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The distributional impact of housing subsidies in Flanders

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In this study the distributional effect of housing subsidies in Flanders – the northern region of Belgium – is analyzed. In addition, the mechanisms that lead to this distribution are clarified. The distributive impact is measured by means of the user cost concept and income quintiles. In order to calculate the level of subsidies the actual user cost is compared with a benchmark cost. Regarding tax expenditure, the benchmark is the generally accepted tax system. With respect to owner-occupiers, the subsidies discussed are mortgage tax relief, the reduced VAT rate for renovation, the reduced transfer tax rate and the imputed rent tax reduction. With regard to the rental sector, social housing and housing allowance are the subsidy schemes at stake. The results show that the tax advantages are mainly received by the 40% highest incomes. The reductions on property tax and transaction costs are to a lesser extent directed at higher incomes, since they include a condition of modest housing. The subsidies in the rental sector for the most part go to the two bottom income quintiles. Overall, the average owner-occupier receives four times more subsidy than the average tenant.

Keywords: housing subsidy; income distribution; Flanders; user cost

Introduction

The goal of this paper is to analyze the distributional effects of the subsidy systems related to housing in Flanders, the northern region of Belgium. It explores how the different subsidies are distributed over various income groups.

Subsidies can take many forms: they can be direct cash payments from the government to the beneficiary, or they can be implicit, such as the difference between subsidized rent and the market rent. Also fiscal measures related to housing can be regarded as housing subsidies. In addition to mapping the distribution of the housing subsidies, we attempt to clarify the mechanisms leading to this distribution.

For homeowners in Belgium, several fiscal advantages are available: mortgage interest relief, the reduced VAT rate for renovation, the reduced transfer tax rate, and the reduction of the imputed rent tax. With regard to subsidies in the rental sector, below-market rent for social housing and the housing allowance are available.

Every measure initiated by the government that lowers the cost of the consumption or production of housing is regarded as a housing subsidy. The subsidy levels will be determined by comparing the actual housing costs to a benchmark cost. In order to calculate these costs we apply the ‘user cost’ concept. Within this perspective, a dwelling is regarded as an investment good that generates housing services that can be consumed. The user cost is the price households pay for these services.

The application of the user cost concept in the field of housing subsidies has a longstanding tradition in Anglo-Saxon literature (Flood & Yates, 1989; Hills, 1991;

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Hancock & Munro, 1992; Haffner & Oxley, 1999). In more recent years the concept has also been applied in Belgian studies (e.g. Doms, Van Damme, Winters, Bilsen, & Buyst, 2001). In recent research for Flanders and the Netherlands the user cost for housing was calculated, while exploring the effect of mortgage interest relief according to income. This study, however, concentrates on the affordability of housing and does not focus on other housing subsidies besides mortgage tax relief (Haffner & Heylen, 2011).

In the following section the conceptual framework is drawn, followed by a discussion of the existing housing subsidy schemes in Flanders. The methodology concerning user cost and databases is then discussed, and the results are presented in the final sections.

Housing subsidies

Conceptual framework

The term housing subsidy is widespread in housing literature but often vaguely defined. In our study we define housing subsidies as all government initiatives that lower the cost of the production or consumption of housing, in an implicit or explicit way (Haffner & Oxley, 1999). According to Flood and Yates (1989) housing subsidies can be divided into three categories: cash outlays, tax expenditure, and rent regulation. The former category is usually seen as the official part of housing policy and includes, for instance, the housing allowance, social housing, grants (for renovation), and social lending. Also tax advantages related to housing are generally regarded as an important part of housing subsidization, although in many instances they were developed outside the framework of housing policy and have initial goals that are not related to housing consumption (Wood, 1990). The subsidy involved in rent regulation is called 'implicit' since it does not include any explicit cash transfer. Certain subsidies are aimed at the demand side of the housing market (housing allowance, social lending), whereas others are directed at the supply side (social housing). The goals of the different subsidy systems may strongly differ: enhancing affordable housing, stimulating homeownership, or improving the quality of the housing stock. Often the official policy goals of the instruments are not made very explicit.

In our study, we determine the involved subsidy level by comparing the actual housing cost to a benchmark cost that refers to a hypothetical situation in which the subsidy would not exist. The subsidy is the difference between the actual housing cost and this benchmark cost. In our analysis we only focus on first-round effects and do not explore behavioral effects or the second-round repercussions of subsidy systems on supply and demand. Ignoring possible second-round effects is a clear limitation of our research.

In the rental sector the choice of the benchmark costs is relatively straightforward. In both the private and social rental sector the benchmark cost is the market rent of the dwelling, without housing allowance. In the private rental market, the housing allowance is an explicit subsidy that lowers the cost of housing. The subsidy in social housing is the difference between the actual (subsidized) rent and the (hypothetical) market rent of the dwelling. The rent in Flemish social housing is related to the income of the tenants and the quality of the dwelling, and is set below the market rent. Flemish social housing agencies are able to subsidize the rents as a consequence of the bricks and mortar subsidy they receive from the Flemish government. With respect to subsidized loans, the subsidy results from the difference between the actual (subsidized) and the market interest rate. The benchmark cost of owning a dwelling financed with a social loan includes a hypothetical market interest.

