

Indicators for evidence-based regional policy: opportunities and constraints in OECD countries

WORKSHOP “PUBLIC POLICIES ORIENTED TOWARDS RESULTS: FROM SPENDING TO PERFORMANCE”

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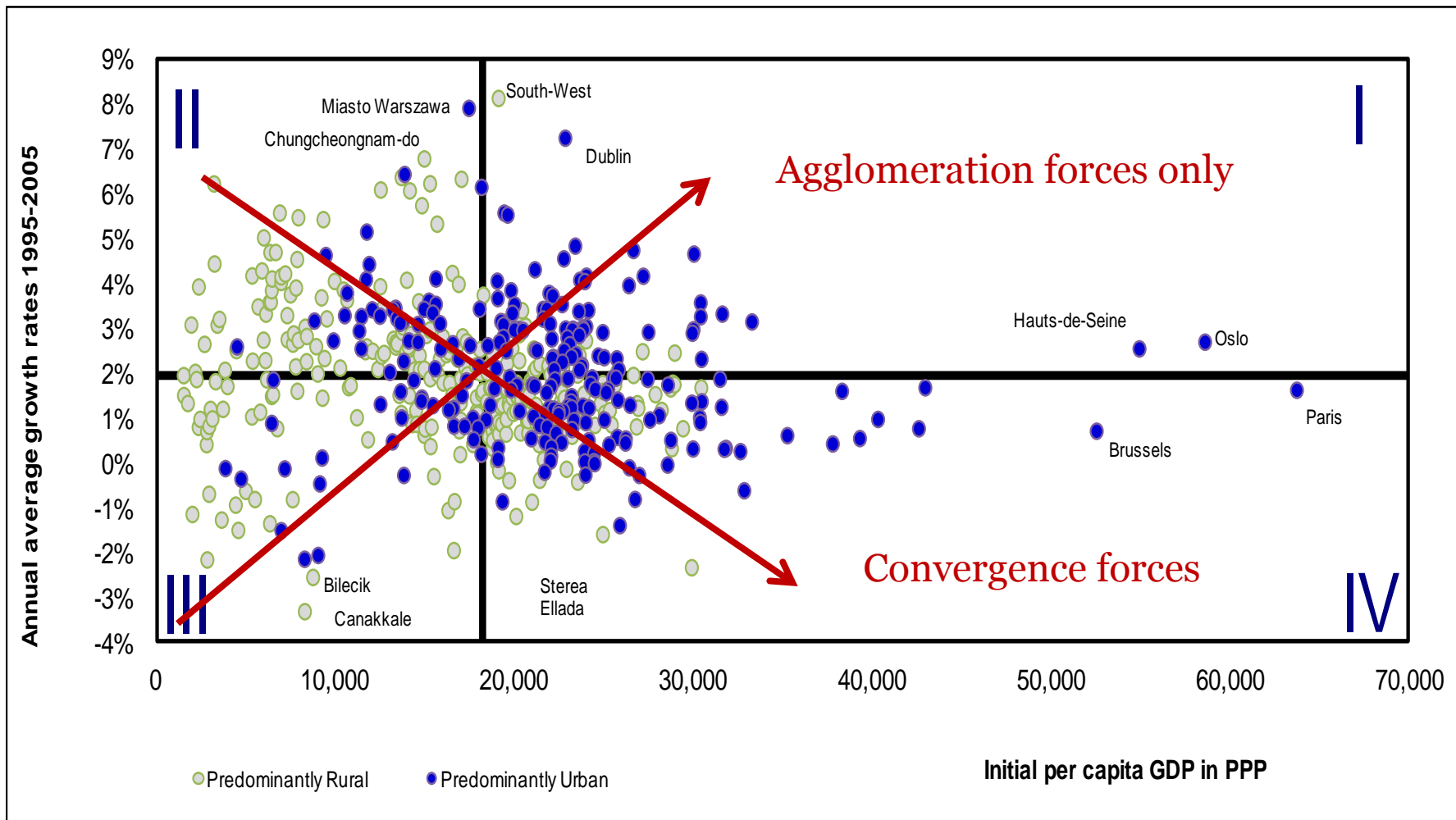
Outline

1. Rationale for regional development policies and relevance of indicators
2. Difficulties with the use of policy indicators
3. New data approaches developed at the OECD
 - OECD Regions at a Glance
 - New definition of rural areas
 - New definition of functional urban agglomerations
 - Measuring urban-rural linkages

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Regional growth results from two opposite forces

(GDP per capita)

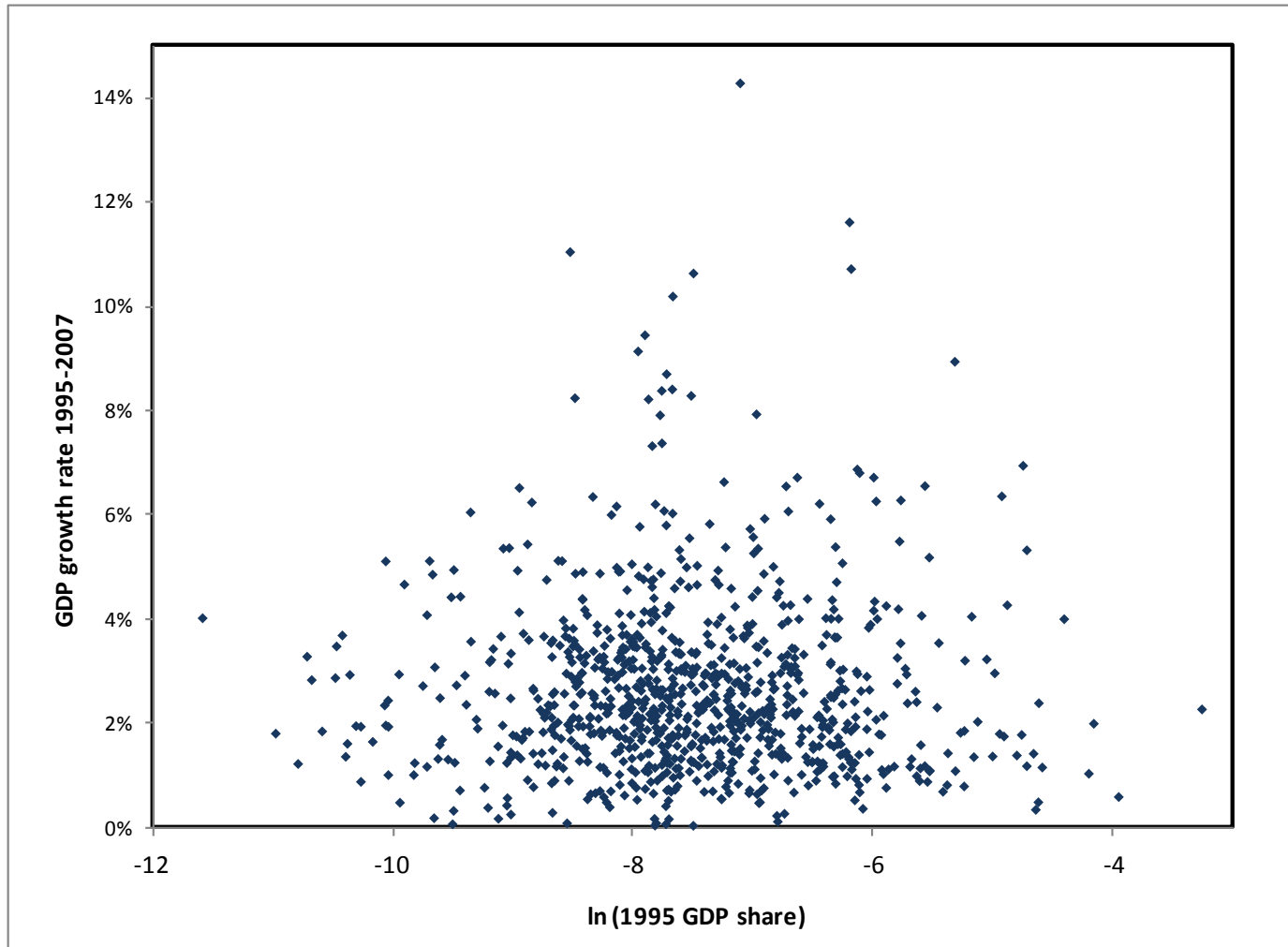


NB: The horizontal and vertical bars indicate OECD averages

➔ Many rural and intermediate regions are growing faster than urban ones

Regional growth vs. size (GDP share)

