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Revaluation and reform of council tax in Wales: Impacts on different councils and household types

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Revaluation and reform of council tax in Wales: impacts on different councils and household types

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Preface

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The Nuffield Foundation is an independent charitable trust with a mission to advance social well-being. It funds research that informs social policy, primarily in Education, Welfare and Justice. It also funds student programmes that provide opportunities for young people to develop skills in quantitative and scientific methods. The Nuffield Foundation is the founder and co-funder of the Nuffield Council on Bioethics and the Ada Lovelace Institute. Visit www.nuffieldfoundation.org.

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The views presented in this report are those of the authors alone; it should not be inferred that the Welsh Government, VOA, consortium members, the Nuffield Foundation, advisory group members or other named individuals agree with them. Any errors or omissions are also the responsibility of the authors.

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Executive summary

Council tax bands in Wales are based on property values in April 2003 – 17 years ago. That is more up to date than in England and Scotland, where they are based on values in April 1991 (almost 30 years ago!). But it is still enough time for the relative values of different properties to change significantly: for example, official estimates suggest that while average prices had doubled since 2003 across Wales as a whole by the end of 2019, those in Blaenau Gwent had risen 171% compared with just 77% in Wrexham.

Moreover, while the difference in 2003 values between a property in Band A and a property in Band I was at least 9.5-fold, the difference in tax rates is just 3.5-fold. The structure of council tax is therefore both increasingly out of date and arbitrary, and highly regressive with respect to property values. It is ripe for revaluation and reform.

This report examines how revaluation and reform of council tax in Wales would affect the tax bases, average net tax bills and grant funding requirements of different local authorities (LAs); and the net tax bills and after-tax incomes of different household groups. This is in the context of a commitment from the Welsh Government to make council tax fairer and more progressive.

Our main policy messages are:

- **Council tax is out of date, regressive and distortionary. It needs to be revalued and reformed.** The values of properties in different parts of Wales have changed very differently over the 17 years since the last revaluation, increasing more than twice as much in Blaenau Gwent as in Wrexham, for example. This means properties are in increasingly arbitrary tax bands that may bear little relation to current reality: two households living in equally valuable properties in the same LA can find themselves paying tax bills hundreds of pounds different just because their properties used to be worth different amounts in 2003. Council tax is also highly regressive with respect to property value, and the 25% discount for single-adult households encourages the inefficient use of property.
- **Whether grant funding from the Welsh Government were adjusted alongside reforms to council tax would have a crucial effect on the reforms' impact across LAs.** If it were not, each LA would need to raise just as much council tax revenue as before if it wanted to maintain spending – implying no change in the average tax bill in each LA, even as the amounts paid by individual households went up and down. With full adjustment of funding, average bills would change to reflect changes in local tax bases. For example, making council tax proportional to up-to-date values would lead to average bills falling by more than £160 in Merthyr Tydfil, Neath Port Talbot and Blaenau Gwent. Conversely, they would rise in areas with high average property values such as Cardiff, the Vale of Glamorgan and Monmouthshire. In what follows, we assume funding is fully adjusted.
- **Reform could make council tax much more progressive.** Revaluation alone would have little effect on the average tax bills of different household types. But a proportional council tax would reduce net council tax bills by the equivalent of 0.5% of household income, on average, for households in the bottom fifth of the income

distribution, while increasing average bills by 0.3% of income for those in the top fifth. Younger households, renters and those receiving disability benefits would also see tax reductions, on average.

- **While there may be particular concern about low-income losers from reforms, it is important to recognise they would be massively outnumbered by low-income winners.** For example, 21% of households in the bottom fifth of the income distribution would see their net tax bill fall by more than £200 a year under a continuous and proportional council tax, while just 3% would see it increase by more than £200 a year. Many would see little or no change because their bills are fully or largely covered by the council tax reduction scheme, which could be made more generous if the Welsh Government wanted to mitigate the impact of reforms further. The government could also consider transitional relief and deferral of payments – although getting the design of deferral schemes right is vital to avoid undermining tax revenue.
- **Revaluation and reform of council tax could help narrow household and geographical wealth inequalities via effects on property prices.** Economic theory and empirical evidence suggest that changes in property taxes get largely or fully reflected in rents and property prices. This means that a proportional property tax would narrow the gap in property wealth between owners of high- and low-value properties and, if accompanied by redistribution of funding from central government, between areas with low and high property values. The scale of these impacts is highly uncertain, though.

1. Introduction

Council tax is a tax formally levied on the occupiers of residential properties, with the amount of tax due depending on:

- the tax band a property is placed in (from A to I);
- the tax rate set by the council and police authority the property is located in; and
- whether the occupier is entitled to an exemption or reduction or must pay a premium over the standard rate.

It is collected by local authorities (LAs) and in 2019–20 they are forecast to collect £1.36 billion for themselves (around 18% of their overall funding) and a further £0.32 billion for the police. With 1.4 million households in Wales, this means an average bill of approximately £1,165 per dwelling after accounting for reductions, exemptions and premiums, or around 3% of household disposable income.

This makes council tax the second-largest tax devolved to Wales, after the Welsh rates of income tax (forecast to yield £2.1 billion in 2019–20). It is therefore important that the tax is well designed, and aligns with the Welsh Government's distributional preferences. Unfortunately, it is not. And it seemingly does not.

Council tax bands in Wales are based on property values in April 2003 – 17 years ago. That is more up to date than in England and Scotland, where they are based on values in April 1991. But it is still enough time for the relative values of different properties to change significantly: for example, official estimates suggest that while average prices had doubled since 2003 across Wales as a whole by the end of 2019, those in Blaenau Gwent had risen 171% compared with just 77% in Wrexham.

Moreover, while the difference in (2003) values between a property in Band A and a property in Band I is at least 9.5-fold, the difference in tax bills is just 3.5-fold. Council tax is therefore both increasingly out of date and arbitrary, and highly regressive with respect to property values. In other words, it is ripe for revaluation and reform.

Given this, it is welcome that the Welsh Government is open to change. Indeed, it is committed to making council tax 'fairer and more progressive' (Welsh Government, 2019a), potentially alongside broader changes to the way local government is funded in Wales. This report therefore examines how revaluation and reform of council tax in Wales would affect the tax bills and after-tax incomes of different household groups; as well as the tax bases, average tax bills, and finances of different LAs.

To do this, we use administrative data on property characteristics and property transactions, and household survey data that include self-reported property value estimates for owner-occupiers as well as other socio-economic data (including income, employment status, age and disability status). Up-to-date property values are estimated for different council areas and different household types using an approach called hedonic regression analysis. Once we have these new values, we can apply various council tax systems, including an updated version of the current system (a pure revaluation) and

more progressive tax systems. Impacts across LAs and households can then be assessed, both under the assumption that occupiers bear the tax in practice as well as principle and under the assumption that property values and rents adjust so that it is owners (including landlords) that bear the tax in practice.

Doing this, we find that revaluation and reform of council tax can increase progressivity with respect to both property value and household income. There would be some low- and middle-income households in high-value properties that lose out, especially in areas such as Cardiff, Monmouthshire and the Vale of Glamorgan. But these would be far fewer in number than those that would gain, and a system of delayed payments (for example, at sale of property or death), akin to the deferred payment scheme for social care costs, could be made available – although getting the design of such a system right would be crucial.

A revalued and reformed tax system would also redistribute tax bases between LAs. For example, a more progressive council tax would increase tax bases in areas such as Cardiff, Monmouthshire and the Vale of Glamorgan, where values are high, and reduce them in areas such as the South Wales Valleys, where values are low. Grant funding could be reallocated to offset these changes though, with the changes in grant funding required generally less than 5% of current allocations.

Whether grants are reallocated turns out to play a critical role in determining the impact of revaluation and reform across places and, as a result, different household types, which are not uniformly distributed across different parts of Wales. This is because if grants are not adjusted, LAs would each need to collect just as much council tax as they do now in order to maintain spending, which would mean charging the same average bill as now. Revaluation and reform would therefore redistribute tax bills *within* LAs – individual properties can see their bills go up and down even if the average is the same – but not *across* them.

The rest of this report proceeds as follows. Chapter 2 describes the current system of council tax in Wales and explains why revaluation and reform are desirable. Chapter 3 sets out the reform options we consider in the report and provides an overview of how we model them. Chapter 4 examines the impact of the reforms across different places, specifically council areas. It shows impacts on LAs' tax bases, and the impacts on average tax bills, and grant funding, depending on whether grant funding is adjusted or not. Chapter 5 examines the impact of the reforms across different types of people and households. In particular, it shows the effect on tax bills before and after the council tax reduction scheme (which subsidises council tax for low-income households) for different types of household – such as low/high income, young/old household heads, housing tenure, disability status and family structure. Chapter 6 examines potential effects of revaluation and reform on property values if they change in response to changes in the tax bills that occupying property entails. Chapter 7 then focuses on tricky issues that are sometimes seen as making revaluation and reform especially difficult – such as low-income households living in high-value housing, and the big differences in property values between different parts of the country. Chapter 8 concludes. Finally, Appendix A provides more detail on our methodology and looks at the sensitivity of our property value estimates to changes to the specification of the hedonic regressions used to estimate property values, and Appendix B provides additional results. A full set of additional results can be found in our online spreadsheet appendix.

2. Council tax and the need for reform

2.1 How council tax works

Council tax was introduced on 1 April 1993 to replace the community charge ('poll tax'), a tax levied at a flat rate per adult, which had itself replaced the long-standing system of domestic rates – a tax proportional to the assessed market rental value of each property – in 1990 in England and Wales (following a one-year trial in Scotland).¹ Council tax was to some extent a compromise between domestic rates and the poll tax: liabilities are related to property values, but less closely than under domestic rates, and some of the 'per-person' character of the poll tax is retained in the form of a 25% discount for single-adult households.

Each of the 1.4 million residential properties in Wales is placed into a band according to its assessed capital value. When council tax was introduced, properties in England, Scotland and Wales were allocated to one of eight valuation bands (A to H) according to an assessment of their values on 1 April 1991, though the cut-off points between bands were different in each country. In Wales – though not in England and Scotland, where the 1991 bandings still apply – a revaluation came into effect on 1 April 2005, based on property values as at 1 April 2003 (with the cut-off points between bands correspondingly updated to take account of growth in property values since 1991), and at the same time a ninth band (Band I) was added.

Individual local authorities (LAs) across Wales set the overall level of council tax in their area by choosing a rate for Band D properties, with the levels for other bands then determined as ratios of the Band D rate. The ratios between bands are set centrally for the whole of Wales. Those in the lowest band (A) pay $\frac{2}{3}$ of the Band D rate, while those in the top band (I) pay $2\frac{1}{3}$ times the Band D rate.

Table 2.1 shows the current value bands and the proportion of properties in each band across Wales as a whole. 57% of properties in Wales are in Bands A–C; barely 5% fall in Band G or above. Since most properties are below Band D, most households pay less than the Band D rate. Because of this, and also because of discounts and incomplete collection (see below), the average Band D rate set by LAs in 2019–20 is £1,591, but the average amount paid by households is significantly lower, at £1,165 per year, or 3% of households' average disposable income. Council tax is expected to raise £1.7 billion for Welsh LAs in 2019–20 (after discounts), a fifth of their total budget.

Council tax is administered by the 22 unitary authorities in Wales. However, 'precepting authorities' – namely, community councils and police & crime commissioners (PCCs) – can instruct the unitary authorities to collect and pay over an addition to the council tax rates they set themselves. Thus the Band D rate applying in a particular area is the sum of that set by the unitary authorities and those set by precepting authorities. Precepting authorities account for 19% of the average Band D rate across Wales.

¹ Northern Ireland still has a system of domestic rates.

Table 2.1. Council tax bands in Wales

Band	Tax rate relative to Band D	Property valuation as of 1 April 2003	Percentage of dwellings in each band, 2019–20
A	$\frac{6}{9}$	Up to £44,000	14.5%
B	$\frac{7}{9}$	£44,001 to £65,000	21.0%
C	$\frac{8}{9}$	£65,001 to £91,000	21.8%
D	1	£91,001 to £123,000	16.2%
E	$\frac{11}{9}$	£123,001 to £162,000	13.3%
F	$\frac{13}{9}$	£162,001 to £223,000	8.2%
G	$\frac{15}{9}$	£223,001 to £324,000	3.8%
H	2	£324,001 to £424,000	0.9%
I	$\frac{21}{9}$	Above £424,000	0.4%

Source: <https://statswales.gov.wales/Catalogue/Local-Government/Finance/Council-Tax/Dwellings/proportionofcounciltaxdwellings-by-band-year>.

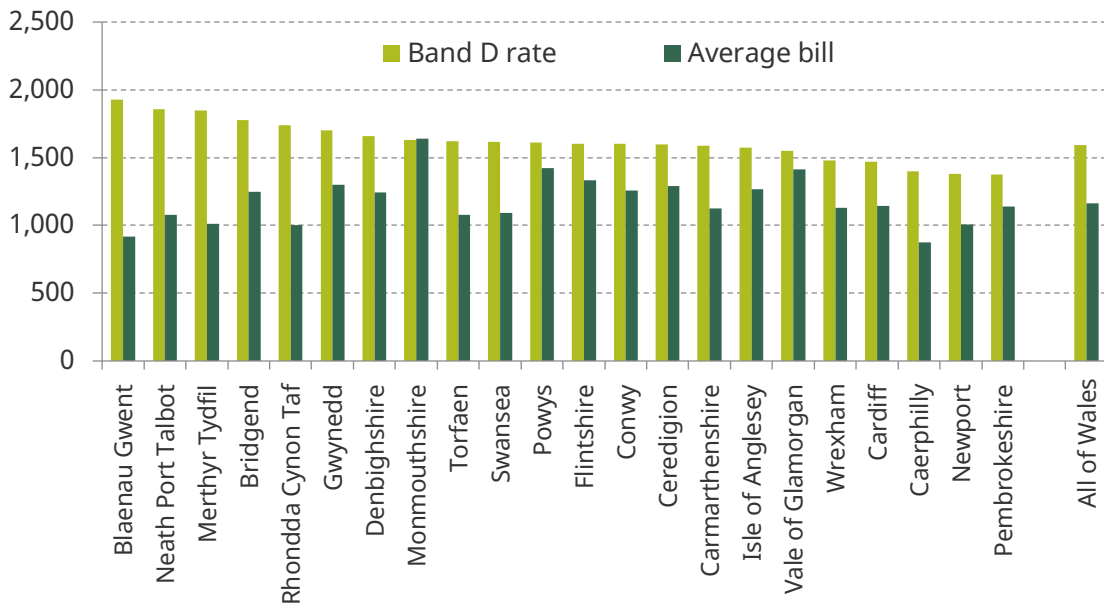
Council tax rates vary significantly across LAs, as shown in Figure 2.1. Band D rates range from £1,377 in Pembrokeshire to £1,928 in Blaenau Gwent. Average council tax bills reflect the value of properties in the area and the prevalence of discounts as well as the Band D rate set by the council, so they vary in a different way across LAs. In fact, LAs with more valuable properties tend to set lower Band D rates; as a result, there is almost no correlation between an LA's Band D rate and the average bill its residents have to pay.² Blaenau Gwent, for example, has the highest Band D rate in Wales but also the smallest tax base (83% of properties there are in Bands A or B, compared with only 9% in Monmouthshire at the other extreme; see Figure 2.2), so average bills in Blaenau Gwent are below the Welsh average. Average net council tax per dwelling ranges from £876 in Caerphilly to £1,642 in Monmouthshire.

Council tax bills are reduced by 25% if only one taxable adult lives in the household. About half a million households in Wales, slightly over a third of the total, receive this single-person discount.³ Some groups of adults are ignored for the purposes of counting the number of taxable adults in a residence. The largest such group is students undertaking full-time educational courses with a higher education institution; others include people in detention, carers, the severely mentally impaired, 18- and 19-year-olds in full-time (non-higher) education, members of religious communities, resident care-home and hospital patients, and residents of hostels or night shelters. Properties adapted for use by disabled people are moved down one council tax band (including Band A properties: these are reduced to 'Band A-', charged five-ninths of the Band D rate).

² The correlation coefficient is actually slightly negative, at -0.06.

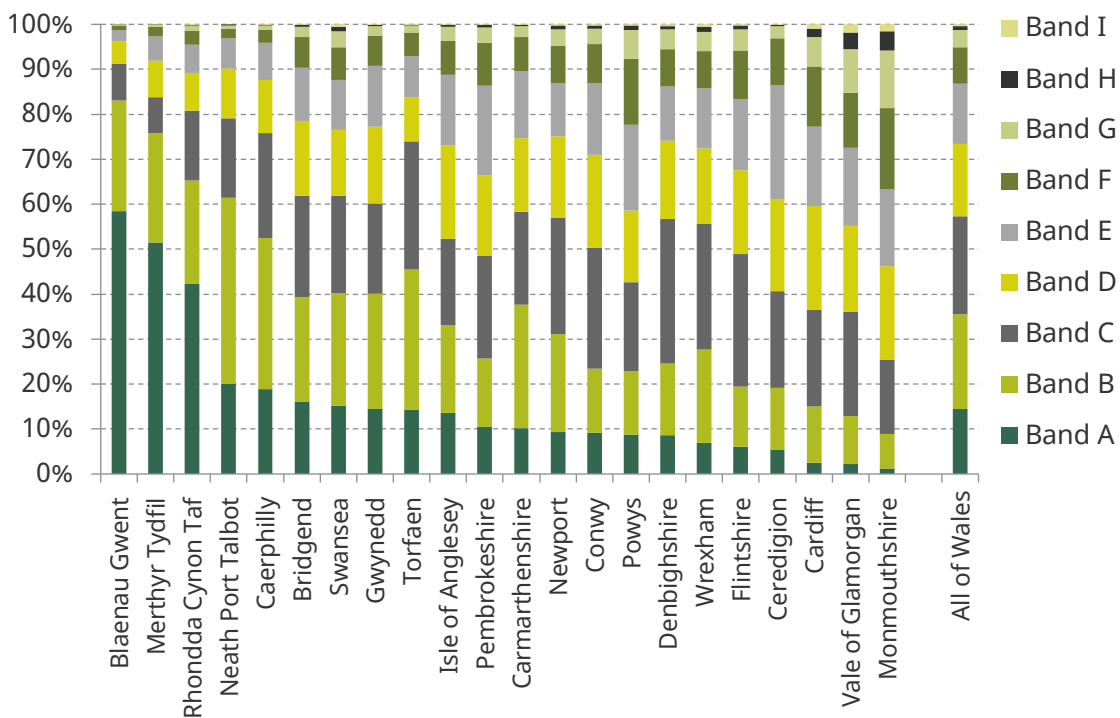
³ Source: <https://statswales.gov.wales/Catalogue/Local-Government/Finance/Council-Tax/Dwellings/counciltaxdwellings-byct1rowdescription>.

Figure 2.1. Band D rates and average net bills by local authority



Source: Band D rates from <https://statswales.gov.wales/Catalogue/Local-Government/Finance/Council-Tax/Levels/averagebanddcounciltax-by-billingauthority>, taking the average of community council precepts in each LA. Average bill calculated by the authors based on amount to be collected from council tax payers (<https://statswales.gov.wales/Catalogue/Local-Government/Finance/Revenue/Financing/financingofgrossrevenueexpenditure-by-authority>) and total number of dwellings (<https://statswales.gov.wales/Catalogue/Local-Government/Finance/Council-Tax/Dwellings/counciltaxdwellings-by-localauthority-ct1rowdescription>).

Figure 2.2. Band distribution by local authority, 2019-20



Source: <https://statswales.gov.wales/Catalogue/Local-Government/Finance/Council-Tax/Dwellings/proportionofcounciltaxdwellings-by-localauthority>.

LAs can choose to charge up to double the normal council tax on second homes and long-term empty homes (with some exceptions), or can give a discount of up to 50% (for second homes) or 100% (for empty homes).

A nationwide council tax reduction scheme (CTRS) is in place to reduce or eliminate liability for households with low income and financial assets (unlike in England, where such schemes were localised in 2013 and most LAs, under financial pressure, have reduced their generosity).⁴ In 2018–19, some 278,000 households in Wales – a fifth of all those liable for council tax – received reductions averaging £940, reducing LAs' council tax revenue by £260 million (14%).⁵

Legal liability for paying council tax usually rests with the occupants of a property, though in certain circumstances (such as empty homes) the owner is liable. Collection rates have improved since the introduction of council tax, rising from 94.7% in 1996–97 to 97.3% in 2018–19.⁶

2.2 Council tax is increasingly out of date and arbitrary

Council tax bandings in Wales depend on properties' assessed values on 1 April 2003, the date used for the revaluation that took effect in April 2005. This is more recent than in England and Scotland, where they are still based on 1991 values as when the system was introduced in 1993, but still means they are 17 years out of date – and counting.

This poses practical difficulties for the valuation of new properties, for which the Valuation Office Agency must assess what they would have been worth in 2003. It is particularly difficult in residential areas that did not exist in 2003: how do you value properties in what was a polluted industrial estate back in 2003, but is now a landscaped and leafy housing estate?

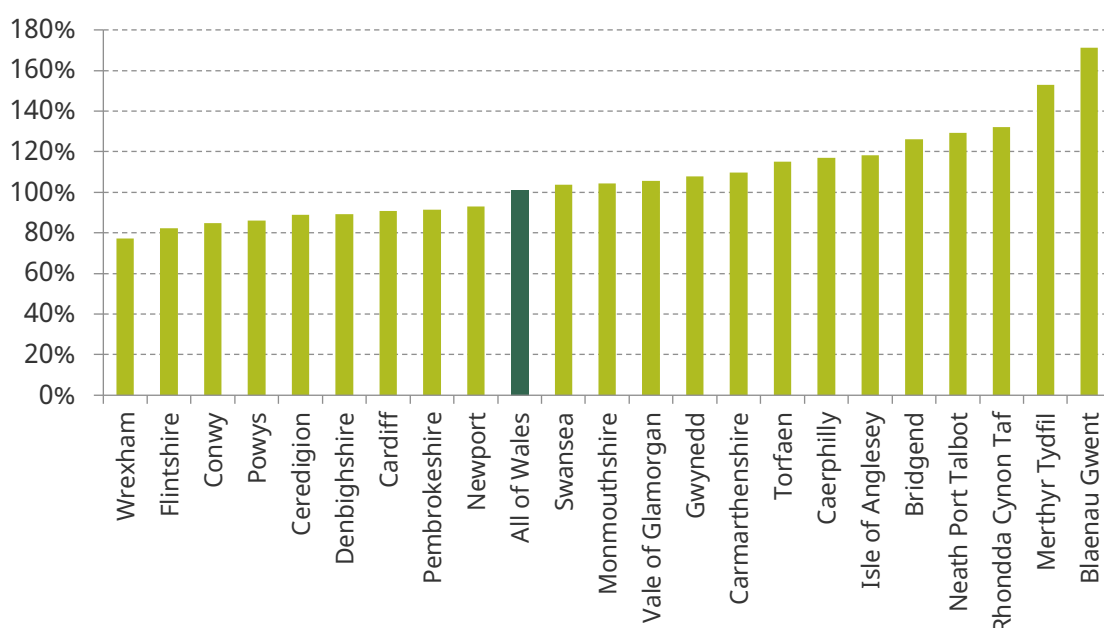
More fundamentally, the use of out-of-date valuations creates unfairness, both across LAs and across households within each LA.

The unfairness across LAs arises from using an out-of-date measure of the ability to pay of residents of different LAs in determining funding allocations from the Welsh Government. The distribution of Revenue Support Grant (RSG) from the Welsh Government to LAs is based on LAs' tax bases (as well as their needs): more grant is provided to LAs with lower-value properties in lower tax bands, reflecting their residents' lower ability to pay and so the council's lower ability to raise revenue for itself. Broadly speaking, the aim is that if all LAs spent at the level the Welsh Government judges that they need, they would all need to set the same Band D rate (i.e. levy the same tax on a given-band property). But if the value bands are out of date, and property values have risen more since 2003 in some LAs than in others, then grant funding will no longer reflect local property values. Households in one LA will face higher council tax bills (or receive less services) than otherwise-similar households living in equally valuable properties in otherwise-similar LAs, just because properties in their area *used to be* more valuable than elsewhere 17 years ago.

⁴ See Adam, Joyce and Pope (2019).

⁵ Source: authors' calculations based on Welsh Government (2019b).

⁶ Source: <https://statswales.gov.wales/Catalogue/Local-Government/Finance/Council-Tax/Collection/counciltaxcollectionrates-by-billingauthority>.

Figure 2.3. Percentage growth in average property price 2003–19, by local authority

Note: Increases shown are from the first half of 2003 (the three months either side of the valuation date) to the second half of 2019 (the latest estimates available).

Source: ONS, UK House Price Index (<https://www.gov.uk/government/collections/uk-house-price-index-reports>), 25 March 2020 release.

This is not just a theoretical possibility: prices have changed in quite different ways in different parts of Wales. Since 2003, property values in Wales have grown by 4.3% a year on average, but the growth rate ranges from 3.5% in Wrexham to 6.2% in Blaenau Gwent. Over 17 years, those differences in growth rates cumulate to create large effects: average prices have doubled on average across Wales as a whole, but the rise is 77% in Wrexham and 171% in Blaenau Gwent (see Figure 2.3).⁷ Yet funding from the Welsh Government is still allocated as if relative property values had not changed since 2003. So Wrexham council must now levy more tax on a household in (say) a £150,000 property than Blaenau Gwent council, if both are to deliver the spending on services deemed necessary by the Welsh Government.

This unfairness across LAs could in principle be rectified purely through the funding system – by redistributing grant across LAs in line with current property values – without necessarily reforming council tax itself at all. What cannot be rectified without reforming council tax is the unfairness across households within an LA. Two households living in equally valuable properties, receiving the same services from the same council, can have different tax bills because one property was worth more than the other 17 years ago. That kind of arbitrary variation in the tax liabilities attached to similar properties is indefensible. And that is the strongest argument for doing a revaluation – and for keeping valuations up to date in future.

⁷ More generally, prices in the Valleys rose much more quickly than elsewhere in Wales between 2003 and 2007, and while growth has subsequently been slower in the Valleys than in Cardiff, Monmouthshire and the Vale of Glamorgan, this earlier growth spurt has not been completely undone. The slowest price growth has been among councils in north-east Wales, and Pembrokeshire in the far south-west.

2.3 Council tax is not proportional to property value

Lack of revaluation means that council tax liabilities do not reflect current property values. But they are not even proportional to 2003 values, for three main reasons:

1. Council tax has a banded structure.
2. Tax rates are regressive with respect to (banded) values.
3. Single-adult households pay 25% less.

The banded structure

The banded structure means that two properties just on either side of a band cut-off can attract very different tax liabilities: 22% higher at the bottom of Band E than the top of Band D, for example. Conversely, two properties at opposite ends of the same band attract the same tax liability, despite one being worth (in the case of Band B or C, say) almost 50% more than the other. This issue becomes particularly acute at the two ends of the spectrum, with all Band A properties in an LA attracting the same tax regardless of how far below the £44,000 cut-off they were, and all Band I properties attracting the same tax regardless of whether they were worth £425,000 (in 2003) or were multi-million-pound mansions.

There are practical advantages to a banded structure, in terms of reducing the need for precision in valuations and the scope for appeals (although while fewer people might disagree with a banding than a precise valuation, the amounts at stake are likely to be much larger, which can make it more worth appealing). But many other places manage to base property taxes on continuous valuations, including Northern Ireland. At the very least, a finer disaggregation of bands (particularly at the two extremes) would temper the unfairness of a banded structure.

The regressive tax rates

On top of the peculiarities of a banded structure per se, the relative tax rates attached to different bands make council tax highly regressive with respect to property value: that is, the tax is a lower percentage of property value for higher-value properties. Tax on a property in Band I is 3.5 times the tax on a property in Band A, despite the former being worth at least 9.5 times as much (in 2003) and sometimes far more than that. A property that was worth £30,000 in 2003, in an LA charging the Welsh average Band D rate, attracts tax (before discounts) equivalent to 3.5% of its 2003 value. In contrast, a property that was worth £600,000 in 2003 attracts tax equivalent to 0.6% of its value in that year, as shown in Figure 2.4. (The figure also shows the effect of the banded structure: for example, a property that was worth just below £123,000 – the cut-off for Band E – in 2003 is taxed at 1.3% of its 2003 value, whereas a property that was worth just over £123,000 is taxed at 1.6% of its 2003 value.)

Figure 2.4. Annual council tax as a percentage of 2003 property value in an LA charging the 2019–20 Welsh average Band D rate



Figure 2.5 shows our estimate of the regressivity of council tax with respect to property values in 2018, taking into account non-uniform price growth since 2003 and the different Band D rates set by different LAs. The regressivity is somewhat ameliorated by the single-person discount (SPD) and the CTRS, both of which are more common among low-value properties. But even with full take-up of discounts, we estimate that, on average, people in £100,000 properties pay more than 0.8% of that value in council tax each year, compared with only 0.5% for people in £400,000 homes.⁸

Higher-income people tend to live in more valuable homes, so the regressivity of council tax with respect to property value also means that it is regressive with respect to income, as shown in Figure 2.6. This figure also shows the impact of the CTRS across the income distribution, assuming full take-up: council tax is clearly less regressive after accounting for the CTRS than before. (The true impact will lie between the two lines, as non-take-up of the CTRS is significant.)

