Different Regions with Few Transaction
An Approach of Systematization

FIG Working Week 2017
Surveying the world of tomorrow –
From digitalisation to augmented reality
Helsinki - June 1st, 2017

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Motivation

Problem:

SELECT

from

number of purchases = 5

• No statistical analysis is possible!
Introduction

• Valuation necessary in all markets (functional and spatial)
• Comparison approach (with purchase prices) not usable in all submarkets
• Other market data not available in those regions
  • No data available for income method (rates)
  • No information about market adjustment available for cost approach
  • Difficult to identify comparable regions for transregional investigations
• Alternative approaches necessary

Are there different types of regions with few transactions?
Discussion in research context

- Mainly undeveloped plots in city centers are in research focus
- Direct comparison approach needs at least 10-15 purchase prices (stable mean)
- Statistical analysis for regression analysis needs at least 50-100 purchases (approx. 15 purchases per influencing parameter)
Aims and Methodological Approach

• The focus of this research
  • Detailed view and investigation on regions with few transactions

• Aims of the evaluation process
  • Get a better view on regions with few transactions
  • Develop approaches for specific categories
    • Available data
    • Possible strategies

• Methodological approach
  • Grounded Theory Method (GTM)
  • Guided interviews

Source: bennettca.co.nz
Grounded Theory Method

Research question
- Are there different regions?
- How to handle these regions?
- What kind of additional data is available?

Create guideline interview
Choose starting experts sample
Phone interview
Coding and analysis
Grounded Theory Method

Choose expert (differing from sample or in depth)

Create guideline
Choose starting experts sample
Phone interview
Coding and analysis

Coding and analysis
Phone interview
Guided Interview on regions with few transactions

- Definition and characterisation
- Appearance and causes
- Own experiences
- Alternative approaches and data
Choice of Experts & Coding

- Academic background
- Valuation experts
- Working in markets with few transactions
- Wide working radius and different markets
- 7 Experts from different areas
Results – Main categories

Region with few transactions

Lack in offer

Lack in demand

Phenomena in rural areas

June 1st, 2017

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### Results

#### Derived Subcategories for Lack in Offer

<table>
<thead>
<tr>
<th>Example</th>
<th>Sample</th>
<th>Rare in its condition</th>
<th>Not available in special condition</th>
<th>Normal number but not sold in a time period</th>
<th>Unique</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office building in rural areas</td>
<td>Small population, small sample</td>
<td>Undeveloped plot in city area</td>
<td>Owner occupied Buildings</td>
<td></td>
<td>A castle</td>
</tr>
</tbody>
</table>

#### Example
- Office building in rural areas
- Undeveloped plot in city area
- Owner occupied Buildings
- A castle

#### Sample
- Small population, small sample
- Huge population but in a different (not comparable) condition
- Huge population, but small sample in specific time period
- Population = 1
  Sample ≤ 1
## Results

<table>
<thead>
<tr>
<th>Derived Subcategory for Lack in Demand</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of offered real estates doesn't satisfy the demanded quality</td>
<td></td>
</tr>
<tr>
<td>Demographic reason</td>
<td></td>
</tr>
</tbody>
</table>

<table>
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</thead>
<tbody>
<tr>
<td>Unusual size and shape of plots in city centers</td>
<td></td>
</tr>
<tr>
<td>Rural areas with decreasing number of inhabitants (peripheral rural areas)</td>
<td></td>
</tr>
</tbody>
</table>

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<td>Normal population, small sample</td>
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<tr>
<td>Huge population, small sample</td>
<td></td>
</tr>
</tbody>
</table>
Results

- Additional Data:
  - Experts knowledge
    - Reports
    - Experts surveys
  - Offer prices (marketing periods)
  - Rents
  - Regional indicators (purchase power, population development etc.)

Source: Immobilienscout24.de
Findings

• There are different regions with few transactions (categorization is possible)
• Different regions = different additional data
• Categorization can be used to develop appropriate approaches for each region
Further work

- Further validation
  - Quantitative survey
  - Investigation on those regions
- Further investigation on the availability and quality of data
- Development and testing of approaches suitable for the specific region
  - Fusion of different data sources
Many thanks for your attention!

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