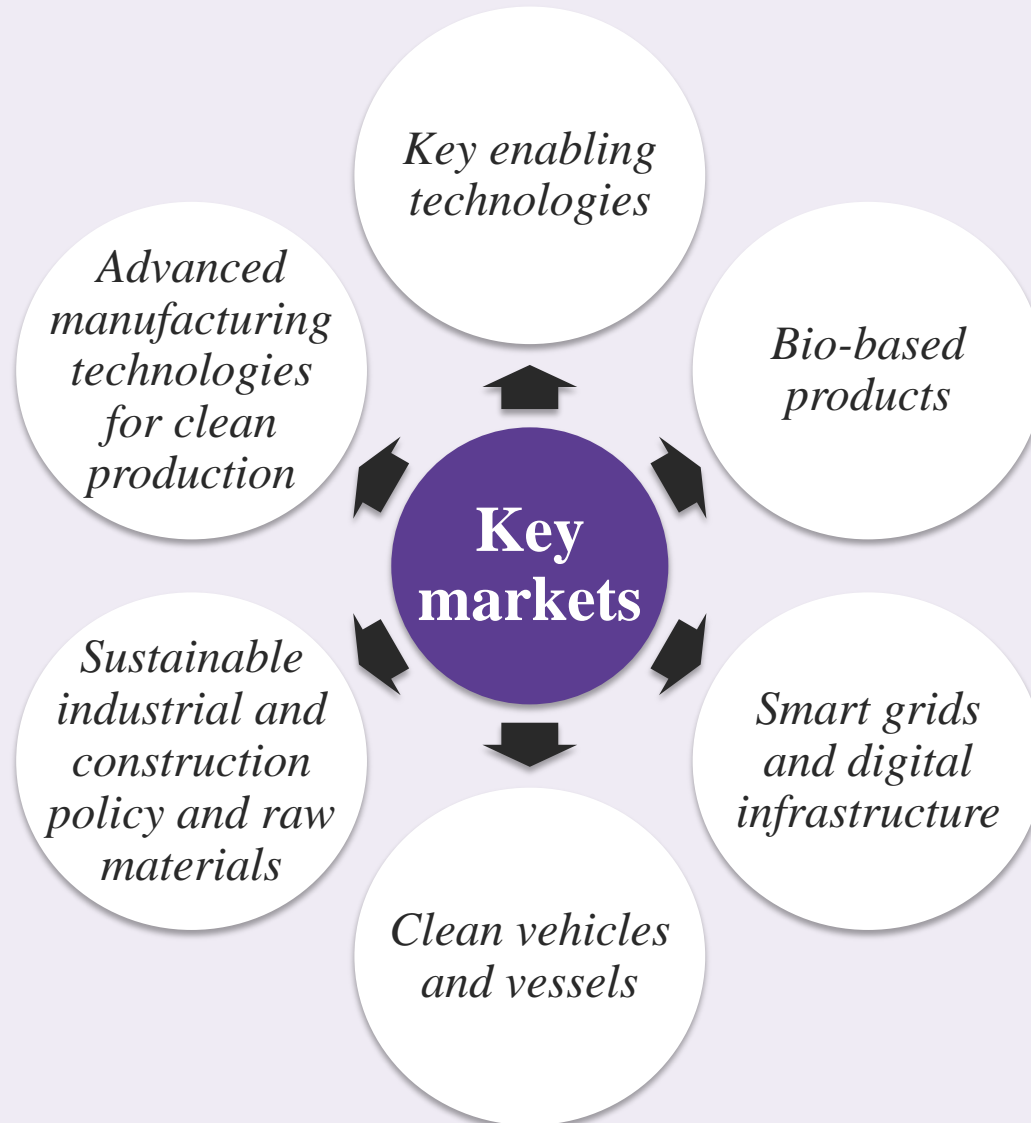
→ more durable, more customer specific or ecologically sustainable products

↑ levels of investment;
↑ human capital and skills;
↑ innovation;
↑ number of SMEs

