Geographical rent – modelling social and economic development with spatial methods

Researcher and R user point of view
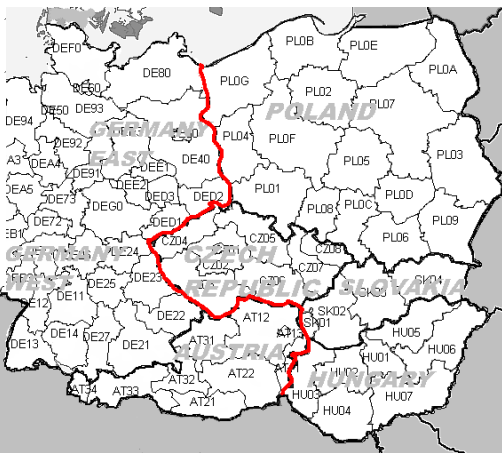
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Researcher and R user point of view ...

Tools:

1) GIS maps

2) Economic and social data

3) SPDEP package as a tool for modelling economic and social develpoment on regional level in spatial approach

Spatial economic analysis

Economic information

Geographical information

+

Field of the research

Tools: Integration of GIS maps and economic data

Question: Looking for interactions in space...→ what can explain us differences in speed of development

Field of research

1) social and economic development

2) spatial interactions - do neighbours matter?

3) geographical rent - do borders matter?

4) do spatial and social proximity matters?

Growth of GDP per capita in PPP in 1995-2002

under 0.1
0.1 - 0.2
0.2 - 0.3
0.3 - 0.4
0.4 - 0.5
over 0.5
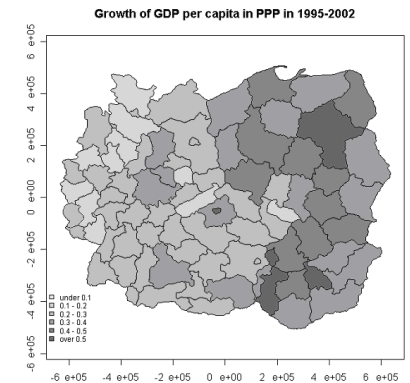
Field of the research

Tools: Spatial methods in SPDEP

Answer (trial): Perhaps there are some soft determinants

Activity Index: important (or not) work-related factors. The activity index presents the economic culture, lifestyle and workstyle, and mentality of a society. It shows professional priorities and attitude towards work, thus also reflecting socio-economic awareness.

→ Issues mixed in Activity Index (1=important, 0=not important)

- Good co-workers
- Prestige of the proffesion
- Opportunity to show initiative
- Social utility of work
- Contacts with other people
- Opportunity to achieve something
- Responsible job
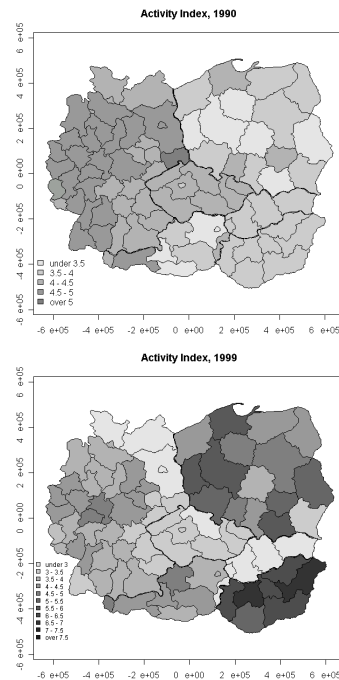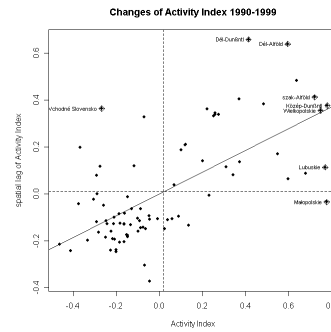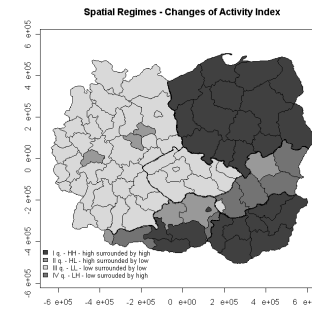- Opportunity to use one's skills

Activity Index, 1990

Activity Index, 1999

Activity Index vs.GDP

Changes of Activity Index 1990-1999

Moran Scatterplot regions vs their neighbours

Spatial regimes – points from Moran scatterplot on the map

Spatial Regimes - Changes of Activity Index

Spatial Regimes - Changes of GDP (in mln of PPP)

Changes of GDP and Activity Index have simmilar pattern
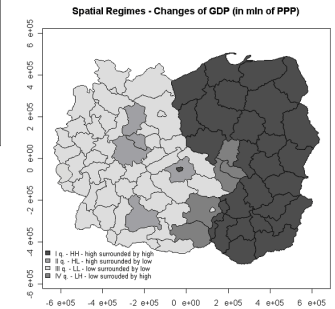
From Researcher and R user point of view...

→ **Advantages of R**

  too many to list them.....☺

- almost perfect tool and packages (mainly SPDEP) for spatial economic analysis

From Researcher and R user point of view...

→ **Disadvantages of R**

1) Graphics - still some problems with nice, advanced graphics for economic data (even not available in R Graph Gallery)

2) Descriptive statistics

   easy functions give poor results, other functions require many data transformations

3) Poor program marketing!!! - I do my best to promote it (book on spatial methods in R), but still it is not well-known program in economics ☹

Thank You for attention!