



Green Growth & Urban Development

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An Extended Policy Matrix

Figure 1.2. New Development Paradigm: A Policy Complementarity Matrix

	E fficiency	E quity	E nvironmental Sustainability
Economic Policies	Sustained growth	Economic reforms may increase equity	Green growth may improve sustainability
Social policies	Social policies may increase efficiency (knowledge, trust)	Social cohesion	Environmentally sustainable social policies
Environmental policies	Green economy may boost innovation	Social policies can enhance inclusiveness; poor people are the most hurt by environmental degradation	Sustainable Environment

Integrating the three dimensions of societal progress and geographic space

	CITIES	RURAL AREAS
<i>EFFICIENCY/INCOME</i>	+	-
<i>ENVIRONMENTAL QUALITY</i>	-	+
<i>SOCIAL DIMENSIONS: Public goods (e.g. Health, Education)</i>	+	-
<i>SOCIAL DIMENSIONS: Community produced goods (e.g. Trust, Security)</i>	-	+

Source: OECD Regional Outlook 2011



Example of Transport Infrastructure

1. Transport infrastructure has positive impacts on *regional economic growth*
2. However, it has ambiguous effects on *inter-regional equity*
3. There are important regional spillovers that require coordination



Constructing synergies among Urban Policies

Impact → (reads horizontally)	Land-use Zoning	Transportation	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

Integrating sectoral policies at the urban level

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.