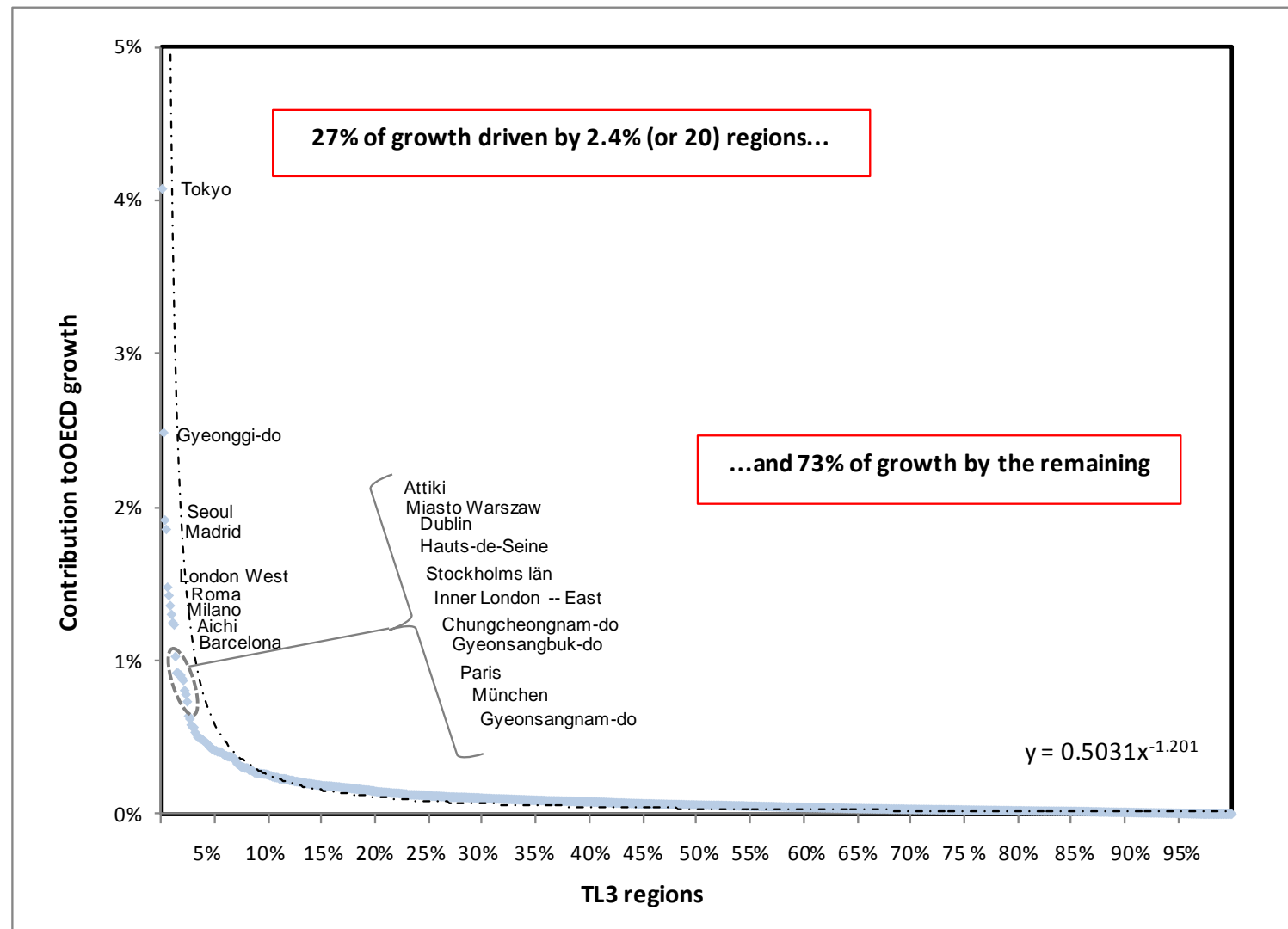
OECD TL3 regions, 1995-2007



Source: Garcilazo and Oliveira Martins (2012)

Granularity of OECD growth across regions

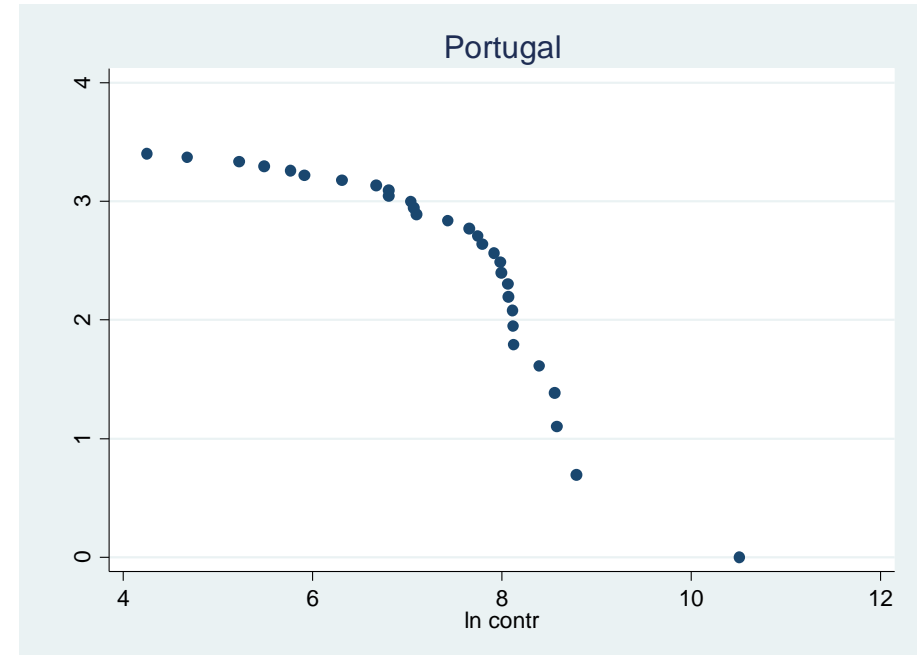
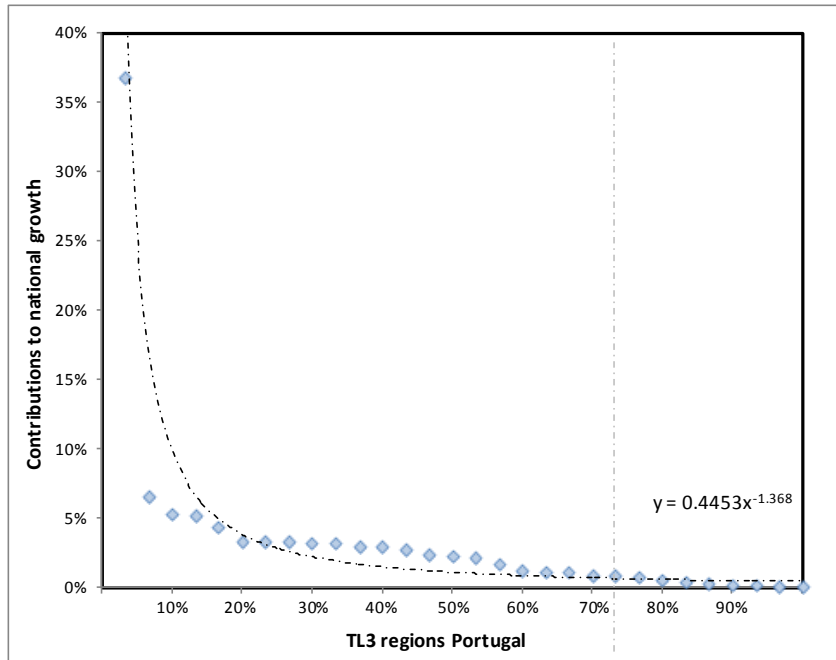
Contributions to OECD-wide growth, TL3 regions



Source: OECD Regional Outlook 2011

NB: This shape of contributions is approx. scale-free (OECD, national, sub-national)

