

## Chapter 8

### **Fiscal decentralisation in the Netherlands: Distributional and employment effects**

by  
Remco van Eijkel and Wouter Vermeulen\*  
CPB Netherlands Bureau for Economic Policy Analysis  
Spatial Economics Research Centre

*Fiscal decentralisation is widely advocated as a means to enhance allocative efficiency and accountability at the local level. Moreover, several countries seek to shift taxes from earned income to more “growth-friendly” bases such as immovable property, which is usually levied at the local level. Yet large distributional effects may well impede such tax reforms. In this chapter, we use simulations to explore the distributional effects of a shift from the national earned income tax to either a local tax on the use of residential real estate or a local head tax in the Netherlands. The analysis shows that distributional effects may be reduced considerably by design. Policy scenarios in which distributional effects are minimised, and the tax burden is shifted towards immovable property show that the tax shift yields a moderately positive impact on employment.*

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## Introduction

The potential advantages of fiscal decentralisation are discussed at length in the economic literature.<sup>1</sup> Ever since Tiebout (1956), the consensus among proponents of fiscal decentralisation is that local taxation brings about more efficient outcomes as it enables and incentivises local governments to tailor expenditures to local demand. Another frequently used argument in favour of decentralising taxes is that it enhances political accountability at the local level since it both confronts voters directly with the costs of the local policy and tightens the local government's budget constraint (see, e.g. Seabright, 1996 and Besley and Coate, 2003).

The Great Recession and the need for fiscal consolidation in its aftermath have spurred the debate on fiscal decentralisation and its potential to enhance budgetary discipline (OECD, 2013). Moreover, the significant tax burden on labour, and its potentially detrimental impact on growth, have led to a search for more “growth-friendly” bases such as immovable property, notably in the European Union (see, e.g. European Commission, 2013). As property taxes are usually levied at the local level, the debate on tax shifting is closely tied to the issue of fiscal decentralisation.

In spite of the potential gains of fiscal decentralisation, distributional effects may inhibit such reforms due to political opposition by the losers. The poll tax failure in the United Kingdom serves as one poignant reminder of the popular resistance that fiscal decentralisation may incite. For such reforms to be successful, it is therefore crucial that distributional effects are understood and addressed. However, the distributional effects of fiscal decentralisation have received little attention in the literature to date.<sup>2</sup>

This chapter explores the distributional effects of a shift from the national earned income tax to either a local tax on the use of residential real estate or a local head tax in the Netherlands. The Netherlands provides a compelling case, as the role of local taxes is exceptionally low from an international perspective – yet this may well change in the near future.<sup>3</sup> In a letter to the Dutch parliament, the Minister of the Interior and Kingdom Relations and the State Secretary for Finance recently outlined a tax shift to the local level (BZK, 2016). Several political parties included a reform along these lines in their manifestos for the 2017 general elections. Using a survey containing detailed information about 95 000 Dutch households as input, a micro-simulation model is applied to predict the distributional effects of a local tax reform along similar lines, which roughly doubles overall local tax revenues. The survey allows us to categorise households into distinct groups on the basis of various characteristics, like income level, source of income and composition.

Two scenarios are considered: one in which the reform takes place through a tax on the use of residential property and another in which a local head tax is introduced. A review of the literature suggests that these two tax bases are particularly conducive to allocative efficiency in the local public sector. These taxes relate more directly to the benefits of local service provision than alternative taxes. Furthermore, they do not divert costs to non-voters, so that local accountability is also enhanced. In both scenarios, higher local taxes are compensated by a lowering of taxes on earned income collected at the national level.<sup>4</sup> Compensation schemes in the baseline scenarios are chosen so as to minimise distributional effects since we are interested in whether large income shifts from one (type of) household to another can be forestalled. This is also the reason why in the baseline simulations exemptions from local taxes are assumed for the lowest-income households.

For both scenarios, we find mild distributional effects for the median households of all household groups considered. In the property tax scenario, these effects range from a -0.3% change in disposable income (for the retired) to a 0.4% change in disposable income (for double earners). Zooming in on individual households, some dispersion around the median is observed, especially at the lower-income levels. Still, less than 5% of the lower-income households experience a negative income shock exceeding 4%, suggesting that the cost of compensating the biggest losers from the reform through more targeted measures may be moderate. Under the head tax scenario, both the distributional effects for the median households and the dispersion around the median are even smaller than in the property tax scenario – a finding that is of particular interest in view of the bad reputation the local head tax has had ever since the poll tax failure. The sensitivity of these results to an alternative treatment of exemptions and fiscal equalisation schemes are explored.

Motivated by the international quest for more growth-friendly tax bases, we also explore the long-term employment effects of our fiscal decentralisation scenarios, using yet a different micro-simulation model. When it comes to the baseline scenarios, in which the compensation scheme is designed to minimise the distributional effects, employment is enhanced under the property tax scenario. The tax shift from earned income to the use of residential real estate increases employment by 0.2% (both in hours and in persons). The simulation results for this scenario thus show that fiscal decentralisation can encourage inclusive growth, since, with few exceptions, the tax shift does not generate large distributional effects for households in the economy while at the same time stimulating employment.

By contrast, a shift to a local head tax does not deliver additional employment if compensation is aimed at minimising income redistribution. Alternative compensation schemes providing households stronger incentives to put in more hours at work (e.g. an increase in the earned income tax credit) create more employment, at the expense of larger distributional effects. Likewise, not granting local tax exemptions has a positive effect on employment but at the same time generates a negative income shock for the lowest-income households.

