Larger Urban Zones in the Urban Audit

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Chapter 1

Introduction
Spatial units in Urban Audit

- City, Larger Urban Zone (LUZ), Kernel, Sub-City District (SCD)
- Around 300 European cities with > 50,000
- Focus on LUZ in this presentation
- Revision of LUZ in 2006
- Presentation of the methodological work in the revision process
Larger Urban Zones

- Ideally, identical to Functional Urban Area
- But: important that statistical data is available
- Compromise in 2003: use existing administrative or statistical unit, like NUTS 3 regions
- Result: Some LUZ are too large and not very useful
Chapter 2

Building blocks
Core city

- Starting point: use "city" of Urban Audit
- City is normally = 1 municipality
- France: co-operation units consisting of several communes
- Test with GEMACA criterion: contiguous municipalities with >7 jobs per hectare
Surrounding area

- For LUZ it was allowed to use NUTS 3, LAU 1, LAU 2 as building block
- From geographical point of view, it is preferable to use small building blocks
- If the building blocks are very small (like UK wards), the commuting picture is blurred and results in many non-contiguous fields
Chapter 3

Commuting fields
Commuting Field criteria

- For each residential LAU around a city:
- Commuting ratio = commuters to core / residents employed
- Applied thresholds for commuting fields:
  - 20 % (narrower commuting field)
  - 15 % (wider commuting field)
- Sum up population within commuting field
- Compare with population of the original LUZ
- Allow +- 50% difference commuting field - LUZ
## Commuting Field calculations

<table>
<thead>
<tr>
<th>Type of target area where commuters work</th>
<th>Commuting/residents employed $&gt; 20%$</th>
<th>Commuting/residents employed $&gt; 15%$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core city (1 municipality)</td>
<td>Done for all UA cities where commuting data are available</td>
<td>Done for all UA cities where commuting data are available</td>
</tr>
<tr>
<td>Core area (GEMACA def.)</td>
<td>Experimental calculations</td>
<td>Experimental calculations</td>
</tr>
<tr>
<td>In France: communauté urbaine</td>
<td>Done by INSEE</td>
<td>Done by INSEE</td>
</tr>
</tbody>
</table>
Commuting Field 2001 - Verona
Commuting Fields 2001 - Bologna & Modena

NUTS 3 / LUZ 2003 boundary
Commuting intensity to core city
- 15% - 20%
- 20% - 25%
- 25% - 30%
- >30%

Central city
Municipality map
Lake
Municipality
Sea
Unknown

Commuting intensity: 15% - 20%

10 0 10 20 Kilometers

1 0 0 1 0 2 0 0 K i l o m e t e r s
Commuting Field around Barcelona 2001

- Commuting intensity to core city:
  - 15% - 20%
  - 20% - 25%
  - 25% - 30%
  - >30%

- Municipalities and boundaries:
  - NUTS 3 and old LUZ boundary
  - Commuting areas

- Map legend:
  - Lake
  - Municipality
  - Sea
  - Unknown

- Scale:
  - 6 0 6 12 18 24 30 Kilometers
Commuting Field around Santiago de Compostela 2001
Commuting Field around Las Palmas 2001
Chapter 4

Alternative core
Experiments with core area

- Tested the GEMACA definition
- At least 7 jobs per hectare in each LAU of the contiguous core area
- Calculate commuting fields around the extended core area
- Experiments done for a few large cities
MILANO

COMO

GALLARATE

Municipality map

Lake

Sea

Unknown

Day population density per sq km

700 - 1000

1000 - 2000

2000 - 3750

NUTS 3 NUTS boundary

Kilometers

N

S

W

E

Milan Core Area 2001
Athens Core Area 2001

Density of Working Day Population
Jobs per sq. km.

- 700 - 1000
- 1000 - 2000
- 2000 - 30000

NUTS 3 boundary
Day population density per sq km
- Red: 700 - 1000
- Brown Dark: 1000 - 2000
- Brown: 2000 - 30000

Municipality map
- Blue: Lake
- Red: Municipality
- Blue: Sea
- Unknown: Unknown

Scale: 7 - 0 - 7 - 14 Kilometers

Direction: N - S - W - E
Core Area 2001

Day population per sq.km
- 700 - 1000
- 1000 - 2000
- 2000 - 30000

Municipality map
- Lake
- Municipality
- Sea
- Unknown

NUTS 3 boundary

NL

ELEIDEN
 UTRECHT
 ALMERE
 AMSTERDAM
 ZAANSTAD
 HAARLEM
 HAARLEMMERMEER
 AMERSFOORT
 LEIDEN
 HILVERSUM
 HILVERSUM
 NEW
 S
 W
 E
 8 0 8 16 Kilometers
Commuting field around core area

- One example of an under-bound city (Copenhagen)
- First map: commuting field calculated for the single city of Copenhagen
- Second map: commuting field calculated for the combined core area where all municipalities have at least 7 jobs per hectare
Commuting field around Copenhagen Core Area 2001

- NUTS 3 boundary
- Commuting intensity to core:
  - 15% - 20%
  - 20% - 25%
  - 25% - 30%
  - >30%
- Core area (>7 jobs/hectare)

Municipality map:
- Lake
- Municipality
- Sea
- Unknown

Scale: 20 0 20 40 Kilometers

Legend:
- N
- E
- S
- W
## Indicators for 2 alt. commuting fields

<table>
<thead>
<tr>
<th>Urban Audit code and label for</th>
<th>Population in LUZ</th>
<th>Population in Commuting field</th>
<th>LUZ / Commuting Field</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Larger Urban Zone</strong></td>
<td><strong>Period 4 (2000/2001)</strong></td>
<td><strong>target (core)</strong></td>
<td><strong>20%</strong></td>
</tr>
<tr>
<td>DK001L – København (core city)</td>
<td>1 806 667</td>
<td>499 148</td>
<td>1 147 056</td>
</tr>
<tr>
<td>DK001L – København (core area with &gt; 7 jobs per hectare)</td>
<td>1 806 667</td>
<td>1 014 240</td>
<td>1 737 923</td>
</tr>
</tbody>
</table>
Revising the LUZ

- The experiments with commuting fields have led to improved LUZ in 2006
- ES, GR, IT, NL agreed to revise the LUZ of their cities in the Urban Audit
- Denmark is waiting for new NUTS 3 to be approved in connection with a regional reform
Thanks for listening!

Any Questions?