Effects of rental legislation on the office market: A game theoretic analysis

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1. Introduction

When the rental market in Sweden is described in general terms it is said that in 1972 the commercial rental market was deregulated while the residential rental market continued to be regulated. This is however not the whole truth, because even though the landlord is free to set the rent in an empty office, there are rules concerning the rent that the landlord can demand when a lease is to be renewed and also rather detailed procedural rules. As the rental contract in Sweden is rather short, typically 3 years for office buildings, the rules concerning renewal of contracts are important for the working of the market.

The hypothesis to be developed in the article is that the rental legislation increases the risk for the landlord and makes it rational for the landlord to accept a rent below the theoretical market rent.

The structure of the article is as follows. In the next section an overview of recent research on office rents is presented and in section three a base case with no specific regulations is presented and analyzed. The rental legislation in Sweden is presented in stylized form in section four. In section five the effects of the different parts of the legislation is analyzed in simple game-theoretic models. In section six, other side effects of the current legislation are discussed, in section seven preliminary results from the Swedish rental market are presented, and finally in section eight, policy implications together with possible reforms in the Swedish rental legislation are discussed.

2. Earlier studies of office market rents

Few studies have been written describing rents from a game theoretical perspective. The authors believe more focus should be put on this topic since transaction costs for new lettings are very high and are of great significance to market liquidity. According to Vasser (2004) who studied the probability of renewal for nearly three hundred properties across forty-one Metropolitan Statistical Areas throughout the United States, the amount of contracts that are renewed at the end of the lease period are only 57%.

A Swedish study by Gunnelin and Söderberg (2002) on the Swedish rental market showed the amount to be xx.
For studies describing new lettings from a game theoretical perspective, see for instance Pfrang, Wittig (2008) who model a game theoretical framework that covers the basic mechanisms of lease contracts negotiations as basic non cooperative game situations. They find that different market situations affect the perception of utility of the negotiating parties and that brokers’ influence on the behavior of the negotiating partners can contribute to the efficiency of negotiation processes.

For studies describing the renewal of contracts from the above perspective, see for instance McAllister and Tarbert (1999) who discuss the effect of potential lease expiry on the rental negotiation process and levels of rental agreed. The idea behind the study is that tenants may use the threat of lease termination at rental negotiations in order to obtain a rental and or other concession. The authors find that it is rational for the landlord to make a rental concession and that the level will be a function of the landlords expected cost of void, probability of tenant relocation, landlords risk preference, and the effects of the bargaining process.

Few studies have been found that actually compares the rent level in newly signed leases with that of renewed contracts. Crosby and Murdoch in (2000) examine the effect the rent assessment process has on the level of rents and rental values in the commercial property market in England and Wales. In a rising market, new lettings were perceived to be significantly higher than that provable at rent review, and vice versa.

Gunnelin and Söderberg (2002) aim to identify the term structure in the office rental market in Stockholm CBD Sweden. In the hedonic rent equation the dummy variable “reneg” stands for contracts that were renewed rather than newly signed and turned out to be negative with a value of 4%.

One of the difficulties discussed in this article is how to determine the intentions of the sitting tenant. Tomas Miceli (1999) suggests a method to separate serious tenants from unserious in the housing market (meaning tenants willing to stay versus tenants not willing to stay). Since the willingness to stay is not observable, the landlord has to attract and reward the serious tenants through self-selection. Two types of contracts are described in the article, long term leases and declining rental contracts. Long term leases are different from short term leases in that the tenant has to pay for the whole period even if he/she leaves in advance. In return the tenant gets a lower rent per period. This can be seen as a two period model where the tenant gets a lower price per period, but has to pay an exit fee if he/she leaves after the first period. The same logic applies in the “declining rent contract” where the rent is higher initially than for a contract with flat rent, and then falling below the rent of the same.

3. The base case: An unregulated office market

The rental legislation system in Norway and Finland\(^1\) can be interpreted as systems with an unregulated market where everything is determined by the contract between the parties. The

\(^{1}\) The information about Finland and Norway was collected with the kind help of KTI and KLP Eiendom
typical contract \(^2\) is written for a limited period of time (typically 3-5 years Finland and 4-5 years Norway), the contract expires automatically at the date stipulated in the contract and neither landlord nor tenant has any rights or obligations outside those stipulated in the contract.