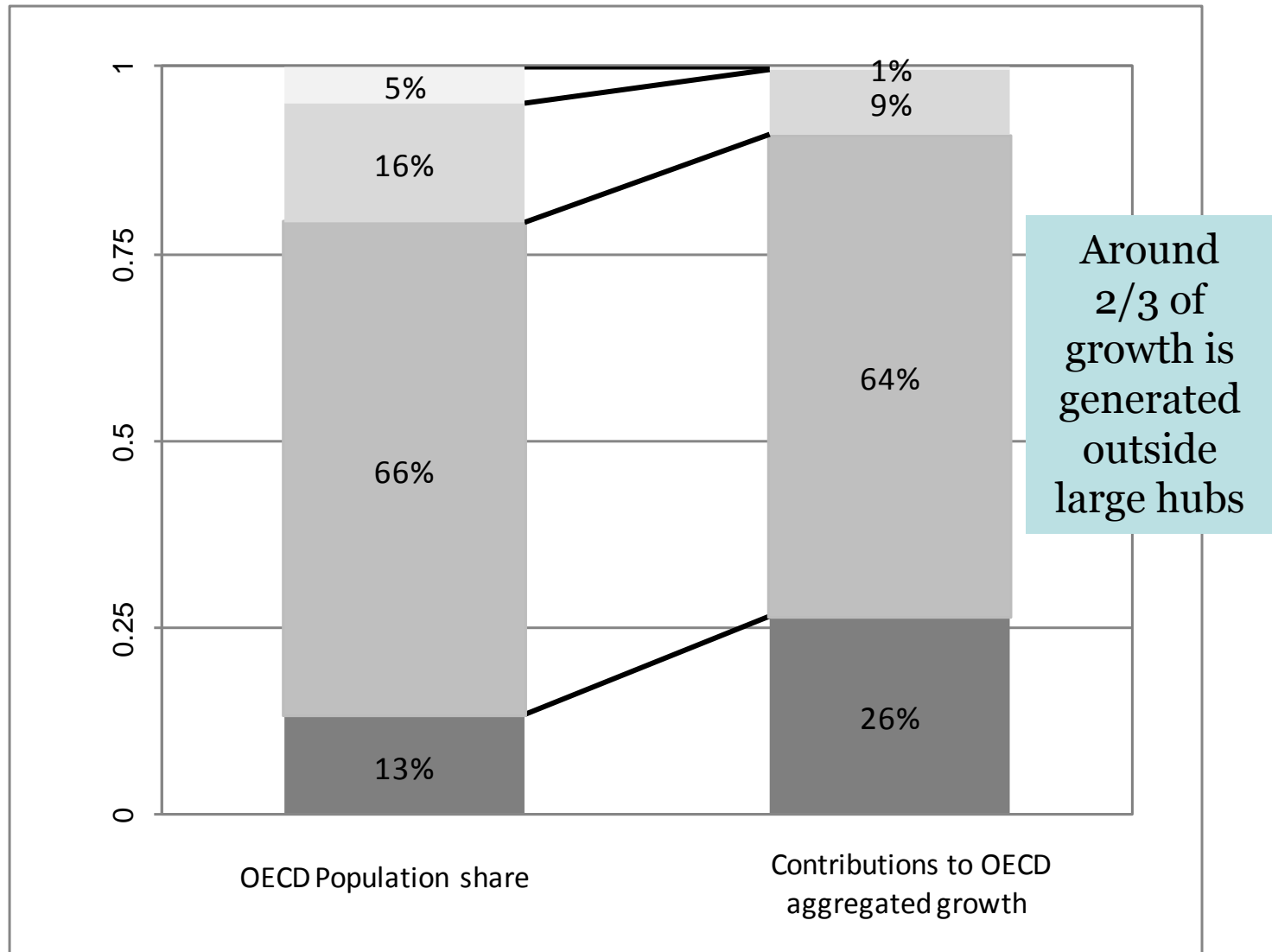
Contribution of regions to growth: Portugal



Source: OECD Regional Regional database

Contributions to aggregate growth by % of population

OECD TL3 regions, 1995-2007



Key principles for an effective Regional policy

OECD promotes ‘place-based’ policies allowing for a strategy and concentration of policy actions:

- Use of regional specific assets and smart specialisation (or to create absolute advantages to stimulate competition & experimentation across regions)
- Create complementarities among sectoral policies at the regional (or local) level
- Use of multi-level governance mechanisms for aligning objectives & implementation

Relevance of regional policy indicators

- In this context, regional data and indicators are critical input to shift from a concept of regional policy as a compensatory action to a focus on growth
- Regional data is also as critical input to consolidate a comprehensive 3-pillar model of development:
Competitiveness, Inclusion and Sustainability
- Robust set of indicators:
 - Enable international comparison to assess economic performance of territories and quality of life of people (harmonized definitions and methods);
 - Help make informed choices and orient policy (Relevant for a certain place, debatable, timely)
 - Enter in the evaluation of policies (what worked and why and explicit connections and causality)

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Relevance of regional policy indicators

- How to integrate indicators in a easy-to-capture way for policy makers (e.g. use of visual tools)?
- How to deliver them in a way which is useful for policy makers when designing policies, implementing reforms and/or evaluating them?
- How to take into account complementarities across different types of policies (economy-wide, regional policies)?
 - Policy coherence avoids conflicting outcomes
 - Policy complementarity signals a benefit and needs to be constructed from the outset

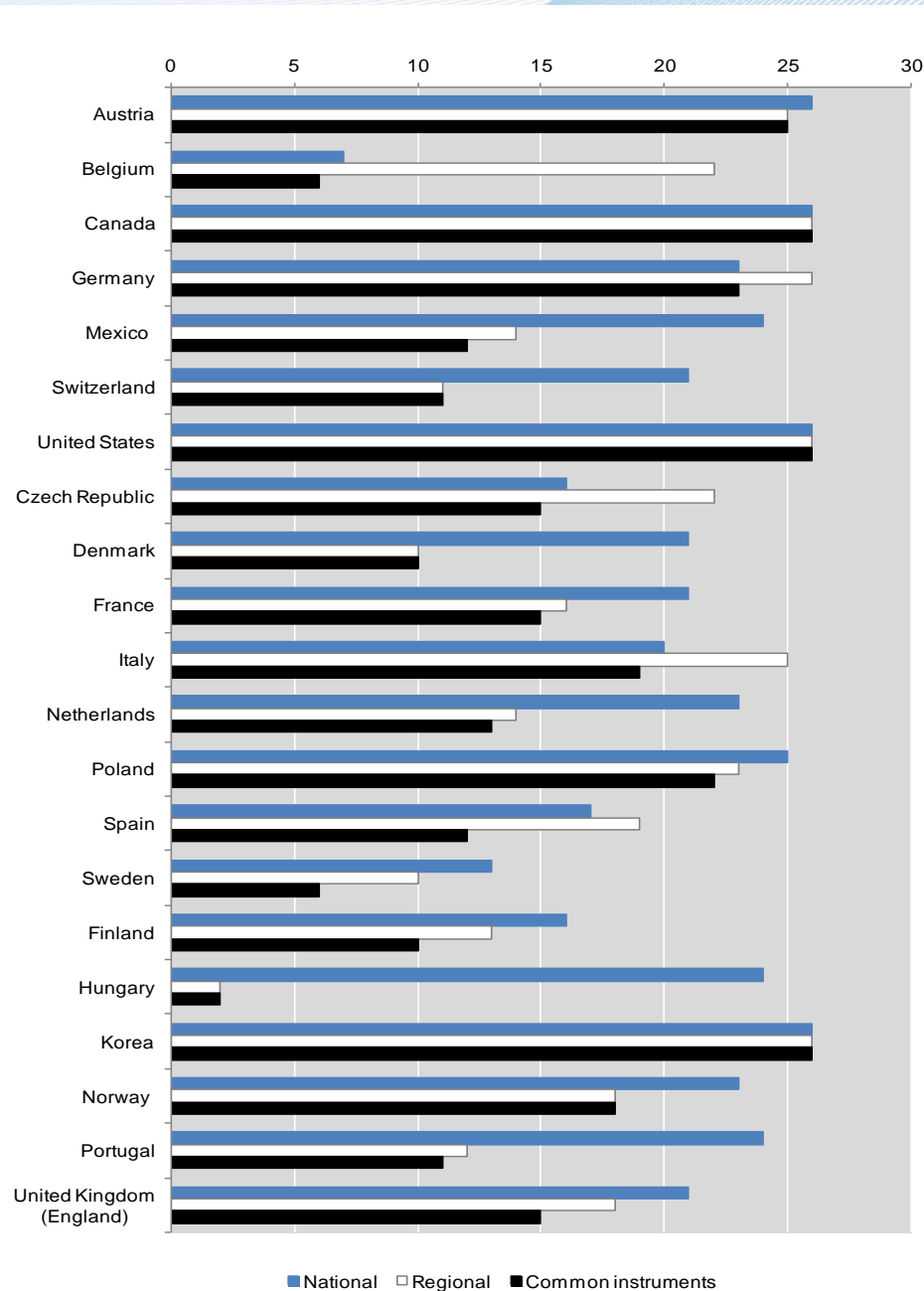
Innovation policy: multiple instruments...