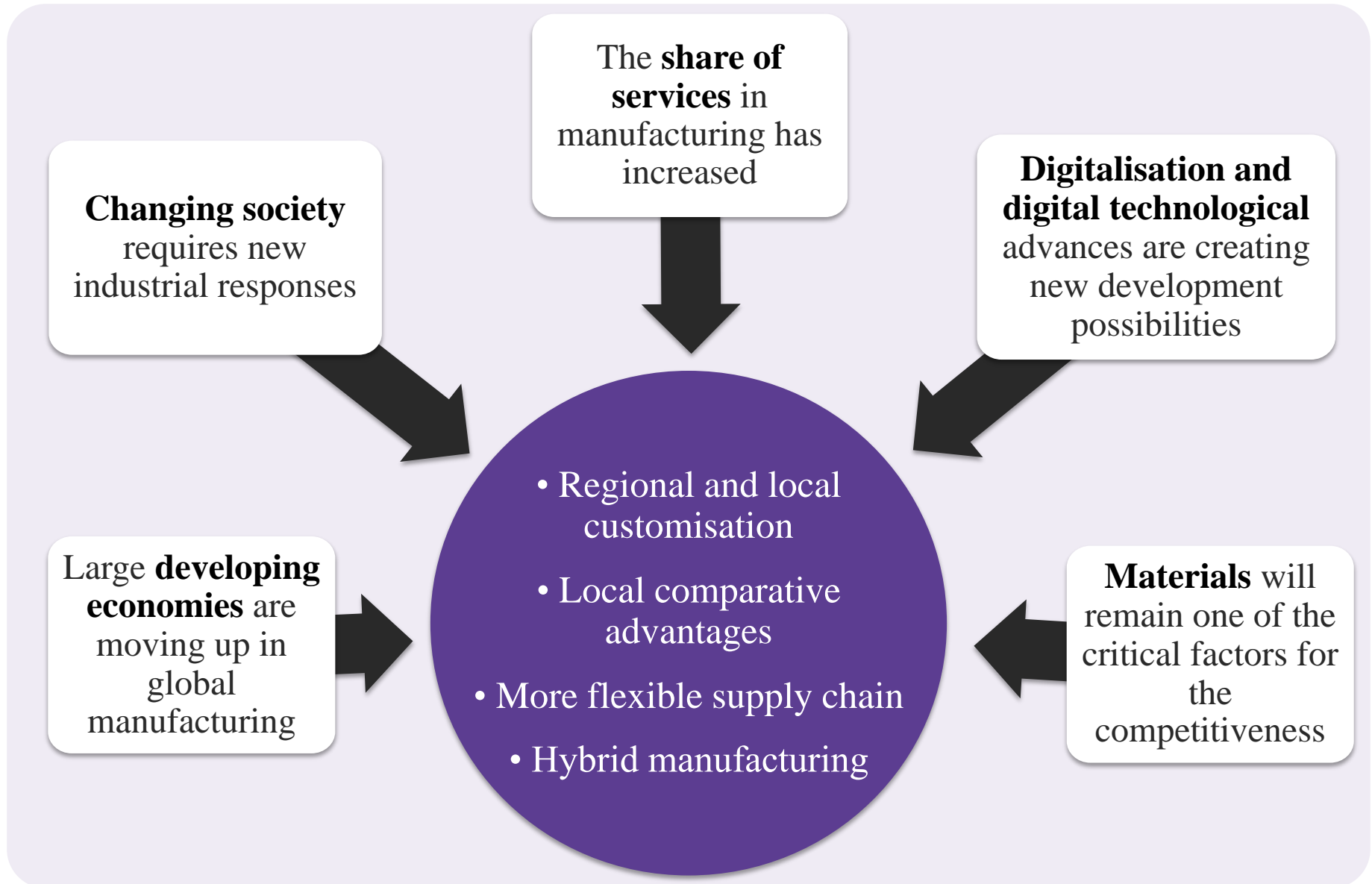
→ to a network-based organisation of businesses

↑ value added over EU GDP from 17.3% to 20% (by 2020)

Chapter 2: Towards a new vision for a future oriented EU industrial policy



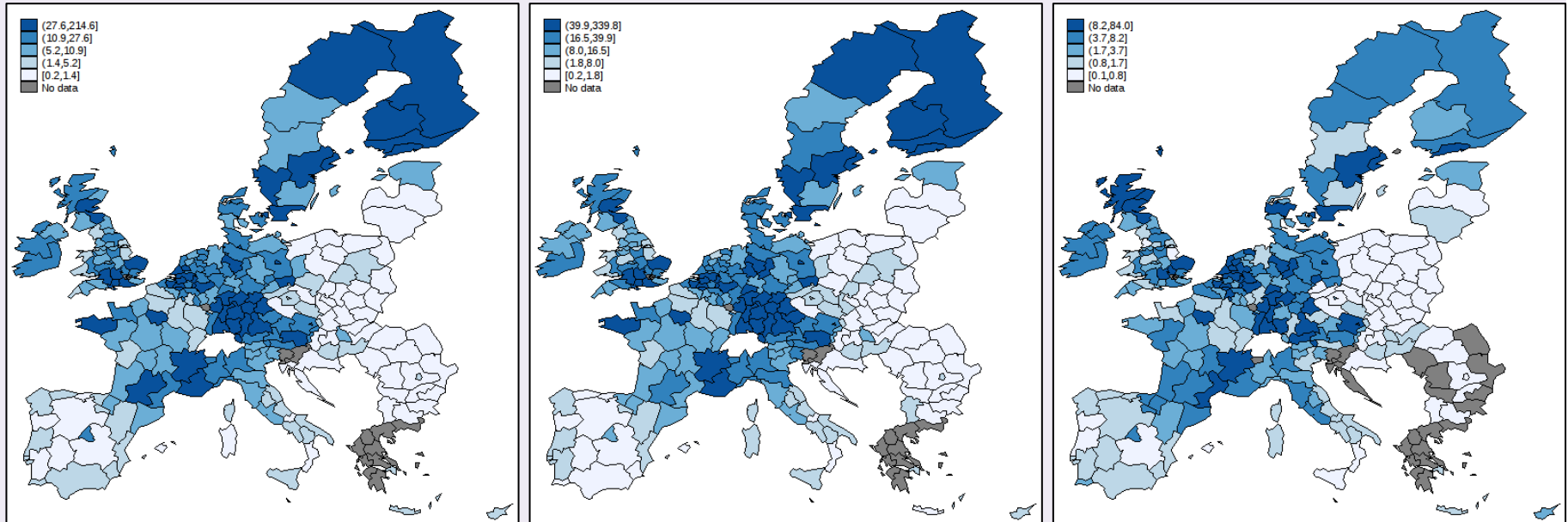
Chapter 2: The changing role of industry in the global economy



Chapter 2: Future pattern of specialisation of European regions

Regions from central and northern Europe are expected to lead the industrial innovation process in the coming years

