The Tax Treatment of Housing: Economic Issues and Reform Measures

By Gavin A. Wood

Housing taxation expenditures are viewed by many as an important source of housing subsidies, although they have frequently emerged as taxation systems have evolved, rather than being designed specifically to aid housing consumption or production. The increasing severity of constraints on government budget deficits has elevated the issue of housing tax expenditures beyond that of mere academic curiosity. Some governments have sought to curb the growth of housing tax expenditures by reforming the tax treatment of housing. Is there a case for reform measures? Are there coherent and operational reform measures worthy of serious consideration?[1]

These questions raise a host of issues concerned with macro-economic performance, allocative efficiency and equity: macro-economic performance, because housing tax expenditures can erode the tax base, and thereby affect governments' budget deficits; allocative efficiency, because housing taxation expenditures will influence relative rates of return on housing assets and lead to changes in the economic behaviour of households and firms; and equity, because housing taxation expenditures alter the relative tax burdens among individual taxpayers, and between owner-occupiers and tenants.

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In this paper each of these issues is addressed and the prospects for reform assessed in an international context. In doing so, I draw on the papers presented at the Joseph Rowntree International Conference on Housing Finance held in York in June 1989. These provide relevant material on the existing array of housing tax expenditures employed by a representative sample of Organisation for Economic Cooperation and Development (OECD) countries. Firstly, I discuss the relevance of the tax expenditure concept and briefly describe the housing taxation practices of these countries. Next, I explain why housing tax expenditures have attracted critical attention in recent years. This is followed by an examination of the attributes of tax expenditures as a means of supporting housing consumption and production, and the tenure-neutral reform proposals that are increasingly advocated by commentators on housing policy. Lastly, the recent reform measures introduced by OECD governments are explained and evaluated, and are followed by some concluding remarks.

THE RELEVANCE OF THE TAX EXPENDITURE CONCEPT

How Do We Define Tax Expenditures?

A tax expenditure is usually defined as a departure from the generally accepted tax structure which produces the favourable treatment of particular types of activities or groups of taxpayers (OECD, 1984). Tax expenditures can take the following forms: tax exemptions, where income from particular sources is excluded from the tax base; tax allowances, which are sums deducted from assessable income in order to arrive at taxable income; tax credits, which are amounts deducted directly from tax liabilities, and may or may not be allowed to exceed tax liabilities; and finally, rate reliefs, where specific types of activities or taxpayers are subject to reduced rates of tax. The term tax expenditure places emphasis on the proposition that, in principle, all tax expenditures can be structured as direct expenditure programmes and thus evaluated in direct expenditure terms (Surrey, 1973).

However, such an evaluation exercise must be preceded by an identification of what constitutes a tax expenditure. In the case of owner-occupied housing, the definition of a tax expenditure requires the identification of the normal tax treatment accorded to comparable assets or goods. There are three alternatives: housing could be considered a consumption good, an investment asset or a financial asset (Grey *et al.*, 1981). The way in which housing is given favourable tax treatment depends upon the category in which housing is placed.

Economists have tended to treat housing as an investment asset in analysing tax expenditures (Rosen, 1979; de Leeuw and Ozanne, 1981; Goodwin, 1986). There are two main reasons for this classification of housing. Firstly, it recognises that the taxable capacity of the owner-occupier will be greater than that of the individual with the same money income who is not a home-owner and is, therefore, obliged to pay rent out of taxable income. This is because the house of the owner-occupier is an asset which, if let, could generate a money income. In that event, the individual would be on a par with the tenant in having to pay for rental accommodation for him or herself, but his or her money income and ability to pay would be greater and he or she would in fact pay more tax. Secondly, taxation systems will distort the allocation of resources if they are not neutral between different types of expenditure. Increasing attention has been devoted to allocative distortions between owner-occupation and the private rented sector, and the ability of the housing sector to appropriate funds and resources which would otherwise have been channelled into capital investment in the industrial sector. This suggests that owner-occupied housing and other investment expenditures are sensitive to relative rates of return, and a tax system which seeks to minimise distortions should, therefore, accord housing the same tax treatment as other investment goods.

Even if we accept the investment asset classification, it is difficult to generalise about what actually constitutes housing tax expenditures in OECD countries, as the normal treatment of investment goods is not self-evident, given the variations in taxation procedures across income generating assets. One approach is to restrict attention to a comparison of the tax treatment of home-owners and private landlords.

The Current Tax Treatment of Housing

There is considerable variation in OECD member countries' tax structures, but within these at least two groups may be identified. The first, corresponding to English speaking countries, is characterised by a heavy reliance on direct taxes applied to income and profits. Thus in 1986, for instance, taxes on incomes and profits as a percentage of total tax revenue were 42 per cent, 56 per cent and 71 per cent in the USA, Australia and New Zealand respectively. A second group exhibits a high ratio of indirect taxes on goods and services to direct taxes, and relatively high social security contributions. In the same year of 1986, taxes on goods and services and social security contributions amounted to 71 per cent, 72 per cent and 78 percent of total tax revenue in Spain, France and Greece respectively.[2] These differences are reflected in the tax treament of housing assets, with the former group placing a greater reliance on taxes levied on housing returns, and the second group relying more heavily upon taxes applied to transactions in housing assets and recurrent property taxes.

The Taxation of Net Rental Income

The taxation of owner-occupiers' imputed net rental income entails logistical and political problems. Notional rental income values must be based on administered assessments which require significant policing and enforcement costs. Since assessed values are generally below market values, and whilst current expenses are commonly accorded tax allowance status, the revenue yield tends to be low. In addition, the 'fairness' of a tax levied upon an intangible income stream is difficult to justify in the political arena. Prompted by these considerations the UK, France, Ireland, Australia and West Germany have abandoned the taxation of imputed net rental income. However, in some of these countries, current housing expenses remain as tax allowances. In the UK, owner- occupiers receive tax relief on their mortgage interest payments at their highest marginal tax rates on the first £30 000 of a mortgage. Under the Mortgage Interest Relief at Source Scheme, households not liable for income tax make mortgage repayments net of 'relief' at the basic rate of tax. In West Germany, owner-occupiers can take advantage of a depreciation allowance which amounts to 5 per cent of the historic cost of purchase in each of the first 8 years of ownership (the allowance is only available once and the accumulated aggregate cannot exceed DM300 000). The USA grants the most generous tax allowances to home-owners. Mortgage interest payments of up to US$1.1m may be deducted from assessable income when incurred for the purposes of acquiring a principal and a second residence. In addition, local property tax payments are accorded tax allowance status as regards federal income tax provisions (Miles, 1989).