With regard to the analysis of tax expenditure, different benchmarks are possible. Flood and Yates (1989), followed by Hancock and Munro (1992), introduced a hierarchy of benchmarks that could be regarded as progressively reducing distortions in the tax structure. A first possible benchmark is the 'commonly accepted' tax system. Each deviation from the general system that favors a specific group can be seen as a subsidy. This definition is strongly in line with the definition of tax expenditure of the Belgian High Council of Finance (*Hoge Raad van Financiën*). The Council defines a tax expenditure as a 'revenues decrease due to a deviation from the general scheme of a tax measure in favor of a particular group taxpayers or particular economic, social or cultural activities, which can be replaced by a direct allowance' (Hoge Raad van Financiën, 2002, p. 7). This Belgian definition is in line with the one from the OECD, which argues that a tax expenditure 'is defined as a departure from the generally accepted tax structure which produces the favorable treatment of particular groups of taxpayers or groups of activities' (Wood, 1990, p. 810).

A second benchmark takes 'tenure neutrality' as a point of departure. The tenure neutrality benchmark presumes that all owners need to be treated equally by the income tax system, regardless whether the dwelling is rented out or occupied by the owner. Each deviation from this principle will be regarded as a subsidy.

Third, 'tax neutrality' can be taken as a subsidy benchmark. Under tax neutrality, investors would be treated indifferently – for the sake of tax treatment – between buying a dwelling or making another investment decision. It entails that each investment good is treated equally with regard to income tax. Since earnings on bonds or shares are included in income tax (minus the costs), it means that both net imputed rent and net capital gains (resulting from value increase) should be entered into income tax. Non-taxation of these components – or partial taxation – is hence regarded as a form of tax expenditure. Because of specific data limitations, in this paper we determine tax expenditure by using the first discussed benchmark: the commonly accepted tax system.

Studies on distributional effects of housing subsidies

In an influential study from 1991, Hills discussed the results of several UK studies on the distributional effects of housing subsidies. In addition, he explored the British situation for 1989 using different tax benchmarks. Other influential comprehensive studies on the topic – covering both the rental and owner-occupied sector – are by Rosen (1985) for the US, Hancock and Munro (1992) for Glasgow, and Flood and Yates (1989) for Australia. In these last two studies the subsidies are calculated by means of both a cash-flow and an economic cost concept. In 2000 Haffner applied the tax neutrality benchmark to draw a picture of owner-occupied tax subsidization in Denmark, England, the Netherlands, and Western Germany. She calculated the cost of subsidies for representative hypothetical cases (typical households).

In recent times several studies have been published on the topic. Matsaganis and Flevo-tomou (2010) explored the impact of mortgage tax relief system for owner-occupation in five EU countries, applying the simulation model EUROMOD. Ter Rele and Van Steen (2003) focused on the distributive impact of subsidies on both rental and owner-occupied housing in the Netherlands. For the Czech Republic, Lux, Sunega, and Boelhouwer (2009) analyzed the distributional effect of mortgage interest relief, the implicit subsidies of rent control, and housing allowances. In 2004 the Australian Institute of Health and Welfare published a comprehensive study on the distributional effects of Australian housing benefits in both the owner-occupied and rental sector. They concluded by comparing aggregate subsidy levels by tenure. In these studies, generally mortgage tax relief or other tax benefits are

found to be overrepresented among higher-income groups whereas housing allowances and public/social housing subsidies are found to be concentrated at the bottom of the income distribution.

The most recent comprehensive Flemish study on the topic – using the user cost approach – was published by Doms et al. in 2001. They applied the ‘typical cases’ methodology to explore the subsidy mechanisms in the Flemish owner-occupied sector. Survey and administrative data were used to explore the subsidy systems in the Flemish rental sector. The study pointed out that the mortgage interest relief is bigger for higher incomes but smaller in relative terms. The VAT subsidy for renovation was found to be equal among different income groups of renovators. Also, no income effects were found for the reduction of imputed rent tax. The authors presumed that each income group bought, renovated, or built a dwelling of equal value, which was a clear limitation of this study. Therefore, the discovered effect concerning mortgage relief is only due to the impact of the marginal tax rate and not due to differences in dwelling values between income groups. Finally, a Flemish study on administrative data of 1995 pointed out that only 10% of all housing subsidies went to the bottom quintile, whereas 40% was directed at the top quintile (De Decker, 2000).

Flemish and federal housing policy

Belgium is a federal state with three regions: the Flemish, the Walloon, and the Brussels region. Until 1980, housing policy was a federal issue. From the 1980s onwards, important aspects of housing policy became regional issues. In 2011 the largest part of housing policy is regionally governed, although specific aspects, such as private rental legislation and mortgage tax relief, are still federal.