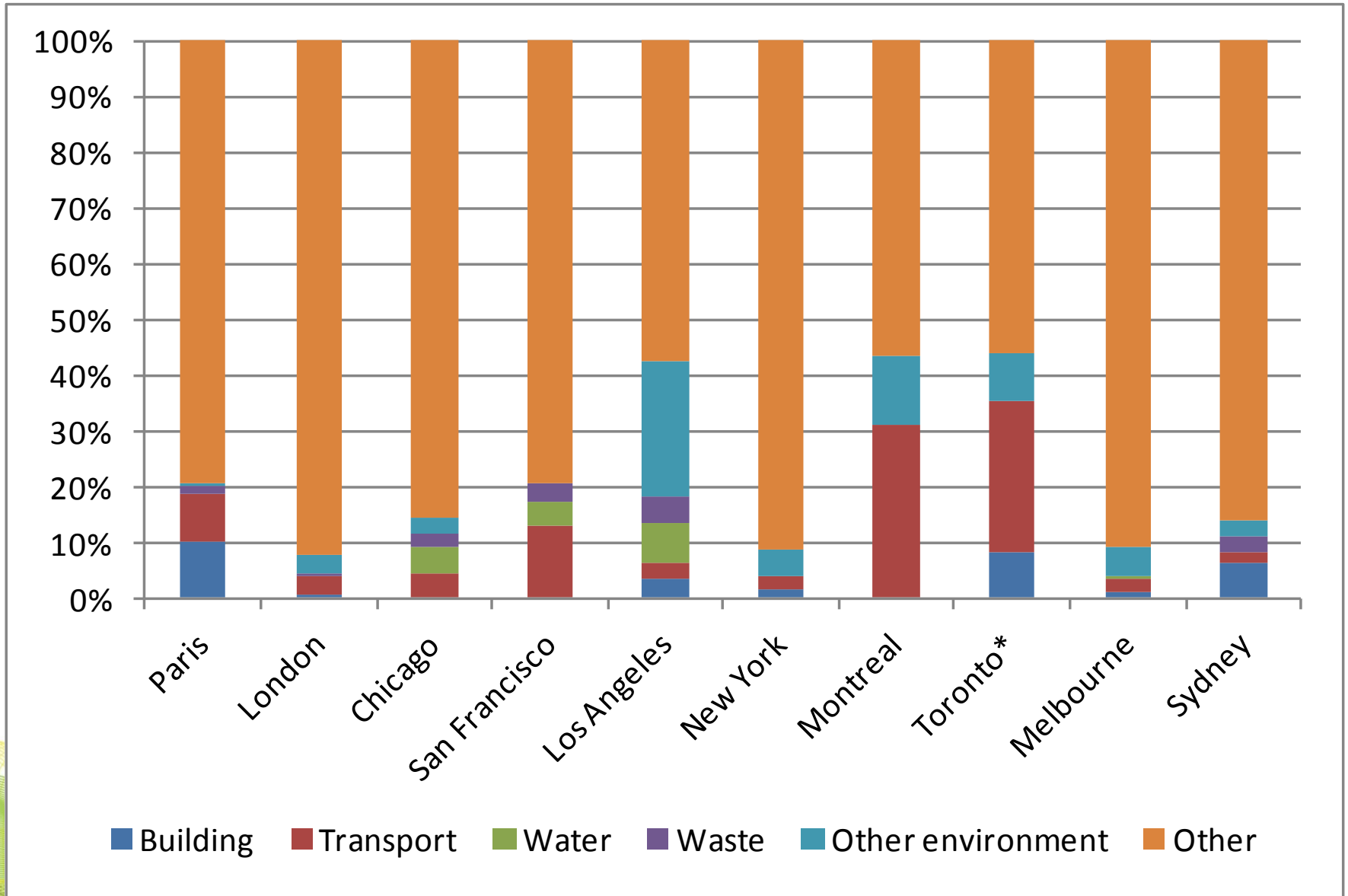
Source: OECD Regional Outlook 2011

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



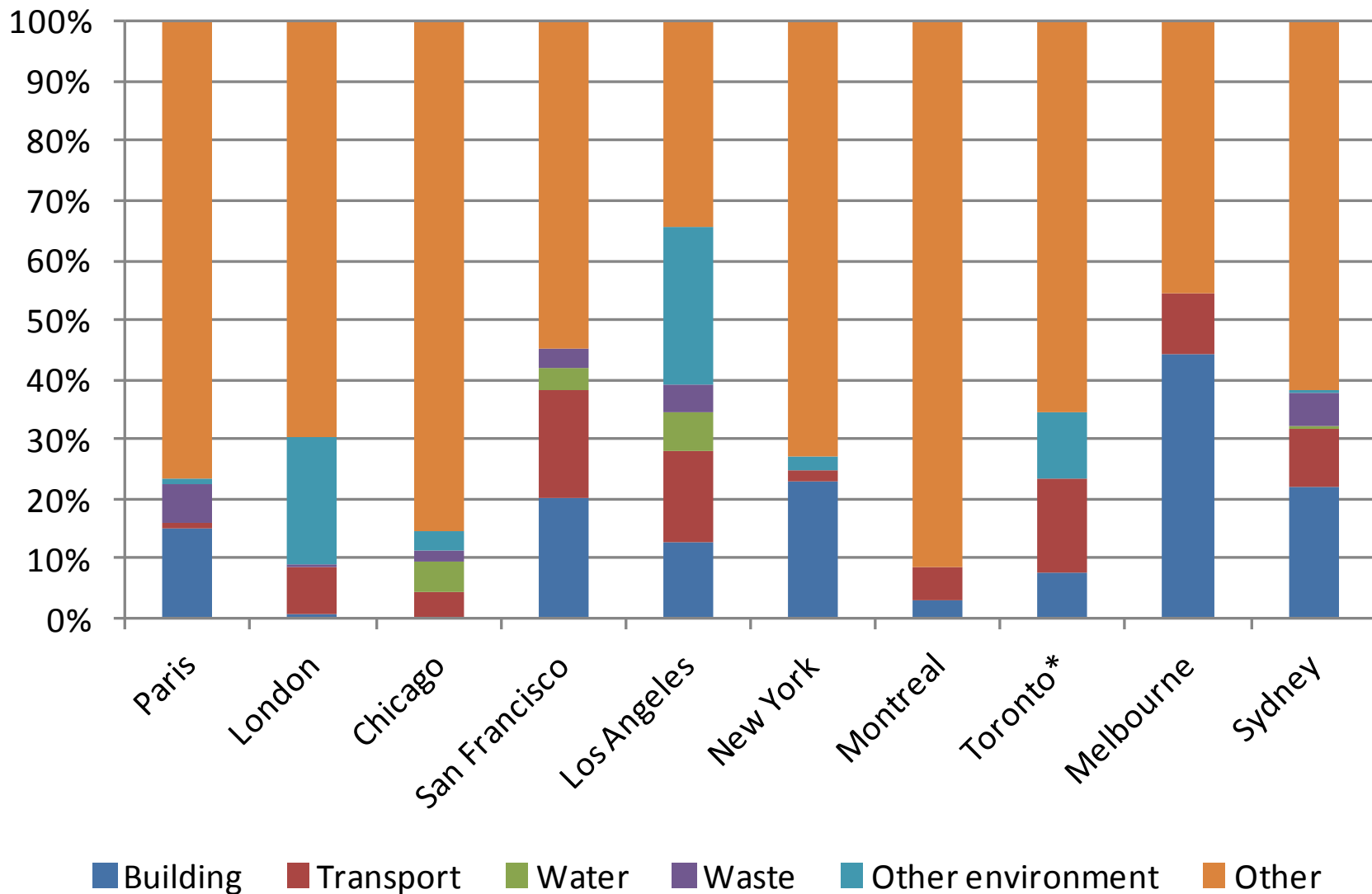
Cities invest in green growth

Expenditure share in city budgets (2010)



