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Urban Sprawl Beyond Growth: from a Growth to a Decline Perspective on the Cost of Sprawl

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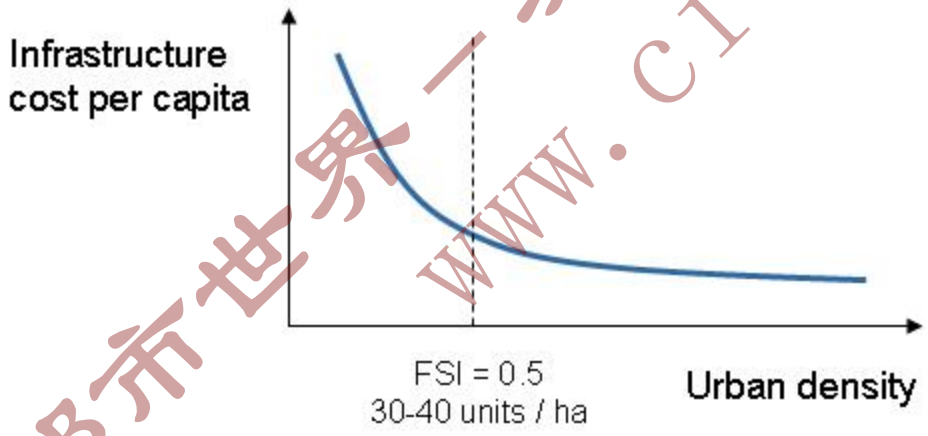
Costs of Sprawl

- Urban sprawl produces high public costs for providing infrastructure
- Cost-relevant factors are ...

  - the urban density (inhabitants or housing units per unit urban land)

  - the spatial arrangement of land use

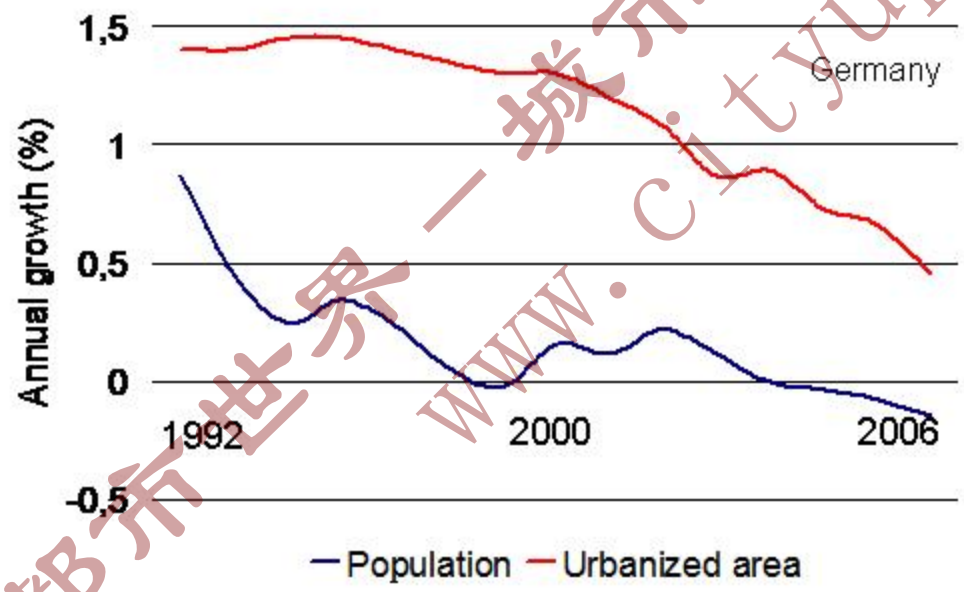


Costs of Sprawl

- Recommendations for a more cost-effective urban growth
  - "raise urban densities"
  - "locate growth near existing urban areas and infrastructure" (compact, contiguous urban form)
- Traditional anti-sprawl policies are *growth-policies*
  - they attempt to allocate new development