The homeownership rate in 2005 was 74.4%, whereas the private rental sector covered 18.5% of the market. The social housing sector is relatively small, including 5.6% of all households. About 1.5% of households are classified as living rent free. Owner-occupiers are strongly overrepresented among the higher-income groups. Based on the Housing Survey from 2005, the homeownership rate reaches 89% in the highest income quintile, compared to 67% in the lowest quintile (Heylen, Le Roy, Vanden Broucke, Vandekerckhove, & Winters, 2007). Private tenant and especially tenants in social housing are overrepresented in the lower income quintiles.

According to our definition, several government measures on the federal (Belgian) and regional (Flemish) level can be regarded as housing subsidies in Flanders. First we describe the measures for the rental sector, followed by the subsidies for the owner-occupied sector.

Rental sector

In Flanders, only families with an income below a certain threshold are eligible for *social housing*. In 2011 this threshold was set at €19,169 for a single person, whereas for lone parents and couples without children it was €28,753, plus €1607 per child. In social housing the rent is lower than the market rent, unless taxable household income rises over time to a relatively high level. The subsidized rent is determined as 1/55th of yearly taxable income, with a correction for family size and the quality of the dwelling. Further, it is limited by a maximum (the market rent) and a minimum. The social housing agencies themselves have to finance the difference between the subsidized and market rent. In order to have the necessary financial means they can benefit from interest-free loans granted by the Flemish

Social Housing Company (VMSW). Therefore, the VMSW receives a capital subsidy from the Flemish government.

The Flemish *housing allowance* is granted to a limited group. First, low-income families that move from a bad or unsuitable to a good or suitable dwelling are targeted. The rent of the new dwelling is limited to a maximum, depending on the number of children. Second, low-income families moving to a dwelling rented out by a rental agency are a target group. For these two groups, in order to be entitled, the taxable household income had to be lower than €15,830 in 2011, plus €1042 for each additional child. This subsidy system has existed since 1992 and was renewed in 2007. In the new system the allowance is regressive, relative to the income level, and granted for a maximum nine years. In the old system, which existed from 1992 to 2007, the allowance was calculated in a different manner, was granted for a maximum 15 years, and was not regressive. Also, the maximum rent of the new dwelling was lower in the old system. In 2011 the group receiving a housing allowance according to the old system was still larger than the group that falls within the new system (Winters, Heremans, Elsinga, Marchal, & Vandekerckhove, 2004).

Owner-occupied sector

For Belgian homeowners four fiscal measures exist that may lower the consumption or production cost of housing for specific groups, and that can be regarded as deviations from the general tax scheme. Hence, they can be regarded as housing subsidies. Two of them are federal measures while the other two are regional issues.

Mortgage tax relief is the most generous and best known tax advantage for owner-occupiers. In Belgium, two systems were running in 2011; first, if the mortgage was taken out before 2005 the old system is applied, which has existed since 1989. In this system the fiscal advantage has three components: a regular interest relief, an additional interest relief, and a capital deduction. In the case of regular interest relief the conditions are not strict, with almost all mortgagors being eligible. The amount eligible for deduction is limited to the value of the cadastral income (yearly imputed rent). In case the yearly mortgage interest is higher than the cadastral income, households can benefit from the additional interest relief. In order to receive the additional interest relief, the mortgage duration should be a minimum ten years and must concern a newly built house (with VAT obligation). The amount that is deductible from taxable income is limited to fixed ceilings according to the number of children and is regressive (80% of total interest in the first five years to 10% in the twelfth year). Regarding capital deduction, the mortgage term is also at least ten years. Only a share of the capital repayment can be deducted from taxable income. This percentage is determined by the rate of a fixed ceiling to the total loan sum and varies according to number of children. If the household has no children, the fixed ceiling was €62,190 in 2005 (year of our analysis). In general, the advantage of these last two components is positively related to the marginal tax rate (of income tax) and the mortgage amount. The tax advantage concerns a deduction of taxable income and is calculated at the marginal tax rate. Since in Belgium the income tax is progressive, the benefit will be bigger for higher incomes (De Meyer, 2007).

Since 2005, mortgagors can benefit from the Housing Bonus (*Woonbonus*), which was introduced to replace the old mortgage relief system. In contrast to the old system, the Housing Bonus is a deduction on a flat rate basis and therefore not related to the level of the loan amount. In our study, however, the analysis is carried out for 2005, which entails that the distributive impact of the Housing Bonus will not be analyzed.

Table 1. Components of the theoretical and actual user costs of housing in the rental and owner-occupied sector.

Rental sector	Owner-occupied sector
Market rent	Mortgage interest
	+ Interest on owner's equity
	+ Benchmark VAT on renovation
	+ Benchmark transfer tax
	+ Benchmark imputed rent tax
	+ Holding costs
	+/- Value change of the dwelling
= Theoretical user cost	= Theoretical user cost
- Housing allowance	- Mortgage tax relief
- Subsidy social housing	- Reduction transfer tax
	- Reduction VAT on renovation
	- Reduction imputed rent tax
	- Subsidy social lending
= Actual user cost	= Actual user cost

A second federal tax advantage concerns VAT regulation in the case of renovation costs. Since 1986 a reduced VAT rate of 6% exists (instead of 21%) for renovation costs of dwellings of at least 15 years old. From 2000 onwards this rate also applies to the renovation of dwellings of at least five years old. This last measure was temporary and lasted until the end of June 2011.