The next section provides a brief review of the literature on the choice of the local tax base, motivating our choice for a tax on the use of residential real estate and a head tax in the remainder of the chapter. Distributional effects of a shift to these bases are discussed in the third section, while the fourth section deals with the employment effects for the same scenarios that have been considered in the third section. The final section offers some concluding remarks.

### Choice of a local tax base: Review of existing insights

Distributional and employment effects of a local tax reform depend crucially on the local tax base through which the reform is channelled. In order to select a tax base that is best able to deliver the potential gains from fiscal decentralisation, we rely on existing insights from the literature. Throughout this chapter, we focus on the financing of local public goods and leave aside the case of social services being funded by local taxes, as is typical for the “Nordic model of fiscal federalism”.<sup>5</sup> With this in mind, we consider how various local tax bases perform in terms of two of the main aspects of any local tax reform, namely allocative efficiency and accountability at the local level; these issues will be discussed in turn.

### *A tax base in accord with the benefit principle?*

A common notion in the public finance literature is that taxes that impose the tax burden on those persons who actually benefit from the tax-financed public good are least distortive (see, e.g. Musgrave, 1959). Of course, this benefit principle also holds true for the local public sector. A local tax reform that ensures a better alignment of a person's willingness to pay for local services with the actual amount this person contributes is expected to enhance allocative efficiency. Not only are inhabitants in this way incentivised to weigh the benefits of using public services against the costs, but also local governments are encouraged to deliver those services for which inhabitants are willing to pay.<sup>6</sup>

Even though user fees are a standard way to integrate the benefit principle into local public finance, they obviously cannot be employed to finance non-excludable local public services. In another class of local public services, economies of scale play an important role. Examples include the services from facilities like public transit, theatres, shopping centres and so on. Financing fixed costs from user fees lead to under-utilisation and under-provision of these services, as prices must then be set above the marginal cost.

Taxation of real estate is a way to recoup the benefits of facilities that are produced with fixed costs. By their nature, such facilities will be provided at only a limited number of locations. The benefit that households derive from proximity to such locations will capitalise into land rents. It is a tenet of the conventional urban economic theory that a tax on land rents suffices to finance the efficient level of local public goods provision (Arnott and Stiglitz, 1979). Moreover, the capitalisation of access to urban amenities like theatres, bars and restaurants, shopping centres and cultural heritage turns out to be highly empirically relevant. De Groot et al. (2015) show that in the Netherlands access to such amenities explains at least as much of the spatial variation in house prices as access to jobs. Financing the provision or subsidisation of such amenities from residential real estate means that those who benefit also pay the price.<sup>7</sup>

Property taxes can be levied on either users or owners. Currently, residential property taxes in the Netherlands are only levied on owners. A tax on the use of residential real estate was abolished in 2005. The benefit principle applies when the tax falls on the party that benefits. This criterion is non-discriminatory for the owner-occupier sector. It matters considerably, though, for the rental sector. The social rental sector is exceptionally large in the Netherlands, accommodating about one-third of all households. In this sector, capitalisation is imperfect because of rent regulation, so that neither benefits nor taxes on the use of real estate will be fully passed on to owners. Hence, a tax on the use of real estate accords better with the benefit principle than a tax on owners.<sup>8</sup>

Taxation of commercial real estate is only consistent with the benefit principle in as far as commercial activity benefits from local public services. If not, a commercial property tax may induce a race to the bottom in case local jurisdictions engage in aggressive tax-setting behaviour to lure mobile capital. According to the “new view” of property taxation, inter-jurisdictional tax competition renders a (commercial) property tax to be inefficient as it corrodes local tax bases and consequently leads to under-provision of local public services (see Zodrow and Mieszkowski, 1986).<sup>9</sup> Empirical evidence for Germany supports the notion that municipalities may cut tax rates aggressively in order to attract mobile capital (see Becker, Egger and Merlo, 2012).

A head tax accords with the benefit principle for non-excludable public services that benefit all inhabitants to the same extent. Investment in environmental quality is a good example. In this vein, the water boards that are responsible for water management in the Netherlands are also financed with a head tax. While the social services that are provided at the local level are inherently challenging to reconcile with the benefit principle, it may be argued that to some extent, the entire community benefits from their insurance value.<sup>10</sup> Financing such services from a property tax implies that people who live in an expensive dwelling contribute disproportionately to their funding. This may also distort the location choice of households.<sup>11</sup>

Although the demand for municipal services may rise with income, a local income tax may not accord as directly with the benefit principle as a tax on residential real estate. Moreover, whereas residential real estate is immobile in at least the short run, people are not. This implies that to the extent that local income taxes do not correspond to local benefits, they may distort location choices and induce a race to the bottom. The empirical fact that local governments in the United States predominantly choose to tax immobile real estate supports this notion (see, e.g. Nechyba, 1997).

Admittedly, there are quite a few OECD countries, including Switzerland and the Nordic countries, where lower-level governments generate a significant share of their income through income taxes. This does not seem to create excessive inter-jurisdictional tax competition or a malfunctioning of the local public sector.<sup>12</sup> Still, replacing a national tax on earned income by a local income tax does not reduce the tax burden on labour, which makes such a policy less attractive in light of the tax-shifting debate. By contrast, a property tax is expected to put a lower burden on labour as it (partly) capitalises into house prices, leaving labour supply decisions (mostly) unchanged; this issue will be returned to in somewhat more detail in the fourth section of this chapter.

