

The removal of rent control impact on search and mismatching costs: Evidence from Oslo

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Abstract

The removal of the Norwegian rent control in 1982 created a natural experiment that enabled us to investigate whether rent control affected the search and matching process in the private residential rental market in the Norwegian capital, Oslo. We collected and analyzed data on “housing for rent”, “housing wanted” and “housing exchange-wanted” advertisements in Oslo covering a period from 1970 to 2008. We concluded that use of newspaper listing services by potential tenants and landlords changed after the rent control removal. Our results indicate that it is more costly, in time and money, for a potential tenant to search for and to find a home under rent control. Moreover, our results indicate that rent control increases the probability of and the distance from the ideal dwelling, in size, standard and location, a potential tenant have to settle for.

Key words: Rent; Rent control; Search; Mismatching cost; Oslo

JEL: D12, E65, R21, R31, R38

Introduction

Turner and Malpezzi (2003) suggest that perhaps 40 to 50 per cent of the world's urban population lives in rental housing of one kind or another. Most of these households live in units subject to controls on rent paid, making rent control one of the most essential subjects of debate in the study of housing. The Norwegian rent control was removed in 1982. This removal created a natural experiment that enabled us to investigate whether rent control affected the search and matching process in the private residential rental market in the Norwegian capital, Oslo.

Adopting the terminology proposed by Arnott (1995), rent control in Oslo transitioned from a second-generation system, where rents were allowed to increase at approximately the same level as the consumer price index (CPI), to a system permitting the landlord to stipulate any rent in new contracts, while still protecting tenants bound by existing contracts against unreasonable rent increases. In the classification developed by Lind (2001), Norwegian rent control transitioned from Type E to Type A (whereby the former refers to smoothing price changes to protect all tenants against certain types of increases in market rents – segregation-related rent regulation, and the latter denotes weak transaction cost-related rent regulation, protecting existing tenants against rent levels exceeding the market rate). Lind's classification system is more fully described below.

According to Lind (2001), rent regulation can have two main purposes. The first is to protect existing tenants against major increases in market rents caused by greater demand. The second aim is to ensure that renting attractive properties is not prohibitively expensive for households on lower incomes. Despite the importance of these phenomena, Arnott (1995) and Olsen (1988) point out the scarcity of research on the detriments and benefits of rent control. They argue that, even though there is broad agreement about the detrimental effects of first-generation rent control, second-generation rent control might not be as harmful as is widely perceived. The problematic aspects of rent control are expressed in a well-known 1992 survey of economists, in which Alston et al. (1992) found that over 90 % of respondents believed that rent control decreased the quantity and quality of rental housing in their area.

Nevertheless, it may be argued that the harmful effects of rent control are acceptable costs, if control leads to a desired distribution of welfare. Arnott and Igarashi (2000) concur with this view, claiming that rent control could be appropriate for distributional reasons, as its removal would imply major shifts in welfare from lower to higher deciles of income distribution.

Given the variety of rent control programs, empirical studies offer the most valuable information for assessing second-generation rent control characteristics and outcomes (Arnott, 1995). This view is supported by Olsen (1988), while Kutty (1996) posits that the effect of rent control on housing supply and rental quality is theoretically ambiguous and must be empirically determined.

In line with the studies conducted by Gibb (1994), Bailey (1999) and Oust (2013a, b), our data is collected from newspaper advertisements. While the above studies used the “housing for rent” advertisements to examine how the rent has developed and whether the removal of rent control affected the rent prices in Scotland and Norway, this paper studies the advertisements more directly. The aim of this paper is to investigate whether the removal of rent control changed the way landlords and potential tenants used newspaper listing services in the private residential rental market. Although newspapers have more or less been replaced by the internet as the main location for this type of listing services, the transfer value to study internet listing services should be very large. We want to test whether or not the eventual changes in the search and matching process were advantageous for the potential tenants. The hypothesis we want to test is: the removal of rent control made it easier for potential tenants to access a large number of “housing for rent” advertisements, with descriptions of key characteristics. The intuitive position is that if potential tenants have access to a large number of “housing for rent” advertisements, with descriptions of key characteristics, this would reduce their search- and mismatching costs. Reduced search cost would here imply that a potential tenant would have to use less time and money to find a home. Reduces mismatching cost would mean that the potential tenant, with larger probability, would be able to rent a dwelling closer to the ideal dwelling, in size, standard and location.

We investigated this hypothesis by asking several questions. First, did “housing wanted” or “housing for rent” advertisements dominate the market place? A “housing wanted” advertisement is an advertisement where a potential tenant is asking if someone could offer him/her a place to rent. These types of advertisement typically include the type of dwelling wanted, where in the city the potential tenant wants to live and some information about the potential tenant, typically gender, age and occupation. A “housing for rent” advertisement is an advertisement where a landlord is offering a dwelling for rent. Second, how easily could potential tenants and landlords get information about the current rent level through the newspaper listing services? How willing were landlords to disclose their asking rent in the newspaper advertisements? Third, how many “housing for rent” advertisements existed where the key characteristics like location, type, size and asking rent were available.

To give a deeper understanding of changes in the newspaper listing services that could have impacted potential tenants’ search- and mismatching cost, we present data on the share of the “housing for rent” advertisements that wanted a special kind of tenant or that wanted some kind of extra service in addition to, or instead of, rent, and the share of “housing wanted” advertisements that were posted in the newspaper by the potential tenant’s employer and the share of potential tenants that offered some kind of extra service on top of the rent or instead of the rent.

At the end of the paper, we present data on deposit size and the number of “housing exchange-wanted” advertisements. To our knowledge, this is the first attempt to use this approach to investigate whether the removal of rent control affected the search and matching process in the private residential rental market.

