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The Tenant's Decreasing Willingness to Pay and the Rent Abatement Phenomenon*

by

EKKEHART SCHLICHT

Introduction

It has been observed that, as a rule, new tenants pay higher rents than old-established tenants for the same type of flat in the same building: Rents actually paid seem to be influenced negatively by the previous duration of the tenancy[1]. Let us call this the *rent abatement phenomenon.*

The only theoretical explanation for this phenomenon I am aware of has been given by EEKHOFF [1981]. He argues that the German tenants' protection legislation, which reduces the scope for rent increases during a tenancy, is conductive to rent abatement[2]. The phenomenon, however, has been observed in Germany also before the relevant bills have been passed, and it can be observed in other countries as well: The "legal" interpretation of the phenomenon seems not to be able to capture the whole of the story[3]. The purpose of the present note is to offer an alternative theoretical explanation for rent abatement. It rests on the proposition that the willingness to pay of the tenant decreases with the length of the tenancy because his economic situation changes and the previously optimal flat becomes suboptimal in the course of time.

1. The Tenant's Decreasing Willingness to Pay

Consider a household which looks for a flat. It can choose between flats of different quality q offered at different initial rents r. Assume the relevant offers

* I thank R. Ulbrich for very valuable hints and suggestions. He has drawn my attention to the phenomenon and has pointed out to me that it is independent of the present tenants' protection legislation. The views expressed here, however, will not necessarily be shared by him. The final section has been suggested by some critical questions raised by J. Eekhoff with regard to an earlier version of this note.

[1] See eg. STATISTISCHES BUNDESAMT [1968], pp. 180–183, 222–225.

[2] Eekhoff is very careful, however, in stating only that the law will lead to rent abatement, he does not maintain that rent abatement would be absent without the law. Hence the present remarks are qualifying rather than criticising his argument.

[3] The reference given in footnote 1 refers to an earlier period, for instance.

to be described by an increasing function relating rent r to the maximum attainable quality q at this rent:

$$q=q(r) \qquad q'>0 \ . \tag{1}$$

(To keep things simple it is assumed here and in the following that all functions are twice continuously differentiable.)

The household has a utility function which is dependent upon the quality of the flat and its income y minus rent payments r:

$$u=u(q,y-r) \qquad u_1>0,\ u_2>0,\ u_{12}\geqq 0,\ u_{22}<0 \ . \tag{2}$$

It has been assumed here that the marginal utilities are positive, that the marginal utility of income is decreasing with increasing income and not decreasing with an increasing quality of the dwelling[4].

For a given level of income y, the household chooses an optimal flat by maximizing his utility (2) under the constraint (1). This gives rise to the necessary condition

$$u_1 \cdot q' = u_2 \ . \tag{3}$$

It is assumed that a unique optimum exists and that the second-order condition

$$u_{11} \cdot (q')^2 - 2u_{12} \cdot q' + u_{22} - u_1 q'' < 0 \tag{4}$$

holds true around the optimum. Hence for any income y there will be a unique optimal rent r^* which can be considered as a function of y, and an associated optimal quality q^*:

$$r^*=f(y), \quad q^*=q(f(y)) \ . \tag{5}$$

From (2)–(4) it follows that f is strictly increasing:

$$f'=\frac{u_{22}-u_{12}}{u_{11}(q')^2-2u_{12}q'+u_{22}+u_1 q''}>0 \ . \tag{6}$$

Initially, the household has an income y_0 and chooses an optimal dwelling at a rent $r_0^*=f(y_0)$ with quality $q_0^*=q(f(y_0))$.

