

Fifty shades of state: Quantifying housing market regulations in Germany

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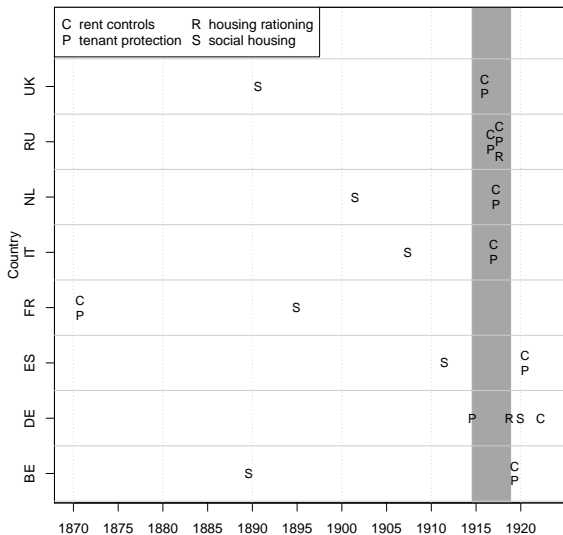
Introduction

- Housing market plays vital role.
 - ▶ Largest component of private consumption: housing expenditure (rental payments, housing repair, and heating) $\approx 34.5\%$ (rent 27.3%).
 - ★ next component is transport (14%).
 - ▶ Housing wealth (6.3 trillion €) vs. total wealth of private households (12.3 trillion €).
- Since 1914, state intervenes actively in rental housing market.
- Consequences of these regulations need to be assessed.
- To do this, housing market regulations must be quantified.

Classes of regulations

- **Protection of tenants from eviction**: restricting the possibilities to evict tenants by the landlords.
- **Rationing of housing**: preservation and redistribution of the scarce housing.
- **Rent controls**: upper bounds on rents and/or their growth rates.
- **Social housing**: fostering construction, modernization, and exploitation of social housing.

Housing market regulations around WWI in Europe



Regulation indices

- **Survey approach:** Noam (1983) and Gyourko et al. (2008) — index of building codes strictness; Andrews et al. (2011) — rental market regulations index. Cross-section, no time dimension.
- **Regulation counting approach:** Nicoletti et al. (2000) and Alesina et al. (2005) — weighted sum of binary indicators.
- **Legislative/judicial activity approach:** Foster and Summers (2005, 2008) — index of land use regulations based on activity over 10 years in legislative and judicial branches.
- **Mixed approach:** Cuerpo et al. (2014) — market regulation index using country-specific legal acts and reports of different specialized organizations. Only cross-section.
- **Page counting approach:** Dawson and Seater (2013) — index of US federal regulation as # of pages in Code of Federal Regulations.

Algorithm

- 1 For each class of regulation a set of relevant **elementary regulations** is identified.
 - ▶ A rule that can take either binary or numeric values (e.g., tax rate).
- 2 For each elementary regulation j of class i an index is created:
 - ▶ either a dummy variable:

$$I_{ijt} = \begin{cases} 1 & \text{if regulation } j \text{ is in force in period } t \\ 0 & \text{otherwise} \end{cases} \quad (1)$$

where j is an elementary regulation and t is the time index.

- ▶ or a numeric variable: $N_{ijt} \in \mathbb{R}$. Further, the variable is transformed into an index as follows:

$$I_{ijt} = \frac{N_{ijt}}{\max(N_{ijt})} \quad (2)$$

Algorithm

- ③ Elementary regulation indices are aggregated for each **class of regulation** i by averaging them:

$$\text{HRI}_{it} = \frac{w_{it}}{J} \sum_{j=1}^J I_{ij t} \quad (3)$$

where w_{it} is an index of **application sphere** of regulations of class i in period t .

- ▶ $w_{it} \in [0, 1]$, where 0 corresponds to none dwellings, while 1 to all dwellings being subject to regulation.
- ④ Based on individual indices, a composite regulation index can be constructed as a simple average:

$$\text{HRI}_t = \frac{1}{I} \sum_{i=1}^I \text{HRI}_{it} \quad (4)$$

Algorithm: Sphere of application

- In 1922–1937 for tenant protection and in 1922–1936 for rent controls, sphere of application:

$$w_t = \alpha_{AB}^{1918} \alpha_{\text{other}} \quad (5)$$

- where α_{AB}^{1918} is the share of housing built before 01.07.1918; and α_{other} is a share of housing *not freed* from regulations due to other exceptions (e.g., exemptions for large, expensive, or vacant dwellings).
- In 1950–1960, sphere of application:

$$w_t = \alpha_{AB}^{1948} \alpha_{\text{other}} \quad (6)$$

where α_{AB}^{1948} is the share of housing built before June 20th, 1948.

