



OECD ECONOMIC SURVEY OF THE NETHERLANDS 2004:

HOUSING POLICIES

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from the section on housing policies, chapter 2*

Housing price increases have been high owing to weak supply responses

Real house prices in the Netherlands increased at annual average rate of 2.9 per cent over 1971-2002, the fourth highest rate among OECD countries with available data (**Table 2.1**). Increases in real house prices rose to an annual average rate of 6.7 per cent over 1991-2002, the highest rate in the OECD area. Consequently a large rise in real land prices emerged -- real construction costs have risen at a much lower rate. While residential landowners are made better off by such price increases, this gain is at the expense of other current and future residents who have to pay higher rentals.

Normally, high increases in house prices are associated with high income growth. This is because income growth generates more demand for space, increasing the price of land for construction. Indeed, the correlation coefficient between increases in real house prices and growth in real household disposable income for the OECD countries included in this analysis is 0.5. But growth in real household disposable income in the Netherlands was actually slightly below average (see **Table 2.1**). In other words, increases in income are associated with unusually large increases in house prices in the Netherlands. House prices rose at annual average rate relative to household disposable income of 0.7 per cent over 1971-2002, the third highest rate in the OECD area; housing affordability, as indicated by house prices relative to household disposable income per capita, declined by more than in any other country except for Spain. In most countries, house prices actually declined relative to disposable income. Over 1991-2002, the annual average increase in house prices relative to disposable income was 4.8 per cent, by far the greatest increase in the OECD area. The large increase in house prices relative to disposable income in the Netherlands mainly reflects the relatively small effect of housing stock supply in restraining increases in real house prices by international comparison (**Box 2.1**). The greater easing in access to mortgage finance in the Netherlands than in most other countries, especially in the 1990s, is also likely to have contributed to the relatively large price increase in the Netherlands.¹ Finally part of the explanation of house price increases in the 1990s may be found in a catch-up effect after the strong house price decline in the early 1980s, which initially faded away only slowly.

Table 2.1. Real increases in house prices, construction costs and household disposable income¹
Average annual percentage change

	Real house prices				Ratio of house prices to disposable income				Real construction costs	Real household disposable income	Ratio of house prices to disposable income per capita
	1971-80	1981-90	1991-02	1971-02	1971-80	1981-90	1991-02	1971-02			
United Kingdom	3.7	4.7	2.8	3.6	0.9	1.6	0.0	0.8	10.1	2.9	1.0
Spain	2.0 ²	6.3	2.5	3.5 ³	-1.0 ²	3.7	0.2	0.9 ³	10.6	2.8	1.5 ³
Ireland	3.3	-0.6	6.1	3.1	5.4 ⁴	-2.1	0.7	0.1 ⁵	10.9	3.0 ⁵	0.8 ⁵
Netherlands	3.7	-2.2	6.7	2.9	0.7	-4.1	4.8	0.7	5.3	2.3	1.3
Australia	1.9	2.3	3.3	2.5	-2.1	-0.3	0.8	-0.4	7.5	3.0	1.0
Belgium	4.1	-1.6	3.9	2.2	0.6	-3.3	2.4	0.0	5.1	2.2	0.2
Canada	3.2	1.8	0.6	1.7	-2.2	-0.7	-1.0	-1.3	5.5	3.1	-0.1
Italy	3.7	2.2	-0.5	1.6	-4.3 ⁷	-0.5	-0.8	-0.6 ⁶	9.8	1.4 ⁶	-0.5 ⁶
Norway	0.0	0.9	3.7	1.6	-1.1	-0.8	-0.2	-1.2 ⁸	5.9	3.0 ⁸	-0.7 ⁸
United States	2.2	0.8	1.9	1.6	-1.1	-2.4	-1.1	-1.5	5.3	3.3	-0.5
France	2.6	0.8	0.8	1.3	-0.7	-0.8	-1.2	-0.9	5.8	2.3	-0.4
Denmark	1.7	-1.8	3.4	1.2	0.4	-3.7	2.2	-0.2	6.2	1.5	0.0
Japan	1.8	4.5	-2.3	1.0	-2.5	1.8	-3.2	-1.4	3.4	2.5	-0.8
Finland	-1.8	6.4	-1.7	0.7	-4.8	3.3	-2.8	-1.6	7.4	2.5	-1.2
New Zealand	0.1	-0.7	1.1	0.2	-2.9 ⁹	-2.9 ⁹	-0.9	-1.4 ¹⁰	9.1	2.1 ¹⁰	-0.4 ¹⁰
Sweden	0.6	-0.7	0.4	0.1	-1.2	-1.6	-1.3	-1.4	7.9	1.5	-1.0
Switzerland	0.7	3.5	-3.1	0.1	-0.4	0.9	-4.9	-1.7	1.4	1.9	-1.2
Germany	1.6	-0.7	-0.6	0.0	-1.5	-3.2	-2.5	-2.5	0.8	2.6	-1.6
Average	1.9	1.4	-0.6	1.6	-0.9	-0.8	-0.5	-0.8	6.6	-0.1	2.4

