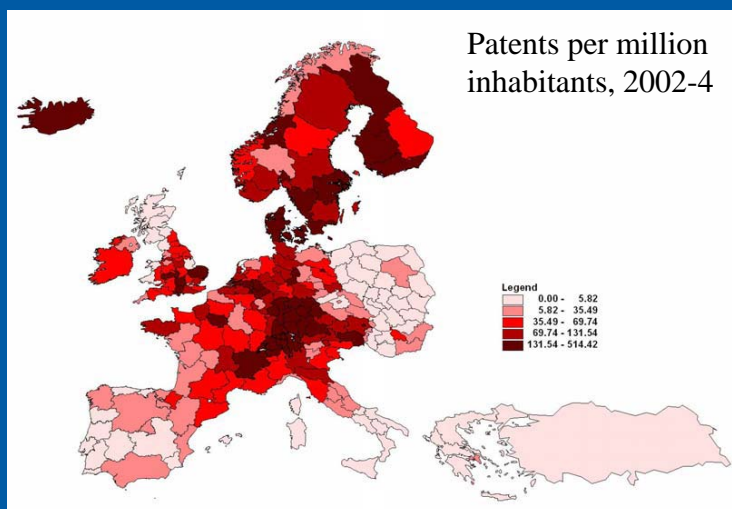




# Regional Policy and Innovation

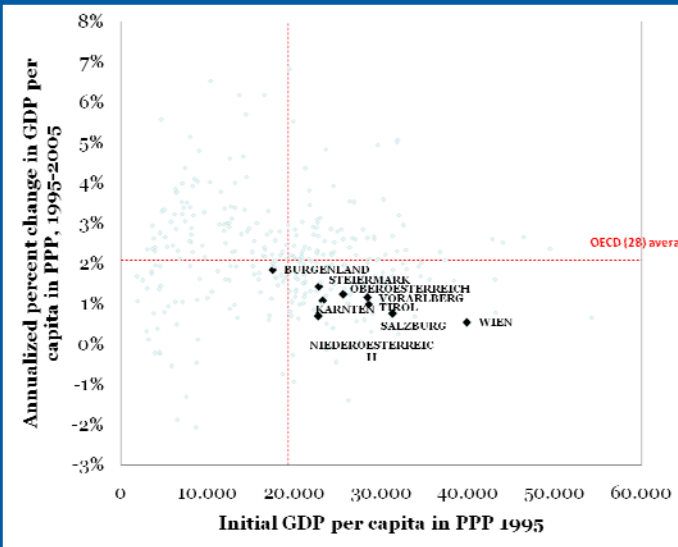
Marcos Bonturi,  
Regional Competitiveness and Governance

## R&D-led innovation maps pick out same “usual suspects” ...





## Austrian regions have high GDP but grow slowly

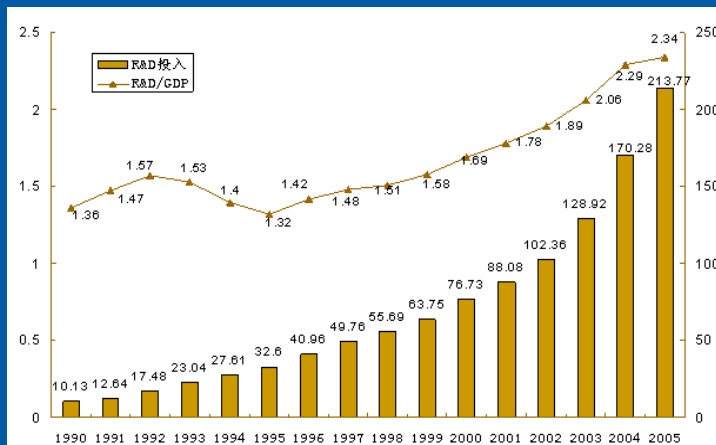


- Productivity growth over the past decade has been below the OECD average in all Austrian regions



## But growth in OECD regions dwarfed by growth in (some) Asian regions

Shanghai aims to increase R&D intensity to 3.3% by 2020...