We find that use of newspaper listing services by potential tenants and landlords changed after rent control removal. The newspaper listing services went from being dominated by “housing wanted” advertisements to having a higher share of “housing for rent” advertisements. Landlords become more willing to disclose their asking rent in their “housing for rent” advertisements. The number of “housing for rent” advertisements where key characteristics like location, type, size and asking rent was available increased dramatically. We find that landlords, in the periods we are studying, went from posting “housing for rent” advertisements in the 1970s where they often asked for a special type of tenant and where they frequently sought some kind of extra service in addition to or instead of rent, to posting “clean” advertisements where the focus was on information about the dwellings. Until the mid-1980s, it was more normal that employers posted “housing wanted” advertisements on behalf of their employees than afterwards (these advertisements were typically larger, included the logo or the name of the company in large print, and said that an employee in the company needed a place to live, giving contact information for someone in the company or the potential tenant). Until the removal of rent control, 5 to 10 % of potential tenants posted “housing wanted” advertisements where they offered some kind of extra service on top of or instead of rent.

We also find that landlords started asking for a smaller deposit size, and the thresholds dividing the rental market into several sub-markets disappeared in the years following the removal of rent control. We conclude that the removal of rent control reduced tenants’ search and mismatching cost in the private residential rental market in Oslo. Higher search and mismatching cost under rent control is yet another way rent control reduces the total social welfare (here in a utility, meaning of the word) produced in the private residential rental market, reducing the social welfare to be distributed.

The remainder of this paper is organised as follows. Review of pertinent literature is presented in the first section, followed by an introduction to the Norwegian rent control and the Oslo rental market. The subsequent section is dedicated to the study data description, followed by the results and their discussion. The final section offers some key conclusions.

Literature Review

After World War II, rent control was widespread across many European and some US cities, and still plays an important role in many housing markets (Haffner et al., 2008; Lind, 2001; O’Sullivan & De Decker, 2007; Turner & Malpezzi, 2003). Given the importance of the property market (and thus rental sector) in the economy, findings yielded by studies examining the effectiveness of rent control often serve as arguments in the political discussion. Even though, in the last two decades, shifts toward market deregulation became more prevalent, authors of several recent studies have attempted to quantify the effect of rent deregulation (Lind, 2003). Conducting comparative studies of rent control removal is very difficult because of the great heterogeneity of housing markets, making every new case where it is possible to conduct before-and-after studies interesting and highly valuable.

Oust (2013a) analysed the removal of the rent control in Norway in 1982, focusing on the developments in rent and house prices. His findings revealed that the rents landlords

demanded were in line with the market clearing rent in both the period with rent control (1970–1981) and the period following its abolishment (1982–2011). Thus, Oust (2013a) concluded that the Norwegian rent control did not have the desired welfare distribution effects.

Gibb (1994) and Bailey (1999) analysed the removal of rent control in Scotland in 1988, specifically examining rent development in Glasgow and Edinburgh before and after deregulation. Both studies revealed that rent increases in Glasgow after deregulation were barely in line with inflation, and those in Edinburgh were actually below the corresponding inflation levels. In addition, after deregulation, rent increases were lower than the increase in house prices. Gibb (1994) also found that, after deregulation, a greater number of landlords operated in the rental sector and real rents remained relatively stable. At the same time, the concentration ratio declined, different properties were being rented out, and the geographical distribution of rental units changed. Bailey (1999) concurred with the view that rent levels had not risen in real terms, suggesting a smooth adjustment process, with supply keeping pace with demand.

Another interesting empirical study was conducted by Sims (2007). Sims analysed the removal of rent control in Massachusetts in 1995. He found that rent control was able to depress the rents at the same time as having a small effect on the construction of new housing. In addition, Sims found that rent control encouraged owners to shift away from rental status. One shortcoming of this study, as Sims pointed out, is the short time span after deregulation, making the data set pertaining to rent control effects in Massachusetts small. Moreover, the data may be affected by fluctuations in the business cycle and the possibility that the market may not have reached a new equilibrium, creating a fundamental problem of unit undersupply.

When interpreting the effects from the studies above one should be aware of that deregulation is not an exogenous event. Maybe politicians tend to deregulate when the effects are expected to be small, as the number of people against the deregulation can then be expected to be smaller.

Sims's results are in line with those reported in the extant literature on rent control summarised by Arnott and Igarashi (2000). As the authors pointed out, in general, if rent control depresses rents, it will reduce the housing supply, reducing the total welfare produced in the residential rental market.

In this respect, the microeconomic intuition that relates a rent ceiling to diminishing quantity and quality of residences in the tenancy market has been supported by several theoretical explorations (Basu & Emerson, 2000, 2003; Raess & Ungern-Sternberg, 2002;) and empirical analyses (Albon & Stafford, 1990; Alston et al., 1992; Gyourko & Linneman, 1990a, 1990b; Johnson, 1951). Gyourko and Linneman (1989), Nagy (1995) and Gleaser and Luttmer (2003) studied the New York controlled rental market, finding misallocation of housing units. Other authors examined the reduced mobility in the housing market under rent control (Ault et al., 1994; Clark & Heskin, 1982; Gyourko & Linneman, 1989; Munch & Svarer, 2003; Nagy, 1995; Skak & Bloze, 2013).

Lind (2001) has developed a classification system for rent regulations with Types from E to A, described in short below.

Types A and B cover only sitting tenants, and concerns the rent when a contract is extended or when the fixed rent comes to an end, while types C, D and E, cover both new tenancies and sitting tenants.

Type A Weak transactions cost related rent regulation

Type B Strong transactions cost related rent regulation

Type C Monopoly related rent regulation that forbids rents higher than the market rent

Type D Overshooting related rent regulation that has the aim of smoothing changes in rents

Type E Segregation related rent regulation

The first-generation rent controls can be seen as an extreme version of this kind of rent regulation, as they not only stopped real increases in rents but in fact led to falling real rents as a result of nominal rent freezes and inflation. Some versions of what Arnott (1995) called second-generation rent control are also of type E, but less extreme. The landlord is allowed to increase the rent if costs increase, but not just because an area has become more popular.