- Importance of old-housing correction: In 1936, when first liberalization wave was over, share of old housing was below 79%, while in 1965, it was just 56% of total housing stock.

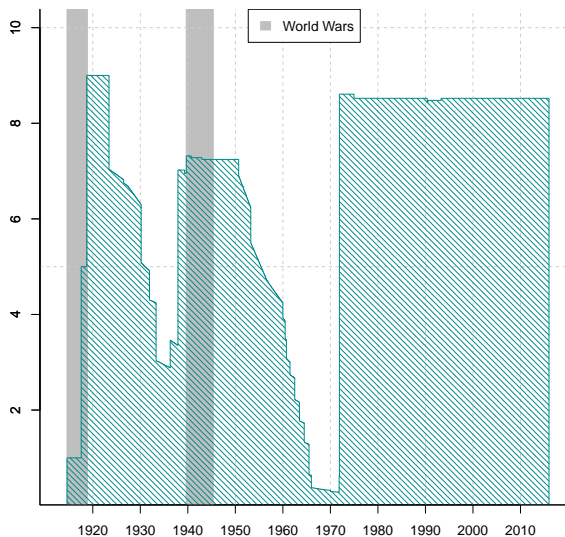
Regulation analysis

- In Germany, regulations (laws and ordinances) issued at three levels:
 - ▶ national (*Bund*);
 - ▶ federal states (*Bundesländer*);
 - ▶ municipalities (*Gemeinden*).
- Over 170 national and regional regulations analyzed.
 - ▶ national: 102 legal acts setting overall framework.
 - ▶ federal state: prohibition of housing misuse;
 - ▶ municipalities: social conservation areas, capping limits, & rental brake.

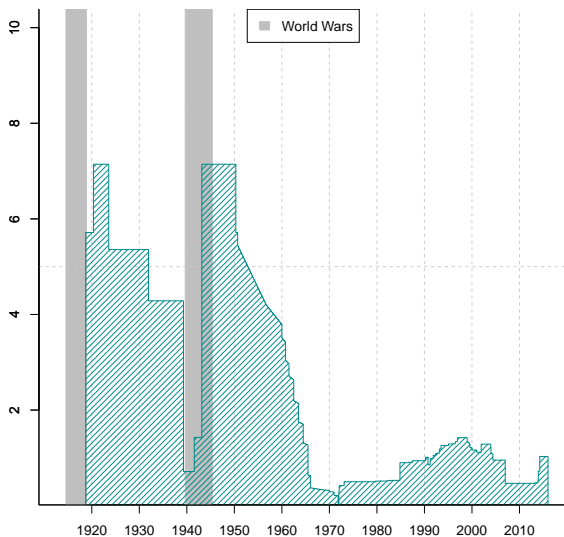
Regulation analysis: Example

| Date | Law title | Summary | Source |
|------------|--|---|-----------|
| 1922-03-24 | ReichsmietenG | Rent setting: 1) existing contracts: rent fixed at peace time level (<i>Friedensmiete</i>) at 01.07.1914; 2) new contracts: rent fixed at 01.07.1914 level of comparable rents (<i>ortsüblicher Mietzins</i>), which are observed for dwellings in the same area, with the same type and location; 3) contracts for housing terminated between 01.07.1914 and 30.06.1918: peace time rent updated by change in construction cost. Basis rent (<i>Grundmiete</i>): interest + operating cost (<i>Betriebskosten</i> : taxes, public charges, insurance fees, administrative costs, etc.) + maintenance cost. Sphere of application: not applicable to new housing, i.e., dwellings obtained after 01.07.1918 through new construction (<i>Neubauten</i>), reconstruction (<i>Umbauten</i>), and fixture (<i>Einbauten</i>). | RGBl, 273 |
| 1926-07-10 | G zur Änderung des ReichsmietenG | Rent updating: in case of modernization (<i>bauliche Veränderungen</i>) increasing the practical value of housing (<i>Gebrauchswert</i>), tenants can be charged a higher rent (<i>Zusatzmiete</i>) to cover reasonable interest and repayment of principal. | RGBl, 403 |
| 1927-03-11 | VO über Festsetzung einer Mindesthöhe der gesetzlichen Miete | Rent updating: from 01.04.1927, legal rent (<i>gesetzliche Miete</i>) is 110% of peace time rent; from 01.10.1927, it is 120% of peace time rent. | RGBl, 72 |