If the market rent is defined as the most probable rent when an office is leased on the open market to a new tenant, the question is whether the rent when a lease is prolonged can be expected to differ from the market rent. Several factors could explain such a difference:

- **Informational aspects**: After a few years both the landlord and the tenant becomes better informed about the other party. A stylized story would be that if the tenant finds out that the landlord is "bad" the tenant will move out. In the same way a landlord would not prolong the contract with a "bad" tenant. If the tenant is "good" and the landlord is "good" the contract will be prolonged and the rent can be expected to be lower in the prolonged contract. This would mean that informational aspects on average would lead to somewhat lower rents when contracts are prolonged compared to rents with new tenants.

- **Transaction costs**: If the tenant has a high transaction cost, the landlord could demand a rent that is somewhat higher than the market rent (as defined above) and the tenant would still accept as the total cost would be lower, taking the transaction cost into account. There are however two counterarguments to this. The first is that the landlord also has transaction costs when trying to find a new tenant. The second is that if the landlord gets a reputation for using the tenants transaction cost to push up rents, then that would reduce the rent that the landlord could charge initially.

Information aspects would imply rents in prolonged contracts to be somewhat below the market rent while transaction cost arguments would lead to rents somewhat above the market rent. The final result would then be difficult to predict.

**4. Rental legislation for the commercial market in Sweden**

**4.1 Basic rules concerning rent levels and sanctions**

As mentioned above, there are no rules concerning the rent levels in a new contract for a commercial property and the focus in our analysis is on office properties even though the same basic legislation covers retail and hotel properties. When a lease is to be renewed, the landlord is not allowed to demand more than the rent that could be expected from a new tenant if the office was empty.

In the conceptual framework concerning rent regulation that is presented in Lind (2001) this is a typical case of what is called "Type A: weak transaction cost-related rent regulation". If the tenant has high transaction costs it could be possible for the landlord to demand a rent level from a sitting tenant that is higher than the rent that a new tenant would be willing to pay. To

\(^2\) In Finland there are also contracts without time limit and they are valid until either the tenant or the lessor wish to terminate. The notice period can be agreed, but is typically 3,6 or 12 months.
simplify the formulations in the rest of the paper, this will be called the rent in the open market.

If the landlord demands a rent level that is higher than the rent on the open market and the tenant moves out of the office, the tenant has the right to economic compensation for damages. For office contracts the minimum compensation is one year’s rent. When the normal contract is three years, this means that a landlord could lose at least one third of the revenue from the contract if they are sued for damages and loses.

It should also be remembered that the rent in Sweden is a gross lease where the landlord pays for operation and maintenance cost, and often also for heating. Losing one year’s rent is then actually more than a third of the net income from the contract. Assuming that operation and maintenance costs are 30% of the gross rent, losing one third of the gross rent would be the same as losing almost 50% of net income.3

4.2 Rules concerning procedure

The procedure when the ending of the contract period comes closer is strictly regulated and the main rules are the following. There are some exceptions for leases shorter than nine months but these exceptions will be disregarded here.

A. Nine months before the lease ends the landlord must notify the tenant if the landlord does not want to renew the lease with the same terms. (The same holds for the tenant but here we focus on the landlord.) If the landlord e.g. is willing to continue the lease but wants to have a higher rent during the next term, then information about this new rent should be part of the notification.

B. Assuming that the tenant wants to stay (or at least pretend that they want to stay - this case will be discussed more in detail in section five below) but believes that the rent demanded is too high, then the tenant should contact the Rent Tribunal for a mediation round. This has to be done before two months have passed from the notification day (which means at least 7 months before the end of the contract.) If the tenant does not contact the Rent Tribunal for mediation then the tenant cannot get any damage payment from the landlord.

If the tenant contacts the Tribunal for mediation, two procedures are possible.

C1 The "normal" case is that the landlord and tenant is called to the Rent Tribunal in order to meet to bargain over the terms. The landlord may reduce their demand, but if the parties do not come to an agreement, the tenant will move out and the tenant can then sue for damages arguing that the final bid during mediation is higher than the rent on the open market.4 The parties can during the mediation or when they realize that they will not come to an agreement

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3 Setting the rent to 100 and the operating and maintenance cost to 30, the net income would be 70 per year. Losing 100 in damages the net income would fall from 210 to 110.