In the course of time, the household's income will change. Accordingly, his optimal choice of dwelling quality will change as described by (5) and (6). But he still lives in the flat with quality q_0^*. It might be asked now: What is the

[4] It is not reasonable to make an assumption about u_{11} since this will be dependent upon the way in which "quality" is measured.

rent level which will just keep him in the old flat? This is the willingness to pay w. It is defined as that rent level for the old flat which makes the household indifferent between the old flat and an optimal new flat:

$$u(q_0^*, y-w)=u\big(q(f(y)),\ y-f(y)\big)\ . \tag{7}$$

Since $u(\cdot)$ is strictly increasing in income, equation (7) defines, for a given q_0^*, the willingness to pay w as a unique function of income:

$$w=w(y)\ . \tag{8}$$

It has the following properties:

$$w(y_0)=f(y_0)\ , \tag{9}$$

$$w'(y)>0 \quad \text{for} \quad y<y_0,\ w'(y)<0 \quad \text{for} \quad y>y_0\ . \tag{10}$$

In other words: If income does not change, the willingness to pay equals the initial rent; if income falls below y_0, the willingness to pay decreases; and if income increases beyond y_0, the willingness to pay decreases also.

Equation (9) is obvious. In order to prove (10) we note that (3), (7) and (8) imply

$$w'=1-u_2\big(q_0^*,\ y-w(y)\big)/u_2\big(q(f(y)),\ y-f(y)\big)\ . \tag{11}$$

The marginal utilities appearing here are evaluated along the same indifference curve. The properties postulated for the utility function (1) imply that the marginal utility of income decreases along any indifference curve if net income $(y-r)$ increases or quality decreases. Together with (1) and (6), this implies (10).

2. *Rent Abatement*

The argument – illustrated by the very simple example given above – can now be stated more generally as follows: Once a family moves into a new flat, it is chosen optimally and remains optimal as long as economic and social conditions do not change. If those conditions do change, the family would prefer another type of flat. Hence the willingness to pay will fall short of the rent obtainable in the market. If the landlord is interested in keeping the tenants in order to avoid costs associated with looking for a new tenant and to shun the risks of vacancy or of getting a bad tenant who pays the rent irregularily only and whom it is difficult and costly to get rid of, he will lower the rent uniformely with the decreasing willingness to pay. As long as the difference between the

willingness to pay and the rent obtainable in the market from a new tenant does not exceed his turnover costs, he will prefer to keep the old tenant. Hence rent abatement will be observed.

The process will be lengthened in presence of mobility costs on the side of the tenants since this will raise their willingness to pay once they have moved in. Still their willingness to pay will decrease under changing economic and social conditions, and the foregoing argument remains valid. As long as new tenants can, in general, be exploited better than old tenants, the custom of rent abatement will be profitable.

3. Concluding Comments

The morals of the simple argument offered above seem to me to be two-edged: Firstly, rent abatement is not necessarily attributable to legal restrictions: These restriction will be conductive to rent abatement only insofar as they enforce a degree of rent abatement which exceeds the spontaneous rent abatement analyzed in this note, and only in this case Eekhoff's arguments will be applicable. But the housing market is structurally imperfect because of high turnover costs on the side both of the tenants and the landlords, and this induces bilateral monopolies everywhere – a typical case of what WILLIAMSON [1975] very aptly termed "idiosyncratic exchange" resulting from an "ex post small numbers problem". Hence legal rules which enforce standardized rents will induce a behaviour on the side of the landlords and the tenants which approximates price taking more closely, and will increase economic efficiency in this respect. Hence a moderate legislation which is not enforcing more than the spontaneous rent abatement seems to me to be desirable. The argument is essentially the same as Williamson's argument in favour of collective wage settlements.

Secondly it seems to me to be misleading to take the observation of rent abatement in presence of no legal restrictions as an argument that economic forces are subordinate to social forces in the housing market (IPSEN [1976]) and that, hence, economic reasoning will fall short of explaining anything essential here.

References

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Professor Dr. Ekkehart Schlicht
Fachgebiet Wirtschaftstheorie
Technische Hochschule Darmstadt
Schloß
D-6100 Darmstadt
Bundesrepublik Deutschland