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Kholodilin, Konstantin

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Rent Control Effects through the Lens of Empirical Research: An almost Complete Review of the Literature

Konstantin A. Kholodilin

Opinions expressed in this paper are those of the author(s) and do not necessarily reflect views of the institute.

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DIW Berlin German Institute for Economic Research Mohrenstr. 58 10117 Berlin

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# Rent control effects through the lens of empirical research: An almost complete review of the literature

#### Konstantin A. Kholodilin

DIW Berlin

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#### Abstract

Rent control is a highly debated social policy that has been omnipresent since World War I. Since the 2010s, it is experiencing a true renaissance, for many cities and countries facing chronic housing shortages are desperately looking for solution, directing their attention to controling housing rents and other restrictive policies. Is rent control useful or does it create more damage than utility? To answer this question, we need to identify the effects of rent control. This study reviews a large empirical literature looking at various aspects of rent controls. We conclude that rent controls are quite effective in terms of lowering housing rents or slowing their growth, but they also lead to a wide range of adverse effects affecting both landlords and tenants.

Keywords: rent control, housing policy, empirical literature review

JEL codes: K25, N90, R38

## Introduction

Rent control, like any other governmental policy, has its intended and unintended effects. The intended effect is the affordability of housing, meaning that tenants face reasonable rental burden. Typically, the rental burden — defined as the share of the rental costs in the total income of the household — is considered reasonable, if it does not exceed 30% or 40%. This threshold depends on country. While Australia and USA use 30% as an affordability threshold, the EU countries commonly apply a 40% value (Jewkes and Delgadillo 2010, Del Pero et al. 2016). When the rental burden is excessive, it prevents the households from buying other goods and services and deteriorates the quality of living. In extreme cases, it can lead to extreme poverty and malnutrition. Therefore, it is very important to guarantee the housing affordability.

However, at the same time, multiple other effects emerge. Some affect other tenants who are not protected by rent control, thus, leading to redistribution of income. Other effects work in the opposite direction to that intended by the policy makers, damaging the protected tenants. Yet other effects, for example, higher homeownership rates or lower inequality, cannot be treated as positive or negative from the normative point of view. Therefore, it is important to be conscious of the possible effects of rent control. Ideally, policy makers should take into account all possible effects with their costs and benefits. The decision on the introduction of rent control and its design must rest upon an objective and comprehensive cost-benefit analysis. Only when the net benefit is positive is the policy sensible. Otherwise it produces more damage than utility.

Such cost-benefit analysis can draw upon the rich literature that investigates potential effects of rent control using a robust scientific methodology and reliable data. Here, we provide a comprehensive overview of this literature.<sup>1</sup> Our objective is to summarize the evidence on the effects of rent control accumulated over the years. Although this study is very far from delivering a complete picture of the net effects of rent control, it can still provide useful guidance for making decision on the introduction or reforming of rent control.

## **Country coverage**

Let us first look at the country coverage of the literature. I start from gathering all studies on the effects of rent control — published and unpublished; both theoretical and purely empirical. However, in the main part of my study, I focus exclusively on the empirical articles published in referred journals. The logic behind such a choice is that articles published in peer reviewed journals have at least some guarantee that their methodology is more or less sound.

To find the relevant studies I used both the previous literature reviews and three online research paper databases (Google Scholar, IDEAS/RePEc, and Social Science Research Network) where the keyword "rent control" was searched. While IDEAS/RePEc focuses mainly on research papers in economics, SSRN is a broad social sciences database, and Google Scholar is the broadest yet. Figure 1 shows the breakdown of the literature on effects of rent control by the publication status (published as a journal article/book or unpublished) and by its relation to empirics (empirical or theoretical). In order to avoid duplication, I only include in the group of unpublished papers those whose later versions are not published in journals or as book chapters. I tried to make the sample of rent control studies as exhaustive as possible. However, I cannot guarantee that it is complete. Some studies, especially older and unpublished, could not be found or accessed. The studies written in languages other than English are also underrepresented in the sample.

<sup>&</sup>lt;sup>1</sup> Earlier reviews of the literature are less comprehensive and do not include the newer research results, e.g., Gilderbloom and Appelbaum (1988), Benjamin and Sirmans (1994), John I. Gilderbloom and Markham (1996), B. Turner and Malpezzi (2003), Ye (2008), Jenkins (2009), Pastor, Carter, and Abood (2018), or Kettunen and Ruonavaara (2021). A recent paper of Gibb, Soaita, and Marsh (2022) considers a wide set of studies (79 studies devoted to rent control, including 43 empirical studies and among them 33 empirical published articles), but examines mainly the geographic and methodological distribution of studies.





The total size of the sample is 172 works. Among them, empirical studies account for 79.7%, while the proportion of published studies is about 70.3%. Interestingly, the share of published theoretical studies among all theoretical papers is 67.2%, whereas that of published empirical studies among all empirical works is 82.9%. Thus, the probability of an empirical paper to be published is somewhat higher than that of a theoretical paper.

A concise overview of the rent control literature is contained in Table 6. This is perhaps the most comprehensive review of the literature encompassing the period between 1967 and 2022. The figure below depicts the distribution of rent control studies by countries and continents. The length of each bar is proportional to the number of studies and its color corresponds to the continent to which the respective country belongs.



#### Figure 2: Distribution of studies by countries and continents

The number of countries for which rent control effects are investigated is rather limited — 36 compared to the almost 200 countries existing in 2022. A lion's share of the studies — 32% of all 92 studies considered here — is devoted to the USA. One possible reason is the fact that, in the United States, rent control is often a regional matter, in contrast to many European countries where rent control is adopted at the national level. In the USA, states and even municipalities can have their own housing regulations. Many US studies focus on a single city, while other exploit a large geographical variation. Overall, the North American continent accounts for 38% of the published empirical rent control studies. The share of studies on rent control in European countries is 52.7. The remaining 9% of studies are unevenly distributed across other four inhabited continents. The distribution of unpublished empirical studies by continents is somewhat different, as Table 7 shows.

Table 1: Distribution of published and unpublished studies by continents, in percentages

Continent	Published	Unpublished
Africa	2.7	1.3
Asia	2.7	7.7
Europe	52.7	52.6
North America	37.8	33.3
Oceania	3.4	2.6
South America	0.7	1.3

The shares of studies on countries in Asia, Europe, and South America among unpublished studies are much higher than those among the published ones. This difference can be explained by two reasons. First, given a publication lag between a discussion paper and journal article, this can point out to an increased interest in rent control policies in those continents that, after, a while will lead to more journal articles concerning corresponding countries. Second, it can also be interpreted as a sign that papers on countries outside North America are less likely to be published in referred journals.

Figure 3 illustrates the distribution of published empirical studies over time. Given the relatively small number of studies, they are aggregated by decades: 1961–1970, 1971–1980, etc.



Figure 3: Distribution of studies by decades

One of the earliest published studies on effects of rent control is Gelting (1967). Surprisingly, it considers Denmark and not the USA. This appears to be the only study that quantitatively analyzes the effects of rent control in the 1960s. The number of studies dramatically increased in the 1980s, attaining its maximum in the 1990s. During these periods, the majority of studies were devoted to rent control in North America. It can be explained by an increased activity related to rental market regulations in the USA: the imposition of rent controls in the wake of the oil shocks and deregulation wave in the 1990s. In the 2000s, the number of studies plummeted. Since then, North American studies nor longer dominate the research landscape. The 2020s is bringing a new impetus to rent control research: only 2.5 years into the decade, there are already 11 studies published: almost 75% of the number published in the entirety of the 2010s. This can be explained by a new regulation wave that can be observed especially in Europe (France, Germany, and Spain). Further, the 2010s and 2020s are seeing a surge in international studies, including Sánchez and

Andrews (2011), Weber and Lee (2020), Kholodilin and Kohl (2021a), Kholodilin and Kohl (2021b) that are not confined to a single country, but rather cover multiple countries.

