Railway Stations’ Area Development and Regional Cohesion

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Curriculum 2017 - 2020
Crossing Borders - Activating Spaces
Case Study Analyses on the Railway Stations and the Settlement Development

- Functionality of the railway stations highly depend on the mobility and/or commercial services that it offers as well as the role it plays in the surrounding built-environment.

- On this basis, we applied two different approaches towards the integrated railway and settlement development:
  1. Land use analysis
  2. Land reserve analysis
Definitions of the Terminology

Corridor case studies are defined based on:

- Functionality (as the main link of a functional region)
- Connecting two main railway nodes

- **Catchment area:**
  A radius of 300-m or 1-km buffer to the railway station

- **Service area:**
  1-km street network to the railway station

- **Walking shed:**
  300-m street network to the railway station (5-10 minutes accessibility for taking the train)

Source: Soltaniehha, M. 2019
Current Trends (1): Land Use Analysis

Legend
- Built area
- Central district
- Land reserves
- SBB real estate properties

300m-radius district of the railway station

Source: Soltaniehha, M. 2019, based on Scholl, et al. (2016)
Catchment Areas as the new Town Centres supporting trans-boundary cooperation

Source: Soltaniehha, M. 2019, based on Scholl, et al. (2016)
Current Trends (2): Land Reserve Analysis towards a regional balance

Source: Soltaniehha, M. 2019
Example of Corridor Analysis for Land Reserves

Distribution of land reserves in Corridor Liestal and Ergolztal, Canton Basel Land

Source: Soltaniehha, M. 2019; data: RAUM+, Basel Landschaft, 2019

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Three Generic Strategies for Integrated Spatial and Railway Development

1. Concentration only on the main hubs
   - Underused infrastructure and low-impact

2. General principles not tailored based on the situation
   - Externalities led from sprawl: need for infrastructure expansion

3. Targeted densification according to the existing and future infrastructure
   - Compact settlements for reserves for structural and infrastructural expansion

Source: Soltaniehha, M. 2019
The Principal Strategy of ‘Inward Development before Outward Development’

What are the exceptions and limitations?

Source: Soltaniehha, M. 2019; data: Canton Aargau, Office for Spatial Planning, 2015
Could One Plan Fit All?

Limitations of the Master-Plans

- Different stakeholders, different plans?
- Supporting railway stations?
- Railway station as potential for trans-boundary cooperation?
- Further factors: topography? Shrinking population? Aging population? Dormitory towns?

Source: Soltaniehha, M. 2019
Planning as a Process

**PARADIGM SHIFT**

**Normative Planning based on Local Authorities**

- Federal Constitution, RPG, RPV
- National Sectoral Plans
- Cantonal Directive Plans
- Communal Land Use Plans

*Source: ARE, 2017; translated by the author*

**Cooperative Planning in Functional Regions**

- Spatial Concept Switzerland
- Agglomeration Programs
- Model project (Modellvorhaben)
- Metropolitan conferences

**Old Paradigm**

- Sector vision of city
- Expansionary strategies
- Zoning plans
- Segregations
- Infrastructure as undesirable places

*Source: Scholl, B. 2018*

**New Paradigm**

- Integrated vision of city
- Re-duce, Re-use, Re-cycle
- Mixed-use development
- Porosity
- Infrastructure acquiring new appeal
Informal Planning as a Supplementary Tool

Source: Soltaniehha, M. 2019; based on Scholl, B. 1995; Tosoni, I. 2013; Grams, A. 2015
Relevance to the Iranian Case Studies?
A Proposed Scenario for the ‘Green Corridor’ by RAI

Source: Soltaniehha, M. 2019
Complex scenarios at ‘Green Corridor’
how could informal planning be helpful?

Source: RAI (Iranian Railways, 2018)

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Proposed Planning Process for the Green Corridor

Source: Soltaniehha, M. 2019
Recommended procedure for a Corridor Consilium in the Caspian Sea region

Source: Soltaniehha, M. 2019
Framework on the likelihood of transfer between same, similar and different systems (barriers and context)

Tehran, a metropolitan of 15 million inhabitants; with three railway stations

Different problem?
Similar nature, different scales

Tehran as a overcrowded metropolitan city has no capacity for resiliency in case of confronting natural and man-made catastrophes

A rapid population growth is expected in the northern rural areas due to expansion of road infrastructure;

Possible solution?
Supplementary informal planning instruments

Source: author adapted from TAN, 2013
Proposed structural shift in spatial planning system in Iran

Source: Soltaniehha, M. 2019
Thank you!

Sepas!

Je vous remercie!