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**Research Report**

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## **DIW Roundup** Politik im Fokus

Deutsches Institut für Wirtschaftsforschung

2022

# Rent Control Effects through the Lens of Empirical Research

Konstantin A. Kholodilin

# Rent control effects through the lens of empirical research

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

## Introduction

Rent control, as 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%.

However, at the same time, a bunch of other effects emerge. Some of them affect other people who are not protected by rent control. Some effects work in the opposite direction damaging the protected tenants. Therefore, it is important to be conscious of the possible effects of rent control. Ideally, the policy makers should consider all possible effects with their costs and benefits. The decision on the introduction of rent control and its design must rest upon an objective cost-benefit analysis. Only when the net benefit is positive and substantial the policy will make sense. Otherwise it does more damage than utility.

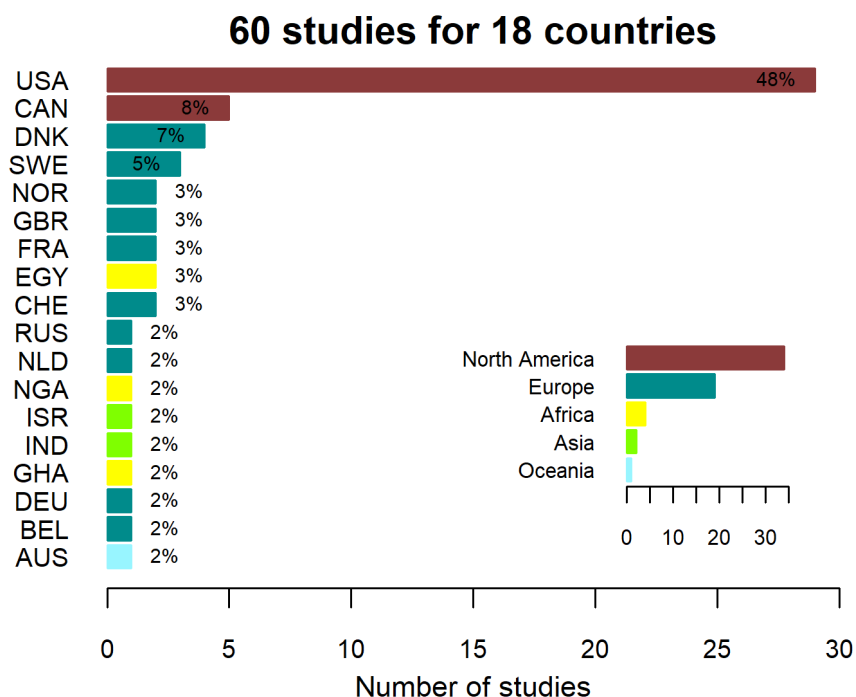
Such cost-benefit analysis can draw upon the rich literature that investigates potential effects of rent control using a robust scientific methodology and reliable data. Here, we provide a comprehensive overview of this literature.<sup>1</sup> Our objective is to summarize the evidence on the effects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

## Country coverage

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<sup>1</sup> Earlier reviews of the literature are less comprehensive and do not include the newer research results, e.g., Benjamin and Sirmans (1994), John I. Gilderbloom and Markham (1996), or Pastor, Carter, and Abood (2018).

Let us first look at the country coverage of the literature. We concentrate exclusively on the empirical articles published in referred journals. A concise overview of the rent control literature is contained in Table A1 in Appendix. This is perhaps the most comprehensive review of the literature encompassing the last fifty years. The figure below depicts the distribution of rent control studies by the countries. The length of each bar is proportional to the number of studies and its color corresponds to a continent to which the respective country belongs.