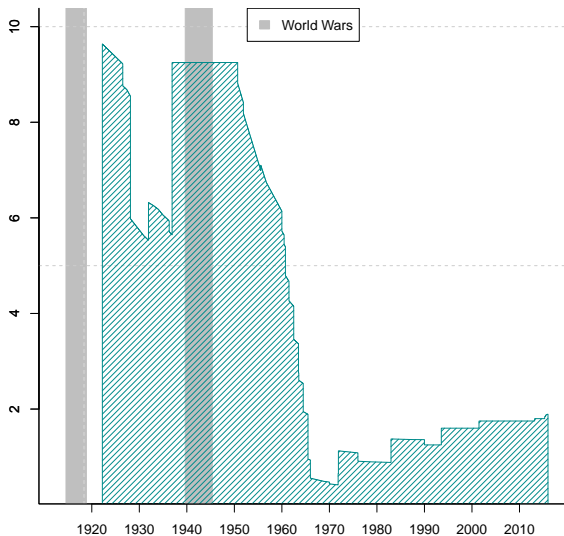
The index of tenant protection regulations, 1913–2015



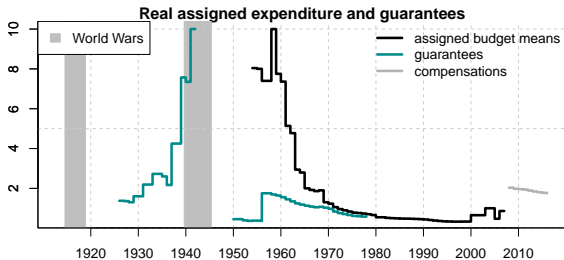
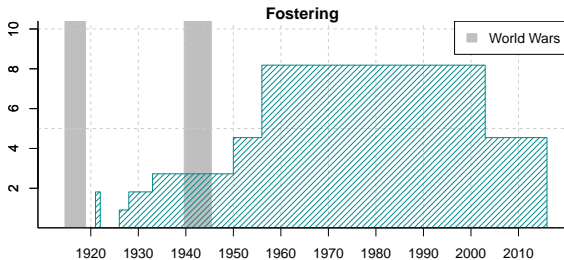
The index of housing rationing regulations, 1913–2015



The index of rent controls regulations, 1913–2015



Indices of social housing policy, 1913–2015



Regulation waves

- Since 1914, five regulation waves:
 - ① Started during World War I and ended in the mid-1930s.
 - ② Began with outbreak of World War II and lasted till mid-1950s.
 - ③ Between the late 1950s and early 1970s.
 - ④ Between the mid-1970s and early 2000s.
 - ⑤ Since the early 2010s.
- Average duration of regulation waves is about 20 years.
- During crises, swift and strong increase in regulations followed by their gradual removal.
- In peaceful times, (de)regulation occurs at a slower pace.

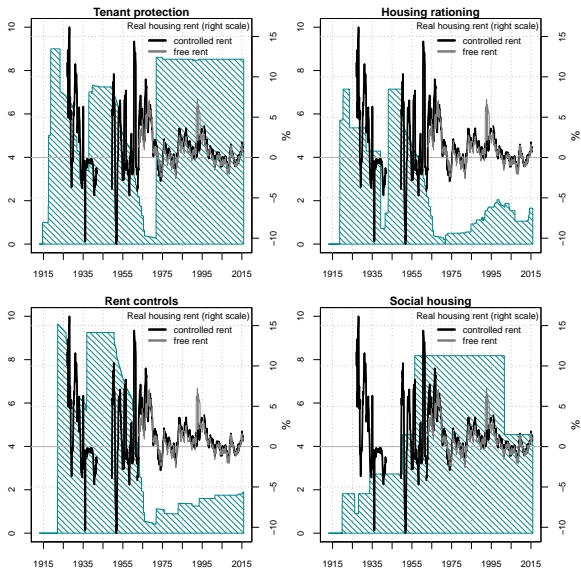
Regulation waves

- Different types of regulations have various degrees of persistence.
 - ▶ Tenant protection —initially emergency measure— still in power.
 - ▶ Housing rationing and social housing construction can be removed:
 - ★ Rationing causes lots of inconveniences to both landlords and tenants and is more difficult to justify.
 - ★ Social housing requires large state investment and is abandoned when housing market improves or the government gets into financial troubles.
 - ▶ Rent controls are regarded as a distortion: Reduced in the absence of excess demand for housing, but raised when situation gets worse.