4 Suing for damages is actually possible up to two years after the ending of the lease, but we will in the discussion assume that it is done directly after the ending of the lease.
demand that the Rent Tribunal makes a statement about what the open market rent is. Both parties then supply material to the tribunal that substantiate their view about what the open market rent is. The material supplied to the tribunal is also the only material that the parties can rely on if the tenant later sues for damages (see below). Both parties can supply written testimonials from expert witnesses, e.g. property valuers about the level of the open market rent. Using the material that the parties have supplied, the tribunal either comes to the conclusion that the rent demanded is reasonable - and then they do not have to specify a level - or they come to the conclusion that the open market rent is lower than the landlord’s demand in which case they will have to specify their view of the level of the open market rent.

C2 Legal advisors to tenants who have decided to leave but want to have damages anyway - have found somewhat of a loophole in the legislation which is that it is mandatory for getting damages that the tenant have filed for mediation, but it is not mandatory to actually participate in mediation. The tenant might not show up when it is time for mediation and then it is the landlord’s first demand that is the reference point for whether the landlord has demanded too high rent.

The procedure to contact the court and go through the mediation procedure may be a lengthy process. This means that even if the landlord must notify the tenant nine months in advance, it may not be many months left of the contract when the parties come to the conclusion that they cannot agree about the new terms and the tenant decides to move out. The tenant does however have a final option.

D. The tenant can go to the Rent tribunal and demand that the date when the tenant has to leave be postponed for a few months to make it possible for the tenant to find another alternative landlord.

4.3 How the court determines whether damages should be paid

If the tenant wants to have damages the tenant goes to the District Court, the tenant has to pay a small fee and then standard rules for costs in civil courts apply which means that the losing party pays for their own legal cost and also the legal cost of the winning party.

During the court procedure the legal representatives of the tenant and the landlord present evidence concerning the level of the open market rent, and both can use expert witnesses, e.g. property valuers to give testimony on the level of the open market rent.

4.4 Open market value at what date and based on what information?

When the landlord notifies the tenant about a demand for a rent increase, this demand concerns the rent paid when the new contract starts - which is at least nine months ahead. Suppose as an example that rents have increased continuously during the last 2 years and that
the landlord expects this increase to continue and therefore demands a rent that is let us say 2% higher than the open market rent level at the time of notification.

Suppose that the tenant notifies the court and says that they want mediation, but that the tenant does not show up. The tenant moves out and sues the landlord for damages. During this period unexpected events have occurred in the form of a financial crisis and the open market rent have fallen by 10%. The rent demanded is considerably higher than the open market value at the date when the new contract should start.

In theory the evaluation of the demand from the landlord should be done in relation to the information available when the demand was put forward, but this creates an extra empirical uncertainty as it might be difficult to substantiate this later when new information has arrived and it might be difficult in practice to completely disregard this new information.

5. Theoretical analysis

5.1 Base case with perfect information and no transaction costs

If it is common knowledge what the open market rent is and how it will develop, the landlord has no reason to demand neither more nor less than the open market rent. Should the landlord demand more than this, the tenant can be expected to sue for damages and it will not be possible to get more than the open market rent from a new tenant. Thus, it cannot be profitable for the landlord to demand more than the open market rent from the current tenant. And there is no point in demanding less than the market rent as it does not reduce any risks and only leads to lower revenues.

5.2 Overview of the uncertainties

In reality the behaviour of the landlord will depend on several types of uncertainty:

1. Uncertainty about the type of tenant: Is it a tenant who really is interested in renewing the contract or is the tenant planning to leave and only interested in getting payment for damages? In the model below we call them typ S (for "serious") and Type U (for unserious - only pretends to want to renew the contract).

2. Uncertainty about the current market rent level and how the market rent will develop up to the time when the contract formally expires.

3. Uncertainty about how the courts will act, especially how they will evaluate what the market rent level is.

In this section we disregard the possibility mentioned under D that the tenant can demand to get some additional time before moving out. All transaction costs are also disregarded. It is
assumed that the expected market rent is 100 - the rent that a new tenant would be willing to pay - and that this rent does not change over time.

5.3 Introducing uncertainty about the future market rent level: Fixed date for end of contract.

The structure of the process as described above can then be summarized by the following decision tree.