## Demand for regional action is strong in all OECD countries

- **Regions and globalisation:**
  - Changes in the way firms decide what they produce and where
  - ...leading to an evolution of the relative “value” of regional assets
- **Background of societal concerns:**
  - OECD Ministerial meeting conclusions – Governments need to communicate better the threats and opportunities of globalisation
  - Views of EU citizens (Eurobarometer): globalisation = delocalisation
- **Perception from the regions:**
  - Always someone, somewhere that can do what we do, but cheaper
  - Is it better to be specialised or not? How can regions move up the value chain and anchor their key industries?

Common answer is often “be more innovative”...



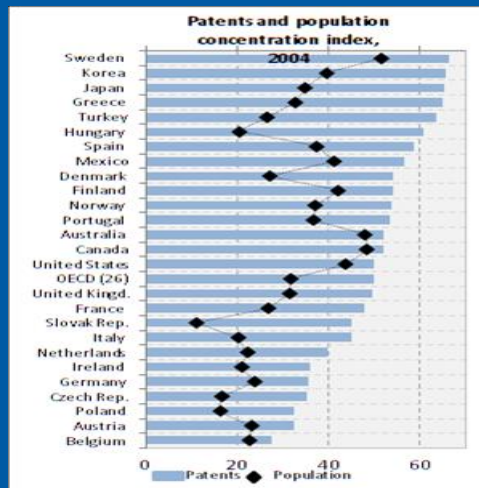
## Policy streams are converging: regions are where innovation happens...

Policy	Old	New
Regional	Redistribution to lagging regions; exogenous drivers	Building competitive regions by building local capacity; innovation the key driver
Science and Technology	Narrow definition of innovation; single sector projects in basic research	Broader definition; Collaborative and multi-sectoral research; focus on business applications
Industry and Enterprise	Subsidies to firms; national champions	New or hard to reach innovation – services, public sector, eco-inno and global challenges

And now Economy and Finance – innovation’s role in moving out of recession



## Innovation has a spatial dimension: that regional policies can support



### Evidence of spatial dimension:

- (Over)concentration of innovation inputs and outputs in particular places
- Strong clustering and specialisation at regional level

### Explained by:

- Innovative milieu-type arguments (knowledge flows)
- Practical preference for working with accessible partners
- *Many other things.....*

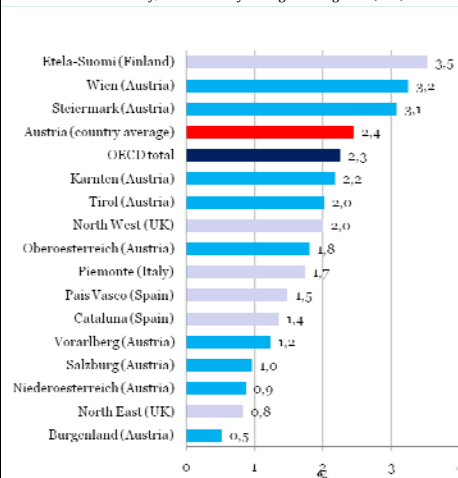


## Austrian regions have very different strengths and specialisations....

(Comparison of Austrian regions with regions recently reviewed by OECD)

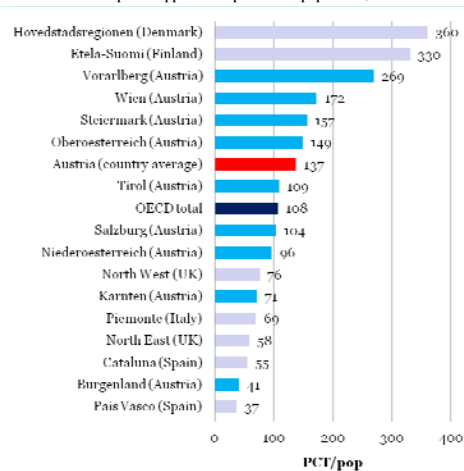
### Research and development expenditures:

R&D intensity, 2005 Country average and regional (TL2)



### Patents:

PCT patent applications per million population, 2005

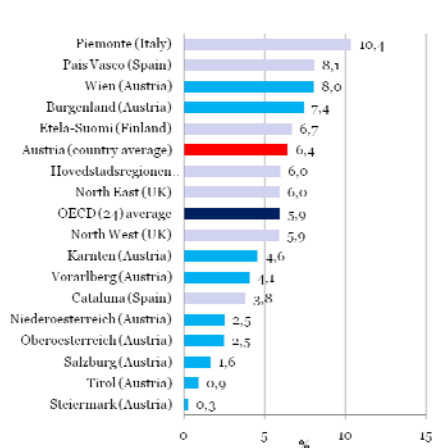




## ...so a policy for regional innovation for Austria has to be flexible

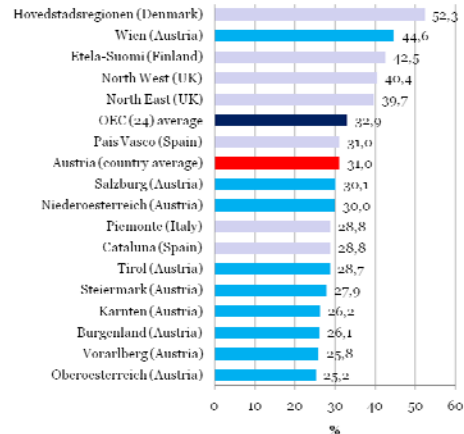
### High-tech manufacturing:

Percentage of High-tech manufacturing employment, country average and regional level (TL2), 2005



### Knowledge-Intensive services:

Percentage of knowledge-intensive services employment, country average and regional level (TL2), 2005



## But regions vary greatly in how they innovate: indicators capture only some of this

Patents per million, class	Average expenditure on R&D as % of GDP	R&D shares by sector: Public – Private (%)	Average employment in high technology sectors (%)
0-10	0.57	60 - 40	23.3
10-50	1.57	50 - 50	28.5
50-250	1.63	40 - 60	37.5
250 +	2.41	25 - 75	43.2



## ...and regions less engaged in R&D-based innovation can still grow

Patents per million, class	As % of all regions
0-10	33.43 (of which 46% are rural regions)
10-50	15.5
50-250	25.4
250 +	25.7

### In these regions:

- Public R&D as a percentage of regional GDP is low
- Firms engage less in R&D (less than 50% of **innovative** firms engage in R&D)
- Fewer jobs are in high technology sectors

Yet this group have above average GDP growth... Good at absorbing, entrepreneurial, non-tech innovators



## The scope for regional intervention is becoming clearer...

Category	National policy	Regional policies
Area of specialisation	“anonymous” framework of regulations and institutions	collaboration among identifiable actors; importance of proximity relationships
Types of innovation support	basic research, applied research	close to the market, assisting firms to translate knowledge into marketed products and services
Strategic approach	overall policy focus for national innovation system	building regional consensus based on needs assessment; addressing specific gaps (e.g., alternative institutions)
Rationale for intervention	market failure	market “opportunities”



## ...with some general models, but no clear best practice...

	Federal, decentralised	Centralised	Small country
Innovation environment	↔	↑	↑
Innovation poles, clusters and science parks	↓	↔	↔
R&D, pure research/applied	↔	↑	↑
Enterprise support for innovative firms	↓	↔	↔

↔ = both central and regional levels involved ↓ = essentially a regional responsibility; ↑ = essentially a regional responsibility

Source: Based on Technopolis et al. (2006)



## OECD research agenda

- A series of **Regional Innovation Reviews** (e.g., north of England, Piedmont, Catalonia...)
- Contributing to the **OECD Innovation Strategy** – the regional dimension
- **Collaboration with OECD member countries, EU and IADB** on policy analysis