Cities have green growth-related revenues

Revenue shares of total city revenue (2010)



Policy challenges for funding

“Greening” revenue sources (property taxes and incentives to sprawl)

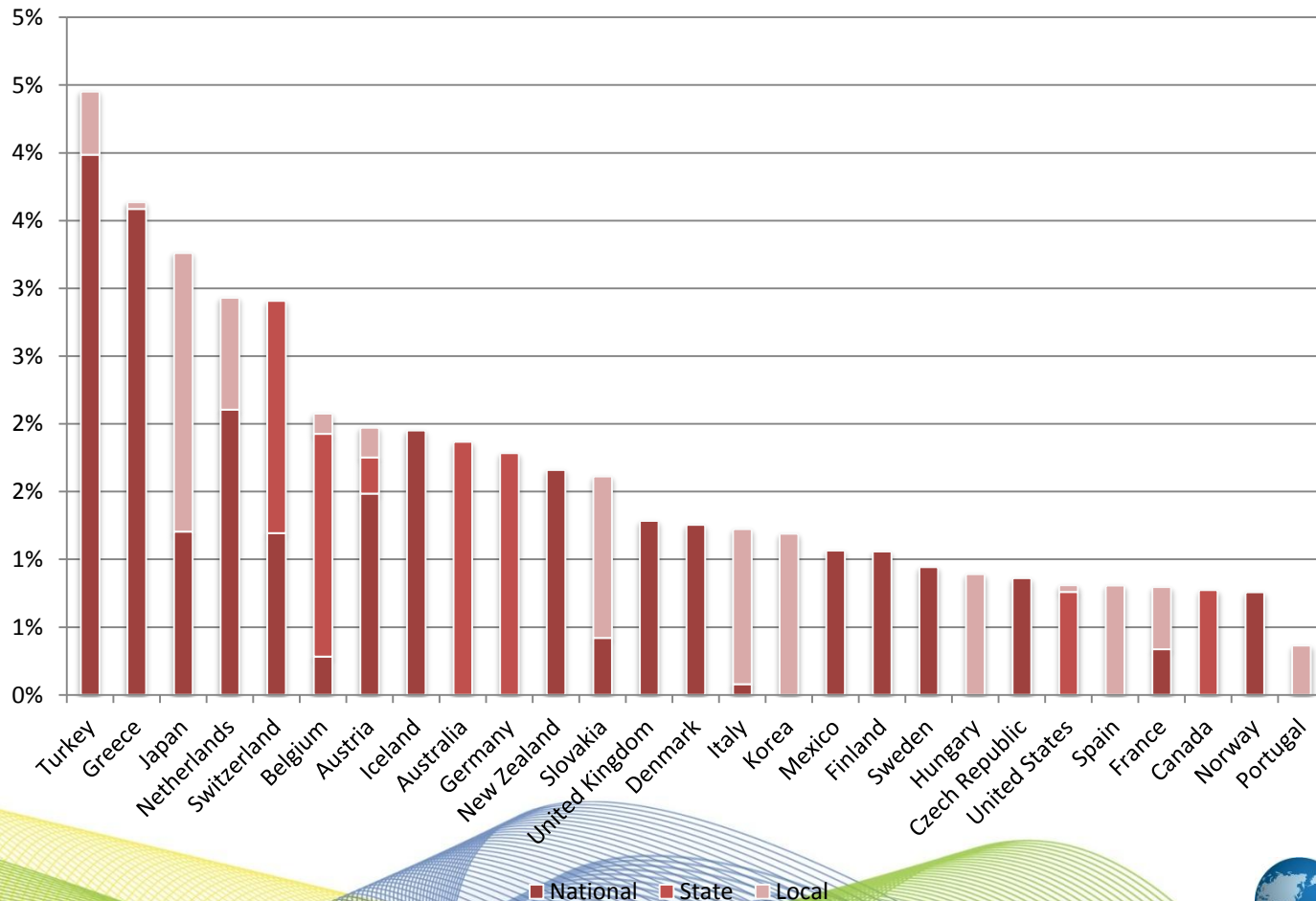
Find private funding:

- **Stimulate private financing**
- **Making the developer pay (development fees, value capture taxes)**
- **Public private partnerships (PPPs)**

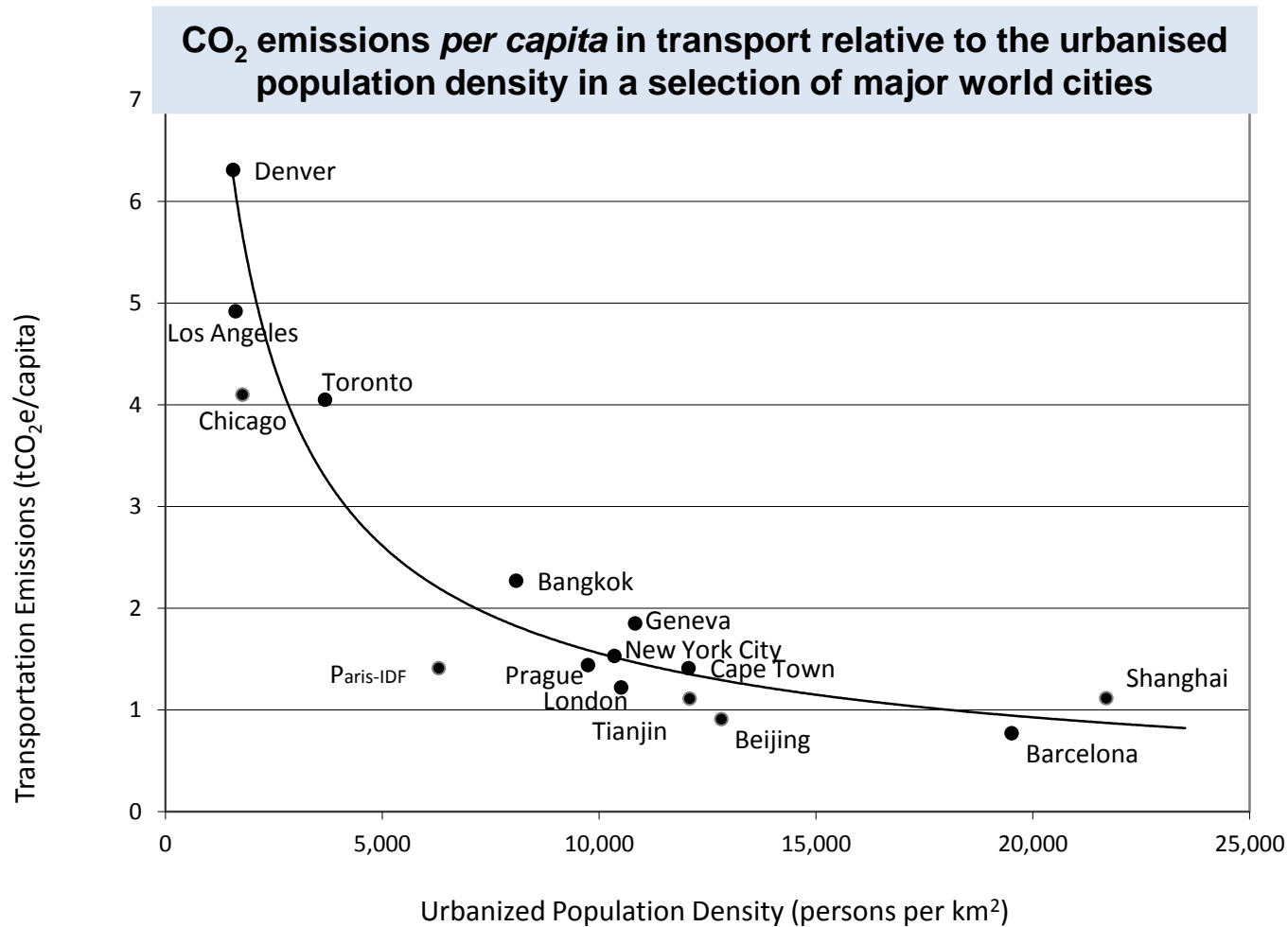


Multi-level coordination

- Important part of the policies remain at the central level (OECD Round Table, Chicago March 2012)
- E.g. taxation relevant to transportation (vehicle tax):