	Knowledge Generation	Knowledge Diffusion	Knowledge Exploitation
Traditional instruments	Technology funds R&D incentives/supports/grants Support to scientific research and technology centres Support to infrastructure development Human capital for S&T	Science parks Technology Transfer Offices and schemes Technology brokers Mobility schemes Talent attraction schemes Innovation awards	Incubators Start ups support innovation services (business support and coaching) Training and awareness-raising for innovation
Emerging Instruments	Public private partnerships for innovation Research networks/poles	Innovation vouchers Certifications/ accreditations	Industrial PhDs Support to creativity Innovation benchmarking
	Competitiveness poles Competence centres New generation of scientific and technological parks and clusters Venture and seed capital Guarantee schemes for financing for innovation		
Experimental instruments	Cross-border research centres	Open source-Open science markets for knowledge	Regional Industrial Policy Innovation-oriented public procurement

Figure 3.1. Number of policy instruments used by national and regional governments, by country

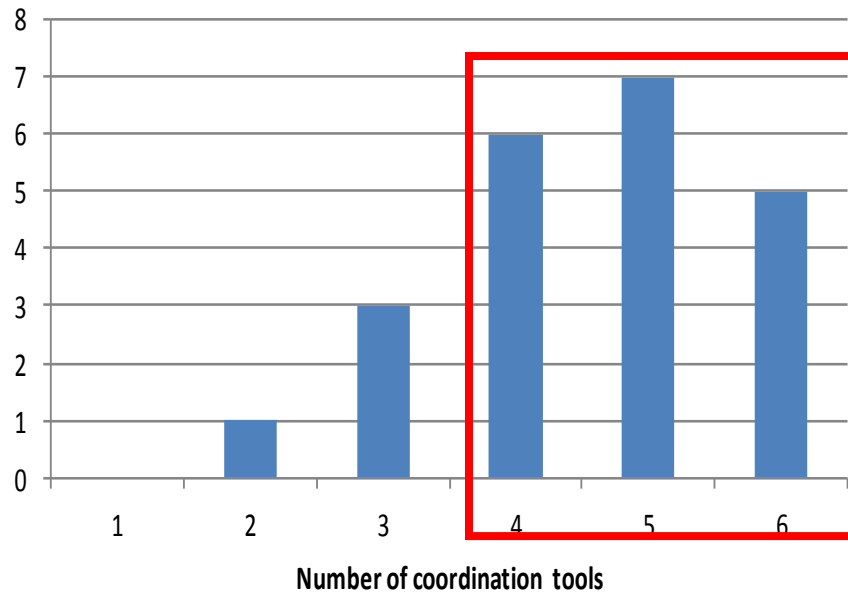
... which need
better
governance

Source: results
from an OECD
Survey on the
Governance of
Innovation systems



Governance tools to work with other levels of government and the private sector

Multiple tools are used in any given country (generally 4 or more)

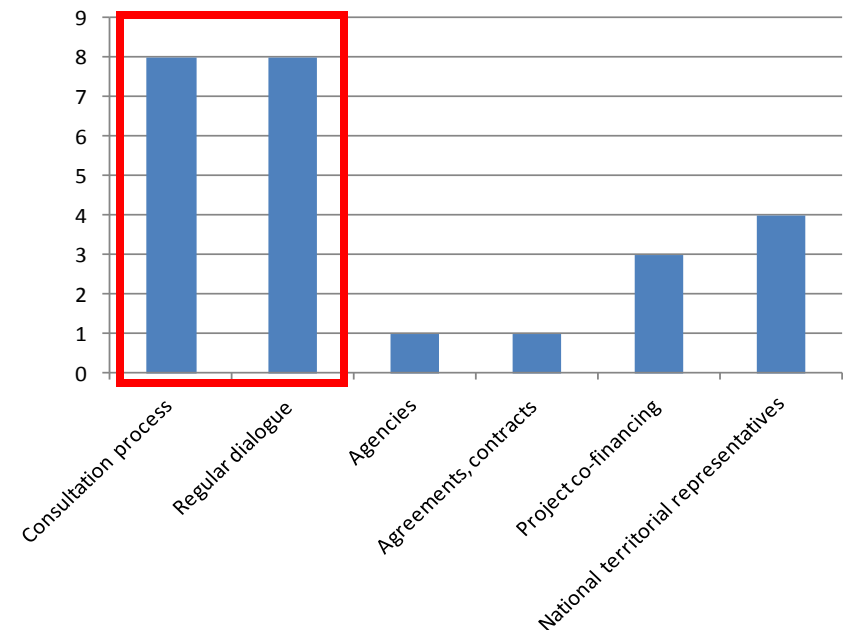


Note: 22 reporting countries (20 OECD, 2 non-OECD countries).

Source: OECD (2011) *Regions and Innovation Policy*, OECD Publishing, Paris based on OECD-GOV Survey on the Multi-level Governance of Science, Technology and Innovation Policy.



Regular dialogue and consultation rated most important among tools



: 24 reporting countries (20 OECD, 4 non-OECD countries), one country reported two top tools.

Source: OECD (2011) *Regions and Innovation Policy*, OECD Publishing, Paris based on OECD-GOV Survey on the Multi-level Governance of Science, Technology and Innovation Policy.

Example of policy complementarities in an green growth package in urban areas

Pro-Growth Policies → Greening Opportunities ↓	Infrastructure and Investment Policies	Innovation Policies	Human Capital Policies
Energy Policies	<i>Regulations and investments to support cogeneration of energy, district heating/cooling, and city purchase of renewable energy</i>	<i>Funding and technical assistance for regionally-located renewable energy R&D</i>	<i>Retraining of traditional economy workers for renewable energy production</i>
Impact on Jobs	Renewable energy production is more job-intensive than fossil-fuel energy production.	Low and high-skill job opportunities at renewable energy start-ups.	Facilitates transition between traditional economy jobs and renewable sector job opportunities.
Impact on Demand for Green Goods	District heating/cooling can increase access to renewable energy by enabling or requiring participation of buildings in district.	Lowering barriers to commercial development of renewables can lower final cost, thus enabling greater demand.	--
Impact on Urban Attractiveness	Can attract firms given renewable sources of energy less vulnerable to price fluctuations than fossil-fuels.	Funding and technical assistance can attract renewable energy SMEs and R&D activities, and add value to local academic institutions	Skilled labour pool can better attract renewable energy producing firms.