Background

The laws

Rent controls were imposed in Norway and Oslo during World War I as part of a more extensive price capping that encompassed almost all trade sectors. The controls were implemented to avoid damaging price increases at a time of crisis, to ensure affordable housing for the growing working class in the main cities, and to prevent profiteering. Initially, rent controls aimed to stabilise nominal rents, reflecting what Arnott (1995) calls a first-generation rent control system that lasted until after World War II. Norway subsequently introduced a more flexible system of rent control, which was subjected to a series of minor revisions. This was, following the terminology of Arnott (1995), a second-generation system, allowing local housing rent boards to decide what level of increase was permitted in a given year. These approved increments were often at the same level as increases in the CPI, but were starting from an already low rent level. While larger increases were allowed if the rental property was upgraded, the size of these increases had to be approved by the rent committee.

After World War II, Norway experienced a housing shortage, and the government imposed price controls on houses and flats built with government support. The involvement of authorities in the housing sector was exercised either through support for co-operative building or through provision of financial aid for families that wanted to build small houses of moderate standard. Oslo stimulated the supply of housing by giving financial support to the co-operative company OBOS and making large areas of land available to it (Hansen &

Guttu, 2007). This policy was successful and, by the end of the 1960s, the housing market had more or less normalised. As the supply of accommodation substantially increased, lack of housing was no longer considered an immediate problem, although house prices and rents were still increasing.

Table 1: Regulations of the Norwegian housing market

Type of housing	Period	Type of regulation
Rental homes	1916-1935	Rent control on some types of flats.
	1940-2010	Rent control on some types of flats.
	1976-1983	Condominium conversion forbidden.
Owner-occupied homes	1940-1954	Prize freeze.
	1954-1969	Price regulations.
Housing co-operatives	1940-1954	Price freeze.
	1954-1982/88	Price regulations on new/old flats. Condominium conversion
	1976-1983	forbidden.

Description of the regulation and deregulation in the Norwegian house market.
Reference: Eitrheim and Erlandsen (2004)

The regulation and deregulation of the Norwegian housing market are summarised in Table 1. As can be seen from the data, in addition to rent control in Norway, price control was imposed on houses and flats built with government support after World War II. As the price was tied to the initial building cost, which increased over time, significant differences emerged in the price of housing within the system. Many families who had moved into small flats that were subject to price control just after World War II had experienced a sharp increase in their standard of living, and wanted to leave their flats for houses. To afford this transition, they needed to obtain the full market price for their flats. The system was increasingly perceived as unfair. In 1969, the price control on houses built with financial aid from the authorities was removed. In 1970, co-operative housing was the only controlled market left; it remained under regulation until the end of 1987, when OBOS, the last co-operative, removed price control. Hence, co-operative housing has its own price index, distinct from the price index used in this work.

The rent system in Norway was characterised by four main elements:

- (1) Rent control was enforced through a system of local rent boards that decided how much the rent could increase from one year to the next.
- (2) Landlords were supposed to involve the rent board in setting the rent when letting a dwelling for the first time. In practice, the rent boards were seldom involved in the pricing. Although most landlords set the rent independently, they were supposed to comply with the rent control rules.

(3) The regulations prohibited eviction of tenants without reason. A short list of grounds for eviction was codified in the laws, and landlords faced the burden of proving violations.

(4) To maintain sufficient supply of rental units, landlords' opportunity to convert flats from rentals to owner-occupied homes was restricted. While this stipulation was not in place in the 1969 to 1975 period, the process was time-consuming and this option was thus rarely exercised.

One of the problems with the rent control system was its dependence on tenants reporting excessive rents to the relevant authorities. If a tenant did not accept the rent and it was in conflict with rent control, he or she could bring the matter to court. For the tenant, the benefit of reporting an excessive rent stemmed from the fact that, upon signing the rental contract, he or she could obtain a lower rate in the new contract. However, this was rarely the case in practice. As we show later, it seems that most tenants simply accepted the rent that the landlord offered in order to find somewhere to live.

The repeal

The removal of rent control through the Act of June 11, 1982 # 44 came less than one year after the Conservative Party took power for the first time in more than a decade. With the support of the centrist parties, the government started pushing for reforms. Rent control for new rental contracts was removed, but remained in force for old contracts on pre-World War II brick buildings until 2010. In addition, condominium conversion was now allowed, and removal of price controls on co-operative housing was permitted. These rapid changes present a natural experiment that allows us to study the effects of the removal of rent control. In the classification developed by Lind (2001), Norwegian rent control transitioned from Type E to Type A.

In 1999, a new Rent Act came into force in Norway. However, since rent control was not a part of the previous Rent Act of 1939, price control on most flats had already been removed in 1982. Consequently, the Rent Act of 1999 caused minor changes in the manner rents were determined. The Act accepted existing market rents for new tenancies. According to the Act, market rent is never regarded as unfair. In existing contracts, rent increases can only be made once a year, and should not exceed the changes in the CPI. A larger revision is permitted every third year to ensure that the rent follows the market trend. The normal time period for a fixed-term contract is three years.

After the 1982 Act came into force, a number of rent-controlled flats still remained in Norway. To protect lifelong tenants, rent control was optioned as a transitional rule for pre-World War II blocks of flats, in some of the larger cities. The number of flats covered by the transitional rule in Oslo was approximately 44,000 in 1981 and fell to approximately 12,000 flats in 1992 (Ot. Prp. Nr. 82 1997–98). After 1999 the transitional rule was changed so that it only protected existing tenants. Brattbakk (2007) estimated that, in 2006, only 3,500 flats that were under rent control were left in Oslo. These remnants of the old rent control were abandoned on January 1, 2010. The main reason for the drop in the number of flats included in the transitional rule was that after the general removal of rent control, condominium conversion was no longer forbidden. Many of the existing tenants became owners of the

flats instead of renters and if the tenant living moved, the flats typically were converted and sold instead of being let again.