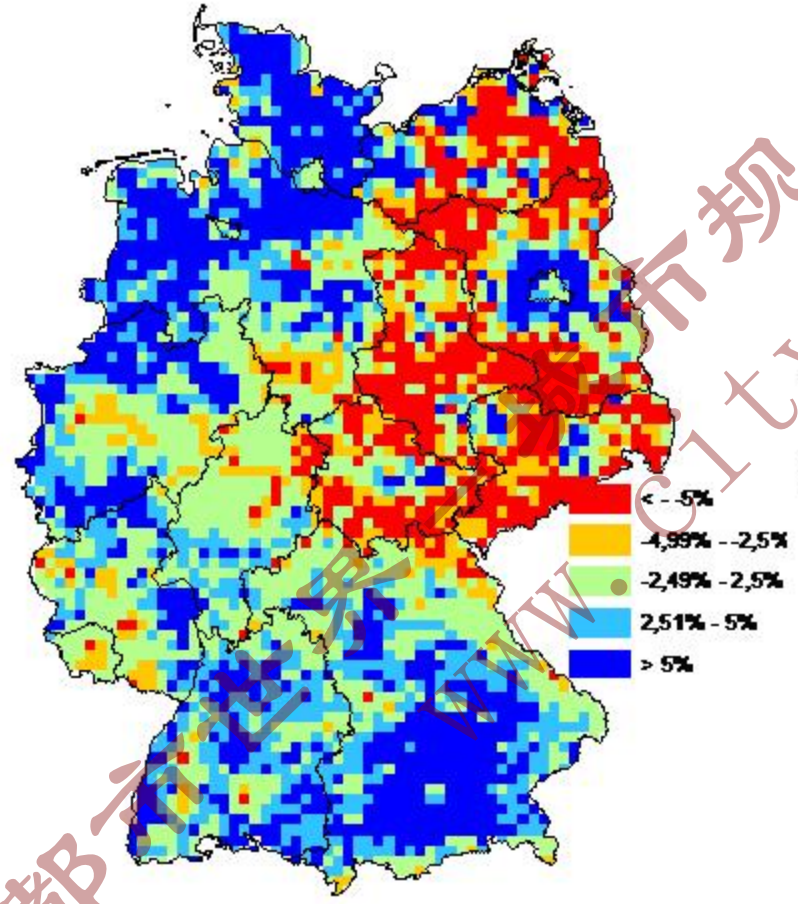
The End of Growth …

- Population decline as an “emerging trend” in Europe
  - in 2005, 25% of all Europeans lived in shrinking regions
  - in 2007, > 50% of all Germans lived in shrinking counties

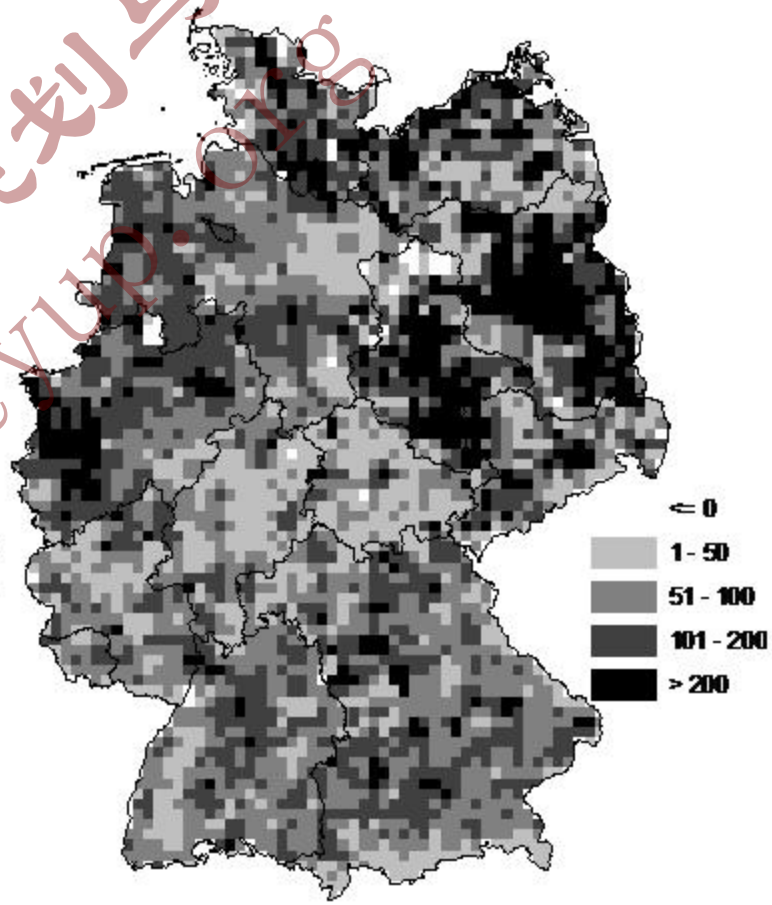


… is not the End of Sprawl!

