The metropolisation process in different territorial scales: focus on Central and Eastern European countries
Plan of presentation

1. Metropolisation as a territorial outcome of globalised informational economy

2. Impact of metropolisation process on territories at different spatial scales

3. Conclusions and policy implications
PART I

1. Metropolisation as a territorial outcome of globalised informational economy
Stylized facts (1.1)

1) **Shift** from industrial to informational (knowledge based) economy.

2) **Segmentation** of global economy:

   - **high** segment: comparative advantage based on ability to create and adapt innovations. Concentrated in **metropolises**;

   - **low** segment: comparative advantage based on price. Located in **non-metropolitan areas**.
Stylized facts (1.2)

3) Evolution of spatial linkages in informational economy:
- development of non-regional linkages,
- development of ties within network of metropolises.

4) Main drivers of world city network formation:
- advanced producer services sector,
- multinational companies,
- research intensive industries,
- IT technology.
Stylized facts (1.3)

5) **Shift** from territorial to network organisation of space

Tab.3. Selected differences between territorial and network organisation of space

<table>
<thead>
<tr>
<th>Territorial organisation</th>
<th>Network organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centre, periphery</td>
<td>Nodes, tendency to decentralise mutual linkages</td>
</tr>
<tr>
<td>Size-dependent</td>
<td>No dependency on size</td>
</tr>
<tr>
<td>Boundaries</td>
<td>Connections</td>
</tr>
<tr>
<td>Coherence, continuity</td>
<td>Dispersion, separation</td>
</tr>
<tr>
<td>One-directional flows</td>
<td>Two-directional flows</td>
</tr>
<tr>
<td>Closedness, outward impermeability</td>
<td>Territorial openness</td>
</tr>
<tr>
<td>Constancy, inelasticity</td>
<td>Short-lividness, flexibility</td>
</tr>
<tr>
<td>Proximity, location ties – transport costs</td>
<td>Insensitivity to distance, omnipresence – costs of information</td>
</tr>
<tr>
<td>Territorial hierarchy, vertical links, dominance of size</td>
<td>Horizontal links, cooperation and competition</td>
</tr>
</tbody>
</table>

Theories of metropolisation (1.4)

J. Friedman (1986) *world city hypothesis*.

S. Sassen (1991) *global city*

M. Castells (1998) *space of flows*

A.J. Scott (1998) *typology of localisation*

P. Taylor (2003) *world city network*

Metropolisation process could be defined twofold:

1. Development of a multicenter network of large cities - metropolises serving as global nodes

2. Decoupling of the metropolis from their regional base to the contacts in the multicenter network of cities.
PART 2. Metropolisation at different spatial scales (2)
Localisation of TNCs knowledge intensive services sector

**The key industries:**
- accountancy,
- finance and banking,
- advertising.

**Supportive industries:**
- consulting,
- insurance,
- law.

Mainly capital cities 18 of 22
3000 largest companies (headquarters and subsidiaries)

Internationalisation level (size of diagram)

Control functions (red: headquarters > subsidiaries) (green: subsidiaries > headquarters)
MEGA cities in European Space (2.3)

76 Metropolitan Economic Growth Areas (MEGA)
- traditional functions (industry, transport)
- contemporary (control and management)

Pentagon area:
- Area: 14%,
- Population: 32%,
- GDP: 43%.
CEEC scale (3.1)
Real GDP growth (1989=100)
Regional divergence caused by metropolisation of core regions and marginalisation of peripheral regions

Petrification of regional structure which is quite polycentric at macroregional scale
Regional divergence at NUTS3 level (CV) (3.3)

All regions
- divergence as a general rule (Bulgaria the most extreme case)
- significant differences between countries
- petrification during the crisis (convergence in Latvia)

Capital city regions excluded
- other metropolitan areas in case of Poland and Romania responsible for divergence
- cohesive smaller countries (CZ, EE, LV, SI)
- convergence in Latvia
Regional divergence at NUTS3 level (EU15 vs. NMS) (3.4)
Main dimensions of socio-economic polarisation in CEECs (3.5)

Main components of regional differentiation in CEECs (based on PCA):

a) **Metropolisation** (knowledge intensive business services (KIBS), R&D potential, human capita resources, advanced labour market and SME sector, developed infrastructure)

b) **Industrialisation** (industry – high share in GVA and productivity, lower share of public (non-market) services, but also market services in GVA)

c) **Urbanisation** (developed market services, tourism, insignificant agriculture)

d) **Dependency** (agriculture and public services, high unemployment rate)
Metropolisation – quality matters (3.6)