The rental market in Oslo and Norway

Oslo is the capital of Norway, and by far the country’s largest city, with a population of 487,363 in 1970 and 560,484 in 2008. Metropolitan Oslo has a population of approximately 1 million. In the second half of the 19th century, both the population and the construction sector activity increased sharply.

In Norway, there is a strong tradition of living in owner-occupied dwellings (Bengtsson, Ruonavaara and Sørvoll, 2017). The period of intense urbanisation at the start of the 1900s marked a break with this tradition, with an increase in landlord-owned blocks of flats in the cities. Owing to the emergence of this trend, there has been a strong political will to make it easier for common people to own their homes. This policy was successful and, at 77 %, Norway is now among the countries with the highest home ownership rates. For the capital Oslo, the figure is 69 % (Table 2). The removal of rent control came amidst a strong increase in owner-occupancy. According to the available data, 16 % of households living in owner-occupied homes are in co-operative housing. In addition, the 23 % of population living in rental housing comprises 18 % residing in private rentals and 5 % living in social housing (2001 figures).

Table 2: Percentage of tenants

	1920	1970	1990	2001	2011
Norway	47%	34%	22%	23%	23%
Oslo	95%	49%	24%	29%	31%

The table shows the percentage of households in Norway that are tenants. In the 20th century, Oslo went from having very few owner-occupying households to about 69%. Household data presented in the table is from the censuses of population and dwellings in Norway undertaken by Statistics Norway in the years 1920, 1970, 1990, 2001 and 2011. We have no comparable figures for 1981, but have national data from the National Housing Conditions Survey showing a tenant share of 31% in 1973, 27% in 1981, and 21% in 1988.

The deregulation of the rent market may have accelerated the decrease in the percentage of households renting their residence. Before the deregulation, professional landlords typically owned blocks of flats, where condominium conversion was forbidden. (The term professional landlord is here used to distinguish them from non-professional landlords typically renting out one or two flats in their own house. In Norway, a person owning four or fewer flats, and no other commercial property, is regarded as a non-professional landlord.) These properties were typically divided into separate flats and sold to people that chose to take residence there themselves. After some time, as shown in Table 3, professional landlords re-entered the market, but opted for holding other asset types. It is also evident

that non-professionals comprised a significant share of the rental market, occupying a wide variety of flats.

Table 3: The composition of the rental market in Norway

	1973	1981	1988	1995	2001
Non-professional landlords with live-in tenants	68	54	45	109	130
Remaining flats rented out by non-professionals	105	132	129	177	130
Company residence, public and private	86	51	31	33	25
Local authority owned	33	42	51	56	60
Professional landlords	104	67	45	41	95
Rest	6	4	6	1	10
Total number of rented residencies	402	359	307	418	450

The composition of the rental market in Norway, 1973-2001. All numbers denote 1000s.

Reference: Langsether et al., 2003

This major change was a result of the deregulation of the housing market, which enabled many tenants in pre-World War II blocks of flats to buy their flats at a low price (In Norway there existed, and still exists, a law that gives the tenants the right to buy the apartment that they are living in, if the owner of the apartment building wants to register the apartments as independent legal entities. The price the tenant have to pay is 80% of the market price. If the owner want to sell the apartments as separate units, they have to be registered as independent legal entities.) Consequently, the residential rental market started to primarily serve young people, who chose to rent before becoming home owners. More than 90 per cent of all Norwegians become home owners during their lifetime (Gulbrandsen & Nordvik, 2007). The decline in the number of flats owned by professional landlords is probably to a large degree caused by the same policy. The pre-World War II blocks of flats were previously primarily owned by professional landlords. When these flats where sold to the tenants, it took some time before the number of properties held by professional landlords increased to the 1970s' levels.

Data

To study the removal of rent control, we focused on the private sector of the rental market. As noted in previous sections, 18 % of Norwegian households live in private rental housing. In line with the approach adopted by Gibb (1994), Bailey (1999) and Oust (2013a), newspaper advertisements served as the data source for our study.

The data required for meeting the study objective were collected in two datasets. The first datasets (the yearly dataset) consisted of gathering rent information, deposit amount, type of residence, number of rooms, property size (in square meters), address and identification information (landlord's phone number and advertisement number) for 27,907 flats and houses advertised for rent in Oslo. While the sample generally included only the advertisements that were registered in August, exceptions were made for the years with few advertisements, for which July and September were included as well, as these months represent the time of year in Norway with the largest number of observations could be made.

Once the sample was formed as described above, entries were checked and those missing certain items or containing data that could bias the indices were excluded from the analysis. Thus, advertisements that had one or more of the following features were excluded:

- Properties not identified as any of the flat types or as a house
- Properties located outside the Oslo area, defined here as more than 30 km or 30 min away from the city centre
- Repeated rent advertisement with no time interval between tenancies
- Properties with a rent period shorter than 6 months
- Dwellings without bathroom, inside toilet or cooking facilities
- Rent includes other services, such as babysitting, renovation, etc.
- Advertisements not specifying rent
- Fake advertisements for dwellings that do not exist ("Housing for rent" advertisements have from time to time been used by sellers of other types of goods or services, like books or lawns.)

In the second dataset, we counted the number of "housing for rent" advertisements and "housing wanted" advertisements for the five first weekdays of August. The counting was carried out at five-year intervals (1970, 1975, 1980, 1985, 1990, 1995, 2000, 2005 and 2008). We imposed the criteria applied to the first phase noted above, with the exception of the dwelling type and rent. The main aim of the second dataset was to establish differences in the housing supply and demand in the Oslo area for the years examined. We also use this dataset to look at requests (by landlords) and offers (from potential tenants) of other services, such as babysitting, renovation, etc.

