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Rising rent burdens following distorting investment incentives – The effects of rent controls in Germany


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Rising housing costs fuel current debates concerning political interventions that foster the provision of affordable living space. We examine the effects of the rent brake, a form of rental control introduced in Germany in 2015, on housing returns and on the affordability of living space. We derive housing returns by matching micro-level quotes on similar objects offered for rent and for sale and approximate the affordability of living space by regional rent-to-income ratios. To identify the effect of the rent brake, we estimate multiple-period difference-in-differences models exploiting the temporal, regional, and object-specific variation of the rent brake introduction. Our results suggest that the main goal of the political intervention to secure affordable living space in tense housing markets cannot be attained due to construction incentives in newbuilds and fostered gentrification.

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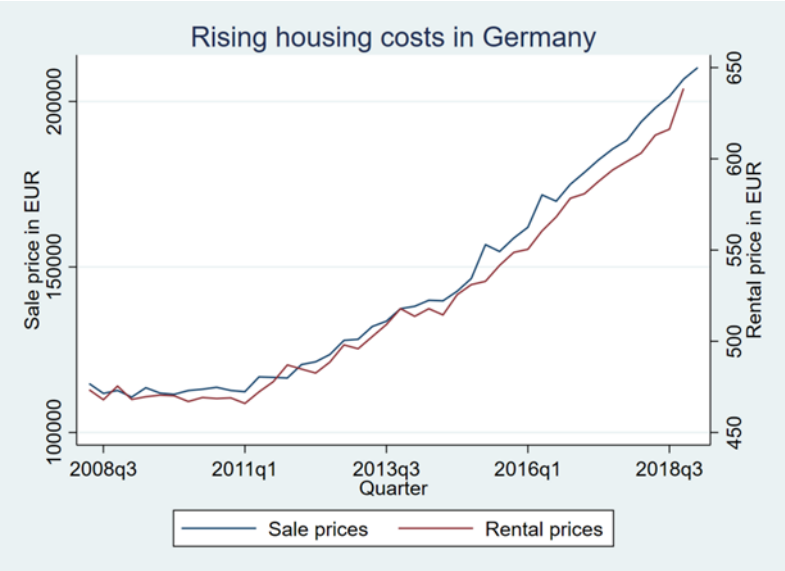
In times of rising rents and sale prices for residential properties caused by a severe demand overhang combined with inelastic supply at the housing market, low interest rates, and population growth in most large cities, interventions that promote affordable housing in tense markets are part of the current policy debate. To protect tenants and secure affordable housing, regulations like rent controls that put an upper ceiling on rent prices are introduced. However, investment impulses to increase affordable living space are needed for a sustainable long-term solution and it is disputed if measures like rent controls set the right incentives in the market. Various laws of rent control have been passed in different countries in the last decades. Recently investigated examples are in US metropolitan areas like San Francisco and Cambridge. However, Latin American and European countries experience periods of rent controls as well. A prominent example is the rent brake introduced in Germany from 2015 onwards.

In Baye & Dinger (2021), we examine the investment incentives of the German rent brake and if it is a sufficient instrument to foster the provision of affordable living space. Our work adds to two strands of literature. The first strand includes studies investigating the influence of rent controls providing contradictory reports concerning the effectiveness of the regulation with regard to price developments in rental markets, renters' mobility, misallocations, and incentives for residential development, see for example Diamond et al. (2019a), Sims (2007), and Autor et al. (2014). The relation between rents and sale prices that determines the gross return on real estate is hardly addressed in previous works on rent regulation. Moreover, most international studies examine the relation in selected cities or metropolitan areas.