# **Potential effects**

What are potential effects of rent control? To answer this question, one must first compile a list of effects identified in the literature under inspection. In order to do this, as in any other classification exercise, I try to strike a balance between the accuracy and generalization. As a rule, I take advantage of the wording used by the authors of the papers. However, given the terminological differences, the same notion can appear in different studies under different names, thus, leading to a too large number of categories. Such a classification would possibly very accurately describe the terms used by the authors of the studies, but it would not be operational. Therefore, I need to generalize when classifying the regulation effects. In some cases, it is much easier, for example, when effects on prices, supply, and quality of housing as well as on residential mobility are considered. In other cases, it is less evident, for instance, when the authors investigate the impact on inequality, net welfare, and allocation. These notions are closely related to each other. For example, misallocation of housing can lead to more inequality, since "wrong" people can be privileged by rent control.

Figure 4 presents different effects of rent control with the number of studies in which they are examined. Although these are probably not all the possible effects, these are those that occurred to researchers conducting studies. As some studies analyze multiple effects, the sum of frequencies in this figure is not equal to the number of studies.



Figure 4: Potential effects of rent control

The literature identifies 19 socioeconomic, demographic, and security effects of rent control. When ordered by the number of studies and, thus, by their prominence from the perspective of researchers, these are: controlled rents, mobility, homeownership, construction, quality, supply, uncontrolled rents, homelessness, misallocation, value, segregation, vacancy, net welfare, commute times, inequality, marriage, profitability, side payments, and tax base. The effect on controlled rents is actually the intended impact. This is the main target of rent control. Most other effects are rather unintended.

#### **Price effects**

The *uncontrolled rents* refer to the rents paid by the tenants in the housing segment that is not subject to rent control regulations. The rental housing legislation often splits the private rental sector into two parts: those subject and those not subject to rent control. The latter are typically newly built or luxury dwellings. Sometimes, rent control is only applied in tight housing markets. Theoretically, it can also be applied only to a specific type of landlord. The *value* refers to the market selling price of the real estate. For example, by creating more tenure security and limiting rent increases, rent control can make the rental properties less attractive from the perspective of potential buyers, thus, resulting in a price discount. The category *profitability* measures effects of rent control on rental yields of landlords. Rent reductions decrease their revenues and, thus, can negatively affect the profitability of letting dwellings. In addition, some "fair rent" designs explicitly limit the rate of return, since this is virtually the only element of rental price that can be affected by the landlords (Achtenberg 2017, 462).

#### Housing supply

Residential mobility shows how long the tenant household stays at the same place: the longer this time, the lower the mobility. The notion of *construction* in the literature can cover both the total residential construction and construction of rental dwellings in particular. Unfortunately, it is not always clear from the studies whether they mean the total construction or just rental part of it. Moreover, at the moment of completing dwellings, it is usually not clear how they are going to be used: sold to the homeowners or leased to tenants. As a rule, supply refers to the existing rental housing stock. The reduction of supply can imply both its physical disappearance (when dwellings are demolished; smaller dwellings are merged into bigger ones; or residential premises are directed to non-residential uses) or a change in the tenure status of the dwellings (conversion of rental dwellings into the owner-occupied ones). The supply effects are related to construction effects, but should not be confused with each other: while the former deal with the stock of dwellings, the latter deal with the flow. The effect on *vacancy* means that rent control can affect the proportion of empty dwellings. For example, price control often exaggerates preexisting shortages, leading to lower vacancy rates. The homeownership refers to the proportion of dwellings occupied by the homeowners in the total housing stock or, alternatively, the share of homeowner households in the total number of households. Thus, it describes the tenure structure of the housing stock. The *quality* describes the physical state of the rental dwellings: how well are they maintained and equipped.

#### **Distributional effects**

The *net welfare* denotes the difference between benefits and costs of rent control. For example, the benefits can include lower rental burden of tenants in regulated dwellings, while costs can be comprised of increased rental burden of tenants in unregulated dwellings and decreased revenues of landlords. The tax base effects describes the changes in tax revenues due to rent control. Two channels can lead to this effect. First, capping of rents reduces the revenues of landlords and, thus, profit taxes. Second, rent control can decrease the value of controlled property and, hence, lower the property tax proceeds. In principle, tax effects can be taken into account when computing the net welfare. The *misallocation* implies that by distorting price signals, rent control can lead to a mismatch between the supply of, and demand for, rental housing. The sitting tenants in controlled dwellings may have less incentives to leave, since they are well protected and have cheap dwellings often in a good location. Even if the family situation of these people changes (for example, their grown up children leave their nest), these people do not change their dwellings, even though young families, who need such spacious dwellings, are struggling to obtain any dwelling. In addition, misallocation can refer to an "unfair" redistribution of resources: although rent control is designed to help low-income households, in reality it can benefit those with higher incomes more. The related notion of inequality refers to rent control exaggerating or reducing already existing economic inequality between social classes and ethnic groups. The segregation refers to the effects of rent control on racial and social segregation of people. In some cases, rent control is thought to prevent segregation by reducing the residential mobility. The effect on *homelessness* means that rent control could possibly lead either to fewer or to more people living on the streets. In the former case, a stronger tenant protection prevents landlords from kicking out their tenants, while in the latter case, the reduction in the supply of rental dwellings can result in some people having a tough time when looking for an available dwelling.

#### Miscellaneous

Here, I explain the effects that cannot be assigned to any of the preceding categories. The *commute times* can become longer due to lower residential mobility: people tend to stay in the same regulated dwelling and are ready to spend more time on commuting from home to the workplace. The *marriage* effect refers to the potential impact of rent control on the demographic decisions made by the people. For instance, a lack of rental housing can cause young people to postpone their marriage, since many cultures often require them to live separately from their parents. Finally, *side payments* represent various unofficial payments, such as key money, that can be fostered by the introduction of rent control.

# Sign and significance of effects

Apart from identifying the potential effects of rent control and how much research attention it attracts, it is of utmost importance to analyze their direction. Indeed, for policy-making it is more relevant to know whether most researchers agree that rent control affects, say, rents or whether unanimity regarding this effect is lacking. Figure 5 depicts those rent control effects that occupy the most prominent place in the literature. We select an effect, if more than 6 studies are devoted

to it. The left (right) bar shows the number of studies that found a negative (positive) effect of rent control on the corresponding variable. The height of the bar in the middle corresponds to the number of studies that did not find a statistically significant effect of rent control on the variable.



Figure 5: Direction of the most prominent effects of rent control

The most prominent effect of rent control is, unsurprisingly, its impact on controlled rents; that is, on rents paid by the tenants of the dwellings subject to rent control. The picture is rather unambiguous: 25 out of 31 studies point out to a statistically significant negative effect. Thus, rent control is quite effective in capping the rents.