A first regional tax advantage concerns the imputed rent tax for homeowners. In the case of a dwelling categorized as 'modest', the tax is reduced by 25%. A dwelling will be classified as 'modest' if the non-indexed imputed rental value is lower than €745 per year. Furthermore, a flat rate reduction is applied for families with two or more children. Also, regarding transfer tax – a Flemish policy measure – a reduced rate exists for modest dwellings. Since 2002 the normal transfer tax rate is 10%, whereas it is 5% for the purchase of a modest dwelling. In the period before 2002, the normal rate was 12.5% and 6.5% for the reduced rate.

In addition to the tax benefits discussed above, Flemish owner-occupiers can benefit from two types of renovation grants and two types of social lending. In our study these subsidy schemes will, however, remain out of scope. The potential impact of these measures on the total distribution of housing benefits is expected to be small, since the incidence of application of these measures is relatively low.

Methodology

In order to calculate the subsidy levels – the difference between the benchmark and the actual housing cost – we make use of the 'user cost' concept. Within the user cost framework, housing is regarded as an investment good that produces a flow of housing services that can be consumed. The cost of these services is called the 'user cost,' being the opportunity cost of the investment in housing instead of an alternative investment good.

Table 1 shows the different components of the theoretical and actual user cost in Flanders for both tenants and owner-occupiers. In contrast to the cash flow concept – which measures the expenses for housing at a certain time – the user cost takes the cost of owners' equity. The opportunity cost of the owners' equity was calculated as the after-tax earnings of an alternative investment in the long run, being the yield of a state bond over ten

years. The earnings on this kind of investment are taxed at a rate of 15%. Other important components of the user cost are the yearly paid mortgage interest and the holding costs. The latter includes the costs of maintenance and depreciation of the dwelling. Finally, the user cost also includes the benefit or loss of the dwelling value change. As house prices in Flanders rose strongly in 2005, this component yielded a 'profit' for homeowners. In the rental sector the user cost is the same as the cash flow rent (Poterba, 1992; Haffner, 2000).

In case of the theoretical user cost of homeowners, possible tax advantages and other subsidies are not taken into account. Benchmark costs are supposed for each component. VAT on renovation and transfer tax are assumed to be calculated at the normal rate (respectively 21 and 10%). Concerning mortgage interest there is assumed no deduction in the income tax. Also, possible tax reductions of imputed rent are not applied. The actual user cost of owner-occupiers is calculated by taking account of all actual tax advantages and the implicit subsidy in case of a social loan. In the rental sector, the theoretical user cost is the market rent. In order to calculate the actual user cost, the market rent should be corrected for housing allowances and the implicit subsidy in social housing.

In order to determine the user cost for homeowners, certain assumptions need to be made. We assume, for example, that the transfer tax and VAT on renovation are paid by their own means.

In order to assess the distributive impact of the subsidies we apply quintiles of equivalent income. Each income quintile represents 20% of the total population. The lowest quintile represents the 20% lowest equivalent incomes in society, whereas the fifth quintile corresponds to the 20% highest incomes. Disposable income is made equivalent by using the adjusted OECD equivalence scale.

The Housing Survey (*Woonsurvey*) 2005 is used as data source for calculating the tax subsidies in the owner-occupied sector (Heylen et al., 2007). This survey contains the necessary data on subsidies for homeowners that moved in the period 1995–2005, based on a sample of 5216 households. Regarding the rental sector, administrative data on housing allowances and social housing are delivered by respectively the Flemish administration (Department RWO) and the Flemish agency for Social Housing (VMSW). The provided databases include the necessary data on family income and composition for calculating the equivalent income. The boundaries of the income quintiles are calculated by using the Housing Survey 2005 and indexed to 2008 for the analysis of the administrative data. Information on the market rent is provided in the administrative dataset of social housing. Market rent was determined for a substantive part of the social housing stock by estimates of notaries.

Tax advantages in owner-occupied sector

Table 2 shows the theoretical and actual user cost of housing for the Flemish homeowners that moved in the period 1995–2005. Only 8% of this group does not have an outstanding mortgage. The average actual user cost was €12,083, whereas the benchmark user cost reaches €13,382. The mortgage tax relief is by far the largest fiscal advantage, providing an average yearly benefit of €1020. The reductions of the transfer tax and imputed rent tax reach on average respectively €132 and €41. These advantages are only granted to correspondingly buyers and owners of a modest dwelling. The reduced VAT on renovation produces an average benefit of €106.

In Table 3 the fiscal advantages for homeowners are presented according to income quintiles of the owner-occupied sector. In addition, the rate of the total tax subsidy to the theoretical user cost is presented. The quintiles are based on incomes in the owner-occupied

Table 2. Theoretical and actual user cost, tax advantages, for owner-occupiers, for different components, average per year, Flanders, 2005.