### ***Tax base and accountability***

Taxes on the use of real estate and head taxes appear to accord better with the benefit principle than taxes on other bases. By the same token, they also foster the accountability of local governments to their constituents. If people who make use of local services are also confronted with the price, they are incentivised to discipline their local government through the ballot. Yardstick competition plays a vital role in disciplining local governments that want to raise taxes.<sup>13</sup> This competition is reinforced by the high visibility of local property taxes.<sup>14</sup>

Taxation of the ownership rather than the use of residential real estate may undermine accountability, as in the rental sector, such taxes fall on owners that may not vote in the municipality where they own rental dwellings. This creates an incentive to shift costs onto these non-voting parties. Due to rent regulation, taxes on the use of real estate are not fully passed on to outside owners. Moreover, even if such taxes are passed on, then voters are at least confronted with the costs of local public service provision. Modern behavioural economics suggests that such nudges may have considerable effects (see, e.g. Thaler and Sunstein, 2008).

Taxation of other bases appears to be less conducive to democratic accountability. Firms do not have voting rights. Nevertheless, the incentive to overtax firms is mitigated or even undone by the mobility of capital (see the previous section). Local income taxes are less visible than property taxes or head taxes, particularly when they are collected through national income taxation. Hence, we conclude that the tax on the

use of real estate and the head tax are most conducive to efficiency and accountability at the local level.

### Distributional effects of fiscal decentralisation

Shifting taxes from one base to another will inevitably make some people worse off. Large distributional effects may hinder a successful tax reform in case it gives rise to public resistance. In order to gain insight on this issue, we explore the distributional effects of fiscal decentralisation in the Netherlands by means of a micro-simulation model.<sup>15</sup> This simulation model, using a representative survey containing detailed information on about 95 000 Dutch households as input, is used by the CPB Netherlands Bureau of Economic Policy Analysis (hereafter, CPB) to perform forecasts and analyses in the realm of purchasing power, social security and (income) taxation.<sup>16</sup>

Using the gross income of individuals as a starting point, the model computes net disposable incomes by adding to, and subtracting from, gross income levels payments and allowances that follow from (income) taxation, social security payments, pension contributions, care and rent benefits, etc. These computations are performed *ceteris paribus*, so the model does not allow for behavioural responses to shocks in disposable income. Moreover, we are able to compute (changes in) net income for various household groups since the survey used allows us to categorise households on the basis of several characteristics, like income level, source of income and composition.

Applying the CPB micro-simulation model, two scenarios for a local tax reform are considered: one in which there is a tax shift from earned income to the use of residential real estate and another in which there is a shift from the earned income tax to a head tax. In both scenarios, the reduction of income taxes at the national level is designed so as to minimise distributional effects. In the property tax scenario, this compensation takes the form of a lowering of the rates in the first two brackets of the income tax.<sup>17</sup> In the head tax scenario, compensation takes place through an increase in the tax credit.

In order to simulate the distributional effects, we make the following assumptions for both scenarios:

- **Assumption 1:** The magnitude of the tax shift is EUR 4 billion.

This shift in taxes would imply that municipal income from local taxes roughly doubles in the Netherlands. On a yearly basis, this would boil down to an increase of local taxes by about EUR 300 per adult or EUR 500 per household, on average. As the share of local income that comes from local taxes would still be less than half of the OECD average of 37%, this shift could be regarded as a conservative first step towards fiscal decentralisation. Moreover, in the property tax scenario, the total revenues from recurrent taxes on residential property would equal approximately EUR 7.5 billion per year or 1.25% of gross domestic product (GDP), which is close to the OECD average (see Blöchliger, 2015).

- **Assumption 2:** Municipalities adjust local taxes in such a way that the level of municipal service provision remains constant.

The simulations abstract from potential efficiency gains that fiscal decentralisation may induce and which would make the distributional picture look more favourable.

- **Assumption 3:** Exemptions from local taxes are granted to households who earn an income (including social security payments) that is below the minimum income threshold.

The share of households with an income below the minimum threshold accounts for about 10% of all households in the Netherlands and mainly consists of unemployed and self-employed people and students.<sup>18</sup> While assuming exemptions in the main scenarios, we will also run alternative scenarios to assess to what extent the lowest-income households are hit if they are not exempted from local taxes.

The next two assumptions only pertain to the scenario in which there is a shift towards a tax on the use of residential real estate.

- **Assumption 4:** The shift from the national tax on earned income to a local property tax takes place through a reduction of the general grants flowing from the central government to the municipalities. This reduction is made according to the equalisation system currently in place.

In the current Dutch equalisation system, disparities in local (residential) property tax base are equalised for 80%. Performing alternative scenarios allows us to determine how different degrees of equalisation affect the distributional effects at the national level.

- **Assumption 5:** Wealth effects for current and future homeowners due to changes in house prices are ignored.

One may expect the property tax to be capitalised into home values, which benefits future homeowners at the expense of current homeowners. However, the distributional effects reported in this section only concern changes in net income and therefore do not reflect changes in a household's wealth.<sup>19</sup>

### ***Simulation results: Property tax scenario***

Table 8.1 reports the distributional effects of the property tax scenario. The first column shows the effects of the local tax on household income; the second column shows the effect of the compensating reduction of the national income tax and the third column shows the net effect. The reported percentage change in income holds for the median household for a range of household groups.