Population Development (in %, 1996-2004)



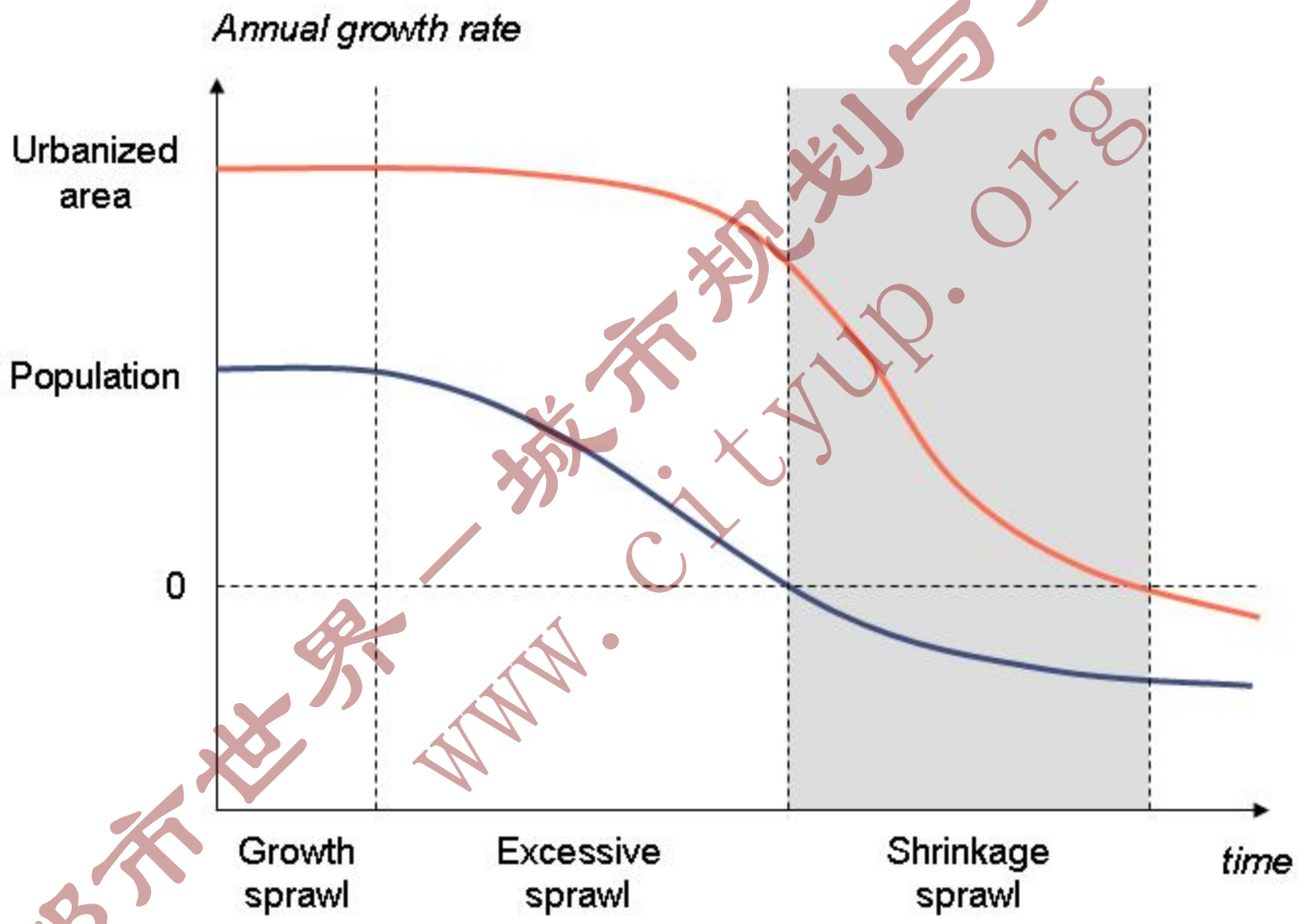
Land Consumption (ha per 10 km², 1996-2004)