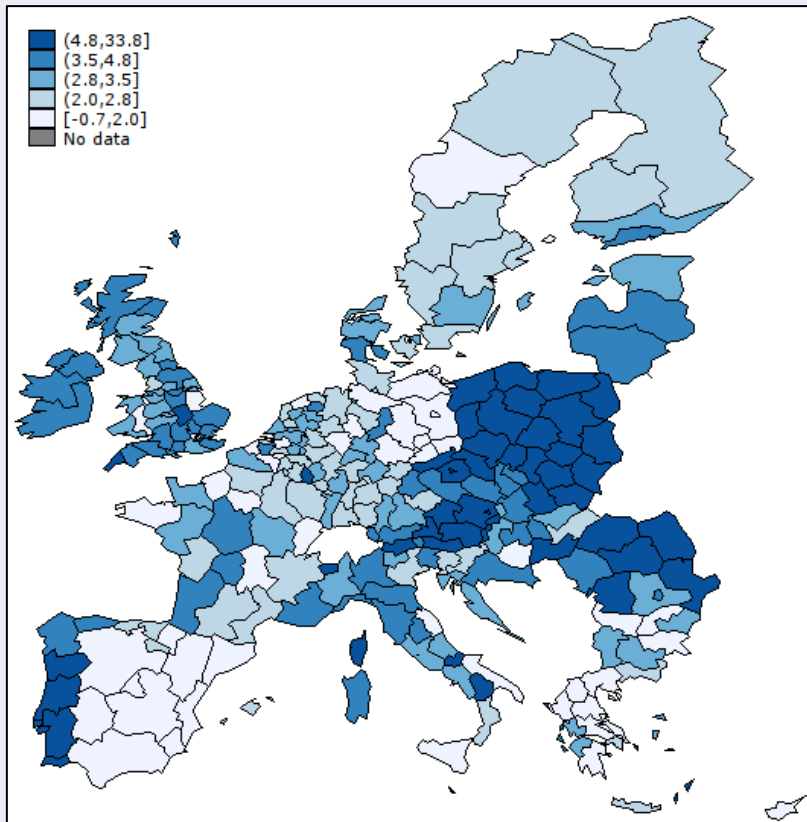
Patents applications to EPO, per million inhabitants, 2002-2013 (High-tech, ICT, biotechnology)



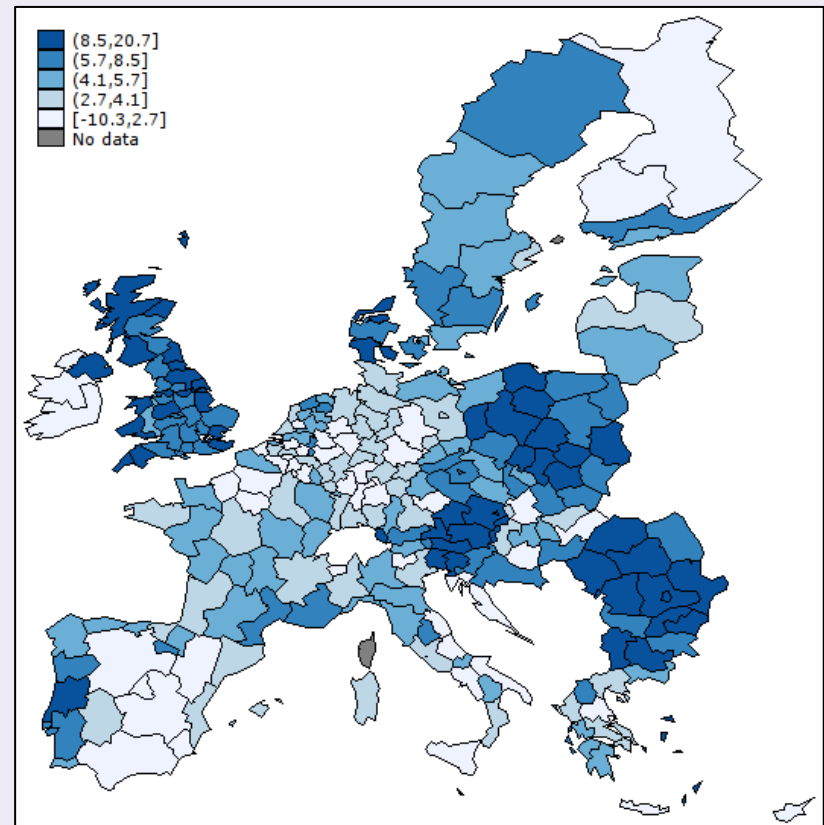
Chapter 2: Future pattern of specialisation of European regions

Enhancement of human capital is expected to continue in eastern regions

Persons with tertiary education and employed in science and technology
(% of active population, Average yearly change, 2001-2015)



