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Investment incentives of rent controls and gentrification – Evidence from German micro data

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Relevance

- Rising rent and sale prices for residential properties due to
  - Severe demand overhang combined with inelastic supply at housing market
  - Low interest rates
  - Population growth in most large cities
- Current policy debate about market interventions to secure affordable living space
- Various laws of rent control have been passed in the last decades

Research questions

- How are housing returns influenced by the introduction of a rent brake in Germany in 2015?

- Is the German rent brake a sufficient instrument to foster the provision of affordable living space?

Contribution

- Relation of rents and sale prices hardly addressed in previous works on rent regulation (Diamond et al. (2019a), Sims (2007) and Autor et al. (2014))
- Use of unique micro dataset covering a whole country, while most international studies examine the relation in selected cities / areas
- Combination of evidence on housing return and rent regulation
- New insights into the efficiency of rent controls addressing housing shortages resulting in higher rent burdens

German housing market as laboratory

- Large rental market as homeownership rate is 47% (2020)
- Rent brake
  - Introduced in 2015
  - limits the rents in new contracts by a ceiling of 10% above the local rent index and excludes newbuilds
- Germany is a good laboratory: rent brake was introduced in different municipalities at different points in time

Data

- Unique micro data set covering the nationwide housing market
  - Rental and sale listings
  - Value-determining, object specific characteristics
  - Source: research data center FDZ Ruhr at the RWI / ImmobilienScout24
- Rent control variables
- Regional (socioeconomic) variables

- Observation period: 2007-2018

Empirical Approach – Housing returns

Effects of the rent brake on housing returns (micro level):

$$
\begin{aligned}
rent\_price\_ratio_i = \alpha_i \\
&+ \gamma \;\; municip\_reg_m \\
&+ \delta_1 \, municip\_reg\_applied_{mq} * object\_reg_i \\
&+ \delta_2 \, municip\_reg\_applied_{mq} * object\_unreg_i \\
&+ \beta \, X + A_d + B_q + \varepsilon
\end{aligned}
$$

Results – Housing returns

VARIABLES	(1) Rent-price ratio	(2) Rent-price ratio
$municip\_reg_m$ (Treatment municipality)	**-0.0179***** (0.00414)	**-0.0208***** (0.00389)
$municip\_reg\_applied_{mq} * object\_reg_i$ (Regulated objects)	**-0.0653***** (0.00430)	**-0.0670***** (0.00425)
$municip\_reg\_applied_{mq} * object\_unreg_i$ (Unregulated objects in regulated municipality)	**0.147***** (0.00489)	**0.152***** (0.00485)
Object specific variables	YES	YES
Region specific variables	YES	YES
Socio economic variables	YES	YES
Social assistance recipients	YES	NO
Year FE	YES	YES
District FE	YES	YES
Constant	15.62*** (0.0825)	15.10*** (0.0755)
Observations	2,774,267	3,116,542
R-squared	0.432	0.424
Observation period	2011-2018	2008-2018

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1. Observation period: 2008/2011 – 2018;

Empirical Approach – Rent burden

Effects of the rent brake on the rent-income ratio (district level):

$$
\begin{aligned}
rent\_burden_m = \alpha_i \\
&+ \gamma\ district\_reg_d \\
&+ \delta\ district\_reg_d * period\_reg_y \\
&+ \beta\ X + A_d + B_y + \varepsilon
\end{aligned}
$$

Results – Rent burden

VARIABLES	Rent-income ratio
$district\_reg_d$	0.0747***
	(0.0151)
$\boldsymbol{district\_reg_d * period\_reg_y}$	**0.0240*** **
	(0.00234)
Control variables	YES
Year FE	YES
District FE	YES
Constant	0.133***
	(0.0131)
Observations	3,955
R-squared	0.836

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
District-year level
Control variables: Yield, urban area (dummy), metropolitan area (dummy), western / eastern Germany (dummy), population growth, students, unemployment rate, construction completions

Results

- Introduction of the rent brake does promote investments in tense housing markets due to the exclusion of newbuilds from the regulation

- Rent burden increases in rent control areas after the introduction of the regulation

➢ Rent control causes a within-market supply shift towards unregulated newbuilds, which is supply-driven due to significantly higher returns

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Robustness and additional tests

- Subsample analysis of estimation of rent-price ratio framework
  - Seven biggest cities
  - Municipalities with little / many building completions
  - Municipalities with little / many building permits, with and without lag

- Determinants of rent-price ratio

- Test of conditional parallel trends-assumption for multiple-period difference-in-differences model

Conclusion

New evidence on housing market dynamics caused by rent regulation using a unique micro dataset:

- Rent brake incentivizes new construction in tight markets
  - Rent-price ratio of unregulated new apartments on average rises by 14 percentage points
  - Rent-price ratio of controlled inventory objects decreases by 6.5 percentage points after the introduction of the law
- Rent burden in controlled areas rises after the introduction of the rent brake
- Rent brake causes a supply-driven within-market shift towards an increased supply of high priced newbuilds in tense housing markets (gentrification)

➢ Rent brake is not a sufficient instrument to improve situation of tenants in tense housing markets