The role of the property tax in the tax system

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*Few tax issues inspire such strong emotions as the taxation of housing. In the
1970s and 1980s much of the debate was characterised by indignation over the
substantial untaxed capital gains that could be made by house owners and hold-
ers of tenant-owned apartments. As a result of the tax system, large groups
received "payment for living," to cite the title of the 1978 book by Bo Sandelin
and Bo Södersten (Betalt för att bo). As the tax system has been reformed, the
focus of the debate has shifted to the negative effects experienced by certain groups
in response to changes to the tax rules or the tax base for applying those rules.
The property tax in particular has proven to be a political hot potato in recent
times. It is not the changes in the rules that have been at issue, but rather the
effects of applying the current property taxation system consistently when the
basis for the tax has changed as a result of climbing market values.*

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It is only natural that the tax on housing is
perceived as important, considering that
housing consumption accounts for a substan-
tial share of household expenses, and that the
only way to change it involves huge moving
expenses. For this reason it is especially im-
portant to move the perspective away from
contemporary policy issues involving winners and losers. In this paper I shall try
to analyse the principal questions about taxation of housing with a focus on the
role of property tax. The analysis will be based on the general fiscal policy princi-
ples that apply to the taxation of consumption and income. Only when it is

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[1] The paper is based largely on Englund (2000).

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understood how these should be applied to housing can the manifestations of property tax that have given rise to today's highly inflamed debate be discussed, for example that taxes have climbed most in those areas where particularly rapid market price increases have been noted.

A number of different taxes are imposed on housing. Housing companies pay corporation tax on their profits, households and housing companies pay property tax, households pay income tax on capital gains with the right to a deduction for interest expenses, housing companies pay payroll tax for their employees, and VAT is charged on residential services at different stages in the production process. Furthermore, housing consumption is subsidised for certain households through housing allowances and certain loans are subsidised through interest subsidies. It is the interplay between all these taxes and subsidies that is important.

How should homes be taxed?

It has been discussed in various contexts whether homes should be considered as consumer goods or investment objects, and it has been argued that the choice is significant in determining how homes should be taxed. While the home may be viewed from both standpoints, giving the impression that one of

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the two ways of looking at the issue must be selected results in great confusion. While homes are capital goods – and thereby potential investment goods – they are not intrinsically consumer goods. Only when combined with operations and maintenance expenditures, heating, etc, do they generate services that can be consumed. Let us call these housing services. In this sense there is no difference in relation to other capital objects, which combined with work and different input goods contribute to producing services and goods for consumption: ovens and the baker's labour produce bread, vehicles and the drivers' labour produce transport services, etc. General principles for choosing a tax system in a world where consumer goods are produced by a combination of production factors should consequently be applicable also to the production of housing services, whether produced by a housing company for lease or by the owner for personal use.

There is an extensive theoretical complex analysing "optimal tax systems." The basic premise is that the tax system should aim for a good balance between two fundamental economic objectives: efficiency in production and consumption and

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an even distribution of consumption opportunities among different citizens. The theory, as developed especially during the 1970s and still perhaps best represented in the textbook by Atkinson and Stiglitz (1980), offers a few general points for how the tax system can contribute to achieving such a balance.

The problem of selecting a tax structure arises because of our substantial resource consumption under public management that must be financed with taxes – taxes that unavoidably distort financial decisions. High taxes on wage earnings benefits the consumption of leisure, while high taxes on savings reduces the supply of funds that can be used for future investments, etc. The higher the general fiscal pressure, the more difficult – but also the more important – it will be to compare the different distortions with one another and find a suitable balance. Generally, fiscal pressure on certain consumer goods should be related to how sensitive demand for the item is to price changes; the more that demand is crowded out by high taxes (that is, the higher the price sensitivity), the greater the *inefficiency* that will follow from a high tax on that particular item. From this point of view, goods with highly inelastic demand – often necessities – are ideal taxable goods. The equivalent principle applies to the supply of different production factors such as labour; the lower the wage sensitivity, the less harmful the effect of high marginal tax rates.

It is difficult to find support for a policy in which taxation of housing services generally should deviate from taxation of consumer goods in general.