It is not clear why this regressive structure should be desirable.

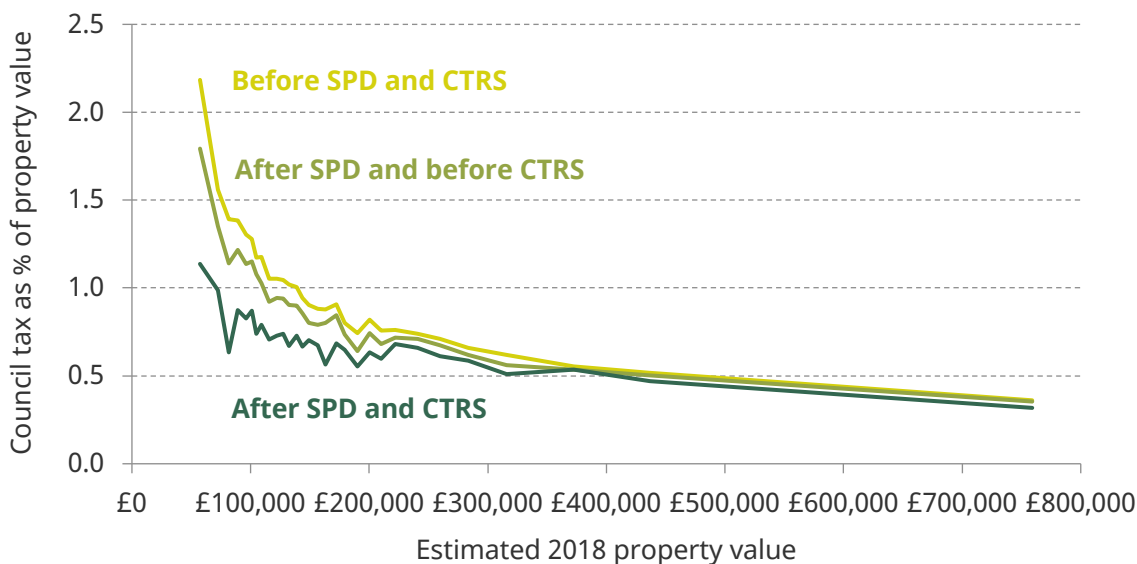
While most people would agree that the tax and benefit system as a whole should be progressive, that does not mean that every individual tax needs to be progressive. What matters is the distributional impact of the system as a whole. Individual taxes should be designed to best suit their purpose.

Tobacco duties, for example, are highly regressive (because poorer households spend a bigger share of their budgets on cigarettes, on average), but they are widely regarded as fair: by raising the price of tobacco to discourage smoking, they are seen as doing something sensible, and tobacco taxation would clearly not be a sensible tool to try to

⁸ The comparison with higher-value homes would be even starker, but there are not enough of them in our household survey data to generate a reliable estimate of average council tax rates for higher-value properties after accounting for discounts.

redistribute between richer and poorer households. It is better to use tobacco duties to discourage smoking, and other parts of the tax and benefit system to achieve the desired progressivity of the system as a whole.

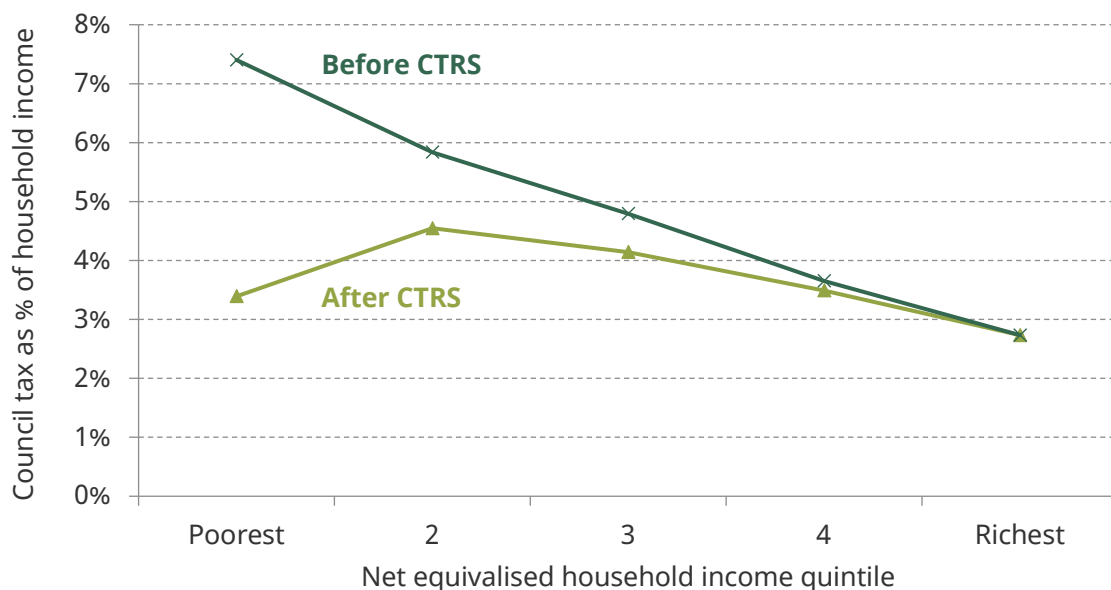
Figure 2.5. Annual council tax as a percentage of estimated property value in 2018, before and after SPD and CTRS



Note: Assumes full take-up of CTRS. Plots average effective council tax rates for 30 quantile groups of estimated property values in Q4 2018.

Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

Figure 2.6. Average council tax as a percentage of average net income by household income quintile, 2018



Note: Assumes full take-up of CTRS.

Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

This example makes clear that when thinking about how council tax should be structured, we need to think of its purpose and how it fits into the tax system as a whole. Council tax is not trying to encourage behaviour change like tobacco taxation (or alcohol or fuel taxation). It is simply attempting to reflect one aspect of households' ability to pay – the value of their housing wealth or consumption – and if we want to levy higher tax rates on those with more resources in general then it seems odd to levy *lower* tax rates on those with more of one particular resource (housing) as the current regressive structure does.

The IFS-led Mirrlees Review of the tax system (Mirrlees et al., 2011, chapter 16) examined the place of housing in the tax system as a whole. Housing is a consumption good (for the people who live in it) and an asset (for the people who own it), and should be taxed accordingly. Most consumption is taxed as a simple percentage of value, through VAT. But VAT is not levied on housing in the UK – unlike in many other countries – and housing consumption is therefore undertaxed relative to most other goods and services. The Mirrlees Review therefore advocated a proportional tax on the annual consumption value of housing, to stand in place of VAT, noting that such a tax would look much like council tax, but levied in proportion to up-to-date property values and with no single-person discount.⁹

The usual argument made for not applying VAT to certain items (such as most food) is a distributional one: that such necessities make up a disproportionate share of poorer households' budgets and should be kept affordable. The Mirrlees Review rejected this argument, as preferential VAT rates for necessities is poorly targeted at distributional goals: the revenue forgone could be used more effectively in other ways. Council tax support is just one example, showing how a fraction of the revenue from taxing housing can be used to ensure that the tax does not make housing more expensive for those who can least afford it. But, in any case, the distributional argument against levying a proportional tax cannot possibly be used to justify a more regressive levy such as council tax (before the CTRS).

If council tax is seen as a tax on housing wealth, rather than housing consumption, it would seem no less odd to have marginal and average tax rates that decline with wealth levels: the opposite of what we do when taxing incomes, for instance. Proponents of wealth taxation rarely argue that the wealth tax should be regressive.¹⁰

If anything, it would be efficient to tax housing more heavily and more progressively than other goods. Property taxation is a relatively efficient way to raise revenue and redistribute, because it has less effect on behaviour than other redistributive taxes. It does little to discourage work or saving, and property cannot be moved abroad. The main disincentive effect it creates is a disincentive to build more housing. But taxing housing reduces housing development less than other taxes reduce production of other goods and services, since housing supply is relatively unresponsive to financial incentives:

⁹ Economically, it is the annual rental value, rather than the capital value, of the property that is relevant. Rent represents the price of the consumption services in a particular period, whereas the capital price is the value of the asset. Levying a tax as a percentage of capital value, rather than rental value, will tend to overtax properties that are expected to become more valuable (relative to others) and undertax properties that are expected to become less valuable. In practical terms, however, where owner-occupation is the norm, capital values might be easier to assess than rental values. Policymakers therefore face a choice between what is economically preferable and what is practically preferable.

¹⁰ The Mirrlees Review argued against an annual wealth tax. The reader is referred there for discussion of this and of how the *returns* to wealth, including the returns to housing wealth, should be taxed.

planning restrictions etc. are far more important (Caldera Sanchez and Johansson, 2011). To the extent that house-building does respond to financial incentives, that creates a further efficiency argument in favour of proportionality. The current regressive structure, taxing low-value housing more heavily than high-value housing, incentivises developers to build more high-value properties and fewer affordable homes. A progressive structure would do the opposite. A tax proportional to property value would discourage housing development in general – like VAT discourages the production of other goods and services – but would not distort the mix of housing built.

Making council tax proportional to property value would already be a radical reform, and has a clear rationale as a substitute for VAT on housing. In this report, we look at making council tax proportional to property value, and also consider less radical reforms that would reduce the regressivity of council tax with respect to property value and income, but we do not look at moving beyond proportionality to a progressive property tax. As we noted in the introduction, the Welsh Government has committed to making council tax more progressive (i.e. less regressive).

We emphasise that we do not take a view on how progressive the tax and benefit system overall should be. If the Welsh Government did not want to change the overall progressivity of the tax system, it could broadly offset the distributional effects of the reforms we discuss by making other taxes (such as land transaction tax and/or the Welsh rates of income tax) less progressive. Making council tax less regressive while making more distortionary taxes such as income tax less progressive could roughly maintain the overall degree of progressivity in the tax system while making it more efficient.

But the Welsh Government might want to increase overall progressivity, and particularly to tax those with high property wealth (or high property consumption) more heavily overall than presently. Concern about wealth inequality has been rising, with rising property values an important part of that. This also feeds into debates about intergenerational inequality, since older people tend to have more housing wealth (and have especially benefited from house price rises) and to live in bigger properties relative to their household size.

The single-person discount

The third way in which council tax departs from being proportional to 2003 property values – the 25% discount for single occupancy – is by far the most damaging to economic efficiency. The single-person discount originated in the attempt to make council tax a hybrid between domestic rates and the poll tax, as described at the start of this chapter. The idea was that, if council tax is half property tax and half poll tax, single people should pay only half as much of the poll tax part as couples – a reduction of a quarter of the total.

This logic was not fully followed through: three-adult households do not pay a premium, for example. But there is a more fundamental sense in which council tax fails as a hybrid. Under council tax, unlike the poll tax, the reduction for single-adult households depends on the value of the property. Less council tax is payable in total if a single person occupies an expensive property and a couple a cheap property than the other way round. That was not the case under either domestic rates or the poll tax.

In distributional terms, if for some reason we want to redistribute from multi-adult to single-adult households, it is not clear why the extent of that redistribution should be

related to the value of the property they occupy. And because the discount is linked to property value, it encourages inefficient use of the housing stock, with single-adult households living in bigger properties, and multi-adult households living in smaller properties, than they otherwise would. With property scarce, a discount that makes it scarcer for those who most need space does not look like sensible policy. Although much less widely discussed than the out-of-date valuations and regressive structure, this is a major weakness of the current council tax system.¹¹

Is council tax partly a 'benefit tax'?

Both the regressive rate structure and the single-person discount may reflect a view that council tax is not intended purely as a tax on property value. It is sometimes argued that council tax is partly a 'benefit tax', reflecting households' use of council services. With this in mind:

- **If council tax is intended to be a pure benefit tax, it does a remarkably bad job.** Use of the main council services (such as adult and child social care) bears little relation to property value. A significant number of households pay little or no council tax because of the CTRS, and these include many with the highest use of local government services. If we really wanted a benefit tax approach, that would more likely mean charging directly for more council services, and levying higher taxes on households with more children and elderly people, and more vulnerable and infirm people – not those living in more valuable properties. A pure benefit tax would bear little, if any, relationship to property value. **Council tax is perhaps more plausible as a hybrid of a property tax and a benefit tax**, reflecting its origins as a compromise between domestic rates and the poll tax. The poll tax element could be seen as a crude, flat-rate charge for local services, with the extra tax paid on higher-band properties being the property tax element.
- **The historical accident of council tax's origins is not a good principled basis for designing or evaluating the tax. But, in any case, when people talk about council tax being a charge for local government services, it is not clear that they mean its rates should be structured so that the distribution of payments reflects different households' use of services.** Domestic rates, which were levied in proportion to (rental) value, were also sometimes described as a charge for local services. Likewise business rates, the other (semi-)local tax, are sometimes said to be a charge for the local amenities that firms benefit from, but no one argues that business rates should therefore be less than proportional to value, perhaps as a hybrid of a per-business ('poll') tax and a property tax. On the contrary, business rates are levied as a lower proportion of value for low-value properties than high-value properties. The description above of what a genuine benefit tax approach would involve serves to illustrate how far it is from what anyone actually advocates. There has been little praise for the poll tax since it was abolished, let alone advocacy of levying more tax on the old and vulnerable than on those less likely to require local government services.
- **In some ways, it would seem somewhat anomalous to design council tax alone as a benefit tax.** All taxes are ultimately paying for public services, and despite the long

¹¹ Note that a more accurate hybrid between domestic rates and the poll tax would have been to set the single-person discount equal to half the Band A rate. That would be more progressive and would not have the same distortionary effect.

history of benefit taxation as a concept, governments in practice do not tend to design taxes so that the distribution of payments reflects different households' use of services (the TV licence fee being the most obvious exception). If the taxes people paid were commensurate with services received, the tax system would not do any redistribution. Instead, services are provided universally or according to need, and taxes levied broadly according to people's ability to pay (or to correct for market failures, as with alcohol, tobacco and fuel duties).

- **There is one way in which council tax differs from other taxes, though: it is the only tax whose level is set by LAs rather than national government.** One could argue that redistribution based on ability to pay should be the preserve of the UK and Welsh Governments, leaving LAs the option of raising more or less for the services they provide via a 'benefit tax' approach that does not seek to redistribute.¹² However, this line of reasoning leaves open the question of why the local tax should be related to property value at all, even in a less-than-proportional way.

Overall, then, we cannot say definitively that there is no role for the benefit tax approach in local taxation, and therefore for a regressive local tax. But it is not an easy argument to sustain. And it does nothing to undermine the earlier case for a proportional tax on housing. The rest of the tax system undertaxes housing because of the absence of VAT, and there is therefore a strong case for a housing tax that is (at least) proportional to value. Any case for a different kind of local tax would be on top of that, not instead of it.

2.4 What would a good property tax look like?

Taking the above discussion together, a good property tax would:

- be based on up-to-date values;
- be proportional to value; and
- avoid distorting behaviour in undesirable ways such as the single-person discount currently does.

Ideally, therefore, there should be a revaluation as soon as possible, and council tax should be levied as a simple percentage of those up-to-date property values, with no discount for sole occupancy.

Crucially, revaluations should then happen regularly – perhaps annually, but certainly no less often than the three-yearly cycle now adopted for business rates – to prevent the present unsatisfactory situation arising again.¹³ Frequent, regular revaluations would mean that the associated changes in bills would be small, gradual and routine – and

¹² On the other hand, one could also argue that any system that gives LAs only one tax instrument with which to raise revenues – whether a pure benefit tax, council tax or a proportional property tax – is overly restrictive. This view would imply that giving LAs control over a wider range of tax instruments – for introducing a local income tax, localising decisions on the level of business rates, or simply allowing LAs to choose the council tax band relativities and discounts themselves – could be desirable (Amin-Smith, Harris and Phillips, 2019).

¹³ If full revaluations happen less than once a year, a simple local house price index should be used to update valuations for years in between. This would deliver a reasonable approximation with minimal effort.

therefore much less disruptive and politically difficult than the revaluation we analyse in this report, which reflects the pent-up effects of decades of relative price changes.

This model of a tax proportional to up-to-date property values is in line with the recommendations of the Mirrlees Review,¹⁴ and a number of other reports have since made broadly similar recommendations (Corlett and Gardiner, 2018; Leishman et al., 2014; Murphy, 2019).

This benchmark guides the analysis we undertake in the rest of this report and the reform options we set out in the next chapter. These include intermediate options such as systems that keep the banded structure but make the tax rates applying to bands proportional to value, or at least less regressive than now. While such options would not solve all the problems with the current council tax system, there may be practical or political reasons that make them more palatable as a first step.

¹⁴ The Mirrlees Review also proposed that stamp duty land tax (SDLT) on housing should be abolished and the revenue recouped through higher council tax, but we do not consider the Welsh equivalent to SDLT, land transfer tax (LTT), in this report.

3. Analysing reforms to council tax

3.1 The reforms we analyse

As discussed in the previous chapter, revaluation and reform of council tax are clearly desirable. But before making changes, it is important to understand empirically the impacts they would have. In this report, we look at the council-level and household-level impacts of a range of reforms, starting with a bare minimum revaluation-only option and then adding in further changes in steps culminating in the full Mirrlees Review recommendation of a fully proportional council tax, as follows:

1. Using updated property values to assign properties to council tax bands ('pure revaluation').
2. As option 1 but also making relative tax rates proportional to the median price of properties in each tax band ('revaluation with proportional bands').
3. As option 2 but adding additional tax bands at the bottom and top of the distribution ('revaluation with extra and proportional bands').
4. As option 1, adding additional tax bands at the bottom and top of the distribution and making the band relativities less regressive – though not, as in options 2 and 3, fully proportional ('revaluation with extra bands and reduced regressivity').
5. Applying a fixed percentage tax rate to updated (continuous) property values, but retaining existing discounts, premiums and exemptions ('revaluation with a continuous and proportional system').
6. As option 5 but also abolishing the single-person discount ('revaluation with a continuous and proportional system without a single-person discount').

To keep this report manageable, we show many of our results just for options 1 and 5, but present our key findings for all of them. Since these reforms build up by additional components, broadly speaking the intermediate options tend to be in between the two cases that we focus on, though this is not always the case. Full results for all reforms are available in an online spreadsheet appendix (www.ifs.org.uk/research/welsh-council-tax).

We restrict attention to revenue-neutral reforms. Local government funding is tight and local authorities (LAs) might be looking to raise more revenue in the process of reform, though this would not be the purpose of reforms. But tax rates could be increased (or reduced) under any of these options, or indeed the existing system. In order to focus on the structure of the system, we separate that issue from the question of how high taxes should be.

3.2 What we look at in this report

In the next two chapters, we model the impacts of these council tax reforms both across areas (Chapter 4) and across households (Chapter 5).

First, we look at how the different reforms would affect each LA's tax base, and how that would in turn affect its grant funding if the Welsh Government decided to redistribute Revenue Support Grant (RSG) in line with this updated tax base. We show the implications of these grant adjustments for average council tax bills in each LA assuming LAs maintain their spending.

We then turn to look at the impacts on individual households, looking at how tax bills would change for households of different ages, incomes, housing tenures, etc.

3.3 Data and methodology

LA-level analysis

The LA-level analysis uses data from: the Valuation Office Agency (VOA) on the stock of properties in Wales including their current council tax band and certain key characteristics (that pertain to valuation); the Land Registry on the prices paid for properties that transacted between 2010 and 2018; and the Welsh Government on the council tax bases and rates and grant funding of different LAs, and the characteristics of different local areas including population density.

To estimate property values for the stock of properties in Wales, we first match the VOA data with the Land Registry data, by address. We then impute Q4 2018 values for the entire stock of Welsh properties using an approach termed hedonic regression. This posits that property values can be modelled as a function of the characteristics of the property and the area in which it is located. Our regressions include a range of property characteristics (dwelling type, number of bedrooms, bathrooms and other rooms, size in square metres, type of parking available, whether it has a conservatory, its age, and certain other characteristics that may be pertinent to value such as whether it has a view or whether it is current or former social housing) and location characteristics (such as which small neighbourhood – each containing about 1,500 people – it is located in, population density, and deprivation), and they allow for differential property price time trends over the period 2010–18 by LA area. Overall, the regression explains around 85% of all variation in property values in Wales over this period. Values are updated from Q4 2018 to Q1 2019 using the official House Price Index for each LA area.

It is possible that this approach could lead us to overstate (understate) the values of properties that do not transact, if they are systematically less (more) desirable than properties that do transact with the same observed characteristics. However, controlling for unobserved differences is difficult and beyond the scope of this project.

The impacts of reforms on LAs' tax bases, grant funding and average tax bills are modelled using a model designed and built specifically for this project. It uses our estimates of the value of each property in Wales, alongside Welsh Government data on the council tax bases and rates and grant funding of different LAs, to do this, taking into account the proportions of households in each LA entitled to different exemptions, discounts and premiums and in receipt of support from the CTRS.

Household-level analysis

The household-level analysis uses data from wave 8 (2016–18) of Understanding Society, a representative panel survey of 1,233 households in Wales. The data are linked to

administrative data from the VOA on households' council tax bands, from which we deduce households' pre-reform council tax liabilities (given the LAs in which they live). There are 295 households for which linked VOA data are not available; where possible, we impute their council tax bands using their reported house values or rent, local authority and property characteristics.¹⁵

The data contain self-reported house values for homeowners, which we uprate to December 2018 using the LA-level House Price Index for the appropriate dwelling type (detached, semi-detached, terraced etc.). Property values for renters are imputed using a hedonic regression on property characteristics (dwelling type, number of bedrooms and other rooms, existing council tax band), location characteristics (local authority, rurality, population density, LSOA deprivation levels¹⁶) and household characteristics (income, household composition and demographics¹⁷). Reported and imputed property values are then used to calculate households' council tax liabilities after revaluation and reform.

It is possible that this approach could lead us to overstate (understate) the values of rented properties, if they are systematically less (more) desirable than owner-occupied properties with the same observed characteristics. This would in turn lead us to overestimate (underestimate) the council tax liabilities of households that rent after revaluation and reform. However, controlling for unobserved differences is difficult and beyond the scope of this project.

In imputing property values for renters, we randomly draw error terms from the error distribution of owner-occupiers (that is, the part of the variation in property values that is not explained by the characteristics we control for). Without doing this, predictions would understate the variation in property values across renters. To ensure that our results are robust to these random draws, we impute 20 property values for each household based on 20 randomly drawn error terms. The results we present are averages over all 20 imputations for each household.

The impacts of reforms are modelled using the IFS tax and benefit microsimulation model, TAXBEN. To simulate post-reform incomes and tax liabilities, we drop 229 households with incomplete information on incomes and household characteristics. We further drop 105 households for which we cannot impute council tax bands (largely because of missing house values or rents). This leaves us with a final sample of 899 households in Wales, which we reweight to match the distribution of council tax bands in the administrative data. The final sample closely matches the (representative) overall Understanding Society

¹⁵ These include tenure type (distinguishing between private and social rentals), dwelling type interacted with the number of rooms, LSOA-level Index of Multiple Deprivation (IMD) decile group and whether the property is in a rural or urban area. The imputation is based on an ordered logistic regression.

¹⁶ Based on deciles of specific components of the IMD: income, employment, housing, education and health. LSOA stands for Lower Super Output Area.

¹⁷ These include whether the household contains a couple, the number of adults, the number of children in different age groups, the highest qualification in the household, the age of the oldest household member and whether anyone in the household is in receipt of disability benefits or reports having a long-standing illness or disability.

sample in terms of the distributions of income, local area deprivation (IMD), age of the oldest household member and household size.¹⁸

We model reforms to the 2018–19 tax and benefit system (which corresponds to Q1 2019), assuming universal credit is fully rolled out and that benefit cuts that apply to new claimants or children (such as the two-child limit) are fully in place. This allows us to capture the long-run effects of reform.

Assumptions on grant adjustment

As discussed in more detail in the next chapter, the impact of revaluation and reform of council tax will depend crucially on whether grant funding is adjusted to reflect changes in the tax bases of different LAs. In the LA-level analysis, we can explicitly account for this, working out how much each council would need to change its tax rates and average tax bills if grants are and are not adjusted. However, in the household-level analysis, we are unable to do this as samples at the LA level are too small to be properly representative. Instead, we adjust the council tax rates all households in Wales face by the same proportion so that reforms are revenue neutral across Wales as a whole. It turns out that when tax rates are fairly similar across LA areas, as is the case in Wales, this approach will lead to estimates closer to what we would obtain if we were able to model full grant adjustment, rather than no grant adjustment.

Assumptions about incidence and capitalisation

We consider two alternative assumptions about who would bear the economic burden of council tax. Council tax is generally payable by the occupier of a property. But it is not necessarily the occupier who ultimately bears the burden of the tax. In particular, in the case of rental housing, rents may adjust in response to council tax changes, in effect passing the effect of higher/lower council tax bills on to the landlord. This need not happen explicitly or deliberately, but can be the result of changes in the demand for housing affecting the market rent. Higher council tax, for example, will reduce the amount that potential tenants are willing and able to pay in rent, which may force landlords to reduce the rent they charge. That would shift at least part of the burden of council tax on to property owners.

We therefore consider two alternative extremes: one in which the incidence of council tax changes is fully on the occupier, and one in which rents adjust so that it is fully on the owner. Reality is likely to be somewhere in between – although theory and evidence suggest it is probably closer to the latter. Unfortunately, while the household survey data available record information on the rental income landlords receive, they do not record information on the number or location of their rental properties. This means we cannot allocate gains/losses as a result of the revaluation and reform of council tax to individual landlords. Instead, we show impacts for landlords as a group and give some indication of their characteristics.

If council tax changes do affect the annual rental value of a property, this can be reflected in the capital value of the property. Potential landlords will be willing to pay less for a property if the rental income they can get from it is lower. And the same is true for owner-occupied housing, even though the owner and the occupier are the same person (so the

¹⁸ The final sample under-represents multi-family households, specifically those containing unrelated families or related families of the same generation. See Chapter 5 for more details.

rental value of the property is not actually paid); potential buyers of the property will not be willing to pay as much for it if the property has a higher annual council tax bill attached to it, so the market value of an owner-occupied property will fall if its council tax bill rises (and rise if it falls). We show how council tax changes would affect property values if they were fully 'capitalised' in this way. Again, reality will not be this extreme, though theory and evidence suggest property tax changes do get reflected in property values to a high degree.¹⁹

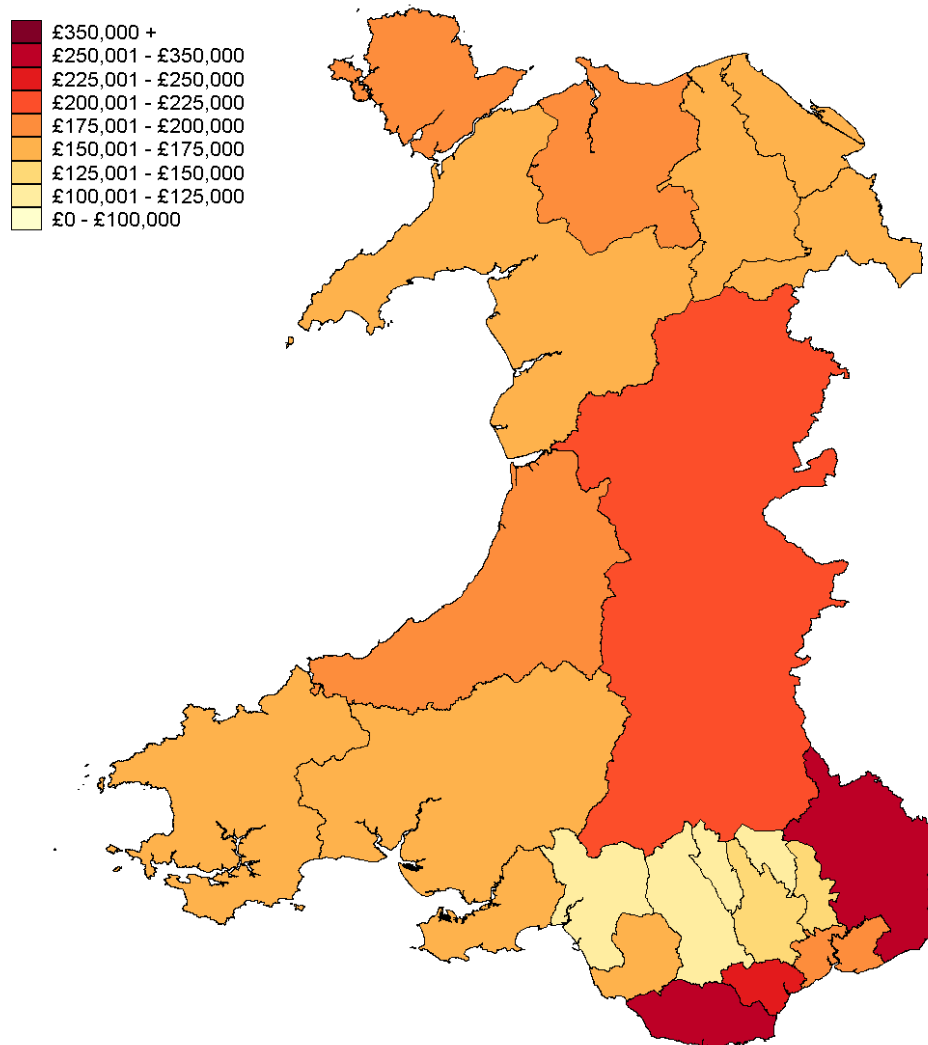
Further information on our methodology can be found in Appendix A. We now turn to our analysis and findings.