In contrast, the imputed net rental income of owner-occupiers is taxed in Denmark, Finland, Greece, Luxembourg, the Netherlands, Spain and Sweden. Generally, imputed rent is arrived at as a percentage of the property's assessed capital value. Due to irregular assessments, these tend to be below market values. Moreover, exemptions are frequently employed, further nullifying the impact on tax liabilities. Since current expenses are deductible from assessable income, imputed net rent can often be negative in the initial years of ownership. Finland typifies taxation provisions in this respect. Since 1973, Finnish home-owners have been subject to the payment of income tax on net imputed rent. The gross imputed rent is set at 3 per cent of the administratively assessed capital value, which normally lies below market values. Those properties whose assessed capital value is below MARK215, 000 are exempt. For those home-owners subject to tax, annual mortgage interest payments in excess of MARK600 and up to MARK25,000 can be deducated from gross imputed rent. As a result, only 2 per cent of Finnish home-owners paid tax on net imputed rent in 1983.[3]

All OECD countries tax private landlords' net rental income. In some countries, tax expenditures are explicitly granted to private landlords in order to encourage their acquiescence with regard to rent controls. With 35 per cent of the total housing stock in the private rental sector, this approach is particularly evident in West Germany. The West German government grants private landlords a depreciation allowance identical to that available to owner-occupiers (see above); in addition, interest on loans and other operating expenses can be deducted. Since rent controls depress rent levels, these tax arrangements normally result in losses being incurred during the early years of investment. These may be deducted from other sources of income. This 'negative gearing' represents an attractive means of sheltering other sources of income. Indeed, owners may avoid tax entirely on housing returns by taking advantage of the exemption of capital gains from taxation, which becomes available after a minimum possession period of 2 years.

The Taxation of Capital Gains

Most OECD countries treat the capital gains realised on owner-occupiers' principal residence as exempt from taxation. In those countries where capital gains are taxed, deferral provisions nullify their impact. For instance, home-owners in the USA can defer taxes on condition that the realised gains are put into a more expensive home. Furthermore, for home-owners aged 55 or over, there is a one-time capital gains exclusion up to a ceiling of US$ 125,000.

In Sweden, capital gains are also subject to taxation on a deferred basis, provided they are reinvested in the owner-occupier's principal residence. In the first 4 years of ownership, tax is levied on nominal capital gains; after the fourth year of ownership only real capital gains are taxed, the real gain being calculated by indexing the acquisition price according to movements in the consumer price index. Beyond the fourth year of ownership, improvement expenditures can be immediately deducted from assessable capital gains.

In most OECD countries capital gains realised on private rental properties are subject to taxation. Practice varies with regard to the use of nominal or real capital gains as the tax base. In Australia, real capital gains are taxed under income tax provisions. Whilst Canada applies income tax provisions to realised nominal gains, 25 per cent of all gains are exempt. Until the 1986 Tax Reform Act, the USA subjected the realised nominal capital gains of private landlords to a preferentially low capital gains tax rate. This rate relief was eliminated by the 1986 Tax Reform Act; however, the impact was partly offset by the lowering of average income tax rates in that year. Taxation provisions differ in West Germany where, as noted earlier, capital gains are entirely exempt beyond a minimum period of possession of 2 years.

Non-recurrent Indirect Taxes, Recurrent Property Taxes and Wealth Taxes

Examples of non-recurrent taxes are the stamp duty levies payable in Australia and the UK, and the transfer taxes payable in Greece and Portugal. Home-owners in Greece are subject to a number of non-recurrent indirect taxes to which a plethora of tax expenditure provisions apply. The non-recurrent indirect taxes comprise a real estate transfer tax applied to the sales of residential property, and an inheritance/gift tax that is applied to the transfer of property by means of inheritance, gifts and parental assistance. Since 1982, the tax base has been valued in both cases by administered methods resulting in below market values. The real estate transfer tax is applied to all property sales at the flat rate of 10 per cent. To protect first-time purchasers, exemptions are granted, the value of which is dependent upon household composition and size. Unlike the transfer tax, the inheritance/gift tax is applied on a progressive scale with rates rising from 0 to 25 per cent. The recipient is liable to pay the tax, but if that person owns no other residential property there is an exemption, the value of which is determined by household composition and size.

Similar tax provisions with significant non-recurrent indirect taxes on residential property are to be found in Portugal, Spain and Turkey.

Recurrent property taxes are levied by local tiers of government in almost all OECD countries.[4] The tax base generally consists of land and buildings that have been assessed for tax purposes, and the tax is levied at rates established by municipal government revenue needs. As the tax is local, there is a wide variation in assessment procedures both within and between OECD countries. Contrary to practice elsewhere, the USA allows property taxes to be deducted from assessable income under federal tax provisions.

Greece is one of the few countries to include residential property in the tax base of a recurrent wealth tax introduced in 1982. The public's reaction to the tax has been sufficiently vociferous to encourage the government to reduce tax rates sharply, and apply them to administratively assessed capital values that are deliberately below market values. With exemptions on wealth holdings up to DRS25m and an average tax rate of less than 1 per cent, the impact of this wealth tax is now negligible.

Preferential Tax Treatment of Savings Plans

In Canada, France, West Germany, Japan and Luxembourg an important aspect of the tax treatment of home-owners is the tax expenditures accorded to Savings Plans designed to facilitate the accumulation of down-payment (deposit) requirements. The Canadian Registered Home Ownership Savings Plan (RHOSP) was exemplary of such programmes. Under the RHOSP introduced in 1974, first-time purchasers could deposit up to CAN$ 1000 per annum with a ceiling of CAN$ 10,000. Each year's deposit could be deducted from assessable income, and interest accruing on deposits was exempt from tax. These tax expenditures are granted conditionally on the use of RHOSP accumulated funds for the financing of down-payments. This scheme was withdrawn in the late 1970s.

TABLE 1.

Main features of the tax treatmnent of existing housing assets in selected OECD countries

	Apply preferential tax treatment to savings	Apply a transfer tax or stamp duty	Allow deduction of mortgage interest	Add (imputed) net rental income to taxable income	Tax capital gains	Apply an annual wealth tax	Apply recurrent property tax
Canada							
Owner-occupiers	-[a]	Yes[a]	-	-	-	-	Yes
Private landlords	-	Yes	Yes	Yes	Yes[a]	-	Yes
Australia							
Owner-occupiers	-	Yes	-	-	-	-	Yes
Private landlords	-	Yes	Yes	Yes	Yes[b]	-	Yes
UK							
Owner-occupiers	-	Yes	Yes	-	-	-	Yes
Private landlords	-	Yes	Yes	Yes	Yes	-	Yes
Sweden							
Owner-occupiers	-	Yes	Yes	-	-	-	Yes
Private landlords	-	Yes	Yes	Yes	Yes	-	Yes
France							
Owner-occupiers	Yes	Yes	Yes	-	-	Yes	Yes
Private landlords	-	Yes	Yes	Yes	-[c]	Yes	Yes
The Netherlands							
Owner-occupiers	Yes	Yes	Yes	Yes	-	Yes	Yes
Private landlords	Yes	Yes	Yes	Yes	-	Yes	Yes[d]
USA							
Owner-occupiers	-[e]	-	Yes	-	-	Yes	Yes
Private landlords	-	-	Yes	Yes	-	Yes	Yes
Greece							
Owner-occupiers	-	Yes[f]	Yes	Yes[f]	-	Yes	-
Private landlords	-	Yes	Yes	Yes	-	Yes	-
Finland							
Owner-occupiers	-	-	Yes	Yes	-	-	-
Ireland							
Owner-occupiers	-	Yes	Yes	-	-	-	-