1. All variables are deflated by the private consumption deflator. Countries in shaded regions have average increases in real house prices that are one standard deviation (1.1 percentage point) or more away from the average increase for all countries over 1971-2002.

2. 1972-1980.

3. 1972-2002.

4. 1977-1980.

5. 1977-2002.

6. 1980-2002.

7. 1975-1980.

8. 1975-2002.

9. 1986-1990.

10. 1986-2002.

Source: OECD.

Box 2.1. Determinants of real house prices

Following Meen (2002), real house prices (G) are assumed to be positively related to real household disposable income (RY) and negatively related to the real stock of dwellings (H) and the real interest rate (RR),¹ it is important to include housing supply in this relationship because failure to do so results in a downward bias in the estimated income elasticity of house prices as income and the stock of dwellings are co-integrated. Estimating this relationship as an error correction model, all explanatory variables have the expected signs and are statistically significant (the housing stock is significant at the 90 per cent confidence level but does not quite reach significance at the 95 per cent level). The long-run elasticity of real house prices with respect to real disposable income (1.94) is lower than those obtained by Meen (*ibid.*) for the United Kingdom (2.51) and the United States (2.71).² This, together with lower growth in household disposable income in the Netherlands than in the other two countries (see **Table 2.1**), suggests that high growth in real house prices is not attributable to strong demand but rather to weak supply responses by international comparison (especially compared with the United States). The long-run elasticity of real house prices with respect to the housing stock (-0.52) is low compared with those for the United Kingdom (-1.91) and especially for the United States (-7.64). This may be because prices are so high in relation to disposable income that demand is price inelastic -- Dutch households would find it difficult to economise much more on space in response to an increase in prices whereas American households could easily economise on space in these circumstances. In addition, a much higher proportion of the increase in housing supply in the Netherlands has been for social housing than in the other two countries, which may have a weaker effect on house prices than private housing supply.

1. Nominal variables other than the housing stock were deflated by the private consumption deflator to obtain real variables. The housing stock was deflated by the residential construction price deflator. The housing stock was estimated from investment data using a perpetual inventory model with a 0.85 per cent depreciation rate: this depreciation rate, which comes from ter Rele and van Steen (2001, pp. 57-58), is based on the loss in value due to the ageing of the house, despite carrying out regular maintenance. The interest rate series is for mortgage rates.
2. Meen's estimation periods are 1969(3) to 1996(1) for the United Kingdom and 1981(3) to 1998(2) for the United States.

Table 2.2. An error correction model of real house prices

Constant	-13.549	(-5.4)
ln (G) ₋₁	-0.434	(-5.4)
Δln (G) ₋₁	0.037	(6.9)
ln (RY) ₋₁	0.841	(4.1)
ln (H) ₋₁	-0.226	(-1.9)
RR ₋₁	-0.031	(-5.2)
\bar{R}^2	0.759	
Standard error of regression	0.045	
DW	2.19	

Note: The dependent variable is Δln G; t-values are given in brackets. The estimation period is 1970-2002 (annual data).