¹⁹ Høj, Jørgensen and Schou (2018) provide a review and show that changes in property taxes in Denmark are fully capitalised into house prices, for instance.

4. The impact of revaluation and reform across places

This chapter examines the impact of revaluation and reform across different places – specifically different local authority (LA) areas. We consider impacts on tax bases, average tax bills and reliance on Revenue Support Grant funding – with the last two depending crucially on whether grant allocations are updated to reflect the changes in tax bases that revaluation and reform would result in. Indeed, without such adjustments to grants, revaluation and reform would redistribute tax bills *within* LA areas, but not necessarily *across* them. This is because, if grant funding is unadjusted, each LA would need to raise as much council tax as prior to revaluation and reform if it wanted to maintain spending levels – implying that even if individual households’ tax bills went up or down, the average net bill charged by each LA would have to be the same.

Figure 4.1. Predicted average (mean) property values by LA area



Note: Arithmetic mean property price predictions for Q1 2019.

Source: Authors’ calculations using HM Land Registry (2019) and Valuation Office Agency (2019).

As discussed in the previous chapter, the first stage of our analysis is to estimate up-to-date property values for the current stock of properties in Wales. Doing this, Figure 4.1 shows our estimate of the average (mean) property price by council area as of the first quarter of 2019.

We estimate that average values ranged from approximately £101,000 in the case of Blaenau Gwent to £288,000 (almost three times as much) in neighbouring Monmouthshire as of Q1 2019. More generally, the map shows clearly that average values in the South Wales Valleys are lower than in the rest of Wales: all LA areas where we estimate that average values are below £150,000 are located in the Valleys.

Of course, underlying variation in average values across LA areas is much greater variation across neighbourhoods and individual properties. In the analysis that follows, we take full account of the property-level variation in values, building our estimates of the impacts on different LA areas from the bottom up. Table B.1 in Appendix B provides detail on the distribution of values by LA, and Figure B.1 in the same appendix shows estimates of mean prices by Lower Super Output Area (LSOA), showing that there is significant variation in prices between smaller neighbourhoods within LAs.

4.1 Updated tax bands and relativities

Given estimates of Q1 2019 property values, we can assign properties to bands based on these values. For systems that have the same number of bands as now (options 1 and 2), band thresholds are set so that the same proportion of properties would be in each band as presently across Wales as a whole – although the proportion in each LA area would change depending on how relative property values have changed since the last revaluation date in 2003. For systems with additional bands at the top and the bottom, we do the following: Bands A and B are split into four bands (A1, A2, B1, B2), each with the same proportion of properties in; and Band I is split into two bands (I and J), each with the same proportion of properties in.

Table 4.1 shows the band thresholds and tax rate relativities for the systems that have the same number of bands as now (options 1 and 2). It shows that each band threshold would have to increase by a factor of between about 1.7 and 1.8, reflecting increases in property values since the last revaluation point in 2003. It also shows how moving to proportional bands would significantly increase the progressivity of the council tax with respect to property value. For instance, the relative tax rate on Band A properties would fall from 67% to 37% of that on a Band D property, while the relative tax rate on a Band I property would increase from 233% to 488%.

Table 4.2 shows the band thresholds and tax rate relativities for the systems that have additional bands at the top and the bottom. It shows that adding additional bands at the bottom would allow for significantly narrower tax bands for low-value properties. It also shows that the threshold for the new top band would be such that Band J would include properties with a very wide range of values.

Table 4.1. Band structures, thresholds and relativities of the reforms we model: systems with 9 bands

Band	2003 bands	Q1 2019 bands	Revaluation relativities (option 1)	Proportional relativities (option 2)
A	Up to £44,000	Up to £78,710	6/9	37/100
B	£44,001 to £65,000	£78,711 to £112,490	7/9	54/100
C	£65,001 to £91,000	£112,491 to £155,490	8/9	75/100
D	£91,001 to £123,000	£155,491 to £203,970	9/9	100/100
E	£123,001 to £162,000	£203,971 to £275,840	11/9	132/100
F	£162,001 to £223,000	£275,841 to £380,670	13/9	178/100
G	£223,001 to £324,000	£380,671 to £553,850	15/9	246/100
H	£324,001 to £424,000	£553,851 to £741,180	18/9	348/100
I	Above £424,000	Above £741,180	21/9	488/100

Source: Authors' calculations using HM Land Registry (2019), Valuation Office Agency (2019) and Welsh Government (2019c and 2019d).

Table 4.2. Band structures, thresholds and relativities of the reforms we model: systems with 12 bands

Band	Q1 2019 bands	Proportional relativities (option 3)	Less regressive relativities (option 4)
A1	Up to £68,510	33/100	4/9
A2	£68,511 to £83,950	43/100	5/9
B1	£83,951 to £98,020	51/100	6/9
B2	£98,021 to £112,490	59/100	7/9
C	£112,491 to £155,490	75/100	8/9
D	£155,491 to £203,970	100/100	9/9
E	£203,971 to £275,840	132/100	12/9
F	£275,841 to £380,670	178/100	15/9
G	£380,671 to £553,850	246/100	20/9
H	£553,851 to £741,180	348/100	25/9
I	£741,181 to £862,980	448/100	30/9
J	Over £862,980	555/100	36/9

Source: Authors' calculations using HM Land Registry (2019), Valuation Office Agency (2019) and Welsh Government (2019c and 2019d).

4.2 The impact of a pure revaluation and of a continuous and proportional council tax system

With up-to-date values, and new tax bands and relativities, we can estimate the impact of revaluation and reform. In what follows, we first focus on two of the six reform options outlined in the last section:

- option 1, a **pure revaluation**, which we consider the bare minimum that needs to be done; and
- option 5, a **continuous and proportional system**, which, in addition to revaluing properties, removes the banded structure and applies a fixed proportional tax rate to the exact estimated value of each property. However, this option maintains the current set of discounts, exemptions and premiums (including the single-person discount) as proportional reductions or additions to this fixed tax rate. As highlighted in Chapter 2, there is a strong case to abolish the single-person discount, as in option 6.

Options 2, 3 and 6 – which are all variants of a proportional council tax – have very similar effects across council areas to option 5 – although the effects on individual households can differ significantly.²⁰ The effects of option 4 – which is less regressive with respect to property value than the current tax structure but not fully proportional – lie in between those of options 1 and 5. We provide a summary of the effect of these options across LA areas in Section 4.3; full sets of results for reform options 1–6 can be found in our online spreadsheet appendix.

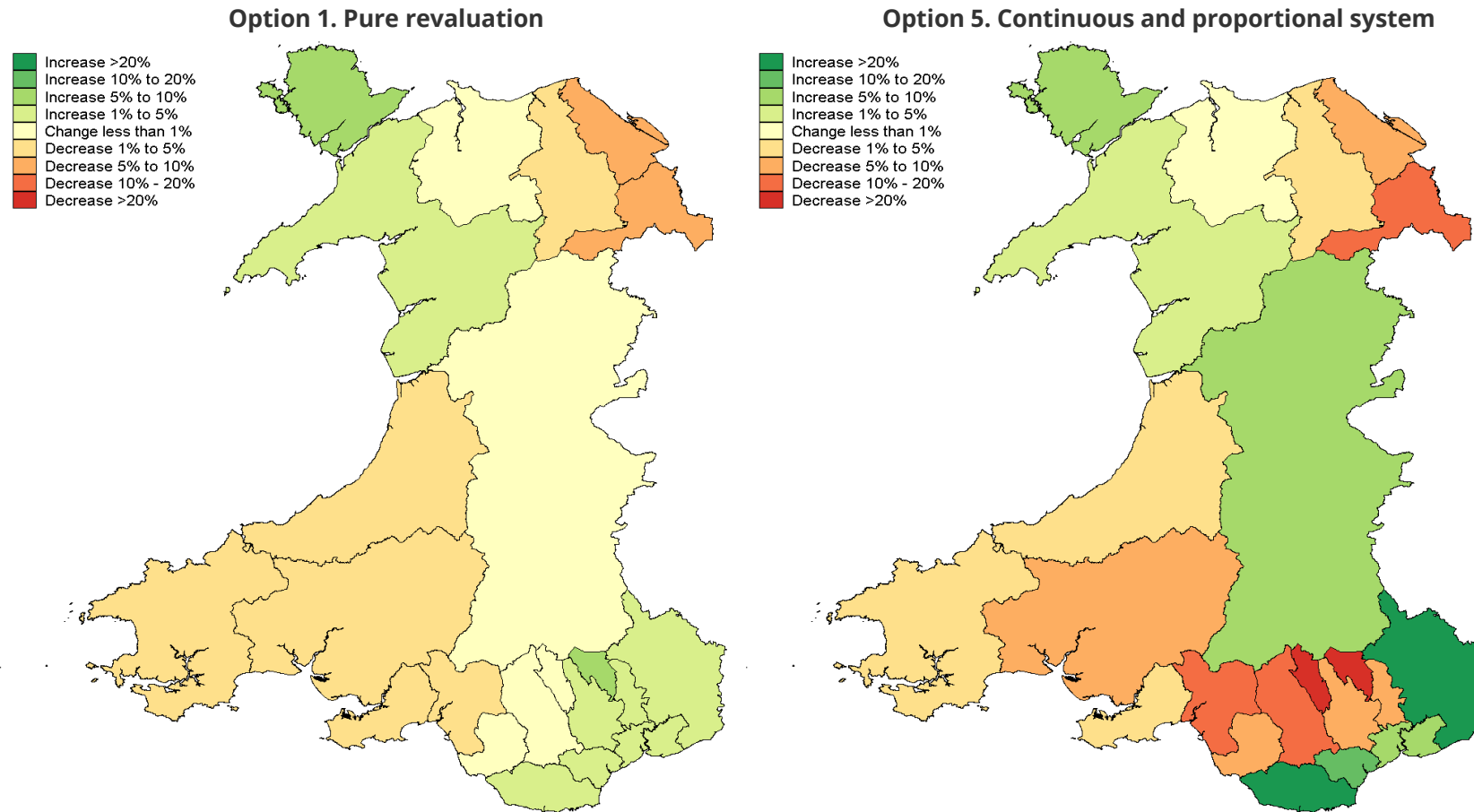
Impacts on local tax bases

The first impact we consider is on the tax base of different LAs. This is a measure of the (relative) amount that would be raised in council tax in different LA areas if all LAs set the same tax rate – for example, the national average tax rate. It can be thought of as a measure of how much different LAs can raise via council tax given the council tax structure in place. It is important because it is used by the Welsh Government as part of its calculations of how much Revenue Support Grant to provide to different LAs to top up their council tax revenues: all else equal, LAs with smaller tax bases get more grant funding (and vice versa), with the aim of allowing them to fund services without having to charge higher-than-average tax *rates* to make up for their small tax *base*.

Figure 4.2 shows our estimates of the change in tax bases that would result from a pure revaluation (the left-hand map) and from also abolishing the banded structure and implementing a continuous and proportional-to-value council tax (the right-hand map). Exact figures for each LA area can be found in our online spreadsheet appendix.

²⁰ For example, compared with option 5, option 6 removes the single-person discount, and so would lead to higher tax bills for households with one (taxable) occupant and lower tax bills for other households. And, again compared with option 5, the retention of a banded structure in options 2 and 3 would lead to lower tax bills for the very most expensive properties.

Figure 4.2. Change in council tax bases, by LA area



Note: Our measure of change in tax base for a pure revaluation is the change in the number of Band D equivalents (after exemptions, premiums, discounts and the council tax reduction scheme). Our measure of the change in tax base for a continuous and proportional system is based on a notional tax rate that would raise the same revenue as the current banded structure if it were applied across Wales as a whole.

Source: Authors' calculations using HM Land Registry (2019), Valuation Office Agency (2019) and Welsh Government (2019c and 2019d).

Under a **pure revaluation**, changes in tax bases reflect different numbers of properties moving up and down tax bands in different LA areas as a result of changes in relative property values since April 2003, the date used for the last revaluation. The left-hand panel of Figure 4.2 shows that our estimates of property values in Q1 2019 imply that:

- Such movements would result in relatively modest changes in tax bases for most LAs: with the exception of Anglesey (up 5%), Blaenau Gwent (up 5%), Wrexham (down 7%) and Flintshire (down 6%), tax bases would change by less than 5% in either direction. This reflects several factors: first, that relatively wide tax bands mean that relative property values have to change quite substantially in order to generate moves between tax bands. This is reflected in the fact that we estimate around half of properties would stay in the same tax band, with around a quarter moving up and a quarter moving down, as shown in Box 4.1. Second, even in areas where relative values have risen (or fallen) on average, our estimates imply some properties have seen a fall (or, conversely a rise) in their relative value, as Box 4.1 again demonstrates. Third, the fact that the current council tax structure is regressive with respect to property value means that the difference between the taxes charged to properties in different bands is much smaller than the difference in their average values.
- There is a clear regional pattern, with tax bases estimated to increase in most of south-east and north-west Wales, and fall in south-west and north-east Wales. In most cases, the factors driving these patterns are clear to see. For example, the Land Registry estimates reported in Chapter 2 show relatively large increases in property values since 2003 in the Valleys council areas of south-east Wales and in Anglesey in the north-west, but relatively small increases in north-east Wales and Ceredigion and Pembrokeshire in the south-west. However, a number of examples are more difficult to explain, including Neath Port Talbot in the south-west, where Land Registry figures suggest average values have increased by more than average, but we estimate the tax base would fall by around 1.7% following a pure revaluation. This reflects the distribution of price changes within the LA area.

Under a **continuous and proportional council tax system**, it is mainly differences in price *levels* rather than differences in relative price *changes* that would determine the effect of such a reform on LAs' tax bases. In particular, the move from a regressive to a proportional tax structure would lead to increases in tax bases in LA areas where average property values are relatively high, and decreases in areas where they are relatively low. The right-hand panel of Figure 4.2 shows this means that:

- Changes in tax bases would be substantially larger than under a pure revaluation. This is both because price levels vary by more than price changes since 2003 do and because the move to a proportional tax system makes tax bases much more sensitive to differences in average property values than under the current regressive council tax structure.
- Tax bases would fall significantly in most of the Valleys, with the largest falls in Neath Port Talbot (20%), Blaenau Gwent (23%) and Merthyr Tydfil (24%), the last two of which have the lowest average property values in Wales. Conversely, tax bases would increase by 18% in Cardiff, 25% in the Vale of Glamorgan and 34% in Monmouthshire, where average values are highest.

Box 4.1. Estimated band movements under a pure revaluation

As highlighted in Section 4.1, for ease of comparison with the current system, we set band thresholds in our pure revaluation scenario such that the number of properties in each band is the same across Wales as a whole after revaluation as is currently the case. However, changes in relative values of different properties mean individual properties can move up and down bands, and the numbers moving up and down can differ across Wales (which is what drives the changes in tax bases described in the main text).

Table 4.3. Estimated percentage of properties moving up and down bands following a pure revaluation, by LA area

Local authority	Down	Same	Up
Blaenau Gwent	7%	58%	35%
Bridgend	26%	51%	24%
Caerphilly	17%	52%	31%
Cardiff	25%	45%	30%
Carmarthenshire	33%	47%	20%
Ceredigion	33%	44%	23%
Conwy	29%	46%	25%
Denbighshire	33%	47%	19%
Flintshire	43%	43%	13%
Gwynedd	17%	47%	36%
Isle of Anglesey	15%	45%	40%
Merthyr Tydfil	16%	61%	23%
Monmouthshire	16%	44%	40%
Neath Port Talbot	28%	54%	18%
Newport	20%	48%	32%
Pembrokeshire	34%	46%	20%
Powys	27%	46%	27%
Rhondda Cynon Taf	16%	61%	23%
Swansea	27%	50%	23%
Torfaen	19%	52%	29%
Vale of Glamorgan	22%	46%	31%
Wrexham	47%	42%	11%
Wales	26%	49%	26%

Source: Authors' calculations using HM Land Registry (2019), Valuation Office Agency (2019) and Welsh Government (2019c and 2019d).

Table 4.3 shows the percentages of properties by LA area and for Wales as a whole that are estimated to go down at least one band, go up at least one band and remain in the same band. It shows clearly that all LA areas are estimated to see properties both go up and go down bands – although the proportions differ quite significantly. For example, we estimate that in Blaenau Gwent, 35% of properties would go up at least one band and 7% would go down at least one band, with the remaining 58% remaining in the same band. Conversely, in Wrexham, 47% are estimated to go down at least one band and 11% to go up at least one band, with the remaining 42% remaining in the same band.

Tables B.2 and B.3 in Appendix B provide information on the estimated share of properties by band following revaluation and reform.

Changes in average tax bills if grant funding is unadjusted

It is reasonable to assume, at least as a first approximation, that revaluation and reform of council tax would not affect how much different LAs want or need to spend on local public services. This means that if Revenue Support Grant (RSG) funding were not adjusted to reflect changes in LAs' tax bases, each LA would need to raise just as much council tax revenue as prior to revaluation and reform. As highlighted at the start of the chapter, this would mean each LA charging its residents the same average tax bill post- as pre-revaluation-and-reform (although, of course, individual households could see their bills go up or down). Under a pure revaluation, for example, that would mean LAs seeing a fall in their tax base having to set a higher Band D rate to offset that fall and leave average tax bills unchanged. Conversely, those LAs seeing an increase in their tax base could set a lower Band D rate and still have an unchanged average tax bill and unchanged revenues.

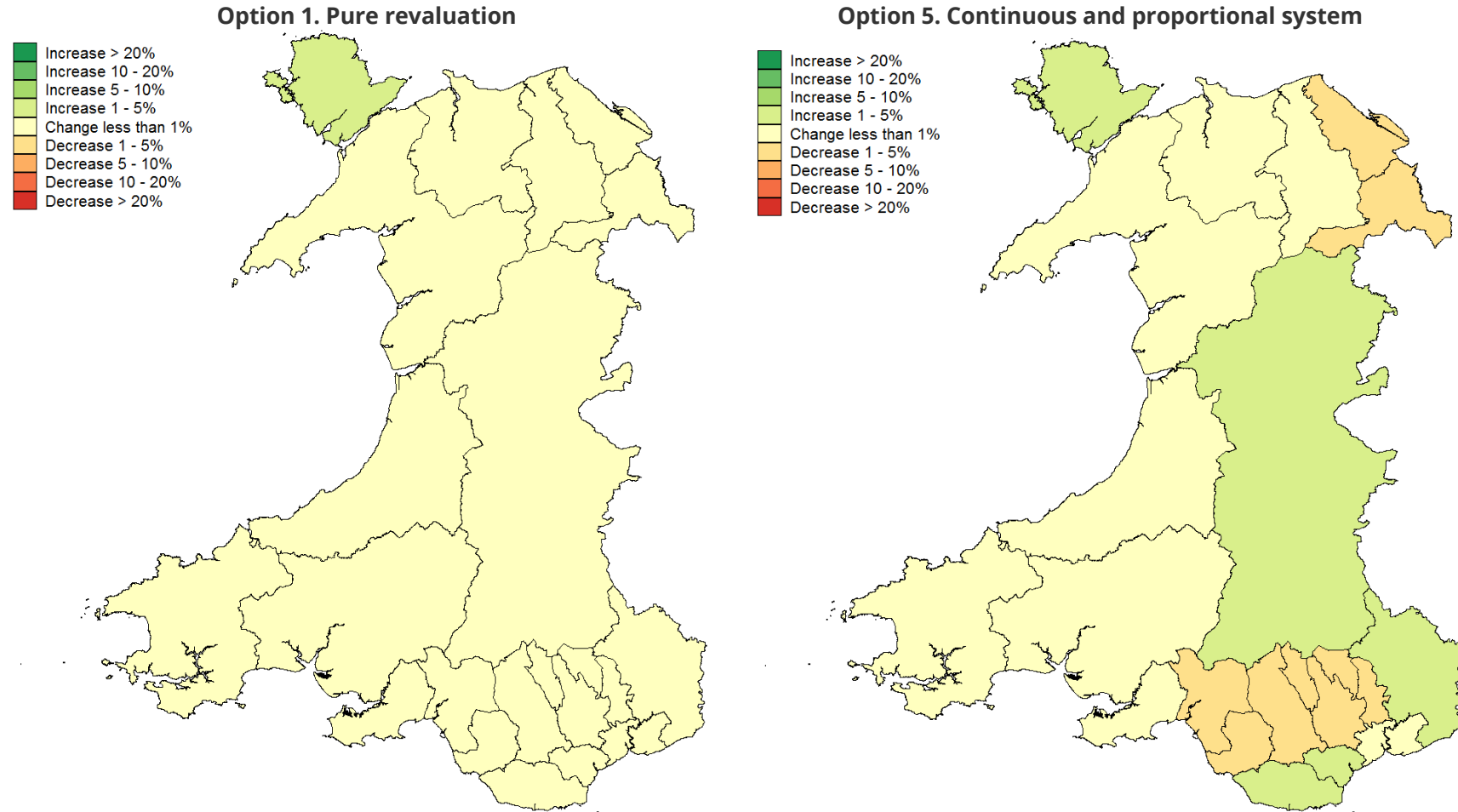
If each part of the country were covered by just one LA that levied council tax, this would mean no change in overall average council tax bills in each LA area. But in fact in addition to general-purpose LAs, police and crime commissioners (PCCs) levy council tax to pay for local police services. The average bill charged by each of these PCCs would be unchanged, like the average bill charged by each general-purpose LA. But because PCCs cover multiple general-purpose LA areas, the *overall* average council tax bill in each LA area (which is the sum of the LA's tax bill and the police precept) would in fact change.²¹

To understand this, consider the average tax bill for a resident of an LA area where, following a pure revaluation, the tax base falls, but which is part of a wider PCC area where the tax base rises. Residents would pay, on average, the same council tax to the LA (which would set its Band D rate higher to raise the same revenue as before) but would pay, on average, less council tax to the PCC (which could set its Band D rate lower to raise the same revenue as before given its larger tax base). The average *overall* council tax bill of residents of this LA area would therefore fall. The average overall council tax bill of residents of other LA areas in the PCC area would rise to offset this.

Figure 4.3 illustrates this for both a pure revaluation (left-hand map) and a continuous and proportional-to-value council tax (right-hand map). It shows that:

²¹ In parts of Wales, community councils also levy small additions to council tax to pay for hyper-local services. These tend to be relatively small though, and all community councils are within a single LA area. Any changes they make to their Band D rate to offset changes in their tax base therefore do not have the same effects on average tax bills by LA as changes that PCCs make to their Band D rates.

Figure 4.3. Changes in average tax bills if grant funding is unadjusted, by LA area



Source: Authors' calculations using HM Land Registry (2019), Valuation Office Agency (2019) and Welsh Government (2019c and 2019d).

- Under a **pure revaluation**, overall average council tax bills would change by less than 1% across all but one LA area: Anglesey. This is because in most of Wales, changes in tax bases would be relatively small (see Figure 4.2) and fairly similar within PCC areas: increasing for all LA areas in the Gwent PCC area, for example, and decreasing in three out of four LAs in the Dyfed-Powys PCC area. The North Wales PCC area includes the LAs with the biggest increase in tax base (Anglesey) and biggest fall in tax base (Wrexham). Residents of the former would end up paying more to the PCC, and the residents of the latter less. But the changes in overall average tax bills would still be relatively modest: an increase of 1.3% in Anglesey and a decrease of just under 1.0% in Wrexham.
- Under a **continuous and proportional council tax system**, there would be somewhat larger changes in overall average council tax bills by LA areas. They would rise in the LA areas that have the highest property values in their PCC area, and fall in the LA areas that have the lowest property values in their PCC area – reflecting the shift from a regressive to proportional-to-value tax structure. The most notable changes would take place in the Gwent PCC area, which has the greatest variation in property values between LA areas. For example, the overall average bill of residents of Monmouthshire would increase by 4.5% as they make a bigger contribution to the Gwent PCC’s council tax requirement, while the overall average bill of residents of Blaenau Gwent would decrease by 3.3% as they make a smaller contribution to the requirement. Impacts would generally be smaller in the Dyfed-Powys and North Wales PCC areas, where there is less variation in average values between LAs.

Adjusting grants to offset changes in tax bases

As highlighted earlier in this chapter, a process of *resource equalisation* has historically been at the heart of the Welsh local government finance system. While this system is complex, the idea underlying it is relatively simple: RSG funding is allocated to LAs in such a way as to offset differences in their tax bases and assessed spending needs.

The aim of this is to allow each LA to afford broadly the same range and quality of services if they each set their (Band D) tax rate at a centrally-defined reference rate. LAs with small tax bases (and/or high assessed spending needs) receive relatively more RSG funding to reflect the fact they can raise less council tax at that tax rate, while those with large tax bases (and/or low assessed spending needs) receive relatively less RSG funding to reflect the fact they can raise more. Thus people living in properties with the same assessed value (as of the last revaluation date in 2003) can face the same tax bill unless their council sets higher or lower tax rates to fund levels of local public service spending that are higher or lower than the reference level.

If the Welsh Government wanted to maintain this type of equalisation following revaluation and reform, it would have to adjust the RSG it provides to LAs to reflect the resulting changes in tax bases: increasing RSG for those whose tax bases fall and reducing it for those whose tax bases rise. If it did not, LAs whose tax bases fall would have to increase their tax rates if they wanted to maintain revenues and spending, while those whose tax bases rise could cut their tax rates and still maintain revenues and spending. This would mean residents of the former LAs facing higher tax bills than residents of the latter LAs who live in properties with the same (updated) assessed value, even if both groups of LAs were spending at the reference level. That is something the local government finance system has historically been designed to avoid.

Of course, the Welsh Government has discretion over the degree of resource equalisation it undertakes. In the remainder of this chapter, we assume it maintains full equalisation, so that RSG allocations are updated to *fully* account for changes in tax bases²² – although, as we discuss in Chapter 7, partial equalisation is possible as well.

Full equalisation would mean that councils would continue to only have to set different tax *rates* if they wished to spend more or less than the reference level, *not* because they had seen their tax bases go up or down as a result of revaluation and reform. And it would also mean that changes in tax bases as a result of revaluation and reform would be fully reflected in changes in average tax *bills*, which unsurprisingly means bigger changes in average tax bills (relative to no adjustment to grant funding), as we show shortly.

First, though, Table 4.4 shows the changes in RSG funding that would be needed to fully offset changes in tax bases in the case of our two main reform options. Figures 4.4 and 4.5 then show how these changes in RSG funding compare with the existing levels of funding that Welsh LAs get from RSG and redistributed business rates revenues (hereafter described as ‘grant funding’ for simplicity) for a pure revaluation and a continuous and proportional council tax system, respectively.

- Under a **pure revaluation**, changes in grant funding would be relatively modest – in only one case exceeding 2% of existing grant funding levels. Monmouthshire would see the biggest reduction in percentage terms (2.1%) and in per-person terms (£27), while Cardiff would see the largest aggregate cash-terms reduction (£2.6 million). More generally, grant funding would be reduced a little for LAs in the south-east and north-west of Wales where bigger-than-average increases in property values would lead to more properties moving up than down council tax bands, and therefore increases in tax bases.
- On the other hand, Wrexham and Flintshire would see the biggest increases in RSG funding (of just over £4 million and £4.5 million, respectively). This again reflects slower-than-average increases in property values in the north-east (and south-west) of Wales, leading to more properties moving down than up council tax bands, and therefore decreases in tax bases.
- Under a **continuous and proportional council tax system**, the necessary changes in grant funding would be substantially bigger, but still less than 10% of existing grant funding in all but one instance. Under this reform, grant funding would be reduced in those parts of Wales where average property values are highest – most notably Monmouthshire (–14.4%), the Vale of Glamorgan (–8.5%) and Cardiff (–4.8%). This reflects the fact that under a proportional council tax system, their high property values translate into significantly bigger tax bases than under the current regressive council tax system; these LAs would therefore be expected to rely more on council tax for their funding, and less on grant funding.
- On the other hand, full equalisation would require grant funding to increase for Valleys LAs, where average property values are the lowest. Rhondda Cynon Taf would need the

²² In doing this, we assume that the reference council tax rate used to measure councils’ pre-revaluation-and-reform tax base is the current average tax rate, and the rate used to measure their post-revaluation-and-reform tax base is the tax rate that would raise the same revenue across Wales as a whole as under the current system. This achieves full equalisation of changes in tax bases.

