

# Rent Control: Its Rationale and Effects

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**Summary.** This paper discusses the rationale behind rent control and analyses its effects using a capital theory framework in combination with traditional bid rent analysis. The experience in Hong Kong and Ontario is found to support the author's hypothesis that in addition to the reasons given by other authors, rent control is a substitute for public housing spending and hence is popular among fiscally strained governments. The theoretical discussion confirms earlier findings and additionally provides insight into some of the differential effects on quality and maintenance that have been observed.

## 1. Introduction

The subject of rent control is one of perennial interest to policy-makers and analysts. As Marks (1991) pointed out, it is "widespread throughout the world in both market and non-market economies" (p. 415). Politicians seem to show a distinct liking for it, as evidenced by the fact that it has survived multiple changes of government in Ontario, Canada, regardless of the recommendations of professional economists.<sup>1</sup> Two questions have attracted the attention of many analysts, namely the motivation behind rent control, and the effects, both short-run and long-run, on the housing market and the welfare of various parties concerned. In truth, understanding of this subject has improved tremendously over the last 20 years.<sup>2</sup> This paper builds on the huge volume of work that has been done in the past, and intends to extend this knowledge further in two directions. Section 2 will explore the rationale of rent control in the light of recent discussions on the subject and the experience of Hong Kong, suggesting a link between rent control and the fiscal constraints faced by the

ruling government. Section 3 will present a simple model based on a capital theory framework to highlight the effects of rent control. Section 4 will draw implications from a joint application of this theory with traditional bid rent analysis. Finally, section 5 will present the conclusions.

## 2. The Rationale behind Rent Control

Rent control is often justified as a means to protect tenants against 'unreasonable' rent increases. During times of acute housing shortage, such as happened in Hong Kong prior to the introduction of rent control legislation in 1921 as inward migration surged, it may be imposed to "keep a roof over the heads of the present occupiers and to protect them from excessive exploitation" (Hong Kong *Hansard*, 1921, p. 85; quoted in Cheung, 1975). During such times of highly unstable housing market, rent control is seen to help smooth out rent increases (Arnold, 1981, p. 30), which otherwise could become 'excessively disruptive'.

Actually, even when there is a severe housing shortage caused by heavy immigration, there is still a strong case against rent control if there is not a wide dispersion of income among the households. If the incomes of households are similar, market rents cannot rise 'excessively' because they are necessarily limited by the incomes of the households. Any increase in the rents will mainly serve to make utilisation of the housing stock more efficient. Existing tenants will be outbid by others if, and only if, others have a greater need for their housing units. This is both efficient and equitable. Competing on an equal basis, tenants and potential tenants placing a high value on the scarce resources will use them more efficiently, while others placing only a low value on the rental units will be eliminated. On the other hand, if there is a fairly wide dispersion in household incomes, severe hardship may indeed be caused as newcomers with stronger bidding power offer higher bids to compete for the scarce housing units.

An alternative explanation to this 'unstable market hypothesis', offered by Marks (1991), is based on political economy considerations. Sitting tenants, according to Marks, have a great deal of political influence because, unlike landlords whose votes are believed to go to business-oriented candidates anyway, they are likely to be 'marginal voters' whose votes depend crucially on candidates' support for rent control. In addition, they are numerous and have a clear common platform.

Another explanation of rent control offered by Marks has to do with society's desire for 'fairness'. According to this view, efficiency is deliberately sacrificed in favour of fairness. This view sees redistribution between landlords and tenants as a key motive behind rent control. This view is also implicit in Albon (1978) and Kaish (1981).

In the case of Hong Kong, the political economy explanation does not appear to carry much weight, as Hong Kong has

never had a democratically elected government. On the other hand, Arnold's view that rent control may be a temporary measure designed to deal with an unstable housing market appears to fit in quite well with the Hong Kong experience. Indeed it was in 1981—the year following the tightening up of immigration policy that had allowed large inflows of immigrants from China—that a Committee of Review recommended the phasing-out of rent control.