	Tax advantage (€)	Actual user cost (€)	Theoretical user cost (€)
Mortgage interest	1020	3555	4575
Interest on owner's equity (exclusive VAT on renovation, transaction tax)		5065	5065
Interest on transfer tax	132	389	521
Interest on VAT for renovation	106	53	159
Imputed rent tax	41	474	515
Holding costs		2547	2547
Total	1299	12083	13382

Source: Housing Survey 2005 (Heylen et al., 2007), $n = 576$.

sector, since they allow us to better clarify the mechanisms at stake rather than population quintiles. Regarding mortgage tax relief, the subsidy rises with income until the third quintile. This effect is caused by the impact of the marginal tax rate and the positive link between the loan amount and the tax advantage. The higher the mortgage amount, the higher the tax relief. This effect is limited to the first three quintiles since there is a built-in maximum to this system. Further, the fiscal advantage drops in the fourth quintile, followed by a peak in the fifth quintile. This drop is caused by the specific family profile of the fourth quintile. This group is marked by an overrepresentation of young people for whom their first dwelling is often not their permanent home. Therefore, the dwelling value and correlated tax advantage is relatively low in this group.

The VAT reduction on renovation is also positively related to income, with the exception of the fourth quintile. In the highest quintile the mean VAT subsidy reaches €149, compared to only €77 in the second quintile. On average, higher incomes carry out more expensive renovations, which increase the subsidy level. As shown in Table 3, in the lowest two quintiles the renovation costs are roughly €20,000, compared to €44,509 in the top quintile.

The relationship between the reduction of the transfer tax and income is opposite. The highest quintile gets the lowest subsidy (€91), whereas the lowest quintile on average receives the most (€154). Also, for the reduction of the imputed rent the highest quintile receives on average less than the other quintiles. For both measures this result is due to the 'modest dwelling' condition, as these dwellings tend to be overrepresented in the lower income groups (see last column of Table 3).

Finally, when we look at the average rate of the total tax subsidy to the theoretical user cost, the differences are relatively small. In the first quintile the rate is on average 9.1%, which is significantly lower than in the second, third, and fourth quintiles. In these groups the tax rate is about 11.5%. The rate drops to 10% in the highest quintile, which is a result of the higher theoretical user cost of this group.

Figure 1 presents the distribution of the total amount of tax advantages according to income quintiles of the population. Since owner-occupied dwellings are overrepresented in the higher income groups, the total tax advantage for 73% is directed at the two highest quintiles in the population. The two top quintiles receive more than 70% of total mortgage tax relief and VAT reduction, whereas the lowest quintile gets less than 5% of these two measures.

The reduction of transfer tax and imputed rent tax is, to a lesser extent, concentrated among the highest incomes. More or less 60% is directed at the two highest quintiles. Between 8 and 10% is received by the lowest quintile. Thus, the 'modest dwelling' condition

Table 3. Tax advantages for owner-occupiers, renovation costs and total tax subsidy as % of theoretical user cost, average per year, share of modest dwellings, according to quintiles for owner-occupiers, Flanders, 2005.

	Mortgage tax relief (€)	Reduction VAT on renovation (€)	Reduction transfer tax (€)	Reduction imputed rent tax (€)	Total tax subsidy/theoretical user cost (%)	Renovation cost (€)	Modest dwelling (%)
1st quintile	575 ^{all}	88 ⁵	154 ⁵	55 ^{3,4,5}	9,1 ^{2,3,4}	21 223 ^{3,5}	65*
2	993 ^{1,3,5}	77 ⁵	151 ⁵	47 ^{3,5}	11,3 ¹	20 416 ^{3,5}	54
3	1233 ^{1,2,4}	114	114	37 ^{1,2,5}	11,6 ^{1,5}	37 374 ^{1,2}	39
4	1082 ^{1,3,5}	103	143 ⁵	43 ^{1,5}	11,6 ^{1,5}	28 742 ⁵	55
5th quintile	1237 ^{1,2,4}	149 ^{1,2}	91 ^{1,2,4}	24 ^{all}	10,0 ^{3,4}	44 509 ^{1,2,4}	23
Total	1020	106	132	41	10,7	878	48

Source: Housing Survey 2005, n = 576.

*chi square: p < 0.05; 1,2,3,4,5,all: value significantly differs ($\alpha = 0.05$) from the value for the category of the assigned number.

Figure 1. Tax advantages for owner-occupiers, distribution of total amount according to income quintiles of the population, Flanders, 2005, Source: Housing Survey 2005.

to a certain extent corrects for the general tendency that fiscal subsidies are mainly directed at the rich. This general tendency follows not only from the distribution of tenure according to income, but also from the distribution of dwelling value according to income. Higher values generate higher mortgage tax relief and higher VAT reduction on renovation costs.