The residential mobility effect seems to be clear cut: almost all studies find a negative effect of rent control on mobility. Two explanations of this phenomenon are suggested. First, the tenants occupying the controlled dwellings have little incentives to leave. This can have negative consequences for the labor market, for lower residential mobility implies less flexible responses to labor market shocks. If the employment situation deteriorates in their city, tenants in controlled dwellings are less likely to move to places where there are brighter perspectives of finding good jobs. Second, lower residential mobility can be explained by a higher tenure stability. Rent control laws often go hand in hand with regulations protecting tenants from arbitrary evictions. Hence, tenants remain longer in the same dwellings, which increases their satisfaction.

In case of the homeownership effects, the picture is a bit less clear cut: there are multiple studies pointing in different directions. Nevertheless, the majority of studies predict an increase in the homeownership rate due to the rent control. This can be explained by the desire of landlords to get rid of those properties that bring them insufficient rental revenues. Therefore, the landlords

sell their dwellings or convert them into condominium ownership. By contrast, Gyourko and Linneman (1989) explain the homeownership effect from the perspective of tenants in controlled dwellings, who are less inclined to become owners, given their protected position.

The impact of rent control on new residential construction is the most ambiguous effect of all. Although more than half of the studies find a negative effect, several studies find no statistically significant effect at all. This can be explained both by different designs of rent control (e.g., exceptions made for the newly built housing) and by the dependent variable (rent control can affect the construction of rental dwellings; however, only data on total construction are available). Moreover, if private construction declines, the government can step in and compensate the missing construction by building social housing. Thus, the overall number of dwelling completions can stay unchanged or even increase, which can be mistakenly associated with beneficial effects of rent control.

The literature is almost unanimous with respect to the impact of rent control on the quality of housing. All studies, except for Lind (2015), indicate that rent control leads to a deterioration in the quality of those dwellings subject to regulations. The landlords, whose revenues are eroded by rent control, have reduced incentives to invest in the maintenance and refurbishment, thus letting their properties to wear out until the real value of the dwellings decreases and becomes equal to the low real rent. In the case mentioned by Lind (2015), the allowed rent increases are pegged to improvements of dwellings made by landlords.

According to the studies examined here, as a rule, rent control leads to higher rents for uncontrolled dwellings. The imposition of rent ceilings amplifies the shortage of housing. Therefore, the waiting queues become longer and the would-be tenants must spend more time looking for a dwelling. If they are impatient or have no place to stay (e.g., in the houses of their friends or relatives), while looking for their own dwelling, they turn to the segment that is not subject to regulations. The demand for unregulated housing increases and so do the rents.

# Methodological issues

The effects examined in the previous section can depend on many factors, given the large heterogeneity of studies under inspection. They can depend on the design of rent control as well as on the data quality and the econometric methodology. Here, I point out to some specific features that can shape the effects of the regulation.

The estimated impact can vary with the degrees of rent control. A strict rent control can be more effective than a soft rent control.<sup>2</sup> The absence of exceptions can leave less room for expansion of unregulated sectors. For example, if newly built housing is not exempted from regulations, housing construction is more likely to dwindle.

The impact can also be different depending on whether rent control is introduced in a country without antecedents of rental regulations or in a country that has a long history of rent control.

<sup>&</sup>lt;sup>2</sup> See, for example, Gilderbloom and Markham (1996).

In the former case, there can be a surprise effect that strengthens the impact of rent control. At first, market participants have not yet elaborated an optimal strategy in order to react to the new challenge. In turn, the effects of deregulation must not be symmetrical but with opposite sign to those of the introduction of rent control. The structure of a market that had been regulated for decades can be different from that of a market that never knew any governmental interventions. For example, the introduction of rent control can dramatically change the tenure structure of the market — by transforming a tenant-dominated market into a homeownership-dominated one. However, the removal of rent control will not necessarily lead to a quick revival of the well functioning private rental market. The effects of partial deregulation — e.g., transition from a strict to a softer rent control — can be also different from those of a complete removal of rent control.

The enforcement of rent control regulations plays also a very important role. In some countries, rent control does not work because most market participants are simply unaware of its existence (Kholodilin 2020). Moreover, even if market agents are well informed about existing regulations, some people can still try to avoid these regulations. The impossibility to raise rents above a legally defined "fair rent" can be compensated by requiring the tenants to make different side payments (e.g., key money). The rents can be frozen, but the principal tenants can sublet parts of dwellings to subtenants at market rates often exceeding the "fair rent" they have to pay to landlords (Mark 2013).

The econometric methodology used to estimate the rent control effect is likewise of utmost importance. A misspecification of econometric models can lead to biased results, with insignificant effects becoming significant, potentially even changing their sign. While some studies reviewed here use a rigorous statistical methodology, others apply rather rudimentary descriptive analysis that can fail to account for some important omitted effects. Table 8 shows the use of different estimation techniques in the rent control analysis.

	Number	Share of
Method	of studies	studies, %
linear regression	40	43.5
descriptive analysis	18	19.6
difference-in-differences	7	7.6
logit/probit	7	7.6
simulation	7	7.6
panel data model	5	5.4
TSLS	3	3.3
event study	1	1.1

Table 2: Techniques used to estimate rent control effects

By far the largest group of studies — 43% — take advantage of linear regressions for cross-section data. There are also 18 studies using purely descriptive analysis. Much fewer researchers use two-stage least squares (TSLS) or difference-in-differences approach. Some studies use more "exotic" approaches, such as a pooled SUR model with time-specific coefficients (Lauridsen, Nannerup,

and Skak 2009), spatial lag regression (Heskin, Levine, and Garrett 2000), or regression discontinuity design (Gardner 2022). In general, perhaps due to the lack of corresponding data, the possible spatial dependencies that are characteristic of the housing markets are, in most cases, not taken into account. Several studies employ time series analysis. However, the samples are often so short that it casts doubts on the reliability of results. One study uses a non-linear technique MARS to identify the periods when rent control was effective (Jacobo Ostapchuk and Kholodilin 2022).

Over time, the research methodology has evolved due to advances both in the econometric methods and in computer techniques. The progress of computer technology allows both using more computation-intensive techniques and taking advantage of much larger data sets. In order to approximately assess these changes I computed the number and proportion of studies that use purely descriptive techniques; see Table 9. By descriptive methods I mean, for example, the so-called "eyeball statistics," when average values or sums before and after changes in rent control regulations are compared, often without relying on the formal statistical tests.

	Number of descriptive	Share of descriptive
Decade	studies	studies, %
1960	1	100.0
1970	3	50.0
1980	7	29.2
1990	3	13.6
2000	2	14.3
2010	2	11.1
2020	0	0.0

Table 3: Application of descriptive techniques over time

It can be seen that descriptive methods were more or less popular until the 1980s, when they were used in about one-third of all published empirical studies. However, in the 1990s and 2000s, their share fell to around 14% and from the 2020s on they seem to fall out of use. This is an indirect sign of a large improvement in research quality over time.

The data employed for the analysis in the rent control literature are also quite heterogeneous. First, the majority of studies — 68% — use microdata (at the level of households or dwellings), while the remaining studies take advantage of macrodata (at the level of municipalities, regions, or countries). Second, the data sources include surveys, official statistical data (for example, results of censuses), address registers, and newspaper advertisements.

# **Publication outlets**

An interesting question is — especially for those who investigate the impact of rent control — where are the corresponding articles published. Overall, there are 50 peer-reviewed journals that

publish research on rent control. About 42% of journals are based in North America. Figure 6 displays the research journals and the continents on which the published studies focus. Only those journals are shown where at least two articles on rent control effects have been published.