Since goods with low price sensitivity are often necessities[2] and the labour supply is perhaps less wage-sensitive in low-wage sectors, there is a risk that focusing on minimizing efficiency losses would place a disproportionately large tax burden on low-income households. Consequently there is a built-in conflict between distribution and efficiency objectives. If housing is perceived as a necessity (a "social right"), those who feel that income *equalisation* is important would recommend a low general tax level on housing. This conflict between the efficiency and distribution objectives, however, should not be overemphasised. While it clearly applies in societies in

[2] This connection, however, is not as obvious as it might sound at first, since the price effect that is intended is the "compensated" price effect, which neutralises the effect of a price increase on purchasing power.

which the majority of the population lives in poverty, with generally higher standards of living the share of income that goes to housing consumption tends to be essentially the same regardless of household income. It is therefore difficult to find support for a policy in a country such as Sweden in which taxation of housing services should deviate from taxation of consumer goods in general.[3]

The theory provides answers of greater clarity regarding the structure of taxation of housing services produced under different forms of tenure. Despite the fact that neutrality between owning and renting has played a central role in Swedish debate on housing policy throughout the post-war period, it still appears to be unclear how this should be interpreted and why it is a natural goal. It has often been presented as a question of justice: housing costs should be the same whether people choose to own or rent their homes. But it is also a question of efficiency: if the tax system systematically benefited a certain form of tenure, resources would be invested in that form of housing to a greater extent than if the tax system were neutral. Neutrality in taxation thereby contributes to socio-economic efficiency.[4]

Generally the tax system – even if it has the task of financing a large public budget – should not be designed so that it affects *how* certain goods are produced and thereby lead to inefficiency in production.[5] It should thereby not influence the choice of production technology and how different production factors such as capital and labour are utilised. With regard to housing the issue is the choice of production methods in the building process and the amount of labour-intensive maintenance "built in" to a new property; high building costs (a large amount of capital) can result in savings on labour and materials later during the life of the property. This principle is easy to apply to corporation taxation. To achieve efficiency it must be made *neutral*; taxable profit must be calculated based on the full right to deduct all costs related to capital, labour and input goods. For example, the depreciation period for tax purposes must correspond with the economic life of the capital good. In this case, the production method

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[3] This does not exclude the fact that targeted support to low-income families with children, for example in the form of housing allowances, may be justifiable considering the significance of a good home environment for children.

[4] I will restrict my focus to the two pure cases of rights of tenancy and owner-occupancy, and ignore the complicated case of tenant-owned apartments. Methods for imposing taxes on tenant-owned apartments are discussed in greater detail by the Property Taxation Committee; see SOU 2000:34 chapter 12.

[5] This insight is based on the works of 1997 Nobel laureate James Mirrlees together with Peter Diamond; see Diamond and Mirrlees (1971).

resulting in the highest profit before tax will also provide the highest profit after tax. The level of the tax is thereby irrelevant to the choice of production method.

> **The choice of form of tenure may be viewed as a choice of production method for housing services.**

The choice of form of tenure may be viewed as a choice of production method for housing services. Consequently, the general principle of neutrality may also be applied to taxation of owner-occupied homes and rental dwellings. This type of perspective may be controversial for several reasons. Thus ownership – and the responsibilities involved – can be perceived as having an intrinsic value, which is perhaps favourable for some and unfavourable for others. An important difference between the two forms of tenure is that the home-owner not only has unlimited opportunities to adapt the home to his personal taste, but also at the same time the full financial responsibility for the effects of these adaptations on the market value of the home. Since a landlord cannot exercise full control over how an apartment is cared for and maintained, there is also a risk that rental apartments will have higher maintenance costs than privately owned single-family homes for this reason. Moreover, ownership may be seen as something that generates external effects in the form of increased responsibility for the immediate environment around the home and perhaps even more generally. In certain countries, especially perhaps in the US, a high proportion of ownership is thereby viewed as an important goal in itself.[6] It is also true that anyone who demands housing in the form of a detached house with a garden in Sweden in reality is relegated to ownership[7], a form of tenure that may not be available to people who would prefer a one-room flat with a kitchenette. In summary, the choice of form of tenure is connected to the choice of housing type. For these reasons owned and rented housing services are different goods to some extent, but since they fill the same basic needs it is still fruitful to consider them as the same.

> **Let us consider housing services from owned and rented homes as the same goods; the housing cost after tax should thereby be the same.**

Thus in principle, differentiated taxes between owned and rented homes should be justified based on the theory of optimal taxation. However, it is not easy to know the direction that such a differentiation should take.[8] We will therefore stick to considering housing services from owned and

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[6] There is also some American research that may be interpreted as stating that the choice of form of tenure affects conditions such as test performance among children, etc; see, for example, Green and White (1997).

[7] In countries with greater mobility such as the US there is a reasonably functioning rental market for single family homes, at least for short-term rentals.