Subsidies in rental sector

For the rental sector, we explore the subsidy distribution of both social housing and housing allowances. Table 4 shows the monthly subsidy, theoretical, and actual user cost for the beneficiaries of the two systems in 2008. In addition the average share of the subsidy in the theoretical user cost is shown. Next to the total average amounts, the averages and distribution according to income quintiles (of the population) are presented.

In 2008, social housing in Flanders provided a home for about 141,000 households, on a total of 2.5 million. Data on the market rent and implicit subsidy were available for about 42% of this group. As Table 4 shows, the average subsidized rent is €237 per month, whereas the market rent is on average €469. This results in a mean implicit subsidy of €232 and is on average almost 48% of the theoretical user cost or market rent. The subsidy is significantly lower for higher incomes as a result of the calculation of the subsidized rent (see the third section). Tenants belonging to the lowest quintile receive €286 per month, compared to only €15 in the highest quintile. The actual rent strongly rises with income. This income effect is due to the subsidy effect, since the market rent hardly varies over the income groups. In the first quintile, the subsidy represents, on average, 59% of the market rent, whereas it is 20% in the third quintile and lowers to a level of 2.7% in the fifth quintile. The last column of Table 4 shows that almost 52% of the beneficiaries belong to the lowest 20% incomes in the population, and only 4% to the highest 40%. This distribution results from the strict income conditions of Flemish social housing.

About 6000 tenants received a Flemish housing allowance under the old conditions in 2008, whereas 2000 fall within the new system which has existed since 2007 (for 1210

Table 4. Theoretical and actual user cost, subsidy, average per month, for beneficiaries of social housing and housing allowances, according to income quintiles of the population, distribution of beneficiaries, Flanders, 2008

	Subsidy (€)	Actual user cost/subsidized rent (€)	Theoretical user cost/market rent (€)	Subsidy/ theoretical user cost (%)	Distribution beneficiaries (%)
Social housing (n = 58.881)					
Total	232	237	469	47.9	100
Income quintiles					
1st	286	195	481	59.0	51.8
2	209	251	460	44.5	33.5
3	102	365	467	20.3	10.8
4	36	436	472	6.5	3.1
5th	15	454	469	2.7	0.8
Housing allowance (n = 8095)					
Old and new system	92	199	291	30.8	100
Income quintiles					
1st	96	196	292	32.1	90.8
2	55	236	291	18.2	9.2
3rd–5th	—	—	—	—	0
Old system	72	196	268	26.9	74.4
New system	185	197	382	51.3	25.6

Sources: VMSW, Agency Women, RWO (Flemish government).

Figure 2. Subsidy of social housing and housing allowance, distribution of total amount according to income quintiles of the population, Flanders, 2005, Sources: Housing Survey 2005, VMSW, Agency Wonen, RWO.

beneficiaries the data were missing). When all beneficiaries of the housing allowance are taken together, the average subsidy is €92, whereas the allowance represents on average 31% of the market rent. Due to the low-income boundary as per the admission criterion, almost 91% of the beneficiaries belong to the first income quintile, whereas the other 9% falls within the second quintile. In line with the features of the allowance calculation, the subsidy is higher for the ones belonging to the first quintile, with, on average, €96 compared to €55 in the second quintile. In the first quintile, housing allowance accounts for 32% of the market rent, compared to 18% for the households belonging to the second quintile. Furthermore, for the 26% that falls within the new system, the subsidy rate (51%) is considerably higher than in the old system (27%). This leads to an average allowance of respectively €72 and €185 in the old and the new system. The mean actual rent however hardly differs between the beneficiaries of the new and the old system, as a consequence of the higher allowed maximum rent in the new system.

The distribution of the total subsidy amounts over income groups for social housing and housing allowances is shown in Figure 2. As a result of the income admission criteria and the regressive nature of the subsidies, the lowest income quintile receives by far the most, in both subsidy systems. Since the income admission criteria are less strict in social housing, the subsidy involved is less directed at the lowest income quintile than in the case of housing allowances. Respectively, 98 and 90% of the budget of housing allowances is received by the 20% lowest incomes in society according to the old and new systems. For social housing this figure is 60%. The housing allowances in the new system are less directed at the lowest quintile, not because of changed income boundaries but because the benefits of the beneficiaries in the second quintile tend to be higher than before.

Overall picture of housing subsidization

In order to draw a general picture of the subsidy distribution, Figure 3 shows the average subsidy amounts per subsidy system according to income quintiles of the population for 2008. Regarding the owner-occupied sector, a couple of assumptions had to be made, which

Figure 3. Average yearly subsidy amount (in €), according to housing subsidy measure and income quintile, all households, Flanders, 2008, Sources: Housing Survey 2005, VMSW, Agency Wonen, RWO.

is a drawback in this study. First, with regards to mortgage tax relief, we assume that the amounts and distribution (according to income) for the movers between 1995 and 2005 are equal to the ones for all mortgagors in 2005. Second, concerning other fiscal advantages, we also presuppose that the subsidy amounts and distribution for owner-occupiers that moved in the period 1995–2005 are the same as the distribution for all owner-occupiers. In addition, the amounts of 2005 (Housing Survey) were indexed to 2008, assuming that there was a status quo in this period.