#### Figure 6: Main publication outlets

The journals publishing the most on the rent control topics are *Journal of Urban Economics*, *American Economic Review*, *International Journal of Housing Policy*, *Journal of Real Estate Finance and Economics*, *Journal of the American Planning Association*, and *Urban Studies*. The journal that published by far the largest fraction of such studies is *Journal of Urban Economics*. In addition, to a large extent these are also high-quality journals, with most specializing in the urban issues.

## **Meta-regression analysis**

As an extension of the descriptive tools employed in this study, we undertake a simple econometric analysis here in order to assess the impact of different characteristics of the papers on their outcomes. For this purpose I use the Extreme Bounds Analysis (EBA) as developed by Leamer (1985) and Sala-i-Martin (1997). The estimations are carried out using the **R** language package *ExtremeBounds* implemented by Hlavac (2016). EBA is a sensitivity test that assesses the robustness of the relation between the dependent variable of a regression model and a variety of potential determinants This test is especially useful in a situation where the number of determinants is large with respect to the sample size. The basic idea is to estimate all possible combinations of determinants and examine the distribution of resulting parameter estimates. The EBA model can be formulated as follows:

$$y = \alpha_j + \beta_j v + \gamma_j F + \delta_j D_j + \varepsilon$$

where v is a focus variable that is tested for a robust relation with the dependent variable y, F is the full set of free variables that will be included in every regression model,  $D_j$  is a vector of kvariables taken from the set X of doubtful variables,  $\varepsilon$  is the error term, and j is an index of regression models. While  $D_j$  is conventionally limited to no more than three doubtful variables per model, the particular choice of k, the number of doubtful variables to be included in each combination, is left to the choice of the researcher. Here, I set it to range between zero and the number of doubtful variables.

The full set of variables *X* includes the following dummy variables: First-generation rent control, Published, Descriptive, Decade, and Microdata. The first-generation of rent control variable is equal to 1, if the strong rent control is used, and 0, otherwise. The variable is defined following Blumberg, Robbins, and Baar (1974). The kind of rent control can be relevant, since it implies a different design and intensity of regulations (John I. Gilderbloom 1986). The variable Published is equal to 1, if the study is published as a journal article, a book, or a book chapter; and is equal to 0, if it is an unpublished manuscript (e.g., discussion paper or conference proceedings). The Descriptive variable is equal to 1, if purely descriptive methodology is used to obtain results; and 0, otherwise. The Decade variable contains values corresponding to a decade and is defined as a nominal variable. Finally, the Microdata variable is 0, if the study uses data at a microlevel (dwelling or household), and 0, otherwise (e.g., city or country level).

Several effects of rent control are considered: controlled and uncontrolled rents, mobility, homeownership, and construction. For other effects regression analysis is not feasible due to a very limited number of studies.

Table 10 reports estimation results of the EBA, which are based on all empirical studies, both published and unpublished. The dependent variable takes three values: 1, if the study finds positive effects of rent control on rents for controlled dwellings; -1, if effects are found to be negative; and 0, if the study finds no statistically significant effect. Thus, it is a bit different from the standard meta-regression analysis, where dependent variable is the reported estimate obtained in various studies (Stanley and Jarrell 2005). However, this is the best possible approximate, given the large variety of the data, specifications, and estimation techniques used in the literature on the rent control effects.

The first column indicates the dependent variable or a possible effect of rent control. The second column includes regressors of the EBA. The third column contains the average coefficient estimates. The fourth shows the share of statistically significant coefficients in the total number of estimated models. The fifth column reports whether the variable is robust or nor, according to the test of Leamer (1985): the variable is considered to be robust; if the lower and upper bounds have the same sign. Finally, sixth column shows how much of the cumulative generic distribution of regression coefficients lie above zero.

Effect	Coefficient	Estimate	Share of significant coefficients	Leamer's robustness	Share of generic CDF above 0
controlled rents	Intercept	-0.358	0.484	fragile	0.258
controlled rents	Descriptive	-0.163	0.000	fragile	0.270
controlled rents	FGRC	-0.178	0.000	fragile	0.113
controlled rents	Published	0.088	0.000	fragile	0.721
controlled rents	Microdata	0.005	0.000	fragile	0.512
controlled rents	Decade	0.000	0.000	fragile	0.468
uncontrolled rents	Intercept	16.863	0.407	fragile	0.955
uncontrolled rents	Descriptive	-0.129	0.000	fragile	0.423
uncontrolled rents	FGRC	0.384	0.000	fragile	0.812
uncontrolled rents	Published	-0.259	0.000	fragile	0.279
uncontrolled rents	Microdata	-0.098	0.000	fragile	0.400
uncontrolled rents	Decade	-0.015	0.286	fragile	0.050
mobility	Intercept	5.144	0.484	fragile	0.452
mobility	Descriptive	-0.029	0.000	fragile	0.468
mobility	FGRC	-0.313	1.000	robust	0.010
mobility	Published	0.048	0.000	fragile	0.585
mobility	Microdata	0.064	0.000	fragile	0.613
mobility	Decade	-0.006	0.000	fragile	0.106
homeownership	Intercept	-21.438	0.065	fragile	0.474
homeownership	Descriptive	0.013	0.000	fragile	0.514
homeownership	FGRC	-0.097	0.000	fragile	0.425
homeownership	Published	0.088	0.000	fragile	0.570
homeownership	Microdata	-0.676	0.000	fragile	0.107
homeownership	Decade	0.021	0.000	fragile	0.869
construction	Intercept	-9.871	0.161	fragile	0.251
construction	Descriptive	-1.028	0.750	fragile	0.017
construction	FGRC	-0.135	0.000	fragile	0.394
construction	Published	0.709	0.188	fragile	0.862
construction	Microdata	-0.428	0.250	fragile	0.228
construction	Decade	0.009	0.000	fragile	0.675

Table 4: Meta-regression for controlled rents: published and unpublished studies

Apart from the intercept, only two variables have a share of statistically significant coefficients exceeding 0.5: First-generation rent control in the regression for mobility and Descriptive in

regression for construction. The former variable is also robust, according to Leamer's test. This implies that first-generation rent control is likely to be responsible for lower mobility and that studies using descriptive methodology are likely to find negative effects of rent control on construction. In addition, the percentage of the CDF of coefficients lying below zero is very low (under 0.1) for Decade dummy in regression for uncontrolled rents (the earlier the decade, the lower uncontrolled rents), for first-generation rent control in mobility regressions, and for Descriptive dummy in construction regressions. None of essential variables have coefficients that lie above 0 with a frequency exceeding 90%.

Table 11 displays EBA results for articles published in referred journals. Instead of dummy Published, the corresponding regressions contain the variable HIndex\_Scimago, which is an *H*-index (Hirsch index) of the respective journal taken from the Scimago journal ranking.<sup>3</sup> The higher the index, the more prominent the journal.