- Developed and efficient market service sector
- R&D potential
- Human capital resources
- Entrepreneurship activity
- High-tech industries
- Efficient public sector
- Foreign capital inflow
- Basic infrastructure
- Tourist attractiveness

Positive

Negative
MODELS OF GROWTH IN ANALYSED TYPES OF REGIONS

Core regions - metropolitan regions/areas (>110% national average)
Transition regions - old industry or mixed structure (80-110% national average with some exceptions)
Peripheral regions - agricultural regions (<80% of national average)

1. **Metropolisation** process in core regions consist of: development of market sector, modern business services, high-tech industries

2. **Restructuring** of transition regions consists of: reindustrialisation and externalisation of simple services

3. **Catching-up** process of peripheral regions consists of: labour productivity growth in agriculture and industrialisation/urban development
Global connections of CEECs capitals – business service sector (3.8)

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<tr>
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</thead>
<tbody>
<tr>
<td></td>
<td>Rank (197 cities)</td>
<td>Number of global APS companies (max: 350)</td>
</tr>
<tr>
<td>Warsaw</td>
<td>12</td>
<td>150</td>
</tr>
<tr>
<td>Budapest</td>
<td>20</td>
<td>128</td>
</tr>
<tr>
<td>Prague</td>
<td>21</td>
<td>126</td>
</tr>
<tr>
<td>Bucharest</td>
<td>29</td>
<td>110</td>
</tr>
<tr>
<td>Bratislava</td>
<td>35</td>
<td>93</td>
</tr>
<tr>
<td>Sofia</td>
<td>53</td>
<td>80</td>
</tr>
<tr>
<td>Riga</td>
<td>76</td>
<td>59</td>
</tr>
<tr>
<td>Vilnius</td>
<td>86</td>
<td>51</td>
</tr>
<tr>
<td>Tallinn</td>
<td>89</td>
<td>49</td>
</tr>
<tr>
<td>Ljubljana</td>
<td>93</td>
<td>45</td>
</tr>
</tbody>
</table>
Performance of capital city regions 1995-2010

- Bratislava (winner) and Ljubljana (looser) - different results of euro adoption?
- Warsaw – 2009 crisis in EUR, but temporary
- Bucharest success story 2004-2008 (3 times growth)
- Baltic states capitals – the sharpest decline 2008-2010
b) Country average=100

- Fast growth of capital city regions versus surrounding regions only in 3 countries: SK, RO, BG, while in PL only in the first phase of transformation
- Quite stable situation in the rest of the countries since 2002 or 2006 (crisis did not affect the pre-crisis pattern) – partly result of their high share of capital region in GDP
Performance of capital city regions in Europe 2008-2009 (3.11)

Graph showing the performance of capital city regions in Europe from 2008 to 2009, with axes for real performance (GDP growth) and relative performance (GDP growth relativised by national average). The graph is divided into quadrants that label regions as "Leaders", "Over performance", and "Losers".
City-region relationships (4.1)

**City**: unit within administrative borders

**Metropolitan area**: zone of direct city impact in which the relationships are strong and permanent (functional urban area, internal hinterland zone)

**Metropolitan region**: zone in which the relationships are weaker, but the area is under the core city influence (macroregion, external hinterland zone)

**Hypothesis**: the difference in the level of development between metropolis (city with its metropolitan area) and its regional hinterland (macroregion) has been increasing as a result of metropolisation processes
Intraregional income disparities 2004

(4.2)

scale of internal disparities

- metropolitan area higher developed
- regional hinterland higher developed
Change of intraregional income disparities 1995-2004

(4.3)

- change of internal disparities
- growth of intraregional disparities
- decline of intraregional disparities

This map does not necessarily reflect the opinion of the ESPON Monitoring Committee.

Source: ESPON 2012 Database
Growing disparities in level of development between metropolis (MA) and its hinterland (RH) (4.4)

Key determinants of intraregional differences in level of development:

a) economic structure dissimilarity (MA services vs. RH agriculture and industry),

b) labour market dissimilarity (concentration of workplaces in MA and low labour activity ratio in RH),

c) productivity in manufacturing (capital and research intensive industries concentrated in MA).

Key determinants of metropolitan macroregions divergence process:

a) economic structure dissimilarity,

b) change of labour market situation both in metropolitan area and regional hinterland (increasing of labour force in MA and decreasing activity rate in RH),

c) out-migration from regional hinterland (brain drain process).

CONCLUSION: poor use of development opportunities created by metropolis in the regional hinterland (more “draining” than „diffusion” processes).
Drivers of intraregional convergence (4.5)

- Complementarity between MA and RH is not a sufficient convergence factor:
  
  the metropolitan area functions as a rule in the global information economy, while the regional hinterland is very often embedded in the traditional industrial or agricultural development paradigm supplement in some cases by developed tourism sector.