[8] Empirically, the choice between owning and renting appears to be characterised by high income sensitivity and low price sensitivity. This may be related to the fact that ownership is associated with greater risk, and that certain groups do not have the possibility of owning a home as a result of credit restrictions.

rented homes as the same goods; as a result, the cost of housing after tax should be the same for the homeowner as it is for the tenant. We can now review the tax on housing in these respects. Is taxation of rental dwellings neutral? Are homeowners taxed to ensure that their housing costs will be the same as those of tenants? We will begin with the first question.

Taxation of rental properties

The analysis of the effects of the tax system is complicated by the extent to which the properties are financed with equity or borrowed capital. With regard to equity one must consider taxes on both the corporate and personal level. Since equity costs (the companies' dividends to shareholders) may not

be deducted from the base for the corporation tax, the tax system favours debt financing . This combined with the fact that public housing companies – often with very little equity – play a dominant role on the Swedish rental market makes it natural to simplify the presentation by assuming that both the landlord and homeowner carry mortgages for the full value of their properties.[9] The assumption of 100 per cent debt financing may seem rather peculiar, at least in an inflation economy with rising property prices, where it presupposes unlimited opportunities to allow the mortgage to increase with the nominally rising prices on ageing properties. Until the mid-1980s when inflation was high, real interest rates were low or negative and the credit market was regulated, the financing problem was surely a limiting factor. With the well-developed financial markets of the 1990s and an economy with low inflation and low nominal interest rates, such restrictions have been less important in recent years.

The rent level that will be established on the market is determined by the landlords' costs as well as the profits permitted by market competition and various regulations. Since the stock of housing is heterogeneous and it is difficult for consumers to acquire a

good overview of the market, it is not likely that competition on a deregulated market would eliminate all profits. For the Swedish rental market, however, rent

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[9] The effects of double taxation of equity are discussed in Englund (2000). The numerical calculations presented there indicate that the effects of double taxation are rather limited. An increase in the share of equity from 0 to 40 per cent leads to about a 10-per cent increase in the level of the rent.

regulation (*bruksvärdesystemet*) *aims* to ensure that rents will be based on the expenses of the public housing companies. It is therefore natural to assume that the rent level is determined by the housing companies' costs after tax. What matters are the *real* costs, with consideration taken to the increasing value of the properties. These comprise the total of operations and maintenance costs $w_h l_h$ and interest expenses r with a deduction for depreciation d-P.[10] Operating costs include costs for both material and labour. For the sake of simplicity we will denote them, as if they only comprise labour costs, by the product of the wage level w_h and the input-output coefficient (labour usage per krona of property value) l_h. Since the landlord pays wages before income tax plus payroll tax, w_h is higher than the homeowner's opportunity cost for his own labour, i.e. wages after tax. With a nominal tax system it is practical to let r represent the nominal interest. The rate of price change then comprises the balance of two components, the real depreciation δ and the nominal price trend for properties of constant quality P. Since prices on residential properties have been relatively constant in real terms when viewed over longer periods of time, P can roughly be considered to be the general inflation rate, and r-P the real rate of interest before tax.

A landlord rents the home on the market for rent R_h and pays tax on the profit at tax rate τ. Let us first assume that the corporation tax is *neutral*; that is, the concept of profit in fiscal terms is consistent with the economically correct profit. This means that the landlord is entitled to deduct all costs including property depreciation, and that at the same time he must pay full tax on capital gains.[11] Profits after corporation tax, π, will then be:

$$\pi = (1-\tau)(R_h - w_h l_h - r - \delta + P). \tag{1}$$

If all landlords are equally efficient and indeed have the same costs before tax, and if competition or regulations entail that the profit level is zero, rent will then be equal to the landlords' costs before tax;

$$R_h = w_h l_h + r + \delta - P. \tag{2}$$

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[10] The costs are expressed in this and the following section per Swedish krona of property value. This means that we assume that one krona of property value generates an equal amount of housing services regardless of form of tenure when we compare the costs for tenancy and owner-occupancy. The location rent included in the prices of the properties in attractive areas reflect indeed the fact that these generate services that are valued higher by housing consumers.

[11] This is the case regardless of whether the tax system is nominal – and r and P represent nominal interest and nominal capital gains – or real – whereby r and P represent interest and capital gains after deductions for inflation.