Table 8.1. **Distributional effects of the real estate tax appear manageable**

	Property tax	Compensation	Total
<b>Income level</b>			
< 175% minimum wage	-1.7	1.6	-0.1
175-350% minimum wage	-1.5	1.9	0.3
350- 500% minimum wage	-1.2	1.8	0.4
> 500% minimum wage	-1.1	1.2	0.0
<b>Source of income</b>			
Employees	-1.4	1.8	0.3
Unemployed	-1.4	1.3	0.0
Retired	-1.8	1.6	-0.3
<b>Household type</b>			
Double earners	-1.3	1.8	0.4
Singles	-1.7	1.7	-0.0
Single earners	-1.6	1.5	-0.2
<b>Children</b>			
Households with children	-1.3	1.6	0.2
Households without children	-1.4	1.9	0.3
<b>All households</b>	-1.5	1.7	0.1

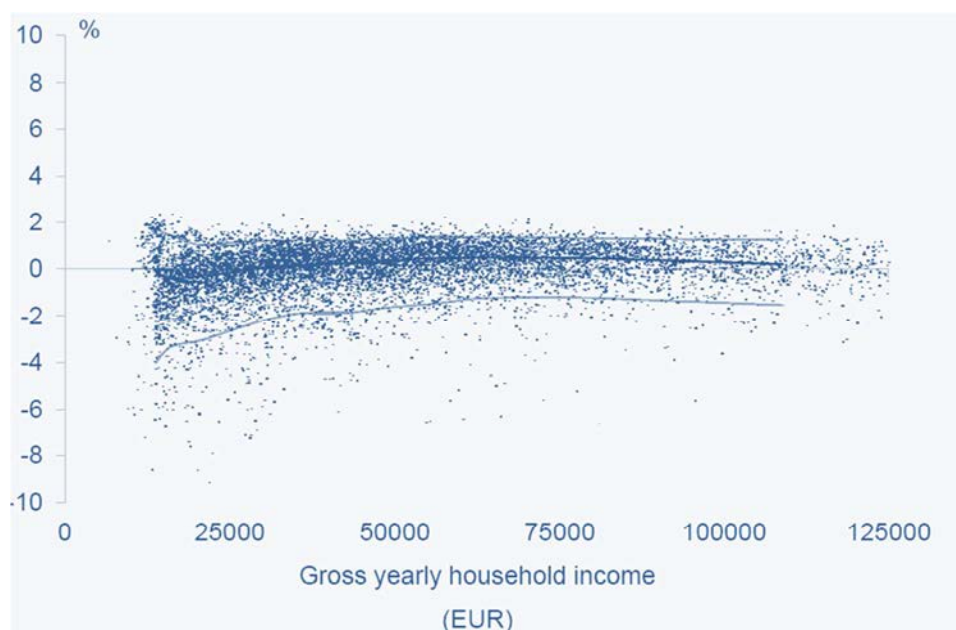
*Note:* Figures in this table represent percentage changes relative to household income for the median household in each group.

*Source:* CPB, 2015.

In none of the household groups, the median household loses more than 0.3% of income, although Figure 8.1 shows that there are some outliers. The property tax induces a comparably significant income loss for the lowest income groups, but these groups also benefit most from the compensating measures. Workers benefit in this scenario, while the retired lose out because the first group spends a smaller share of income on property taxes and it benefits more from the compensating measure. This scenario is also comparably beneficial for two-earner households for essentially the same reasons. Zooming in on individual households in Figure 8.1, some dispersion around the median is observed, especially at the lower-income levels. Still, less than 5% of the lower-income households experience a negative income shock exceeding 4%.



Figure 8.1. Percentage change in household income against level for property tax scenario



*Note:* For each yearly income level, 90% of the percentage changes falls into the two light blue lines. The dark blue line reflects the median.

*Source:* CPB, 2015.

Annex Table 8.A1.1 shows the distributional effects for an alternative scenario in which the lowest-income households are not exempted from the property tax.<sup>20</sup> As one would expect, the lowest-income group is negatively affected in case no tax exemptions are granted. By contrast, the higher-income households gain somewhat as the elimination of exemptions increases local tax revenues, which in turn allows for a sharper reduction of the tax on earned income.

Two other alternative scenarios show how the distributional effects change when considering different degrees of equalisation of the property tax base. Annex Table 8.A1.2 reports the outcomes in case of full equalisation between municipalities, while Annex Table 8.A1.3 displays the results for the case of only 20% equalisation of property tax capacity. As becomes clear from these two alternative scenarios, the degree of equalisation hardly has any effect on the changes in net income for the different household groups at the aggregate (national) level. Of course, to what extent differences in tax capacity between municipalities are equalised does have implications for disparities in distributional effects between municipalities.