Figure 3 shows that the two highest quintiles benefit most from housing subsidies, closely followed by the first quintile. Households in the second and third quintile tend to benefit least. Thus, on the whole, the outcome shows a moderate Matthew-effect. The high benefits to the top quintile are due to the distributive effect of mortgage tax relief, whereas the positive score of the lowest quintile is mainly caused by the selectiveness of social housing. Further, mortgage tax relief is by far the subsidy with the strongest impact, which results from the high frequency of the measure (one-third of all households) and the relatively high subsidy amounts. Social housing has the second largest impact, which mainly results from the high subsidy levels (€232 per month) as the incidence of social housing is rather low (5.6%). The reduction of the transfer tax has the third largest impact. When the advantages of VAT on renovation, transfer tax, and imputed rent tax are counted together, their yearly amount is 59% of the subsidy of mortgage tax relief.

The advantage of mortgage tax relief strongly rises with income, from a yearly average of €77 for households in the first quintile to €734 in the highest quintile. This outcome is related to the fact that higher incomes are overrepresented among mortgagors and that the fiscal advantage rises with income. Further, the social housing benefits are strongly concentrated in the first quintile. From the third quintile onwards, the average social housing subsidy is very low. Because of the low incidence of the housing allowance, the impact in the overall picture is very limited.

Figure 4. Average yearly subsidy amount for all housing subsidies (in €), according to income quintile and tenure status, all households, Flanders, 2008, Sources: Housing Survey 2005, VMSW, Agency Wonen, RWO.

Figure 4 presents the average yearly subsidy amount of all discussed housing subsidies according to income and tenure status. Overall, the average tenant receives €155 housing subsidy per year, compared to €618 for the average owner-occupier. In the rental sector, the result is mainly the outcome for social housing. The lowest incomes get the most, whereas the 60% highest incomes are left out. With regard to owner-occupiers, the relationship with income is in the opposite direction. The total subsidy levels are considerably higher for households belonging to the two highest income quintiles than for the other households.

Methodological discussion

Before turning to the conclusions, we will discuss briefly some of the methodological limitations of our study and the consequences of the tax expenditure definition we chose. We followed the definition of the Belgian High Council of Finance, stating that tax expenditure is a revenues decrease consequently to a deviation from the general taxation scheme in favor of defined groups or economic, social or cultural activities (Hoge Raad van Financien, 2002). If ‘tax neutrality’ was chosen as the benchmark for defining fiscal benefits, our results for the owner-occupied sector would have been different. According to this benchmark, housing assets should be treated equally in taxation as other investment assets. Since the earnings of other types of assets (bonds, shares) are taxable, non-taxation of imputed rent and non-taxation of capital gains should be regarded as fiscal advantages. In Belgium, taxation of imputed rents exists, but the value of the imputed rent is highly underestimated, as the reference date for the estimation is still set at 1975. Therefore, the real imputed rent is to a large extent not taxed. The inclusion of this non-taxation benefit will strongly increase the fiscal advantage of owner-occupiers, and enhance the housing subsidization difference regarding the rental sector. In addition, as imputed rent is in general higher for large, luxury dwellings, and these dwellings are generally occupied by higher incomes, non-taxation of imputed rent will be distributed more strongly towards higher incomes. In Belgium, as in

most European countries, capital gains of housing transactions are not taxed. If the tax neutrality benchmark was applied, non-taxation of capital gains would also be included in the analysis. This tax benefit is largely dependent on price evolutions in the housing market. In 2005, the year of our analysis, the average house price doubled in real terms since 1995. Haffner & Heylen (2011) calculated an expected capital gain of €19,703 for 2005 in Flanders, meaning that non-taxation of these earnings entails a considerable fiscal advantage. Moreover, Haffner & Heylen pointed out that capital gains increase with income, as large dwellings are overrepresented among higher income groups. Thus, including this tax advantage in the analysis would improve the subsidization picture for the owner-occupied sector, and strengthen the tendency that tax benefits for housing rise with income.

A limitation of this study is that the behavioral effects of households to housing subsidization were not included in the analysis. The results might have been different to some extent if they were. For example, the mortgage tax deduction in Belgium is a general system, which strongly enhances the borrowing capacity of households. Several researchers point out that mortgage tax relief enhances housing demand, which might increase prices to a large extent when price elasticity of housing demand is low. The degree to which the tax relief is reflected in house prices approaches 100% according to Berger, Englund, Hednershott, & Turner (2000) for the Swedish situation in the period 1981–1993. Recently, Brounen and Neuteboom (2008) estimated that about 75% of the subsidy is reflected in house prices in the Netherlands. On the other hand, several studies point out that the capitalization effect of mortgage tax relief is rather limited. For Italy, Jappelli and Pistaferri, (2007) found that mortgage tax relief did not affect housing demand. Also, Bourassa and Girgsby (2000) estimated for the US that the subsidy is reflected in prices at a rate of 14%. In Belgium no study has focused on this topic yet. As housing demand in Flanders is generally regarded as rather inelastic, mortgage tax relief will probably be reflected in house prices to a considerable extent (Vastmans & Buyst, 2011). This means that the actual subsidy level will be lower than the formal subsidy level we calculated in this study. Finally, with regard to the housing allowance in Flanders, the incidence of the subsidy is so low that no price increasing effects are expected.