A simple arithmetical example can clarify the meaning of this relationship. Let us make the following assumptions that intend to capture current conditions: operating and maintenance costs $w_h l_h$ comprise a total of 3 per cent of the property value; the nominal lending rate r is 5 per cent; the depreciation rate δ is 1.5 per cent of the property value; real estate prices are increasing at a rate P that is 2 per cent.[12] This means that the rent that would cover all costs in the absence of tax effects is 7.5 per cent of the property value $(3 + 5 + 1.5 - 2)$.[13]

If the corporation tax is neutral and all landlords are equally efficient, that is, have the same input-output coefficient l_h, the rate of tax is indeed irrelevant to the rent. Naturally, not all landlords are equally efficient.

> **If the corporation tax is neutral and all landlords are equally efficient, the rate of tax is irrelevant to the rent.**

Their costs depend on their methods for producing housing services; for example, the balance between housing capital and labour. With a neutral corporation tax, where property owners can deduct current operating and maintenance costs as well as the property's actual depreciation, however, this choice is not affected by the tax rate.[14] A neutral corporation tax, which leads to equality (2), is consequently a natural norm for the taxation of housing. It offers all landlords an incentive to achieve maximal efficiency, since a higher profit before tax also entails higher profit after tax.

One way in which the tax system deviates from a neutrality norm in reality is that capital gains are actually taxed at a lower rate than other income. This is mainly because there is no tax until a profit is realised.

> **In reality the tax system deviates from a neutrality norm because capital gains are actually taxed at a lower rate than other income.**

This means that the housing company gets an interest-free tax credit and that the effective tax rate will be lower to a corresponding degree. Let us call the share of current capital gains subject to taxation α_h. The value of the tax credit is partially dependent on the level of the (nominal) interest, and on the length of the holding period.[15] The share α_h is thus lower with higher inflation and for longer holding

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[12] The figures are not meant to be exact. According to Statistics Sweden's income and expense survey of multi-family dwellings the following distribution was found in 1997 for public housing companies, all expressed as share of total costs: capital expenditures (including depreciation) 38 per cent, labour-related operating and maintenance costs 33 per cent and other operating and maintenance 29 per cent.

[13] This means a yield of 4.5 per cent $(7.5 - 3)$, which may appear to be somewhat low. However, this must be understood against the background of the fact that we have ignored the risk premium on returns on equity.

[14] In practice, fiscal legislation must work with standardized depreciation rates. It has been claimed that the depreciation rate that the National Swedish Tax Board normally permits, 2 per cent, is too low.

[15] See Agell and Södersten (1982) for illustrative calculations of how the effective taxation of capital gains depends on the holding period, interest, etc.

periods. When consideration is taken to taxation of capital gains, zero profits after tax imply that the rent will be

$$R_h = w_h l_h + r + \delta - \frac{1-\alpha_h \tau}{1-\tau} P. \tag{3}$$

If the capital gains were fully taxed ($\alpha_h = 1$), expression (3) would be exactly the same as (2). In practice, capital gains are not fully taxed, thereby lowering the real costs after tax implying that a lower level of rent is consistent with cost recovery. The size of the effect depends on the corporation tax rate τ and the rate at which prices rise, P. P must be multiplied by a multiplier greater than 1 when deducted from other costs if capital gains are not fully taxed. With a 30 per cent corporation tax rate, the multiplier is 1.4 (1/0.7) if capital gains in practice avoid taxation completely ($\alpha_h = 0$). In the illustrative calculation above, it would lower the rent by approximately 10 per cent from 7.5 to 6.7 per cent of the property value.

With a completely neutral corporation tax, the rent is based solely on the real rate of interest before tax regardless of the inflation rate, but according to expression (3) the relationship between inflation and the rent level is also dependent on the tax system. The overall effect on the rent level also depends on how closely nominal interest follows inflation. Historic experience during the post-war period suggests that the real interest rate before tax is relatively stable. If this is the case and α_h is less than 1, the rent level according to (3) will be a decreasing function of the inflation rate. The effect is reinforced by the fact that the higher the rate of inflation, the lower α_h will be, since the value of the tax credit increases with the nominal interest.

Taxation of single-family homes

The homeowner has an implicit income from the property he owns and occupies; he pays rent to himself. The rent cannot be measured directly, but it can be estimated.