### ***Simulation results: Head tax scenario***

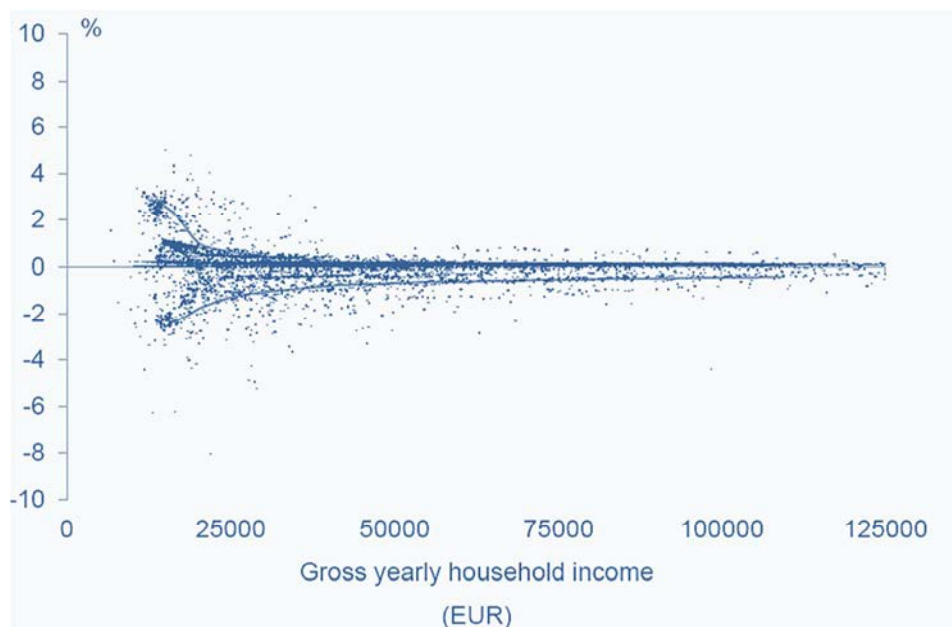
Distributional effects of the head tax scenario are reported in Table 8.2. It has the same set-up as Table 8.1. Patterns for the different income groups are also similar: lower incomes incur the most significant loss and receive the most compensation. The distributional effects are even smaller than the effects for the property tax scenario, although Figure 8.2 shows that there are outliers in this scenario as well.

Table 8.2. **Distributional effects of the head tax appear manageable as well**

	Head tax	Compensation	Total
<b>Income level</b>			
< 175% minimum wage	-1.7	1.9	0.1
175-350% minimum wage	-1.6	1.7	0.1
350-500% minimum wage	-1.3	1.4	0.1
> 500% minimum wage	-0.9	1	0.1
<b>Source of income</b>			
Employees	-1.5	1.5	0.1
Unemployed	-1.7	1.2	0.0
Retired	-1.7	1.8	0.2
<b>Household type</b>			
Double earners	-1.6	1.6	0.1
Singles	-1.4	1.5	0.1
Single earners	-1.9	1.9	0.0
<b>Children</b>			
Households with children	-1.4	1.5	0.1
Households without children	-1.5	1.6	0.1
<b>All households</b>	-1.5	1.6	0.1

*Note:* Figures in this table represent percentage changes relative to household income for the median household in each group.

*Source:* CPB, 2015.

Figure 8.2. **Percentage change in household income against level for head tax scenario**

*Note:* For each yearly income level, 90% of the percentage changes falls into the two light blue lines. The dark blue line reflects the median.

*Source:* CPB, 2015.

Again, we consider an alternative scenario in which there are no local tax exemptions (see Annex Table 8.A1.4). The unemployed lose in this situation, whereas for all other household groups the median household is not worse off than in the baseline scenario. Nevertheless, it appears that in spite of its regressive nature, the

distributional effects of a shift to a head tax may be reduced considerably by the design of the compensation scheme.

### Employment effects of fiscal decentralisation

In addition to the distributional effects generated by a shift from a tax on earned income to a property tax or a head tax, we also simulate the employment effects of such a shift using another CPB micro-simulation model. The model we use here is based on a discrete choice model for labour supply, where the structural parameters of the model are estimated by exploiting a large panel dataset that, amongst other things, contains information about labour and leisure decisions for a large sample of Dutch households.<sup>21</sup> The CPB simulation model can be applied to predict how changes in the Dutch tax-benefit system affect the labour market participation decision of various household types.

In order to simulate the employment effects, we make the following assumptions for the property tax scenario (in addition to the assumptions stated in the previous section).

- **Assumption 6:** The tax on the use of residential real estate fully capitalises into house prices.

We believe this assumption is reasonable given that supply on the Dutch occupier-owner housing market is very inelastic, especially in the short and medium term. As a consequence, an increase in housing expenses due to a higher property tax is fully compensated by a fall in house prices and the net housing expenses for (future) occupier-owners are thus unaffected by the tax shift.<sup>22</sup>

- **Assumption 7:** The tax on the use of residential real estate in the rental housing market is not passed on to the landlord.

This assumption follows from the fact that the social rental sector accounts for approximately 90% of the total rental housing stock in the Netherlands and that the social housing sector is characterised by rent regulation. As a result of this regulation, there exists excess demand on this market. This implies that even when net housing expenses for the tenant go up due to the property tax, these expenses will still be below their equilibrium value. Hence, the property tax cannot be passed on to landlords in the form of lower rents.

#### *Simulation results: Property tax scenario*

Table 8.3 presents estimates of the long-term employment effects in the property tax scenarios in hours and persons. Due to the assumption that the property tax fully capitalises into house prices because of inelastic supply, the property tax does not distort labour supply. This explains the first column in Table 8.3. As the third column of this table shows, the shift to a property tax stimulates employment. This result is driven by the compensation scheme, as indicated by the second column. This scheme stimulates the participation of the second earner in the household in particular.

Table 8.3. **Employment rises in the property tax scenario**

	Property tax	Compensation	Total
<b>% change in</b>			
Employment in hours	0.0	0.2	0.2
Employment in persons	0.0	0.2	0.2

Source: CPB, 2015.

The alternative scenario in which the lowest-income households are not exempted from local taxes shows a larger positive employment effect (see Annex Table 8.A1.5). Comparing Table 8.3 and Annex Table 8.A1.5 reveals that the additional employment created by not granting exemptions amounts to 0.2 percentage point in hours and 0.1 percentage point in persons. Note, however, that this increase in employment comes at the expense of larger distributional effects, as we have seen in the previous section.