*Figure 1: Decision tree (1): General structure*

Landlord presents a bid

- Tenant demands mediation
  - Tenant participates in mediations: no agreement
    - Sue for damages (1)
  - Tenant participates in mediations: agreement
    - Sue for damages (2)
  - Tenant does not participate in mediation
    - Sue for damages (3)

- Tenant accepts or moves out without demanding damages (4)

Some of these alternatives will be interesting if the tenant is of type S and some of type US. Let us then start by assuming that the landlord knows the type. We start with Type U. In this case either the tenant moves out without demanding damages or demands mediation but will not participate in the mediation. The reasons why the unserious tenant does not participate in the negotiation is that the tenant does not want to give the landlord a chance to reduce their bid. The decision tree now has the following structure.
In Case (2) it would be very risky for the landlord to demand more than the open market rent, as there will be no possibility to reduce the demanded rent during the negotiations as there will be no negotiations. A crucial issue is then what the landlord thinks about the competence of the Court and how it will evaluate the evidence presented by the parties. As one property owner remarked - when they realize that they are in this situation they immediately sign up the experts with the best reputation to get them on their side. The risk adverse property owner would however demand somewhat less than 100. How much less depends on how easy it is to evaluate what the market rent is and how risk averse they are. Let us say that a risk-averse landlord would come to the conclusion that it is rational to demand 95 in rent.
Let us then switch to the case where the landlord knows that it is a type S tenant. Here one more aspect has to be introduced and that is what the tenant believes that the market rent is as that will be one factor that determines the tenant’s behavior.

*Figure 3: Decision tree (3): Tenant type S*

![Decision Tree Diagram]

In this case, it does not seem very risky to demand e.g. 105. Either the tenant is not so well-informed and accepts the bid even though the bid is higher than the expected market rent according to the expert beliefs.

If the tenant demands mediation, the behavior of the landlord will depend on a number of beliefs and degree of risk aversion. Let us assume that the landlord thinks that the tenant is well-informed and has low transaction cost, then assuming equal bargaining power and that the landlord also has low transaction costs, they would on average agree on a rent of 100.

It is however likely that the tenant will argue that the market rent is below 100, e.g. 95 and indicate that it might move out and go to court if the landlord does not accept a rent of say 97. If the landlord sees it as risky to go to court, given the high level of damages, it will be rational to accept a rent of say 95 even if the probability of going to court is very low.

Just to illustrate: If the damages is one yearly rent, and the chance of winning is 80% and a four year contract is contemplated the expected payoffs would be the following (disregarding discounting):

Demanding 97: no risk for damages . expected payoff 4*97 = 388

Demanding 100: 20% risk for damages 0.8*400 + 0.2 300 = 380
Evaluation

In reality the landlord cannot be sure about what type a specific tenant belongs to. If the landlord knows that the tenant is of type S, it is not very risky to demand more than the market rent, but it is a very risky strategy if there is a type U tenant. The risk averse landlord would in a situation where there is uncertainty about type not dare to demand more than the market rent. Maybe even less, as it might be a type U tenant and an unpredictable court system. Let us, as argued above assume that the landlord demands 95 to be on the safe side if it is a type U tenant.

This creates a further complication. If it in reality is a type S tenant who sees that bid as a first step in a bargaining process than the tenant expects some reduction in the landlord demands during the process, and the final rent might end up at e.g. 92.

The analysis so far seems to rather clearly support the hypothesis that the legal system leads to a rent below market level when contracts are renegotiated. The following sections will discuss some other aspects that points in the same direction.

5.4 Further aspects that makes it rational to demand a rent below the market rent.

Costs for lawyers: The general rule in the courts is that if the landlord is sued for damages and loses, then the landlord must pay not only their own legal costs but also (reasonable) legal costs of the other party. Higher cost of losing a court process would make it even more rational to reduce the rent demanded in order to reduce the risk of being sued for damages - and at the same time reduce the risk of losing such a case.

Changing the contract expiry date: As described above the tenant can rather late in the process put in a request to get some extra time before moving out, typically a few months. These requests seem to be granted most of the time. This weakens the bargaining position of the landlord even further as it will make it more difficult to make an agreement with a new alternative tenant. The possibility for the current tenant to demand some extra time means that the landlord cannot guarantee when the office will be empty and the new tenant can move in. This possibility reduces the expected income from a new tenant, as their might be vacancies in between the tenants, and this would make it rational to reduce demanded rent further.