Effect	Coefficient	Estimate	Share of	Leamer's	Share of
			significant	robustness	generic CDF
			coefficients		above 0
controlled rents	Intercept	-3.907	0.484	fragile	0.173
controlled rents	Descriptive	-0.049	0.000	fragile	0.405
controlled rents	FGRC	-0.189	0.000	fragile	0.140
controlled rents	HIndex_Scimago	0.004	1.000	robust	0.990
controlled rents	Microdata	0.058	0.000	fragile	0.583
controlled rents	Decade	0.003	0.000	fragile	0.639
uncontrolled rents	Intercept	16.636	0.316	fragile	0.947
uncontrolled rents	Descriptive	-0.065	0.000	fragile	0.450
uncontrolled rents	FGRC	0.268	0.000	fragile	0.755
uncontrolled rents	HIndex_Scimago	0.004	0.500	fragile	0.859
uncontrolled rents	Microdata	-0.112	0.000	fragile	0.407
uncontrolled rents	Decade	-0.015	0.300	fragile	0.054
mobility	Intercept	3.173	0.652	fragile	0.307
mobility	Descriptive	-0.047	0.000	fragile	0.442
mobility	FGRC	-0.208	0.667	fragile	0.231
mobility	HIndex_Scimago	0.000	0.000	fragile	0.263
mobility	Microdata	0.048	0.000	fragile	0.546
mobility	Decade	-0.004	0.000	fragile	0.116
homeownership	Intercept	-22.904	0.065	fragile	0.458

Table 5: Meta-regression for controlled rents: only published studies

<sup>&</sup>lt;sup>3</sup> See https://www.scimagojr.com/.

Effect	Coefficient	Estimate	Share of significant coefficients	Leamer's robustness	Share of generic CDF above 0
homeownership	Descriptive	0.304	0.000	fragile	0.649
homeownership	FGRC	-0.088	0.000	fragile	0.440
homeownership	HIndex_Scimago	0.002	0.000	fragile	0.747
homeownership	Microdata	-0.590	0.000	fragile	0.168
homeownership	Decade	0.023	0.000	fragile	0.828
construction	Intercept	-13.459	0.065	fragile	0.341
construction	Descriptive	-1.037	0.750	fragile	0.016
construction	FGRC	-0.148	0.000	fragile	0.380
construction	HIndex_Scimago	-0.003	0.125	fragile	0.324
construction	Microdata	-0.136	0.125	fragile	0.414
construction	Decade	0.013	0.062	fragile	0.689

Only the *H*-index is robust and statistically significant in 100% of cases in the regression for controlled rents. The CDF of its coefficient estimates lies in more than 90% above zero. This implies that, the higher the quality of the journal, the more likely the positive effect of rent control on rents in controlled dwellings. This is a somewhat paradoxical result. Two other variables deserve attention because they have statistically significant coefficients in most cases: first-generation rent control in mobility regressions and Descriptive dummy in construction regressions. It appears that under stricter rent control, mobility is more likely to decline and that, similarly to regressions including both published and unpublished studies, the use of descriptive methods increases the likelihood of finding negative construction effects. Looking at the share of CDF above 0, one can see that also the Decade variable can, to some extent, explain the negative effect of rent control on uncontrolled rents: the later the study is published, the more likely it to find that rent control dampens uncontrolled rents.

# Conclusion

In this study, I examine a wide range of empirical studies on rent control published in referred journals between 1967 and 2022. I conclude that, although rent control appears to be very effective in achieving its main goal — lower rents — it also results in a number of undesired effects, for example, lower mobility and residential construction. These unintended effects counteract the desired effect and, thus, diminish the net benefit of rent control. Therefore, the overall impact of rent control policy on the welfare of society is not clear.

Moreover, the analysis is further complicated by the fact that this policy is not adopted in a vacuum. Simultaneously with rent control, other housing policies — such as the protection of tenants from eviction, housing rationing, housing allowances, and stimulation of residential construction (Kholodilin 2017, 2020; Kholodilin et al. 2021) — are carried out. Furthermore, banking, climate, and fiscal policies can also affect the results of rent control regulations.

Nevertheless, at least ideally, policy-makers should take into account the multitude of these effects and their interactions when designing an optimal governmental policy. Researchers would readily support this by providing their expertise.

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# Appendix

Study	ISO alpha 3 country code	Place and period	Type of data	Method	Rent control generation
Ahern and Giacoletti (2022)	USA	St. Paul (Minnesota) and 5 surrounding counties, 2018–2022	micro: 150,000 real estate transactions	difference-in- differences regression	2
Ahrens, Martinez-Cillero, and O'Toole (2019)	IRL	Ireland, 2008–2018	macro: rent index at the level of Local Electoral Areas	difference-in- differences regression	2
Albon (1978)	AUS	Canberra and Queanbeyan, 1973– 1976	macro: Rent Control Office; 1971 Census data	descriptive; simulation method	1
Ambrosius et al. (2015)	USA	161 New Jersey communities, 2003	micro: Rent Control Survey of the New Jersey Tenants Organization and 2010 Census	linear regression	2
Appelbaum et al. (1991)	USA	56 US cities, 1984	macro: HUD survey of homelessness in 60 metropolitan areas	linear regression	2
Asquith (2019)	USA	San Francisco, 2003– 2013	micro: building parcel by month dataset of evictions of San Francisco's Planning Department	instrumental variable linear probability model	2
Assaad, Krafft, and Rolando (2021)	EGY	Egypt, 2006 and 2012	micro: 2006 and 2012 waves of the Egypt Labor Market Panel Survey	difference-in- differences regression	1
Attia (2016)	EGY	Egypt, 2010–2011	micro: data on households from Household Income, Expenditure and Consumption Survey	hedonic regression	1
Ault and Saba (1990)	USA	New York City, 1965 and 1968	micro: New York City Housing and Vacancy Surveys	hedonic regression; simulation model	1
Ault, Jackson, and Saba (1994)	USA	New York City, 1968	micro: New York City Housing Vacancy Survey	cross-sectional regression	1
Autor, Palmer, and Pathak (2014)	USA	Cambridge (Massachusetts), 1995	micro: parcels of land	cross-sectional regression	1
Autor, Palmer, and Pathak (2019)	USA	Cambridge (Massachusetts), 1992–2005	macro: block-level crime statistics (crime counts per 1,000 square meters) of Cambridge Police Department	panel-data model	1
Bailey (1999)	GBR	Aberdeen, Dundee, Edinburgh and Glasgow, 1987–1996	micro: advertisements for private rented accommodation appearing in newspapers and property guides	descriptive analysis	unknown
Ballesteros (2001)	PHL	Metro Manila, 1998	micro: Annual Poverty Incidence Survey	linear regression	1
Ballesteros, Ramos, and Magtibay (2016)	PHL	Metro Manila, 2014	micro: data of families from the Family Income and Expenditure Survey (FIES) and the Annual Poverty Indicators Survey (APIS)	hedonic regression	2
Barton (2020)	USA	City of Berkeley, 1978–1995	micro: US Census data	descriptive analysis	2
Baye and Dinger (2021)	DEU	Germany, 2008–2018	micro: RWI-GEO-RED data based on residential real estate advertisements from ImmobilienScout24	multi-period difference-in- differences regression	2