In conducting the survey, we were aware of one important limitation—the data gathered reflected solely the rent information about dwellings advertised through the listing service, *Aftenposten*, the largest listing service in the study period. According to Langsether et al. (2003), in Norway, about one third of tenants find their dwelling through listing services. However, the gathered data pertain to the part of the market that was most affected by rent control. It should, nonetheless, be noted that the information obtained in this manner excludes rents in public or semi-public housing, which constitute about one fourth of the market (Langsether et al., 2003). Still, this is not a significant issue for the present study, as the government does not need rent control to ensure that cost of dwelling in the public and

semi-public sector is below the market clearing rent. Thus, these submarkets are less likely to have been influenced by rent control.

Results and discussion

The aim of this paper is to investigate whether the removal of rent control changed the way landlords and potential tenants used newspaper listing services in the private residential rental market. We also want to test whether or not the eventual changes in the search and matching process were advantageous for potential tenants.

The first question we asked was ‘did “housing wanted” or “housing for rent” advertisements dominate the market place?’ Another important shift in the market search and matching behaviour can be detected. In Figure 1 we can observe a shift in how potential tenants and landlords used newspaper listing services. Prior to the removal of rent control, “housing wanted” predominated, whereas in other periods, “housing for rent” advertisements become more prevalent.

This is a significant shift in the market search and matching behaviour, which was not evident prior to 1990. This pattern coincides with the “bust” cycle in the Norwegian housing market; the observed shift could have been caused by rent deregulation, as it persisted even after the bust cycle was over. If the demand for rental housing was higher than the supply of rent controlled dwellings, the need for advertisements would diminish. While it is difficult to claim causality between the removal of rent control and the shift in the type of advertisements, it is evident that the trend was positive for the tenants. It also likely benefitted the search and matching process, since the properties of the dwellings should be more important than the properties of the tenants. “Housing for rent” advertisements instead of “housing wanted” advertisements should then lower the total searching cost giving a social benefit.

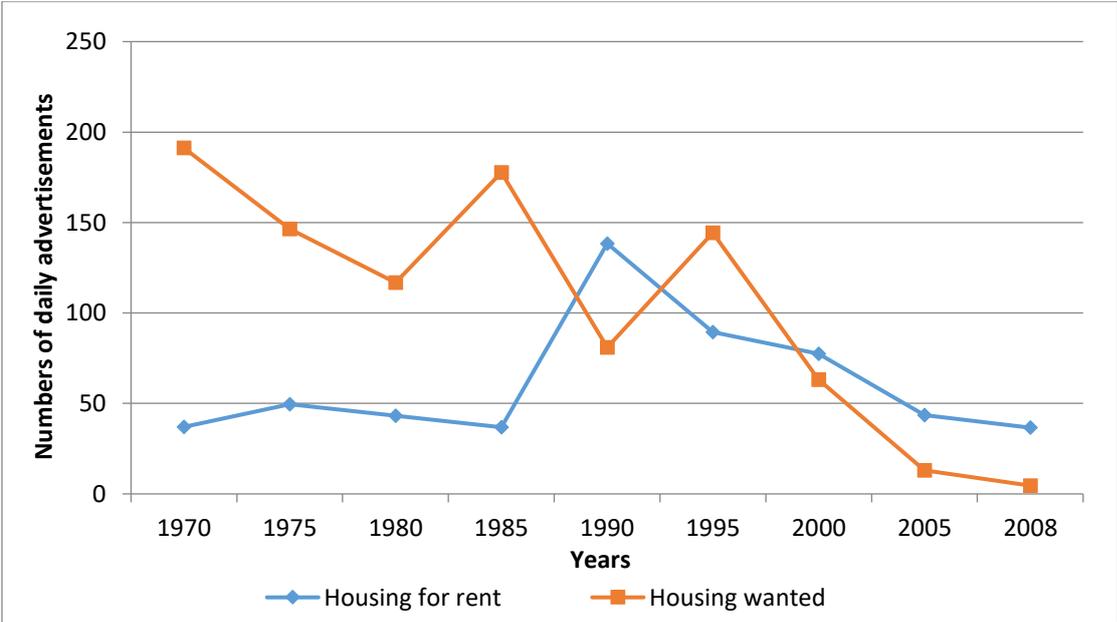


Figure 1. The average number of “housing for rent” and “housing wanted” advertisements placed in *Aftenposten* between 1970 and 2008. The figures pertain to counts conducted at five-year intervals.

The second question we asked was ‘how easily could potential tenants and landlords get information about the current rent level through the newspaper listing services?’. Figure 2 shows how often landlords chose to put the asking rent in their “housing for rent” advertisements. The data presented reveal a marked change in the number of “housing for rent” advertisements that included the asking rent in the period when the rent control was removed. More specifically, in the period affected by rent control, only around 20% of the advertisements specified the asking rent. After the deregulation, the fraction of advertisements including an asking rent increased rapidly to about 80%.

One possible reason for the change in the percentage of advertisements specifying rent value may be reluctance to advertise illegal rent in the newspaper (Oust, 2013a). However, irrespective of the motivation behind this shift, the share of landlords that advertised their properties with an asking rent increased significantly after the removal of rent control.