[a]Favourable tax treatment of an RHOSP was an important policy measure until its demise in the late 1970s. Under the proposed Value Added Tax (VAT) scheme, resales of property will be tax exempt. In a modified form, new housing will be subject to VAT. Seventy-five percent of private landlords' realised nominal capital gains are subject to tax.
[b]In Australia, real capital gains are subject to taxation under income tax provisions.
[c]In France, private landlords who let only one dwelling are exempt from capital gains tax.
[d]In the Netherlands, there are separate property taxes on occupants and owners.
[e]If 1989 proposals are accepted by the US Congress, tax favoured first-home savings accounts will become available. The capital gains of home-owners are taxed on a deferred basis. A one-time exemption of US$ 125,000 to home-owners aged 55 or over significantly reduces the impact of the tax.
[f]There is both a real estate transfer tax and an inheritance tax that affects the transfer of residential property in Greece. Owner-occupied dwellings of less than 200 m2 are exempt from tax on imputed rental income. This exemption covers almost the entire stock of Greek owner-occupied housing.

Source : Talon (1986); OECD (1983); Rowntree Trust (1989).

market. Furthermore, fixed rate mortgages can inhibit mobility in inflationary conditions as they enable gains to be reaped by mortgagees, as long as they maintain the existing low-rate mortgage whilst their dwelling inflates rapidly in value. The household must trade-off these gains against a progressively more suboptimal consumption bundle (Hendershott and Hu, 1982). In such situations, the problem of over-investment in housing assets may emerge slowly rather than rapidly.[8]

In general, however, market developments are leading to the closer integration of housing finance circuits with equity and money markets.[9] Of particular importance in this regard are the more widespread use of variable rate mortgage terms, the increasing divorce of origination, servicing and holding functions, and the relaxation of statutory controls on housing finance markets and institutions (Boleat, 1986). It can be argued that these developments will increase the efficiency with which housing finance circuits can mobilise funds to match increases in demand, and will improve the competitiveness of markets. In the context of allocative distortions, these developments may have the additional impact of enhancing the mobility of financial capital at the expense of funds for investment in business assets.

Tax Revenue Losses and Balanced Budget Multiplier Impacts

Another potentially significant influence of housing tax expenditures is that on the government's budget balance. Housing tax expenditures tend to grow automatically with inflation, interest rates and real incomes and thereby erode tax revenues. There is little information on the cost to OECD governments of housing tax expenditures in terms of revenue loss. This is partly because there is no agreed method of measurement, but also because some governments have been reluctant to render tax expenditures subject to regular scrutiny (Surrey, 1973). The most commonly employed method of measurement is the 'revenue foregone' approach. Here cost is measured "by comparing revenue generated by the existing tax legislation, with that which would arise in the absence of the specific tax expenditure of interest, given unchanged taxpayer behaviour" (O'Sullivan, 1986, p. 37).

The available evidence suggests that the cost of tax expenditures, as measured by the revenue foregone method, is significant and has grown rapidly during the 1980s. In the USA, the budgetary cost of housing tax expenditures was US$49bn in fiscal year 1988. This dwarfs the direct budgetary outlays for low-income rental households of US$ 11 bn (Miles, 1989). The growth in tax expenditures during the 1980s has been readily apparent in both Ireland and the UK. In the Irish case, tax expenditures to owner-occupiers were higher by 150 per cent in real terms in 1986 than in 1980, reflecting rises in marginal tax rates and interest rates. As a consequence, tax expenditures to owner-occupiers increased from 30 per cent of total indirect and direct housing subsidies in 1980 to 36 per cent in 1986. Between financial years 1980-81 and 1988-89, the revenue foregone as a result of tax expenditures to UK owner -occupiers grew by 70 per cent in real terms. This time, the rise reflects rises in real house prices and the increased number of mortgages. The cost of mortgage interest relief, which had been only 3.4 per cent of net public expenditure on housing in 1980-81, had risen to 9.5 per cent by 1988-89. Clearly, the cost to governments can be substantial.

If losses in tax revenue are matched by balanced reduction in direct government expenditures, there will be a detrimental effect on aggregate demand, output and employment (Asimakopulos and Burbridge, 1984; Mair, 1984). This balanced budget multiplier effect arises because the increase in private expenditure due to the reduction in taxes is less than the balanced reduction in govemment expenditure, the tax reduction being partially absorbed by an increase in saving. Aggregate demand will then fall, as will output and employment. These tendencies will be aggravated to the extent that capital is immobile (or investment is predetermined) in the short run, and there is short-run price and wage inflexibility. Furthermore, in the context of housing tax expenditures, such fears are heightened by the observation that the ratio of employment and new investment to total housing spending is very low.

Equity Considerations

Arguably, it is in relation to equity considerations that the principles and practice of tax policies conflict most with housing policy goals. O'Sullivan (1986) identifies three main reasons why the formal incidence of owner-occupier tax expenditures is regressive. Firstly, with progressive tax rate structures, any given tax exemption or allowance will generate a larger absolute and proportionate reduction in tax burden as a household moves into higher tax brackets. Secondly, as the choice of owner-occupation is income elastic, higher-income groups possess a higher proportion of owner-occupiers. Thirdly, the demand for owner-occupation housing services is also income elastic and, therefore, the size of a tax exemption or allowance tends to be greater the higher the income level of the household. Clearly, these factors are likely to ensure a highly regressive formal incidence, with disturbing implications for the efficiency of tax systems in redistributing income.

There is evidence confirming the regressive distributional properties of owner-occupiers' tax expenditures. In Denmark, 70 per cent of housing tax expenditures are captured by the 24 per cent of households with the highest incomes (United Nations, 1989). Two-thirds of US housing tax expenditures go to households with annual incomes that place them in the top 11 per cent of all taxpayers (Miles, 1989), whilst in the UK 20 per cent of mortgage interest relief is received by the 10 per cent of households with the highest incomes; moreover, the average value of this relief for households with annual incomes greater than £30,000 is more than three times that received by households with annual incomes less than £5,000. This regressive pattern is the source of much criticism.

It is also the case that housing tax expenditures are an ineffficient policy measure in encouraging growth in home-ownership, as they fail to target those low -income groups with an underlying preference for home-ownership, but lacking the ability to meet ownership and acquisition costs. As we shall see in the final section of this paper, it is these considerations which appear to be uppermost in the minds of those OECD governments which have recently sought to reform housing tax expenditure provisions.