Source: OECD Regional Outlook 2011

➔ Outcome Indicators need to take into account the structure across the different policy areas; identify unbalances and weakest links

➔ Other examples available for the production of renewable energy as a rural development strategy

Constructing synergies among Urban Policies

Impact → (reads horizontally)	Land-use Zoning	Transportati on	Natural resources
Land-use zoning <i>Land-use zoning determines the density, height of buildings, and proportion of undeveloped land on each property.</i>	–	Segregation of land uses impacts travel distances and frequency; transit-oriented development zones encourage use of mass transportation.	Zoning designates natural resource areas that may be set aside to reduce vulnerability to flooding or urban heat island effects.
Transportation <i>Transportation policies determine the development and extension of road and mass transportation networks.</i>	Transportation infrastructure policies shape demand for land and acceptance of density increases.	–	Transportation systems impact natural resource and preserved zones.
Natural resources <i>Natural resource policies determine which areas are preserved from development and what uses are acceptable on them.</i>	Natural resource policies determine the limits of developed land-use zones and can improve quality of high- density zones.	Natural resource policies affect the placement of road and mass transportation infrastructure.	–



Examples:


- Retraining of local workers for building retrofit programmes
- Orienting development around public transportation and services
- ICT and public transportation investments to improve service quality cost-effectively
- Congestion fees and enhancements in bus service.
- Compact city policies and eco-neighbourhoods that reduce environmental impact of providing urban services

Source: Hammer, Kamal-Chaoui et al (2011), Cities and Green Growth: A Conceptual Paper

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OECD *Regions at a Glance* 2011

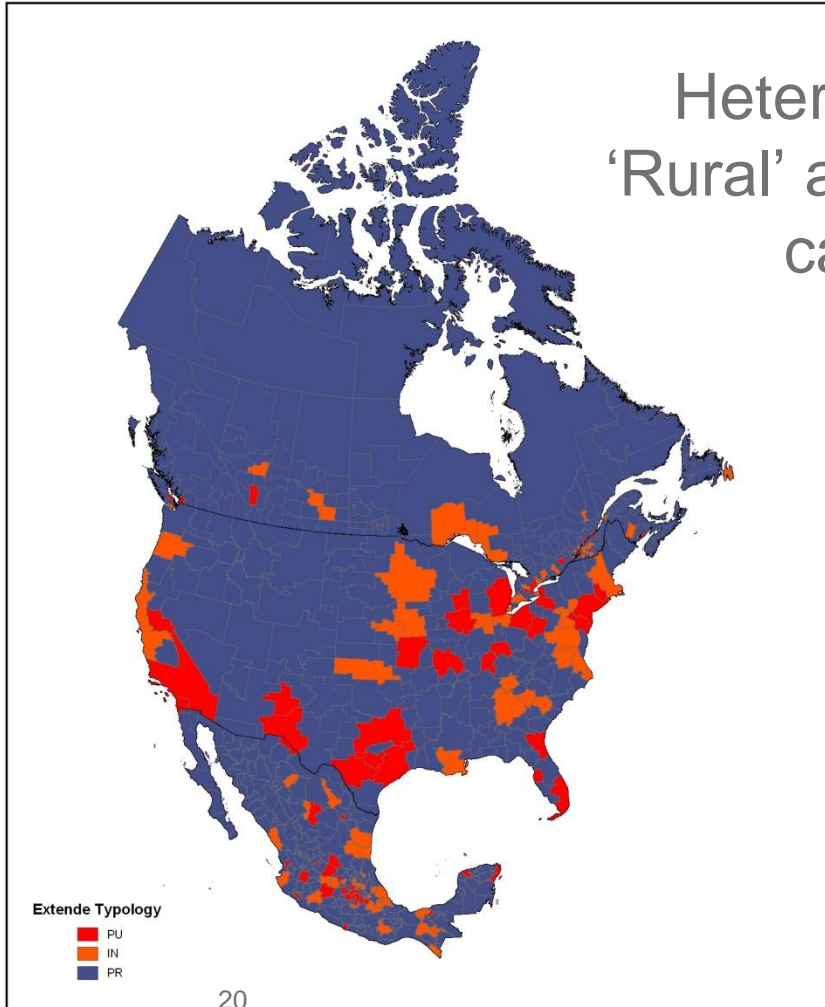
Concentration of resources and contribution of regions to change	Efficiency	Equity	Environmental sustainability
Persistence of regional disparities			
Common characteristics of regions achieving a certain outcome			

- Internationally comparable statistics 2000 regions; 34 OECD countries + emerging economies. Time-series (1995-2009) for around 40 indicators of demography and migration, economic accounts, labour market, social indicators, environmental and innovation)
- Friendly tool to disseminate (e.g. OECD eXplorer)

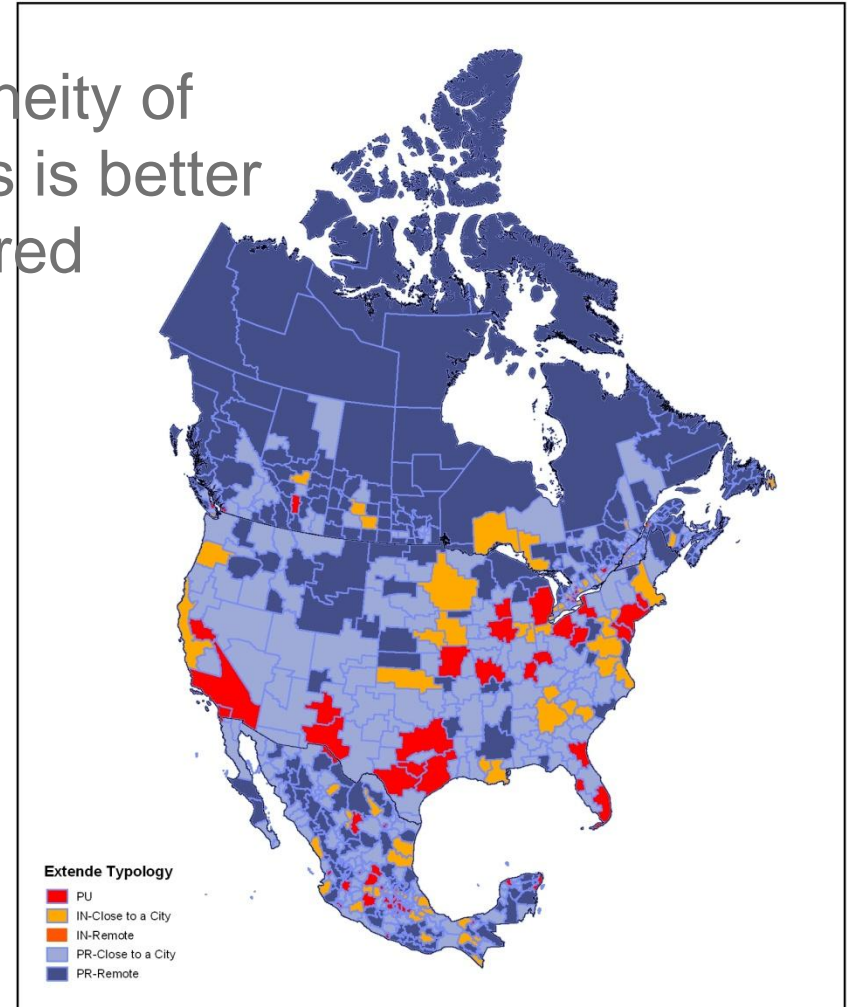
I. Extended OECD Territorial typology: Remote rural regions