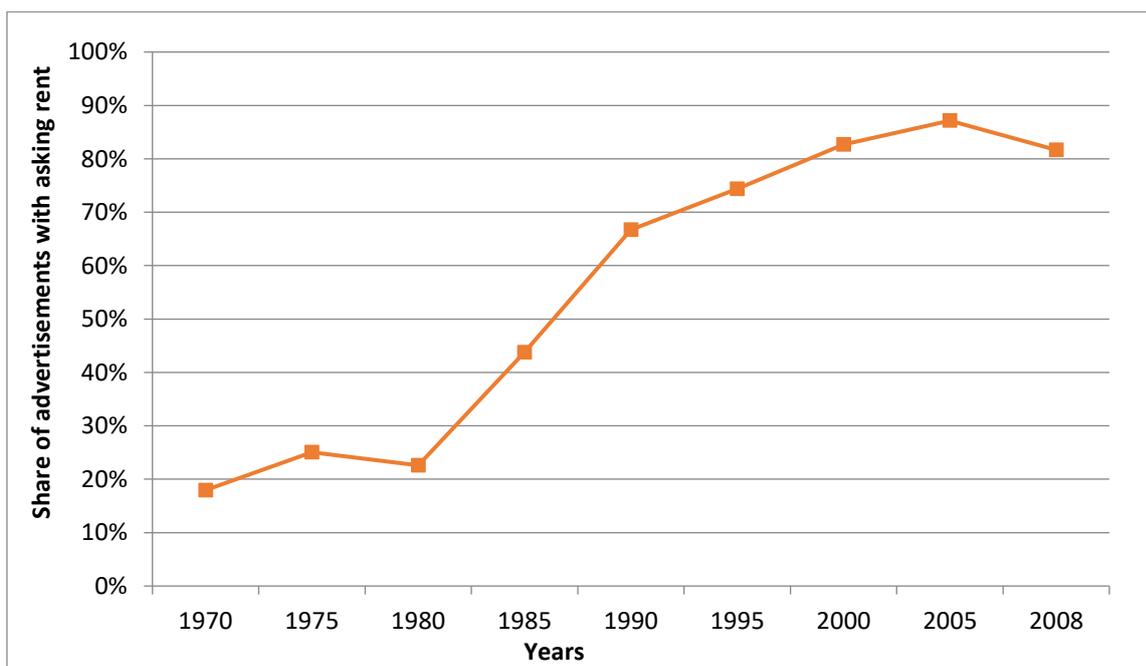


Figure 2. The fraction of the “housing for rent” advertisements in the newspaper *Aftenposten* in the five first weekdays in August that included asking rent. The numbers have been compiled at five-year intervals.

The third question we asked was ‘how many “housing for rent” advertisements where the key characteristics like location, type, size and asking rent were available?’. Figure 3 shows yearly observations of the average number of “housing for rent” advertisements placed in the newspaper *Aftenposten* that specified asking rent. We have also added the equivalent number of advertisements for the Internet listing service Finn.no between 2001 and 2008, to

show that the decrease in the number of newspaper advertisements is caused by the introduction of Internet listing services.

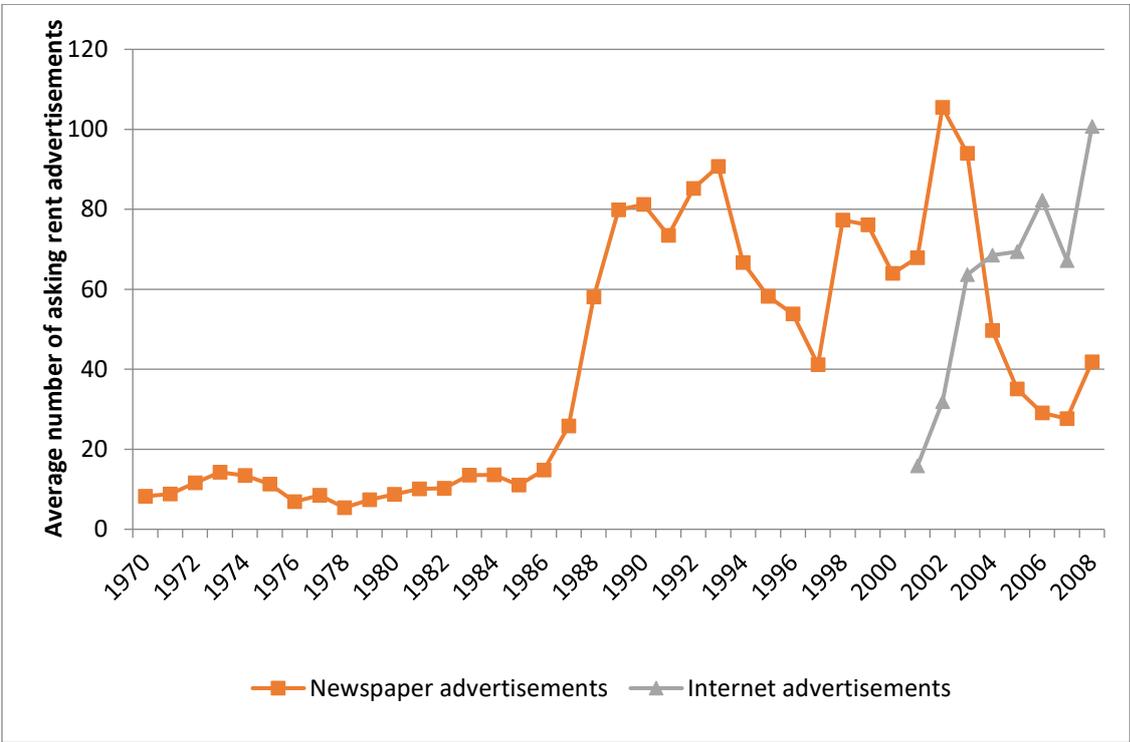


Figure 3. The average number of housing advertisements per day with asking rent in the newspaper Aftenposten between 1970 and 2008 and the equivalent number of advertisements for the Internet portal Finn.no between 2001 and 2008.

Figure 3 reveals four important effects, namely (a) a greater number of “housing for rent” advertisements included an asking rent, (b) greater prevalence of landlord advertisements relative to those placed by tenants, (c) the business cycle effect, and (d) at the end of the time series, a large majority of “housing for rent” advertisements were placed over the Internet.

It is also evident that the change in the tenant searching cost lags behind the rent control removal. Once the transformation is complete in 1989, a large push from the business cycle can also be noted. However, the transformation clearly commenced before the start of the business cycle and the effect persisted even after the business cycle ended. It is natural for market changes to experience some lag time, especially when the change in the searching behaviour is as large as the one demonstrated here.

The intuition behind these three questions was that if potential tenants had access to a large number of “housing for rent” advertisements, with description of key characteristics this would reduce their search and mismatching cost.