Conclusions

In this paper a picture is drawn of the distributional effects of housing subsidies in Flanders, the northern region of Belgium. With regard to the owner-occupied sector, the impact of several tax expenditure measures is explored, whereas in the rental sector the focus was on subsidies related to social housing and housing allowances. Every government policy measure that yields a decrease of the consumption or production cost of housing in an explicit or implicit way was regarded as a housing subsidy. In order to calculate the subsidy levels, the actual housing costs were compared with a benchmark cost, representing the cost under the hypothesis that the subsidy would not exist. In case of tax expenditure, we used the general tax system as a benchmark. Consequently, non-taxation of imputed rent or capital gains are not defined as tax advantages. Contrary to most previous research on the topic, this study also focused on the impact of other tax advantages besides mortgage tax relief. Our analysis did not take account of renovation grants and subsidized loans. The impact of these subsidy schemes is expected to be limited compared to the impact of tax benefits and social housing, since incidence of these measures is low.

In the owner-occupied sector, the largest subsidy is the well-known mortgage tax relief. This tax advantage is, among mortgagors, positively related to the marginal tax rate and

the loan amount, which results in a strong positive link with income. Since mortgagors are strongly overrepresented in the higher income groups, the two lowest quintiles only receive a small percentage of the total subsidy amount. Since 2005, the discussed mortgage tax relief system is replaced by a flat rate tax deduction for new mortgagors. Within this new system, the link between tax advantage and loan amount is absent. However, due to taxation at a marginal tax rate, the benefits will still be larger for higher income mortgagors.

Also the reduction of VAT for renovation is larger for the higher incomes in the owner-occupied sector, which is a consequence of the higher renovation costs in this group. Regarding the reduction of the transfer tax and imputed tax, the role of the ‘modest dwelling’ condition is crucial. Since modest dwellings – with a relatively low imputed rent – are overrepresented among the poorer homeowners, the tax advantages are to a lesser extent directed at the higher incomes. On the whole, only 10% of all tax advantages are received by the lowest 20% incomes in society, whereas about 73% is received by the 40% highest incomes. This outcome is to a large extent caused by the overrepresentation of high incomes in owner-occupation, but also by the mechanism at stake: the positive correlation of income with the marginal tax rate, the loan amount and the renovation costs.

In the earlier Flemish study of Doms et al. (2001), no income effects were discovered concerning VAT on renovation, transfer, and imputed rent tax, simply because the applied ‘typical case’ method did not allow for discovering such effects. Therefore, our results stress the merit of an analysis based on elaborate survey data. The Flemish Housing Survey of 2005 offered us the necessary information about the distribution of dwelling value, renovation costs, and modest dwellings over income groups. Moreover, our study stresses the relevance of exploring the effect of other tax advantages besides the often studied mortgage tax relief effect. The income effect of the three other tax measures on the user cost appears to be considerable. Added together, their subsidy is more than half of the subsidy involved in mortgage tax relief.

With respect to the rental sector, the number of social tenants – about 141,000 in 2008 – is much higher than the monthly number of housing allowances (9210). The implicit subsidy in social housing is relatively high, being almost half of the theoretical market rent. As a consequence of the strict income conditions, the social housing subsidies are mainly received by the two bottom income quintiles. With regard to the housing allowances, two-thirds of the beneficiaries fall under the old system. The benefits are yet higher for beneficiaries of the new system while the average actual rent does not differ between the recipients in the two systems. Almost the entire subsidy amount is received by families in the lowest income quintile. As for social housing, this outcome is caused by strict income admission criteria.

When all the subsidy schemes discussed are taken together, the two top quintiles on average benefit the most, whereas the third and fourth quintile have the lowest subsidy levels. Due to social housing, the average housing subsidy in the lowest quintile is relatively high. We do not find a large Matthew-effect, in contrast to the study of De Decker for 1995. The latter study did yet not make use of the user cost method and did not take other tax advantages into account besides mortgage tax relief. Overall, the average owner-occupier receives four times more housing benefit than the average tenant. The impact of the mortgage tax relief is found to be the strongest, followed by the impact of social housing. Further, the link between income and subsidy levels is opposite for both tenures. The homeowners in the top quintiles receive the most tax advantages, whereas high-income tenants hardly benefit at all from housing subsidies. Since no measures are available for tenants that fall outside the admission scope of social housing and housing allowances, this group benefits the least.

The discussed policy measures have varying policy goals and do not always intend to redistribute wealth to lower income groups. Yet, it is interesting for policymakers to know in what way housing subsidization is distributed among income groups and which mechanisms lead to this distribution. We would suggest that policy makers reflect on the outcome of this study with a view to potential reform of the elements that lead to higher benefits for the highest income groups.

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