Tough zoning regulations, especially in rural areas, are a major barrier to increased supply of residential building sites. Municipalities are free to develop their own regulations, but these must comply with spatial policy of central and provincial governments as well as national and EU regulations concerning such things as noise pollution and safety. The government is considering a relaxation of its rules in rural areas with which municipalities must comply when developing zoning regulations and expects to make an announcement in this respect later this year. Cumbersome building regulations and administrative procedures may also restrict housing supply. Building regulations have been growing in quantity and complexity. This has created difficulties for municipalities to deal promptly with building permit applications. There has also been an increased use of the public enquiry procedure, meaning that more time and processing are required to deal with building permit applications. The government is reassessing building regulations ('*herijking VROM-regelgeving*') with a view to simplifying them. The government has recently also set up 'boosting teams' ('*aanjaagteams*') to solve impediments to housing supply at specific sites or in specific regions.

Volatility in wealth effects from housing has also been high owing to price inelastic housing supply and tax subsidies for owner-occupied housing

When real house prices evolve at a different rate from what households expect, the wealth effects are likely to stimulate or retard growth in consumption expenditures depending upon whether the wealth effects are positive or negative. If it is assumed that households expect real house prices to increase at the same rate as in the previous period, then changes in the real rate of house price inflation will impact on growth in consumption expenditures; this is the formulation in the CPB's consumption equation. Based on this measure, volatility (as measured by the standard deviation in changes in the real rate of house price inflation) in the Netherlands (7.2 per cent) is the sixth highest in the OECD area (**Table 2.3**). Alternatively, it could be assumed that households anticipate real house price inflation to be equal to the rate of increase in the trend of real house prices. Based on this measure, volatility (22.9 per cent) is the highest in the OECD. Another possibility is that households give more weight to recent observations when forming expectations of trend increases, which could be approximated by increases in a Hodrick-Prescott (HP) filter of real house prices. In this case, volatility is the fifth highest in the OECD. Volatility in the Netherlands is higher than average on all three measures. Indeed, a simple average of the three measures points to volatility being the highest in the OECD.²

Table 2.3. Volatility in growth in real house prices¹
Per cent, 1971-2002

	Change in house price inflation	Difference between actual and OLS ² trend house price inflation	Difference between actual and HP trend ³ house price inflation
Netherlands	7.2	22.9	7.3
Italy	12.7	15.0	9.2
Spain	9.7	17.9	8.4
Finland	9.4	17.1	9.2
United Kingdom	9.8	14.5	8.9
Denmark	8.7	13.8	7.2
Ireland	5.2	17.3	5.1
Sweden	6.0	14.0	6.3
Norway	6.0	13.7	6.0
Switzerland	5.2	13.7	5.3
New Zealand	6.6	11.3	6.0
Japan	5.9	11.9	5.7
Belgium	4.5	14.1	4.8
Canada	6.9	9.9	5.5
Australia	6.6	8.0	5.1
France	3.7	7.7	3.8
Germany	2.6	5.0	2.3
United States	2.3	4.8	2.3
Average	6.6	12.9	6.0

1. Volatility is measured by the standard deviation. The countries are ranked in descending order of volatility based on a simple average of the standard deviations of the three series.

