

The Regional Dimension of Innovation in OECD Countries: What the Data Say

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Structure of the presentation

- The OECD REGPAT database
- A sample of initial findings from the data



Measuring Innovation at local Level

- What indicators are available?
- R&D data are collected at the level of firms; some regionalisation is available, but: For a few recent years, and at fairly aggregate level only (confidentiality).
- Innovation survey data are relevant at the level of companies; attempts to regionalise, but loss of relevance + confidentiality limits. Restricted to Europe.
- Patent data

Patent data

Using patents as indicators of inventive output:

- Pros: most technical inventions are patented; publicly available; for all countries; rich information (technical field, address of inventors and holder etc.)
- Cons: not all inventions are patented; skewed value distribution; invention \neq innovation.
- Bottom line: Can be used, but needs caution and clear controls.



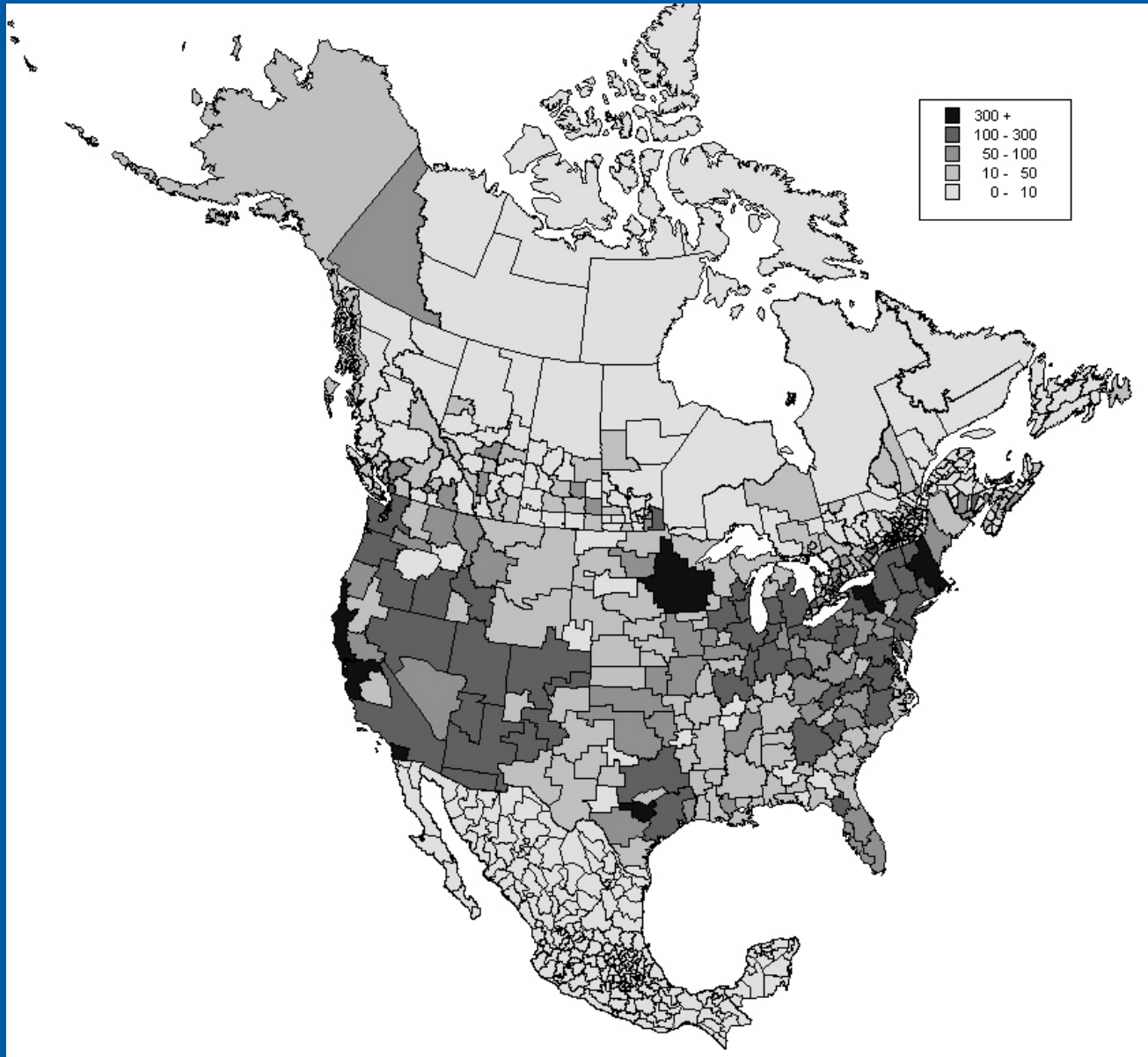
The OECD REGPAT Database

3 million patent applications (EPO + PCT)
with regional code; TL3 level = 2000
regions in OECD countries (EU, US, JP etc.)
+ large non OECD (China, India).