Likewise, employment can be fostered by choosing an alternative compensation scheme. For instance, compensation through the earned income tax credit (EITC) by EUR 4 billion generates an additional increase in employment (in hours and persons) relative to the scenario in Table 8.3. This alternative scenario also shows a trade-off between employment and distributional effects: recipients of income assistance and the retired incur larger income losses in case of compensation through the EITC.

### ***Simulation results: Head tax scenario***

The employment effects of the shift to a head tax are shown in Table 8.4. The head tax does not distort labour supply, as shown in the first column. On the other hand, the compensating scheme hardly affects employment either, so that no new jobs are created in this scenario. This is hardly surprising, as both the head tax and the tax credit are essentially lump sum in nature. Like in the property tax scenario, employment effects may be increased by not granting exemptions or through alternative compensation schemes at the expense of more substantial distributional effects, as is shown in Annex Table 8.A1.6.

Table 8.4. **Employment remains constant in the head tax scenario**

	Head tax	Compensation	Total
<b>% change in</b>			
Employment in hours	0.0	0.0	0.0
Employment in persons	-0.0	0.1	0.0

Source: CPB, 2015.

The analysis in this section thus indicates that neither the property tax nor the head tax distorts labour supply. The compensation scheme then determines the extent to which fiscal decentralisation stimulates employment. A shift to the property tax already yields additional jobs in the scenario in which distributional effects are minimised.

## **Conclusion**

In this chapter, it has been argued that the tax on the use of residential real estate and the head tax are conducive to allocative efficiency in the local public sector. Both tax bases accord well with the benefit principle, and they enhance local accountability. Distributional effects of a shift from the national income tax to these tax bases are

manageable through appropriate design of the compensation scheme. Neither scenario distorts labour supply. Finally, fiscal decentralisation may stimulate employment, depending on the compensation scheme.

Light is also cast on the question whether the optimal mix between the property tax and the head tax varies across municipalities. A property tax may be more appropriate if its proceeds are used to invest in location-specific facilities. In municipalities that spend their money mainly on services benefiting all residents equally, a head tax may be more appropriate. Furthermore, in some municipalities, significant discrepancies in home values may exist, which do not directly relate to access to municipal services. In that case, households that happen to live in expensive homes would contribute disproportionately to the provision of local service provision that is financed through a property tax. Setting the mix between these two taxes at the national level would make it impossible for municipalities to respond to such local differences.

Alas, a local tax reform through one of these taxes might not be so easy to implement. As stated by Blöchliger (2015), one of the main strengths of a (local) property tax, namely its visibility, is at the same time one of its weaknesses since voters in general dislike salient taxes. It goes without saying that the same holds for a head tax. On top of that, head taxes and (to a lesser extent) property taxes are in general perceived as unfavourable for low-income households. Public discontent with salient local taxes that generate substantial distributional effects could even lead to tax revolts that leave politicians with no other option than to undo the tax reform.

The most well-known example of a local tax that has been dispensed with due to massive public resistance is the community charge (also known as the poll tax) in the United Kingdom. The community charge was basically a local head tax, introduced in Scotland in 1989 and in England and in Wales one year later. Soon after implementation, the poll tax became very unpopular and was finally abolished in 1992. According to Smith (1991a), an important reason for this unpopularity, besides some ill-thought-out policy measures accompanying the implementation, was that the distributional effects turned out to be unexpectedly large. Moreover, these effects were poorly communicated to the public.

Seen from this perspective, this chapter makes a significant contribution by providing detailed information on the distributional effects of two potential local tax reforms. The scenarios considered differ from the introduction of the poll tax in one crucial aspect. Whereas the poll tax merely replaced another local tax, a shift from the national tax on earned income to a local tax is assumed. Since the national income tax system has many parameters that can be adjusted, these scenarios allow policy makers to design compensation schemes that minimise changes in income distribution. As a result, and in sharp contrast to the experience with the poll tax, distributional effects in both the property tax scenario and the head tax scenario are found to be mild.

## Notes

1. See Rodden (2003) and Oates (2005) for comprehensive surveys on the potential merits of fiscal decentralisation. An opposite strand in the literature mentions the potential disadvantages of local taxes and includes works by McLure (1967) and Inman and Rubinfeld (1996).
2. One notable exception is Smith (1991b), who studies the distributional effects of the introduction of the poll tax.
3. The municipalities' income share of local taxes did not exceed 10%, against an OECD average of 37% (OECD/KIPF, 2012).
4. In our simulations, we assume that the national government balances the budget by lowering the grants distributed to the municipalities by the same amount as the reduction in the revenues from earned income taxes. Municipalities in turn balance the budget by increasing local tax revenues such that the loss in revenues from grants is fully compensated.
5. See, e.g. Rattsø (1998) and Borge and Rattsø (2012) for thorough discussions on the Nordic model.
6. This mechanism also underlies the famous Tiebout model, which predicts that interjurisdictional competition and household mobility bring about the efficient provision of local public services (Tiebout, 1956).
7. Of course, not all municipal expenditure will capitalise into house prices. What matters though is whether the marginal services that are financed from local taxes will capitalise. Allers and Vermeulen (2016) show for the Netherlands that changes in central government grants to municipalities that came without spending obligations fully capitalised into house prices. This suggests that at the margin, tax revenues that come without spending obligations will be spent on services that capitalise.
8. Using data on the Boston housing market, Carroll and Yinger (1994) argue that even for the private rental sector a tax on property ownership cannot be considered as a benefit tax. They find that the lion's share of the property tax landlords pay is not shifted to tenants in the form of higher rents, while tenants, rather than landlords, benefit from a higher quality of public services.
9. In principle, the same argument applies to residential real estate. However, it seems empirically less relevant in the Netherlands as the tax base, housing supply, is almost perfectly inelastic in at least the medium long run (Vermeulen and Rouwendal, 2007).
10. Hoynes and Luttmer (2011) decompose the value individuals derive from the US state tax-and-transfer systems into two components: a redistributive value and an insurance value. They show that the latter mitigates the incentive for high-income households to move in order to avoid paying for the redistributive system.
11. Calabrese, Epple and Romano (2012) show that when rich households contribute disproportionately to the provision of the local good, poor households have an

incentive to migrate to wealthy communities with a corresponding abundant supply of local goods and services. Simulations demonstrate that the inefficiencies due to this “rich chasing the poor” mechanism can be such that they fully nullify the potential welfare gains from decentralisation.