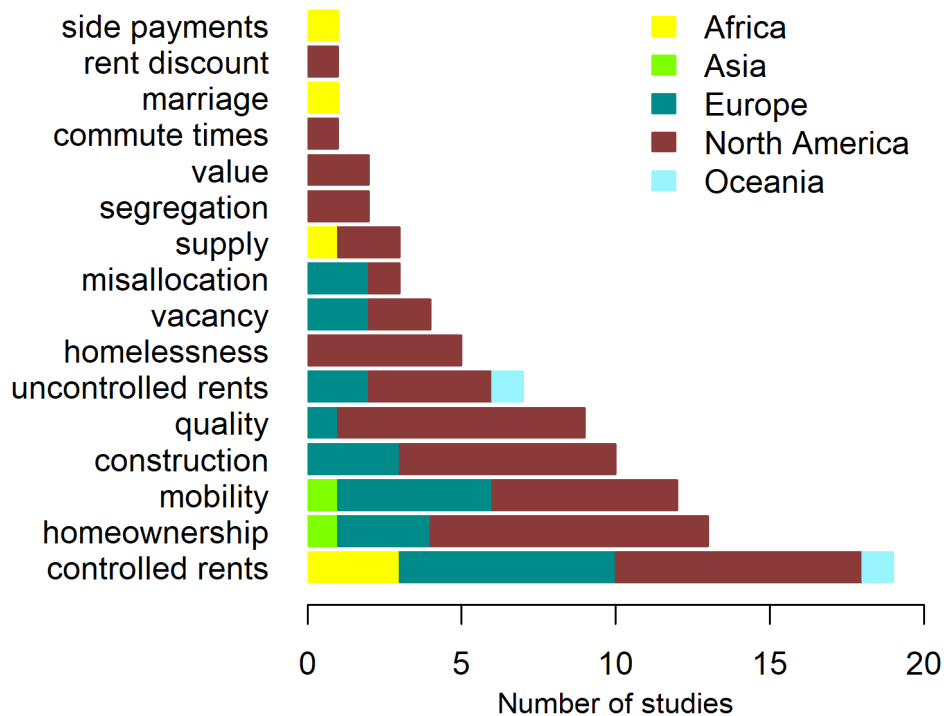


**Figure 1: Distribution of studies by countries and continents**

The number of countries for which rent control effects are investigated is rather limited — 18 compared to almost 200 countries that existed in 2021. A lion’s share of the studies — 48% of all 60 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, since states and even municipalities can have their own regulations. Therefore, many US studies focus on single cities. Overall, the North American continent accounts for 57% of the total number of empirical rent control studies. The share of studies on rent control in European countries is 32%. The remaining studies are distributed across Africa, Asia, and Oceania. To the best of our knowledge, there are no published studies on rent control in South America.

### Potential effects

What are potential effects of rent control? Below we present different effects of rent control with the number of studies in which they are examined. Although these are probably not all the possible effects, but at least those that occurred to the researchers. Some studies analyze several effects, therefore, the sum of frequencies in this figure is not equal to the number of studies.



**Figure 2: Potential effects of rent control**

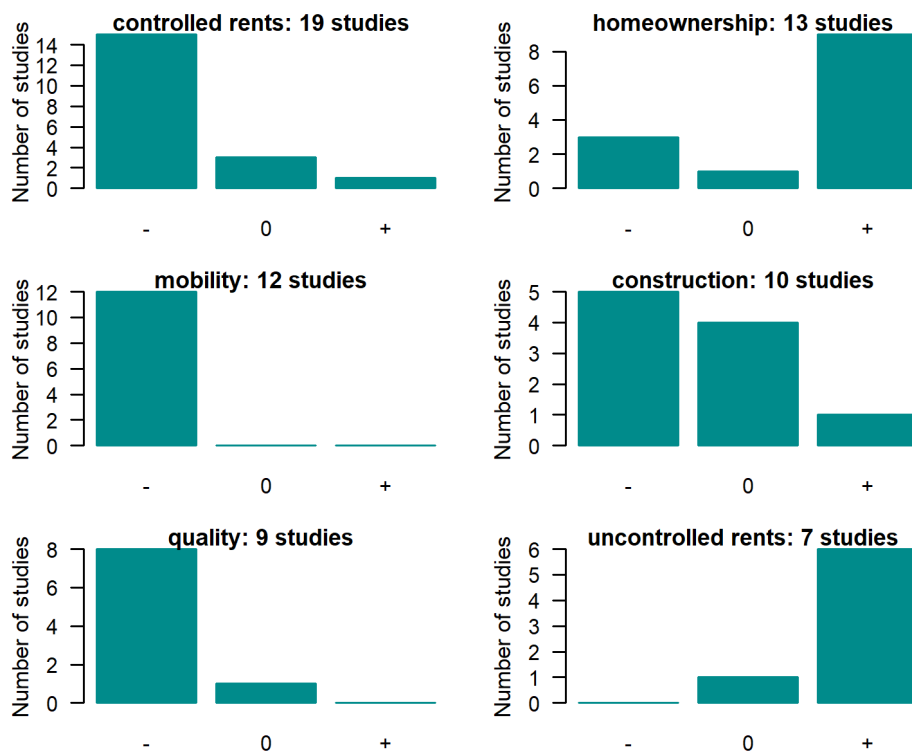
The literature identifies 16 socioeconomic and even demographic effects of rent control. When ordered by the number of studies and, thus, by their prominence from the viewpoint of researchers, these are: controlled rents, homeownership, mobility, construction, quality, uncontrolled rents, homelessness, vacancy, misallocation, supply, segregation, value, commute times, marriage, rent discount, side payments. The effect on controlled rents is actually the intended impact. This is the main target of rent control. Most other effects are rather unintended.