Let us now make a comparison with the homeowner who lives in the property he owns. Here no rent is paid on the market that could comprise a basis for taxation. Still, it is apparent that the homeowner has an implicit income from the property he owns and occupies; in a way, he pays rent to himself. This rent cannot be measured directly, but it can be estimated since reasonably it should be in proportion to the property value. Ever since the system with a standardised tax on imputed income from property was introduced in the 1950s,

this thought has been expressed in the Swedish tax system. Let us therefore assume that the tax on single-family homes is calculated by adding a percentage s of the property value to other taxable income and taxing it at the general tax rate for the household's capital income t. If all households have the same tax rate this is clearly equivalent to a property tax with the tax rate $t \cdot s$. Before the 1991 tax reform imputed income was calculated as 3 per cent of the tax-assessed value and a 50-per cent tax rate were in effect for the majority of homeowners, which thus corresponds with a property tax of 1.5 per cent ($0.5 \cdot 3$) of the assessed value.

The income from owning a house comprises not only the rental value but also any increase in the value of the property. Just as with rental properties, these capital gains are only taxed when the property is sold. This is tantamount to an interest-free tax credit, with only a portion of the annual increase in value being subject to taxation. Let us call this share $\alpha_{\ddot{a}}$. Since the homeowner may postpone the time of taxation if the capital gains from the sale are invested in a new and more expensive home, for the majority of homeowners $\alpha_{\ddot{a}}$ is a rather small figure. If the homeowner could borrow money at the same rate of interest before tax as the landlord, r, his housing cost after tax would be equal to operating and maintenance costs plus interest expenses after tax, plus depreciation minus capital gains after effective capital gains tax, plus property tax:

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$$R_{\ddot{a}} = w_{\ddot{a}}l_{\ddot{a}} + r(1-t) + \delta - (1-\alpha_{\ddot{a}}t)P + t\cdot s. \tag{4}$$

It is easy to see that it is possible to adapt the imputation rate s to ensure that housing costs are independent of the tax rate t. If s is set equal to $r - \alpha_{\ddot{a}}P$ then (4) may be simplified to

$$R_{\ddot{a}} = w_{\ddot{a}}l_{\ddot{a}} + r + \delta - P. \tag{5}$$

The right side of this equation is identical to the right side of equation (3). By choosing an imputation rate that is equal to interest adjusted for inflation and taxes according to the above, neutrality is indeed achieved to the extent that total housing costs become the same for the landlord and the homeowner if operating costs are the same ($w_{\ddot{a}}l_{\ddot{a}} = w_h l_h$) and if taxation of rental properties is neutral. The tax on housing will not distort the household's choice between the two forms of tenure: renting – and buying maintenance services at the market price $w_{\ddot{a}}l_{\ddot{a}}$ – or owning, and carry-

ing out the services personally at the opportunity cost $w_h l_h$. The intuitive reasoning is that like other investments, private homes generate a yield on a level with interest r. The yield comprises the total of the rental value and capital gains. If the capital gains are completely untaxed ($\alpha_{\tilde{a}} = 0$) the imputation rate must capture both of these components and the percentage s must be set to be equal with the nominal interest. If the capital gains are fully taxed nominally ($\alpha_{\tilde{a}} = 1$), the imputation rate should only capture the part of the yield in excess of inflation; that is, the percentage s must be set to be equal to the real interest rate $(r - P)$. Note that in both cases it is presumed that nominal capital gains, as an element in a neutral but nominally based tax system, are fully taxed in the rental sector.

Even if the property tax was adapted to meet the conditions of (5), the cost comparison between self-produced and purchased housing services would be influenced by other taxes; w_h is the wage before income tax including payroll tax and $w_{\tilde{a}}$ is the wage after income tax. The difference between them is the well-known tax wedge that favours household production over purchasing services on the market. Since the tax wedge itself is so large in the Swedish tax system, it is highly significant even if wage costs only account for a limited share of the rent. With a payroll tax of 40 per cent of wages and a 50 per cent marginal tax rate, the landlord will pay 1 krona and 40 öre for one wage krona that is only worth 50 öre after taxes for the individual wage-earner and homeowner. The tax wedge $w_h / w_{\tilde{a}}$ will be 2.8 (1.4/0.5).

Taxation of the yield from the households' housing capital means that there will be higher taxes on housing consumption than on other consumption of services from durable capital goods.

Before continuing it might be worth noting that imposing a tax on the yield generated on households' housing capital in this way entails a higher tax on housing consumption than on other consumption of services from durable capital goods such as cars, sailing boats and furniture. This observation sometimes comprises the basis for criticism of the property tax[16] and for demands to abolish it. Considering that other durable capital goods represent much smaller values and have a shorter economic lifetime, however, it is difficult to view this criticism as a crucial objection to the property tax.