One reason for bringing in rent control, not previously mentioned, appears to be consistent with the experiences of many countries. It sees rent control as a substitute for public housing and thus serves to reduce the government's fiscal burden (Ho, 1981, p. 82). This view suggests that rent control is especially in demand where the government's fiscal position does not allow the introduction or expansion of its public housing programme. In the early decades of rent control, Hong Kong was economically very much underdeveloped. A public housing programme was unthinkable. Hong Kong's public housing programme began in 1953 not by choice, but as a result of the need to provide temporary accommodation to the victims of a catastrophic fire that had destroyed hundreds of homes. As the Hong Kong economy expanded, so did the public housing programme, but rent control was maintained to relieve the pressure on the public housing programme as massive inward migration continued. As of today, more than 2.8m people have been accommodated in public housing, and an additional 40 000 flats are expected to be built each year on average until 2001. The Long Term Housing Strategy (1987) optimistically expects that the demand for public housing will be fully met by 2001. Rent control is becoming less and less important as public housing expands.

An interesting implication of this view is that where the expansion of public housing is unlikely because of fiscal restraint, rent control is also unlikely to be abandoned. The experience of fiscally-strapped Ontario seems to bear this out. Indeed, one

could make the case that the introduction of rent control in 1975 in Ontario had to do with fiscal restraint.<sup>3</sup> The fiscal restraint due to the ongoing, massive Port and Airport Development project in Hong Kong also may be the reason for delaying the full decontrol of rent in the Territory.

According to this interpretation, the distributional aspects of rent control are certainly not just between landlords and tenants. The government, or general taxpayers, certainly comprise an important party as well. This suggests that an alternative to rent control is to raise taxes on decontrolled rental incomes, and to use the proceeds to strengthen the supply of public housing for the poor. Given that there is little evidence that rent control yields net benefits to households in greatest need for housing assistance (Marks, 1991), rent decontrol combined with an explicit tax on rental incomes earmarked for public housing purposes may be superior to rent control,<sup>4</sup> which certainly is haphazard in its distributional effects (Albon, 1978).

### 3. A Model of Rent Control

As stated earlier, the second question about rent control that has always attracted the interest of analysts is its effects. Much understanding on the subject has been gained through the huge volume of excellent work that has already been done, both theoretically and empirically. However, little of the theoretical work done on the subject uses a capital theory perspective. This section shows that a simple model using such a perspective confirms and enriches earlier results.

We assume that the free market rental price of dwelling unit is a function of quality and time. Thus we can write the rental price at time  $t$  as  $p(t)$  or  $p_t$ :

$$p_t = p_t(q_t, t) \quad (1)$$

A higher quality is assumed to seek a higher rent. The time term captures changing market conditions over time.

We assume  $q_t$  to be a function of  $q$  in the previous period ( $q_{t-1}$ ) as well as main-

tenance expenditure ( $m_t$ ) in the current period. In general, the better the quality of a dwelling unit at the beginning of a period, the better the quality at the end of the period, other things being equal. Expenditures on the maintenance of the building structure not only improve the quality of housing in the current period but also result in a better-quality dwelling unit at the beginning of the next period, with the result that housing quality is also higher in the next and future periods. This can be called the embodiment effect of maintenance expenditures. We can write:

$$q_t = q_t(q_{t-1}, m_t) \quad (2)$$

In the current period 0, the landlord maximises  $\pi$  with respect to the anticipated disposal or redevelopment date  $D$  and maintenance expenditure  $m_0$ .<sup>5</sup>

$$\pi = \int_0^D p e^{-rt} dt - \int_0^D m(t) e^{-rt} dt + R(D, m(t)) e^{-rD} \quad (3)$$

where the first term is the present value of rental income; the second term is the present value of all maintenance costs; and the last term is the discounted resale value or the redevelopment value, whichever is greater, as at  $D$ , the time the present owner expects to dispose of the rental property.

Differentiating  $\pi$  with respect to  $D$ , we obtain:

$$p(D)e^{-rD} - m(D)e^{-rD} + R'(D)e^{-rD} + R e^{-rD}(-1) = 0$$

$$\Rightarrow p(D) - m(D) + R'(D) = R(D)r \quad (4)$$

where the left-hand-side expression describes the marginal benefit of postponing redevelopment or resale while the right-hand side describes the marginal cost of the postponement.

Rent control, by depressing  $p(D)$ , is likely to quicken redevelopment. However, if rent control also affects redevelopment value, the effect on the redevelopment date will also depend on whether rent control enhances or depresses the redevelopment value. To the extent that new rental housing is exempt from rent control, redevelopment value may be higher because, as

Fallis and Smith (1984) have demonstrated, rent control will raise the rents of properties exempt from control. This would reinforce the tendency towards speeding-up redevelopment. On the other hand, if rent control also applies to new rental housing, the resulting decline in  $R(D)^r$  means that the redevelopment date could be delayed by rent control, or redevelopment may take forms other than rental housing if that is allowed.