12. Schmidheiny (2006) does provide empirical evidence for Switzerland that high incomes sort into low-tax communities. Another empirical paper on fiscal competition between local governments is by Buettner and Janeba (2014), which shows that German municipalities compete for high incomes through subsidies on public theatres. In several Nordic countries, tax competition is stifled by co-ordination amongst municipalities – or even by regulation of tax rates. Notably, for the case of Denmark, Lotz, Blom-Hansen and Hartmann Hede (2015) argue that the Danish local tax system – local income taxation accompanied by financial sanctions for municipalities that raise their tax rate – has created a “tax freeze”.
13. A famous paper on yardstick competition between lower-level governments is Besley and Case (1995). It shows that in the case a US state governor is eligible for re-election, the state’s tax-setting behavior is influenced by the tax policy of neighbouring states. Allers and Elhorst (2005) provide empirical evidence for the presence of yardstick competition between municipalities in the Netherlands.
14. Cabral and Hoxby (2012) argue that the unpopularity of a property tax is mainly due to its visibility.
15. See Romijn et al. (2008) for a description of this micro-simulation model.
16. The survey used contains household data for the year 2012. For the sake of consistency, for all the other parameters used as input we take their 2012 values.
17. The rate of the first bracket (with a range of EUR 0-18 945) decreases by 1.64 percentage points, while the rate of the second bracket (with a range of EUR 18 945-33 863) falls by 1.19 percentage points.
18. The minimum threshold is determined by the Ministry of Social Affairs and Employment and can be seen as the minimum income one needs to reach a decent standard of living. This threshold is not the same for everyone as it depends on a person’s age, marital status, number of children, etc.
19. Using the CPB housing market model (see Donders, Van Dijk and Romijn, 2010), we estimate that house prices will fall by about 1.6% (in the very long run) as a consequence of the shift to property taxes. This wealth effect may be regarded as limited in comparison to house price dynamics in the recent past.
20. All tables and calculations corresponding to the robustness checks are relegated to Annex 8.A1.
21. The model assumes that the labour market clears in the long run, so that an increase in labour supply is met by a rise in labour demand. Therefore, in the remainder we will interpret the outcomes of this model as the effects on employment rather than on labour supply solely. See Jongen, de Boer and Dekker (2014) for a thorough description of this micro-simulation model.
22. Allers and Vermeulen (2016) find that inter-municipal differences in budget shocks fully capitalise into prices on the Dutch housing market, which indicates that supply on this market is highly inelastic.

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## Annex 8.A1

## Robustness analysis

Table 8.A1.1. **Distributional effects of the property tax in case no local tax exemptions are granted**

	Property tax	Compensation	Total
<b>Income level</b>			
< 175% minimum wage	-2.0 (-1.7)	1.8 (1.6)	-0.5 (-0.1)
175-350% minimum wage	-1.5 (-1.5)	2.0 (1.9)	0.4 (0.3)
350-500% minimum wage	-1.2 (-1.2)	1.9 (1.8)	0.6 (0.4)
> 500% minimum wage	-1.1 (-1.1)	1.3 (1.2)	0.1 (0.0)
<b>Source of income</b>			
Employees	-1.4 (-1.4)	2.0 (1.8)	0.4 (0.3)
Unemployed	-2.0 (-1.4)	1.4 (1.3)	-0.8 (0.0)
Retired	-1.9 (-1.8)	1.7 (1.6)	-0.3 (-0.3)
<b>Household type</b>			
Double earners	-1.3 (-1.3)	1.9 (1.8)	0.5 (0.4)
Singles	-1.9 (-1.7)	1.9 (1.7)	-0.2 (-0.0)
Single earners	-1.6 (-1.6)	1.6 (1.5)	-0.1 (-0.2)
<b>Children</b>			
Households with children	-1.4 (-1.3)	1.8 (1.6)	0.3 (0.2)
Households without children	-1.5 (-1.4)	2.0 (1.9)	0.4 (0.3)
<b>All households</b>	-1.6 (-1.5)	1.9 (1.7)	0.2 (0.1)

*Note:* Figures in this table represent percentage changes relative to household income for the median household in each group. Results for the baseline scenario are in parentheses.

*Source:* CPB, 2015.