The conclusion is that it became much easier for tenants to obtain information about both dwelling characteristics and rent through listing newspaper services after the removal of the rent control, which is likely to have resulted in a much lower tenants’ searching cost. Thus,

while a time lag relative to the removal of rent control is evident, this was clearly the most important change in the rental market during this time period.

Table 4: Housing for rent with a special request and housing advertisements with special offer

Year	Advertisement posted by employer	Extra service offered	Type of tenant wanted	Advertisement with service request
1970	14,1 %	6,9 %	33,6 %	19,6 %
1975	10,5 %	5,1 %	24,6 %	10,5 %
1980	16,2 %	9,1 %	9,6 %	8,4 %
1985	12,9 %	1,4 %	5,3 %	2,8 %
1990	2,8 %	1,0 %	1,2 %	0,2 %
1995	3,2 %	0,2 %	1,1 %	0,4 %
2000	3,2 %	0,2 %	1,1 %	0,4 %
2005	0,7 %	0,7 %	0,7 %	0,5 %
2008	0,0 %	1,2 %	0,0 %	0,2 %

The table shows the share of “housing wanted” advertisement that was posted by the potential tenant’s employer or where the potential tenant offered some type of extra service in addition to the rent and “housing for rent” advertisements that wanted a special kind of tenant or wanted some kind of extra service in addition to or instead of rent.

In Table 4 we present data on the share of the “housing for rent” advertisements that wanted a special kind of tenant or that wanted some kind of extra service in addition to or instead of rent. In the 1970s and early 1980s, when rent control was in place, landlords could be very specific in their advertisements about which type of tenant they wanted. It was most common that the advertisements asked for a specified gender, followed by age, couples, couples without children, type of occupation and in some advertisements religion (strong Christian beliefs) of a desired tenant or even indicating an area of Norway he/she should originate from. Sometimes, owing to overly narrow and stringent requirements, these could be met by a very few households.

Rent control might have contributed to the emergence of this situation. Given that many potential tenants would typically be willing to pay the controlled rent that was lower than the market clearing rent, landlords could impose other criteria, given that they could not increase rent as a means of finding the most suitable tenants. While this practice might have given the landlord additional options, it clearly created a strong possibility of discrimination. The fall in the share of advertisements that had a specific request about the type of tenant the landlord wanted seems to have started before the removal of rent control.

It was also more common for landlords to require various additional services (Table 4). Babysitting was the most common extra service landlords asked from their tenants. However, the advertisements revealed a wide range of other services, such as garden work, snow clearing,

driving, renovation help, *et cetera*. The value of some of these extra services was substantial, and led to lower asking rents or “free” housing.

Potential tenants would also offer to do extra services for the landlord in their “housing wanted” advertisements (Table 4) before the removal of rent control. Most of these advertisements offered janitor work, renovation and garden work, snow clearing, but also baby-sitting.

Such requests and offers for additional services might be perceived as a way for the landlord to achieve the rent level that is closer to the market clearing rent. In addition, as determining the exact value of these additional services was difficult, their inclusion into rental agreements made it possible to avoid discussions on violation of the rent control. On the other hand, many landlords probably needed these services, and having a flat provided an opportunity to obtain them without incurring additional costs.

In practice, however, requests for extra services reduced the number of suitable potential tenants, creating fewer matching opportunities in the market. Consequently, tenants seeking a dwelling would, on average, have to search for a longer time to locate suitable property.

Table 4 also shows that until 1985, about 10 to 15% of the “housing wanted” advertisement was posted by the potential tenant’s employer. Some potential tenants also had their parents or a relative to post the advertisement for them. This would typically be the case, if the parents or the relative had a prominent position. To have an employer posting the “housing wanted” advertisement seems to have been beneficial to the tenant, indicating implicit and sometimes also an explicit employer guarantee, implying that other potential tenants would have a disadvantage.

The size of deposits seems to have changed as well once rent control was abolished (Table 4). Large deposits were more common in the “housing for rent” advertisements early in the time period included in this analysis. In the period from 1970 to 1982, high deposits were not uncommon, and could be as large as 100 to 150 times the monthly rent, typically ranging from 50 to 60 monthly rents (Table 5). While this may seem excessive, it is important to note that the rent was rather low. After 1982, it was rare to find such excessive deposit requests. Nonetheless, in the first few of years after the deregulation, a few advertisements still stipulated deposits equivalent to 50 to 60 monthly rents.

High deposits might be yet another way to bypass rent control, as tenants would be required to contribute most or all of the equity needed to own the flat, and/or give the landlord additional income from the interest from the deposit.

High deposits are likely to exclude a number of potential tenants, thus making the matching process difficult for households with low income and limited savings. Consequently, rental units for which high deposits are required can be perceived as a submarket to which many of the potential tenants would not have access.

Table 5: Large deposit

Deposit	1970-1982	1983-2008	1978-1982	1983-1987
More than 5 times the rent	12.8%	0.7%	13.6%	4.8%
More than 10 times the rent	8.2%	0.2%	6.2%	1.6%
More than 20 times the rent	5.8%	0.12%	3.7%	0.8%

The data pertains to the percentage of deposits defined as large (deposits that are equivalent to 5, 10 or 20 monthly rents). The prevalence of high deposits in the period with and without rent control, and just before and right after the deregulation, is contrasted.

The newspaper *Aftenposten* also had an advertisement column for those that sought to exchange housing (Figure 4). This exchange market was still active in the early 1980s, but started to become less prominent during the late 1980s, and effectively ceased to exist in the early 1990s. Households used this feature to advertise that they wanted to exchange dwellings. The column contains both dwellings for rent and owner-occupied dwellings. Among the self-occupied dwellings, co-operative flats are the most common. Price regulation for the largest co-operative in Oslo, OBOS, existed until 1988. Co-operative housing occupants also incurred rent costs, as well as some type of deposit. However, as length of these advertisements was limited, most did not specify if the advertised dwelling was a rental unit or an owner-occupied unit. However, the flats with known status seemed to be quite evenly distributed between owner-occupied and rental. The exchange market for rental housing seems to have constituted approximately 5 % of the total advertisement market before the removal of rent control.