The discussion so far relates to variations in the formal incidence of housing tax expenditures among owner-occupiers at different income levels; that is, vertical equity. Also relevant are any disparities arising from the formal incidence of subsidies between owner-occupiers and tenants whose income and housing consumption are equal; that is, horizontal equity. It can be argued that housing tax expenditures are contributing to a widening disparity in favour of owner-occupiers. Three factors can be identified here. Firstly, direct expenditure housing programmes are commonly constrained by budgetary concerns. To the extent that tax expenditures to owner-occupiers are growing automatically with inflation and incomes, subsidy provision will increasingly benefit owner- occupiers. Secondly, as housing tax expenditures can erode the tax base, and if compensating increases in rate schedules are used to maintain tax revenues, tax burdens will be shifted onto tenants. Thirdly, if tenants save the same in total as owner-occupiers on identical incomes, then tenants will accumulate wealth in non-housing assets, whilst the housing equity stakes of owner-occupiers will benefit from any beneficial impact of housing tax expenditures on rates of return.[10]

These factors have been the source of concern about increasing polarisation between tenures, and residualisation of rental tenures (Pugh, 1980; English, 1981). Estimates from Ireland and Australia illustrate how government housing tax provisions and direct expenditure programmes are furthering these processes. In Ireland, private tenants account for 10 per cent of total households and yet receive less than 1 per cent of total housing subsidies. This is despite higher housing costs relative to income: purchasers pay, on average, 10.6 per cent of 1987 gross household income on housing, as compared with an average of 12.3 per cent of 1987 gross household income paid by private tenants. In Australia, private rental housing comprises 20 per cent of the housing stock yet receives only 7.7 per cent of total government gross housing expenditure outlays. Estimates of the sum of direct and indirect housing subsidies, expressed on a per household basis, indicate that in 1987 home-owners received US$26.59 per week, compared to only US$4.36 per week received by private tenants. Once again, this discrepancy persists despite higher housing costs relative to income in the private rental tenure (Gruen, 1988).

These points are confined to the formal incidence of housing tax expenditures; that is, the money which, in this case, is indirectly transferred by the government to the household legally entitled to receive it. There is an important distinction to be drawn between this formal incidence and the effec-

Table 2.

Home-ownership rates in selected OECD countries

(per cent)

	1950	1960	1970	1980[b]	1986[c]
Australia[a]	45	71	67	68	69
Denmark	NA	45.7	48.6	52	66
Finland	55.9	60.8	60.4	64	NA
France	35.5	41.6	44.7	47	51
Norway	NA	52.8	52.6	NA	67
Sweden	NA	36.2	35.2	39	55
UK	NA	41.8	49.2	52	64
Canada	65.6	66.0	60.0	64.3	63
USA	55.0	61.9	62.9	65.6	63.8

a Figures for Australia refer to the nearest census year.
b The figure for Sweden refers to the year 1975.
c Denmark, 1988; France, 1984; USA, 1988; Canada, 1987; UK, 1987.
NA, Not Available.

Source: United Nations, *World Housing Survey*; Rowntree Trust (1989).

tive incidence, which is the actual reduction in price which the household benefits from as a consequence of the transfer. The actual reduction in price is the tax subsidy and will depend upon the responsiveness of supply and demand to price changes; the more unresponsive is supply in relation to changes in demand, the less will be the benefit of tax expenditures to first-time buyers, since their increased demand will serve to bid up prices, thereby capitalising part of the tax expenditures in higher prices. If supply is totally unresponsive, tax expenditures will be completely capitalised. There has been little empirical analysis of the supply of housing. Whilst de Leeuw and Ekanem (1971) estimated a long-run price elasticity of supply of between 0.3 and 0.7 for different sorts of housing in the USA, McDonald (1979) reinterprets their results to imply a zero elasticity. On the other hand, Ozanne and Struyk (1978) obtain a long-run price elasticity estimate of 0.3.

O'Sullivan (1986) and Leutner (1986) have identified a number of factors likely to influence the relationship between the distributions of formal and effective tax subsidies. O'Sullivan (1986) points out that higher-income groups will receive larger amounts of formal subsidy; thus increases in demand are likely to be strongest at the upper end of the market. Counteracting this factor is the less binding job market location constraint on higher-income groups and, therefore, their ability to locate in areas where the supply of land is more responsive to price change. For example, empirical estimates produced by Bradbury *et al.* (1977) indicate that the price elasticity of housing supply ranges from 0.87 in the outer suburbs of Boston, USA, to almost zero in the central business district. Since many low-income groups are constrained to inner city areas where supply is more inelastic, they will receive smaller tax subsidies. However, as Leutner (1986) argues, low-income households may benefit from the filtering of properties vacated by higher-income groups. Although the factors influencing the effective distribution of tax subsidies can be specified, it is not possible to arrive at firm conclusions in the absence of empirical evidence.

Tenure Change, Urban Sprawl and Housing Improvement

The national impacts of housing tax expenditures, which are outlined above, will of course be reflected in the nature of urban housing markets. One potential impact deserving attention from the perspective of urban development is the role of tax expenditures in promoting home-ownership. Table 2 depicts the post-war trend in the rate of home-ownership in selected OECD countries. With the exception of Canada and Finland, all countries experienced a significant increase in the rate of home-ownership in the early post-war years. As housing tax expenditures lower the cost of owner-occupied housing, it is reasonable to argue that favourable tax treatment will enable a greater expansion in owner-occupation than would otherwise be the case. Even if the price elasticity of supply is zero, this expansion can come about through tenure transfers.

As we cannot directly observe what would have been the trend in homeownership rates in the absence of housing tax expenditures, it is difficult to gauge precisely the contribution of favourable taxation provisions to the growth in homeownership. However, empirical studies of the tenure choice decision which have sought to estimate rigorously the importance of housing tax expenditure provisions are suggestive. In the USA, Rosen (1979) estimates that the removal of favourable tax provisions would lead to a fall of 4.4 per cent in the incidence of owner-occupation amongst his sample of households. In de Leeuw and Ozanne's (1981) study cited earlier, the authors estimate the long-run effect of taxing imputed income and allowing the deduction of all operating costs to be a 6.5 percentage point reduction in the percentage of households that are owner-occupiers. These results indicate the importance of housing tax expenditures in the tenure choice decision and their impact on the demand for housing services.

An additional feature of the growth in home-ownership has been its development on the outskirts of metropolitan areas, and the emergence of suburbanisation and urban sprawl. Factors such as advances in transportation technology, employment change and a fall in energy costs will have played a role in this decentralisation process during the 1960s and early 1970s. However, housing tax subsidies will also be a factor, as there is evidence to suggest that they have aided the demand for larger single-family units in the suburbs of metropolitan areas (Hughes and James, 1974; Vickerman, 1984). This phenomenon has been cited as a cause of municipal government fiscal problems, as expansion of the urban area requires heavy public capital expenditure in infrastructure, whilst out-migration erodes the economic and fiscal base of the central city. Jussil (1986) points out that variations in municipal tax rates will emerge and can reinforce the suburbanisation process as households move to avoid high taxes. As labour market location constraints are less binding on higher-income households, inner city areas may then attract an increasing proportion of households with low incomes. These low incomes can preclude the maintenance and improvement of the housing stock vacated by higher-income groups and, therefore, spatial concentrations of poor-quality housing are symptomatic of the problem.

With the rise in energy costs during the 1970s, and the fall in property values in inner city locations, the underlying economic forces may now facilitate a reversal of this process. However, many metropolitan areas have inherited seriously depleted economic and residential structures which have led some policy analysts to argue for the use of tax expenditures to regenerate urban areas (Meyers and Musial, 1974). In the housing context, these arguments have spurred the introduction of increasingly favourable tax allowance provisions for expenditures incurred in the improvement and rehabilitation of private residential property. These provisions are clearly designed to encourage investment in the existing housing stock by lowering the cost to households via reduced tax burdens, the policy rationale being that such financial inducements will lever a greater expenditure than would otherwise be the case. (These developments are examined in the final section of this paper.)

