



Swiss Hedonic Day, June 27th 2007

Modelling hedonic residential rent prices in Canton Zurich

Michael Löchl

Institute for Transport Planning and Systems (IVT)

Background

Why real estate modelling @ IVT?

Mission extract:

„Generation of new knowledge about the structure of spatial and, in particular, travel behaviour [...]“

=> development/application of land use and transport models (platforms: UrbanSim and MATsim)

Background

Purpose

Data

Model

Result

Outlook

Purpose

Collecting and using publicly available data resp. data from public administration to model residential rent prices

- for land use and transport modelling
- for further modelling and analysis

Background

Purpose

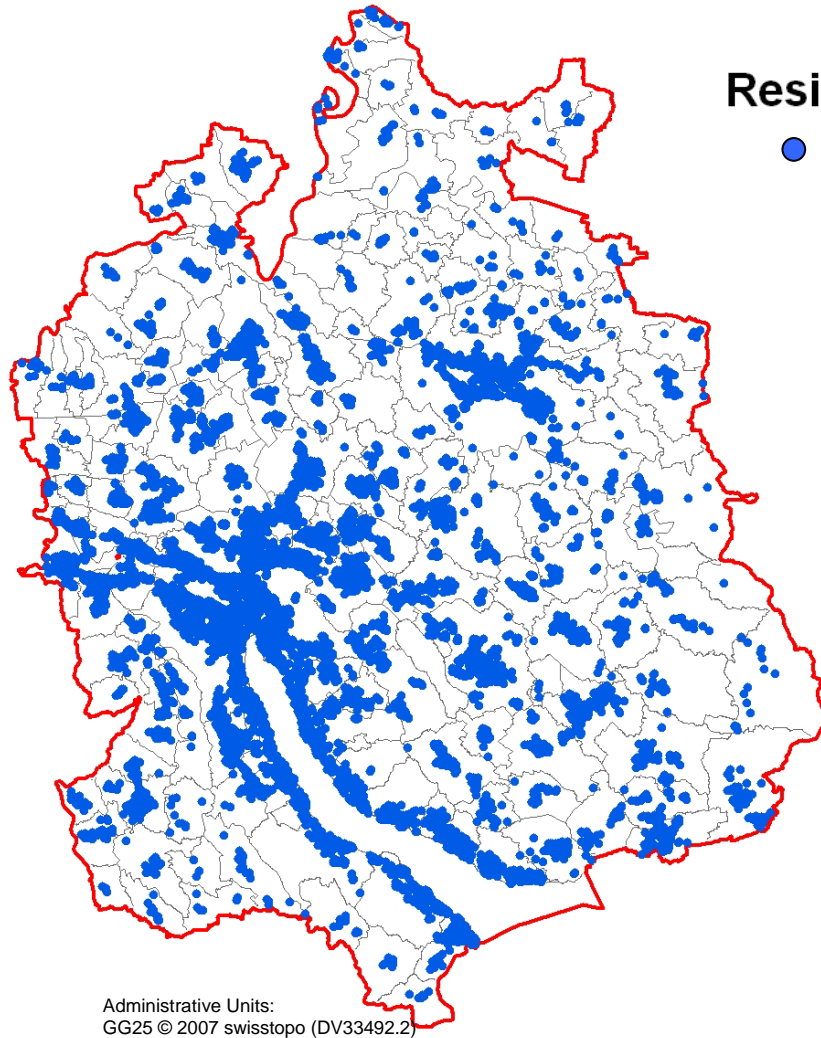
Data

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Data



Residential unit in

● Comparis dataset

Background

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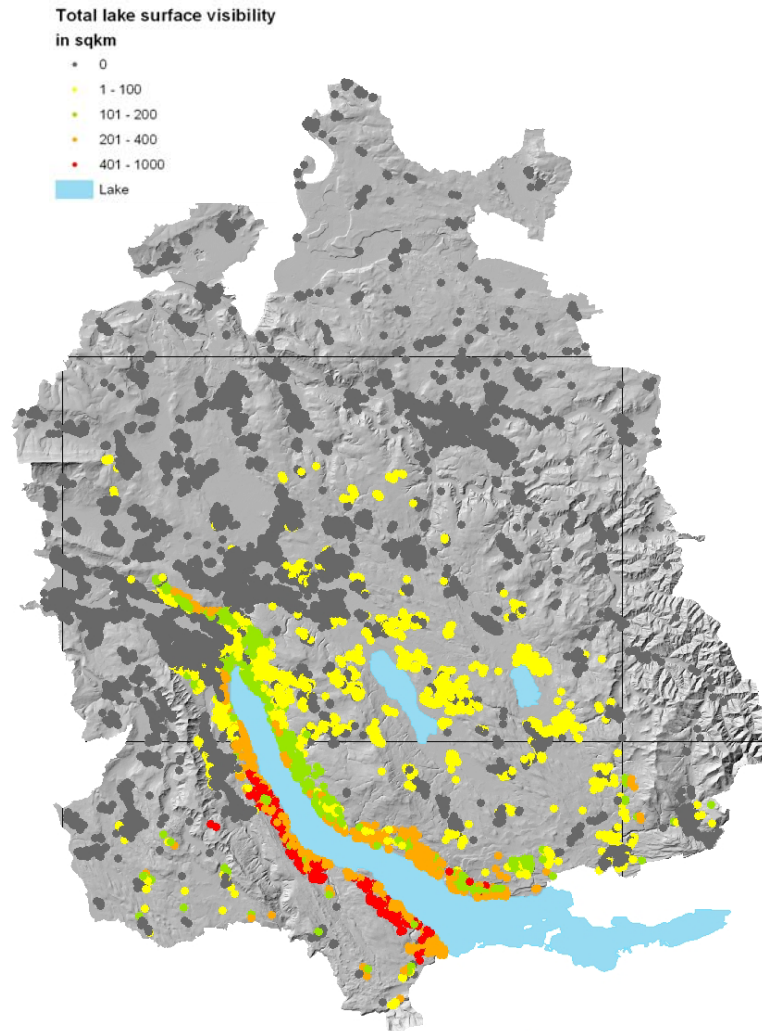
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Variables (viewshed example)