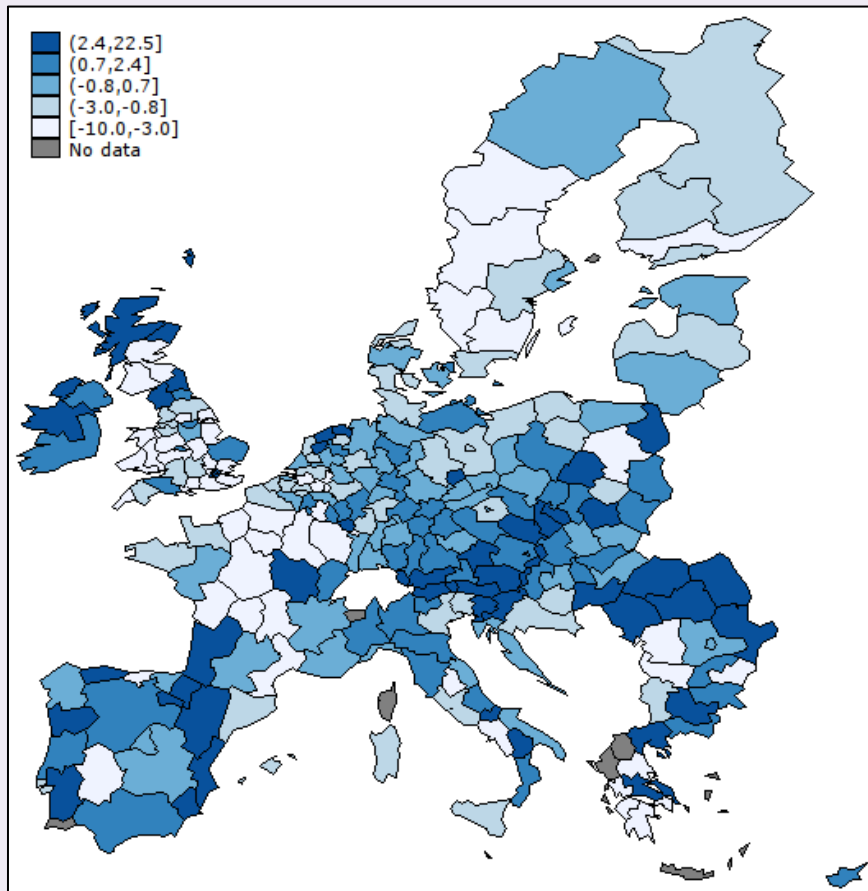
Scientists and engineers,
(% of active population, Average yearly change, 2001-2015)



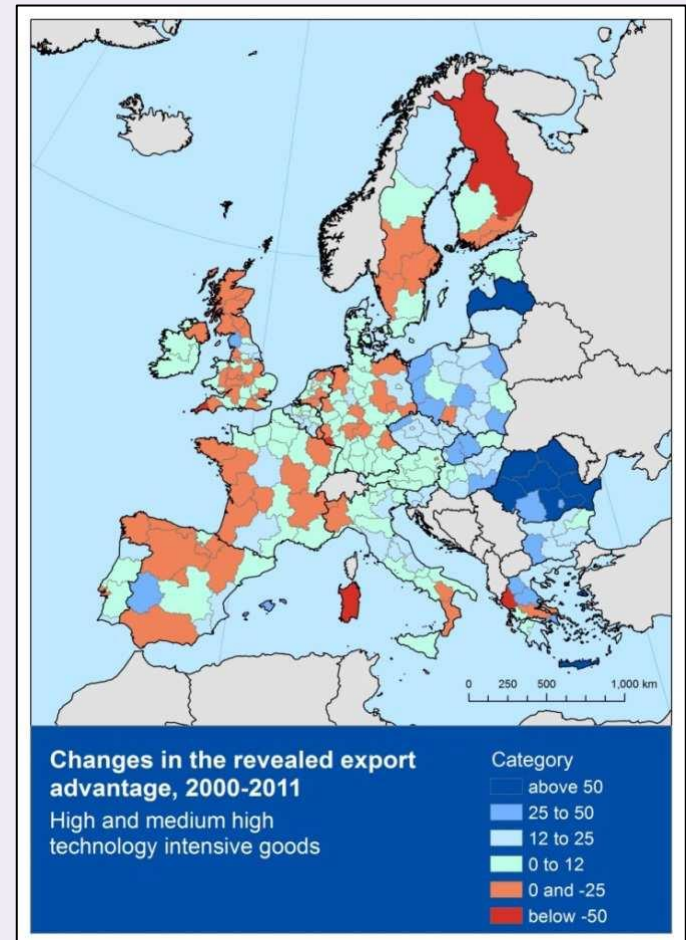
Chapter 2: Future pattern of specialisation of European regions

Specialisation of eastern regions in high and medium-high technology industries have the potential to increase

High and medium high-technology manufacturing, Percentage of total employment, average yearly change (%), 2008-2015