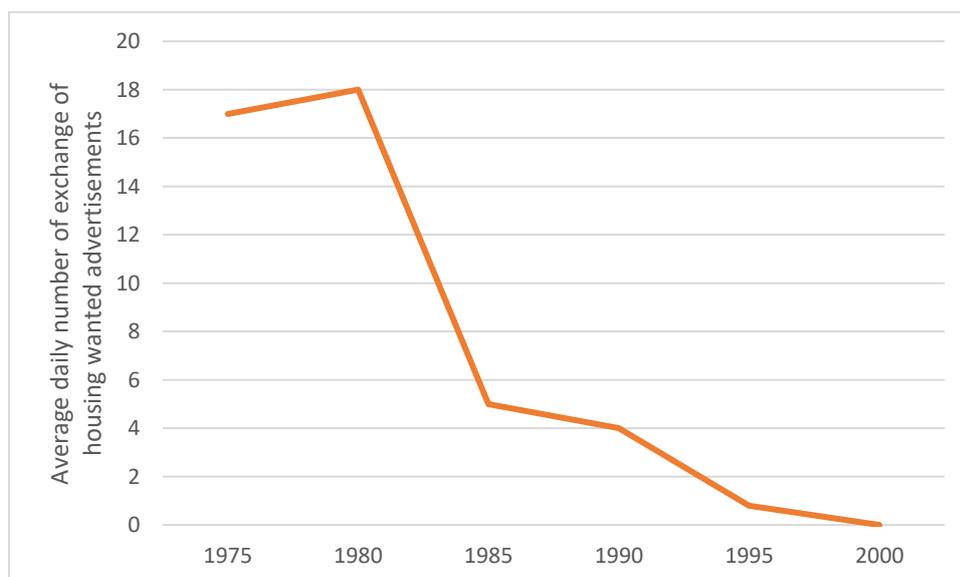


Figure 4. The average number of housing exchange-wanted advertisements per day in the newspaper Aftenposten between 1970 and 2000. In 2000 and after, exchange of housing did not have a designated column.

A typical example of an “exchange wanted” advert would stipulate that a household needs a flat of a different size or in a different geographical location. One reason for the existence of this exchange submarket is gains that can be achieved by exchanging dwellings that have controlled rent, as this reduces living costs. To be sitting on a rent contract, with a low rent seems to have a value in itself. Indeed, the advertisements often highlighted low rental cost. From 1999 it was no longer possible to transfer rent contracts for dwellings under the transitional rule to a new tenant. The result was that exchange-wanted advertisements for rental housing disappeared from the newspaper.

Exchange of housing, instead of two separate search and match processes, reduced market size. While not many households would seek to exchange dwellings, this nonetheless reduced the size of the main market.

While Oust (2013a) argued that the rents landlords demanded were in line with the market clearing rent in both the period with rent control (1970–1981) and the period following its abolishment (1982–2011), we argue that the rent control had an effect on the rent, and had a significant effect on the search and matching process in the private residential rental market. This might have been seen as a paradox since the findings in this paper might indicate queues and shortages before the deregulation, and then rents could have been expected to increase in order to reach a more balanced situation.

Figure 2 shows that the share of “housing for rent” advertisements with an asking rent was close to 20% before the removal of rent control. Table 4 shows that between 8 and 20 % of the “housing for rent” advertisements included the request for some kind of service in addition or instead of the rent. This type of advertisement was explicitly excluded from the rent index used by Oust(2013a). The extra services do not come on top of the market clearing rent, but rather seem to be an alternative way of achieving market clearing.

Conclusion

This study examined how potential tenants and landlords in Oslo changed the way they used newspaper listing service to find housing and tenants after the removal of rent control. We found that the advertisement trend shifted from “housing wanted” and “housing for rent” advertisements that did not specify rent towards “housing for rent”, after the removal of the rent control. Landlords become more willing to disclose their asking rent in their “housing for rent” advertisements after the removal of the rent control and the number of “housing for rent” advertisements where the key characteristics like location, type, size and asking rent were available increased dramatically. The intuition behind these question was that if potential tenants had access to a large number of “housing for rent” advertisements, with description of key characteristics this would reduce their search and mismatching cost.

We find that landlords, in the periods we are studying, went from posting “housing for rent” advertisements in the 1970s where they often asked for a special type of tenant and where they often asked for some kind of extra service in addition to, or instead of, rent, to posting “clean” advertisements where the focus was on information about the dwellings. Until the mid-1980s, it was more normal that employers posted “housing wanted” advertisements on behalf of their employees than afterwards. Until the removal of rent control 5 to 10 % of potential tenants posted “housing wanted” advertisements where they offered some kind of extra service on top of or instead of the rent.

We find that, in the years following the removal of rent control, landlords started asking for a smaller deposits and that the rental market increasingly emerged as one rental market. We conclude that the way potential tenants and landlords used newspaper listing services to find housing or a tenant changed after the removal of rent control. Moreover, we posit that it is likely that the removal of rent control reduced the tenants’ search and mismatching cost in the residential rental market in Oslo. Higher search and mismatching cost under rent control is yet another way rent control reduces the total social welfare produced in the private residential rental market, reducing the social welfare to be distributed. Following Arnott and Igarashi (2000), this should give desired social welfare distributional effects.

The removal of rent control in Norway and Oslo probably came at an ideal time. The self-ownership ratios were high, construction activity during the previous decades had been so high that the shortage of housing was low. Combined with the problems/cost that rent control created, some of them described in this paper, this would probably have made it easier and more popular for the politicians to remove rent control. Our result indicates that a removal of rent control will reduce potential tenants cost, in time and money, of finding a new home. Moreover, our results indicate that by removing rent control, potential tenants will be able to rent a dwelling closer to their ideal one in size, standard and location.

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