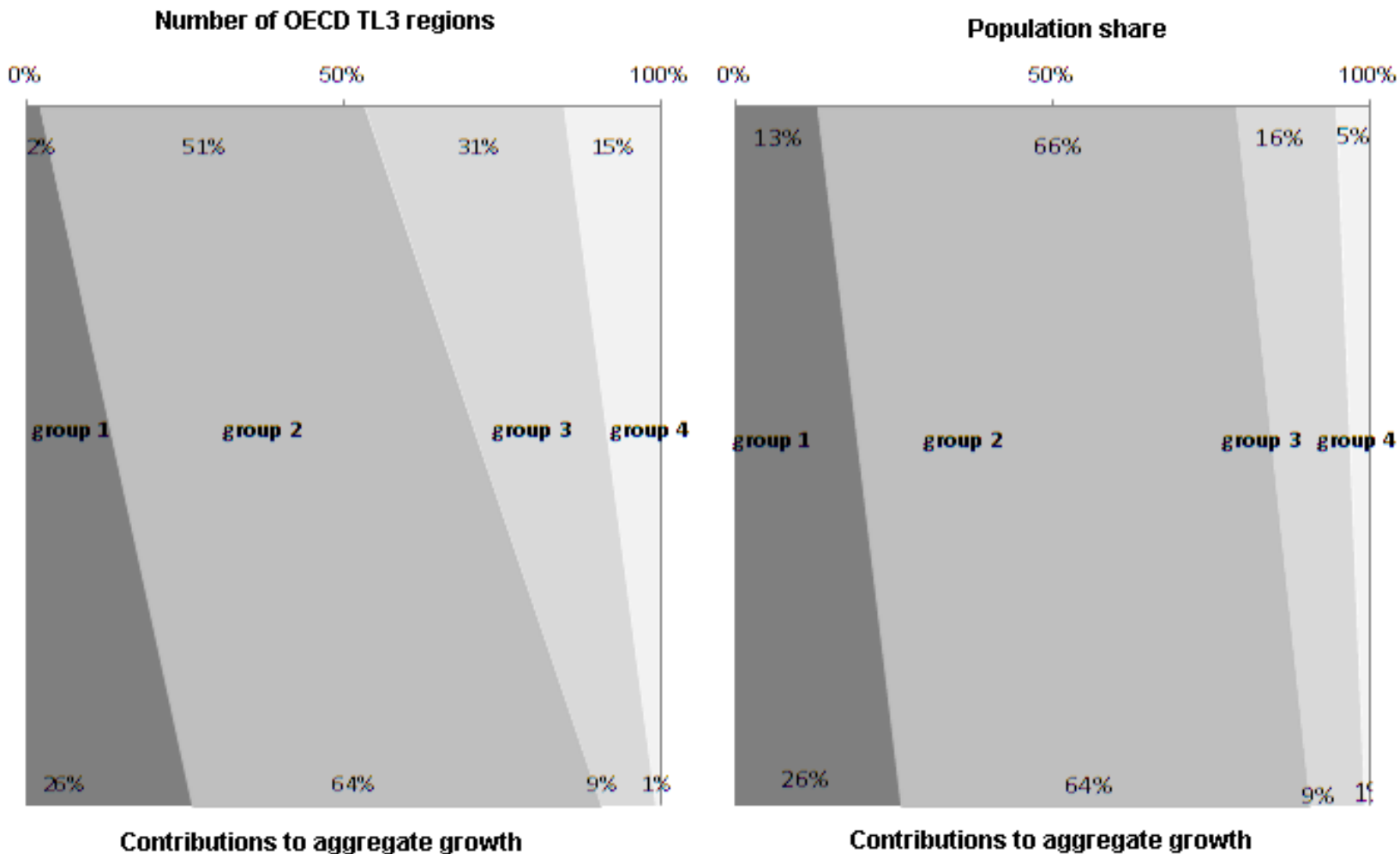
Rationale for early action: urban form matters



Per capita carbon emissions tend to be reduced as urban areas become denser and rely to a greater extent on public transit, walking and cycling.

Also need broader view on growth

Figure 1.12. Contributions to growth by percentage of regions and population share, OECD TL3 regions



➔ The performance of big regional hubs is strategic for the national economy, but most contributions to growth occurs outside the large metropolitan areas.



Knowledge gaps

- **Critical conditions under which infrastructure fosters agglomeration effects?**
- **Green cities could be considered more attractive; but how can green growth infrastructure lead to positive sum growth effects (instead of zero sum ones)?**
- **Which types of green infrastructure investments have the largest growth stimulating effects?**
- **How to take inter-regional equity effects into account when deciding on green infrastructure investments?**



Thank you!