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Best current model

Significant variable	Impact on rent price
Travel time to Zurich CBD by car	—
Income per capita in municipality	+
Viewshed of lake surface (only lakes larger 1sqkm considered)	+
Number of workers in bars and restaurants within 1 km radius	+
Average air noise above 52dB (dummy)	—
Percentage of buildings build before 1971 in municipality	+
Next autobahn intersection within 2km linear distance (dummy)	—
Evening sun radiation index	+
Number of inhabitants in hectare of property	—
Linear distance to next rail station	—
Slope	+
Autobahn within 100m linear distance (dummy)	—
Rail line within 50m linear distance (dummy)	—
Power line within 200m linear distance (dummy)	—
Share of foreigners in hectare of property	—
Public transport accessibility (to employment)	+

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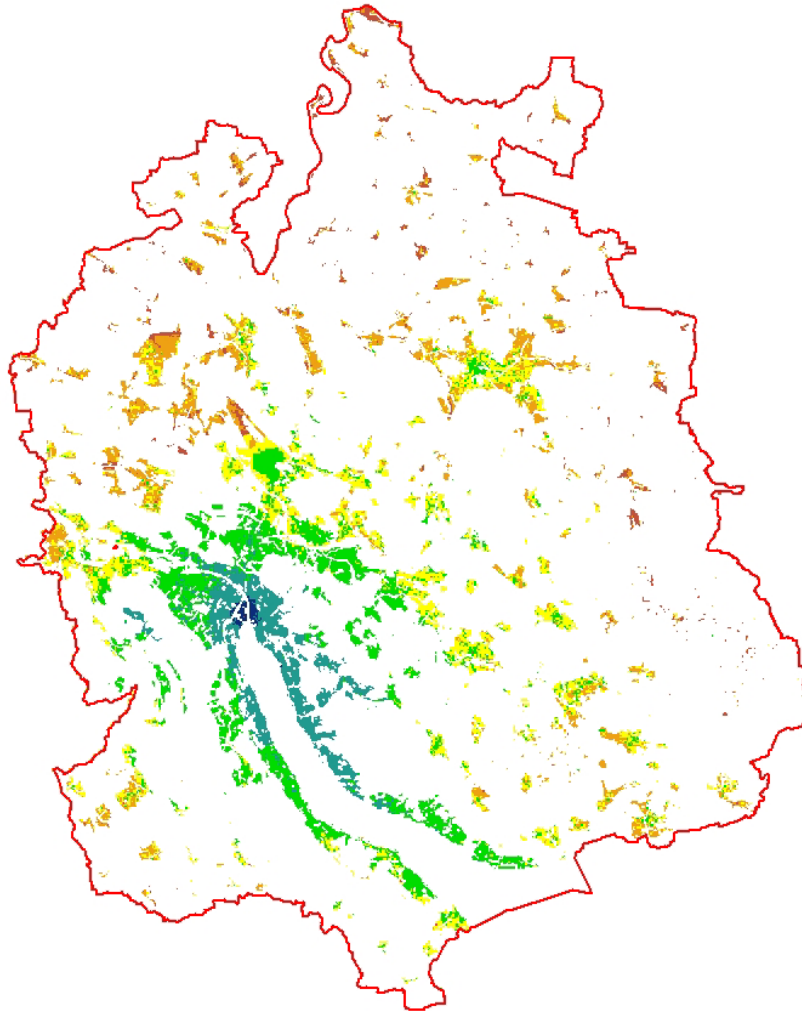
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(Preliminary) results