Change in competitiveness for high-tech goods

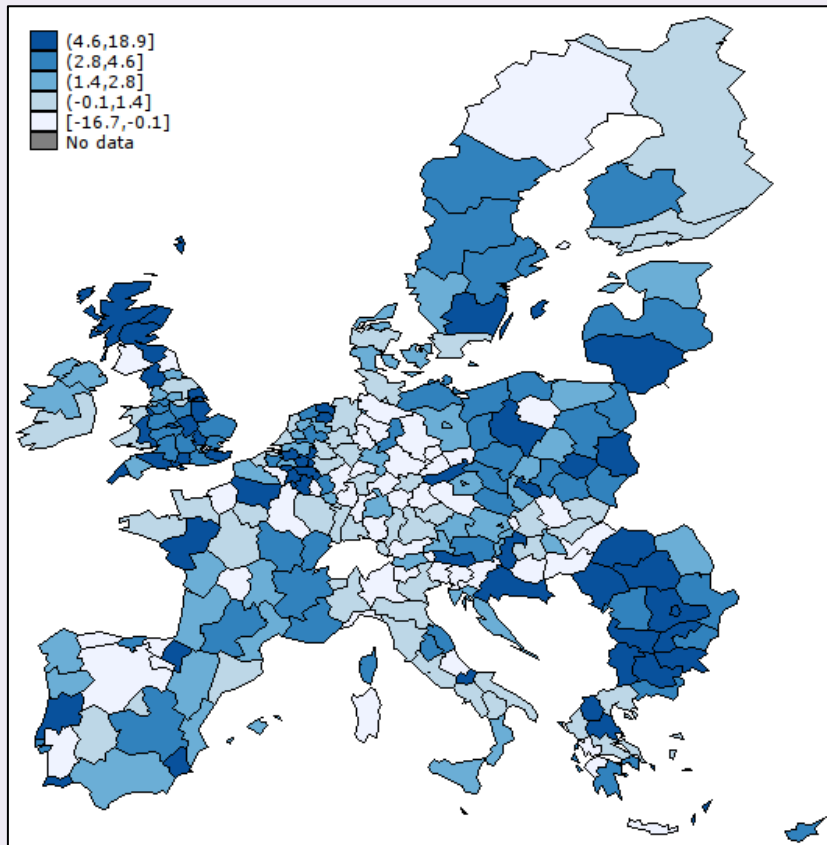


Chapter 2: Future pattern of specialisation of European regions

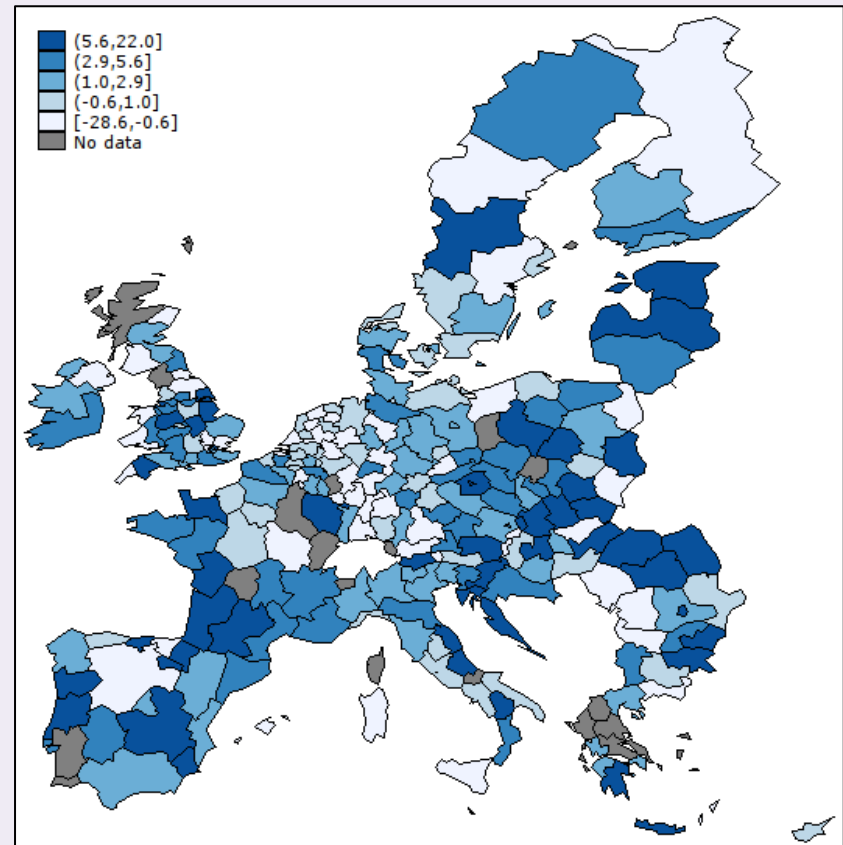
EU regions will further develop knowledge-intensive services related to industry

Knowledge-intensive services, average yearly change in total employment, %, 2008-2015