THE CASE FOR HOUSING TAX EXPENDITURES

Many of the impacts discussed in the previous section have spurred a critical examination of tax expenditures and calls for reform. However, tax expenditures do possess a number of attributes which warrant attention in a balanced treatment of reform options.

They encourage private sector participation rather than government-centred decision making. By offering financial incentives on a voluntary basis, tax expenditures avoid the use of coercive instruments of government intervention. It may be argued that alternative direct and indirect subsidy programmes are more likely to be accompanied by government controls over the provision or production of services or goods. These latter programmes run the risk of supplanting market forces and inducing the withdrawal of private sector participation, as compared to the co-operation which is encouraged by tax expenditures.

The provisions of tax expenditure programmes are simpler and easier to administer. As the administrative machinery necessary for the monitoring and collection of tax revenues is already in place, tax expenditure programmes do not require a new bureaucracy for the purposes of implementation. Thus, significant cost savings may be realised by invoking the tax expenditure route as compared to alternative instruments of government intervention. Furthermore, as tax expenditures are not commonly subject to regular review and scrutiny, they may be viewed as helping to preserve the stability of a subsidy.

Decision-makers respond more favourably to tax subsidies than to direct subsidies. An advantage of benefits paid to households through the tax system is that they are disbursed in a manner incidential to normal taxation procedures. In contrast, direct subsidy programmes tend to require a more time consuming and 'visible' application process, which highlights the individual's receipt of subsidy. This can stigmatise potential claimants and induce a reluctance to initiate valid claims, thereby reducing take-up.

Tax expenditures can, in principle, assist the private rental and owner-occupier tenures equally. Tax provisions are flexible and can be used to assist both homeowners and tenants in the private rental sector (Grigsby, 1989). Tax expenditures favouring the latter are normally indirect forms of assistance provided in the form of incentives encouraging the construction of new rental housing. However, in recent years, two countries have begun using the tax system to assist private renters directly. In Ireland, persons aged 55 or over are able to treat rent paid to private landlords as a tax allowance. Similarly, the Greek government's tax reforms of 1988 introduced a new allowance for lower-income tenants distributed in the form of tax credits. Such measures offer the opportunity of designing more horizontally equitable housing tax expenditures.

In view of the allegedly discretionary and inequitable impacts of tax expenditures, it is desirable to examine the attributes proposed on behalf of alternative subsidy mechanisms. This presumes that a subsidy programme promoting home-ownership matches government policy priorities. For the purpose of this discussion I shall assume that this is the case.[11]

TENURE-NEUTRAL TAX REFORMS

A radical reform package advocated by an increasing number of academics and policy-makers (Grey *et al.*, 1981; Ermisch, 1986) is attracting considerable attention internationally. Such reforms would subject owner-occupiers and private landlords to the same tax provisions relevant to the investment good status of housing. Given competitive market conditions, these changes would limit significantly allocative distortions. In order to ensure competitive market conditions, rent controls and administered allocation schemes in social and public housing must be removed. The effects of these institutional changes would be the relaxation of institutional impediments to households' tenure choice decisions, and the maintenance of capital mobility within the housing sector and between the housing sector and the rest of the economy. In order to meet housing policy goals a comprehensive housing allowance programme is proposed, which is targeted on low-income households and specified in such a way that housing of some minimum standard is not beyond the means of low-income groups.

This package of reforms would involve substantial administrative and institutional change in most OECD countries (Wood, 1988). Such changes can be executed if the political will is present. However, there are reservations which can be expressed in respect of the tenure-neutral reform package. At the heart of the proposals is the proposition that the failure to house low-income groups is attributable primarily to their lack of purchasing power. If subsidies are targeted appropriately, free markets can be relied upon to allocate housing optimally. But the segmentation of housing markets, externalities and the monopoly powers of social and public housing institutions can impede the efficient operation of market forces. In such circumstances allocative inefficiencies and unequal housing opportunities for different groups in society can emerge.

These reservations and the administrative hurdles identifed above may have dissuaded governments from adopting such a radical reform package. However, there are other considerations which may present more important barriers to reform. Firstly, in some countries a tenure-neutral policy may be politically unrealistic, where ideological beliefs in the attributes of a particular tenure form are strong. Secondly, the introduction of these policy measures would increase the cost of housing for middle- to higher-income groups who are existing home-owners. The larger the fraction of a country's housing stock which is owner-occupied, the more politically unattractive these measures become. Thirdly, in those countries in which imputed rent does not form part of the income tax base, there can be resistance to change on the grounds that imputed rent is an 'invisible' income stream. Furthermore, in an inflationary environment with a tax base measured in nominal terms, taxing imputed rent becomes a tax on real wealth. Whilst this is a problem common to all assets, it is a particularly sensitive issue with respect to housing, as housing equity generally comprises the largest component of many households' net worth.[12] This point is most relevant to retired persons on fixed incomes who tend to be "asset rich but income poor" (Grigsby, 1989). Finally, contrary to many countries' experiences during the 1970s, we are now generally experiencing high real rates of interest and lower inflation rates. This combination raises the cost of owner-occupied housing, and can strengthen resistance to a policy change which would raise those costs for a large number of households.

RECENT POLICY REFORMMEASURES IN OECD COUNTRIES.[13]

Recent reform measures in OECD countries have not in general changed housing subsidy provisions toward a tenure-neutral subsidy/tax system. The new tax provisions introduced in recent years reflect concerns ranging from the cost of tax expenditures to the use of tax expenditure provisions in order to favour particular purchasers, activities or segments of the housing stock.

Curbing the cost and reducing the regressivity of tax expenditures. Both of these objectives tend to be related or combined in practice, in that measures designed to curb foregone tax revenues have a disproportionate impact on high-income groups. There are a number of options open to governments seeking to reduce the cost of tax expenditures, and they generally involve limitations on the use of tax allowances. Finland combines a ceiling on mortgage interest relief of MARK25, 000 (which in 1985 was binding on only 0. 7 per cent of mortgages) with a non-deductible element comprising the first MARK600 of interest payments. In 1987, the Irish government also introduced a non-deductible component in relation to the mortgage interest tax allowance by making the first 10 per cent of interest payments non-deductible. The severity of this restriction is related to the size of the mortgage.

Some countries have decided to preclude the application of tax allowances at the taxpayer's marginal rate of tax. In Greece, reforms introduced in 1988 restrict the tax benefit from the mortgage interest tax allowance to the base of the income tax rate scale. This flat rate deduction provision has been employed in France since 1983, with rebates on mortgage interest charges calculated at the flat rate of 25 per cent.

The introduction of a ceiling on the extent of allowable cost deductions is increasingly common. If this is not adjusted in line with inflation the real value of tax allowances will be gradually eroded; it therefore represents a convenient means of phasing out tax allowances.