2. Ordinary least squares.

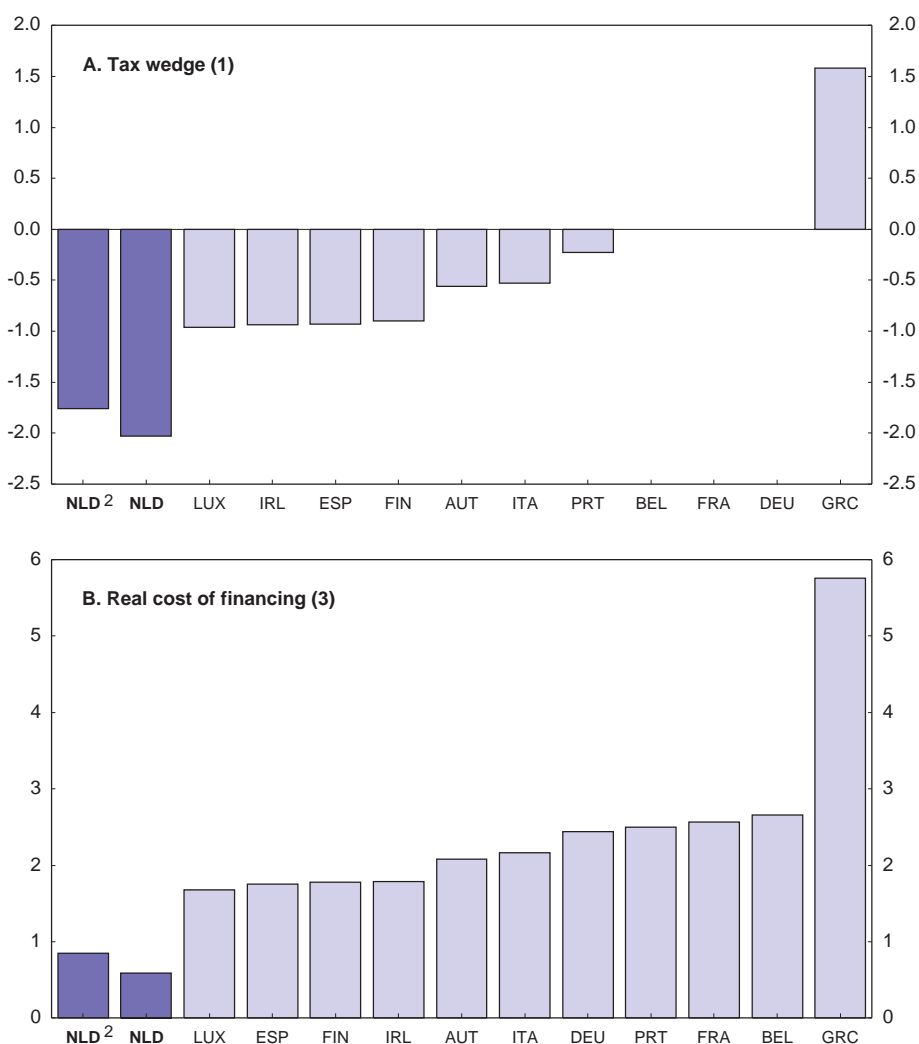
3. Hodrick-Prescott filter ($\lambda = 100$).

Source: OECD.

Volatile house prices are to be expected when housing supply is price inelastic -- variations in demand mainly affect price rather than quantity. But this is aggravated in the Netherlands by high subsidies through the tax system for owner-occupied housing by international comparison (**Figure 2.1**).³ These subsidies mainly result from owner occupiers being able to deduct mortgage interest costs from income taxed at the individual's highest marginal rate while paying low taxes (including local property tax) on imputed rental income compared with taxes on other assets; owner occupiers normally declare a large tax loss on their primary residence (ter Rele and van Steen, 2001). In an efficient market, the present value of expected housing subsidies will be capitalised into house prices. If income rises more quickly (slowly) than expected such that households revise up (down) their estimate of permanent income, this additional tax effect on

demand will translate into even higher (lower) house prices. In the event that the rise (fall) in permanent income expectations coincides with an increase (decrease) in real interest rates, as might be expected during a cyclical upswing (downturn), this stabilising effect on house prices will also be weakened by the subsidies.