Current regulation strengthening

- Currently, housing market deterioration.
- National vacancy rate still relatively high: 8.6% in 2010. But strong geographical housing market mismatch:
 - ▶ Countryside, Ruhr area, and East Germany are losing people who head for larger cities with better education and employment opportunities.
- Since late 2013, moderate nationwide real rent increase.
 - ▶ Rents grow much stronger in large and university cities with large immigration.
- As a result, three of regulation classes are strengthened.

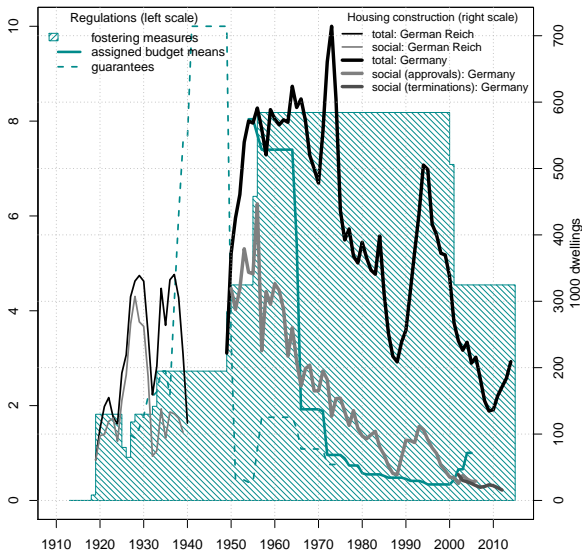
Real housing rent vs. regulations in Germany, 1913–2015



Current regulation strengthening

- **Housing rationing** expands: Growing number of regions introduce social conservation areas and prohibitions of housing misuse.
- **Rent controls** become more restrictive.
 - ▶ In 2013, **capping limit** —upper bound on rent increases in existing contracts— further lowered:
 - ★ as a rule, rent can be raised by 20% in 4 years (4.7% a year).
 - ★ in areas with tight housing market, at most 15% in 4 years (3.6%).
 - ▶ Since 2015, **rental brake** —upper bound on rent setting by new contracts for dwellings terminated before 01.10.2014 and located in areas with tight housing market ($\approx 20\%$ of housing stock).
 - ▶ In 2016, German government plans to further raise rent controls.
- **Social housing policy** intensified. In October 2015, federal financing of social housing construction doubled from 518.2 to 1018.2 million €.

Social housing policy and actual construction, 1913–2015



Summary and future research

- Four regulation class indices and a composite index are constructed for Germany, 1914–2015.
- They can be used to evaluate the impact of regulations.
- Cross-country comparisons are important.
- For this purpose, indices for other countries must be developed.

References

- Alesina, A., S. Ardagna, G. Nicoletti, and F. Schiantarelli (2005). Regulation and investment. *Journal of the European Economic Association* 3(4), 791–825.
- Andrews, D., A. C. Sánchez, and Å. Johansson (2011). Housing markets and structural policies in OECD countries. Economics Department Working Paper No. 836.
- Cuervo, C., S. Kalantaryan, and P. Pontuch (2014). Rental market regulation in the European Union. *European Economy — Economic Papers* 515.
- Dawson, J. W. and J. J. Seater (2013). Federal regulation and aggregate economic growth. *Journal of Economic Growth* 18, 137–177.
- Foster, D. D. and A. A. Summers (2005). Current state legislative and judicial profiles on land-use regulations in the U.S. Working Paper No. 512, Wharton Real Estate Center, The Wharton School, University of Pennsylvania.
- Foster, D. D. and A. A. Summers (2008). State executive/legislative and judicial activities and the strength of local regulation of residential housing. *The Urban Lawyer* 40(1), 1–16.
- Gyourko, J., A. Saiz, and A. Summers (2008). A new measure of the local regulatory environment for housing markets: The Wharton residential land use regulatory index. *Urban Studies* 45(3), 693–729.
- Nicoletti, G., S. Scarpetta, and O. Boylaud (2000). Summary indicators of product market regulation with an extension to employment protection legislation. OECD Economics Department Working Papers, No. 226.
- Noam, E. M. (1983). The interaction of building codes and housing prices. *AREUEA Journal* 10, 394–404.