## Table 6: Articles on rent control effects in referred journals

Study	ISO alpha 3 country code	Place and period	Type of data	Method	Rent control generation
Baye and Dinger (2022)	DEU	Germany, 2008–2018	micro: RWI-GEO-RED data based on residential real estate advertisements from ImmobilienScout24	multi-period difference-in- differences regression	2
Bettendorf and Buyst (1997)	BEL	Belgium, 1920–1939	macro: per capita expenditure data	Rotterdam demand model	1
Block (1989)	CAN	Toronto and Vancouver, 1972-1988	macro: semiannual vacancy rates	descriptive analysis	unknown
Bonneval, Goffette-Nagot, and Zhao (2021)	FRA	Lyon, 1890–1968	micro: real estate property manager's accounting books	difference-in- differences regression for panel data	1
Borck and Gohl (2021)	DEU	Berlin, 2013–2019	macro: GfK data at ZIP code level; Open Street Map; Mietspiegel data	simulation model (spatial equilibrium model)	1
Bourassa and Hoesli (2010)	CHE	Switzerland, 1998	micro: Enquête sur les revenus et la consommation	logit regression	2
Breidenbach, Eilers, and Fries (2022)	DEU	Germany, 2013–2017	micro: object level rental price data from the RWI-GEO-RED	event study	2
Chapelle, Wasmer, and Bono (2021)	FRA	Paris, not indicated	micro: Base d'Informations Economiques Notariales for real estate prices; online ads for new leases; the Répertoire du parc locatif social for the social housing sector; and Census for the share of social housing	hedonic regression; simulation model	2
Chen, Jiang, and Quintero (2022)	USA	New York City, 2002– 2017	micro: NYCHVS data on housing units and households	hedonic regression	2
Clark and Heskin (1982)	USA	Los Angeles, 1978– 1980	micro: a sample of 4,094 tenants selected using random digit-dialing techniques	contingency analysis	1
Coffey et al. (2022)	IRL	Ireland, 2014–2020	macro: rent index at the level of Local Electoral Areas	event study analysis; difference-in- differences regression	2
Diamond, McQuade, and Qian (2019)	USA	San Francisco, 1990– 2016	micro: entire address history of individuals from Infutor	dynamic neighborhood choice model	2
Dutta, Gandhi, and Green (2022)	IND	4 states of India (Gujarat, Karnataka, Maharashtra, and West Bengal), 2001– 2011	macro: aggregate district-level data from the Census of India and National Sample Survey Organization household- level consumption and employment surveys	panel-data model	1
Early (2000)	USA	New York City, 1996	micro: New York City Housing and Vacancy Survey	linear regression	unknown
Early and Olsen (1998)	USA	44 US metropolitan areas, 1985–1988	macro: housing survey + micro: homelessness survey	TSLS; logit	unknown
Early and Phelps (1999)	USA	49 US metropolitan areas, 1984–1996	micro: American Housing Survey	hedonic regression	unknown
Eckert (1977)	USA	Brookline (Massachusetts), 1968–1976	micro: data on rents, property assessments, and physical characteristics for over 1000 buildings with nearly 12,000 rental units under rent control; data on property assessments, physical characteristics, and sales price for all single-family, two- family, three-family, industrial-	linear regression	1

Study	ISO alpha 3 country code	Place and period	Type of data	Method	Rent control generation
			commercial properties and condominiums sold		
Ejarque and Kristensen (2015)	DNK	Denmark, 2010	micro: administrative register data are collected by Statistics Denmark providing information on all housing units and its occupants in Denmark on a yearly basis	OLS; TSLS	:
Engerstam (2017)	FIN, SWE	3 major urban areas in Sweden and 6 major urban areas in Finland, 2000–2015	macro: macroeconomic and demographic statistics; regulation indices	linear regression	2
Fallis and Smith (1985a)	CAN	Toronto CMA, 1982	micro: random sample of 175 private buildings containing 6 or more units subject to rent control, and 140 private buildings containing 6 or more units not subject to rent control	hedonic regression	2
Fallis and Smith (1985b)	CAN	Toronto, 1982	micro: survey of dwellings and households	descriptive analysis	1
Fetter (2016)	USA	51 US cities, 1940– 1946	macro: monthly rent index of National Industrial Conference Board and the data on rents from intercensal housing surveys carried out by the Census Bureau and the Bureau of Labor Statistics	linear regression	1
Field et al. 2008)	IND	Ahmedabad, 2002	macro: riots, incidents of violence; 2,440 parts that fall within the 11 electoral jurisdictions that contain at least one mill	linear regression	1
Fitzenberger and Fuchs (2017)	DEU	West Germany, 1984– 2011	micro: SOEP households	linear regression; quantile regression	2
Gaffney (2021)	USA	East Palo Alto, 2000, 2006, 2010–2019	micro: American Community Survey (ACS) using census data for the years 2000 and 2010 and ACS Data Profiles - Housing Characteristics data for 2006 and 2011-2019	difference-in- differences regression	2
Gandhi, Green, and Patranabis (2021)	IND	4 states of India (Gujarat, Karnataka, Maharashtra, and West Bengal), 2001– 2011	macro: aggregate district-level data from the Census of India and National Sample Survey Organization household- level consumption and employment surveys	panel-data model	1
Gardner (2022)	USA	San Francisco, 2007– 2016	micro: database of eviction notices filed with the San Francisco Rent Board	regression discontinuity design	2
Geddes and Holz (2022)	USA	San Francisco, 1990– 2000	macro: data on each unit's address, the number of units in the building, and the year the building was built for all residential units in the San Francisco Assessor's Secure Housing Roll; zip code level number of eviction notices and wrongful eviction claims from the San Francisco Rent Board.	continuous treatment difference-in- differences design	2
Gelting (1967)	DNK	Denmark, 1940 and 1960	macro: construction statistics	descriptive analysis	1
Gibb (1994)	GBR	Edinburgh and Glasgow, 1988 and 1992	micro: newspaper advertisements from Glasgow Herald and the Scotsman	mean- comparison; linear regression	C
Gilderbloom (1986)	USA	63 New Jersey cities, 1970 and 1980	macro: Census data	linear regression	2

Study	ISO alpha 3 country code	Place and period	Type of data	Method	Rent control generation
Gilderbloom and Markham (1996)	USA	125 New Jersey cities, 1970–1990	macro: Census data	linear regression	2
Gilderbloom and Ye (2007)	USA	76 New Jersey cities, 2003	micro: Rent Control Survey of the New Jersey Tenants Organization	linear regression	2
Gissy (1997)	USA	50 US cities	macro: 1984 Housing and Urban Development survey	WLS	2
Glaeser (2003)	USA	8 cities in California and 7 cities in New Jersey, 1970 and 1990	micro: New York City Housing and Vacancy Survey; macro: US Census and 1991 HUD Report to Congress on Rent Control	linear regression	2
Glaeser and Luttmer (2003)	USA	New York City, 1993	American Housing Survey 1993 and New York City Housing and Vacancy Survey 1993	cross-sectional regression	2
Goetz (1995)	USA	San Francisco, 1960– 1991	macro: annual data on the number of multifamily-housing units constructed	time series analysis	2
Grimes and Chressanthis (1997)	USA	200 US cities, 1990	macro: census data	TSLS	unknown
Gross (2021)	unknown	cities in California, Massachusetts, and New Jersey, 1970– 2000	macro: census tract data	nearest neighbor matching	2
Gyourko and Linneman (1989)	USA	New York City, 1968	micro: New York City Housing and Vacancy Survey	cross-sectional regression, logit regression	1
Gyourko and Linneman (1990)	USA	New York City, 1968	micro: New York City Housing and Vacancy Survey	logit regression	1
Hahn et al. (2022)	DEU	Berlin, 2018–2021	micro: asking prices and rents from Value AG and Immobilienscout24	difference-in- differences regression	1
Heffley and Santerre (1985)	USA	101 New Jersey cities	macro: city level	linear regression	unknown
Heskin, Levine, and Garrett (2000)	USA	4 California cities (Berkeley, East Palo Alto, Santa Monica and West Hollywood), 1980 and 1990	macro: census blocks	spatial lag regression	2
Hirsch (1988)	USA	9 cities in Los Angeles county (California), 1976–1981	micro: pairs of sale and resale data of identical properties from the roll of the Assessor of Los Angeles County	linear regression	1
Jackson (1993)	USA	Brookline (Massachusetts), 1980–1988	macro: data on health code violations and building permits	descriptive analysis	1
Jacobs (1994)	USA	New York City, 1987	micro: New York City Housing and Vacancy Survey	hedonic regression	1
Jarosiewicz (1984)	USA	Cambridge (Massachusetts), 1983	micro: random sample of the entire list of rent controlled units; Cambridge Street List Book	descriptive analysis	1
Jiang, Quintero, and Yang (2022)	USA	New York City, 2002– 2017	micro: NYCHVS data on housing units and households	instrumental variable model	2
Karpestam (2022)	SWE	Sweden, 2016–2017	micro: Longitudinal integration database for health insurance and labour market studies	logit regression	2
Kattenberg and Hassink (2017)	NLD	Netherlands, 2006– 2008	micro: database recording all employees (SSB Banen), self-employed (SSB Zelfstandigen) and households on	linear probability regression	1