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[16] Lind (2000) has taken this as a justification for discussing a system without property tax and without the right to deduct interest expenses associated with real estate holdings. His discussion, however, does not handle the interplay with the taxation of other consumption.

Swedish taxation on housing

Taxation of single-family homes based on the property market value is indeed a natural instrument for creating neutrality between owner-occupancy and tenancy. It can either be designed as a separate property tax or as a part of taxation on income by adding an imputed income to other capital income. These alternatives are essentially equivalent; a flat rate of s per cent of market value and a tax rate of t per cent have exactly the same effect as a property tax of $s \cdot t$ per cent. As discussed above, neutrality is achieved under certain conditions if the imputation rate is set to be equal to the market interest rate – the nominal or real rate, depending on whether the households' capital gains are taxed or not. When a tax on imputed income was introduced in 1953, the income was also set at a level with the interest rate at 3 per cent of the assessment value.[17] It is unclear whether this level was intended to represent real or nominal interest. When the imputation rate was not raised during subsequent decades despite soaring inflation, the growing gap in relation to nominal interest resulted in sharply reduced housing costs for homeowners. This effect was countered gradually through the reformation of the tax system, first by limiting the tax rate for the deficit deduction through the changes implemented between 1982 and 1985, and later through the 1991 tax reform. The tax on imputed income was also replaced at that time by a 1.5 per cent property tax.[18] Combined with a monetary policy with an explicit inflation target of 2 per cent, the level may be perceived as an adaptation to a normal real interest of 3 per cent; a 1.5-per cent property tax is equivalent to a 5-per cent imputation rate taxed at a 30-per cent capital–income tax rate.

> **Taxation of single-family homes based on the market value is a natural instrument for creating neutrality between owner-occupancy and tenancy.**

However, several prerequisites for ensuring that an imputation rate at the level of the nominal interest rate are not fulfilled in practice. This is not a coincidence but rather reflects general problems in the tax system – problems that have been discussed for a long time, but that nevertheless remain. It applies to two aspects in particular: capital gains are taxed first when realised, and the tax on wage earnings penalizes ser-

> **Several prerequisites for ensuring that neutrality is provided by an imputation rate at the level of nominal interest are not fulfilled in practice.**

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[17] See Mattsson (1999) section 3.2 for the history behind the introduction of the tax on imputed income.

[18] The level of the tax has varied. In 1996 it was raised to 1.7 per cent. The tax was subsequently lowered by freezing the assessment values between 1997 and 2000 despite rising market prices. From 2001 the tax rate was lowered to 1.2 per cent at the same time as the relationship between the assessment value and market values was reset.

vices provided by the market. It would be naive to believe that the tax system will change in any of these regards in the near future. For the taxation of housing the question instead is partly how great is the quantitative significance of these conditions, and partly to what extent they can be neutralised by adapting the property tax or some other aspect of taxation on housing. We shall now focus on these questions based on some simple calculations.

In reality only a small part of *capital gains* on rental properties are subject to corporation taxation.

In reality only a small part of *capital gains* on rental properties are subject to corporation taxation. Consequently, with long holding periods the effective tax rate on these is about zero. With completely untaxed capital gains, $\alpha_h = 0$, according to expression (3) inflation will impact on the rent with the factor $1/(1-\tau)$. The effect is dramatic with the conditions found in the 1980s with soaring inflation and a high corporation tax. A 10-per cent price hike and a 50-per cent corporation tax result in a 20-per cent inflation reduction (10/0.5). With a moderate real interest before tax this results in a negative real interest, which is actually so heavily negative that a direct application of expression (3) results in a negative rent level. Consequently it is clear that the combination of inflation, interest, and tax rules found in the 1980s was not compatible with unlimited lending opportunities. With the lower inflation and corporation tax in recent years, the effects are also less. The inflation reduction is 2.9 per cent (2/0.7) with a 2-per cent price increase and 30 per cent corporation tax.

The other factor affecting housing costs is the *taxation of wage earnings* for operations and maintenance.

The other factor affecting housing costs is the *taxation of wage earnings* for operations and maintenance. With a payroll tax of 40 per cent and a 50-per cent marginal tax rate, tenants will be burdened with costs that are 2.8 times higher (1.4/0.5) than for owner-occupied homes. If we assume that labour costs comprise half of the total expenses for operation and maintenance, which above are assumed to amount to 3 per cent, they would equal 1.5 per cent of the property values in the rental sector, which shows that the tax wedge on labour is very significant to the neutrality between tenancy and owner-occupancy.

