# Cultural Heritage and Household Location

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# Amenities and cities

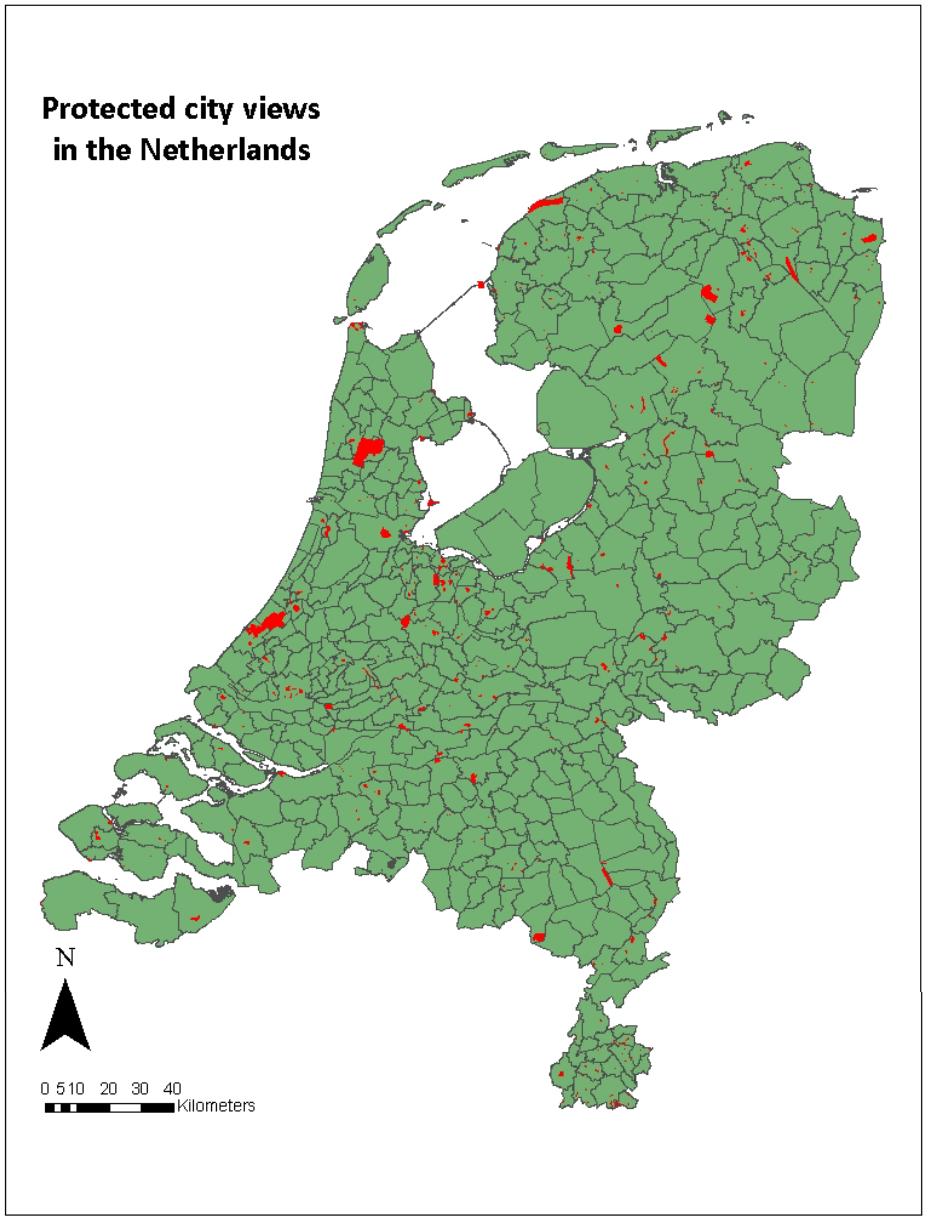
- Jobs are the main amenity of cities …
- … but certainly not the only one.
- Consumers attach value to
  - Shops
  - Restaurants
  - Schools
  - Climate
  - Natural amenities (Bays, beaches, parks,…)
  - Cultural heritage (Ancient inner cities, monuments, museums,…)

# Consumer city

- Amenities affect location choice between and within urban areas
  - Compare Paris and Detroit
    - Brueckner, Thisse and Zenou
  - Beautiful city: tourist attraction
    - Carlino and Saiz
- With probable consequences for growth
    - Glaeser, Kolko, Saiz; Carlino and Saiz

# This paper

- Empirical analysis of household location choice
  - Sorting model (Bayer, McMillan & Rueben)
- Emphasis on cultural heritage
  - Ancient inner cities, monuments, museums