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. The residential *mobility* shows how much time the tenant household stays at the same place: the longer this time the lower the mobility. The *quality* describes the physical state of the rental dwellings: how well are they maintained and equipped. The notion of *construction* in the literature can cover both the total residential construction and construction of rental dwellings in particular. 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 to the tight housing markets. Theoretically, it can also be applied only to a specific type of landlords. The *supply* refers as a rule to the existing rental housing stock. The reduction of supply can imply both its physical disappearance (when dwellings are demolished) or a change in the tenure status of the dwellings (conversion of rental dwellings into the owner-occupied ones). The effect on *homelessness* means that rent control could possibly lead either to less or to more people living in the streets. In the former case, a stronger tenant protection prevents the landlords from kicking out their tenants into the street, while in the latter case, the reduction of supply of rental dwellings can result in some people having tough time in looking for an available dwelling. 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, although young families, who would need more 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 the low-income households, in reality it can benefit more those with higher incomes. The effect on *vacancy* means that rent control can affect the proportion of empty dwellings. For example, price control often exaggerates the already existing shortages leading to lower vacancy rates. The *value* refers to the market price of the real estate. For example, rent control by creating more tenure security and limiting rent increases can make the rental properties less attractive from the point of view of potential buyers, thus, resulting a price discount. The *commute times* can become longer due to a 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 the young people to postpone their marriage, since their culture requires them to live separately from their parents. 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 the segregation by reducing the residential mobility. 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

Figure 3 depicts the rent control effects that occupy the most prominent place in the literature. We select an effect, if more than 5 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 any statistically significant effect of rent control on the variable.



**Figure 3: Direction of the most prominent effects of rent control**

The most prominent effect of rent control is unsurprisingly the impact on controlled rents, that is, on rents paid by the tenants of the dwellings subject to rent control. The picture is rather unambiguous: 14 out of 18 studies point out to a statistically significant negative effect. Thus, rent control is quite effective in capping the rents.

In case of the homeownership effects, the picture is a bit less clear cut: there are more studies pointing into 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 the landlords to get rid of the properties that bring them insufficient rent 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 point of view of tenants of controlled dwellings, who are less inclined to become owners, given their protected position.

The residential mobility effect seems to be clear cut: all studies find a negative effect of rent control on the mobility. Two explanations of this phenomenon can be suggested. First, the tenants occupying the controlled dwellings have little incentives to leave. This can have negative consequences for the labor market, for a lower residential mobility implies less flexible responses to the labor market shocks. If the employment situation deteriorates in their city, the tenants of controlled dwellings are less likely to move to other places where there are brighter perspectives of finding good jobs. Second, a 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.

The impact of rent control on the new residential construction is the most ambiguous one compared to other effects. Although more than half of the studies find negative effect, several studies find no statistically significant effect at all. This can be explained both by different design 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 the 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 indicate that rent control leads to the deterioration of the quality of dwellings subject to regulations. The landlords, whose revenues are eroded by rent control, have less incentives to invest in the maintenance and refurbishment letting their properties to wear out until the real value of the dwellings decreases and becomes equal to the low real rent.

According to the studies examined here, rent control leads as a rule 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 which 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 a large heterogeneity of the studies under inspection. They can depend on the design of rent control as well as on the data quality and on the econometric methodology. Here we 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 the newly built housing is not exempted from regulations, the housing construction is more likely to suffer from controls.

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 had a long history of rent control. In the former case, there can be a surprise effect that strengthens the impact of rent control. At first, the market participants did not elaborate yet an optimal strategy in order to react to a 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 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 the market agents are

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<sup>2</sup> See, for example, John I. Gilderbloom and Markham (1996).



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 an utmost importance. A misspecification of econometric models can lead to biased results when insignificant effects become significant and can even change 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 1 shows the use of different estimation techniques in the rent control analysis.

**Table 1: Techniques used to estimate rent control effects**

Method	Number of studies
linear regression	25
descriptive analysis	10
logit	5
panel data model	4
difference-in-differences	3
TSLS	3
simulation	2
event study	1

By far the largest group of studies — 42% — take advantage of linear regressions for cross-section data. There are also 10 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 pooled SUR model with time-specific coefficients or spatial lag regression. In general, maybe due to the lack of the corresponding data, the possible spatial dependencies that are characteristic for the housing markets are in most cases not taken into account. A couple of studies employ time series method. However, the samples are often so short that it casts doubts on the reliability of results.