Urban Sprawl from Growth to Decline

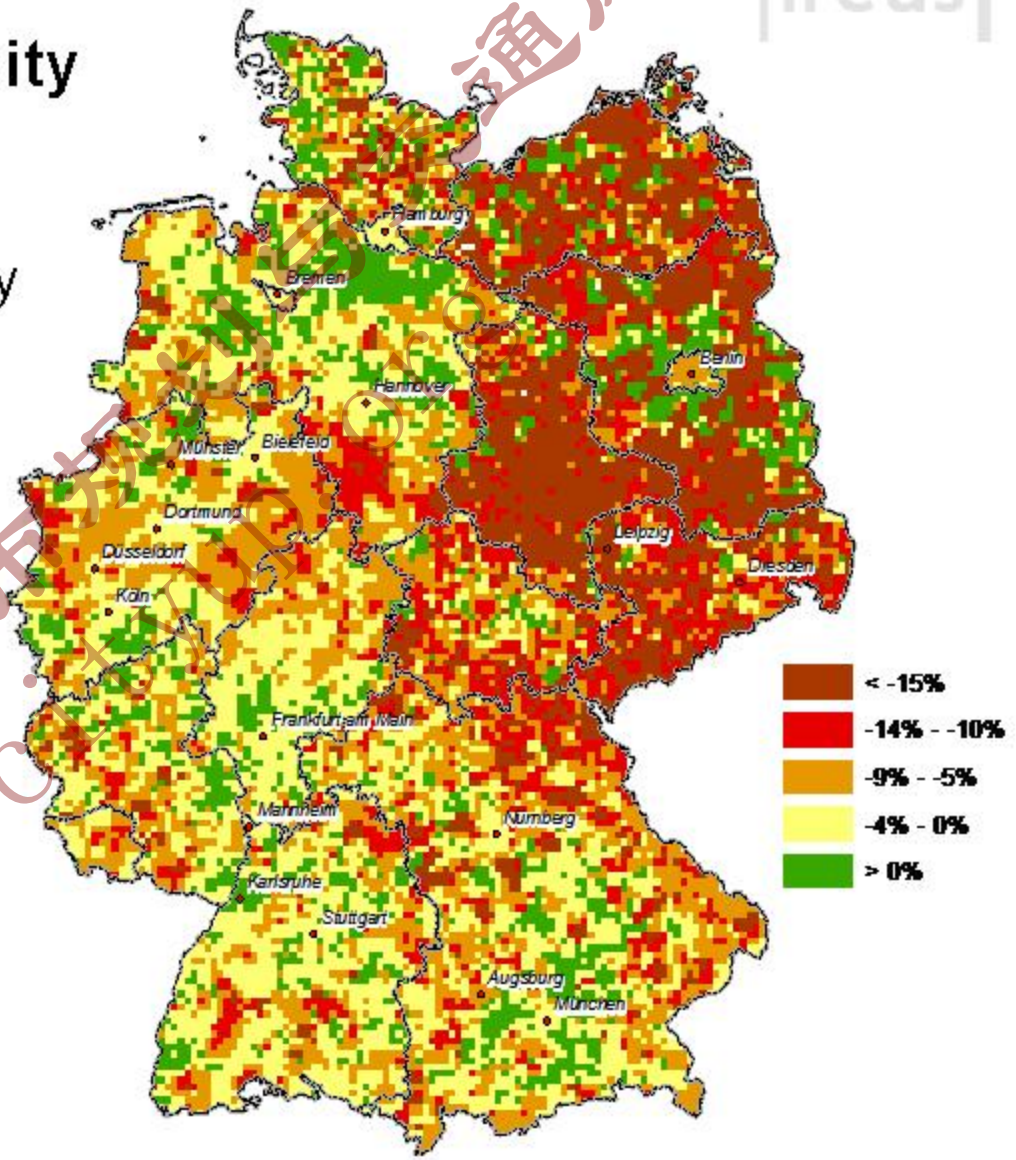
- Decoupling of population growth and land consumption rates
- Reasons are manifold …
  - demographic transition towards smaller household sizes
  - fiscal competition between communities to attract new inhabitants and companies ("fiscalization of land use")
  - planning routines in favor of greenfield development
  - preferences for low density housing
  - government funding of suburban infrastructure development