The tax wedge on wage earnings goes against the rental sector and the incomplete corporation tax on capital gains goes against the owner-occupied sector.

Thus we have identified one factor in the tax system that goes against the rental sector (the tax wedge on wage earnings) and one (the incomplete corporation tax on capital gains) that goes against the owner-occupied sector. Their relative significance is illustrated in

Table 1. Imputation rate s that creates neutrality between tenancy and owner-occupancy with different tax wedges for wage earnings and taxation of capital gains

Effective taxation of capital gains (α_h)	Tax wedge (w_h/w_a)				
	1	1.5	2	3	4
0	2.1	3.6	4.6	5.4	5.9
0.5	3.6	5.1	6.1	6.9	7.4
1	5	6.5	7.5	8.3	8.8

Table 1, which indicates the imputation rate *s* necessary for achieving neutrality between owner-occupancy and tenancy under different assumptions about the size of these two factors. The conclusion is that with a tax wedge between 2 and 3 and a negligible effective taxation of capital gains in the rental sector (α_h close to zero), the effects essentially negate one another. An imputation rate of 5 per cent (or a property tax of 1.5 per cent) of the market value thus stands out as reasonable. A property tax of 1.5 per cent of market value corresponds to 2 per cent of the assessment value. Against the background of all the criticism aimed at the property tax even after the current reduction to 1.2 per cent, such a conclusion must seem provocative to many readers. It is therefore appropriate to discuss a few problems that have been the focus of criticism against the property tax but have not been discussed here.[19]

Other problems are associated with the fact that the assessment value is only an estimate of the market value by the tax authorities based on rather limited information. Consequently it must become misleading in individual cases, especially in areas with few comparable purchases. Caution must be exercised to avoid the risk of such measurement errors leading to excessive taxation.[20] It is therefore natural to choose to aim for an assessment value set at 75 per cent of the market value and to allow it to affect taxes only after a two-year lag. As a result, in practice, assessment values have rarely exceeded current market values.[21]

> **Other problems are associated with the fact that the assessment value is only an estimate of the market value by the tax authorities.**

[19] One factor that we have ignored is that properties are also included in the basis for the wealth tax, which currently comprises 1.5 per cent of taxable wealth over a certain cut-off point. How the wealth tax affects the cost of housing, however, is unclear, since different assets are valued based on different principles when they are included in the taxable wealth. While properties are valued at assessment value, i.e. less than their full market value, liabilities are deducted in full. Consequently, a fully mortgaged real estate investment leads to *lowered* wealth tax, while a real estate investment financed with sales of low valued assets results in a higher tax. It is difficult to assess the overall effect of these separate valuation principles, and the scope for tax arbitration thereby created.

[20] Interestingly enough, the assessment value tends to be lower in relation to market prices on more exclusive properties, which may suggest such caution in the tax assessment.

[21] According to one relevant study – Berger and Boije (2000) – the assessment values set in 1994 were between 50 and 100 per cent of the sales price for 80 per cent of all single-family homes sold during 1994.

Criticism of the property tax has especially strong in areas with soaring prices. This may seem to be paradoxical since the criticism comes from property owners who have actually seen their wealth increase. In many cases, however, it is not so odd since homeowners who remain living in their old homes do not experience that they have become wealthier – indeed, the increased value of their houses has not enabled them to consume more of other goods than before. If at the same time they must pay higher taxes, their opportunities for consuming other goods would clearly decrease. If other goods than the home were involved, consumers would respond to increased prices by trying to cut back on consumption of the more expensive goods. For homes, such an adaptation would mean moving to another neighbourhood or to a smaller home in the same neighbourhood. In many cases such measures might be perceived as so negative that people would refrain completely, at least in the short run. In special cases it is possible that an adaptation would never be considered, not even in the long run. There are probably many year-round residents in attractive locations in the Swedish archipelago who experience this situation. In the name of consistency it might seem that raised property tax should not be applied to such households. The problem with applying that concept, naturally, is that it would be necessary to differentiate the tax depending on the attachment of the property owners – and perhaps even their heirs – to the homes where they currently live. The solutions to the problem that have been proposed in different contexts – such as reducing the property tax for all permanent residents on certain islands – seem rather roughly formulated, with the risk of creating problems as large as any they might solve. Consequently, it is not surprising that the "archipelago issue" has proven to be a crucial problem for the property tax.

