

# How do households acquire information about house prices?

Fabian Kindermann

joint with

Julia Le Blanc, Monika Piazzessi and Martin Schneider

# Motivation

- ▶ **Central questions:**
  - ▶ What information sources on house prices do households use to make forecasts?
  - ▶ And how do different sources shape expectations?
- ▶ New question in **Online Survey of Consumer Expectations** allows to study this relationship.
- ▶ Households rate information sources by importance.

# Preview of Results

- ▶ Factor analysis for cross section
  - two modes of info collection
    - ▶ "local signals" factor:  
direct observations of prices and rents, also online portals
    - ▶ "aggregate signals" factor:  
friends + media (classical & social)
    - ▶ two factors explain more than half of variation
  - ▶ Reliance on aggregate signals → optimism
- Calls for models where
  1. local signals are important to agents
  2. disagreement can arise from differences in attention to aggregate signals

# **Information Sources about House Prices**

# Survey Question on Information Sources

- ▶ Online Survey on Consumer Expectations, Wave 3
- ▶ Question 306:  
*"How important are each of the following sources of information for you to evaluate future house prices?"*
- ▶ Households are asked about 7 sources of information
- ▶ Get to choose between
  - ▶ Very unimportant (0.00)
  - ▶ Rather unimportant (0.33)
  - ▶ Rather important (0.66)
  - ▶ Very important (1.00)

# Information Sources

- ▶ Potential Information sources
  - a. Relatives, Friends and Neighbors
  - b. Classical Media (newspapers, tv, etc.)
  - c. Social Media (like Facebook and Twitter)
  - d. Online real estate platforms
  - e. Financial Consultants
  - f. Direct observations of rents in your neighborhood
  - g. Direct observations of house prices in your neighborhood

# Information Sources

- ▶ Answers in the order of importance

Source	Mean
Direct obs. rents	70.08
Direct obs. prices	68.80
Classical Media	61.31
Online Real Estate Portals	54.92
Friends	48.79
Financial Advisors	43.34
Social Media	20.49

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- ▶ Primary source of information is price observations



# Structuring the Data

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- ▶ Put some more structure on the data
- ▶ Investigate which **joint actions** households undertake to acquire information
- Factor analysis to extract the **principal components**

## Factor Analysis

Variable	Factor 1	Factor 2
Direct obs. rents	0.830	0.067
Direct obs. prices	0.857	0.001
Online Real Estate Portals	0.626	0.288
Financial Advisors	0.594	0.101
Friends	0.101	0.710
Classical Media	0.281	0.589
Social Media	-0.048	0.735
Eigenvalue	2.505	1.243
Fraction explained	0.358	0.178

Rotated factor loadings after varimax rotation

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## Information sources and house price forecasts

# Information sources and price forecasts

- ▶ Online Survey on Consumer Expectations, Wave 3
- ▶ Question 303:  
*"What do you think, by how many percent will house prices increase/fall in your area over the next 12 months."*
- ▶ Idea: Regress expectations on information factors

# Regressions Results

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	HP Growth Forecast over 12 months
Price observations	0.175 (0.162)
Social connections	0.508*** (0.176)
Regional Controls	yes
Number of Cases	2478
R-Square	0.020

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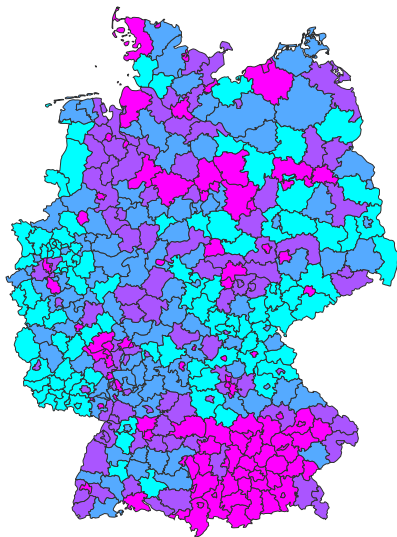
# Summary and Interpretation

- ▶ Where do Germans get information about house prices?
  - ▶ direct observation of prices
  - ▶ friends & media
- ▶ Factor analysis for cross section
  - two modes of info collection
    - ▶ "local signals" factor:  
direct observations of prices and rents, also online portals
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# The Geography of House Price Growth



# Regressions Results

	by Growth Region			
	All	Low/Medium Low	Medium High	High
<b>Growth Region</b>				
Medium Low	0.210 (0.410)			
Medium High	1.274*** (0.457)			
High	1.498*** (0.401)			
Price observations	0.175 (0.162)	0.362 (0.198)	-0.319 (0.339)	0.247 (0.333)
Social connections	0.508*** (0.176)	0.620*** (0.239)	1.098*** (0.416)	-0.044 (0.295)
Number of Cases	2478	1079	570	829
R-Square	0.020	0.017	0.031	0.002