Table 8.A1.2. **Distributional effects of the property tax in case of full equalisation of tax capacity**

	Property tax	Compensation	Total
<b>Income level</b>			
< 175% minimum wage	-1.6 (-1.7)	1.5 (1.6)	-0.1 (-0.1)
175- 350% minimum wage	-1.4 (-1.5)	1.8 (1.9)	0.3 (0.3)
350- 500% minimum wage	-1.2 (-1.2)	1.7 (1.8)	0.4 (0.4)
> 500% minimum wage	-1.1 (-1.1)	1.2 (1.2)	0.0 (0.0)
<b>Source of income</b>			
Employees	-1.3 (-1.4)	1.7 (1.8)	0.3 (0.3)
Unemployed	-1.3 (-1.4)	1.2 (1.3)	0.0 (0.0)
Retired	-1.7 (-1.8)	1.5 (1.6)	-0.3 (-0.3)
<b>Household type</b>			
Double earners	-1.2 (-1.3)	1.7 (1.8)	0.4 (0.4)
Singles	-1.6 (-1.7)	1.6 (1.7)	0.0 (-0.0)
Single earners	-1.5 (-1.6)	1.4 (1.5)	-0.2 (-0.2)
<b>Children</b>			
Households with children	-1.2 (-1.3)	1.5 (1.6)	0.2 (0.2)
Households without children	-1.3 (-1.4)	1.8 (1.9)	0.3 (0.3)
<b>All households</b>	-1.4 (-1.5)	1.6 (1.7)	0.1 (0.1)

*Note:* Figures in this table represent percentage changes relative to household income for the median household in each group. Results for the baseline scenario are in parentheses.

*Source:* CPB, 2015.

Table 8.A1.3. **Distributional effects of the property tax in case of 20% equalisation of tax capacity**

	Property tax	Compensation	Total
<b>Income level</b>			
< 175% minimum wage	-1.8 (-1.7)	1.6 (1.6)	-0.2 (-0.1)
175- 350% minimum wage	-1.5 (-1.5)	1.9 (1.9)	0.2 (0.3)
350- 500% minimum wage	-1.3 (-1.2)	1.7 (1.8)	0.4 (0.4)
> 500% minimum wage	-1.1 (-1.1)	1.2 (1.2)	0.0 (0.0)
<b>Source of income</b>			
Employees	-1.4 (-1.4)	1.8 (1.8)	0.3 (0.3)
Unemployed	-1.5 (-1.4)	1.3 (1.3)	-0.0 (0.0)
Retired	-1.9 (-1.8)	1.6 (1.6)	-0.4 (-0.3)
<b>Household type</b>			
Double earners	-1.4 (-1.3)	1.8 (1.8)	0.3 (0.4)
Singles	-1.8 (-1.7)	1.7 (1.7)	-0.1 (-0.0)
Single earners	-1.6 (-1.6)	1.5 (1.5)	-0.2 (-0.2)
<b>Children</b>			
Households with children	-1.3 (-1.3)	1.6 (1.6)	0.1 (0.2)
Households without children	-1.5 (-1.4)	1.9 (1.9)	0.2 (0.3)
<b>All households</b>	-1.5 (-1.5)	1.7 (1.7)	0.1 (0.1)

*Note:* Figures in this table represent percentage changes relative to household income for the median household in each group. Results for the baseline scenario are in parentheses.

*Source:* CPB, 2015.

Table 8.A1.4. **Distributional effects of the head tax in case no local tax exemptions are granted**

	Head tax	Compensation	Total
<b>Income level</b>			
< 175% minimum wage	-1.9 (-1.7)	2.1 (1.9)	0.3 (0.1)
175- 350% minimum wage	-1.6 (-1.6)	1.8 (1.7)	0.2 (0.1)
350- 500% minimum wage	-1.3 (-1.3)	1.5 (1.4)	0.2 (0.1)
> 500% minimum wage	-0.9 (-0.9)	1.1 (1.0)	0.1 (0.1)
<b>Source of income</b>			
Employees	-1.5 (-1.5)	1.7 (1.5)	0.2 (0.1)
Unemployed	-2.1 (-1.7)	1.4 (1.2)	-0.5 (0.0)
Retired	-1.8 (-1.7)	2.0 (1.8)	0.3 (0.2)
<b>Household type</b>			
Double earners	-1.6 (-1.6)	1.7 (1.6)	0.2 (0.1)
Singles	-1.6 (-1.4)	1.7 (1.5)	0.2 (0.1)
Single earners	-2.0 (-1.9)	2.1 (1.9)	0.2 (0.0)
<b>Children</b>			
Households with children	-1.5 (-1.4)	1.6 (1.5)	0.2 (0.1)
Households without children	-1.6 (-1.5)	1.7 (1.6)	0.2 (0.1)
<b>All households</b>	-1.6 (-1.5)	1.7 (1.6)	0.2 (0.1)

*Note:* Figures in this table represent percentage changes relative to household income for the median household in each group. Results for the baseline scenario are in parentheses.

*Source:* CPB, 2015.

Table 8.A1.5. **Employment in the property tax scenario in case no local tax exemptions are granted**

	Property tax	Compensation	Total
<b>% change in</b>			
Employment in hours	0.2 (0.0)	0.2	0.4 (0.2)
Employment in persons	0.1 (0.0)	0.2	0.3 (0.2)

*Note:* Results for the baseline scenario are in parentheses.

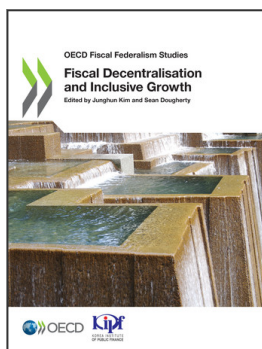
*Source:* CPB, 2015.

Table 8.A1.6. **Employment in the head tax scenario in case no local tax exemptions are granted**

	Head tax	Compensation	Total
<b>% change in</b>			
Employment in hours	0.3 (0.0)	0.0	0.3 (0.0)
Employment in persons	0.2 (-0.0)	0.1	0.3 (0.0)

*Note:* Results for the baseline scenario are in parentheses.

*Source:* CPB, 2015.



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