



EUROPEAN CONFERENCE ON QUALITY IN OFFICIAL STATISTICS 2024 ESTORIL - PORTUGAL



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Urban public policy models as a reaction to the analysis of natural flows. The example of gravity field and urban circular economy

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Two areas of analysis

1. The impact of economically strong cities (metropolises) on the regional environment - analysis of the spatial distribution of the economic potential of municipalities, calculated using the quantitative method
2. Level of circularity of cities - an attempt to create a circularity model



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1. Economic and territorial analysis of metropolis-regional relations

Two theoretical approaches to the issue of interactions between metropolitan centers and their regional surroundings.

1. No impact of the metropolis on the surroundings or negative impact.
2. The existence of natural processes that stimulate the development of the regional environment through metropolises



Hypotheses to explain

Main hypothesis:

Metropolises influence the development of the regions surrounding them.

Detailed hypotheses:

1. Metropolises play a part in stimulating the development of regions.
2. The regions in which metropolises operate are developing more dynamically compared to other territorial units of this level.
3. The development policy of appropriate territorial units takes into account the natural interactions between the metropolis and the surrounding region.



Hypotheses to explain (2)

Auxiliary hypotheses:

1. If a given city influences the development of its surroundings, then, according to the principle of gravity, this influence has a decreasing distribution in relation to the distance (range of influence).
2. The level and dynamics of development of territorial units constituting a given region depends on their distance from the voivodeship city.

Figure. 1. Graphical interpretation of the impact of metropolises on the level of regional development: Kraków - Lesser Poland Voivodeship (Malpolskie)