Figure 2.1. The impact of taxation on housing cost
Per cent

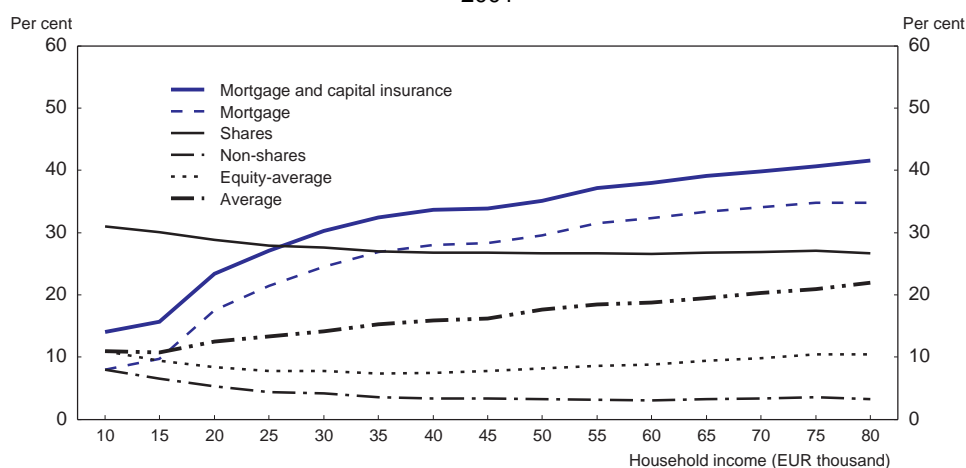


1. Difference between after-tax and pre-tax interest rate on mortgage loans; 1999 tax rules and interest rates unless otherwise indicated.
 2. 2001 tax rules.
 3. Real after-tax interest rate on mortgage loans; 1999 tax rules and interest rates unless otherwise indicated. Expected inflation is 2 per cent in all countries.
- Source: OECD.

The especially favourable tax treatment of debt-financed owner-occupied housing encourages households to maintain mortgages at high levels, which may also amplify economic fluctuations. It has been estimated (ter Rele and van Steen, 2001) that the subsidy to housing costs for owner-occupiers is only around 10 per cent for equity financing⁴ but rises steeply with income for mortgage financing, reaching 30 per cent at a household income of around € 40 000 and 35 per cent at € 80 000. Mortgage financing

combined with a capital insurance policy⁵ is subsidised even more. If households choose to invest in assets, notably shares, with a different risk profile from that of the mortgage, the increased mortgage financing encouraged by the tax system will raise the risk profile of households' portfolios. This is likely to increase the amplitude of business cycles by amplifying the effects on household wealth of fluctuations in share prices, which tend to be pro-cyclical.

Figure 2.2. Price subsidy under the various forms of financing
2001



Source: ter Rele and van Steen (2001).

The government has taken several steps in recent years to limit mortgage interest deductibility when owner-occupiers withdraw housing equity: since 1997, they have not been permitted to claim interest deductions on equity withdrawals from their existing residence except for home improvements; since 2001, the period during which mortgage interest payments could be deducted from personal income has been limited to 30 years and, more importantly, a cut in tax rates has effectively lowered tax subsidies for high income earners by about 20 per cent; and, from the beginning of 2004, owner occupiers can only deduct interest on that part of the mortgage that is equal to the home's value minus the equity withdrawal from the former home.

Housing subsidies reduce economic efficiency and are not well adapted to achieving their social objectives

Tax subsidies for owner-occupied housing increase demand for housing services but are not very effective in achieving their social objective - increasing real consumption of housing services - owing to the low price elasticity of supply. Rather, such subsidies are capitalised into property values, transferring wealth to home owners from home buyers and tenants insofar as they are not compensated by rental subsidies (see below). High-income homeowners benefit most from these arrangements. Tax subsidies also reduce economic efficiency by narrowing the tax base (Table 2.4), resulting in higher tax rates than otherwise and hence, a higher excess burden, and by increasing financial intermediation activity, drawing resources from activities that would be more profitable in the absence of the subsidies.