Market services



High-tech services



Chapter 2: Future pattern of specialisation of European regions

There is a growing potential for re-shoring industrial activities

Average yearly wages in manufacturing in China

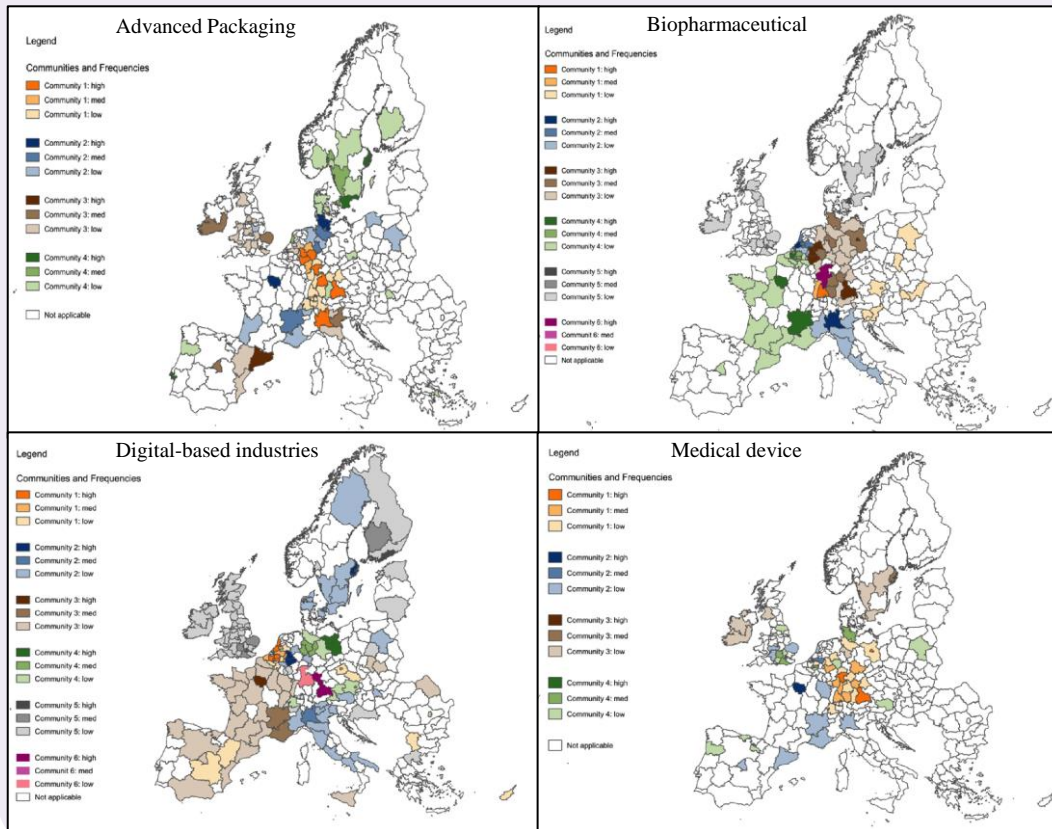


Chapter 2: Future pattern of specialisation of European regions

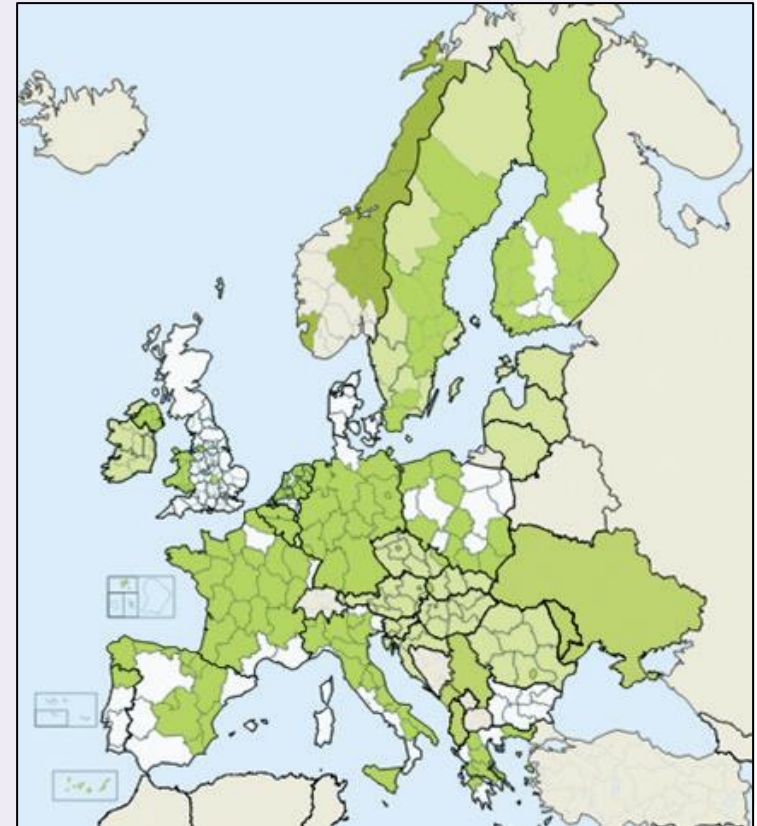
Northern and central Europe will be the location for clusters in the most dynamic emerging sectors.

Regions in the EU continue to invest in KETs.

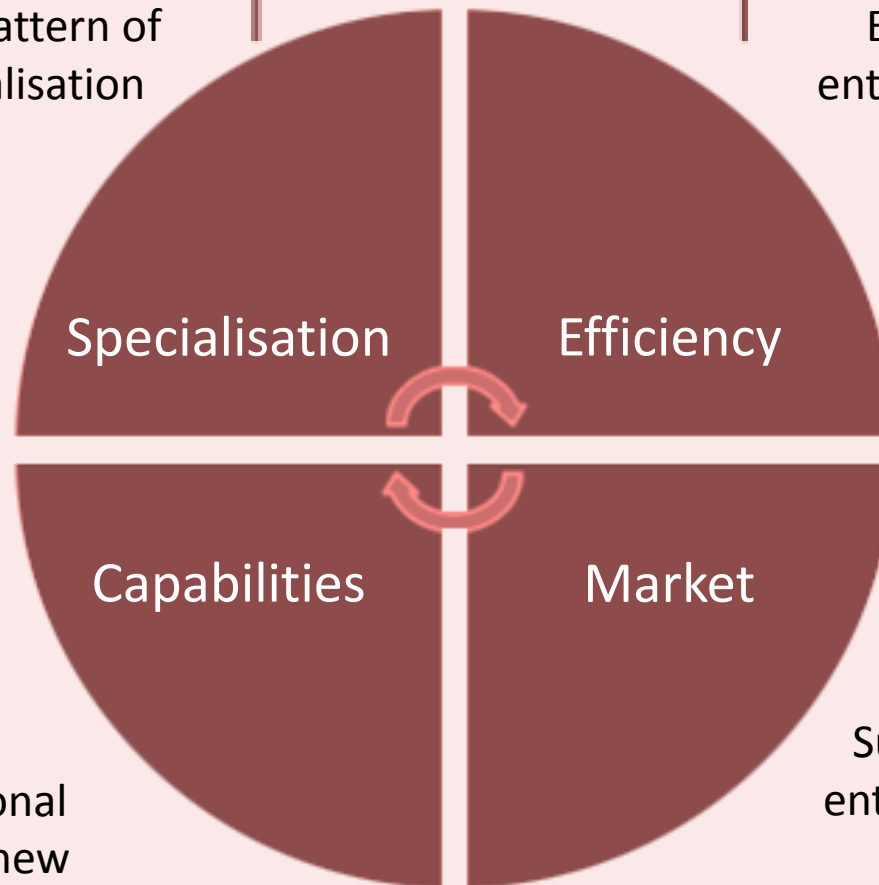
Regions with dynamic cross-sectoral patterns related to emerging clusters (2014)



Regions with encoded KETs priorities (2015)



Chapter 3: Key challenges for European industry and their territorial implications



Designing the pattern of industrial specialisation

Enhancing industrial enterprise efficiency in the use of inputs

Specialisation

Efficiency

Capabilities

Market

Adapt institutional capabilities to new industrial challenges

Supporting industrial enterprises to become more market connected

Chapter 3: Key challenges for European industry and their territorial implications

Designing the pattern of industrial specialisation

Specialisation

...path renewal?