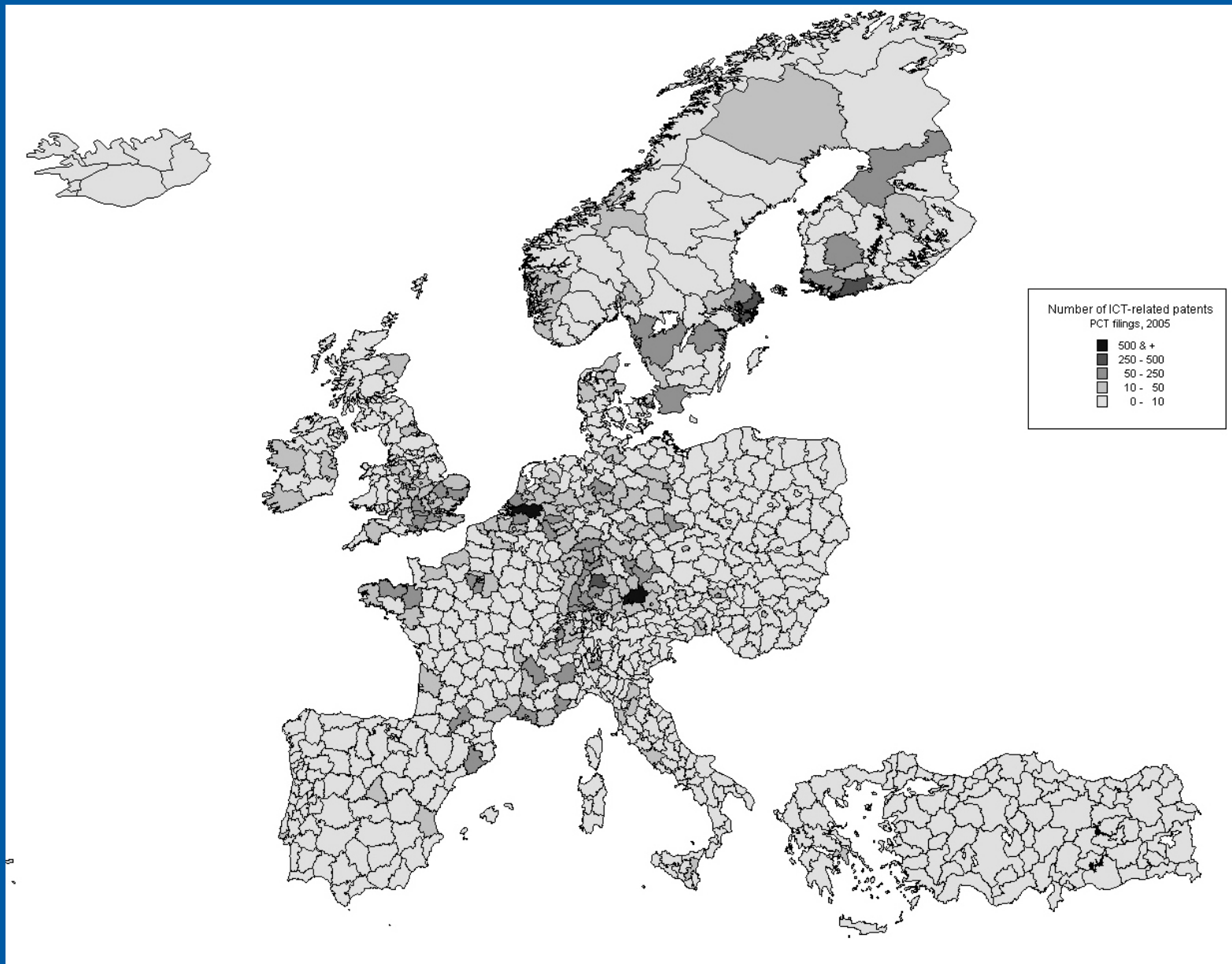
Can be matched with other OECD patent
databases (technical fields, owner's
standardised name, institutional sector,
industry code, citations, applications to 70
other patent offices etc.)