Table 2.4. Housing subsidisation, 2001
In billions of euros

Owner-occupied sector	
Tax saving from deductibility of mortgage interest payments	7
Tax saving from investing equity in house (the avoided taxation on alternative investments)	6
Tax on imputed rent	-2
Local property tax and transfer tax	-3
Total owner-occupied	8
Rental sector	
Housing allowances	2
Local tax	-1
Government subsidy (narrow definition)	1
Rent reduction by corporations and through regulation	6
Total rental (narrow definition)	2
Total rental (broad definition)	8
Total of both sectors (narrow definition)	10
Total of both sectors (broad definition)	16

Source: ter Rele and van Steen (2001).

High rental subsidies attenuate the effects of high property prices on rents. Part of these subsidies (€ 2 billion) are provided directly by central government in the form of housing allowances (*Huursubsidie*), which are means tested, or through housing subsidies granted to housing corporations (Government subsidy (narrow definition) in **Table 2.4**, most of which were capitalised in 1995).⁶ But most are through lower rents charged by social housing corporations (which is partly possible because they accumulated capital by not passing on to tenants all of the subsidies governments provided them with in the past) and rent regulation.

Taken together, high subsidies in the owner-occupied and rental sectors have many drawbacks. First, while the rental subsidies attenuate the impact of high property prices on some tenants, they further increase overall taxation and the associated excess burden of taxation. Second, with the exception of housing allowances, the subsidies benefit existing tenants irrespective of their current income -- new tenants are usually obliged to pay much higher rentals on the private market. The absence of means testing for these benefits (except at the point of entry into social housing) makes them very inefficient at achieving their social objectives. These arrangements may also reduce mobility for existing tenants, who benefit from subsidies only so long as they retain their current lease.⁷ Third, the private rental market is small (**Table 2.5**). Together with regulations that hold rents for existing tenants below market rates, this means that the supply of private accommodation available for rent must be very small indeed. This would reinforce incentives for households unable to obtain accommodation from a social housing corporation to become owner-occupiers, even though being tenants would make more sense for some households (especially those for whom mobility is relatively important) in a less distorted housing market. The large share of social housing and small share of private rentals, together with rent regulations, also reduce arbitrage between the rental and owner-occupied sectors, accentuating movements in prices for owner-occupied housing. High property transfer fees (6 per cent) also discourage such arbitrage, as well as reducing mobility for owner-occupiers.

Table 2.5. Share of forms of tenure at the beginning of the 1990s
Per cent

	Owner-occupied sector	Private rental sector	Social rental	Other
Netherlands	46	13	40	1
United States	67	32	1	-
Great Britain	68	10	22	-
Denmark	56	19	21	5
Germany	40	40	20	-
France	56	21	17	6
Sweden	43	17	22	18

Source: ter Rele and van Steen (2001).

Assessment

The Netherlands has experienced large increases in real house prices in relation to disposable income in recent decades and high volatility in real house prices. This has amplified business cycles. The low price elasticity of housing supply has contributed to both phenomena. The government should relax the rules in rural areas with which municipalities must comply when developing zoning regulations, as it is considering doing. This, together with the planned simplification of building regulations and the activities of 'boosting teams' in solving impediments to housing supply at specific sites or in specific regions should increase the price elasticity of housing supply, attenuating real price increases and economic fluctuations emanating from house price volatility.

High tax subsidies for owner-occupied housing, especially mortgage financed, have reduced economic efficiency, may have accentuated price volatility and are unlikely to have achieved their social objectives. While the government has taken several steps in recent years to limit mortgage interest deductibility when owner-occupiers withdraw housing equity, it should go much further in this direction. Tax subsidies for owner-occupied housing should be phased out. This would entail progressively moving owner-occupied housing (along with insurance policies linked to mortgages) to the third box in the hybrid Dutch personal income tax system, in which capital income is taxed at 30 per cent on an imputed (nominal) return of 4 per cent on net assets.⁸ In fairness to existing homeowners, who paid high prices in the expectation of receiving these tax subsidies, the new regime should only apply to incremental purchases of owner-occupied housing (*i.e.*, existing tax subsidies should be grandfathered).⁹ This would also limit the decline in real house prices from such a change.