The second strand covers studies that investigate determinants and developments of the gross returns of residential real estates, represented by the rent-price ratio. These studies, however, ignore the role of regulation. Following Halket & Pignatti Morano di Custoza (2015) and Bracke (2015) among others, we choose suitable control variables for our analysis, including object-specific characteristics, local attributes, and socioeconomic factors. We thus contribute to the literature by combining evidence on housing returns and rent regulation, using a unique dataset covering a nationwide housing market on micro level which also allows us to address the heterogeneity across metropolitan areas. Moreover, we provide new insights into the efficiency of rent controls addressing housing shortages resulting in higher rent burdens.

In our analysis, we focus on Germany, a country with a large share of tenant households and a comparably small homeownership rate of 46.5% (Federal Statistical Office, 2021b). Figure 1 shows that both rental and sale prices increased significantly in the considered period. The Federal Statistical Office states that in 2019 14% of the German population was overburdened by housing costs (Federal Statistical Office, 2021a). From 2015 onwards, a rent brake was introduced by the Federal States at different points in time in municipalities with tense housing markets. Tense housing markets are characterized by rents that increase faster than the national average, a rent-to-income ratio that is significantly higher than the national average, a low vacancy rate combined with high demand, and a residential population growing faster than the new construction activity. The regulation limits the rents in new contracts by a ceiling of 10% above the local rent index but excludes newbuilds. The condition-specific exceptions of the regulation apply to new buildings, completed in the year 2014 or later, and extensively modernized apartments. To analyze the effect of the rent control, we take advantage of its variation on temporal, regional, and individual levels since it is applied in a selected number of municipalities at different points in time and new and modernized units are not regulated.

Figure 1: Rising rent and sale prices in Germany
Mean of rent and sale prices (in Euro) of newly offered objects between 2008 and 2018.



Our main goal is to examine if the German rent brake is a sufficient instrument to foster the provision of affordable living space. We focus on the supply side and put the return on investment in housing proxied by the rent-price ratio in the center of the analysis because they reflect investment incentives that are needed to address supply shortages. The rent-price ratio is calculated for each rental object from the reported net rent and the matched potential sale price of a similar object.

For our estimations, we exploit a unique micro data set on rental and sale listings, covering several value-determining, object-specific characteristics as well as data on rent control, regional characteristics, and regional socioeconomic variables. The micro-level housing data are based on residential real estate advertisements from one of the largest internet platforms for real estate advertisements in Germany, ImmobilienScout24 (Boelmann & Schaffner, 2019; RWI-GEO-RED, 2020a, 2020b). To calculate the rent-price ratio, we match objects for sale and for rent based on a similarity index that relies on object-specific characteristics and on object conditions.

How does the introduction of the rent brake affect the housing return?

We develop two research questions to disentangle the dynamics of the housing market caused by the rent brake. We start by analyzing how the introduction of the rent brake influences the return on investment in housing. To address this question, we estimate the effect of the introduction of the rent brake on the rent-price ratio relying on a regression with regional- and time fixed-effects. In our regression framework, we take advantage of the introduction of the rent controls at different points in time in various municipalities and exploit the temporal, local, and condition-specific variation.

We find evidence for investment incentives into unregulated newbuilds in areas where the rent controls apply because their rent-price ratio appears to be 14 percentage points higher due to the introduction of the rent control. At the same time, the rent-price ratio of regulated objects decreases on average by 6.5 percentage points, thus, their sale prices do not decline in the same proportion as their rental prices. For investors, who clearly influence the supply of living space, these results induce a clear incentive to invest in new apartments, as it seems to be more attractive to let unregulated apartments in regulated areas to tenants. This suggests that there is a