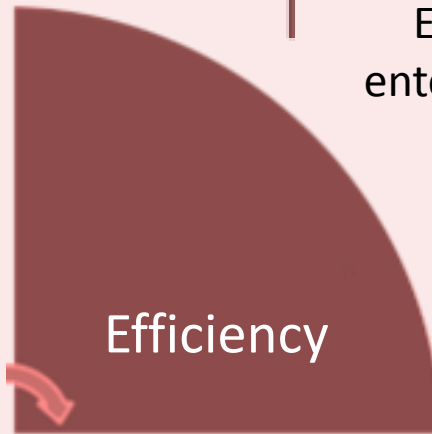
- Scarce emphasis on the needs of smaller enterprises to favour existing technology transfer
- Presence of institutional legacy and ossified networks

...or path formation/creation?

- Higher costs, higher risks and give rise to destructive competition
- Need for greater investments and policy initiative efforts
- Weak absorptive capacity
- Research and educational organisations strongly linked to the old industrial specialisation
- Weak long-term perspective and willingness to take risks within the political system

Chapter 3: Key challenges for European industry and their territorial implications

- Lack of investment in R&D
- Weak education and training system
- Brain-drain of skilled workers;
- Weak incentives to take on higher-skilled workers
- Lack of absorption capacity for regions that lag behind in terms of innovation capacity
- Adoption of green models of production would require LRAs to leverage further public and private investment




Enhancing industrial enterprise efficiency in the use of inputs

Chapter 3: Key challenges for European industry and their territorial implications

- Weak capacity to reach new fast growing markets outside the EU
- Weak economic and institutional environment to attract FDI
- Large financial investments required for SMEs to participate in international markets
- Complicated or costly foreign taxation or cross-border complaints and disputes
- Limited use of e-commerce and scarce information about the potential export market
- Reshoring or offshoring?



Market




Supporting industrial enterprises to become more market connected

Chapter 3: Key challenges for European industry and their territorial implications

- Lack of comprehensive and coordinated strategy
- Weak attitude to look at industry not as a source of mass employment in traditional production work, but as a critical driver of innovation, productivity and competitiveness
- High regulatory barriers that dampen entrepreneurial initiatives
- High fragmentation of policy initiatives
- Weak accountability and transparency mechanisms



Capabilities



Adapt institutional capabilities to new industrial challenges

Chapter 4: How LRAs are responding to the challenges



Dealing with traditional sectors; moving industrial specialisation towards new sectors

Human capital and innovation; better use of raw materials and energy

LRAs adopting solutions to be more responsive to industrial enterprise needs

LRAs supporting industry to become more market connected

Chapter 4: How LRAs are responding to the challenges

Dealing with traditional sectors; moving industrial specialisation towards new sectors

Specialisation

Dealing with traditional sectors:

- Strong coordination between different policy levels
- Develop and maintain a strong research basis
- Create a new local ‘image’

Moving industrial specialisation towards new sectors:

- Development of industry 4.0
- Close collaboration between industry and knowledge institutes
- Involvement of enterprises, research institutions and universities in regional cluster initiatives
- Cooperation between regions

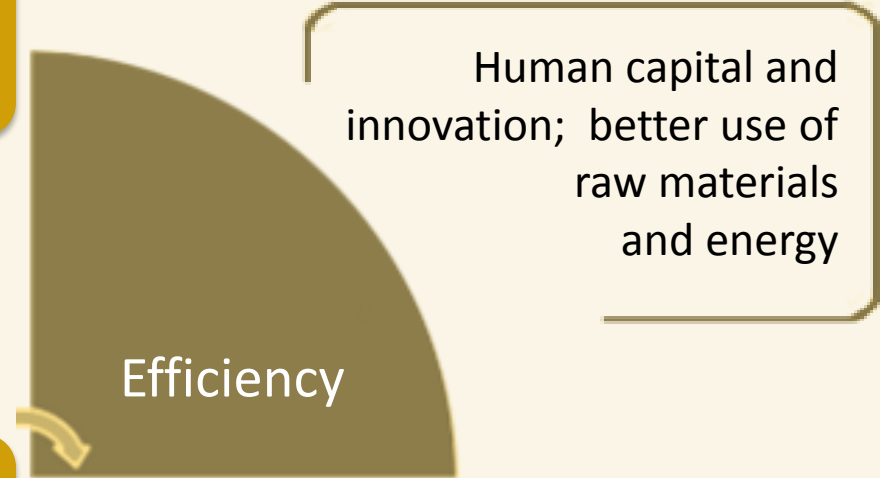
Chapter 4: How LRAs are responding to the challenges

Human capital and innovation capacity:

- Collaboration between research and industrial enterprises
- Improve the capacity of enterprises to attract and employ high-skilled workers

Enhancing efficiency in the use of raw materials and energy:

- Support technological basins by a network of intermediate bodies
- Sharing resources, including techniques, technologies, management and communication tools and human resources