Yet another factor that explains the wrath sometimes inspired by the property tax is the fact that the privately owned home does not generate any monetary returns. As a result, low-income households may find it difficult to finance their tax payments. There is a problem here to the extent that being forced to "borrow for taxes" is experienced as objectionable. One simple method of solving this technically could be to let taxpayers build up a tax credit with the national government, which would not fall due for payment until the property is sold. Considering that the tax credit

could be large in relation to the property value, however, the question arises as to how politically stable such a system would be.

Concluding comments

There are practical problems associated with the property tax. Finding reasonable solutions to these problems deserves a thorough discussion. A necessary prerequisite for such a discussion, however, is to first clarify the basic principles to allow the problems to be accepted for what they are: application problems that could motivate a limited departure from the basic principle.[22] The aim of this paper has been to discuss the principles for taxation of housing. The discussion has been based on the general fiscal policy principles that lead – under certain conditions – to a standard of neutrality in taxing tenants and owner-occupants. How important is it to follow such a standard?

Let us conduct a hypothetical experiment in which we depart from this standard, for example by completely abolishing the property tax, as is sometimes advocated in the debate. With unchanged real estate prices, this would mean that owning a home

The extensive construction of single-family homes, as well as the conversion of rentals into tenant-owned apartments can be seen as adaptations to the tax system.

would be less expensive than renting one. This in turn would stimulate the demand for privately owned homes, and prices would climb. Since access to different types of homes cannot be changed in the short run, prices must rise so much that both types of housing would continue to be in demand. An abolished property tax would indeed be capitalised in the form of raised prices on privately owned homes, allowing housing costs to continue to be unaffected in the short run. The higher prices would serve as a signal to change the supply, both through new construction and through changed forms of tenure. This would start an adaptation process that would continue until the price level once again had dropped to the level of building costs, and identical homes were available at the same price regardless of form of tenure. Indeed, we would have achieved a larger total stock of housing in the new state of equilibrium accompanying the abolished property tax, with a larger share of privately owned homes. The extensive construction of single-family homes ever since the late 1970s, like the past decades'

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[22] The Property Taxation Committee analysed both the issue of principle and many practical problems in 626 pages in its final report (SOU 2000:34).

conversion of rentals into tenant-owned apartments, can be seen in this light; that is, as adaptations to the tax system.

Indeed, a property tax serves the purpose of maintaining the stock of housing at a reasonable level reflecting the demands of households when they must pay full costs. It also prevents the rental sector from being crowded out by the owner-occupied sector. Since the forms of tenure differ in various respects, such as regarding transaction costs and the risk of capital losses, both are needed for the housing market to function well for all types of households. Mobile households tend to prefer rentals, while home ownership may seem more attractive to households that intend to remain in one place for a longer period of time. Young households without any savings may not be able to afford to finance purchasing a home or may be unwilling to take the financial risks that may be involved. Not least, it is important for these groups to have access to a well functioning rental market. This would be more difficult if the tax system favoured owner-occupants over tenants.

References

Agell, J. & Södersten, J., "Skatteregler och realinvesteringar" in *Kreditpolitiken. Fakta, teorier och erfarenheter*, SOU 1982:53.

Atkinson, A.B. & Stiglitz, J.E., (1980), *Lectures on Public Economics*, McGraw-Hill.

Berger, T. & Boije, R., (2000), "En statistisk utvärdering av småhusens taxeringsvärden", annex 2 to *Fastighetsbeskattning – precision, påverkansmöjligheter, individuella bedömningar*, SOU 2000:10.

Diamond, P.A. & Mirrlees, J.A., (1971), "Optimal Taxation and Public Production I: Production Efficiency; II: Tax Rules", *American Economic Review* 61, pp. 8–27, 261–278.

Englund, P., (2000), "Beskattning av hyresrätt och äganderätt" in Lindh, T. (ed.), *Prisbildning och värdering av fastigheter*, Uppsala University, Department of Housing and Urban Research, research report 2000:4.

Green, R.K., & White, M.J., (1997), "Measuring the Benefits of Homeowning: Effects on Children", *Journal of Urban Economics* 41, 441–61.

Lind, H., (2000), "Fastighetsbeskattning om vi betraktar egnahem som varaktiga konsumtionsvaror", annex 4 to SOU 2000:34.

Mattsson, N. (1999), "Är bostadspolitiken neutral? Några skatterättsliga synpunkter", manuscript, Department of Law, Uppsala University, 1999.

Sandelin, B. & Södersten, B., (1978), *Betalt för att bo*, Rabén & Sjögren.

SOU 2000:34, *Likformig och neutral fastighetsbeskattning*, Property Taxation Committee report.