Tax credits can both curb the cost of tax expenditures and ameliorate their regressive nature. By deducting eligible outlays from tax liabilities rather than taxable income, the tax benefit becomes independent of the household's marginal rate of tax, provided that eligible deductions do not exceed tax liabilities. In West Germany, a tax credit of DM600 can be deducted from the home-owner's annual tax liability for each child during the first 8 years of ownership.

Reforms explicitly designed to reduce the regressivity of tax expenditures target expenditures on certain types of purchaser. The now defunct Australian Home Loan Interest Deduction Scheme of 1974 represents an unusually sophisticated provision of this kind. As modified in 1976, it was restricted to first-time purchasers; the unusual aspect of the programme was the progressivity introduced by an income related interest deduction, which tapered off to zero at incomes over AUS$14,000 per annum.

The 1988 Greek reforms also sought to strengthen assistance to first-time purchasers. More generous exemptions from real estate transfer tax were introduced for first-time purchasers, the size of the exemption being conditional on household composition. Thus, couples are granted a DRS4.5m exemption plus DRS1.5m for each additional child.

Encouraging investment in the existing housing stock. It is useful in this context to distinguish between acquisition costs and occupancy costs. Acquisition costs are those outlays which the purchaser must incur in securing housing stock by purchase, and include transaction costs, down-payments, mortgage interest and principal repayments. Occupancy costs are outlays incurred in the process of consuming housing services yielded by the housing stock purchased and will, therefore, include rates payments, depreciation, utility charges, maintenance and repair expenditures.

Tax allowances can be invoked in respect of either or both of these categories. However, there is considerable variation in practice between countries, with some concentrating tax allowances almost exclusively on acquisition costs, as is the case in the UK. This may be detrimental to the maintenance and improvement of the existing housing stock, as the pattern of tax allowances encourages households to choose newly constructed dwellings with low occupancy costs. Correcting this imbalance may encourage demand for older housing and stimulate maintenance and improvement (Royal Institution of Chartered Surveyors, 1986).

Though valid in principle, this proposition should be qualified by the following reservations. Firstly, no empirical examination of the potential impacts has been completed, and their significance is, therefore, not yet substantiated. Secondly, a great deal of housing maintenance and improvement expenditure involves discrete outlays. Home-owners may take out second mortgages to fund these outlays, and interest payments on these are accorded tax allowance status in some countries, thereby affording the favourable tax treatment of improvement and maintenance.[14]

The importance attached to furthering maintenance and improvement of the existing housing stock has prompted some OECD governments to introduce new tax allowances designed to promote these objectives. Some typical reform measures of this kind are listed below.

France. Tax allowance ceilings on improvement and repair expenditures were raised in 1984. The allowances are granted for energy saving improvements as well as for restoration work and major repairs. Rebates are calculated at the flat rate of 25 per cent.

Ireland. As problems of housing shortage have receded, attention has focused on encouraging investment in the existing housing stock. The more severely rundown neighbourhoods can be declared urban renewal areas. The capital outlays on improvement made by owner-occupiers resident in such areas are available as a tax allowance spread over 10 years. In order to stimulate private landlords' outlays, both inside and outside urban renewal areas, 100 per cent of their capital outlays on improvement can be set against the rental income generated by the refurbished building.

Sweden. After the fourth year of ownership, home-owners can deduct improvement costs from taxable real capital gains, thereby mitigating any deterrent effects that a capital gains tax may have on investment in the housing stock.

Curtailing tax efficient housing investment. Private rental housing in some OECD countries has attracted such favourable tax provisions that housing assets are being used as a means of sheltering other sources of income from taxation. This is both costly in terms of tax revenue foregone, and a source of allocative distortions and efficiency losses. These circumstances are particularly evident in countries which use housing tax expenditures to encourage private landlords' acquiescence with rent controls. This can be done by allowing the deduction of operating costs (e.g. interest charges, maintenance, property taxes and depreciation) from taxable income and exempting capital gains from taxation. With the stringent application of rent controls, it is common for private landlords to incur losses which can be used to shelter other sources of income (that is, 'negative gearing'). If rents rise so that losses are eventually eliminated, tax burdens can be minimised by taking advantage of favourable capital gains tax provisions, and selling to owner-occupiers.

Similar circumstances to those outlined above have prevailed in Australia, Canada and West Germany. Measures designed to curb negative gearing were introduced by Canada in 1972, West Germany in 1984 and Australia in 1985.

Prior to July 1985, private landlords in Australia could deduct outgoings in excess of rental income from other sources of taxable income. In addition, capital gains were exempt from taxation. Reforms introduced in July 1985 curbed these tax expenditures, but introduced a new tax concession which aimed to promote new residential construction. In particular, negative gearing was quarantined so that losses could be carried forward and deducted from future rental income and/or realised capital gains on disposal of the rental property. Furthermore, as indicated in the previous sentence, real capital gains were no longer exempted from income tax provisions. To mitigate adverse consequences for new residential construction a depreciation allowance of 4 per cent per annum for newly constructed dwellings was introduced.

Fearful of the consequences for new construction, the Australian government reversed these reforms in September 1987. Negative gearing was fully restored, whilst the depreciation allowance was cut to 2.5 per cent per annum. As a consequence, the acquisition costs of private landlords in Australia are now more favourably treated by the tax system than prior to the July 1985 reforms.

Whilst the use of rental housing as a tax shelter is of concern, this is offset in some countries by government aims to promote the construction (or conversion) of new rental housing. Thus, in recent years, both Ireland and the UK have introduced new tax expenditures designed to stimulate new construction. In the case of Ireland, these took the form of tax allowances. Introduced in 1988, they allow capital outlays on the construction or conversion of accommodation for rent to be deducted from rental income generated from these and/or other rental property.

Measures to curtail the tax privileged status of housing finance institutions. As noted earlier, there is a long tradition of protecting the position of specialist housing finance institutions in the UK, Ireland and the USA. In line with moves to deregulate the financial sector, the boundaries between specialist housing finance institutions and other financial institutions were relaxed during the 1980s. This includes the removal of tax expenditures.

In the USA, S&Ls had until 1984 benefited from a bad debt tax allowance and a maximum tax rate provision, provided that they kept 82 per cent of their assets in home mortgages or US government securities. In 1984, the proportion of bad debts eligible as a tax allowance was reduced to 32 per cent; in 1986, it was further cut to 8 per cent and the maximum tax rate was raised to 31 per cent, just below the corporate rate of 34 per cent. Offsetting this was a relaxation of the asset constraint from 82 per cent to 60 per cent.

Also in 1986, the Irish government moved to place building societies on an equal footing with commercial banks; thus the preferentially low corporate tax rate to which building societies were subject was removed. In addition, interest payments on deposits are now no longer paid net of tax and at a favourably low composite rate. Instead, deposit account interest payments attract tax at the taxpayer's marginal rate, as is the case with other financial institutions.

CONCLUSIONS

The favourable tax treatment of housing assets is common to many OECD countries. Whilst many housing tax expenditures have emerged as tax systems have evolved, rather than being specifically designed to encourage housing consumption or production, they nevertheless accord favourable treatment to housing asset owners.