Remoteness proxied by time needed to reach an urban center

OECD Typology: North America



Extended Typology: North America



Heterogeneity of
'Rural' areas is better
captured

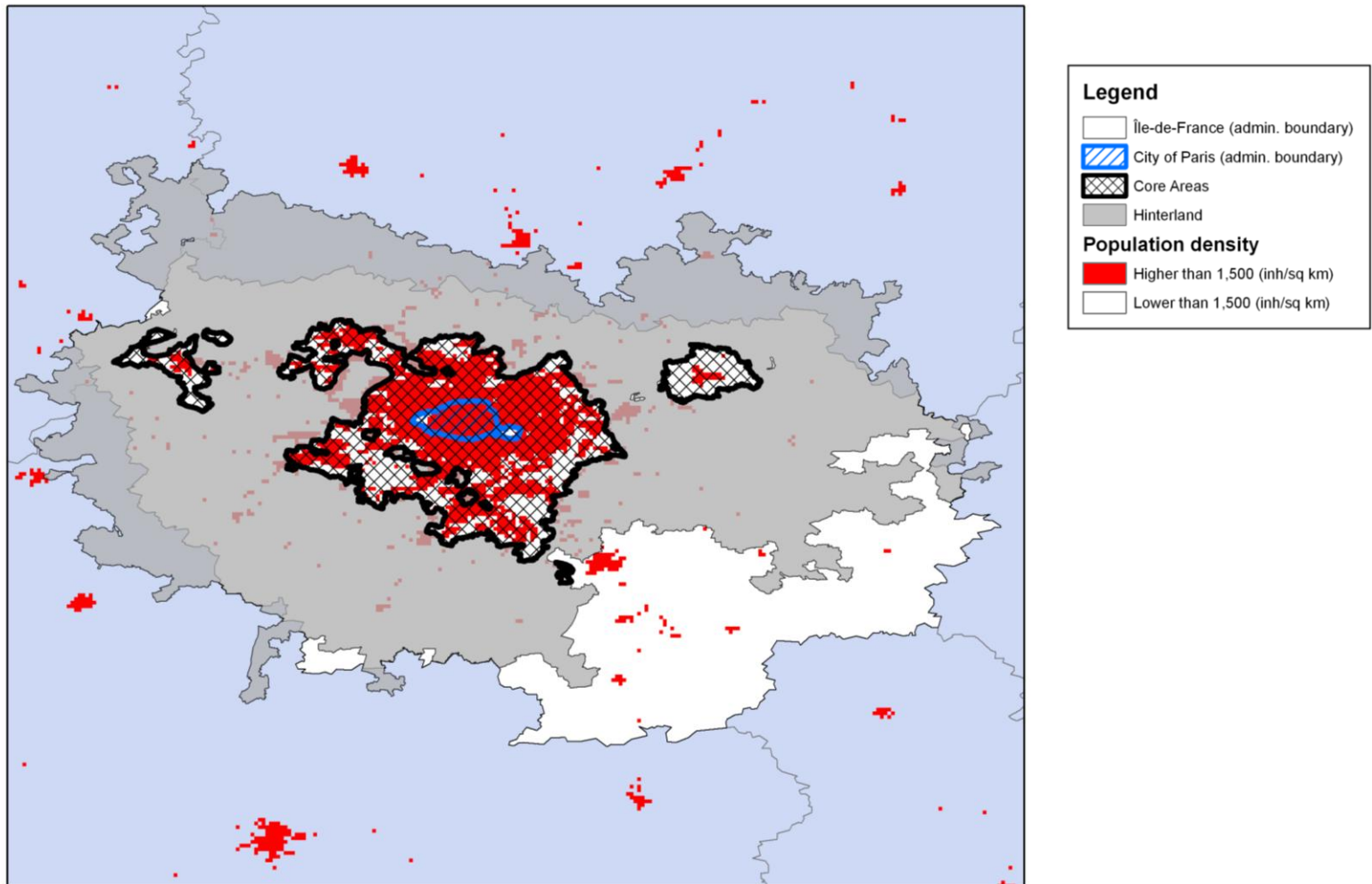
II. New definition of *functional* urban areas

Under the guidance of the OECD Working Party on Territorial Indicators, and carried out jointly with the EC and Eurostat:

1. It identifies urban areas **beyond city boundaries**, as integrated labour market areas (using population density and travel-to-work flows).
2. It is applied to 28 OECD countries and identifies 1 148 urban areas of **different size**: **small urban, medium-sized urban, metropolitan and large metropolitan**
3. It allows comparisons among the **different forms** that urbanisation takes (densely populated centres and their hinterlands, sprawling, polycentric connected cities, etc.)

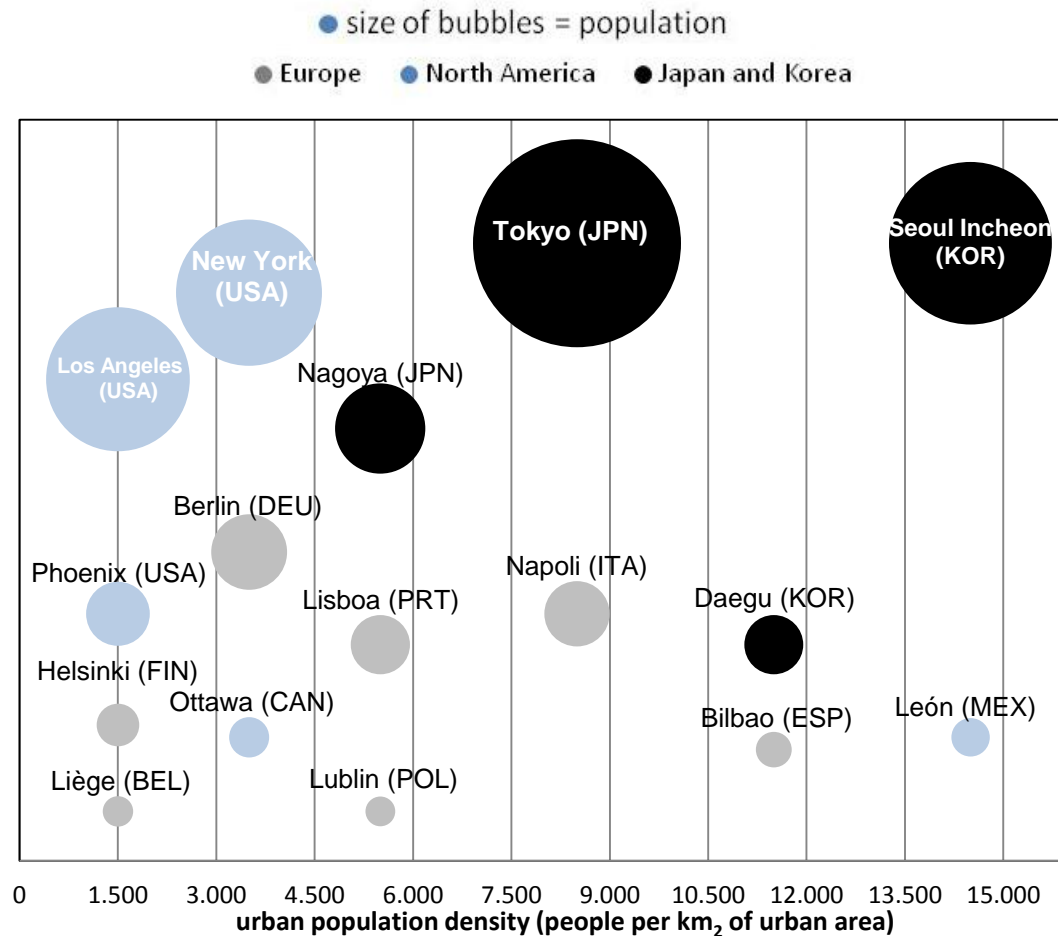
How does the new approach change our view of cities?

The **hinterland area** is identified by all those municipalities that send to the core area at least 15% of their workforce.