While rental subsidies have attenuated the effect of high property prices for existing tenants to varying degrees, this is not so for new tenants who do not qualify for the housing allowances for low-income households and/or housing from a social housing corporation. Indeed, insofar as these subsidies take the form of strict rent regulations for existing tenants, this is at the expense of potential new tenants because it narrows the private rental market, driving up rents. The government should relax rent regulations so that rentals for existing tenants can be adjusted to market rates at regular intervals, such as every three years. This would allow the private rental market to develop from its current atrophied state and would permit social housing corporations to raise rents to market rates for tenants who no longer have low incomes. At the same time, the social housing corporations should be obliged to apply the subsidies that government has provided them with to reducing rents for low income tenants according to a government approved schedule. Such targeting of these subsidies would reduce the amount the government needs to spend on housing allowances, reducing the efficiency costs of taxation. If owner-occupied subsidies though the tax system were to be phased out, rental subsidies could be phased down as well.

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NOTES

1. Mortgage lenders in the Netherlands now take both incomes in a household into account when calculating borrowing capacity. The typical loan-to-value ratio in the Netherlands is 90 per cent, the highest in any OECD country for which data are available (OECD, 2004).
2. In the 1990s, volatility was below average on two of the measures and above average on the other. The simple average of the three measures of volatility was only somewhat higher than the average for all the countries considered.
3. Van den Noord (2004) finds a strong correlation between marginal effective tax wedges on owner-occupied housing and the variability of real house prices (gauged by the root mean square of the per cent deviation from trend) across euro area countries. He estimates that the Netherlands has the largest tax breaks and the greatest price variability.
4. The subsidy is higher (around 30 per cent) if the alternative equity investment is shares because of the higher rate of corporate taxation that is due on this form of investment. In the non-share case, the subsidy is small because the alternative investment is taxed only slightly higher.
5. With such a combination, principal repayments are paid into the insurance policy rather than deducted from the outstanding mortgage. This enables the borrower to maximise mortgage interest deductions by not paying off the debt while at the same time accumulating capital in the insurance policy to pay off the debt when the mortgage term expires. Income on insurance investments linked to a mortgage is not taxed.
6. The government transferred € 16.7 billion to social housing corporations in 1995, representing the present value of future subsidies to which they were entitled.
7. Less scrupulous social housing tenants do, however, move but illegally sub-let their flats, thereby continuing to benefit from the difference between their low social housing rental and market rates.
8. Since 2001, income is allocated to three categories in the personal income tax system: *a)* labour income, imputed rental income from the main residence less mortgage interest payments, and social benefit receipts; *b)* income from substantial business interests (meaning a shareholding of more than 5 per cent); and *c)* income from net wealth. Transferring owner-occupied housing to the third box would bring its taxation into line with that of other assets. Imputed rentals would be taxed at 1.2 per cent (30 per cent tax rate on an assumed return of 4 per cent) of the property value net of mortgage debt. For example, the imputed rental taxation on a house worth € 500 000 with a € 300 000 mortgage would be € 2 400 (1.2 per cent of € 200 000).
9. For example, suppose that an owner-occupier moves from a house worth € 500 000 with a € 300 000 mortgage to a house worth € 700 000 with a € 500 000 mortgage. He would continue to include imputed rental income based on the value of the former home (worth € 500 000) less interest charges on the old mortgage (€ 300 000) in Box 1 (labour income) of the personal income tax (PIT) system. However, the incremental € 200 000 of housing assets (€ 700 000 -- € 500 000) and the associated increase in mortgage debt of the same amount would be included in Box 3 (income from net wealth) of the PIT, which in this case would not generate any extra tax liability as there is no increase in net wealth. Nevertheless, the owner occupier would pay more tax than under the current system because he would no longer be able to deduct interest on the additional € 200 000 mortgage debt from labour income.