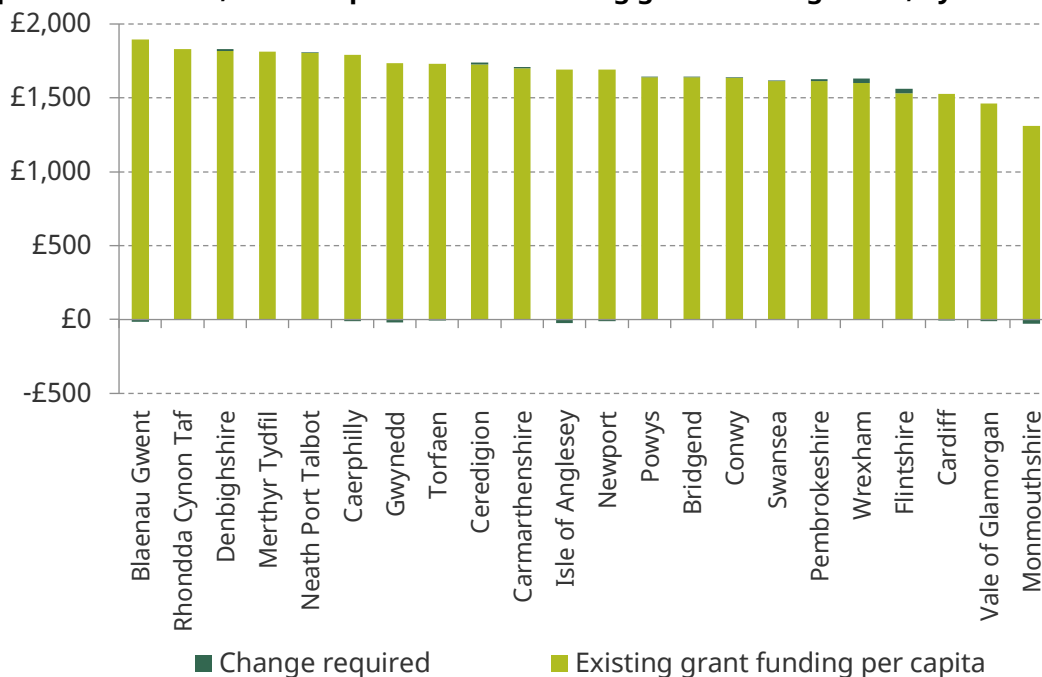
biggest cash-terms increase (£14.2 million), while Merthyr Tydfil, Neath Port Talbot and Blaenau Gwent would require the biggest percentage increases (4.2%, 3.7% and 3.4%, respectively). These and other Valleys LAs would become more dependent on grant funding, as they would be expected to raise less from their residents via council tax.

Table 4.4. Changes in grant funding with full equalisation, by LA area

LA area	Revaluation		Continuous and proportional	
	Per capita	Aggregate	Per capita	Aggregate
Blaenau Gwent	-£15	-£1.1m	£64	£4.5m
Bridgend	£3	£0.4m	£27	£3.9m
Caerphilly	-£9	-£1.7m	£33	£5.9m
Cardiff	-£7	-£2.6m	-£74	-£26.9m
Carmarthenshire	£9	£1.7m	£32	£6.1m
Ceredigion	£11	£0.8m	£13	£1.0m
Conwy	£4	£0.4m	£2	£0.2m
Denbighshire	£11	£1.0m	£18	£1.7m
Flintshire	£29	£4.5m	£43	£6.7m
Gwynedd	-£18	-£2.2m	-£8	-£1.0m
Isle of Anglesey	-£25	-£1.7m	-£39	-£2.7m
Merthyr Tydfil	-£3	-£0.2m	£76	£4.6m
Monmouthshire	-£27	-£2.5m	-£189	-£17.8m
Neath Port Talbot	£5	£0.8m	£68	£9.7m
Newport	-£10	-£1.5m	-£25	-£3.9m
Pembrokeshire	£13	£1.6m	£20	£2.5m
Powys	£2	£0.2m	-£31	-£4.1m
Rhondda Cynon Taf	-£3	-£0.7m	£59	£14.2m
Swansea	£3	£0.9m	£11	£2.7m
Torfaen	-£6	-£0.6m	£25	£2.3m
Vale of Glamorgan	-£12	-£1.5m	-£124	-£16.4m
Wrexham	£30	£4.0m	£52	£7.0m

Source: Authors' calculations using HM Land Registry (2019), Valuation Office Agency (2019) and Welsh Government (2019c, 2019d and 2019e).

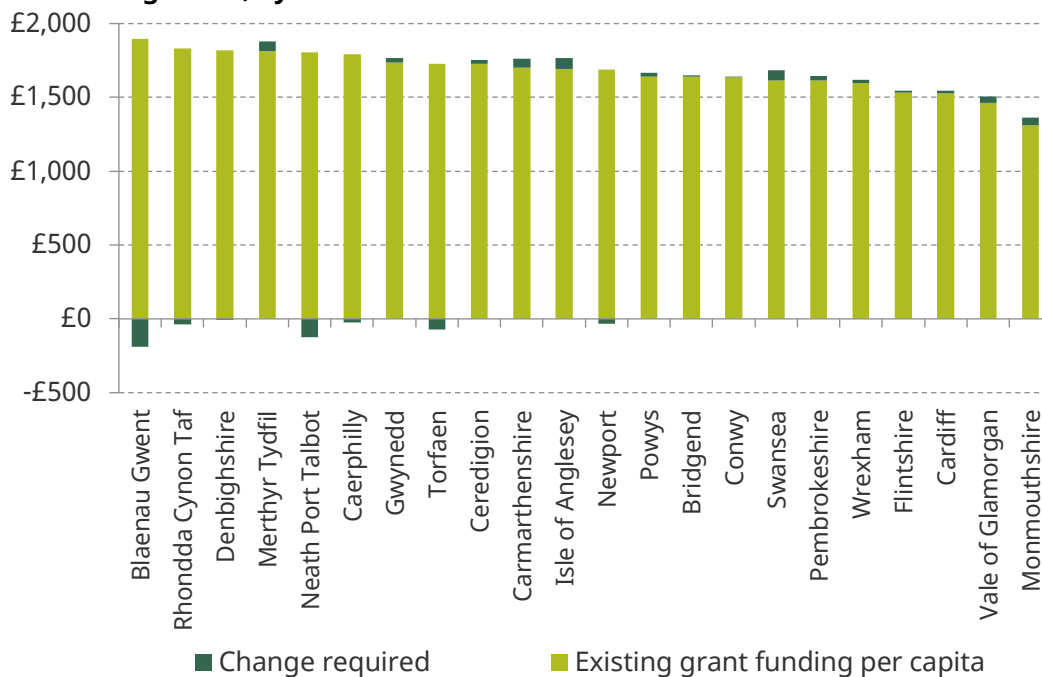
Figure 4.4. Average change in grant funding per person with full equalisation under a pure revaluation, and comparison with existing grant funding levels, by LA area



Note: Existing grant funding includes RSG and redistributed business rates revenues.

Source: Authors' calculations using HM Land Registry (2019), Valuation Office Agency (2019) and Welsh Government (2019c, 2019d and 2019e).

Figure 4.5. Average change in grant funding per person with full equalisation under a continuous and proportional council tax system, and comparison with existing grant funding levels, by LA area



Note: Existing grant funding includes RSG and redistributed business rates revenues.

Source: Authors' calculations using HM Land Registry (2019), Valuation Office Agency (2019) and Welsh Government (2019c, 2019d and 2019e).

Changes in average tax bills if grant funding is fully adjusted

Figure 4.6 shows our estimates of how average tax bills would change following our two main reform options if grants were fully adjusted to offset changes in tax bases.

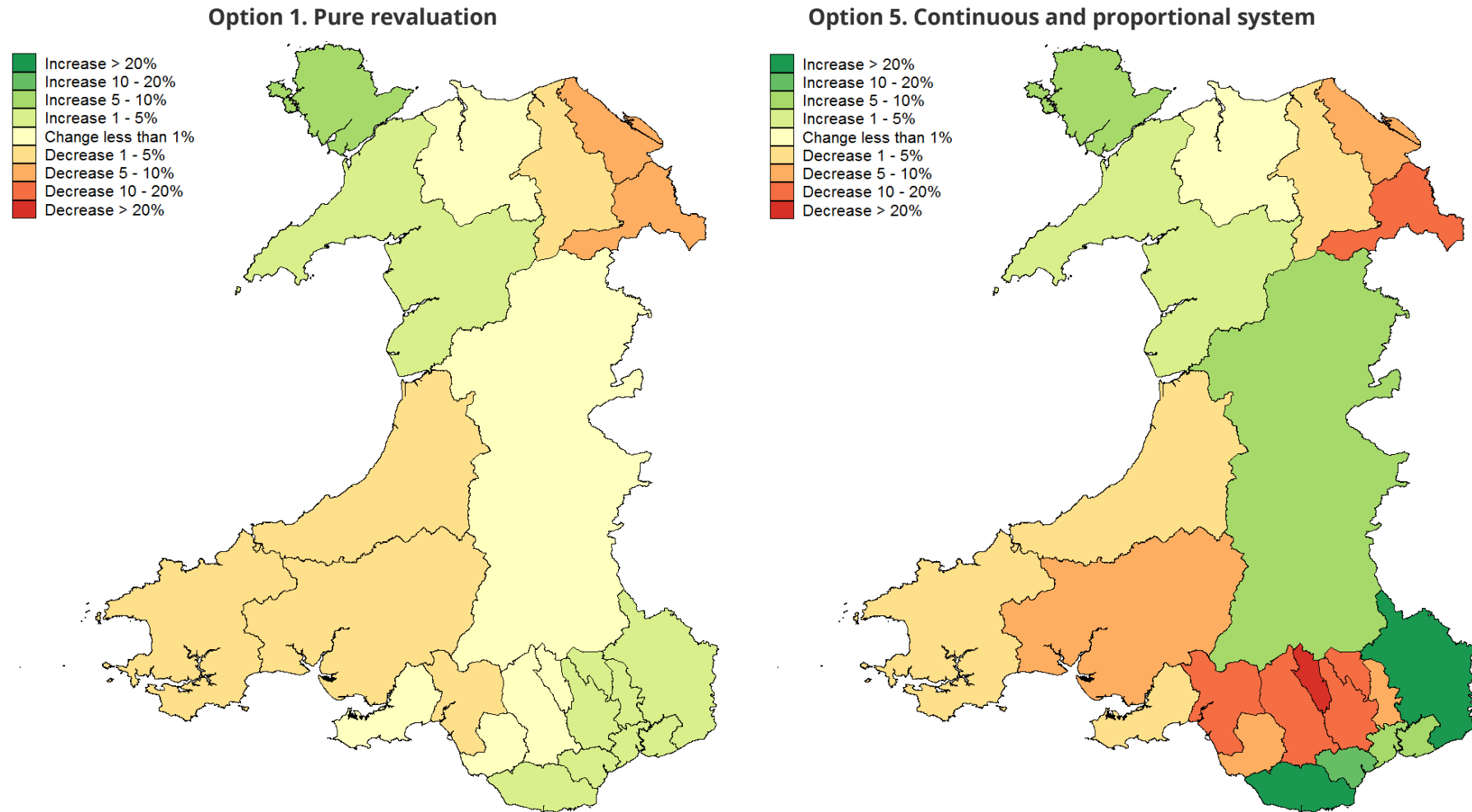
The left-hand panel shows that under a **pure revaluation**:

- Average tax bills would rise modestly in south-east and north-west Wales, where property values have generally risen by more than average, and tax bases would therefore increase following revaluation. This is because LAs in these areas would see a reduction in grant funding to reflect their larger tax bases, and hence would need to raise more council tax revenue from residents to maintain spending levels – which implies an increase in average tax bills.
- Conversely, in parts of the country where property values have increased by less than average, such as the north-east and parts of the south-west, average bills would decrease. This is because LAs in these areas would see an increase in their grant funding to reflect their smaller tax bases, and hence would need to raise less council tax revenue from residents to maintain spending levels.
- The biggest changes would be in Anglesey (up 5%, reflecting its 5% increase in tax base), Wrexham (down 7%, reflecting its 7% fall in tax base) and Flintshire (down 6%, reflecting its 6% fall in tax base). Residents of other LA areas would see changes in bills averaging less than 5%.

The right-hand panel shows that under a **continuous and proportional council tax system**:

- There would be significant reductions in average tax bills in many Valleys LAs and in north-east Wales. This reflects the fact that average values are lowest in these LA areas – despite relatively large increases since 2003 in many parts of the Valleys, and in part because of relatively small increases in the north-east. Merthyr Tydfil would see the biggest fall – around 20% – reflecting its status as one of the LA areas with the lowest average property values in Wales.
- In contrast, average tax bills would increase in those LA areas where average property values are highest, such as Cardiff, the Vale of Glamorgan and Monmouthshire, which would see increases of 19%, 25% and 32% respectively.
- The cases of Anglesey and Powys show an important point: that the impact on tax bills in different parts of the country of revaluing and moving to a continuous and proportional system depends both on the change in property values since the last revaluation (via the revaluation component of the reform) and on the level of values (via the shift to a continuous and proportional structure of the tax system). This is why Anglesey would see a bigger increase in its average tax bill (8%) than Powys (6%), despite average values in Anglesey being lower (£185,000 compared with £200,000): values have risen more in Anglesey since properties were last revalued.

Figure 4.6. Changes in average tax bills if grant funding is fully adjusted, by LA area



Source: Authors' calculations using HM Land Registry (2019), Valuation Office Agency (2019) and Welsh Government (2019c and 2019d).

4.3 The impact of other reform options

The previous section focused on two main reform options: a pure revaluation (option 1 from our original list in Chapter 3) and, in addition, moving to a continuous and proportional council tax system (option 5). In this section, we briefly consider the effects on different LA areas of the other reform options from our original list:

- option 2: revaluation with proportional bands;
- option 3: revaluation with extra and proportional bands;
- option 4: revaluation with extra and less regressive bands;
- option 6: revaluation with a continuous and proportional system without a single-person discount.

Table 4.5 shows the changes in grant funding that would be required to offset the changes in tax bases under each of these reform options (as well as options 1 and 5, which we focused on in the previous section). It shows that:

- The changes in grant funding that would be needed to offset changes in tax bases would be very similar under the banded proportional systems (2 and 3) and the continuous and proportional system (5). The biggest differences are for the two LAs with the highest values – Monmouthshire and the Vale of Glamorgan. But even for these LAs, the difference between option 3 and option 5 amounts to just £12 and £9 per person, respectively. This means that while there may be other benefits (such as not requiring precise point estimates of value, and not requiring primary legislation to enact) and other costs (such as continuing to tax properties within a band at the same rate, despite sometimes large differences in value) of retaining a banded system, the difference in the degree to which grant funding may need to be adjusted does not have to be a material factor in deliberations.
- Unsurprisingly, the scale of grant adjustments required to offset a less regressive but not fully proportional council tax system (4) would lie between the scale required for a pure revaluation (1) and the fully proportional systems (2, 3, 5 and 6) in most instances. For example, for Cardiff, while a pure revaluation (1) would require a reduction in grant funding of £7 per person to offset, and a continuous and proportional system (5) would require a reduction of £74 per person, the less regressive but not fully proportional system (4) that we model would require a reduction of £39 per person.
- Abolishing the single-person discount (6) would, relative to a continuous and proportional system that kept it in place (5), have fairly modest effects.

Table 4.6 shows the changes in average tax bills that would result if grants were fully adjusted to reflect changes in tax bases and LAs wanted to maintain spending. It shows that:

- While a pure revaluation (1) would lead to relatively modest changes in average net tax bills, moving to a proportional council tax system (2, 3, 5 and 6) would involve

substantially bigger changes. For example, the average net council tax bill in Merthyr Tydfil would fall by between £180 and £200 under the proportional options, with somewhat smaller falls in Neath Port Talbot (£150–£175) and Blaenau Gwent (£140–£165). Conversely, the average net council tax bill would rise by a similar amount in Cardiff. And it would increase by over £300 in the Vale of Glamorgan and over £470 in Monmouthshire. This is because average tax bills would more closely reflect the big differences in average property values across Wales under these proportional systems – although local decisions on tax rates and differences in eligibility for discounts and the CTRS would also still matter.

- The changes in average tax bills in each LA area would be similar under the banded proportional options (2 and 3) and the main continuous and proportional option (5). However, the changes in average tax bills by LA would be slightly larger under the continuous option, reflecting the fact that those properties with the very highest (lowest) values would be taxed based on their exact value, not as part of a band including properties with lower (higher) values.
- Unsurprisingly, the changes in average bills under the less regressive but not fully proportional option (4) would lie in between the pure revaluation (1) and proportional options (2, 3, 5 and 6). For example, for Cardiff, while a pure revaluation (1) would see the average net tax bill rise by £20 and a continuous and proportional system (5) would see it rise by £204, the less regressive but not fully proportional system (4) that we model would see it rise by £107.
- Abolishing the single-person discount (6) would, relative to a continuous and proportional system that kept it in place (5), have fairly modest effects on average tax bills. But it would increase average bills in urban parts of Wales, especially in the Valleys, where more people claim this discount, and decrease average bills in more rural areas. The next chapter shows, unsurprisingly, that abolishing the single-person discount would have much more significant impacts on the average tax bills of different household types.

Table 4.5. Changes in grant funding per person with full equalisation, by LA area

Local authority	Existing grant funding	(1)	(2)	(3)	(4)	(5)	(6)
Blaenau Gwent	£1,895	-£15	£57	£59	£27	£64	£55
Bridgend	£1,639	£3	£25	£26	£14	£27	£25
Caerphilly	£1,791	-£9	£30	£30	£9	£33	£31
Cardiff	£1,527	-£7	-£68	-£69	-£39	-£74	-£77
Carmarthenshire	£1,701	£9	£32	£32	£20	£32	£26
Ceredigion	£1,727	£11	£13	£12	£11	£13	£23
Conwy	£1,636	£4	£2	£1	£1	£2	-£3
Denbighshire	£1,819	£11	£17	£16	£12	£18	£15
Flintshire	£1,531	£29	£42	£41	£33	£43	£49
Gwynedd	£1,734	-£18	-£8	-£8	-£14	-£8	£15
Isle of Anglesey	£1,692	-£25	-£39	-£39	-£33	-£39	-£26
Merthyr Tydfil	£1,815	-£3	£69	£72	£42	£76	£72
Monmouthshire	£1,311	-£27	-£177	-£177	-£102	-£189	-£177
Neath Port Talbot	£1,805	£5	£63	£64	£36	£68	£60
Newport	£1,690	-£10	-£24	-£24	-£19	-£25	-£31
Pembrokeshire	£1,614	£13	£18	£19	£15	£20	£37
Powys	£1,640	£2	-£29	-£29	-£15	-£31	-£22
Rhondda Cynon Taf	£1,831	-£3	£52	£54	£31	£59	£54
Swansea	£1,616	£3	£10	£11	£7	£11	£4
Torfaen	£1,729	-£6	£23	£23	£7	£25	£23
Vale of Glamorgan	£1,462	-£12	-£113	-£115	-£64	-£124	-£125
Wrexham	£1,599	£30	£50	£50	£38	£52	£53

Note: Existing grant funding includes RSG and redistributed business rates revenues. (1) Pure revaluation. (2) Revaluation with proportional bands. (3) Revaluation with extra and proportional bands. (4) Revaluation with extra and less regressive bands. (5) Revaluation with a continuous and proportional system. (6) Revaluation with a continuous and proportional system without a single-person discount.

Source: Authors' calculations using HM Land Registry (2019), Valuation Office Agency (2019) and Welsh Government (2019c, 2019d and 2019e).

Table 4.6. Changes in overall average council tax bills with full grant adjustment, by LA area

Local authority	Existing average net bill	(1)	(2)	(3)	(4)	(5)	(6)
Blaenau Gwent	£922	£39	-£146	-£151	-£70	-£163	-£141
Bridgend	£1,200	-£8	-£67	-£68	-£38	-£72	-£67
Caerphilly	£847	£26	-£81	-£81	-£26	-£89	-£85
Cardiff	£1,094	£20	£188	£191	£107	£204	£213
Carmarthenshire	£1,090	-£24	-£81	-£81	-£50	-£82	-£67
Ceredigion	£1,219	-£28	-£31	-£31	-£28	-£32	-£56
Conwy	£1,149	-£9	-£4	-£2	-£1	-£3	£8
Denbighshire	£1,165	-£28	-£42	-£41	-£30	-£45	-£39
Flintshire	£1,241	-£78	-£114	-£112	-£90	-£118	-£132
Gwynedd	£1,226	£43	£20	£21	£34	£20	-£35
Isle of Anglesey	£1,129	£60	£94	£95	£80	£95	£63
Merthyr Tydfil	£987	£7	-£181	-£188	-£109	-£199	-£188
Monmouthshire	£1,566	£72	£472	£474	£274	£506	£473
Neath Port Talbot	£1,066	-£14	-£161	-£163	-£93	-£174	-£153
Newport	£950	£27	£63	£65	£51	£67	£83
Pembrokeshire	£1,054	-£31	-£45	-£45	-£36	-£49	-£89
Powys	£1,296	-£4	£71	£70	£36	£75	£54
Rhondda Cynon Taf	£966	£8	-£136	-£142	-£81	-£154	-£140
Swansea	£1,049	-£9	-£27	-£28	-£17	-£28	-£9
Torfaen	£1,029	£16	-£60	-£60	-£18	-£67	-£61
Vale of Glamorgan	£1,350	£31	£302	£308	£171	£331	£335
Wrexham	£1,085	-£80	-£136	-£135	-£104	-£140	-£144

Note: Existing average net bill as modelled. (1) Pure revaluation. (2) Revaluation with proportional bands. (3) Revaluation with extra and proportional bands. (4) Revaluation with extra and less regressive bands. (5) Revaluation with a continuous and proportional system. (6) Revaluation with a continuous and proportional system without a single-person discount.

Source: Authors' calculations using HM Land Registry (2019), Valuation Office Agency (2019) and Welsh Government (2019c and 2019d).

5. The impact of revaluation and reform across households

Understanding how the impacts of revaluation and reform are distributed across households is important given concerns about income inequality and intergenerational fairness, and in order to understand the impact on people with protected characteristics.

This chapter examines the effect of revaluation and reform across households: by income, family composition, age, disability status, ethnicity and housing tenure. We focus here on average changes in council tax liability. Of course, reforms that have little effect on average may still produce many winners and losers. The distribution of impacts for key groups of interest – including low-income households and pensioners – is explored in detail in Chapter 7. Estimates of the proportions of winners and losers among other groups can be found in Appendix B and our online spreadsheet appendix.

As highlighted in Chapter 3, results at the household level are modelled using data from the Understanding Society survey. The sample size does not allow us to model changes at the council level within Wales, so we cannot model different grant adjustment scenarios. Instead, we calibrate reforms so that they are revenue neutral in Wales as a whole. For reform options that retain a banded council tax structure, this is done by calculating the change in average Band D rate needed to maintain revenue neutrality (given the change in Band D equivalents in all of Wales), and scaling the current Band D rates of all council areas in Wales by this factor. For reform options involving a continuous rate, we start with a national rate that generates the same revenue in Wales as a whole, and scale this at the council level by the ratio of Band D rates to the national average Band D rate (adjusting the national rate to maintain revenue neutrality). This approach approximates the full grant adjustment scenario in the council-level analysis when LAs' Band D rates do not vary too widely, as is the case in Wales.

We focus on households' council tax bills after the council tax reduction scheme (CTRS) is accounted for – referred to hereon as 'net council tax bills' – assuming full take-up of CTRS. Modelling take-up of CTRS is challenging for reasons discussed in Section 5.2. Where assumptions on take-up affect the pattern of results, we discuss impacts on council tax bills before CTRS ('gross council tax bills'), which is equivalent to assuming no take-up of CTRS. The reality will lie somewhere between the two scenarios, although as we discuss further below, estimates of CTRS expenditure based on the assumption of full take-up more closely match actual expenditure than estimates based on presumed take-up levels.

For most of this chapter, we model effects assuming that changes in council tax would be borne by the occupiers of properties and, in particular, would not affect rents. But landlords, at least of privately rented properties, may adjust rents in response to changes in council tax liabilities. At the end of the chapter, we discuss how different assumptions on whether changes in council tax are ultimately borne by occupiers (including tenants) or property owners affect the results presented.

The chapter proceeds as follows. Section 5.1 summarises the distribution of gains and losses from our two main policy options – pure revaluation and a continuous and proportional system – across all households. Section 5.2 examines the average impact these reform options would have across different household types. Section 5.3 considers

alternative reform options, including a proportional and less-than-proportional banded system and removing the single-person discount. Section 5.4 discusses how the results presented in this chapter would change if changes in council tax were borne by landlords instead of tenants as a result of changes in rents.

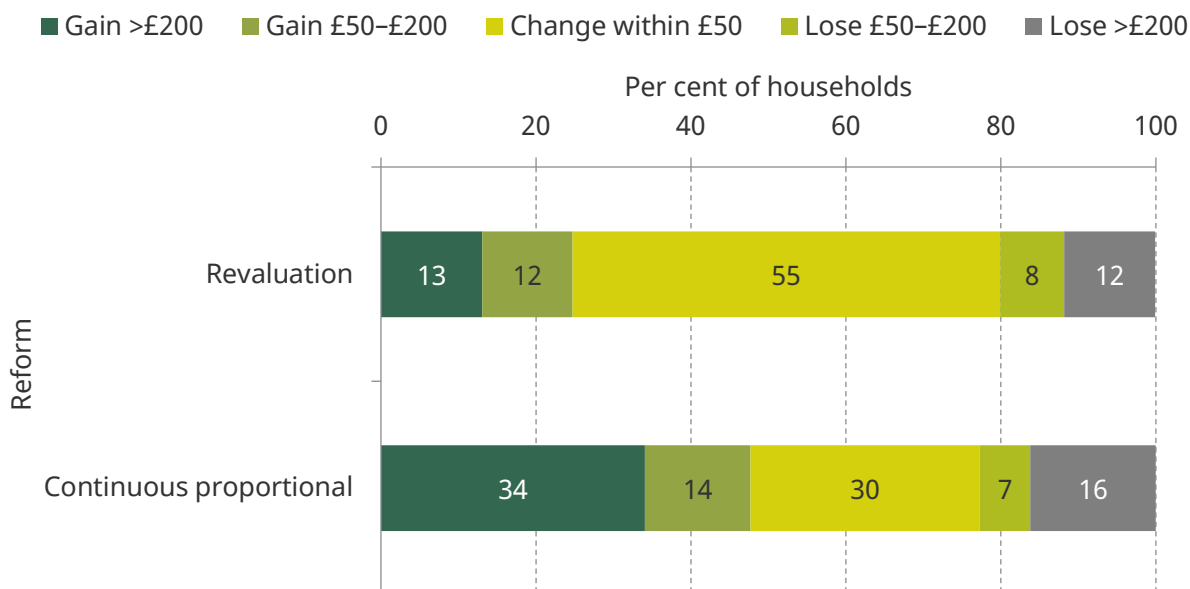
5.1 Overall effects

The reforms we model are revenue neutral, so by definition there would be no change in average council tax bills (after CTRS) across all households in Wales. However, many households would lose, and many others gain, from both reform options.

Figure 5.1 shows the distribution of cash changes in households’ net council tax bills from a pure revaluation and a continuous and proportional system. We estimate that a **pure revaluation** would lead to modest changes of less than £50 a year for the majority of households (55% or 0.8 million households). However, other households would see larger changes, with 0.2 million households (13%) gaining by more than £200 a year and around the same number (12%) losing by more than £200 a year.

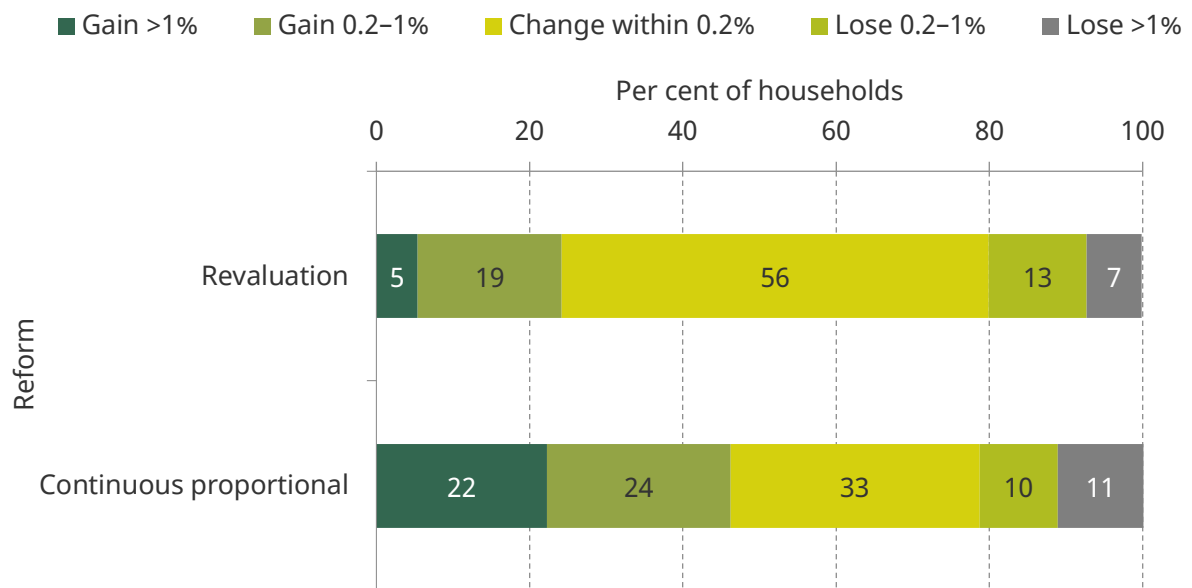
A **continuous and proportional system** would lead to larger changes in council tax bills, with 1.0 million or around 70% of households seeing changes of at least £50 a year. In general, more households would benefit substantially from the reform than lose out substantially. More than twice as many households would gain over £200 a year (0.5 million households or 34%) as lose over £200 a year (0.2 million households or 16%). However, those who lose from the reform lose more on average: the average loss among households losing more than £200 a year is around £920, compared with an average gain of around £410 among those gaining more than £200 a year.