In recent years there has been growing concern about the impact of housing tax expenditures. In particular, the inflationary environment which emerged in the 1970s increased the cost to governments of such measures in terms of tax revenue losses. Furthermore, by reducing the after tax real user cost of residential investments, there are growing fears of an over-investment in housing assets at the expense of industrial capital. Negative impacts upon economic growth may be anticipated. In urban housing markets, tax expenditures are also associated with tenure polarisation, urban sprawl and inner city housing decay.

Whilst many of the adverse impacts of housing tax expenditures have created pressure for reform, OECD governments have in the main demonstrated an unwillingness to reform tax subsidy mechanisms fundamentally. In reviewing recent reform measures introduced by a sample of OECD governments, there would appear to be four objectives guiding reform. These are:

(i) efforts to curb the cost of tax subsidies and reduce their regressivity;
(ii) a willingness to use tax subsidies to encourage the maintenance and improvement of private housing;
(iii) a wish to eliminate negative gearing in the private rental sector;
(iv) the removal of tax privileges favouring specialist housing finance institutions.

Such reforms will suppress but not eradicate the major adverse consequences of housing tax expenditures which have been outlined in the course of this paper.

Notes

1. An earlier version of this paper, based on research conducted whilst the author was an adviser to the OECD Environment Directorate's project group, can be found in Wood (1988).
2. These figures come from OECD (1988).
3. In Finland, interest charges on all personal loans can be deducted from assessable income. The MARK25,000 ceiling applies to all interest payments, with the additional restriction that only MARK10,000 of this allowance can be earmarked for interest payments on loans other than mortgages.
4. For a detailed description of property taxes in OECD countries, see OECD (1983).
5. Defined as the failure to tax imputed net rental income and realised real capital gains.
6. Goodwin (1986) acknowledges the potential impacts that inflation can have on housing demand via tax expenditures and front-end loading problems, but adds a third which he labels "hedging effects". It is argued that in turbulent inflationary conditions housing capital can be perceived as a good hedge against future housing price fluctuations; in addition, if unanticipated house and non-house price inflation are positively correlated, housing capital can be used to 'smooth' non-housing consumption in terms of realising equity by means of taking out second mortgages. Goodwin's econometric estimates suggest that the net impact is crucially dependent upon the relationship between the mortgage rate and expected price inflation.
7. There are a number of other assumptions which need to be satisfied in generating this hypothesis. See Brown and Jackson (1978).
8. Hendershott and Hu (1982) attribute the delay to the use of fixed rate mortgages. They argue that the post-1975 housing boom reflects a catch-up effect, spurred by the erosion (due to amortisation and inflation) of real capital gains on fixed rate mortgages originated in the late 1960s and early 1970s.
9. In the USA, evidence that the mortgage market has become integrated with the bond market is presented in Hendershott and Villani (1980) and Hendershott (1980).
10. Hills (1984) has computed what is termed the degree of fiscal privilege enjoyed by savings held in different assets in the UK. The degree of fiscal privilege is measured as the difference between the individual's mar-

ginal income tax rate and the effective tax rate levied on the asset's real return. Of the assets in which personal wealth is held, housing had the second highest degree of fiscal privilege during the period 1978/79-1982/83, as calculated at the inflation rates pertaining during that period. In Australia, Freebairn *et al.* (1988) estimate the after-tax return to owner-occupied housing and alternative investment assets, and conclude that owner-occupied housing is the most profitable of all forms of direct investment and on a par with fixed interest or property-based superannuation funds.

11. The rationale for such a policy priority is commonly expressed in terms of the strong financial interest of owners in maintaining sound-quality residential neighbourhoods, encouraging saving by a lower rate of taxation on the return to housing equity and facilitating low-income households in exercising any underlying preference to home-ownership.
12. In Canada, for example, housing equity accounted for 43.7 per cent of the net worth of all Canadians in 1977 (Statistics Canada, 1980).
13. The source material upon which this section is based is comprised of documents provided by member country governments to the OECD Environment Directorate's Urban Housing Finance Project, and papers presented to the Rowntree Trust (1989). The author gratefully acknowledges access to these documents.
14. UK owner-occupiers have been able to deduct (from taxable income) interest payments on mortgages raised to finance improvement investments. However, the 1988 Budget revised tax provision in this respect, so that in the future households will be unable to deduct such interest payments.

REFERENCES

ALM, J., FOLLAIN, J.R. and BEEMAN, M.A. (1985) Tax expenditures and other programs to stimulate housing: do we need more?, *Journal of Urban Economics*, 18, pp. 180-195.

ASIMAKOPULOS, A. and BURBRIDGE, J. (1984) The short period incidence of taxation, *Economic Journal*, 84, pp. 267-288.

BOLEAT, M. (1986) Innovations in housing finance instruments and institutions, in: *URBAN AFFAIRS PROGRAMME, Tax Policies and Urban Housing Markets.* Paris: OECD.

BRADBURY, K. ENGLE, R., OWEN, I. and ROTHENBERG, J. (1977) Simultaneous estimation of the supply and demand for housing location in a multizoned metropolitan area, in: G. INGRAM (Ed.) *Residential Location and Urban Housing Markets.* New York: NBER.

BROWN, C.V. and JACKSON, P.M. (1978) *Public Sector Economics.* Oxford: Martin Robertson

ENGLISH, J. (Ed.) (1981) *The Future of Public Housing.* London: Croom Helm.

ERMISCH, J. (1986) Policy reform: an alternative subsidy mechanism, in: *URBAN AFFAIRS PROGRAMME, Tax Policies and Urban Housing Markets.* Paris: OECD.

FREEBAIRN, J., PORTER, M. and WALSH, C. (1988) *Spending and Taxing II: Taking Stock.* Sydney: Allen and Unwin.

GOODWIN, T.H. (1986) Inflation, risk, taxes and the demand for owner-occupied housing, *Review of Economics and Statistics*, 68, pp. 197-206.

GREY, A., HELPWORTH, N.P. and ODLING-SMEE, J. (1981) *Housing Rents, Costs and Subsidies,* 2nd edn. London: Chartered Institute of Public Finance and Accountancy.

GRIGSBY, W.G. (1989) *Some observations on selected aspects of United States housing policy,* mimeo.

GRUEN, F.H. (1988) *Some economic and social aspects of housing in Australia.* Discussion Paper 88/08, Economic Planning Advisory Council.

HARBERGER, A.C. (1962) The incidence of corporation income tax, *Journal of Political Economy,* June, pp. 215-240.

HENDERSHOTT, P.H. (1980) Real user costs and the demand for single family housing, *Brookings Papers on Economic Activity,* 2, pp. 401- 444.

HENDERSHOTT, P.H. (1981) Inflation and extraordinary returns on ownership-occupied housing: some implications for capital allocation and productivity growth, *Journal of Macroeconomics,* 5, pp. 177-203.

HENDERSHOTT, P.H. and HU, S. (1982) Accelerating inflation and nonassumable fixed-rate mortgages: effects on consumer choice and welfare, *Public Finance Quarterly,* 10, pp. 158-184.