Study	ISO alpha 3 country code	Place and period	Type of data	Method	Rent control generation
			rent support (Raamwerk huurtoeslag of the Ministry of Internal Affairs); the WRG woonruimteregister verrijkt		
Kholodilin, Limonov, and Waltl (2021)	RUS	St. Petersburg, 1880– 1917	micro: newspaper advertisements	time series analysis	1
Jacobo Ostapchuk and Kholodilin (2022)	ARG	Argentina, 1927–2017	macro: data on rents	OLS; MARS	1
Kholodilin et al. (2022)	ESP	Catalonia, 2017–2022	micro: sale and rent announcements from idealista	difference-in- differences regression	2
Kholodilin and Kohl (2020)	AUS, BEL, CAN, CHE, DEU, DNK, ESP, FIN, FRA, GBR, ITA, JPN, NLD, NOR, PRT, SWE, USA	16 developed countries 1910–2017 and 44 developing countries 1980–2017	macro: macroeconomic and demographic statistics; regulation indices	panel-data model	unknown
Kholodilin and Kohl (2021a)	AUS, BEL, CAN, CHE, DEU, DNK, ESP, FIN, FRA, GBR, ITA, JPN, NLD, NOR, PRT, SWE, USA	15 countries, 1910– 2016	macro: macroeconomic and demographic statistics; regulation indices	panel-data model	unknown
Kholodilin and Kohl (2021b)	AUS, BEL, CAN, CHE, DEU, DNK, ESP, FIN, FRA, GBR, ITA, JPN, NLD, NOR, PRT, SWE, USA	16 countries, 1900– 2016	macro: macroeconomic and demographic statistics; regulation indices	panel-data model	unknown
Krol and Svorny (2005)	USA	New Jersey, 1980, 1990, and 2000	macro: census tract data	cross-sectional regression	1
Lambie-Hanson (2008)	USA	Berkeley, Albany, Oakland, and Alameda County (California), 1980, 1990, 2000, 2006	micro: Census data from the 1980, 1990, and 2000 decennial reports; 2006 American Community Survey	descriptive analysis	2
Lauridsen, Nannerup, and Skak (2009)	DNK	Denmark, 1999–2004	macro: municipalities	pooled SUR model with time- specific coefficients	unknown
Lazzarin (1990)	CAN	Vancouver, 1974– 1989	macro: time series	descriptive analysis	1
Levine, Grigsby, and Heskin (1990)	USA	Santa Monica (California), 1987	micro: Survey of Rent-Controlled Households	descriptive analysis	1
Lind (2003)	SWE	Sweden, 1995–2001	macro: completed housing units	descriptive before-and-after comparison	1
Lind and Hellström (2006)	SWE	Malmö and Stockholm, 1992– 2000	macro: Area Profiles of the Statistics Sweden; data of one of the major municipal housing companies (Svenska Bostäder)	Bayesian analysis	1

Study	ISO alpha 3 country code	Place and period	Type of data	Method	Rent control generation
Linneman (1987)	USA	New York City, 1981	micro: 3379-observation sample of renters from the New York City Housing and Vacancy Survey	hedonic regression	1
Lyytikäinen (2008)	FIN	Finland, 1990, 1995, 1998, and 2001	micro: data on households from Household Expenditure Survey by Statistics Finland	hedonic regression; simulation model	1
MacLennan (1978)	GBR	Glasgow, 1968–1975	micro: week-by-week pattern of newspaper advertisements for furnished lets; survey of rental sector tenants in the city of Glasgow; University of Glasgow Lodgings Register	time series linear regression	1
Malard and Poulhes (2020)	FRA	Paris, 2015–2017	micro: survey of Olap including information on rents and its determinants	logit regression; hedonic linear regression	2
vlalpezzi (1998)	EGY	Cairo, 1981	micro: survey of 500 households in Cairo	hedonic linear regression; dynamic equations	1
Marks (1984)	CAN	Vancouver, 1978	micro: 3885 apartments in the City of Vancouver	hedonic regression	2
McClure (1978)	USA	Cambridge (Massachusetts), 1975	micro: partial Census covering 4% of population; Rent Control Board Master File that contains data on the location of all controlled apartments and the rents allowed for those apartments	regression analysis	1
Mengle (1985)	USA	8 SMSAs (Boston, Detroit, Minneapolis- St. Paul, Newark, Paterson-Clifton- Passaic, Philadelphia, Pittsburgh, and Washington), 1974 and 1978	micro: data on 8281 dwellings from Annual Housing Survey	logit regression	2
Vense, Vichelsen, and (holodilin 2018)	DEU	German municipalities, 2011– 2016; Bavarian municipalities in the years 2010–2016; German municipalities, 2008– 2016	micro: Internet advertisements; macro: sales of developed vacant plots of land, Demolition and Conversion Statistics	difference-in- differences	2
Mildner (1991)	USA	New York, 1987	micro: Housing and Vacancy Survey	two-stage probit	1
Monràs and Montalvo (2022)	ESP	Catalonia, 2016–2021	micro: 400,000+ dwellings in Catalonia (INCASOL and AHC)	hedonic regression; panel data model	2
Jofre Monseny, Martínez Mazza, and Segú (2022)	ESP	Catalonia, 2016–2021	macro: average rental prices and the number of agreements signed for 230 municipalities	difference-in- differences regression; event-study design	2
Moon and Stotsky (1993)	USA	New York City, 1978– 1987	micro: housing units	Tobit; panel data model	1
Moorhouse (1969)	USA	New York City, 1940– 1966	micro: data on buildings	linear regression	1
Moorhouse (1972)	USA	New York City, 1940– 1957	micro: data on 35 buildings, containing 1682 apartments	linear regression	1
Munch and Svarer (2002)	DNK	Denmark, 1992–1999	micro: 10% random sample of adult population	proportional hazard model	1