The data employed for the analysis in the rent control literature are very heterogeneous too. First, the majority of studies — 60% — use microdata (at the level of households or dwellings), while the remaining studies take advantage of the 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.

## Conclusion

In this study, we examined a wide range of empirical studies on rent control published in referred journals between 1972 and 2022. We conclude that, although rent control appears to be very effective in achieving its main goal — lower rents — it is resulting in a number of undesired effects. These unintended effects counteract the desired effect and, thus, diminish the net benefit of rent control. Therefore, it is not clear what is the overall impact of the rent control policy on the society. Moreover, the analysis

is complicated even more by the fact that this policy is not adopted in a vacuum. Simultaneously with rent control, other housing policies — such as 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 modify the results of rent control regulations.

Nevertheless, at least ideally, the policy makers should consider the multitude of these effects and their interactions when designing an optimal governmental policy. The researchers would readily support this by providing their expertise.

## Appendix

**Table A1: Articles on rent control effects in referred journals**

Study	ISO alpha 3 code	Place and period	Type of data	Method	Year
Albon (1978)	AUS	Canberra and Queanbeyan, 1973-1976	macro: Rent Control Office; 1971 Census data	descriptive; simulation method	1978
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	2015
Appelbaum et al. (1991)	USA	56 US cities, 1984	macro: HUD survey of homelessness in 60 metropolitan areas	linear regression	1991
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	2021
Ault, Jackson, and Saba (1994)	USA	New York City, 1968	micro: New York City Housing Vacancy Survey	cross-sectional regression	1994
Autor, Palmer, and Pathak (2014)	USA	Cambridge (Massachusetts), 1995	micro: parcels of land	cross-sectional regression	2014
Bailey (1999)	GBR	Aberdeen, Dundee, Edinburgh and Glasgow, 1987-1996	micro: advertisements for private rented accommodation appearing in newspapers and property guides	descriptive analysis	1999
Bettendorf and Buyst (1997)	BEL	Belgium, 1920-1939	macro: per capita expenditure data	Rotterdam demand model	1997
Block (1989)	CAN	Toronto and Vancouver, 1972-1988	macro: semiannual vacancy rates	descriptive analysis	1989
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	2021
Bourassa and Hoesli (2010)	CHE	Switzerland, 1998	micro: Enquête sur les revenus et la consommation	logit regression	2010
Breidenbach, Eilers, and Fries (2022)	DEU	Germany, 2013-2017	micro: object level rental price data from the RWI-GEO-RED	event study	2022
Clark and Heskin (1982)	USA	Los Angeles, 1978-1980	micro: a sample of 4,094 tenants selected using	contingency analysis	1982

Study	ISO alpha 3 code	Place and period	Type of data	Method	Year
			random digit-dialing techniques		
Diamond, McQuade, and Qian (2019)	USA	San Francisco, 1990-2016	micro: entire address history of individuals from Infutor	dynamic neighborhood choice model	2019
D. W. Early (2000)	USA	New York City, 1996	micro: New York City Housing and Vacancy Survey	linear regression	2000
D. W. Early and Olsen (1998)	USA	44 US metropolitan areas, 1985-1988	macro: housing survey + micro: homelessness survey	TSLs; logit	1998
D. Early and Phelps (1999)	USA	49 US metropolitan areas, 1984-1996	micro: American Housing Survey, 1984-1996	hedonic regression	1999
Fallis and Smith (1984)	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	1984
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 between 1944 and 1946	linear regression	2016
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	2008
Gibb (1994)	GBR	Edinburgh and Glasgow, 1988 and 1992	micro: newspaper advertisements from Glasgow Herald and the Scotsman	mean-comparison; linear regression	1994
John I. Gilderbloom and Markham (1996)	USA	125 New Jersey cities, 1970-1990	macro: census data	linear regression	1996
John I. Gilderbloom and Ye (2007)	USA	76 New Jersey cities, 2003	micro: Rent Control Survey of the New Jersey Tenants Organization	linear regression	2007
Edward L. 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	2003
Edward L. 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	2003
Goetz (1995)	USA	San Francisco, 1960-1991	macro: annual data on the number of multifamily-housing units constructed	time series analysis	1995