Figure 5.1. Distribution of cash changes in net council tax bill (per year)



Note: Assumes full take-up of CTRS.

Source: Authors’ calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

Figure 5.2. Distribution of percentage changes in net household income

Note: Assumes full take-up of CTRS. Net household income defined as income after taxes and benefits.

Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

Figure 5.2 shows the distribution of changes in council tax bills as a share of net household incomes, after taxes and benefits. This can be interpreted as the distribution of percentage changes in households' disposable incomes after paying their council tax bills. The majority of households (56% or 0.8 million) would see their disposable incomes change by less than 0.2% under **pure revaluation**. Only 0.1 million (5%) would see their disposable incomes rise by more than 1%, and only 0.1 million (7%) would see their disposable incomes fall by more than 1%. Under a **continuous and proportional system**, 1.0 million households (67%) would see changes of more than 0.2%, with 0.3 million (22%) seeing their disposable incomes rise by over 1%, and 0.2 million (11%) seeing a fall of over 1%. The rest of this chapter focuses on the average effects of reforms across household types.

5.2 Effects by household type

In this section, we examine the average changes in council tax bills across different types of households: by income level, family composition, age of the oldest household member, whether any household members have a longstanding illness or disability, whether any household members belong to ethnic minorities, and households' housing tenure. We discuss each of these breakdowns in turn.

In each case, we start by showing the average council tax bills currently paid by different household types. We then show how average council tax bills would change; by combining the two, one can easily deduce the levels of council tax bills, in cash terms, after revaluation and reform. Given that current council tax bills are closely correlated with current property values and, to a lesser extent, with current household incomes (see Figures 2.5 and 2.6), the figures of average council tax bills shown below also give us an indication of the average property values and income levels of different household types in Wales.

Household income

Figure 5.3 shows how much households of different income levels currently pay, on average, in annual council tax bills after the CTRS. Household incomes are measured after taxes and benefits and adjusted for household size (using the modified OECD equivalence scale). Higher-income households pay more council tax on average, with households in the top 20% of the income distribution paying £1,720 a year, compared with £530 a year in the poorest 20%.

There is substantial variation in council tax bills, especially among low-income households. Of the poorest 20% of households in Wales, a third pay no council tax (that is, are exempt or have their bills fully covered by the CTRS) and half pay less than £410 a year.

A **pure revaluation** would have little effect on average council tax bills across the income distribution, as shown in Figure 5.4. As we discuss in Chapter 7, low-income households would be less likely to either gain or lose than middle- and high-income households, as many are entitled to the CTRS and would therefore see changes in the amount of support they receive from the CTRS rather than changes in what they pay themselves.

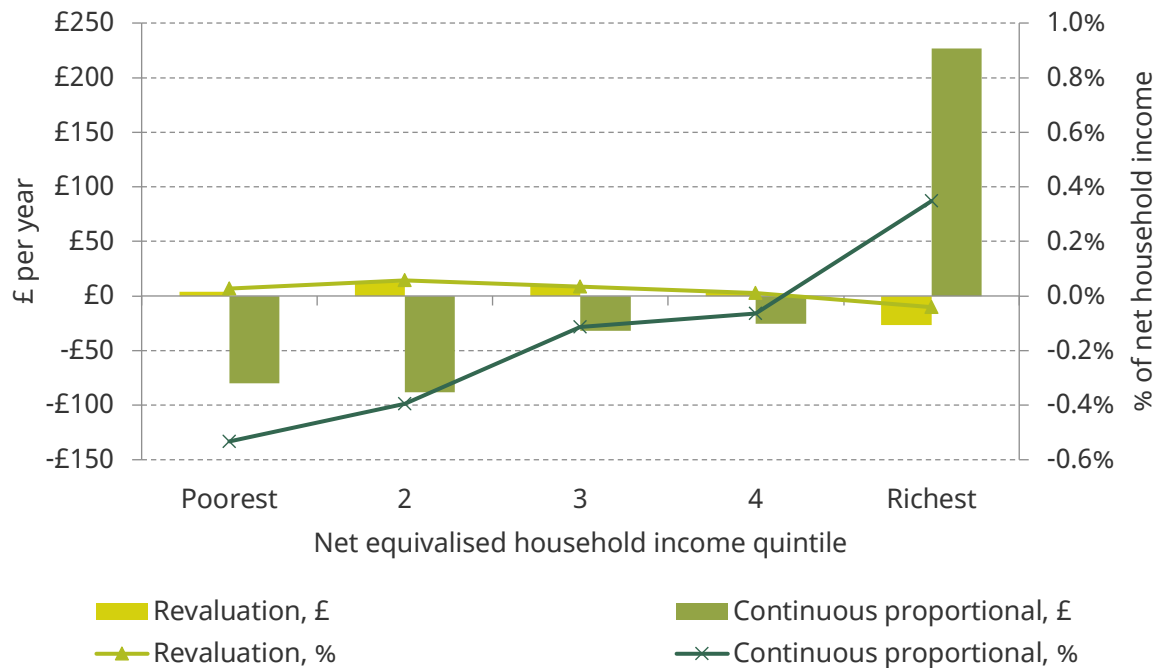
A **continuous and proportional system** would generally be progressive in household income: in cash terms, average council tax bills would fall by £80–£90 a year among the poorest two-fifths of households, and rise by around £230 a year among the highest-income fifth of households. Annual council tax bills after the reform would average around £450 among the poorest fifth of households and around £1,950 among the highest-income fifth of households.

Figure 5.3. Current annual net council tax bill, by net equivalised household income quintile



Note: Assumes full take-up of the CTRS. Incomes are measured after taxes and benefits but before housing costs are deducted and equivalised using the modified OECD equivalence scale.

Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

Figure 5.4. Average change in net council tax bill, by household income quintile

Note: Assumes full take-up of CTRS. Incomes are measured after taxes and benefits but before housing costs are deducted and equivalised using the modified OECD equivalence scale.

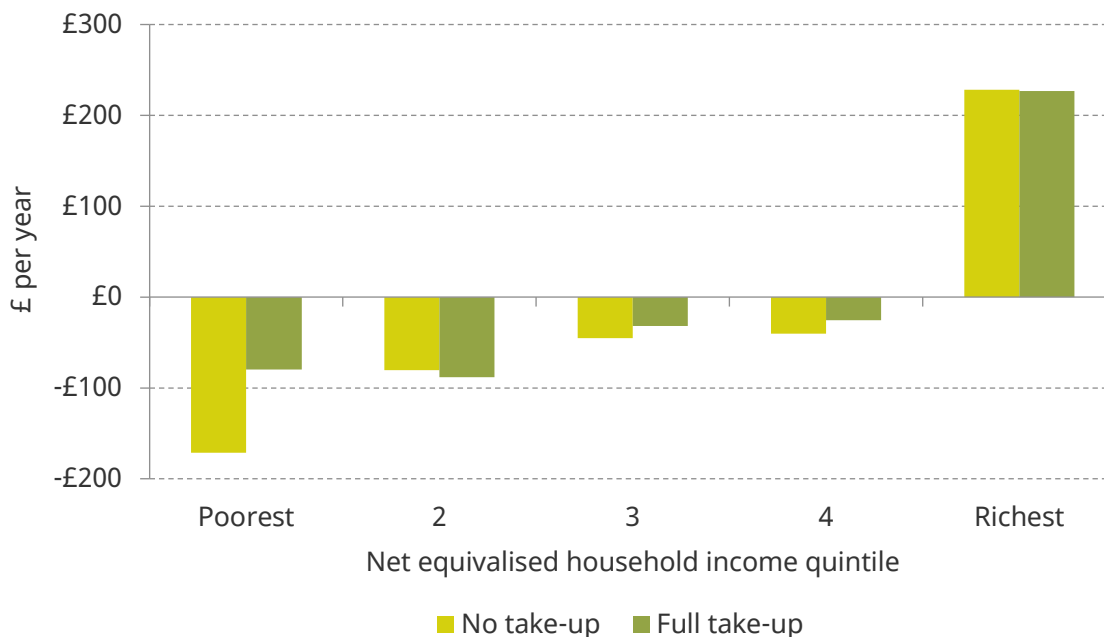
Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

As a share of household incomes, changes at the bottom would loom larger than changes at the top: average council tax bills would fall by 0.5% of average household incomes in the bottom income quintile, and rise by 0.3% of average household incomes in the top income quintile.

The result that the bottom quintile of households does not gain more than the second quintile in Figure 5.4 reflects our assumption of full CTRS take-up. Because many of the poorest households are eligible for the CTRS, falls in their council tax bills partly reduce the support they receive from the CTRS, rather than lowering their out-of-pocket payments.

Our analysis assumes full take-up of the CTRS. Actual take-up of the CTRS in Wales is far from complete: in 2009–10, the last year for which Department for Work and Pensions (DWP) statistics are available, take-up of council tax benefit (CTB, the precursor to the CTRS) in Great Britain ranged between 62% and 69% (DWP, 2013). The Welsh Government has indicated that take-up of the CTRS has been declining over time (Evans, 2019). Unfortunately, modelling less-than-full take-up of CTRS is difficult for a number of reasons. Most importantly, previous research at IFS on council tax benefit shows that the modelled total expenditure on CTB, under the assumption of full take-up, closely approximates actual expenditure on CTB according to administrative data (Adam and Browne, 2012). This is because modelling based on household survey data underestimates *entitlement*; assuming full take-up among those eligible then offsets this error, leading to a good estimate of overall spending on this support. In contrast, assuming less-than-full take-up would lead to an underestimate of spending on CTRS. Second, take-up of council tax benefit (and presumably also the CTRS) is lower among certain types of households –

Figure 5.5. Average change in council tax bill from a continuous and proportional system, by household income quintile, under different CTRS take-up assumptions



Note: Incomes are measured after taxes and benefits but before housing costs are deducted and equivalised using the modified OECD equivalence scale.

Source: Authors’ calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

for example, pensioner households and those that do not take up housing benefit (DWP, 2013). As a result, without linked survey and administrative data, it is difficult to accurately model this non-random take-up of the CTRS.

Instead of attempting to model incomplete take-up, we consider how much our results are driven by the effect of the CTRS, by estimating average changes in *gross* council tax bills (*without* CTRS). These can be interpreted as the effects assuming no take-up of CTRS (but with council tax rates still set to maintain revenue neutrality after full take-up of CTRS). The impacts of moving to a proportional continuous rate with and without CTRS by household income level are shown in Figure 5.5.

Assuming no take-up of the CTRS, cash gains would be substantially larger among the poorest quintile of households, who gain by around £170 a year compared with just £80 a year assuming full take-up. Since actual take-up of the CTRS lies between these two extremes, we would expect council tax bills among the poorest fifth of households to fall by between £80 and £170 a year on average. Assumptions on CTRS take-up have a much smaller effect on results further up the income distribution, and no effect on the richest fifth of households, as these households are not entitled to the CTRS.

Household composition

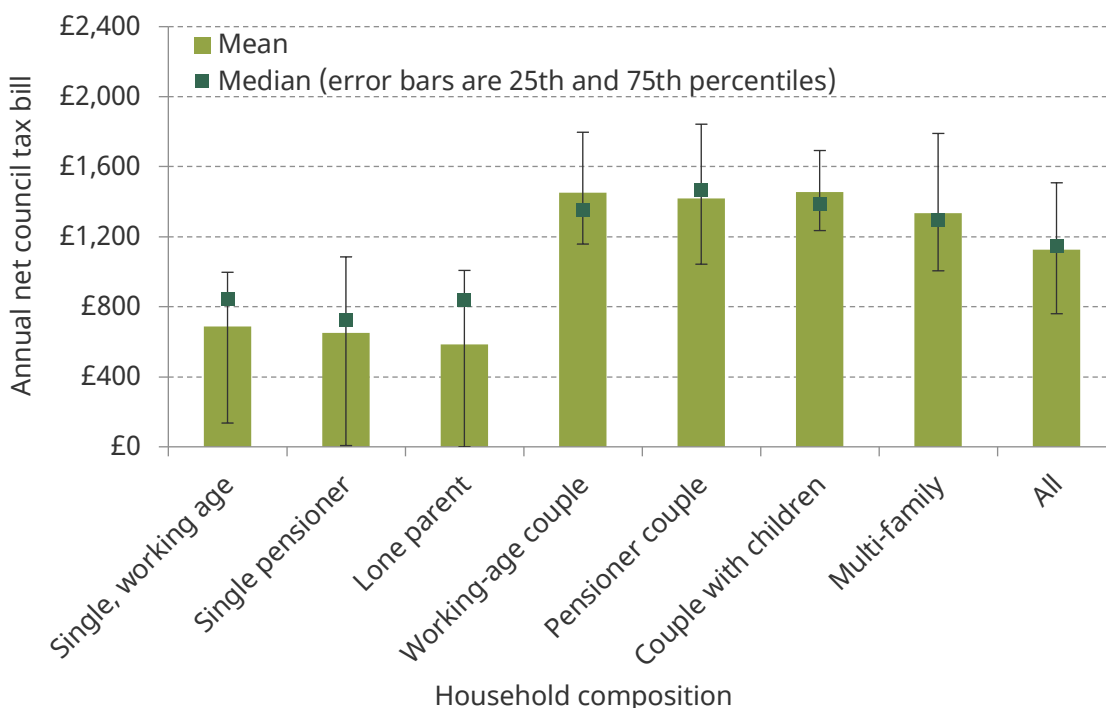
Figure 5.6 shows average council tax bills by household composition: whether the household has children, whether household members are of working age or above the state pension age, and whether the household contains a single adult, a couple or multiple families living together. It shows that average council tax bills are lower among single-adult households, with around 20% of single working-age households, 25% of

single pensioner households and 40% of lone-parent households paying no council tax under the current system. Multi-family households in our sample have slightly lower council tax bills than couples, partly because they tend to live in properties with lower gross bills and partly because they are more likely to be entitled to the CTRS.

It is worth noting that multi-family households make up a smaller share of households in our sample than in the (estimated) overall population, and the types of multi-family households in our sample are not representative. Based on the Understanding Society data, multi-family households make up nearly a quarter (24%) of all households in Wales. Three-quarters (74%) of multi-family households consist of intergenerational families living together (for example, adult children living with their parents or elderly parents living with their children), with the rest consisting of house shares between unrelated families or families of the same generation (for example, siblings).

To model changes in council tax liabilities, we have restricted the sample to households for which current council tax bands are known or can be imputed (see Appendix A). On most dimensions (such as property value, income and age of the oldest household member), the restricted sample is representative of the overall sample. However, information on council tax bands and rent or property value (used to impute council tax bands) is missing for most multi-family households that are not related across generations. As a result, multi-family households represent just 20% of our (weighted) sample, and virtually all (97%) multi-family households in our sample are intergenerational families. Results for multi-family households should therefore be interpreted as results for intergenerational families, rather than the full range of multi-family households in Wales.

Figure 5.6. Current annual net council tax bill, by household composition



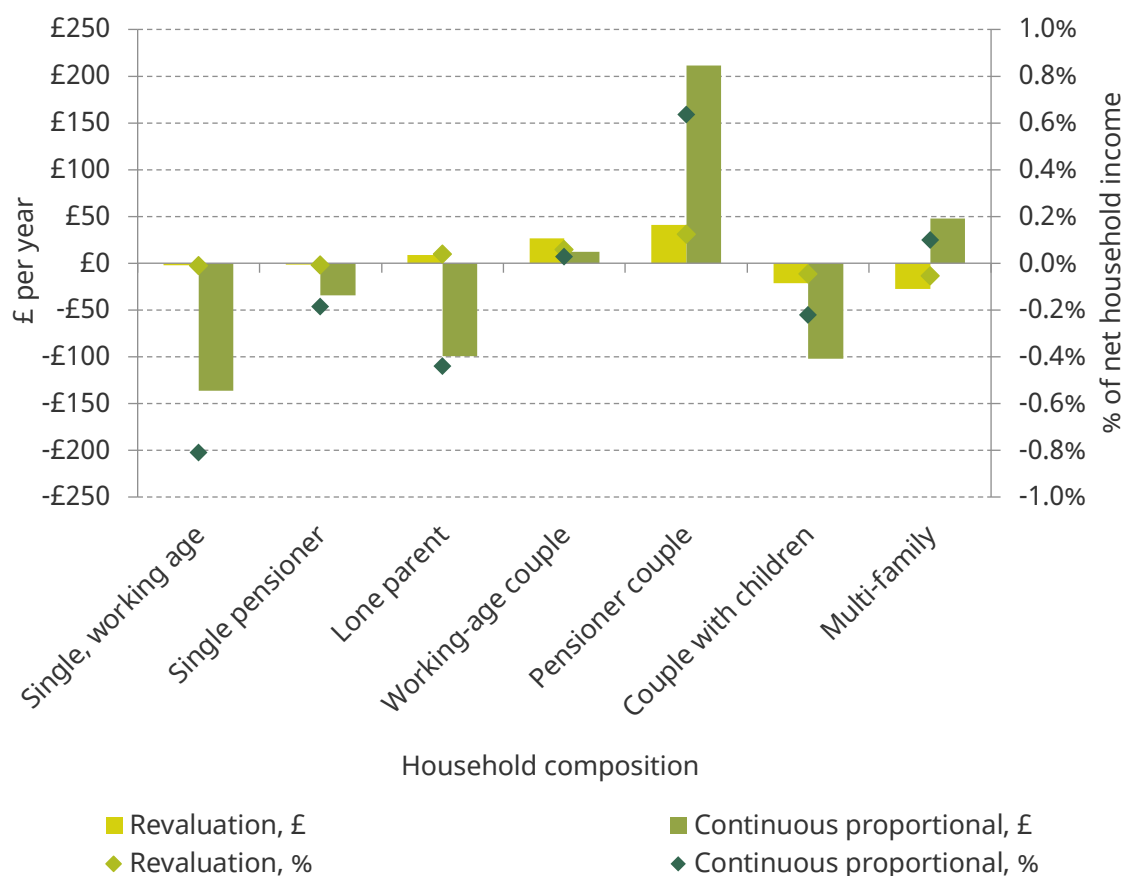
Note: Assumes full take-up of the CTRS. Multi-family households are households with more than one benefit unit.

Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

The average effect of a **pure revaluation** would be close to zero across all household types, as seen in Figure 5.7. Pensioner couples would see their average council tax bills increase by around £40 a year, whilst couples with children and multi-family households would see their average council tax bills fall by £20–£30 a year. This reflects the fact that the former disproportionately live in areas where property values have risen by more since 2003, whereas the latter tend to live in areas where property values have risen by less. That said, revaluation would still create significant numbers of both winners and losers, as seen in Table B.4 in Appendix B.

A **continuous and proportional system** would redistribute from pensioner couples and multi-family households (who tend to live in larger, more valuable properties) towards single-adult households and couples with children (who tend to live in smaller, less valuable properties). Among single-adult households, pensioners live in relatively more valuable properties and are more likely to be entitled to the CTRS so would see a smaller fall in their net council tax bills, of around £30 a year compared with around £140 a year for single working-age adults without children and £100 a year for lone parents.

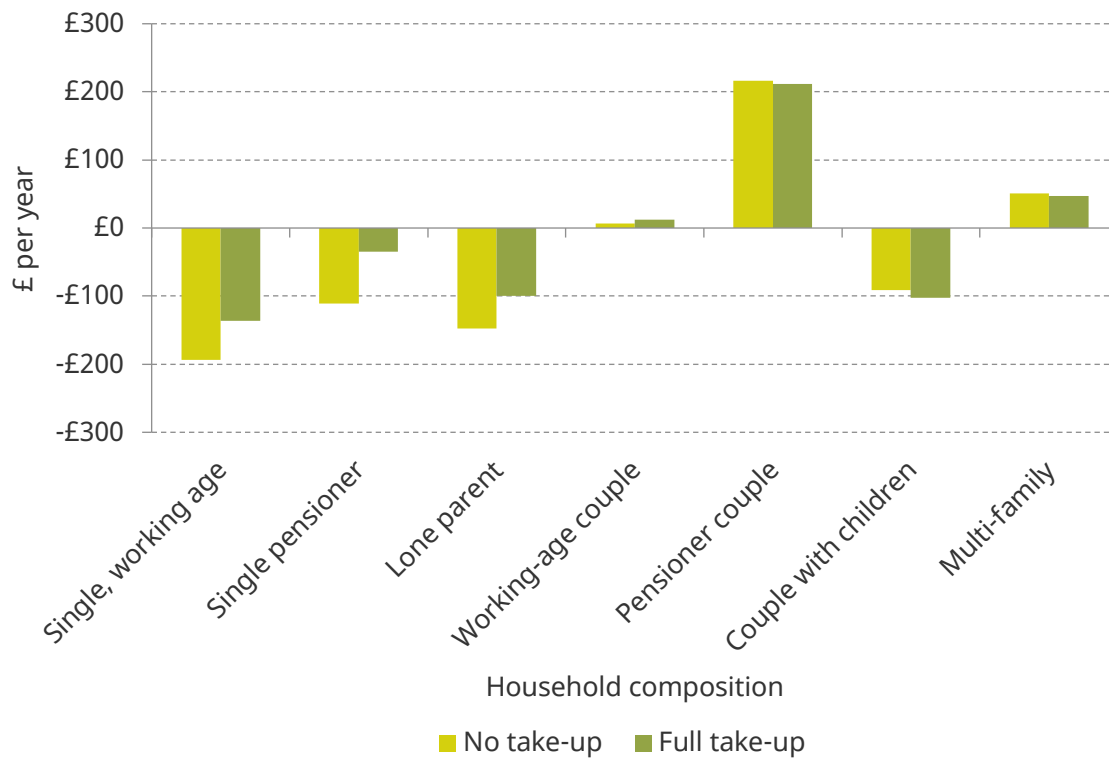
Figure 5.7. Average change in net council tax bill, by household composition



Note: Assumes full take-up of the CTRS. Multi-family households are households with more than one benefit unit. Incomes are measured after taxes and benefits but before housing costs are deducted and equivalised using the modified OECD equivalence scale.

Source: Authors’ calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

Figure 5.8. Average change in council tax bill from a continuous and proportional system, by household composition, under different CTRS take-up assumptions



Note: Multi-family households are households with more than one benefit unit.

Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

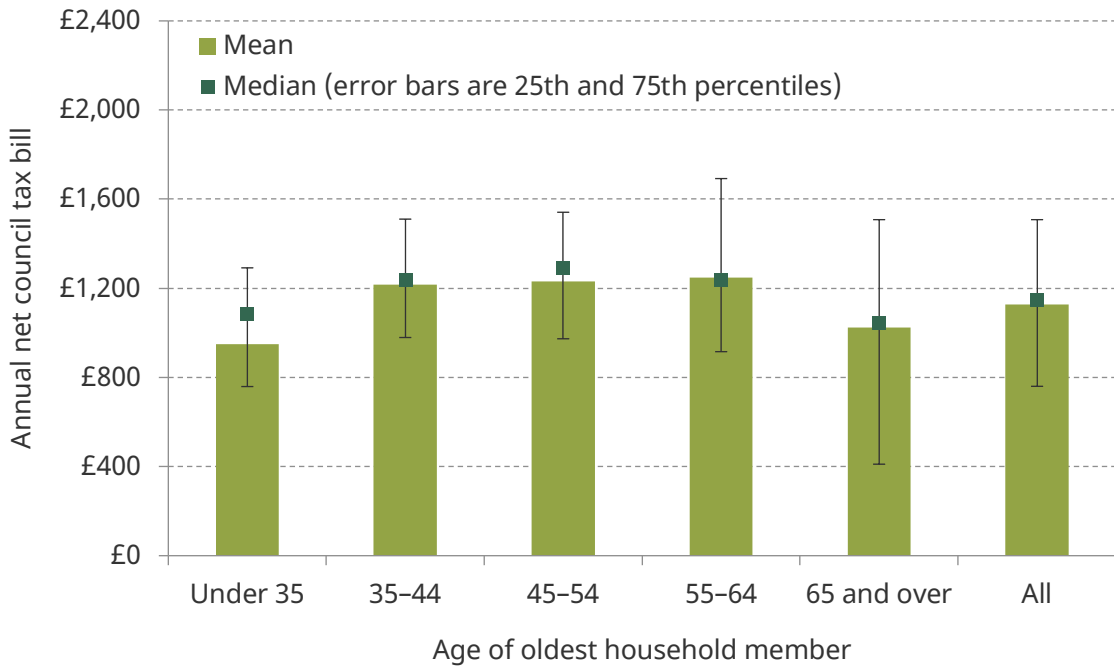
The results for single pensioners in particular are sensitive to assumptions on CTRS take-up (see Figure 5.8). Single pensioners are eligible to have a higher share of their bills covered by CTRS, which also insulates them somewhat from changes in council tax. Without CTRS, single pensioners would see their average council tax bills fall by around £110 a year, compared with £30 a year with CTRS. Given that take-up of CTRS and its predecessors is particularly low among pensioner households (estimated at 54–61% in Great Britain in 2009–10, the latest year for which data are available; see DWP (2013)), the actual gain to single pensioners would lie between £30 and £110 a year.

Age of oldest household member

Figures 5.7 and 5.8 showed that the effects of revaluation and reform would be different for working-age and pensioner households. We can also look directly at intergenerational effects by examining impacts by the age of the oldest household member.

Younger and older households currently pay less council tax, due to a combination of living in properties in lower bands and receiving more CTRS (see Figure 5.9). Average council tax bills are around £1,000 a year for households with the oldest member aged under 35 or aged 65 and over, compared with around £1,200 for households in other age groups. There is substantial variation in council tax bills among the oldest households, with a quarter paying less than £410 a year (and having most of their bills covered by CTRS) and a quarter paying more than £1,510 a year on highly valuable properties.

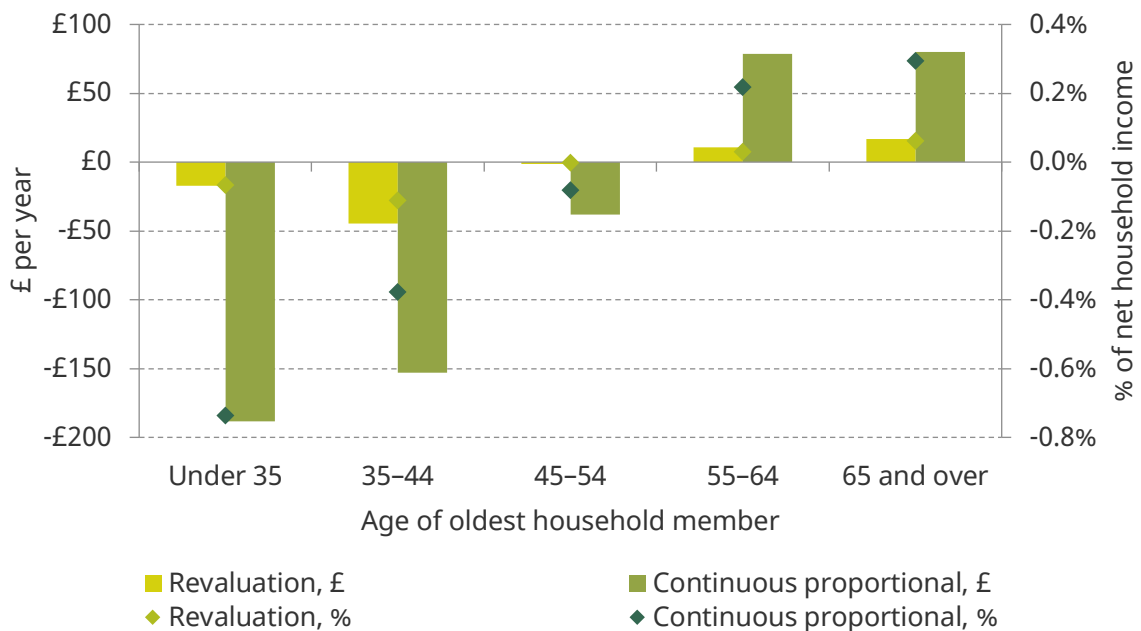
Figure 5.9. Current annual net council tax bill, by age of oldest household member



Note: Assumes full take-up of the CTRS.

Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

Figure 5.10. Average change in net council tax bill, by age of oldest household member



Note: Assumes full take-up of the CTRS. Incomes are measured after taxes and benefits but before housing costs are deducted and equivalised using the modified OECD equivalence scale.

Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

A **pure revaluation** would very slightly reduce council tax bills among younger households and very slightly increase them among older households (see Figure 5.10). Average changes would be minor – within 0.1% of household incomes – though there would be winners and losers among all groups (see Table B.4 in Appendix B).

A **continuous and proportional system** would redistribute from older households towards younger ones, with households under 45 gaining around £150–£190 a year on average, and the two oldest age groups losing around £80 a year on average. After the reform, households in which the oldest member is under 35 would pay around £760 a year in council tax bills on average, compared with £1,060–£1,330 among other age groups.

Disability status

To examine impacts on households by disability status, we distinguish between three groups: households in receipt of disability benefits, ‘other disabled households’ and ‘non-disabled households’. Disability benefits include disability living allowance, incapacity benefit, employment & support allowance, personal independence payment and other disablement allowances.²³ Households are classified as ‘other disabled’ if any adult in the household reports having a longstanding illness or disability, or if any child in the household has a limiting longstanding illness.

A very high proportion of households in Wales in the Understanding Society survey are classed as disabled by our measure: 17% are on disability benefits, and a further 46% have at least one household member who reports having a longstanding illness or disability (but does not receive disability benefits). It is important to note that our measure of ‘other disabled’ is much wider than the most commonly used measure of disability – used, for example, in the government’s employment gap targets (DWP, 2020) – where an individual is defined as disabled if they have a longstanding illness *and* that illness reduces their ability to carry out day-to-day activities. The Understanding Society survey does not ask respondents whether their longstanding illness limits their day-to-day activities, so we are unable to impose this restriction.

Some disabled households in Wales are eligible to have their council tax bills reduced by one valuation band, if they can demonstrate that their properties have been adapted to meet the needs of the disabled person (for example, if they have an additional bathroom or kitchen to meet the needs of the disabled person).²⁴ This reduction is assessed on a case-by-case basis and is not tied to receipt of other benefits. As such, we are unable to account for this reduction in our microsimulation modelling, which may have some effect on our results below. The effect is unlikely to be large, as less than 1% of properties in Wales receive a disability reduction,²⁵ whereas nearly two-thirds (63%) of households in Wales are classified as disabled by our measure.

It is worth providing a caveat to these results up front. First, as explained above, our measure of disability is much wider than commonly used measures and captures the

²³ Other allowances include severe disablement allowance, war disablement allowance, industrial injury disablement allowance and other disability-related benefit or pay.

²⁴ See <https://gov.wales/council-tax-discounts-and-reduction/disabled-people>.

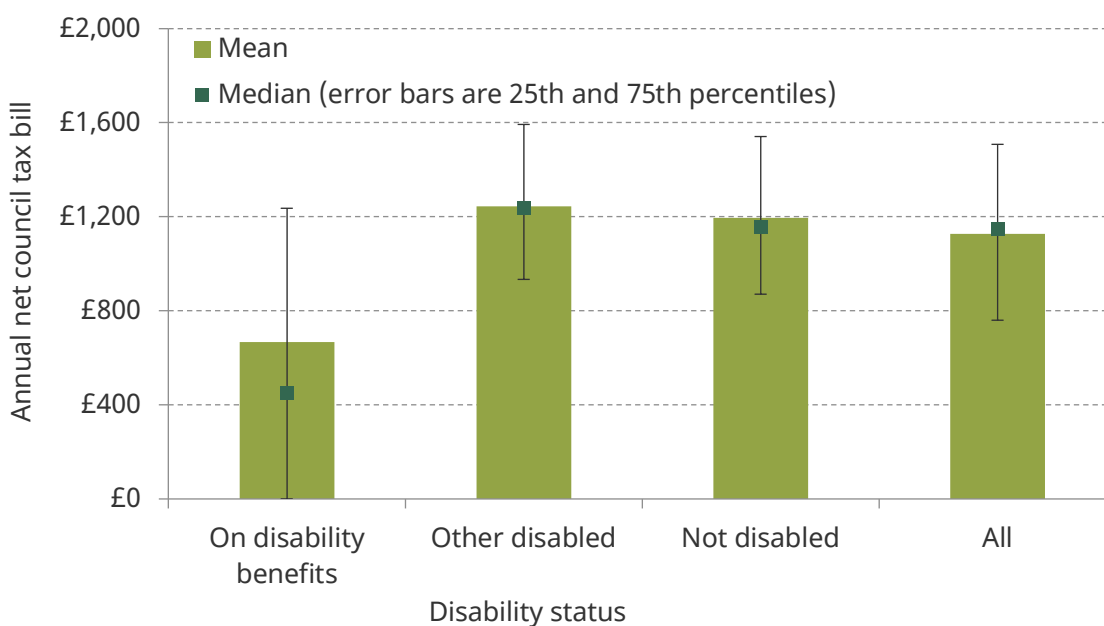
²⁵ <https://stats.wales.gov.wales/Catalogue/Local-Government/Finance/Council-Tax/Dwellings/counciltaxdwellings-byct1rowdescription>.

majority of households in Wales. Second, the sample size of households on disability benefits in Wales is very small: just 150 households.

Caveats aside, Figure 5.11 shows current council tax payments by disability status. It shows that households on disability benefits have much lower council tax bills on average, both because they live in lower-value properties and because they have a higher share of their council tax bills covered by CTRS. The average bill among households on disability benefits is around £670 a year, and over 35% pay no council tax at all. ‘Other disabled’ households look much more like ‘non-disabled’ households in terms of their council tax payments; they pay slightly higher bills on average, but the difference is not statistically significant. ‘Other disabled’ households also have slightly higher incomes and property values than ‘non-disabled’ households.

A **pure revaluation** would have virtually no effect on average bills by disability status – changes would be within 0.03% of average incomes for each group (see Figure 5.12). A **continuous and proportional system** would reduce average council tax bills for households on disability benefits, by around £60 a year, but increase them by around £50 a year for ‘other disabled’ households, who tend to live in more valuable properties. It would also reduce council tax bills by around £30 a year for ‘non-disabled’ households. Under a continuous and proportional system, council tax bills would average around £600 a year among households on disability benefits, around £1,290 a year among ‘other disabled’ households and around £1,170 a year among ‘non-disabled’ households.

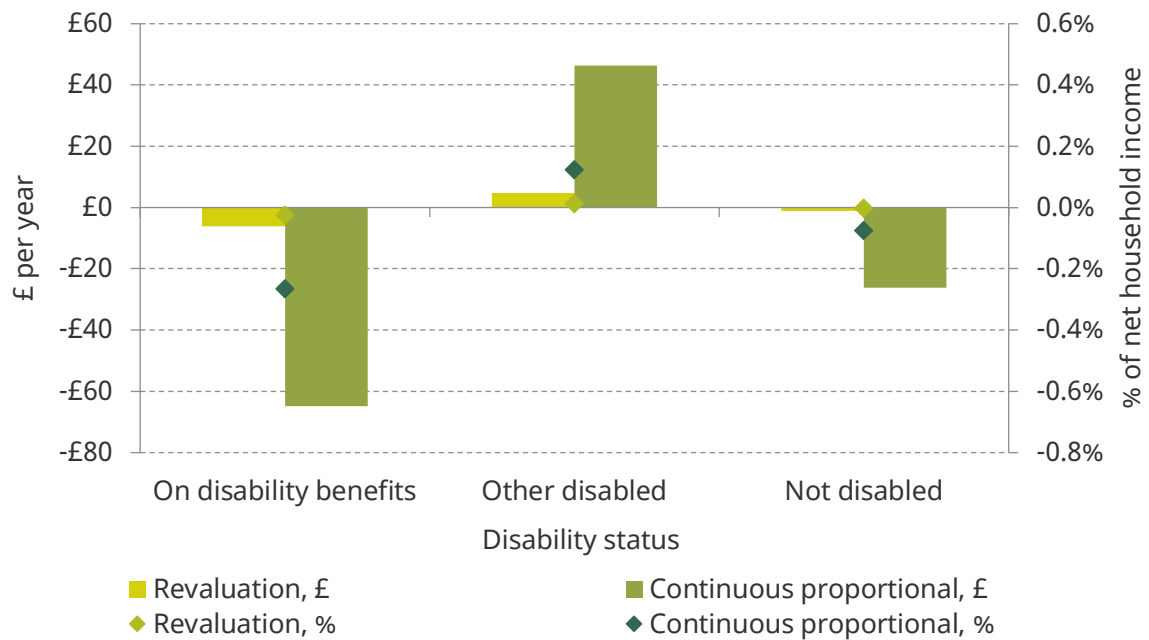
Figure 5.11. Current annual net council tax bill, by disability status



Note: Assumes full take-up of the CTRS.

Source: Authors’ calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

Figure 5.12. Average change in net council tax bill, by disability status



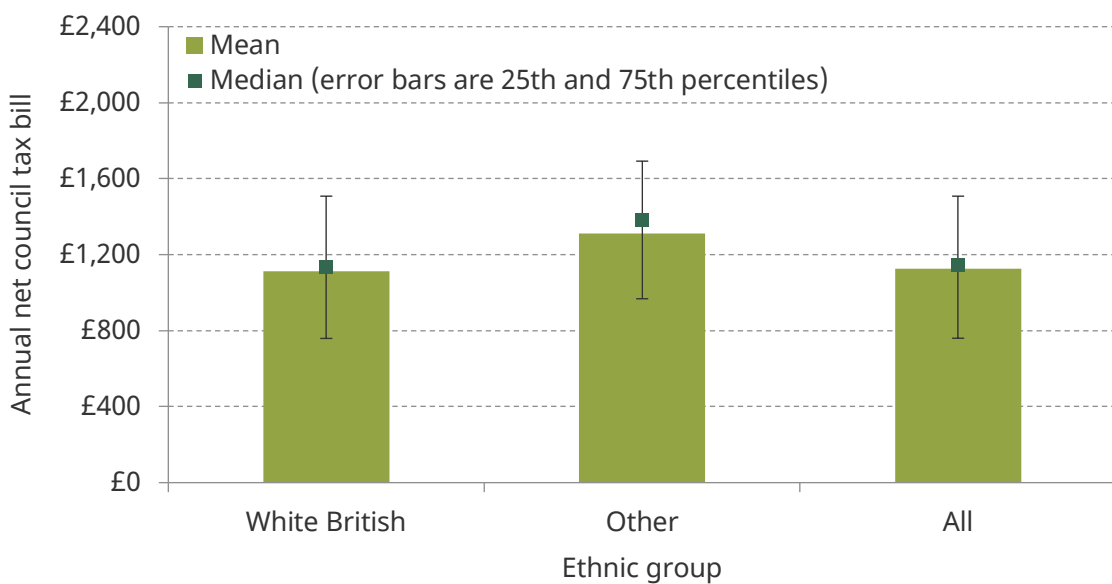
Note: Assumes full take-up of the CTRS. Incomes are measured after taxes and benefits but before housing costs are deducted and equivalised using the modified OECD equivalence scale.

Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

Ethnic group

We classify a household as white British if all adults in the household are white British and as ethnic minority if any adult in the household is not white British. Figure 5.13 shows that ethnic minority households currently pay slightly higher council tax bills on average. This

Figure 5.13. Current annual net council tax bill, by ethnic group



Note: Assumes full take-up of the CTRS.

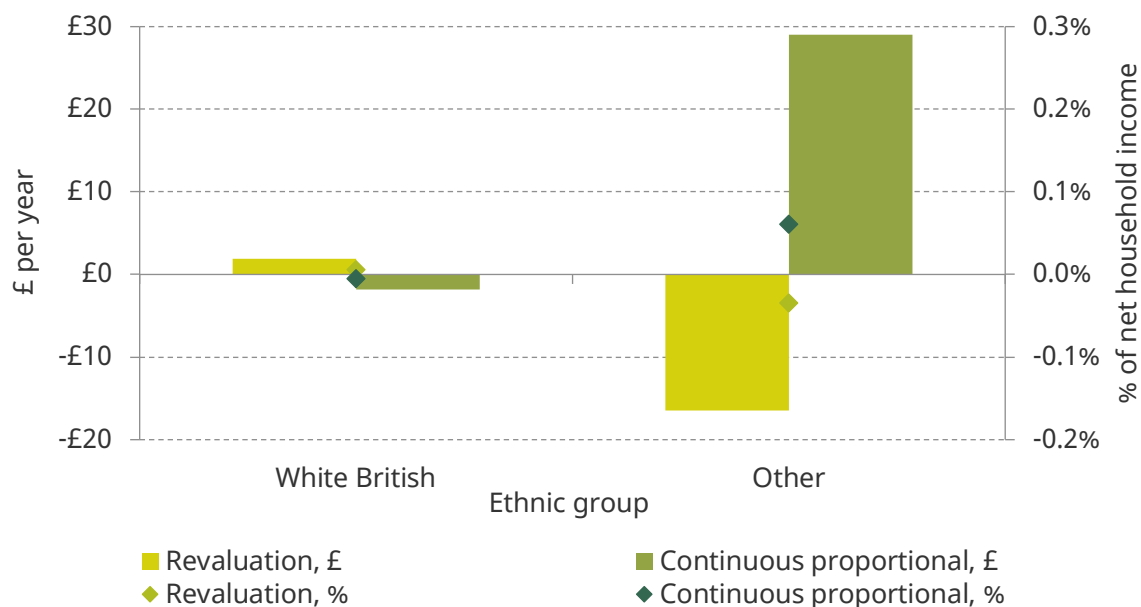
Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

is because ethnic minority households tend to live in areas with more properties in higher tax bands (for example, in Cardiff rather than the Valleys), are less likely to get a single-person discount, and have less of their council tax covered by CTRS (as they are less likely to be pensioners or have low incomes).

The estimated impact of revaluation and reform on ethnic minority households is shown in Figure 5.14. It shows that a **pure revaluation** would slightly reduce average council tax bills among ethnic minority households by around £20 a year, as they tend to live in properties that have not seen large increases in value since 2003. Moving to a **continuous and proportional system** would increase average council tax bills among ethnic minority households by around £30 a year.

There are two important caveats to these results. First, the sample of ethnic minority households in Wales in the Understanding Society data is very small – only 91 households. Second, as explained above, the sample size in Wales does not allow us to model changes at the council level. Ethnic minority households in Wales are disproportionately likely to live in Cardiff, which currently charges a lower-than-average Band D rate. This local authority would see its tax base rise under a continuous and proportional system and, under full grant adjustment, its loss in grants (based on a notional rate) would more than offset its rise in revenues from a higher tax base. The council tax rate would therefore need to be higher to maintain spending in this council area, relative to a situation in which its Band D rate matched the national average across Wales. As such, our results may somewhat understate the increase to average council tax bills among ethnic minority households under full grant adjustment.

Figure 5.14. Average change in net council tax bill, by ethnic group



Note: Assumes full take-up of the CTRS. Incomes are measured after taxes and benefits but before housing costs are deducted and equivalised using the modified OECD equivalence scale.

Source: Authors’ calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

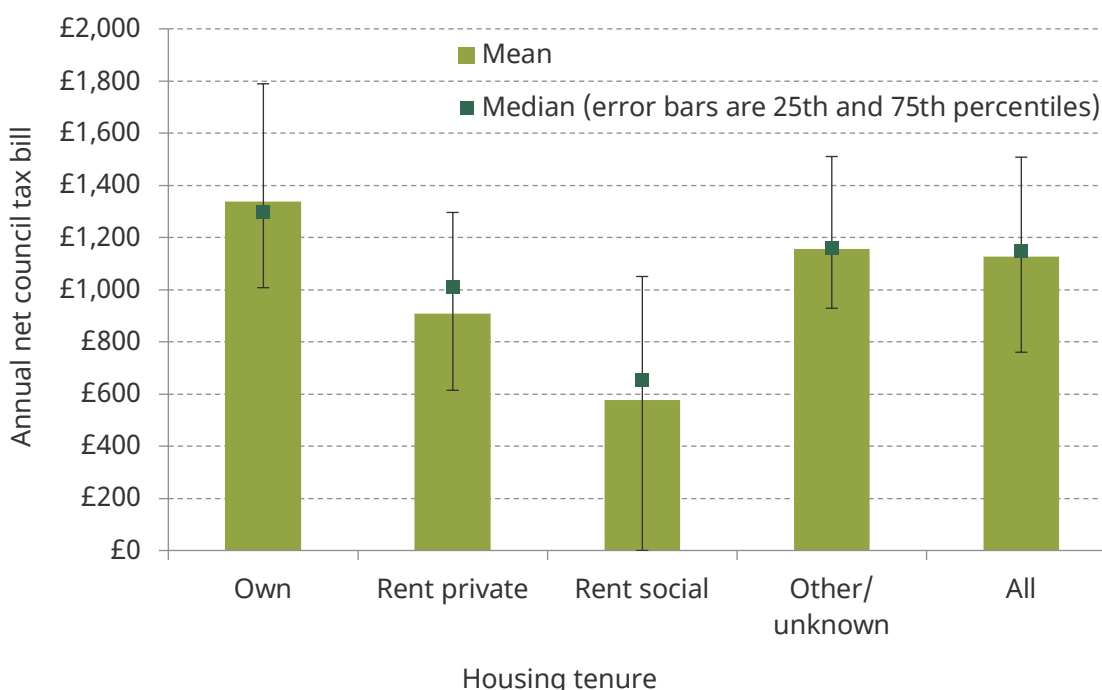
Housing tenure

Finally, we consider impacts across households with different housing tenures. Based on the Understanding Society sample, two-thirds (67%) of households own their homes in Wales, around one in five (21%) live in rented social housing and around one in ten (11%) rent privately. 1% of households in Wales in the sample have other housing tenures (for example, squatting) or are missing housing tenure information.²⁶

Figure 5.15 shows that owner-occupier households pay around £1,340 a year in council tax bills on average, private renters pay around £910 a year and social renters around £580 a year. Average council tax bills are lowest among social renters both because they live in properties with lower (gross) bills and because they tend to be entitled to the CTRS. Over 30% of social renter households pay no council tax under the current system. The very small proportion of households with other or unknown tenures look similar to all households in terms of their council tax bills, so in the following analysis we omit this group and focus on the known groups.

The effect of revaluation and reform on households that rent their homes partly depends on whether rents adjust in response to changes in council tax. In this subsection – as with the above subsections – we assume that rents would not adjust, and so changes in council tax are borne by tenants rather than landlords. We discuss the implications of alternative assumptions on who ultimately pays for council tax changes in Section 5.4.

Figure 5.15. Current annual net council tax bill, by housing tenure



Note: Assumes full take-up of the CTRS.

Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

²⁶ It is worth noting that the share of social renter households in Understanding Society is slightly higher, and the share of private renter households slightly lower, than in the Family Resources Survey (FRS). In 2017–18, 13% of households in Wales in the FRS reported being in private rentals and 17% in social rentals.

Figure 5.16. Average change in net council tax bill, by housing tenure



Note: Assumes full take-up of the CTRS. Incomes are measured after taxes and benefits but before housing costs are deducted and equivalised using the modified OECD equivalence scale.

Source: Authors’ calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

It is also worth noting that, as discussed in Chapter 3, our methodology for estimating property values may be imprecise for rented (especially socially rented) properties if they differ from owner-occupied properties in unobserved ways. For example, if rented properties are systematically less desirable than owner-occupied properties with the same observed characteristics (dwelling type, size, location and so on), our methodology would lead us to overestimate property values of rented properties and therefore overstate their council tax bills after reform.

Notwithstanding these caveats, Figure 5.16 plots the changes in council tax bills across households of different housing tenures. It shows that a **pure revaluation** would very slightly increase bills for social renters, by around £20 a year. This partly reflects the fact that social renters are likely to be in the lowest bands already – 40% are in Band A – and so are more likely to move up bands. Again, there would be both winners and losers in each tenure group, as set out in Table B.4 in Appendix B.

A **continuous and proportional system** would redistribute from owner-occupiers to renters, as the former tend to live in more valuable properties. Average council tax bills would rise by around £60 a year among owner-occupiers under a proportional continuous rate, and fall by around £150 and £100 a year among private and social renters respectively. Council tax bills are already much lower among social renters than for other housing tenures; after the reform, households that rent socially would pay just £480 a year in council tax bills on average.

The smaller reduction among social renters than among private renters reflects higher eligibility for the CTRS among social renters, which partly insulates them from changes in

council tax. Without the CTRS, or assuming no take-up of CTRS, a continuous and proportional system would reduce council tax bills much more among social renters (by £210 a year compared with £100 a year). Assumptions on the take-up of the CTRS have a much smaller effect on estimated impacts on private renters and (particularly) owner-occupiers, who are less likely to be entitled to the CTRS. Private renters would see their gross council tax bills fall by around £200 a year (compared with £150 a year), and owner-occupiers would see their bills rise by around £60 a year (similar to the case with CTRS).

5.3 Other reform options

The previous section focused on two main reform options: revaluation retaining the current banded structure (including the current band proportions and relativities), and a continuous rate that is fully proportional to property values. In this section, we consider the effects of alternative reform options across households. These include ‘intermediate’ reform options that retain the current banded structure but make council tax bills more proportional to property values in each band, and an option that takes the proportional continuous rate even closer to a pure property tax, by removing the single-person discount.

‘Intermediate’ banded options

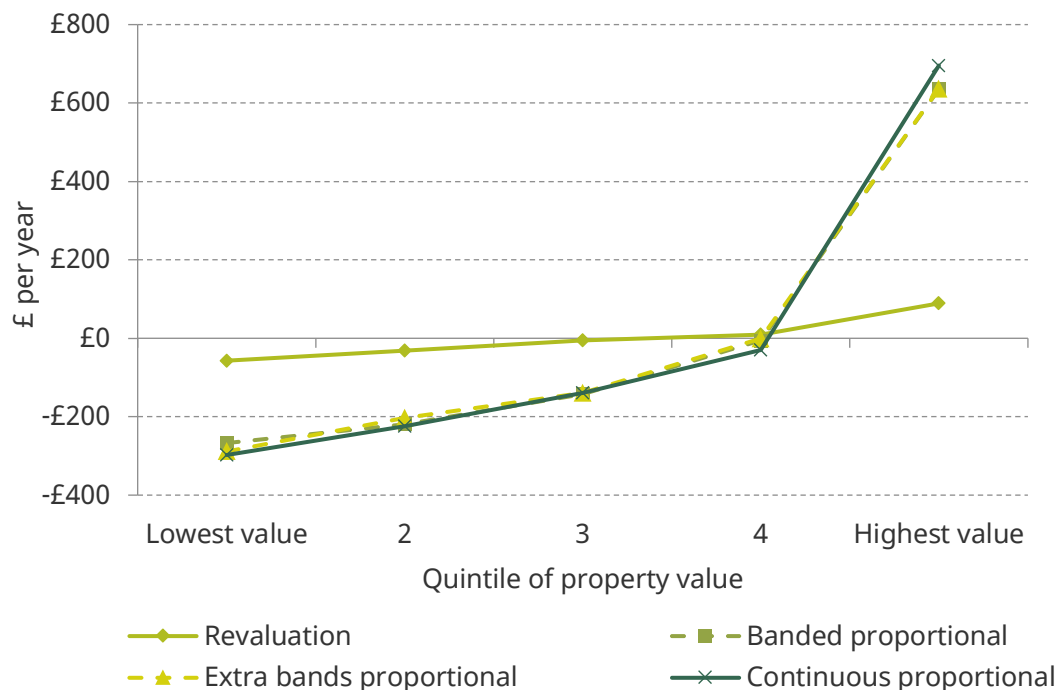
We start by considering two options for reform that retain the current banded structure but make band relativities proportional to the median property values in each band. The first of these (labelled ‘banded proportional’) retains the current shares of properties in each band, whilst the second (labelled ‘extra bands proportional’) adds additional bands at the top and bottom of the property value distribution, as detailed in Chapter 3.²⁷

Figure 5.17 plots the average change in council tax bills by property value under revaluation, a continuous and proportional system and the two ‘intermediate’ banded proportional options. It shows that at an aggregate level, the two banded options would approximate a continuous and proportional system very closely. Adding extra bands at the bottom would make the system very slightly more progressive in property values, but the difference is small: households with the 20% lowest property values would see their council tax bills fall by around £290 a year compared with around £270 a year without extra bands.

The average effects of the two intermediate options would also closely approximate those of the continuous and proportional system along other breakdowns of household types discussed above. Average changes in council tax liabilities by household income level are shown in Figure 5.18.

²⁷ Note that the Understanding Society sample does not contain any Band I households in Wales, so splitting Band I into two new bands under the second option does not affect results in the household-level analysis.

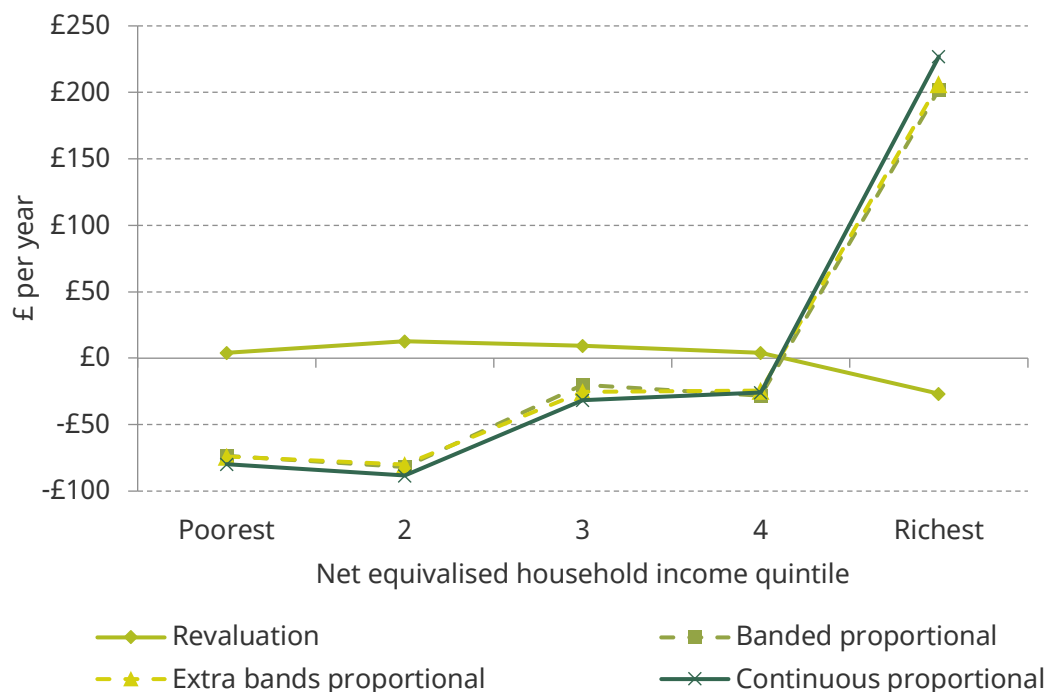
Figure 5.17. Average change in net council tax bill, by quintile of property value



Note: Assumes full take-up of the CTRS.

Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

Figure 5.18. Average change in net council tax bill, by household income quintile



Note: Assumes full take-up of the CTRS. Incomes are measured after taxes and benefits but before housing costs are deducted and equivalised using the modified OECD equivalence scale.

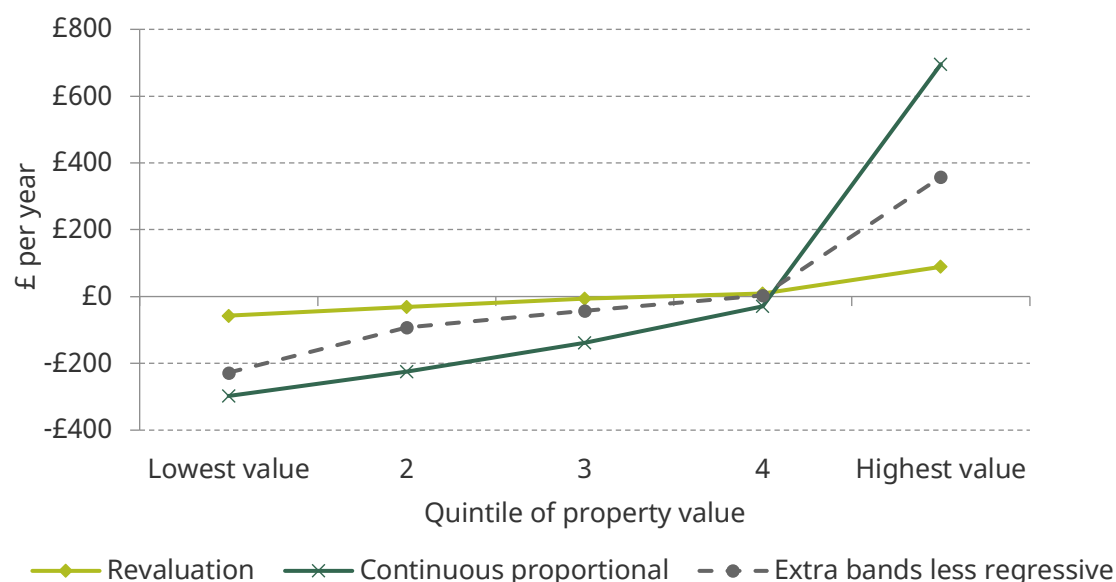
Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

The fact that banded proportional systems have similar effects to a continuous and proportional system on the aggregate level does not mean, however, that individual households would face the same council tax bills. Comparing a fully proportional continuous rate with the banded proportional option with extra bands at the bottom (and the top), council tax bills would be more than £50 a year higher under the continuous proportional system for 20% of households and more than £50 higher under the banded option for 25% of households. 5% (6%) of households would face council tax bills of over £200 more a year under the proportional continuous (banded) system.