HENDERSHOTT, P.H. and VILLANI, K. (1980) Secondary residential mortgage markets and the relative cost of mortgage funds, *American Real Estate and Urban Economics Association Journal,* pp. 50-76.

HILLS, J. (1984) *Savings and Fiscal Privilege.* London: Institute of Fiscal Studies.

HUGHES, J.W. and JAMES, F.J. (1974) *Suburbanisation Dynamics and the Future of the City.* New Brunswick, NJ: Rutgers University.

JUSSIL, S. (1986) Urban impacts and policy reform in Nordic countries, in: *URBAN AFFAIRS PROGRAMME, Tax Policies and Urban Housing Markets.* Paris: OECD.

LEUTNER, B. (1986) The national economic impacts of tax expenditures in the Federal Republic of Germany in: *URBAN AFFAIRS PROGRAMME, Tax Policies and Urban Housing Markets.* Paris: OECD.

LEEUW, F. DE and EKANEM, N. (1971) The supply of rental housing, *American Economic Review,* 61, pp. 806-817.

LEEUW, F. DE and OZANNE, L. (1981) Housing, in: H. J. AARON and J. A. PECHMAN (Eds) *How Taxes Affect Economic Behaviour.* Washington, DC: Brookings Institute.

MAIR, D. (1984) Towards a Kaleckian

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The Urban Edge (1988) Measuring the benefits of rent control, 12, August/September.

TURNER, J. (1972) *Freedom to Build.* London: Macmillan.

UNCHS (HABITAT) (1987) *Global Report on Human Settlements.* Nairobi.

UNITED NATIONS (1987) *Housing and Structural Adjustment.* New York: United Nations.

US BUREAU OF THE CENSUS (1974) *Annual Housing Survey* Washington, DC.

VILLANI, K. (1981) The tax subsidy to housing in an inflationary environment: implications for after-tax housing cost, in: C. F. SIRMANS (Ed.) *Research in Real Estate.* Greenwich, CT: JAI Press.

WALLICH, C. (1987) *Savings Mobilisation through social security: the experience of Chile during 1916-77.* World Bank Staff Working Paper No. 553, Washington, DC.

WEICHER, J. (1979) Urban housing policy: in: P. MIESZKOWSKI and M. STRASZHEIM (Eds) *Current Issues in Urban Economics.* Baltimore, MD: Johns Hopkins University Press.

WEICHER, J. and HARTZELL, D. (1980) *Transactions in new and existing homes.* Urban Institute Contract Report 1291-2, Washington, DC.

WEINBERG, D., FRIEDMAN, J. and MAYO, S. (1981) Intra urban residential mobility: the role of transactions costs, market imperfections, and household disequilibrium, *Journal of Urban Economics, 9,* pp. 332-348.

WILLIAMSON, J. (1987a) *Did England's cities grow too fast during the Industrial Revolution?* Harvard University Discussion Paper No. 1311, Cambridge, MA.

WILLIAMSON, J. (1987b) *Underinvestment in Britain's cities during the Industrial Revolution?* Harvard University Discussion Paper No. 1344, Cambridge, MA.

WILLIAMSON, O. (1985) *The Economic Institutions of Capitalism.* London: Macmillan.

WORLD BANK (1975) *Housing: Sector Policy Paper.* Washington, DC: World Bank.

WORLD BANK (1980) *Shelter.* Washington, DC: World Bank.

WORLD BANK (1988) *Annual Report.* Washington, DC: World Bank.

WORLD BANK (1988) *World Development Report.* Washington, DC: World Bank.

YAP, L. (1975) *Internal Migration in less developed countries: a survey of the literature.* World Bank Staff Working Paper No. 215, New York.

YOTOPOULOS, P. and NUGENT, J. (1976) *Economics of Development: Empirical Investigations.* London: Harper and Row.

ZHANG J. (1986) *Urban construction reconsidered: China's cities, issues and solutions.* World Bank, Urban Development Department Discussion Paper No. 101, New York

TAXATION . . .

→ 51

Theory of the short-period incidence of the property tax, *Environment and Planning C: Government and Policy,* 2, pp. 117-134.

MCDONALD, J.F. (1979) *Economic Analysis of an Urban Housing Market.* New York: Academic Press.

MEYERS, E.E. and MUSIAL, J.J. (1974) *Urban Incentive Tax Credits: a Self-correcting Strategy to Rebuild Central Cities.* New York: Praeger.

MILES, B.L. (1989) *Housing policy: home-ownership affordability.* Congressional Research Service Issue Brief, The Library of Congress, Code IB88108.

OECD (1983) *Taxes on Immovable Property.* Paris: OECD.

OECD (1984a) *Tax Expenditures: a Review of the Issues and Country Practices.* Paris: OECD.

OECD (1988) *Revenue Statistics of OECD Member Countries 1965-1986.* Paris: OECD.

O'SULLIVAN, T. (1986) The theory and measurement of tax expenditures and their impacts, in: URBAN AFFAIRS PROGRAMME, *Tax Policies and Urban Housing Markets* Paris: OECD.

OZANNE, L. and STRUYK, R. (1978) The price elasticity of supply of housing services, in: L. BOURNE and J. R. HITCHCOCK (Eds) *Urban Housing Markets: Recent Directions in Research Policy.* Toronto: University of Toronto Press.

PUGH, C. (1980) *Housing in Capitalist Societies.* Farnborough: Gower.

ROYAL INSTITUTION OF CHARTERED SURVEYORS (1986) *Better Housing for Britain.* London: Royal Institution of Chartered Surveyors.

ROSEN, H.S. (1979) Housing decisions and the US income tax: an econometric analysis, *Journal of Public Economics,* 11, pp. 1-23.

ROWNTREE TRUST (1989) *Proceedings of International Conference on Housing Finance, 28-30 June 1980.* York, UK.

SCHÜSSHEIM, M.J. (1989) *Housing and community development.* Congressional Research Service Issue Brief, The Library of Congress, Code 1B89004.

STATISTICS CANADA (1980) *Incomes, Assets and Indebtedness of Families in Canada 1977.* Ottawa: Statistics Canada.

SURREY, S.S. (1973) *Pathways to Tax Reform: the Concept of Tax Expenditures.* Cambridge, MA: Harvard University Press.

TALON, J.F. (1986) Housing tax expenditures in OECD countries, in: *URBAN AFFAIRS PROGRAMME, Tax Policies and Urban Housing Markets.* Paris: OECD.

UNITED NATIONS (1989) *Distributional Aspects of Housing and Taxation Policies in Denmark.* Copenhagen: Economic Commission for Europe, Committee on Housing, Building and Planning.

VICKERMAN, R.W. (1984) *Urban Economics: Analysis and Policy.* Oxford: Philip Allan.

WEICHER, J.C. (1987) *The future structure of the housing finance system.* Paper presented at *Conference on Restructuring the Financial System,* 16-17 November 1987, Washington DC, USA.

WOOD, G.A. (1988) Housing tax expenditures in OECD countries, economic impacts and prospects for reform, *Policy and Policies,* 16, pp. 235-250.

WOOD, G.A. (1989) *The role of housing in economic growth.* Working Paper No. 21, Economics Programme, Murdoch University.