Urban Sprawl from Growth to Decline

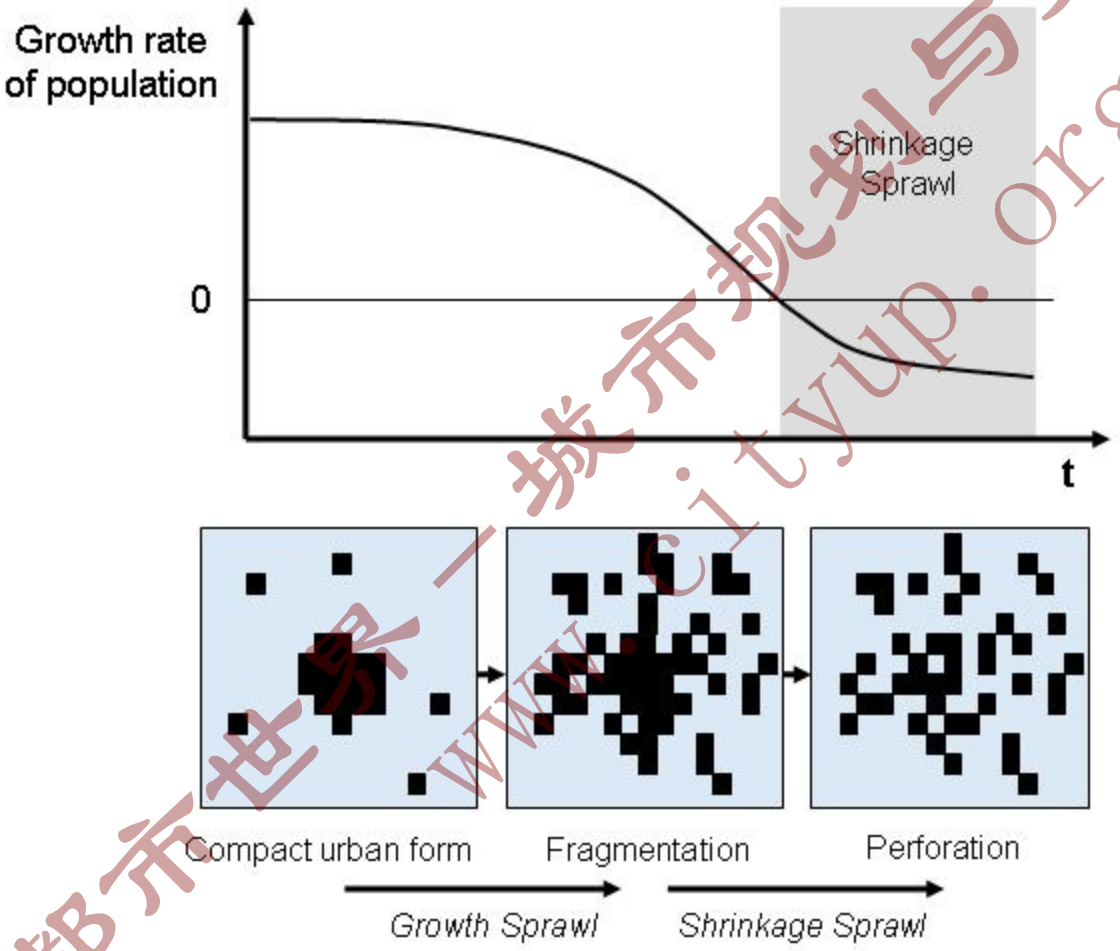


Decline of Urban Density

- Density change in Germany from 1996 to 2006



Perforation of Urban Form



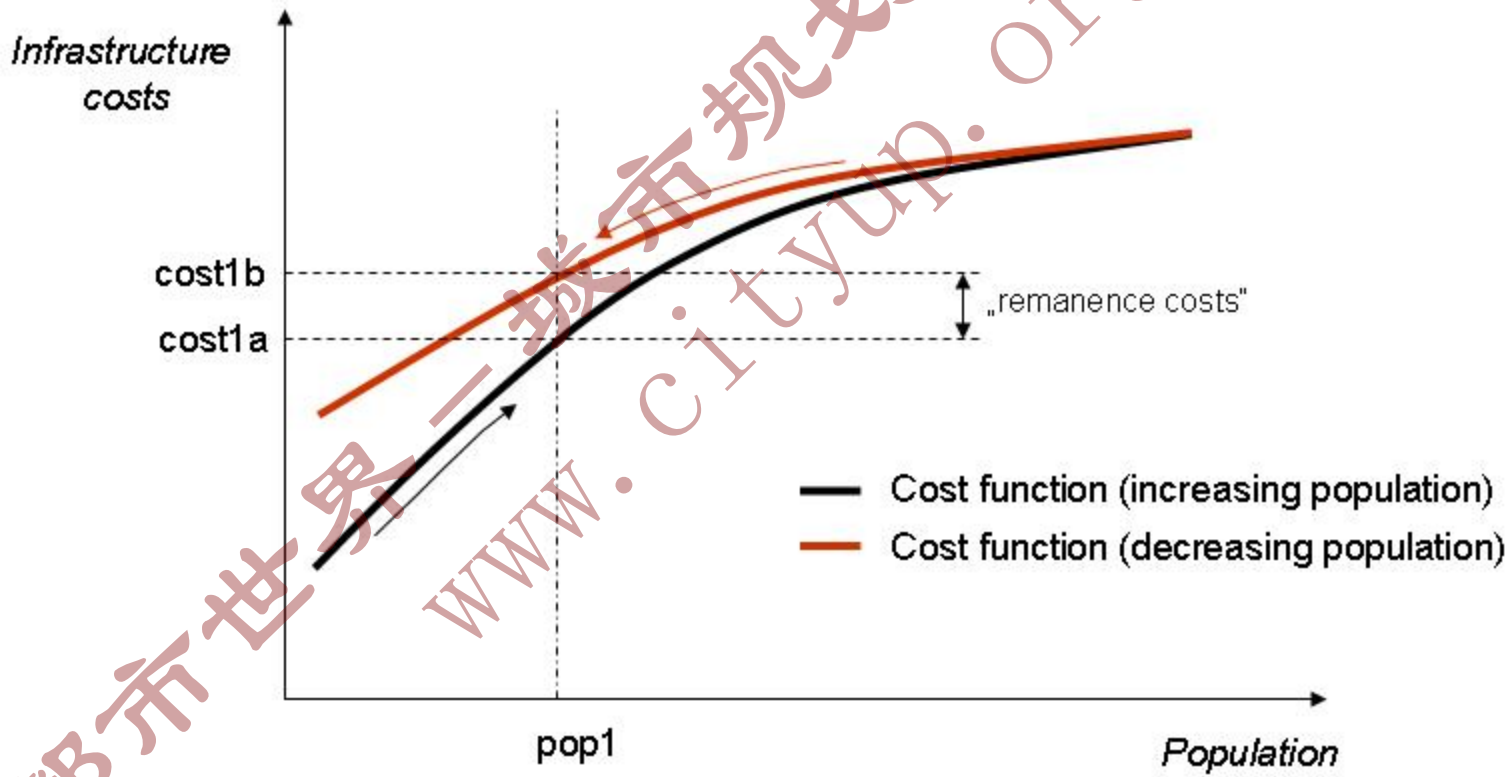
„Visibility“ of perforation

- vacant urban land (brownfields)
- vacant housing

■ Urban land use

What are the Effects of „Shrinkage Sprawl“?

- Higher infrastructure costs per capita (“remanence costs”)