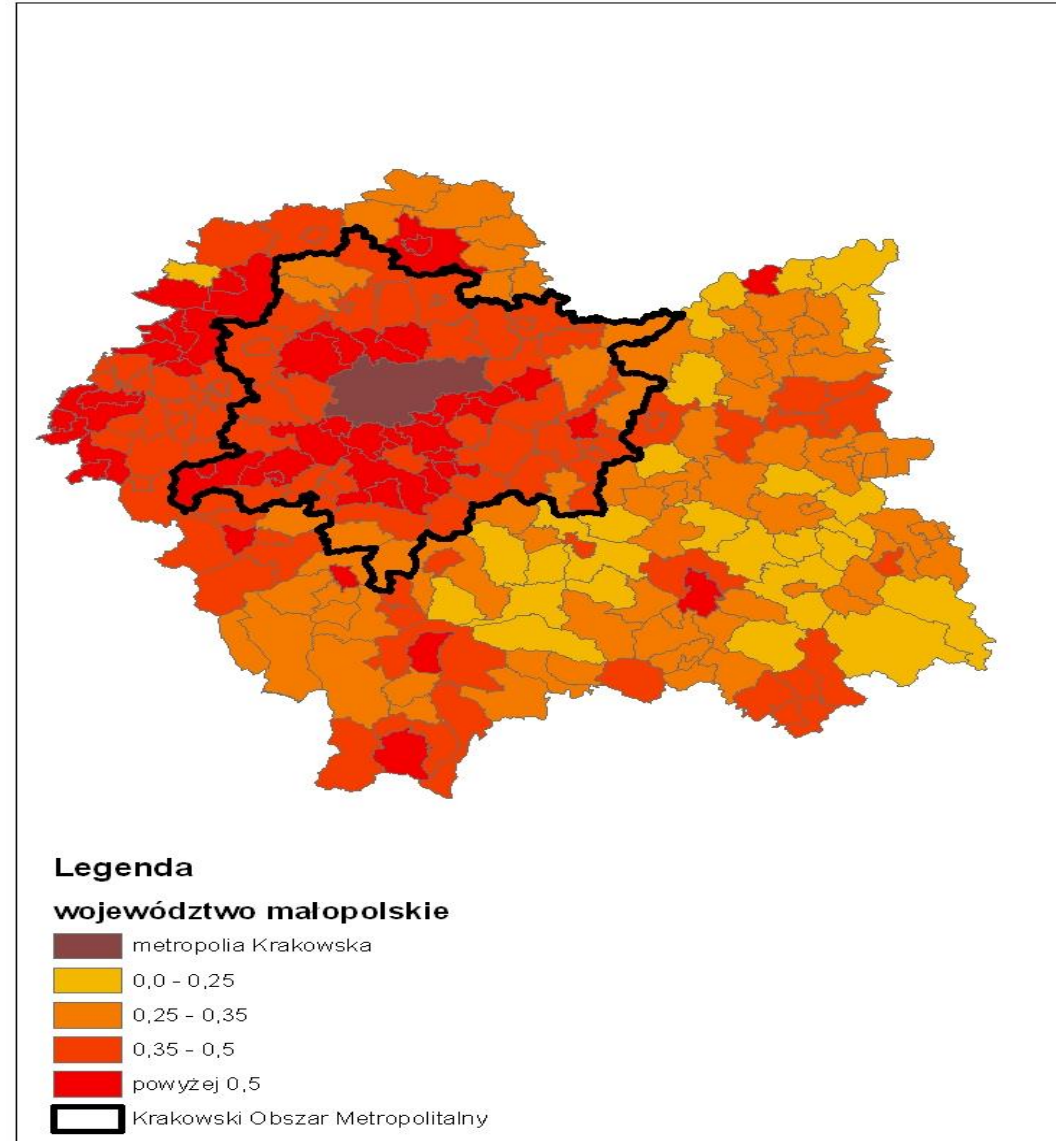
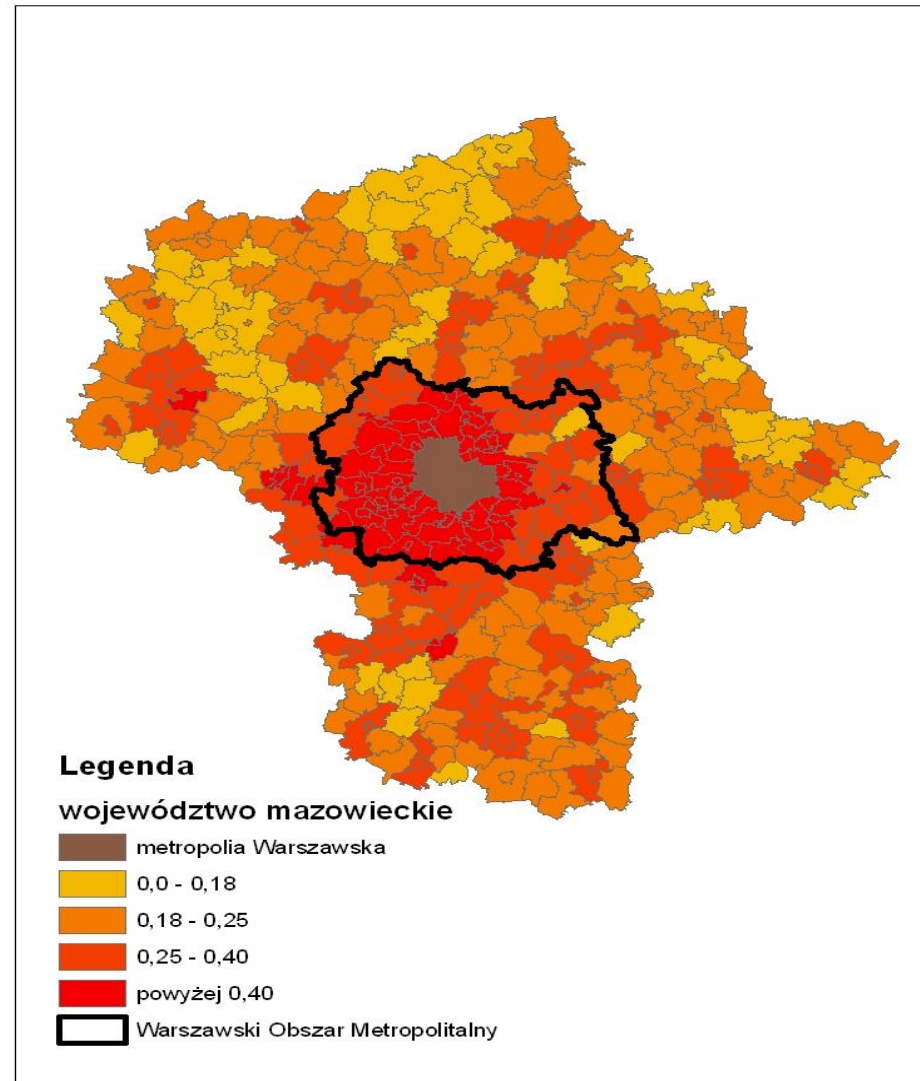


Figure 2. Graphical interpretation of the impact of metropolises on the level of regional development: Warsaw - Masovian Voivodeship





2. urban circular economy and the level of circularity of cities (basic assumptions)

- the business of business is business.
- opportunism as the dominant orientation of most companies gives rise to a specific type of interdependence.
- it generates a gravitational field of opportunistic market play.
- if the winner takes all, the game is unsustainable and leads to predatory economics.
- flexibility above all.
- spatial expansion and time compression.