Study	ISO alpha 3 country code	Place and period	Type of data	Method	Rent control generation
Murray et al. (1991)	USA	Los Angeles, 1983- 1990	macro: Housing Assistance Supply Experiment; Annual Housing Survey	simulation model	1
Nagy (1995)	USA	New York City, 1978– 1987	micro: 1978, 1981, 1984, and 1987 New York Housing and Vacancy Surveys	hazard model	1
Nagy (1997)	USA	New York City, 1978– 1987	micro: 1978, 1981, 1984, and 1987 New York Housing and Vacancy Surveys	hazard model; hedonic regression	1
Olsen (1972)	USA	New York, 1968	micro: 1968 New York City Housing and Vacancy Survey	cross-sectional regression	1
Əni (2008)	NGA	Lagos State, 1997– 2007	micro: survey of Estate Surveyors; property pages of newspapers and magazines in Lagos metropolis	ANOVA	1
Öst, Söderberg, and Wilhelmsson (2014)	SWE	Sweden, 2008	micro: 400,000+ household data from GeoSweden database for 2008	linear regression	2
D'Toole, Martinez-Cillero, and Ahrens (2021)	IRL	Ireland, 2007–2018	micro: 614,004 RTB registered tenancy agreements from Q3 2007 until Q3 2018	difference-in- difference fixed effects model	2
Dust (2018b)	NOR	Norway, 1970–2008	micro: newspaper advertisements	panel regression	1
Dust (2018a)	NOR	Norway, 1970–2011	micro: newspaper advertisements	linear regression	1
Peña and Ruiz- Castillo (1984)	ESP	Madrid, 1974	micro: survey of 4067 housing units in the Madrid Metropolitan Area	hedonic regression; simulation model	1
Pollakowski (2003)	USA	Cambridge (Massachusetts), 1993–1998	micro: set of all building permits issued in Cambridge; record of rent-controlled buildings in the city; database of all properties within the city from the city's Residential Property Assessor	linear regression	1
Quigley (1990)	USA	50 US cities, 1984	macro: HUD survey of homelessness in 60 metropolitan areas	linear regression	unknown
Rapaport (1992)	USA	New York City, 1981– 1987	micro: 1981, 1984, and 1987 New York City Housing and Vacancy Surveys	OLS	2
Rydell and Neels (1985)	USA	Los Angeles, 1979– 1990	macro: city level	simulation model	2
Sagner and Voigtländer (2022)	DEU	Berlin, 2016–2020	micro: rental and purchase asking price data on a dwelling level by Value AG	difference-in- differences regression	1
Sánchez and Andrews (2011)	AUS, AUT, BEL, CHE, CZE, DEU, DNK, ESP, EST, FIN, FRA, GBR, GRC, HUN, IRL, ISL, ITA, LUX, NLD, NOR, POL, PRT, SVN, SWE, USA	25 OECD countries, 2007	micro: household data from EU Statistics of Income and Living Conditions	probit model	unknown
Shulman (1981)	USA	Santa Monica (California), 1970– 1978	macro: median prices	descriptive analysis	1
Silveira and Malpezzi (1991)	BRA	Metropolitan region of Rio de Janeiro, 1980	Household Survey Data	linear regression; simulation model	1

Study	ISO alpha 3 country code	Place and period	Type of data	Method	Rent control generation
Sims (2007)	USA	Boston, 1985–1998	micro: MSA data from the American Housing Survey	difference-in- differences regression	1
Sims (2011)	USA	Cambridge, 1985– 1998	micro: demographic data from the 1990 and 2000 census records for all census tracts in Cambridge and the nearby Middlesex County communities; city administrative records; American Housing Survey's Boston metropolitan sample	first-difference regression	1
Skak and Bloze (2013)	DNK	Denmark, 2004	micro: 20% sample of the rental market	hedonic regression	1
Smith (1988)	CAN	Ontario, 1975–1986	macro: CMHC Toronto Office "Rental Apartment Vacancy Survey"	descriptive before-and-after comparison	2
Smith and Tomlinson (1981)	CAN	Ontario, 1975–1980	macro: Teela Reports Apartment Surveys; CMHC Toronto Office "Rental Apartment Vacancy Survey"	descriptive before–and–after comparison	2
Sternlieb and Hughes (1980)	USA	Fort Lee, 1970–1977	macro: valuations by land-use category from Fort Lee Assessors Office	descriptive analysis	2
St John (1990)	USA	Alameda county (California), 1970– 1988	micro: apartment building sales	hedonic regression	2
Struyk (1988)	JOR	Jordan, 1986	micro: national housing survey (current housing unit, length of tenure, occupant, economic activity, household expenditure) with 2300 observations	linear regression	1
Svarer, Rosholm, and Munch (2005)	DNK	Denmark, 1997–2000	micro: 10% random sample of the Danish adult population (demographic, socioeconomic, and physical characteristics)	competing risks duration model	1
Tan (2021)	USA	Manhattan (New York City), 1989–2000	micro: complaints received by the Department of Housing Preservation and Development and the Department of Buildings and building information scraped from NYC public databases	regression discontinuity; difference-in- differences	2
Teitz (1994)	USA	7 Californian cities, 1970, 1980, and 1990	macro: US Census data at city level	descriptive analysis	1
Thomschke (2019)	DEU	Hamburg, Düsseldorf, Cologne, Munich, Berlin and Leipzig (Germany), 2012– 2017	micro: advertisements of empirica- systeme	difference-in- differences	2
Thornberg et al. (2016)	USA	Californian cities, 2000–2013	macro: 2000 Census; the 2013 three- year estimates from the American Community Survey (ACS); metropolitan area income from the U.S. Bureau of Economic Analysis (BEA), population estimates from the California Department of Finance (DOF); median home prices from DataQuick	linear regression	2
Tucker (1991)	USA	56 US cities, 1984	macro: HUD survey of homelessness in 60 metropolitan areas	linear regression	1
Turner (1990)	USA	D.C., 1985–1987	micro: telephone interviews with renters; financial statements for controlled rental properties; questionnaires completed by owners and managers; inventory of all additions and losses from the D.C. rental stock; one year's history of housing code	regression analysis	2

Study	ISO alpha 3 country code	Place and period	Type of data	Method	Rent control generation
			enforcement activity for controlled rental properties, volume and case-by- case disposition of housing provider and tenant petitions; and application and participation data for the District's Tenant Assistant Program; data on households and housing conditions from the American Housing Survey		
Vandrei (2018)	DEU	Land Brandenburg, 2011–2017	micro: transaction sales prices from Superior Property Valuation Committee of Brandenburg	regression discontinuity design	2
Vitaliano (1985)	USA	5 counties of New York State, 1950	micro: 1950 Survey of Rents	log-linear regression	1
Weber and Lee (2020)	AUS, AUT, CAN, CHE, DEU, DNK, ESP, FIN, FRA, GBR, IRL, ITA, NLD, NOR, NZL, SWE, USA	18 states, 1973–2014	macro: macroeconomic and demographic statistics; regulation indices	panel-data model	2
Werczberger (1988)	ISR	Israel, 1957–1986	macro: various indicators from different sources	descriptive analysis	1
Werczberger (1997)	CHE	Switzerland, 1920– 1990	macro: various indicators from different sources	informal descriptive analysis	1
Wilhelmsson, Andersson, and Klingborg (2011)	SWE	Sweden, 1994–2006	macro: observed vacancy rates of municipal housing companies in 274 municipalities	OLS; TSLS	1
Willis, Malpezzi, and Tipple (1990)	GHA	Kumasi, 1986	micro: a random sample of 1461 households covering 6330 people (1.3% of the total population of Kumasi) and 279 landlords in 1986	linear regression	1