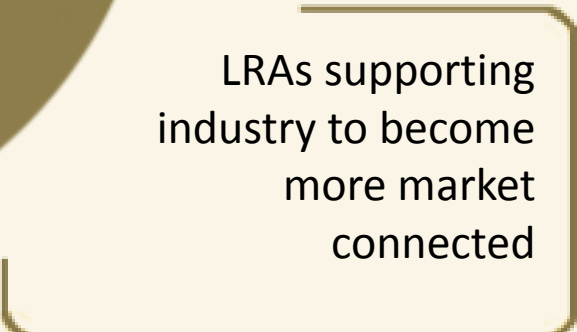


Chapter 4: How LRAs are responding to the challenges

- Enhance and modernise infrastructure and decrease transport costs
- Inter-regional cooperation reducing transport costs
- Enhance infrastructure to increase the attractiveness of the territory for foreign investors
- Promote the territory to incentivise inward investment and also help local enterprises invest abroad and partner with multinationals
- Support for internationalisation of clusters

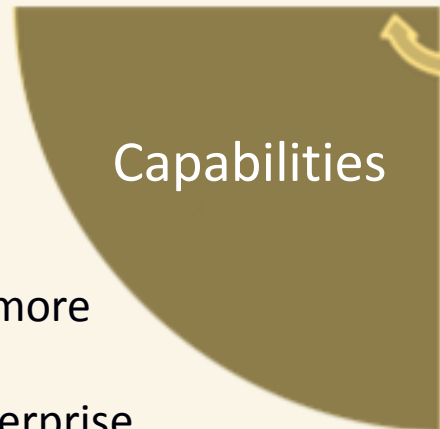


Market



LRAs supporting industry to become more market connected

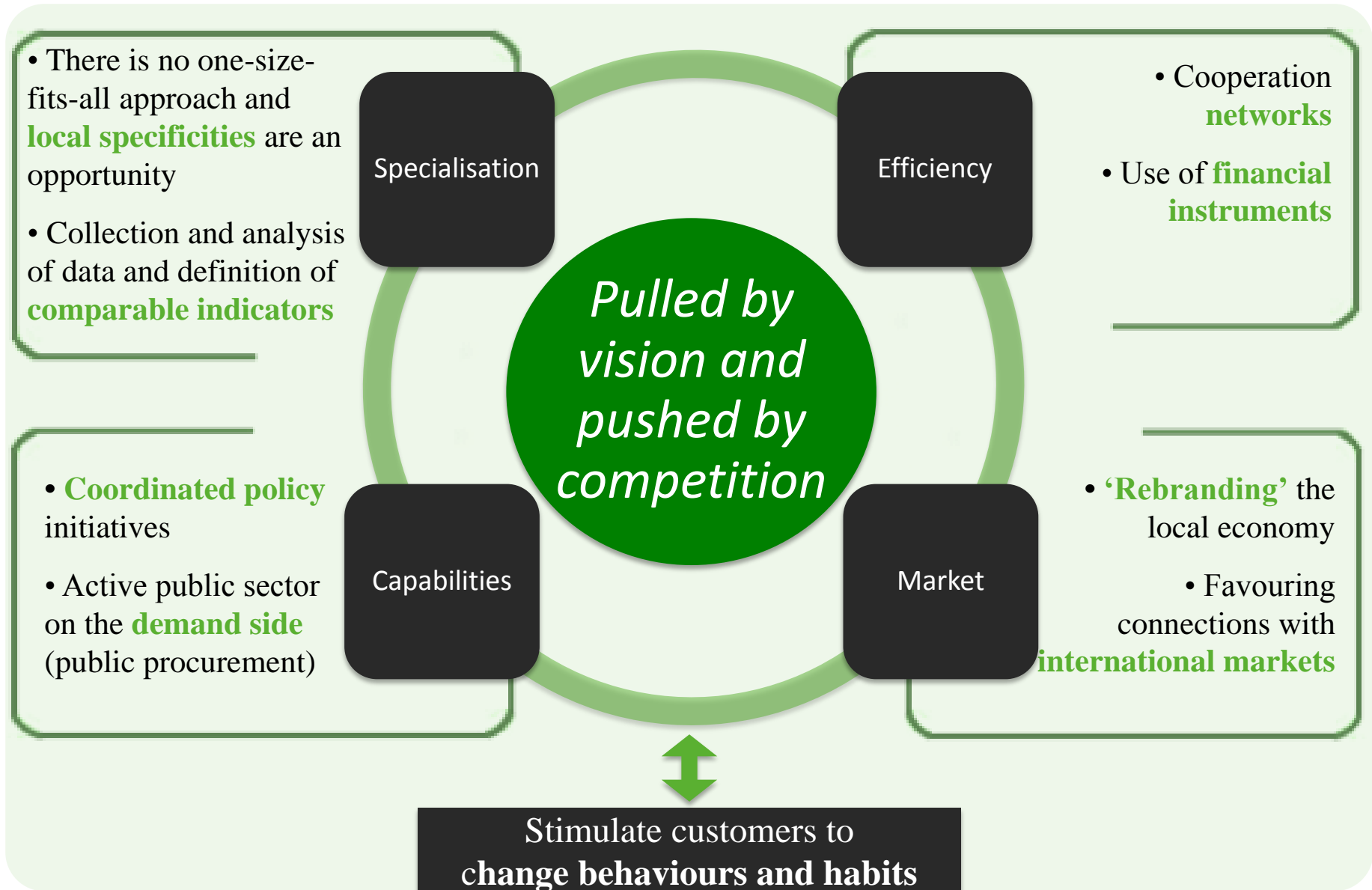
Chapter 4: How LRAs are responding to the challenges



LRAs adopting solutions to be more responsive to industrial enterprise needs

- Actions to reduce the administrative burden
- Facilitating the establishment of small businesses, supporting job creation and entrepreneurship
- Cross-border cooperation
- Strategic use of public-procurement

Chapter 5: Conclusions and recommendations



Thank you for the attention!