Downloadable online (contact OECD)

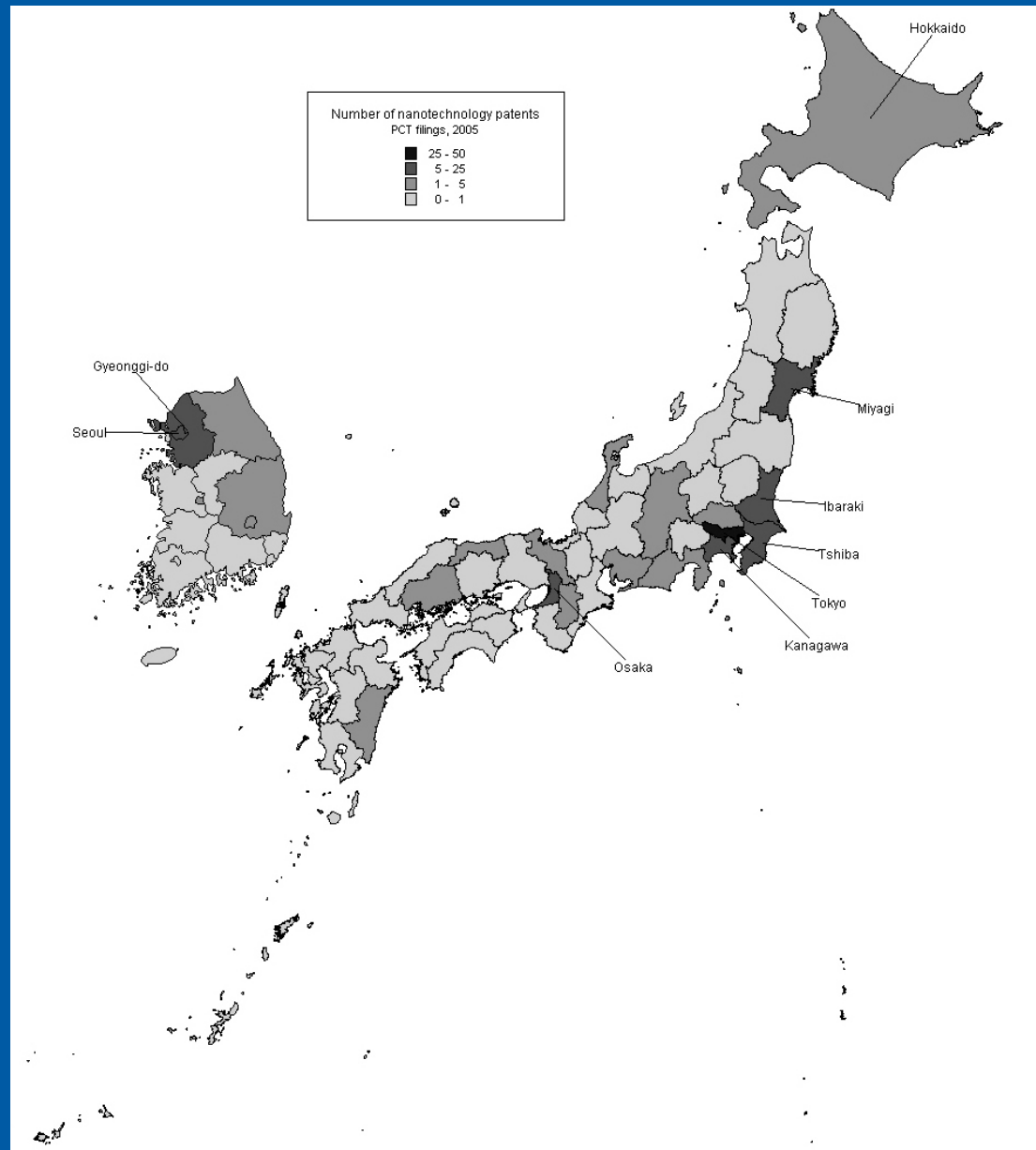
PCT applications per capita – 2004 (Priority year)



PCT applications in ICT fields – 2005 (Priority year)



 PCT applications in nanotechnology – 2005 (Priority year)



Cross-regional linkages are fundamental

Share of patents co-invented in two or more regions (1883 regions in OECD), 2001-2005, EPO applications (incl. PCT)

(ongoing work with Grid Thoma, Bocconi)

	EU	JP	US	OECD
Overall	42.0%	24.1%	27.4%	36.1%
Of which are intra firms	92.0%	81.7%	93.0%	92.4%
Of which are international	24.0%	7.3%	26.7%	26.9%

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(ongoing work with Grid Thoma, Bocconi)

	EU	JP	US	OECD
Overall	42.0%	24.1%	27.4%	36.1%
In the top 10% regions	50.5%	25.0%	28.5%	39.2%
Nanotechnology	43.2%	24.0%	23.9%	33.2%
Biotechnology	59.4%	49.6%	34.7%	44.4%
ICTs	37.3%	20.6%	24.4%	31.6%

Conclusion

- The global knowledge economy is characterised by world-wide competition between top inventive regions.
- Need to build an information system that reflects this dynamics, factors of performance, co-operation/competition between regions, so as to understand its mechanisms and monitor its development.