We also consider an alternative reform option with extra bands at the top and bottom of the distribution and with band ratios that are less regressive than the current system but not fully proportional to property values, as detailed in Chapter 3. The impact of this reform across households with different property values is shown in Figure 5.19. The reform would reduce council tax liabilities among households with the lowest-value properties and raise them among those with the highest-value properties, with relatively little change on average among those in the middle of the property value distribution. The effects would lie between those of revaluation alone and a fully proportional continuous rate.

Figure 5.20 shows the average effects of this reform across the income distribution. The reform would be more progressive in household incomes than revaluation alone, but less progressive than a fully proportional continuous rate. The average reduction in council tax bills faced by the poorest 20% of households under this reform would be around a half of the reduction under a continuous and proportional system.

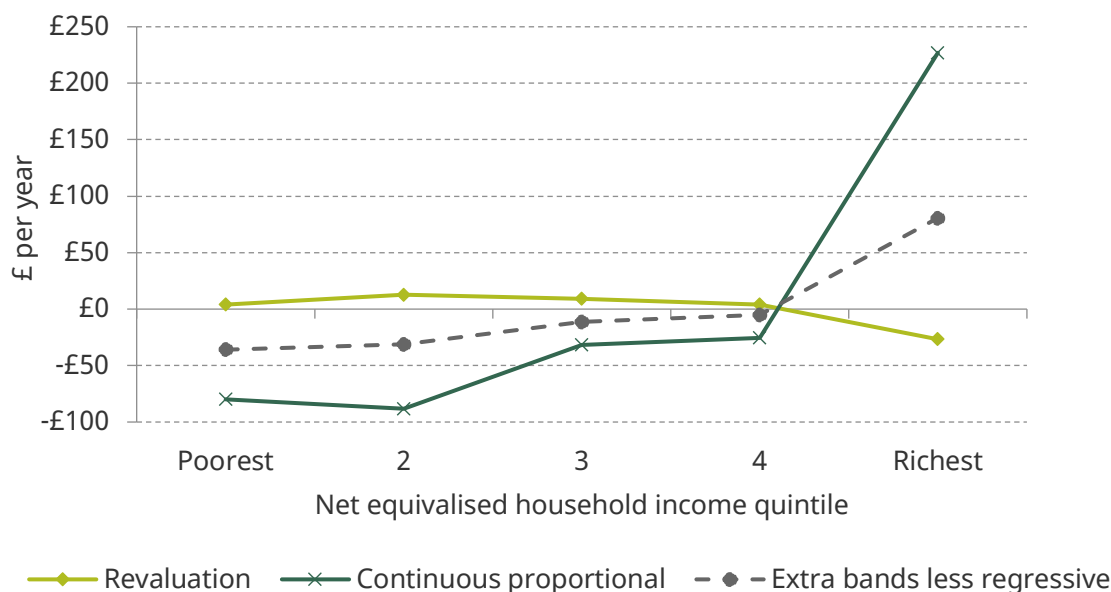
Figure 5.19. Average change in net council tax bill, by quintile of property value



Note: Assumes full take-up of the CTRS. Incomes are measured after taxes and benefits but before housing costs are deducted and equivalised using the modified OECD equivalence scale.

Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

Figure 5.20. Average change in net council tax bill, by quintile of household income



Note: Assumes full take-up of the CTRS. Incomes are measured after taxes and benefits but before housing costs are deducted and equivalised using the modified OECD equivalence scale.

Source: Authors’ calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

Removing the single-person discount

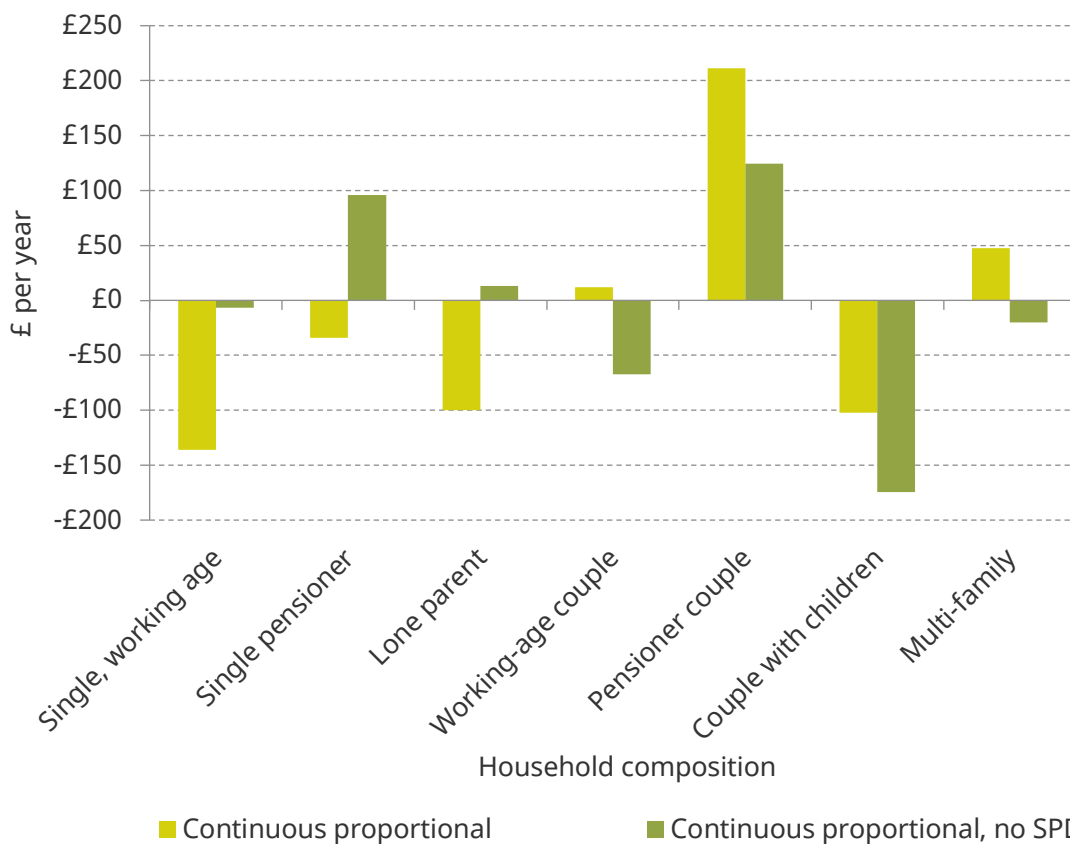
As discussed in Chapter 2, a continuous and proportional council tax system would still fall short of being a good property tax without reforming the single-person discount. This remnant of the poll tax encourages inefficient use of the housing stock, with single-adult households living in bigger properties – and multi-adult households in smaller properties – than would otherwise be optimal. In the following analysis, we consider the effects of removing the single-person discount alongside a continuous and proportional rate. This is the closest reform option to what we would consider an ideal property tax.

Figure 5.21 shows the effect of a continuous and proportional system by household composition, with and without the single-person discount (SPD). Removing the single-person discount would substantially reduce gains from a proportional system among single-adult households – average bills among single working-age households and lone parents would be similar to under the current system and single pensioner households would be worse off than under the current system.

Under a continuous and proportional system without the single-person discount, average council tax bills would barely change among single working-age households and lone parents and would rise by around £100 among single pensioner households, relative to the current system. This compares with falls of around £140, £100 and £30 a year respectively under a continuous and proportional system that retains the single-person discount.

Households with two or more adults would benefit from the removal of the single-person discount, since without it the council tax rate required to maintain revenue neutrality would be lower. However, pensioner couples would still face higher council tax bills than under the current system, by around £120 a year.

Figure 5.21. Average change in net council tax bill from a continuous and proportional system, by household composition, with and without the single-person discount



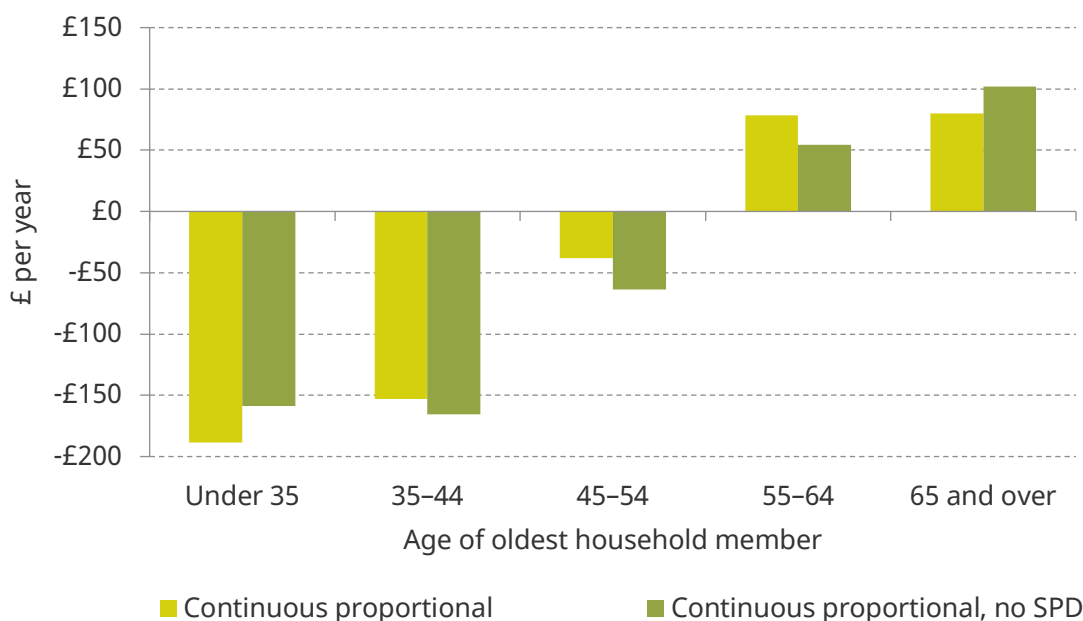
Note: Assumes full take-up of the CTRS. Multi-family households are households with more than one benefit unit.

Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

The youngest and oldest households are more likely to be single-adult households, so removing the single-person discount would increase council tax bills for these groups. As shown in Figure 5.22, households in which the oldest adult is under 35 would gain slightly less from a continuous and proportional system without the SPD (relative to a continuous and proportional system with the SPD), and households in which the oldest adult is aged 65 or over would lose slightly more. Removing the single-person discount – and thereby reducing the revenue-neutral council tax rate – would benefit households in the middle of the age distribution, who are less likely to live in single-adult households.

Looking across the income distribution, we find that lower-income households are more likely to be single. As such, removing the single-person discount would very slightly reduce gains among the lowest-income 20% of households and would slightly reduce losses among the highest-income 20%. A continuous and proportional system without the single-person discount would still redistribute from higher-income to lower-income households, as shown in Figure 5.23. The poorest 20% of households would gain by around £70 a year, and the highest-income 20% of households lose by around £190 a year, compared with around £80 and £230 respectively retaining the single-person discount.

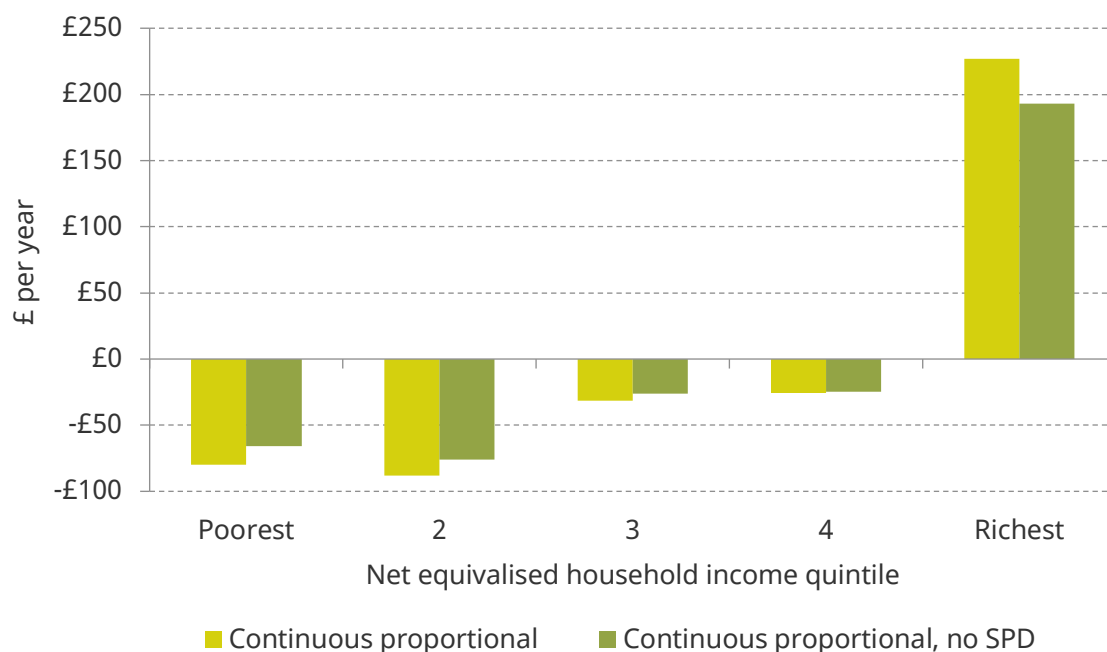
Figure 5.22. Average change in net council tax bill from a continuous and proportional system, by age of oldest household member, with and without the single-person discount



Note: Assumes full take-up of the CTRS.

Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

Figure 5.23. Average change in net council tax bill from a continuous and proportional system, by household income quintile, with and without the single-person discount



Note: Assumes full take-up of the CTRS. Incomes are measured after taxes and benefits but before housing costs are deducted and equivalised using the modified OECD equivalence scale.

Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

5.4 Incidence

In our analysis so far, we have assumed that changes in council tax do not affect rents. But rents – at least private rents – are determined by the supply of and demand for rental properties. If the supply of rental properties is relatively fixed, as is likely the case at least in the short term, private landlords could adjust the rent they charge to at least partly compensate for changes in council tax. That is, council tax could be partly incident on owners of privately rented properties rather than on tenants.²⁸ Social rents, which are set by a formula, are perhaps less likely to adjust to changes in council tax.

Figure 5.16 showed that under a continuous and proportional system, average council tax bills among households that rent privately would fall by around £150 a year. (They would change little on average, by only £15 a year, under revaluation alone.) If rents did not adjust at all, this reduction in council tax would translate into higher disposable incomes for households in privately rented properties. But if landlords were able to put up their rents to fully absorb the fall in council tax, households in privately rented properties would experience effectively no change in their disposable income after council tax and rent,²⁹ and the gain of around £150 per property would accrue to landlords instead. Given that changes in property taxes have been shown to be highly capitalised into property values (see Chapter 6), we would expect council tax changes to be borne in part by landlords, as otherwise the values of rental properties would not be affected.

The Understanding Society survey unfortunately does not contain information about the properties that landlords own, so we are unable to calculate gains and losses to landlords of different demographic groups, if council tax changes were partly borne by landlords instead of tenants. But the data do contain some information on the characteristics of landlords and tenants, so we can say something about how different assumptions about incidence affect the results presented above.

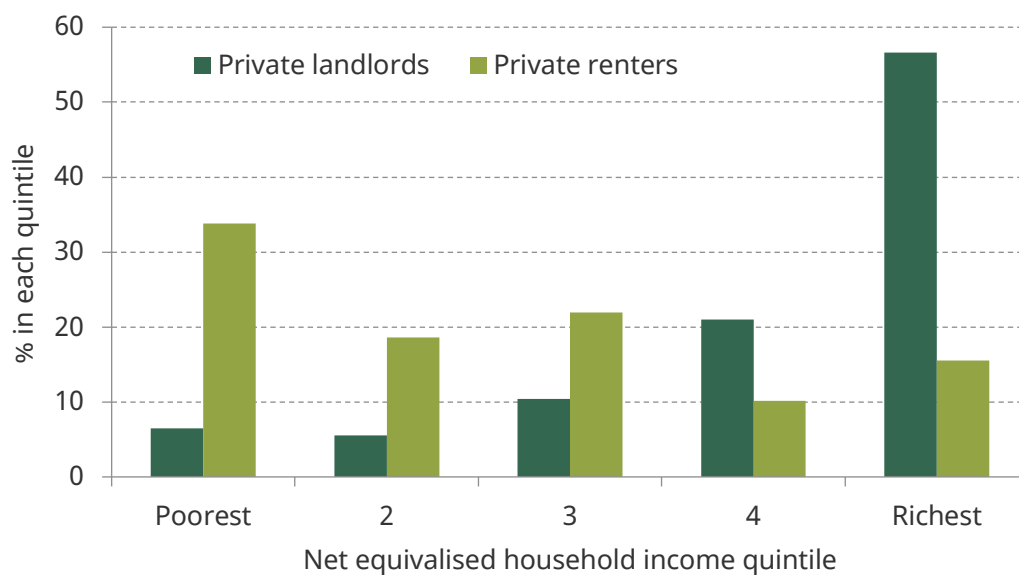
Figure 5.24 shows the distribution of private landlords and renters by household income. It shows that private landlords are skewed towards the top of the income distribution and private renters are skewed towards the bottom of the distribution. Over half (57%) of private landlords are in the highest-income 20% of households, and only 7% are in the poorest 20%. The pattern is reversed for private renters: of households that rent privately, over a third (34%) are in the poorest 20% of households, and only 15% in the highest-income 20%.

This means that if council tax were partly incident on property owners rather than tenants, a continuous and proportional system would be less progressive in incomes than Figure 5.4 implied. Landlord households would lose from higher council taxes on their owner-occupied properties, but gain from lower council tax on the properties they rent out, which allows them to put up rents on those properties. On the other hand, gains at the

²⁸ See, for example, England (2016).

²⁹ The change to tenants is not exactly zero, as changes in rent may lead to changes in universal credit (or housing benefit in the legacy system). For example, if a household's council tax bill falls and the incidence is on landlords, their rent will rise by an equivalent amount. But if they receive the housing component of universal credit, the rent they pay out-of-pocket will rise by less than the full amount, so they can still gain from the reform. The reverse holds if the household's council tax bill rises. But in aggregate the change for private tenants is very close to zero.

Figure 5.24. Distribution of private landlord and private renter households, by household income quintile



Note: Private landlords are identified as households that receive any rental income. Incomes are measured after taxes and benefits but before housing costs are deducted and equivalised using the modified OECD equivalence scale.

Source: Authors’ calculations using Understanding Society wave 8.

Figure 5.25. Distribution of private landlord and private renter households, by quintile of property value



Note: Private landlords are identified as households that receive any rental income.

Source: Authors’ calculations using Understanding Society wave 8.

bottom of the income distribution would be smaller, as low-income households living in privately rented homes would see their rents rise to offset falls in council tax.

More generally, private renter households disproportionately live in lower- and middle-value properties, whilst households that are private landlords disproportionately live in the highest-value properties (see Figure 5.25). This implies that if council tax changes are partly borne by landlords rather than tenants, the effects of moving to a continuous and proportional system (which redistributes from those with higher-value properties to those with lower-value properties) would be smaller than the results above suggest.

For example, single working-age households and lone-parent households – which make up a disproportionate share of private renters – would gain less from the reform on average, since part of the reduction in council tax for these groups would be offset by higher rents. On the other hand, working-age couples – who make up a disproportionate share of private landlords – would gain more (or lose less) from the reform on average, as they would benefit from being able to charge higher rents on rented properties.

6. The potential impacts on rents and property values

Because property values are determined by the supply of and demand for housing, changes in council tax bills would be expected to be reflected in properties' market values. Properties that see a fall in their council tax bills would be expected to rise in value, whilst those that see a rise in their bills would be expected to fall in value, in a process called capitalisation. Economic theory suggests that tax changes will be highly capitalised into property prices where housing supply is relatively fixed (Oates, 1969).

A number of studies provide evidence of significant capitalisation of property taxes in the UK. Bond et al. (1996) find that 45–85% of changes in business rates fed through into changes in commercial property rents in the course of just a few years, whilst a more recent study by Bond, Gardiner and Tyler (2008) find that reductions in business rates in enterprise zone areas are almost entirely capitalised into rents. Housing supply in the UK is found to be unresponsive to property prices (Caldera Sanchez and Johansson, 2011), which, all else equal, would imply a high degree of capitalisation. Studies find that local public goods provision – the corollary to local taxes – is highly capitalised into property prices in the UK (see, for example, Hilber, Lyttikainen and Vermeulen (2011) on grant funding and Gibbons and Machin (2008) on school quality). Many studies on other countries have also found nearly full capitalisation of property taxes (Capozza, Green and Hendershott, 1996; Palmon and Smith, 1998; Høj, Jørgensen and Schou, 2018).³⁰ There is therefore strong empirical backing for the theoretical prediction that property prices would be affected by changes to property taxes such as council tax.

For owner-occupied properties, the reason for capitalisation is straightforward: when deciding how much they are willing to pay for a home, households consider the future stream of council tax payments that they would have to pay in that property (as well as any amenities those council tax payments pay for). For rental properties, capitalisation is likely to happen only if council tax is incident on property owners, rather than tenants, as discussed in Section 5.4 above – that is, if a rise (fall) in council tax reduces (increases) the rent landlords are able to charge on the property, and therefore reduces (increases) the value of the property to landlords.

In this chapter, we consider the impact of revaluation and reform on property values in Wales. We model the effect of complete capitalisation, which can be seen as the upper bound on potential impacts. We model capitalisation as a one-off change in property values by the discounted change in tax liability, assuming this is permanent. That is, we assume that revaluation or reform is based on property values *before* any expectations of changes are priced in, and that people expect the reform to be a one-off and permanent event (they do not expect the tax change to be reversed, nor do they expect any further changes in real tax liabilities in the future as a result of the reform).

The amount by which property values change depends not only on the change in council tax bills, but also on the rate by which future tax payments are discounted. The more households discount the future, the smaller the impact on market values, because future tax payments are worth less in today's terms. In the following analysis, we use a 2% real

³⁰ For a literature review, see Hilber (2015).

discount rate as our central estimate, consistent with the Office for Budget Responsibility's assumptions about long-term productivity growth, and discuss how different assumptions about the discount rate affect our results.³¹

It is important to note that people whose bill increases (falls) do not lose (gain) twice over from both the increase (fall) in their tax bill and the fall (increase) in the value of their property: on the one hand, if they continue living in the property indefinitely, they lose or gain as a result of the change in their tax bill; on the other, if they sell and move, they lose or gain as a result of the change in their property value. However, it does mean that it is the owner of a property at the time of revaluation and reform who loses or gains in full as a result: future purchasers will be willing to pay less (more) for the property if the tax bill associated with it is higher (lower).

The chapter proceeds as follows. Section 6.1 summarises the overall effects of our two main reform options – pure revaluation and a continuous and proportional system – on property values under full capitalisation, and discusses how sensitive estimates are to assumptions about the discount rate. Section 6.2 examines changes in property values across LA areas and Section 6.3 examines changes across households of different income levels.

6.1 Overall effects

Figure 6.1 shows how revaluation and reform would affect average property values, if changes in council tax were fully capitalised into values. We group properties in Wales into 100 equally sized groups based on their current property value, and plot the average property value in each group after the reform. Note that since the reforms we model are revenue neutral, they would have no effect on average property values across all of Wales.

A **pure revaluation** would have little effect on the distribution of property values. The lighter green dots on Figure 6.1 lie very close to the 45-degree line, which means that properties of a given value (say £200,000) today would still be worth, on average, approximately the same amount on average (around £200,000) after revaluation. This reflects the fact that while some properties of this value would move up one or more council tax bands and see their tax bills rise and value fall, others would move down one or more council tax bands and see their tax bills fall and value rise.

A **continuous and proportional system** would increase the value of lower-value properties and reduce the value of higher-value properties, narrowing the distribution of property values in Wales, and wealth inequalities (at least among homeowners).

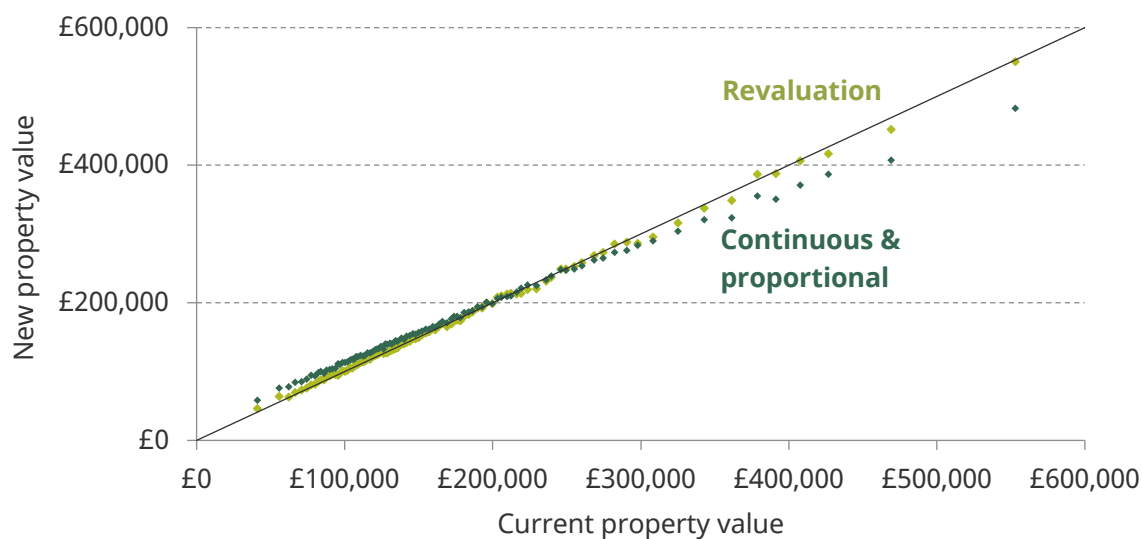
With a 2% real discount rate, the cheapest tenth of properties would see their values rise by around 18%, on average. On the other hand, the most expensive tenth of properties would see their value fall by around 12%, on average – which would be bigger in cash terms than the increases in value of cheaper properties. However, as Figure 6.1 shows, the

³¹ Historically, real interest rates (which reflect real discount rates) have been higher than the rate of productivity growth. However, since the financial crisis, real interest rates have been below the rate of productivity growth. Our assumption is therefore consistent with real interest rates rising from current levels but not returning to pre-financial-crisis levels.

majority of properties are clustered at values below £250,000 and would see their values rise, on average, as a result of the reform.

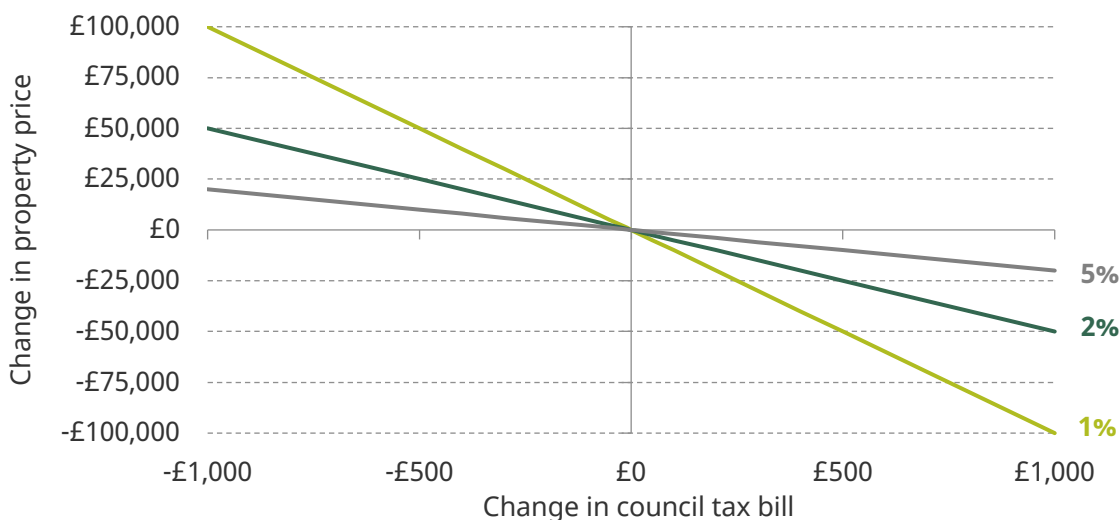
The estimated change in property values from a given change in council tax liabilities is highly sensitive to the discount rate assumed, as shown in Figure 6.2. For example, if council tax changes are fully capitalised into property values, an increase in annual council tax bills of £500 would reduce property values by £25,000 under a 2% discount rate. If a 5% discount rate is assumed instead, property values would fall by just £10,000; under a 1% discount rate, property values would fall by £50,000.