Study	ISO alpha 3 code	Place and period	Type of data	Method	Year
Grimes and Chressanthis (1997)	USA	200 US cities, 1990	macro: census data	TOLS	1997
Gyourko and Linneman (1989)	USA	New York City, 1968	micro: New York City Housing and Vacancy Survey	cross-sectional regression, logit regression	1989
Gyourko and Linneman (1990)	USA	New York City, 1968	micro: New York City Housing and Vacancy Survey	logit regression	1990
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	2000
Jackson (1993)	USA	Brookline (Massachusetts), 1980-1988	macro: data on health code violations and building permits	descriptive analysis	1993
Kattenberg and Hassink (2017)	NLD	Netherlands, 2006-2008	micro: database recording all employees (SSB Banen), self-employed (SSB Zelfstandigen) and households on rent support (Raamwerk huurtoeslag of the Ministry of Internal Affairs); the WRG woonruimteregister verrijkt which contains information on both the dwelling type and the value of all houses	linear probability regression	2017
Kholodilin, Limonov, and Walzl (2021)	RUS	St. Petersburg, 1880-1917	micro: newspaper advertisements	time series analysis	2021
Krol and Svorny (2005)	USA	New Jersey, 1980, 1990, and 2000	macro: census tract data	cross-sectional regression	2005
Lauridsen, Nannerup, and Skak (2009)	DNK	Denmark, 1999-2004	macro: municipalities	pooled SUR model with time-specific coefficients	2009
Levine, Grigsby III, and Heskin (1990)	USA	Santa Monica (California), 1987	micro: Survey of Rent-Controlled Households	descriptive analysis	1990
Lind (2003)	SWE	Sweden, 1995-2001	macro: completed housing units	descriptive before-and-after comparison	2003
Malard and Poulhes (2020)	FRA	Paris, 2015-2017	micro: survey of Olap including information sur le loyer et ses déterminants (surface, nombre de pièces, adresse, époque de construction, date d'emménagement, etc.)	logit regression; hedonic linear regression	2020
Malpezzi (1998)	EGY	Cairo, 1981	micro: survey of 500 households in Cairo	hedonic linear regression; dynamic equations	1998

Study	ISO alpha 3 code	Place and period	Type of data	Method	Year
Marks (1984)	CAN	Vancouver, 1978	micro: 3885 apartments in the City of Vancouver ("Vancouver proper")	hedonic regression	1984
Moon and Stotsky (1993)	USA	New York City, 1978–1987	micro: housing units	Tobit; panel data model	1993
Munch and Svarer (2002)	DNK	Denmark, 1992–1999	micro: 10% random sample of adult population	proportional hazard model	2002
Murray et al. (1991)	USA	Los Angeles, 1983–1990	macro: Housing Assistance Supply Experiment; Annual Housing Survey	simulation model	1991
Oni (2008)	NGA	Lagos State, 1997–2007	micro: survey of Estate Surveyors; property pages of newspapers and magazines in Lagos metropolis	ANOVA	2008
Oust (2018b)	NOR	Norway, 1970–2008	micro: advertisement data	panel regression	2018
Oust (2018a)	NOR	Norway, 1970–2011	micro: newspaper advertisements	linear regression	2018
Quigley (1990)	USA	50 US cities, 1984	macro: HUD survey of homelessness in 60 metropolitan areas	NA	1990
Sims (2007)	USA	Boston, 1985–1998	micro: MSA data from the American Housing Survey	difference-in-differences regression	2007
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 of Somerville, Arlington, Belmont, Watertown, and Newton; city administrative records; American Housing Survey's Boston metropolitan sample	first-difference regression	2011
Skak and Bloze (2013)	DNK	Denmark, 2004	micro: 20% sample of the rental market	hedonic regression	2013
Smith (1988)	CAN	Ontario, 1975–1986	macro: CMHC Toronto Office "Rental Apartment Vacancy Survey"	descriptive before-and-after comparison	1988
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	1981
Svarer, Rosholm, and Munch (2005)	DNK	Denmark, 1997–2000	micro: 10% random sample of the Danish adult population (large number of demographic and socioeconomic variables as well as physical characteristics)	competing risks duration model	2005
Tucker (1991)	USA	56 US cities, 1984	macro: HUD survey of homelessness in 60 metropolitan areas	linear regression	1991
Vitaliano (1985)	USA	5 counties of New York State, 1950	micro: 1950 Survey of Rents	log-linear regression	1985

Study	ISO alpha 3 code	Place and period	Type of data	Method	Year
Werczberger (1988)	ISR	Israel, 1957-1986	macro: various indicators from different sources	descriptive analysis	1988
Werczberger (1997)	CHE	Switzerland, 1920-1990	macro: various indicators from different sources	informal descriptive analysis	1997
Wilhelmsson, Andersson, and Klingborg (2011)	SWE	Sweden, 1994-2004	macro: municipalities	panel data model	2011
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	1990

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