“Remanence cost“ phenomenon

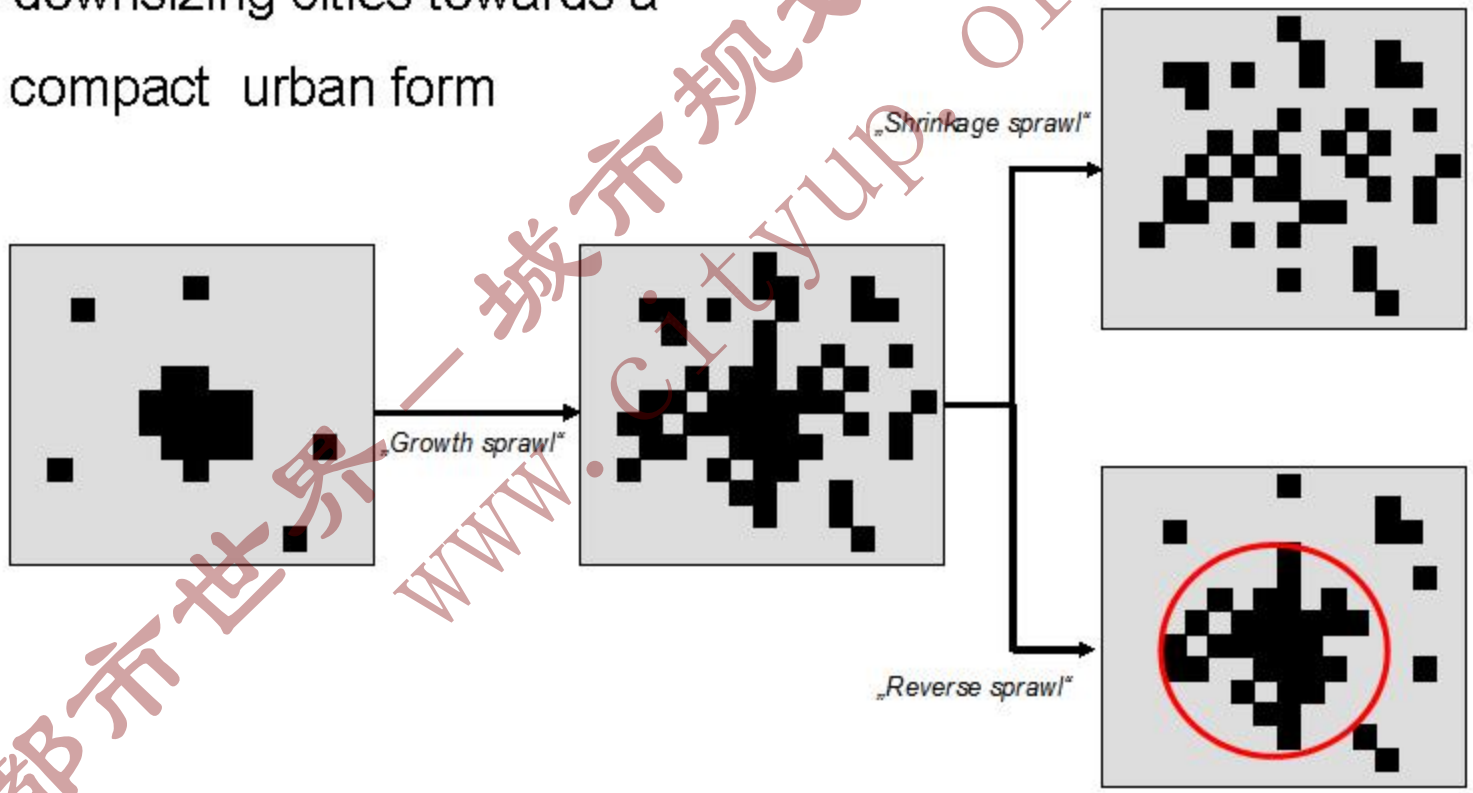
- Limited adaptability of infrastructure provision to a decline of users
- Economical, technical and political reasons for “remanence costs”
  - high share of fixed costs (up to 80% with network infrastructure)
  - technical constraints (immobility and indivisibility of facilities)
  - political constraints (e.g.social resistance against closure)
- Consequently, areas in decline are faced with higher per capita costs if the existing infrastructure provisions are to be maintained (“fewer residents have to pay more for oversized facilities“)

What is to be done?

- Need for a new “post-growth” urban agenda
  - acknowledge shrinkage as irreversible
  - implement “downsizing” strategies of urban development (called “Stadtumbau” in Germany)
- Framework of a downsizing strategy
  - avoid further greenfield development
  - concentrate urban regeneration to the urban core
  - organize deconstruction of under-utilized areas at the urban fringe
- Funding and subsidies as effective instruments

What is to be done?

- „Reverse sprawl“ as a vision for future urban development
  - downsizing cities towards a compact urban form



Conclusions

- Sprawl doesn‘t come to rest with the end of population growth
- In Germany, a new type of „shrinkage sprawl“ is emerging
- Shrinkage sprawl is characterized by a „hyper decline“ of densities
- Shrinkage sprawl is extremely cost-intensive in terms of providing public infrastructure (“remanence costs”)
- Shrinkage sprawl has to be answered with “reverse sprawl”
  - “down sizing” of cities will be a big challenge of urban planners