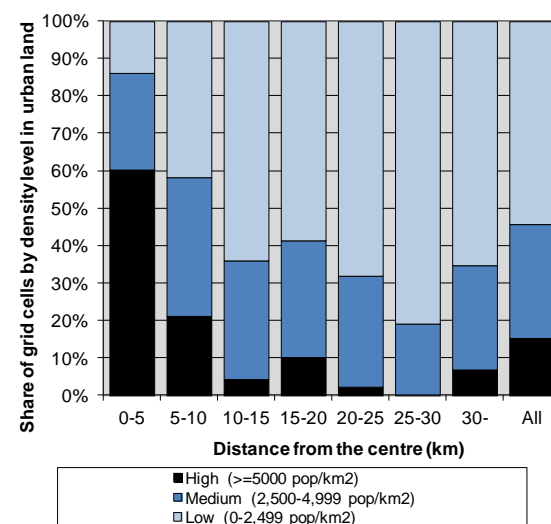
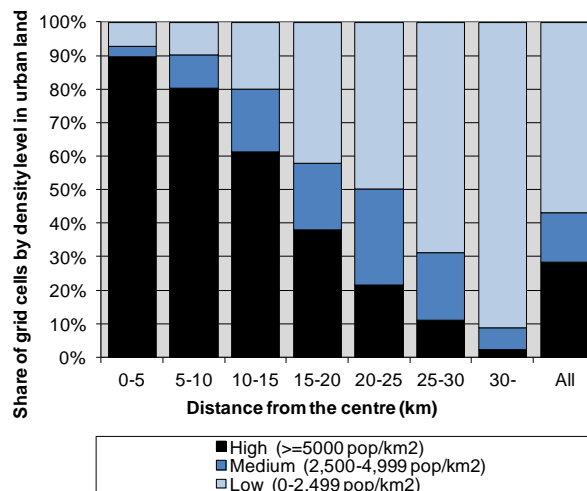
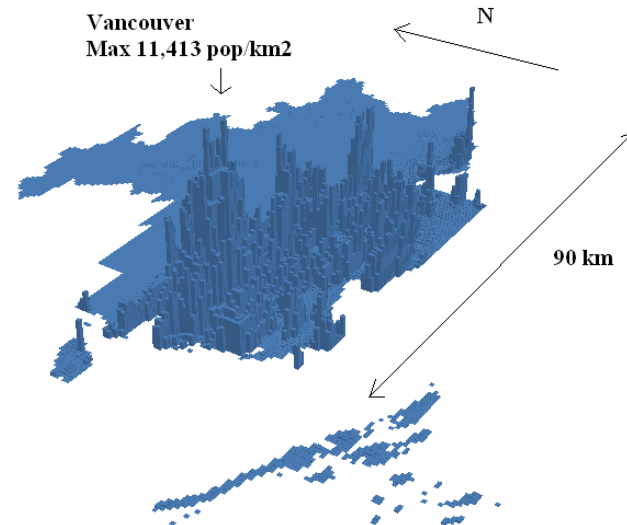
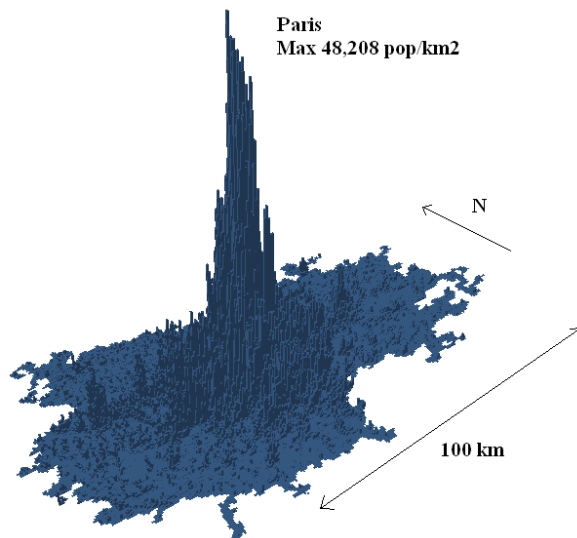


Urban land use and density for urban use differ greatly

- Tokyo (Japan) and Napoli (Italy) have the same urban population density (around 8 500 people per km_2 of urban area), even if Tokyo is 10 times bigger than Napoli in population size



Analysis of density can encourage Compact city policies and Metropolitan-wide strategic planning

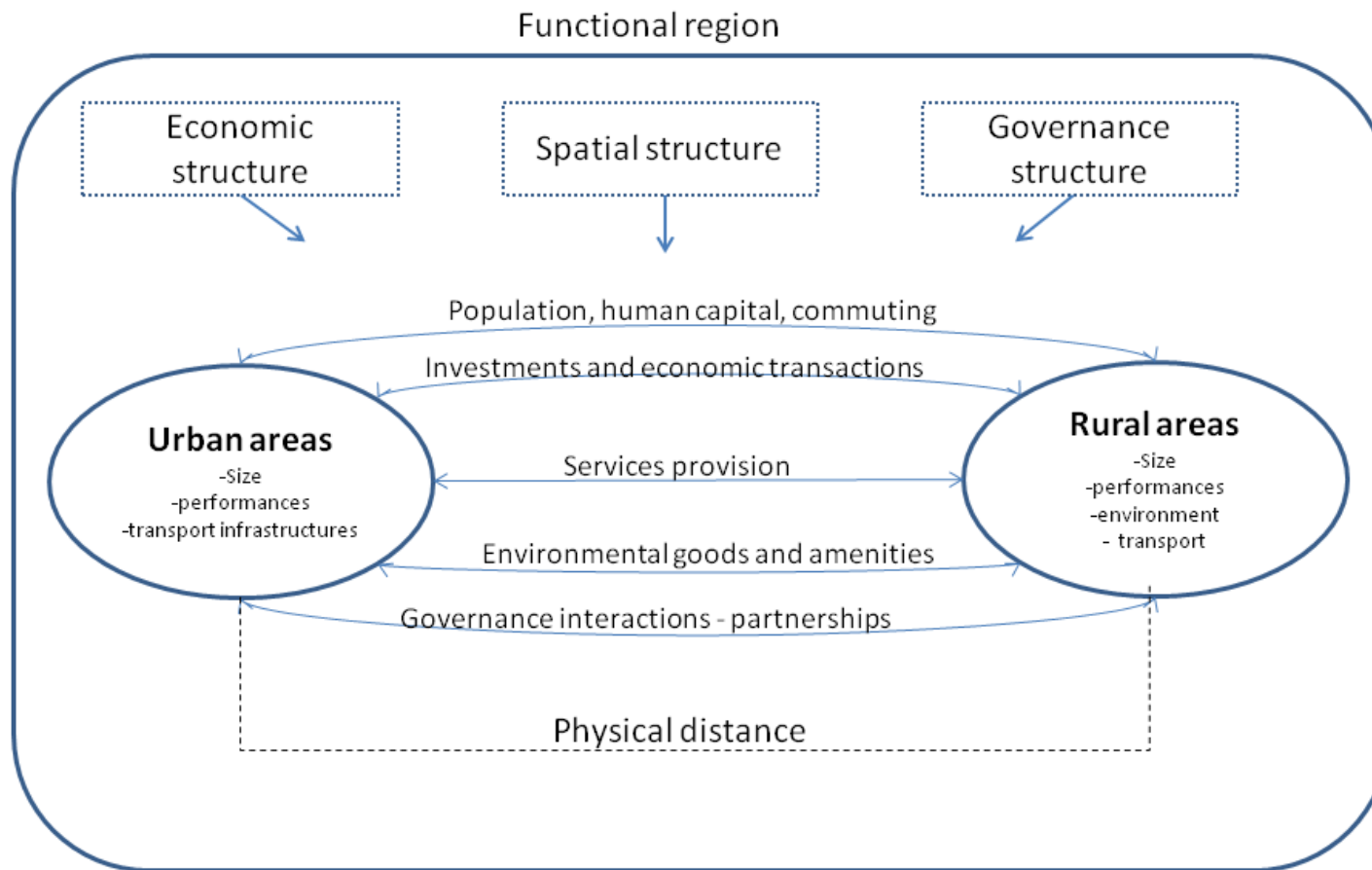


How can functional urban areas be relevant for policy?

- It sheds light of the links between urbanisation and development
 - Preliminary estimates of GDP, air pollution, CO₂ emissions
 - Provide a guide for national and city governments to plan infrastructure, transportation, housing and schools, space for culture and recreation.
- Improves urban statistics, notably through the links with two Eurostat data collections.
 - It is used in Urban Audit of the European Commission (with a different terminology: City and Larger Urban Zone)
 - The core areas in Europe are identical to the densely populated areas, as part of new degree of urbanisation approved in 2011 by the Eurostat Labour Force Survey working group. The new degree of urbanisation is used in all European surveys.

