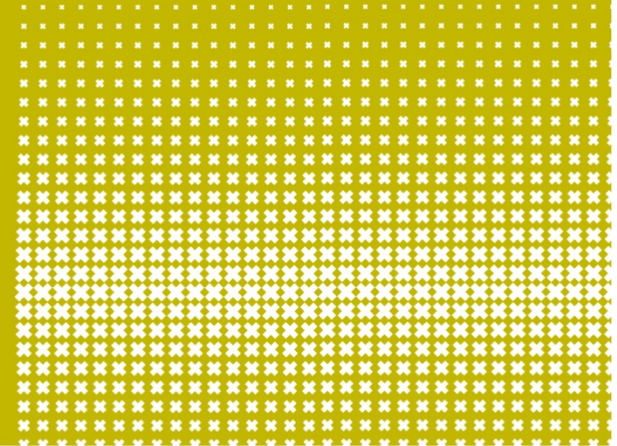




The Sharing Economy – Airbnb and The Housing Market

Case Econometric Game 2021 Amsterdam



by

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Who am I?

- PhD at the Econometrics Chair, Utrecht University.
- TNO (one of the largest Dutch research company), VU University of Amsterdam (Spatial Economic Department)
- Currently, Assistant Professor Real Estate Finance at the University of Amsterdam and Amsterdam School of Real Estate:
 - Real Estate Valuation, Real Estate and Alternative Investments, and numerous Econometrics & Statistics courses
 - Housing markets, House price risk, Urban Economics (externalities, sustainability)
 - Published in leading journals in these fields: Journal of Urban Economics, and Journal of Regional Science.

Introduction I

- The sharing economy – Airbnb (pre-corona):
 - *150 million users worldwide, 6 million listings in over 65,000 cities.*
 - Local residents & businesses, but nuisance and noise pollution → capitalizes into ***house prices***.
 - Not a priori clear what the effect of airbnb on the housing market will be.

Focus area: Amsterdam



www.architour.nl

- ❑ 2008 first Airbnb listings in Amsterdam.

Introduction II

- To what extent does Airbnb affect house price in Amsterdam?
 - Societally and policy relevant question.
 - Data 2000-2018, Dutch Association of Realtors (provided by Brainbay).

Brainbay



Some practical matters

■ Case files (google drive):

- ❑ Econometrics Game 2021 - Case A.pdf
- ❑ AIRBNB_Houseprices.dta (also .txt, tab delimited)
- ❑ Labels_EconometricsGame2021.xlsx

- ❑ Extra_Map_QGIS_Data_Ec.Game2021.zip (Qgis data, Airbnb_map.qgz)
- ❑ Windturbines_JUE_DröesKoster.pdf, but surprise us!!!
- ❑ Presentation_Intro_Case_Ecgame2021 – Dröes.pdf

The Data

- Transactions data enriched with (inside Airbnb) listings data:
 - Main dependent variable house prices (in euros)
 - Two potential independent variables are
 - Distance to the nearest airbnb listing.
 - Number of *active* listings within 250m.
 - Controls: housing quality (size) and location (pc6, pc4)

Some things to keep in mind

- Outliers?
- Location of listings only known with 100m accuracy.
- Distance & Density = 0 before 2008.
- Some variable measure the same thing (size, volume, rooms).
- For the final we will use an extended version of the dataset (augmented report), keep track of changes.

Your report

1. Make sure you write in a clear and concise way. Figures and Tables should be easily readable. More text/tables is not necessarily better.
 2. It is allowed to mention in tables that you added control variables, without showing all of the coefficients.
 3. Try to avoid too many appendices, if any.
 4. YOU ARE NOT ALLOWED TO DEPICT ANY INDIVIDUAL TRANSACTION INFORMATION WITHIN THE REPORT (a spatial plot of the locations of transactions per year is allowed, as well as carefully constructed heat maps).
- Hand in report, ***anonymously***, econometricgame@vsae.nl (also for questions)

The jury



Fonger Ypma



Hans Koster



Martijn Dröes

- Fonger: Ceo of Brainbay (Head of Smart Energy Lab at Eneco, McKinsey), PhD in Mathematical Physics from Oxford University
- Hans: Professor of Urban Economics and Real Estate at the Department of Spatial Economics, VU University Amsterdam. Research fellow TI, research associate with Centre of Economic Performance (LSE), research affiliate CEPR. PhD in economics from VU University Amsterdam.
- Martijn: Assistant Professor Real Estate Finance, research fellow TI, executive board members ERES. PhD in economics from Utrecht University (econometrics chair).
- We will look at many elements like intro, **data, methodology, analysis**, conclusion, structure/presentation/language.

Thank you for listening & try to have some fun!



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