Urban development in Finland – part of a dynamic or declining Europe?

Emma Terämä
Finnish environment institute (SYKE)

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Urban Europe vs. Finland vs. local

- Europe is a largely urbanised region with 74% of the entire population already living in cities
  - cf. 54% for the world and 69% for Eastern Europe (United Nations 2014) AND
  - 84% of total Finnish population (IndexMundi2015/UN Urb.Prosp. 2014) or
  - 69% for Finnish municipalities (StatFin 2014)
- Demographic change can drive sub-national regions in different directions when compared to national (or continental) trends due to
  - fertility and migration - both heavily dependent on ‘young’ age structure
  ➔ Understanding the role of population dynamics is essential when it is a driver of urban land use change, such as in globally experienced population growth and locally manifested demand for artificial surfaces or built environment.

Terama, Clarke et al. (2017*) Modelling population structure in the context of urban land use change in Europe (*submitted to Regional Environmental Change)
Drivers of urban growth

PEOPLE, PEOPLE and PEOPLE

- Population structure and dynamics are important drivers of land use
- Population acts as a key driver for residential urban demand / decline, and therefore drives regional (sub-national) urban development distinct from national level trends
- Sub-national population trends can deviate strongly from national averages based on age structure:
  - different urban land use patterns and demand for artificial surfaces (built environment)
- We see strong population dependence in the regional development of urban areas across Europe, and the effects caused by age structure and sub-national population dynamics

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Integrating sub-national population projections with an urban growth model for Europe
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SSP5 Fossil-fueled Development
- global markets are increasingly integrated
- full exploitation of fossil fuel resources
- resource-intensive and consumption-heavy lifestyle
- high challenges to climate change mitigation
- adaptation challenges are low
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SSP1 Sustainability
- broader emphasis on human well-being
- commitment to achieving development goals, increasing environmental awareness, less resource-intensive lifestyles
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SSP1 Sustainability

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- challenges for climate change mitigation and adaptation are relatively low.
1) Scenario matters – different population assumptions
2) Population structure matters – age in particular

→ sub-national trends deviate from the national
The case of Finland
increase in the share of 75+

2015 2040

Figure material available on request after publication
Ok.. But how do we tackle the urban specificity?

→ We need new spatial classes
The case of Finland spatial classification

Renewal of classification from administrative area based to spatial data based
The case of Finland regional population development

Population 1980-2014

- Inner urban area
- Outer urban area
- Peri-urban area
- Local centres in rural areas
- Rural areas close to urban areas
- Rural heartland areas
- Sparsely populated rural areas
The case of Finland migration by urban-rural classification

65-74

74+

65+

Entire population
The case of Finland migration by urban-rural classification

65-74

74+

65+

Entire population
The case of Tampere

Figure material available on request after publication
Novel population projection approach

- How do non-administrative spatial typologies affect population structure in projections?
- Within each sub-national region (maakunta), we propose using 3-4 out of 7 urban-rural classes

_Spatially explicit population projections: minding the urban-rural interface_

to be presented in

NDS
14.-16.6.2017
in Turku:
Recap

• Urban definitions vary
• Subnational trends ≠ national trends and average rates
• Population structure drives sub-national regions in different directions
• We need functional classes of urban-rural typology to get to the bottom of the urban-rural dynamics
• We need spatially explicit population projections in order to estimate current & future trends in
  • urbanisation and
  • changes in the built environment.
Thank You!

Contact: emma.terama@ymparisto.fi