Protected city views
in the Netherlands
N
0 5 10 20 30 40
Kilometers

# Location choice model

- Heterogeneous population
  - Education
  - Household composition (single/couple/children)
- Spatial unit
  - Municipality (appr. 450)
- Household data: housing needs survey 2009
  - Large sample (70,000 households), weights
- GIS data on employment, accessibility, cultural heritage
- Prices of a standard house
  - Hedonic prices with municipality fixed effects

# Utility

- Function of municipality characteristics
  - Employment accessibility
    - Distance to nearest concentration of 100,000 jobs
  - Railroad and highway accessibility
    - Presence of intercity station
    - Distance to nearest highway ramp
  - Cultural heritage
    - Ancient inner cities
    - Historical sceneries
  - Natural amenities
    - Nature
    - Water
- Kind of reduced form specification
  - Shops, restaurants, etc. (endogenous amenities) adjust to the presence of more basic amenities

# The housing market

- Large rental sector
  - More than 40% of total housing stock
  - Most of it is social housing
  - Rent controlled
  - Allocation via waiting lists, priority rules,…
- Owner-occupied sector
  - Prices adjust supply to demand
- We treat the rental sector in each municipality as a separate alternative
  - With a specific constant

# Spatial issues

- Cultural heritage located in neighboring municipalities may be important
  - Some households may prefer to live outside, but close to a large city
- Include a weighted average of cultural heritage in surrounding places
  - 'Potential' formulation
  - Weighted average, weights decling in distance
- Perhaps not all spillovers are observed

# Results: willingness to pay

| | (1) Mean | | (2) High educated working single | | (3) High educated double earners | | (4) Households with children (-18) | | (5) Age (+10 years) | |
|---|---|---|---|---|---|---|---|---|---|---|
| Historical inner cities within municipality (km2) | 7317.2 | | 1994.6 | | 1055.2 | (ns) | -115.4 | (ns) | -109.3 | |
| Historical inner cities in surrounding municipality (km2) | 1232.1 | | 180.2 | | 127.6 | | 46.6 | | 16.5 | |
| Historical sceneries within municipality (km2) | -511.3 | (ns) | -6.3 | (ns) | 146.5 | | 53.5 | (ns) | 101.5 | |
| Historical sceneries in surrounding municipality (km2) | -69.9 | | -5.6 | | 0.0 | | -2.3 | | 0.1 | (ns) |
| Distance to labor market (km) | -1330.0 | | -376.2 | (ns) | -177.5 | (ns) | 213.6 | | 112.1 | |
| Distance to intercity station (km) | -447.3 | (ns) | -547.1 | | -255.0 | | 83.0 | | 26.6 | |
| Distance to motorway ramp (km) | 20.9 | (ns) | -259.4 | | -127.3 | | -37.2 | (ns) | 9.9 | (ns) |
| Nature (%) | 985.2 | | 104.1 | | 139.5 | (ns) | 11.0 | | 26.0 | |
| Water (%) | 69.2 | (ns) | 54.9 | | -43.6 | | -32.8 | | -21.5 | |

Note: The values in this table are in euros. The first column reports the mean willingness to pay of a marginal change of the municipality characteristic. Columns 2 through 6 report the deviation from the mean willingness to pay for that type of household. (ns) means not significant at 5% level.

# Illustrative example

- Amsterdam
  - Amsterdam: large amount of cultural heritage
    - >7km^2 protected inner city, >7000 monuments
  - Growth boundary, high house prices (313k Euros)
- Almere
  - Satellite city
  - Almost no cultural heritage (4 monuments)
  - Low house prices (163k Euros)
- Same situation: Utrecht and Nieuwegein

- Scenario: No cultural heritage?

# Results: predicted prices

| | | Amsterdam | Almere | Utrecht | Nieuwegein |
|---|---|---|---|---|---|
| Standardized house price (euros) | | € 312 539 | € 162 834 | € 250 317 | € 206 176 |
| Predicted house price (euros) Adjusted equilibrium - No cultural heritage | | € 243 194 | € 156 458 | € 225 270 | € 183 769 |
| | Δ | -69 345 | -6 376 | -25 047 | -22 407 |
| | % | -22% | -4% | -10% | -11% |

# Conclusion

- Cultural heritage is an important driver of household location decisions
- Important differences between household groups
  - Highly educated attach higher value to urban amenities
- Spatial aspects are important
  - Amenities in surrounding municipalities
  - Spatial correlation in error term
- Price disparities would decrease if cultural heritage would not exist in the Netherlands