III. Rural-Urban Linkages and Partnerships

Methods and framework



✓ Urban and rural areas are interlinked through a broad set of linkages, which are different on the base of the characteristics of the whole functional region

Rural-Urban Linkages and Partnerships

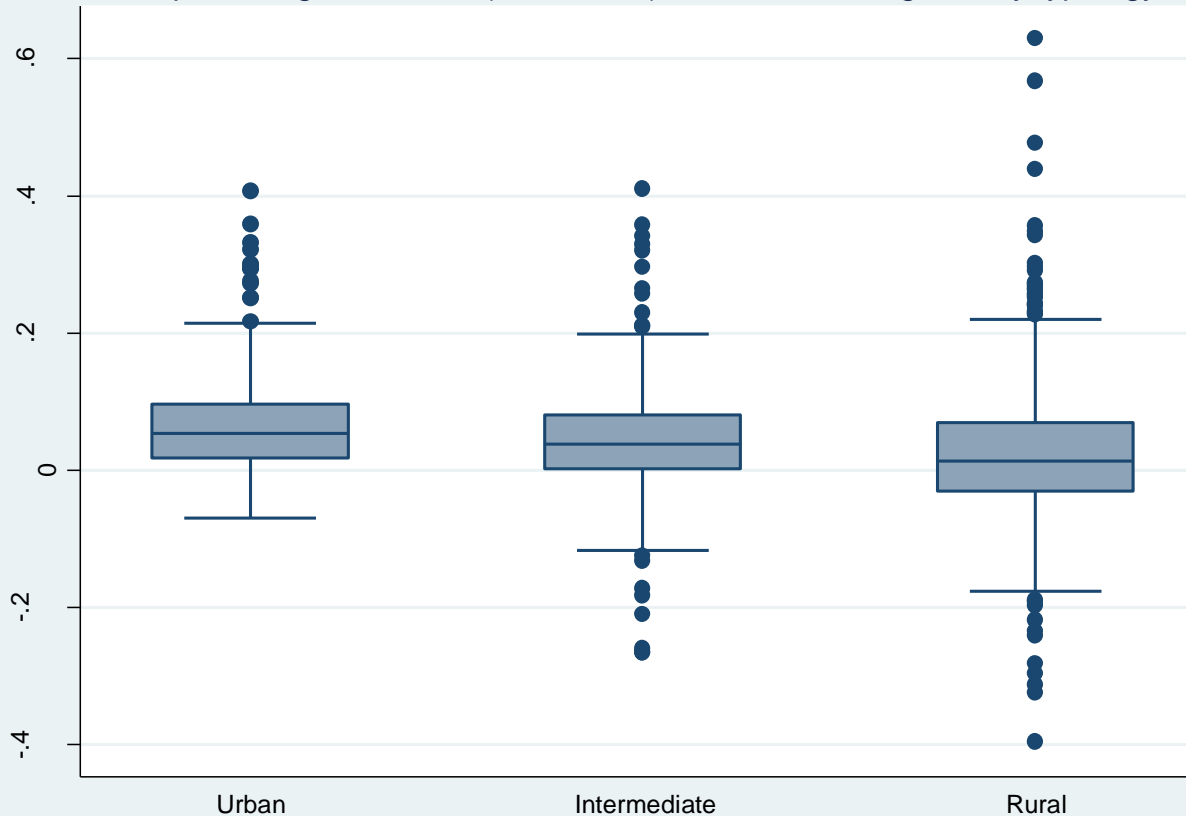
Case studies

Spatial Dimension		Functional Dimension
Three different regions where rural areas have different roles:		Five closely linked interactions:
Metropolitan regions	<ul style="list-style-type: none"> • Germany (Nuremberg) • France (Rennes) • Czech Republic (Prague) • Russia (Krasnoyarsk) 	1. demographic linkages;
Networks of small and medium-sized cities	<ul style="list-style-type: none"> • Australia (Geelong Region) • Netherlands (Brabant) • Italy (Forli-Cesena, Emilia Romagna) • <i>United States (Kentucky)</i> 	2. economic transactions and innovation activity;
Sparsely populated areas with market towns	<ul style="list-style-type: none"> • Portugal (Castelo Branco) • Spain (Extremadura) • Finland (Saarijärvi-Viitasaari Region) • Poland (WestPomeranian Region Region) 	3. delivery of public services;
		4. exchanges in amenities and environmental goods;
		5. multi-level governance interactions.

Economic linkages across OECD TL3 regions

In terms of population growth, rural regions show the highest variability

Population growth rates (2000-2009) in OECD TL3 regions, by typology



✓ Opportunities for growth, both in terms of population and GDP, are observed in all type of regions

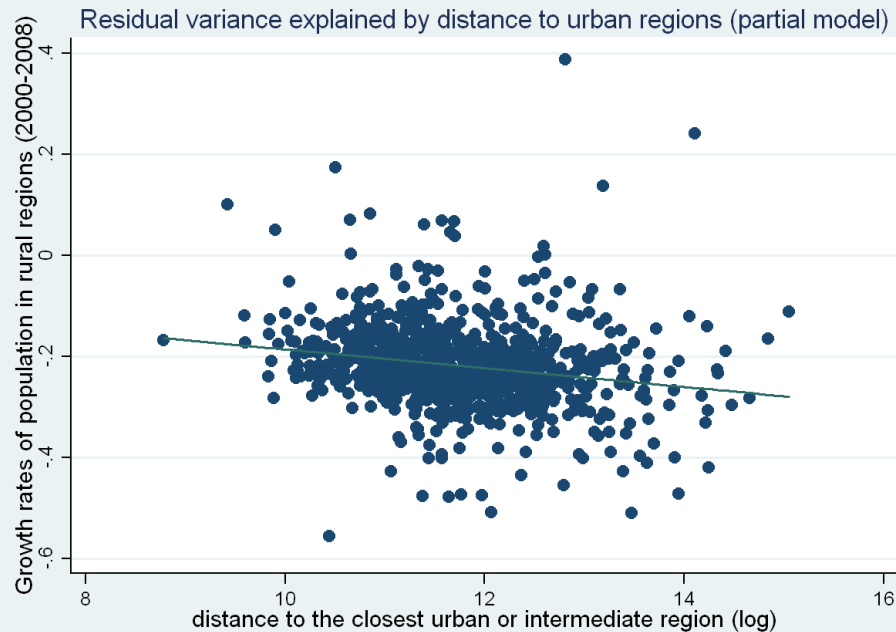
✓ the variability of growth rates is much higher in rural areas than for the other types of region

✓ part of this variability can be explained by looking at the role of the relationships with Urban or Intermediate regions (urban-rural linkages)

U.S., Canada, Chile, Mexico, Israel and Island are excluded from the analysis for reasons of data availability

Economic linkages across OECD TL3 regions

Rural regions closer to urban regions show better performance in terms of population growth

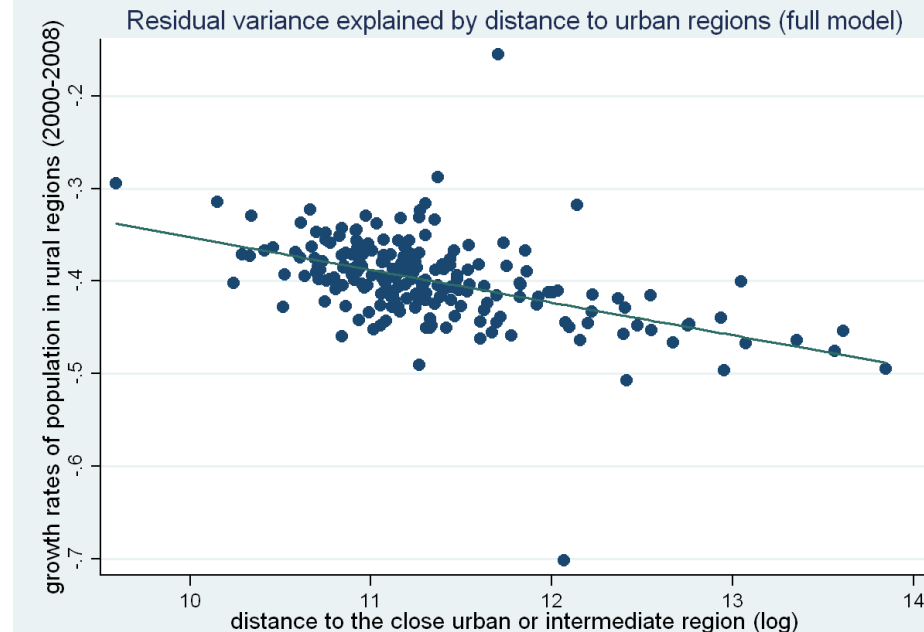


$$\beta = 0.018^{***}$$

868 obs.

Controls:

country dummies, socio-demographics



$$\beta = 0.035^{***}$$

206 obs.

Full set of controls (including industrial structure, unemployment, country dummies, socio-demographics, spill-over effects, etc.)

Conclusions

- Data and indicators are key to implement a modern regional policy agenda
- To be integrated into a structural policy package regional growth needs to be mapped into national performance
- But indicators need to go beyond information and produce knowledge for policy-makers
- Policy complementarities are pervasive and may complicate policy evaluation
- New data approaches help to have a more integrated view of the regional policy system

Obrigado
Thank you

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