Differentiating  $\pi$  with respect to  $m_0$ , we obtain:

$$\int_0^p \frac{\partial p}{\partial q} \frac{\partial q(q_{t-1}, m)}{\partial m_0} e^{-rt} dt - 1 + \frac{\partial R(D, m)}{\partial m_0} e^{-rd} = 0$$

$$\Rightarrow \int_0^p \frac{\partial p}{\partial q} \frac{\partial q(q_{t-1}, m)}{\partial m_0} e^{-rt} dt + \frac{\partial R(D, m)}{\partial m_0} e^{-rd} = 1 \quad (5)$$

The left-hand side is the marginal benefit of current maintenance expenditure, consisting of improvement in rental income (in present value terms) and the improvement in resale or redevelopment value. The right-hand side is the marginal cost of \$1 of maintenance expenditure.

Rent control, by depressing the left-hand side, will reduce maintenance expenditure, causing a faster deterioration of the property. Because  $\partial R/\partial m_0$  is positive for resale properties and is probably zero for redevelopment properties, this effect will be more serious for those properties (mainly older, single-family dwellings) expected to be redeveloped than for those properties expected to be resold (mainly newer, multi-family, high-rise buildings).

However, this straightforward result has to be qualified in three respects. First, in some circumstances landlords may be allowed to raise rents to offset identified maintenance expenditures. Secondly, where there is security of tenure and

rented premises indefinitely, they can be expected to volunteer to help with some of the maintenance expenditures considered necessary to keep the housing services at an acceptable level. Finally, if rent control applies only to existing tenants so that landlords are allowed to charge new market rents every time the existing tenants move out, the negative effects on maintenance will be ameliorated.

Will the negative effect of rent control on maintenance re-equilibrate the rental housing market, as suggested by Frankena (1975)? The simple answer is that this is unlikely, as there is a limit to quality adjustment imposed by the restriction that maintenance expenditure cannot fall below zero (Albon and Stafford 1990; Ho, 1990). Consequently rent control, if binding, will always lead to an imbalance in the housing market.

#### 4. Uncontrolled Prices in a Controlled Market: A Bid Rent Analysis

The above framework can easily combine with traditional bid rent analysis to reveal the differential effects of rent control on different sectors of the housing market. Following Arnott (1981), we can draw the equilibrium rent gradient (ERG) against housing quality on the horizontal axis. In Figure 1, three bid rent curves, one for each of the poor, middle-income, and rich households, have been drawn and they are all tangential to the ERG as required by utility maximisation.

Suppose an influx of immigrants to this city pushes the current rents out of equilibrium. In the absence of rent control, the equilibrium rent gradient would shift to ERG'. If rent control is imposed on housing with quality  $\bar{Q}$  or below,<sup>6</sup> rents are momentarily retained along the old ERG up to  $\bar{Q}$ .

For any housing quality  $\bar{Q}$  within the controlled segment, we can draw supply and demand curves as in Figure 2. Rather than re-equilibrating at E, an excess demand equal to WY immediately appears

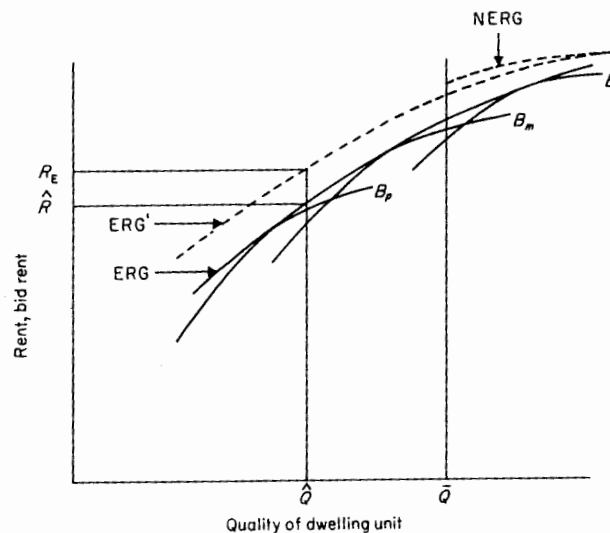


Figure 1.