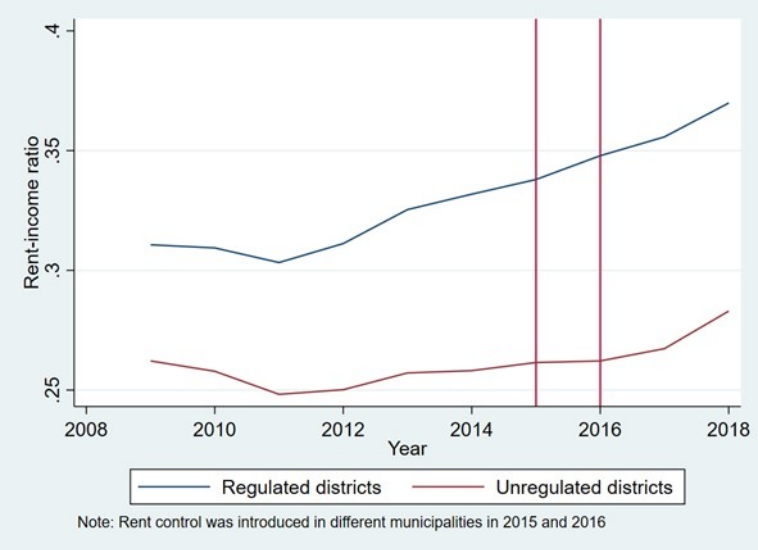
clear investment incentive for unregulated apartments in regulated areas which may lead to the buildup of more expensive living space and does not help to generate a higher amount of affordable housing in these tense housing markets.

How does the rent brake affect the rent burden?

As incentivized building activity does not allow inference on the affordability of the additional living space, we address the second question: Does the rent-income ratio decrease due to the introduction of the rent brake? With this question, we add the factor of affordability to our analysis. We explicitly do not focus on the development of the rent prices, but on the rent-income ratio because we intend to rule out increased demand for higher living and housing standards due to growing income which could foster the supply of new (unregulated) apartments as well. As expected, the rent-income ratio is significantly higher in districts where the rent brake is introduced in 2015 or 2016. We investigate if the rent brake can prevent an additional above-average increase of the rent burden in these regulated areas after the introduction of the regulation compared to the situation in less tight, unregulated markets.

Figure 2: Rent burden proxied by rent-income ratio

The rent-income ratio is an indicator that is, among other key figures, used to identify tight housing markets. As income data are only available on district level, we compress the dataset to a district-year level panel dataset. The vertical red lines mark the two years during which the rent brake was introduced.



Therefore, we apply a multiple-period difference-in-difference framework to estimate the causal effect of the introduction of rent controls on the rent-income ratio. The estimation results reveal that the rent-income ratio in the regulated districts lies 3.03 percentage points higher than in municipalities from the control group where the rent brake is never applied in the observation period. This result could be expected because the rent brake is introduced in tense housing markets. However, our estimation also suggests that the introduction of the rent brake increases the rent burden further by 1.45 percentage points on average. Although the rent control is introduced in these areas, rental payments seem to increase faster than the household incomes in these tight markets. This supports the hypothesis that the demand for living space overshoots the supply so that tenants are forced to pay higher rents for unregulated objects. Thus, we conclude that it causes a supply shift towards more expensive newbuilds. Because of the fact that the rent burden, proxied by the rent-income ratio, rises, we assume that this shift is not demand-driven, but results from the decreased returns of regulated inventory objects.

Conclusion

In summary, our results suggest that the introduction of the rent brake does promote investments in tense housing markets due to the exclusion of newbuilds from the regulation. However, this does not lead to a reduction of the growing rent burden in these areas as the rent control causes a within-market supply shift towards unregulated newbuilds, which is supply-driven due to significantly higher returns resulting from higher net rents in relation to the sale prices.

These results reveal that the introduction of the rent brake does not relax the situation of tenants in regulated housing markets. The goal to foster the provision of affordable living space is undermined by investment incentives for higher-priced newbuilds which increases gentrification and does not improve the situation for low-income tenants in tight markets.

In addition, as our results suggest that these distorting investment incentives seem to be intensified in regions with comparably many building permits, our results stress the need to coordinate political interventions in the housing market to improve the target achievement. For policymakers, the results of this paper show that a rent regulation like the rent brake in Germany is not suitable to solve the problem of rising housing costs because it amplifies the supply shortage of moderately priced living space in tense housing markets.

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