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Linear economy, oportunism, quarterly capitalism



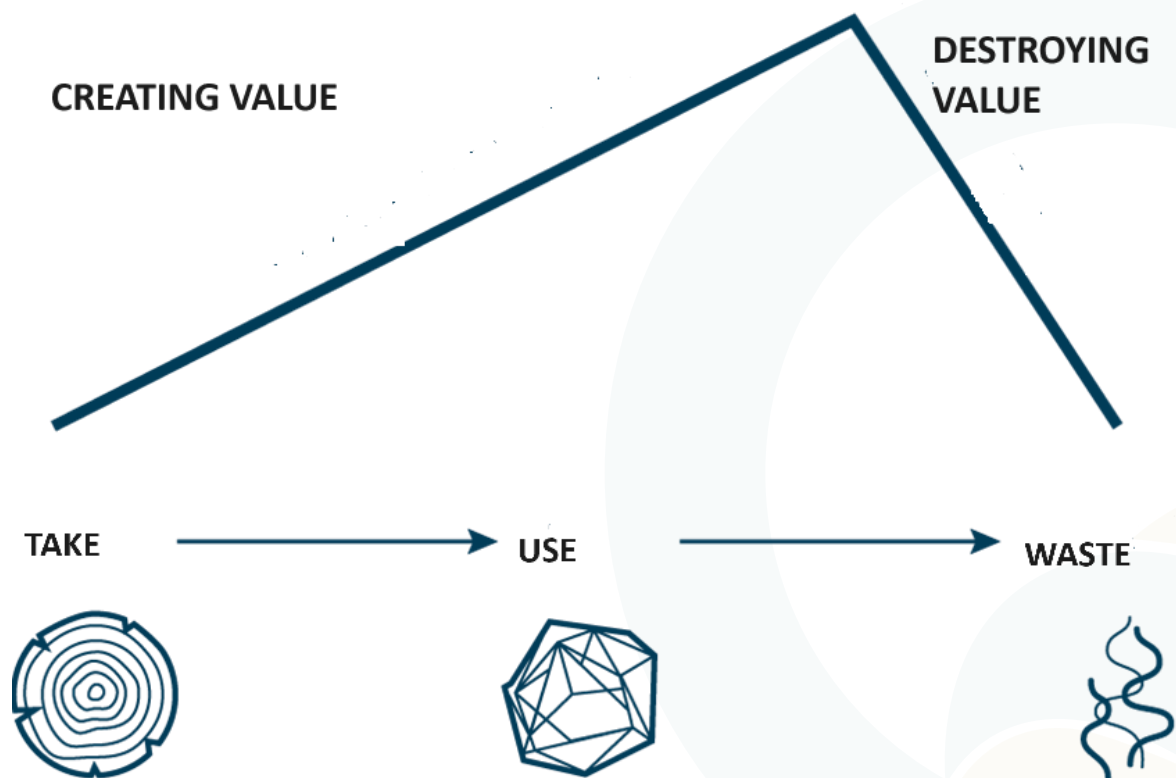
Jeff Immelt

CEO General Electric

„Basically, we are not attached to anything that has a one-year horizon. The bottom line is that in the digital age, waiting a year for something to happen is weird.”



Linear economy in practise





Circular economy in practise

In a circular economy, resources are maintained at their highest utility and value for as long as possible





Methodology short description

2016		2017		2018		2019	
Wrocław	0,628	Wrocław	0,606	Warszawa	0,561	Warszawa	0,615
Warszawa	0,507	Warszawa	0,553	Wrocław	0,535	Wrocław	0,584
Gdańsk	0,496	Gdańsk	0,525	Kraków	0,517	Kraków	0,554
Poznań	0,488	Poznań	0,474	Poznań	0,502	Poznań	0,485
Kraków	0,434	Kraków	0,467	Gdańsk	0,490	Gdańsk	0,460
Łódź	0,382	Łódź	0,398	Łódź	0,432	Łódź	0,427
Bydgoszcz	0,332	Bydgoszcz	0,387	Bydgoszcz	0,432	Bydgoszcz	0,390
Szczecin	0,320	Szczecin	0,356	Szczecin	0,384	Szczecin	0,386



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Thank you for your attention

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