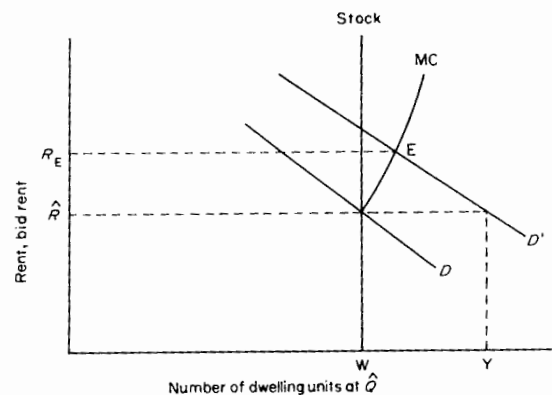


Figure 2.

when rent control prevents rents from rising above  $\bar{R}$ . A similar situation immediately occurs for all houses with quality ranging to  $\bar{Q}$ , but over the longer run a differential effect appears.

As discussed above, rent control will reduce maintenance expenditure particularly for housing expected to be redeveloped. This means that maintenance expenditure will be cut most at the low end of the market. Better-quality housing that is expected to be resold will probably be maintained to achieve a higher resale price. This

differential impact has been confirmed empirically by Gyourko and Linneman (1990).

Over the intermediate run, the supply of low-quality housing may increase as a result of the faster deterioration of housing but this need not imply faster filtering if better housing at attractive rents (relative to the artificially depressed, current rents) is difficult to find as a result of rent control. Overall, imbalance in the housing market is expected to be worst for the middle-quality, rent-controlled housing, as pro-

duction is held in check while filtering from higher-quality housing is not accelerated by rent control. On the other hand, demand will definitely rise as some of the low-income households become better-off over the longer run.

Over the longer run the demolition of low-quality housing will aggravate the imbalance at the low end of the housing market. The seriousness of this effect depends on the incentives to redevelopment (such as whether rent control applies to new housing) as well as institutional frictions (such as problems of legal titles, approval process, etc.).

The imbalance in the housing market at the high end of the controlled market is likely to be least serious, as it may 'spill over' to the uncontrolled market, raising rents above the free market equilibrium in the absence of controls (NERG in Figure 1). That is, the greater imbalance as a result of rent control forces the unsatisfied renters to look for more expensive substitutes, which therefore becomes even more expensive. This agrees with the result obtained by Fallis and Smith (1984). Rents at the very high end of the uncontrolled market, however, are unlikely to be affected by the rent control because they are not close substitutes.

## 5. Conclusions

Rent control is often justified as a means to protect tenants from excessive price shocks. During times of rapidly growing imbalances in the rental housing market, such as major inflows of immigrants, rent control makes sense if and only if there is sufficient dispersion in incomes among households so that existing tenants are unable to pay rents that match the higher bid rents of newcomers. If household incomes are similar, the higher rents cannot be 'excessive' and will only enable more efficient utilisation of the scarce housing resources. In more stable markets, rent control is often motivated by political

the fiscal consideration to reduce government spending on public housing.

Rent control will generally lead to a decline in maintenance expenditure by the landlord and may accelerate redevelopment. Rent control applied to a segment of the market will lead to faster deterioration especially for low-to-middle quality housing that is expected to be redeveloped. This may temporarily raise the supply of low-quality housing. For middle- to higher-quality, rent-controlled housing, the imbalance will be more serious whilst that at the top end of the controlled market will spill over to the uncontrolled sector of the housing market and is therefore less acute.

## Notes

1. An Ontario Economic Council study (Arnott, 1981) recommended a gradual phasing-out of rent control to no avail, while a Royal Commission's four-year study was similarly ignored. See Gooderham (1988).
2. Among others, the works contributing to this understanding include Olsen (1969); Olsen (1972); Cheung (1975); Frankena (1975); Arnott (1981); Marks (1984a, 1984b); Fallis and Smith (1984); Gyourko and Linneman (1990); Albon and Stafford (1990); Miron (1990); Marks (1991).
3. Fallis (1980) noted: "Since 1975 housing policy has changed yet again, principally in response to pressures for restraint in public spending..." (p. 24).
4. Many of the public housing programmes in practice have also been criticised for not benefiting those in greatest need. Ho (1988) suggested a way of overcoming the problem.
5.  $\pi$  is only gross profit. There are fixed costs that are independent of the landlord's behaviour and thus can be left out for analytical purposes.
6. In Hong Kong, rent control is imposed on very old, pre-war buildings, as well as premises in older post-war buildings with rateable values not in excess of HK\$30 000 in 1983. In other jurisdictions where newer buildings are exempt from rent control it is roughly correct to say that the exemption is motivated by the desire to improve the quality of housing.

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