Both these factors then strengthen the hypothesis that rents in prolonged contracts would be significantly lower than rents in new contracts.

6. Side-effects: overinvestment in renovations of office space

A general view seems to be that landlords in Sweden are more willing to renovate offices and that there are "overinvestment" in improving the standard of the offices, compared to Norway
and Finland. Documenting this is difficult, and the purpose of this section is only to argue that we should expect such differences given the rental legislation in Sweden.

"Overinvestment is here defined in relation to the investments that should have been made if everyone was well-informed, transaction cost was zero and given that there were no external effects of the decision. In such a situation all investments made by the property owner to improve the quality of the office space could be financed with an increase in the rent level that reflect the tenant’s willingness to pay for that quality improvement. Overinvestment then means that investments are made but that the willingness to pay for that investment is not enough to make them profitable.

In a situation with zero transaction cost and no side-effects the parties would simply agree not to carry out this investment, as there would be a rent level without investment that both parties would have preferred compared to carrying out the investment and increasing rents. From a theoretical perspective there is only one possible explanation for overinvestment if agents are rational and transaction costs zero, and that would be that the investment has some positive side-effects for the landlord.

The rent legislation in Sweden, where the landlord risks paying damages if they demand a rent over the market level when a contract is to be prolonged, creates an incentive for the landlord to increase the rent level in new contracts. A higher rent level in new contracts would make it less risky to demand a rent closer to the "true" market rent level when prolonging an existing contract. Making a renovation and getting a higher rent would then create a positive external effect for the landlord that could make it profitable to carry out the renovation even if the rent increase is not enough to make the investment profitable.

As described above, a sitting tenant, can get the right to postpone moving out of the office with a few months and this reduces the time that a landlord has to find a new tenant, as the landlord will not know for sure when the office will be vacant until rather late. This weakens the bargaining position of the landlord and the prospective tenant may then demand a lower rent. Given the negative external effects of a rent reduction, the landlord may suggest that the landlord improve the quality of the space in some dimension that the tenant values - even if that value is not enough to make the investment profitable.

7. Empirical support

8. Policy implications

8.1 Introduction

The Swedish rental legislation is built on the hypothesis that the tenant is "weak" and need to be protected against the "strong" landlord. This seems to be a reasonable starting point for the rental housing market, but its realism is not so clear when we look at the office market. The tenant might be a large multinational corporation with a long experience of renting offices or a law firm that knows the ins and outs of the rental legislation, while the landlord might be a
small property owner. Instead of assuming that the tenant is weak and the landlord is strong, a more realistic starting point could be that the parties on average have the same strength. This would motivate some changes in the Swedish legislation that will be discussed below.

8.2 Possible major reforms

The most radical reform would be to switch to a system like the one in Norway and Finland where the relation between the parties are completely determined by the contract that the parties have entered into.

The use of standard contract forms with explicit options on a number of points reduce the risk for the parties and this standard contract could be developed further with for example explicit options concerning conditions when the first contract period expires. The tenant can then protect their interest by introducing a suitable renewal option. Song (2009) discusses how such options can be formulated and priced on the rental housing market and similar clauses could be introduced in office contracts.

8.3 Possible minor reforms

Within a general framework like the Swedish one there is room for a number of adjustments that would create a more balanced bargaining position for the parties. For example:

- Make actual mediation mandatory if the tenant wants to have the chance to get damages. That it is enough to file for mediation increases the uncertainty for the landlord as they will then not have the opportunity to reduce their demand during the mediation process.

- The expiration date of the contract is final, unless the parties agree about a change. The court should not be able to give the right to the tenant to get some extra months to move out, as this also creates uncertainty for the landlord.

- A clarification that when a final bid from the landlord is evaluated (is it higher than the market level or not?) this should always be done in relation to the information available at the time when the bid was made.

- As estimating the market rent level always is problematic because of heterogeneity and lack of data, the condition for getting damages could be changed, saying e.g., that damages only has to be paid if the rent demanded is significantly above the market level. Significantly could here be defined as e.g. 10%.

- Reducing the level of damages. Setting damages to a minimum of one year rent in a three year contract could be seen as unreasonably high. A maximum level of let us say 3 month rent (or 10% of total contract sum might be seen as more reasonable amount. However, if other rules are changed so that only really serious cases are punished, then a high level of damages could be logical.
References