- Similarity of socio-economic structures fosters development of linkages and thus intraregional convergence:
  
  quality of human capital, labour productivity, level of innovation, entrepreneurship.

- Quality of life is very important for regional hinterland
  
  well-developed technical and social infrastructure, landscape assets
Drivers of intraregional convergence (4.6)

- Role of transport accessibility important for intra-regional integration

- Important role of transport infrastructure within 80 to 160 km distance from the city

- Developed linkages within time accessibility 90 minutes isochrone – above that weak linkages

![Graph showing the relationship between distance and time with different colors representing weak, moderate, and strong ties.](image)
Human capital resources backwashing (4.6)

- red: positive migration balance with the core city
- blue: negative balance with the core city

OUT-MIGRATION FROM POLISH EASTERN REGIONS (2008)
- scale of migration
Regional dimension of metropolisation process (4.7)

GDP per capita ratio between: a) the capital city region and b) its regional hinterland

- large disparities in Sofia and Bucharest metropolitan macroregions
- significant disparities in case of Warsaw (stable), Tallinn and Budapest (growing)
- quite stable situation in the rest of countries (fast growth in case of Vilnius)
Sub-regional scale – metropolitan areas (5.1)

Development of polycentric spatial structure of metropolitan area

Polycentric spatial structure may foster:

- commuting at the macroregional level
- development of regional industrial clusters

Functional polycentricity - commuting in Copenhagen MA (5.2)

1981

2005

In-commuting (green)

Out-commuting (red)
Demographic change in the metropolitan areas (5.3)

Population dynamics in metropolitan areas in 2000-2011 (in % or ‰)

- population growth was fast in the wealthiest capital city regions: CZ, SLO, PL, HU
- the deconcentration of population took place in almost all capital city regions (with exception of BG and LT)
City scale - modern office spaces in Warsaw (6.1)

Warsaw: 3.5 mln sq m of which CBC 1.1 mln sq m

Investment outlays annually:
- construction of modern offices: 200-400 mln EUR
- total municipal investments: 900 mln EUR
Modern office spaces distribution in Warsaw (6.2)

AIRPORT
Labour market structure change in Warsaw (6.3)

**Winners (1):** Finance and insurance, Business services, IT sector, Logistics, Hotels and restaurants

**Loosers (2):** Real estate market, Manufacturing

**Soft landing (3):** Public administration, Education, Health Care, Construction (public investment)
Socio-spatial polarisation within city – Warsaw case 2002 (6.4)

Component 1: Family status (concentric)

Component 2: Socio-economic status (sectoral)

Component 3: Social marginalisation (both elements)

300 gated communities
PART III

3. Conclusions and policy implications
GENERAL CONCLUSIONS (7.1)

- Territorial organisation vs. Network organisation of space

- Interregional disparities vs. Intraregional disparities (between FUAs (economic) and within FUAs (social))

- Region - administrative unit (policy) vs. functional urban area (economy)

- Territorial cohesion (territories, disparities, petrifaction) vs. Functional cohesion (flows, opportunities, flexibility)

- Adjustment of the EU policy including Cohesion Policy to these challenges seems to be indispensible
POLICY CHOICES FOR THE EU POLICY (7.2)

POLICY DILEMAS:

• Country level or Regional level

• People or Regions or Sectors

• Cities and Functional Urban Areas or Other (rural) areas

• Efficiency in regional policy – focused on flows and mobility that creates opportunities or
  Equity in regional policy – focused on territories that may lead to petrification of regional structures
SOLUTION (?):

- People based place tailored regionalised policy focused on efficiency
  so endogenous local economic development focused on structural adjustment to globalised informational economy

DELIVERY(?):

- regional and metropolitan governance (authorities at different administrative levels including other public and key private stakeholders) focused on integration of regional and sectoral policies
SPECIFIC PROBLEM SOLUTIONS (7.4)

Problem of metropolis-region disparities:
direct related to specific regional context and/or indirect related to general factors of territorial cohesion

- development of transport infrastructure (usually connected with the development of supra-regional transport links; however, low accessibility in some peripheral parts of macroregions),
- human capital investments (different levels – beginning from pre-school to higher education),
- development of technology clusters to enrich growth potential of regional hinterland,
- development of polycentric structure of metropolitan areas (usually spontaneous process, but some role of regional airports location, industrial and technology parks).
Thank you for attention!

Contact details:
Maciej Smętkowski, Ph.D.
Centre for European Regional and Local Studies (EUROREG)
University of Warsaw

e-mail: msmetkowski@uw.edu.pl

www.euroreg.uw.edu.pl