Monthly gross rent
in CHF per sqm



Background

Purpose

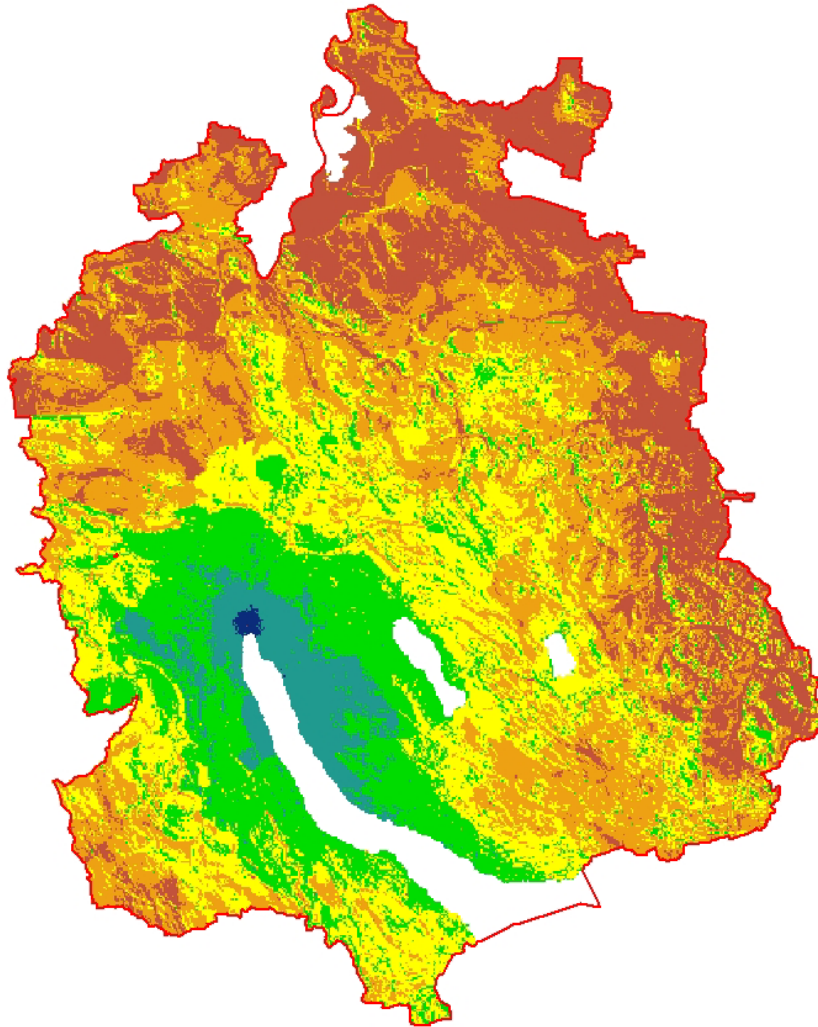
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(Preliminary) results



Monthly gross rent
in CHF per sqm



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- Further improvement of variable selection
- Further testing of variable transformations
- Application of spatial regression analysis

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More information

**...about land use and transport modelling
(in German):**

[http://www.ivt.ethz.ch/vpl/publications/reports/
ab414.pdf](http://www.ivt.ethz.ch/vpl/publications/reports/ab414.pdf)

All papers of group (Prof. Axhausen):

<http://www.ivt.ethz.ch/vpl/publications/reports>

loechl@ivt.baug.ethz.ch