Figure 6.1. Effect of reforms on property values, 2% real discount rate



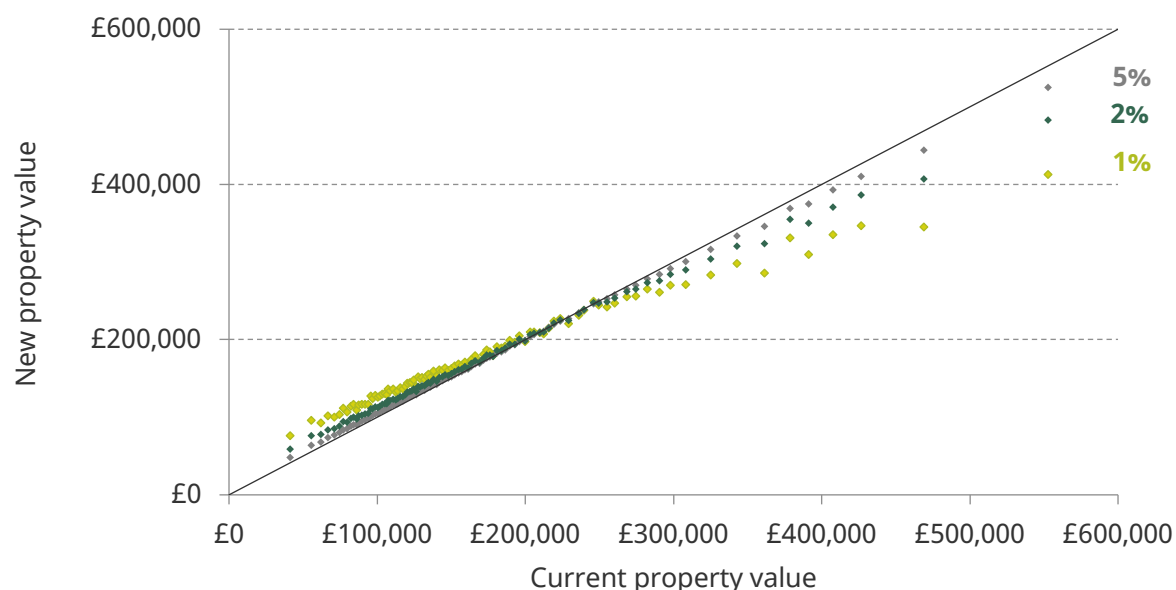
Note: Shows 100 bins of current property values. Omits the two highest bins at around £712,000 and £963,000.
 Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

Figure 6.2. Changes in property price due to capitalisation of changes in council tax bills under different assumptions about discount rates



Source: Authors' calculations.

Figure 6.3. Effect of a continuous and proportional system on property values under different assumptions about the discount rate



Note: Shows 100 bins of current property values. Omits the two highest bins at around £712,000 and £963,000.

Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

As a result, our estimates of changes in property value arising from council tax reforms are also highly sensitive to assumptions about the discount rate.

Figure 6.3 shows that if households discount future tax payments heavily, by 5%, a continuous and proportional system would have much less effect on the distribution of property values in Wales. For example, the average value of the cheapest tenth of properties would rise by 9% (as opposed to 18%), and the average value of the most expensive tenth would fall by 5% (as opposed to 12%).

On the other hand, if households place high value on future tax payments – having a low discount rate of 1% – a continuous and proportional system would lead to large increases in property values among lower-value properties and large falls towards the top of the distribution.

6.2 Effects across LA areas

As with changes in average tax bills, changes in average property values across LAs if tax bills are capitalised will depend crucially on whether grant funding is redistributed to reflect changes in tax bases. If it is not, each LA would still need to raise the same revenue if it wanted to maintain spending, and hence charge the same average tax bill. Thus, average property values would be little changed across LA areas,³² even though within LA

³² As discussed in Chapter 4, there would not be zero effect on average bills and hence average property prices by LA area, because of changes in how much residents in each LA contribute to the police and crime commissioner's council tax revenue requirement. But these changes would be modest, reflecting the fact that the PCC precepts account for around 16% of overall bills.

areas some properties (for example, moving up a band) would see their tax bill rise and value go down, and others vice versa.

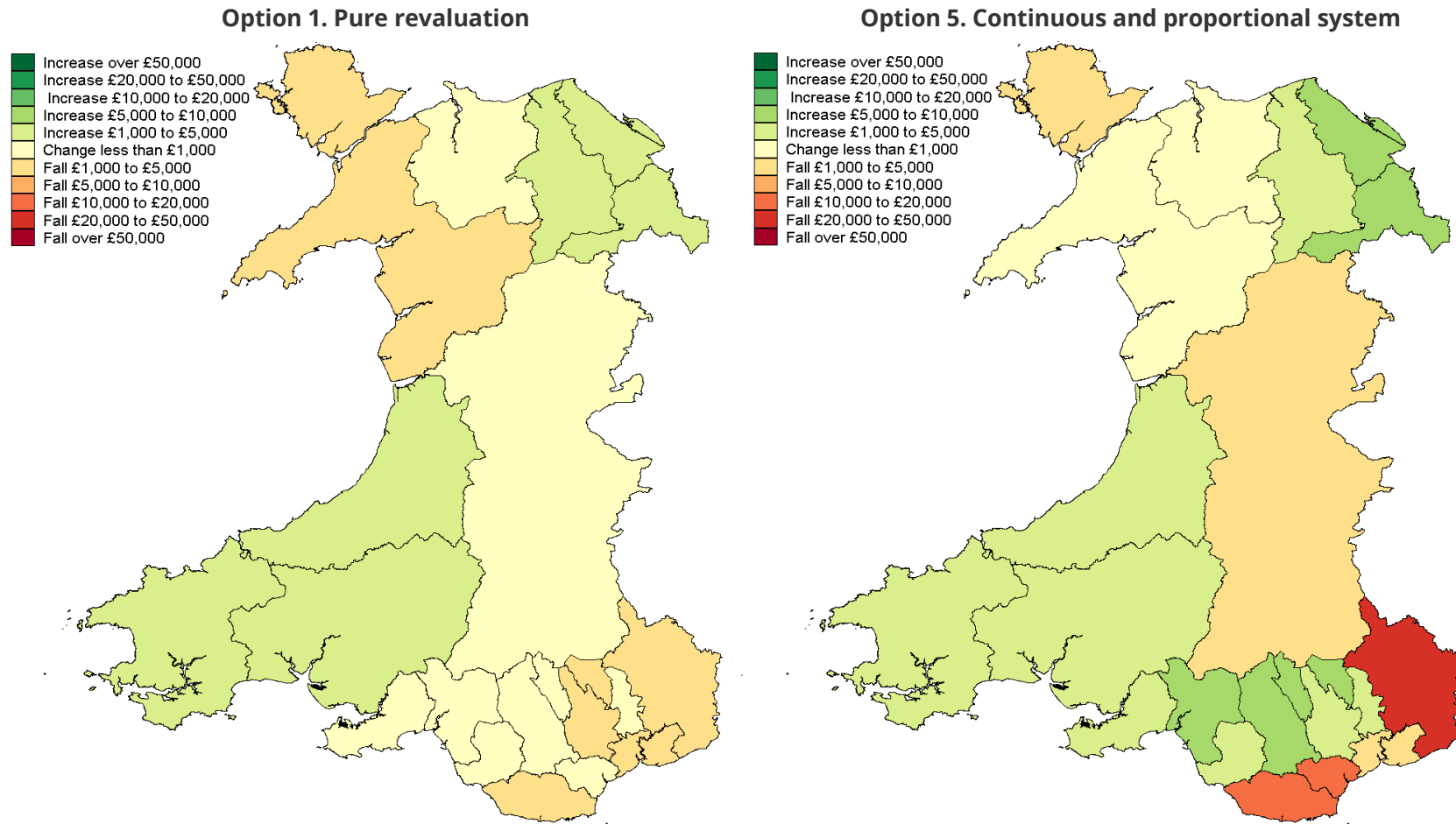
With full adjustment in grants, average tax bills would change to reflect changes in tax bases if LAs wanted to maintain spending levels. This would lead to more significant changes in property values by LA area if these changes were capitalised.

Figure 6.4 and Table 6.1 show our estimates of the effect on average property values by LA of a pure revaluation (left-hand map) and a continuous and proportional tax system (right-hand map), assuming a 2% discount rate. They show that:

- The effects of a **pure revaluation** on average property values by LA would be relatively modest. Average values would fall a little in areas where they have previously risen fastest and hence more properties would move up bands and see higher average bills following revaluation – such as in the south-east and north-west. Average values would rise a little in areas where average bills would fall following revaluation – such as the north-east and south-west. But the average change would be below £5,000 in all LAs and below £3,000 in all but four: Anglesey (down £3,000, or 1.6%), Monmouthshire (down £3,600 or 1.3%), Flintshire (up £3,900 or 2.4%) and Wrexham (up £4,000 or 2.6%). These changes are very small in the context of the changes that take place in any given year, though. For example, the annual change in value of properties in Anglesey exceeded 1.6% in absolute terms for more than three-quarters of the time between April 2009 and March 2019.
- The effects of a **continuous and fully proportional system** would be significantly greater, and would narrow gaps in property values between high-price and low-price parts of Wales, acting to reduce geographical wealth inequality. For example, our estimates suggest that average values in Blaenau Gwent, Neath Port Talbot and Merthyr Tydfil would increase by around £8,200, £8,700 and £9,900, respectively. Conversely, average values in Monmouthshire and the Vale of Glamorgan would fall by around £25,300 and £16,600, respectively. This would see the ratio of property values in Monmouthshire relative to Blaenau Gwent fall from 2.9 times as high to 2.4 times as high. However, the fall in Monmouthshire, which is equivalent to around 8.8%, is relatively small in the context of price rises in recent years. For example, it is equivalent to the estimated increase in value between December 2017 and March 2019. And prices rose by 37% between March 2014 and March 2019.

As already highlighted, though, the impact of revaluation and reform on property values would depend on the discount rate with which property purchasers discount future tax bills (and rental receipts, in the case of landlords). This is illustrated in Table 6.2, which shows the effects of a continuous and proportional system on property values by LA under discount rates of 1%, 2% (our main assumption) and 5%.

Figure 6.4. Effect of reforms on average property values by LA, 2% real discount rate



Source: Authors' calculations using HM Land Registry (2019), Valuation Office Agency (2019) and Welsh Government (2019c and 2019d).

Table 6.1. Effect of reforms on average property values by LA, 2% real discount rate

Local authority	Average price	Estimated change under pure revaluation	Estimated change under continuous and proportional system
Blaenau Gwent	£100,639	-£1,948	£8,167
Bridgend	£152,511	£394	£3,596
Caerphilly	£137,371	-£1,277	£4,431
Cardiff	£225,386	-£978	-£10,186
Carmarthenshire	£154,182	£1,187	£4,114
Ceredigion	£180,733	£1,408	£1,623
Conwy	£176,145	£427	£163
Denbighshire	£166,090	£1,392	£2,238
Flintshire	£165,030	£3,891	£5,876
Gwynedd	£168,318	-£2,172	-£994
Isle of Anglesey	£185,025	-£3,010	-£4,765
Merthyr Tydfil	£103,013	-£358	£9,942
Monmouthshire	£288,233	-£3,621	-£25,282
Neath Port Talbot	£117,442	£686	£8,676
Newport	£180,878	-£1,341	-£3,373
Pembrokeshire	£171,109	£1,534	£2,441
Powys	£200,054	£201	-£3,773
Rhondda Cynon Taf	£114,841	-£396	£7,677
Swansea	£160,663	£451	£1,402
Torfaen	£146,158	-£786	£3,352
Vale of Glamorgan	£250,677	-£1,566	-£16,559
Wrexham	£153,416	£4,015	£6,998

Source: Authors' calculations using HM Land Registry (2019), Valuation Office Agency (2019) and Welsh Government (2019c and 2019d).

Table 6.2. Effect of a continuous and proportional council tax on average property values under different discount rate assumptions, by LA

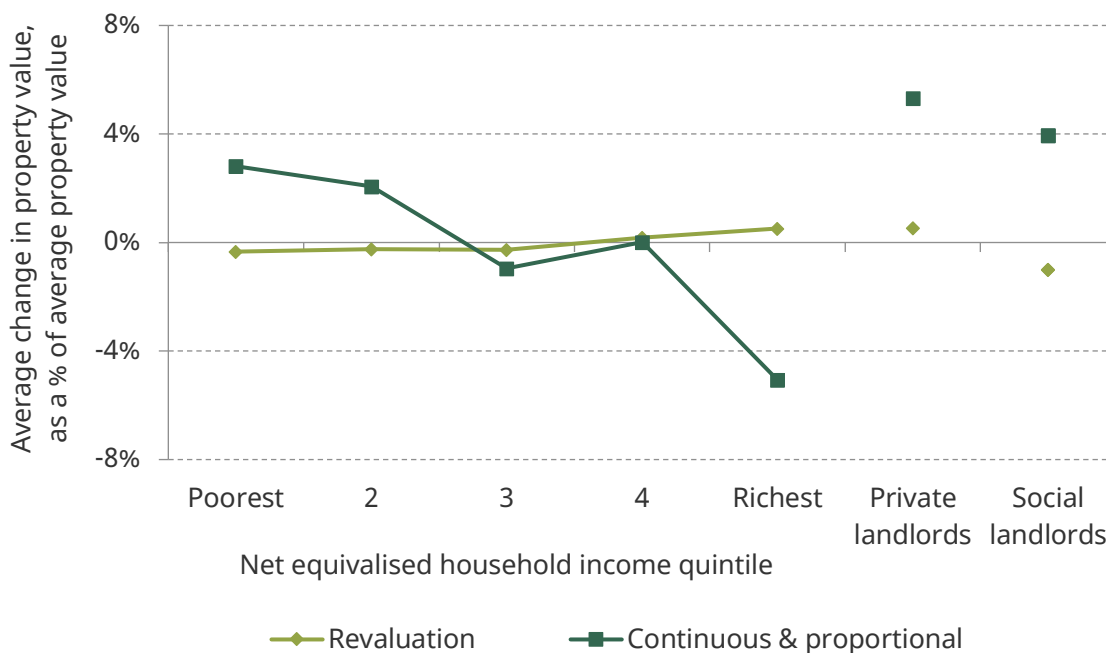
Local authority	Average price	1%	2% (main assumption)	5%
Blaenau Gwent	£100,639	£16,334	£8,167	£3,267
Bridgend	£152,511	£7,192	£3,596	£1,438
Caerphilly	£137,371	£8,862	£4,431	£1,772
Cardiff	£225,386	-£20,372	-£10,186	-£4,074
Carmarthenshire	£154,182	£8,228	£4,114	£1,646
Ceredigion	£180,733	£3,245	£1,623	£649
Conwy	£176,145	£326	£163	£65
Denbighshire	£166,090	£4,477	£2,238	£895
Flintshire	£165,030	£11,753	£5,876	£2,351
Gwynedd	£168,318	-£1,989	-£994	-£398
Isle of Anglesey	£185,025	-£9,530	-£4,765	-£1,906
Merthyr Tydfil	£103,013	£19,884	£9,942	£3,977
Monmouthshire	£288,233	-£50,565	-£25,282	-£10,113
Neath Port Talbot	£117,442	£17,352	£8,676	£3,470
Newport	£180,878	-£6,745	-£3,373	-£1,349
Pembrokeshire	£171,109	£4,882	£2,441	£976
Powys	£200,054	-£7,546	-£3,773	-£1,509
Rhondda Cynon Taf	£114,841	£15,354	£7,677	£3,071
Swansea	£160,663	£2,805	£1,402	£561
Torfaen	£146,158	£6,704	£3,352	£1,341
Vale of Glamorgan	£250,677	-£33,118	-£16,559	-£6,624
Wrexham	£153,416	£13,996	£6,998	£2,799

Source: Authors' calculations using HM Land Registry (2019), Valuation Office Agency (2019) and Welsh Government (2019c and 2019d).

6.3 Effects by household income

This section considers how revaluation and reform would affect the property values of households across the income distribution. We can do this only for owner-occupied properties, as we do not have information on the value and location of rental properties owned by landlords. We therefore show the average impact across all privately rented properties. As discussed in Section 5.4, private landlords tend to be in the top of the income distribution, so changes in the value of privately rented properties would generally be borne by higher-income households.

Figure 6.5. Average change in property value, by household income quintile, as a percentage of average property value



Note: Assumes full grant adjustment and full take-up of CTRS. Incomes are measured after taxes and benefits but before housing costs are deducted and equivalised using the modified OECD equivalence scale.

Source: Authors’ calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

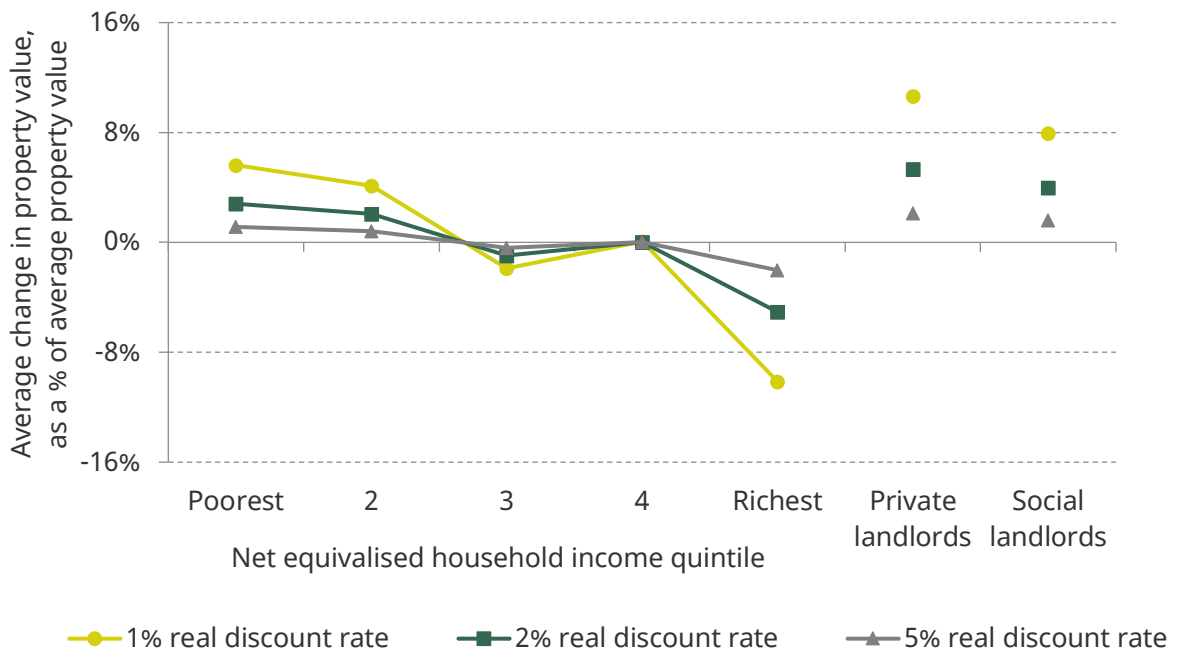
The impact on social housing values is shown for completeness, but we do not comment on these results as the changes are not directly borne by households.

Figure 6.5 shows that a pure revaluation would have little effect on the average values of owner-occupied homes across the income distribution, or on landlords of privately rented properties. Under a continuous and proportional system, owner-occupier households in the bottom 20% of household incomes would see their property values rise by around 3%, on average, reflecting a fall in the tax bill due on the homes they own.

The reverse holds for high-income owner-occupiers, whose tax bills rise and whose property values fall by around 5% on average. However, Figure 6.5 also shows that the values of privately rented properties would increase under a continuous and proportional system. Since private landlords are disproportionately in the top income quintile in Wales, the effect of capitalisation at the top of the income distribution can be expected to be less negative than the chart suggests.

The results are somewhat sensitive to assumptions about the discount rate, as shown in Figure 6.6. Under a lower discount rate of 1% (that is, assuming that people care more about future tax payments), average property values of owner-occupied properties would rise by around 6% for the poorest quintile of households and fall by around 10% for the highest income quintile. Under a high discount rate of 5%, on the other hand, changes in average property values across the income distribution would be small – within 2% of average pre-reform values.

Figure 6.6. Average change in property value from a continuous and proportional system, by household income quintile, as a percentage of average property value, under different real discount rates



Note: Assumes full grant adjustment and full take-up of CTRS. Incomes are measured after taxes and benefits but before housing costs are deducted and equivalised using the modified OECD equivalence scale.

Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

7. Addressing potential challenges to revaluation and reform

So far in this report, we have outlined the rationale for revaluing and reforming council tax, and analysed the potential impacts across different council areas and groups of households. This analysis shows that revaluation and reform can make council tax more progressive with respect to both property values and household incomes, and ensure that sometimes substantial changes in *relative* property values since 2003 are fairly reflected in households' council tax bills.

But, of course, revaluation and reform will come with political and practical challenges. If undertaken on a revenue-neutral basis, by definition it will mean losers (who are liable to be at least somewhat unhappy) as well as winners (who may not be quite so demonstrative about their gains). Some could lose significantly if the relative value of their home has increased significantly, or their property is currently 'undertaxed' given the existing regressive tax structure. There may be a particular policy concern about low-income losers – including pensioners who own properties that have appreciated significantly in value, but who have low current incomes, and low-income people renting from private or social landlords in expensive parts of the country.

In this chapter, we look at how significant such issues are likely to be – for example, how many low-income owners and tenants could lose significantly from revaluation and reform. And we discuss options to ameliorate the impacts on these groups, including deferred implementation and transitional arrangements, deferred payment schemes, and reforms to the council tax reduction scheme (CTRS).

As part of this, we discuss whether using different band thresholds in different parts of the country is a good way to help address these issues and tackle a more general concern that it is 'unfair' for households with similar incomes but living in different parts of the country to find themselves with very different council tax bills because of differences in average property values. We argue it is not – as what leads to different average tax bills between places with high and low property values is the redistributive local government funding system which implicitly redistributes revenues from the former to the latter. If we think areas with high property values should be able to keep some of the revenue in order to spend more or cut tax rates, this should be done by changing the degree of redistribution in the funding system. Setting different band thresholds is just an opaque and inflexible way of doing this.

7.1 How many low-income losers could there be from revaluation and reform?

Chapter 5 showed that the council tax bills of low-income households would, on average, be no higher or lower than now following a council tax revaluation. Moreover, if council tax were reformed to make tax payments more progressive with respect to property values, it would also be more progressive with respect to income: low-income households would gain on average, as they typically live in less expensive properties.

Of course, there would be some relatively low-income losers from revaluation and wider reform though: those living in properties that have increased in value relative to other properties since the last revaluation took place in 2003; and those living in expensive properties, especially in more expensive parts of the country.

Table 7.1 shows the proportions of gainers and losers from a pure revaluation (the top panel) and a fully proportional council tax system (the bottom panel) across the income distribution in Wales. It assumes full take-up of the CTRS by eligible households.

The table shows that under a **pure revaluation**, most low-income households would see little or no change in their council tax bill. For example, around four in five households in the poorest fifth of households in Wales would see a loss (i.e. an increase in net council tax) or gain (i.e. a decrease in net council tax) of less than £50 a year. Only 5% would lose more than £200 a year, and 3% would gain more than £200 a year. In contrast, much bigger proportions of households in the richest fifth of households would see losses or gains of more than £200 a year.

Some of this reflects the fact that low-income households are more likely to live in properties in a low council tax band and with a low value. And as a result of the banding relativities for low bands (for example, $\frac{6}{9}$ for Band A and $\frac{7}{9}$ for Band B), even if a property moves up or down a band, the resulting change in council tax bill will be less than £200 a year. In contrast, richer households are more likely to live in properties in a high council tax band. The band relativities for these (for example, $\frac{11}{9}$ for Band E and $\frac{13}{9}$ for Band F) are such that moving up or down a band will lead to a bigger change in tax bill.

But it also reflects the operation of the CTRS. Because many low-income households have most, if not all, of their council tax waived as part of this scheme, they see little or no change in their net council tax bill. Indeed, without the CTRS, rather more low-income households would see either a loss of £50 or more as their council tax bill rose (31%) or a gain of more than £50 as their tax bill fell (30%), as shown in Table B.6 in Appendix B.

Thus, the CTRS would play an important role in insulating low-income households from big losses from a council tax revaluation – but would also mean few see big gains either.

The bottom panel of Table 7.1 shows that a **continuous and proportional council tax system** would see significantly more low-income households gain than lose. This is a very important point to remember, and is what drives the average gains for low-income households that we saw in Figure 5.4. But 5% of the poorest fifth and 17% of the next-poorest fifth would lose more than £50 a year, some significantly more.

Again the CTRS would play an important role in insulating low-income households from the biggest losses – without it, 17% of the poorest fifth would lose more than £50 a year, and the average loss among the losers would be much higher.

Table 7.1. Percentage of gainers and losers from revaluation and from a continuous and proportional council tax system, by income level, assuming full take-up of the CTRS

	Income quintile group				
	Poorest	2 nd	3 rd	4 th	Richest
Option 1. Revaluation					
Gain >£200	3.2	6.9	11.2	15.7	28.7
Gain £50–£200	9.1	13.4	16.1	11.7	7.9
Lose or gain £0–£50	78.7	60.5	51.1	45.7	40.0
Lose £50–£200	4.6	9.5	10.5	13.0	4.1
Lose >£200	4.5	9.8	11.1	14.0	19.3
Average gain among gainers (£)	96	172	189	269	326
<i>Measured as % of net income</i>	0.6%	0.8%	0.7%	0.7%	0.5%
Average loss among losers (£)	78	103	137	122	145
<i>Measured as % of net income</i>	0.5%	0.5%	0.5%	0.3%	0.2%
Option 5. Continuous and proportional					
Gain >£200	21.4	36.3	40.0	39.9	32.9
Gain £50–£200	7.5	12.8	17.0	15.8	14.9
Lose or gain £0–£50	66.0	34.4	22.6	16.4	8.4
Lose £50–£200	2.6	5.8	5.9	10.9	7.3
Lose >£200	2.5	10.6	14.5	16.9	36.5
Average gain among gainers (£)	243	286	296	287	315
<i>Measured as % of net income</i>	1.6%	1.3%	1.1%	0.7%	0.5%
Average loss among losers (£)	107	290	604	477	778
<i>Measured as % of net income</i>	0.7%	1.3%	2.2%	1.2%	1.2%

Note: Assumes full grant adjustment and full take-up of CTRS. Incomes are measured after taxes and benefits but before housing costs are deducted and equivalised using the modified OECD equivalence scale. Each quintile contains approximately 0.3 million households.

Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

Certain groups of low-income households are more likely to lose than others

Before we move on to consider further policies that could ameliorate the impact on the relatively small number of low-income households that would lose, it is worth noting that some sub-groups of the low-income population could be more likely to lose than others.

Note that the sample sizes underlying the following analyses are small so the results are subject to large margins of error.

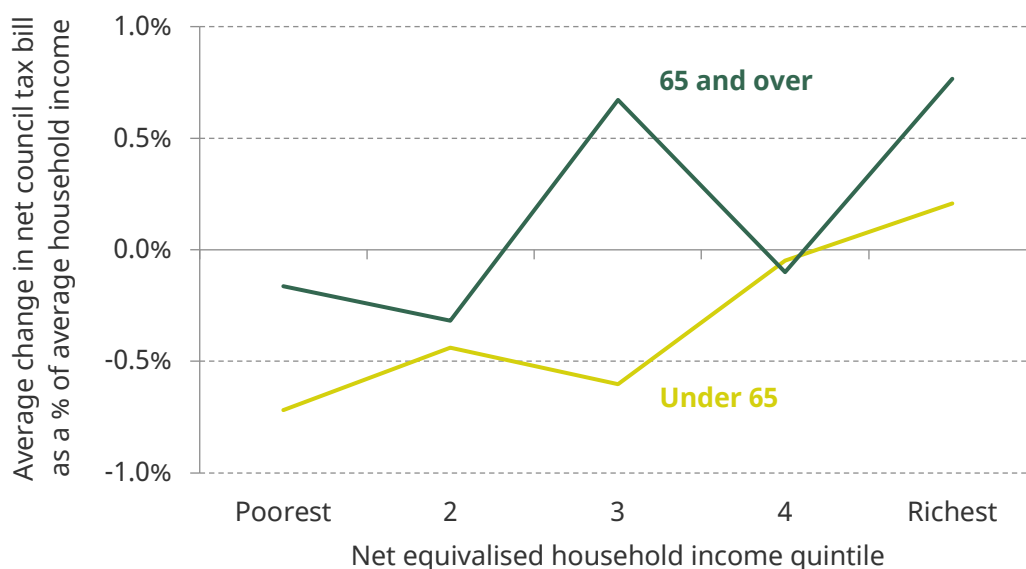
Pensioners

For example, pensioners may have bought their house many years ago – when their incomes were higher and property values much lower. This means we might expect a relatively larger share of low-income pensioner households to live in high-value properties than low-income working-age households (who will generally have bought or rented the property more recently).

As shown in Figure 7.1, low-income pensioners would gain less, on average, from a continuous and proportional council tax than other low-income households.

But according to the survey data underlying this analysis, this is partly because low-income pensioners are relatively more protected from changes in council tax bills because of the CTRS – not surprising given that the income limits for receiving support are higher for pensioners. Therefore, most neither gain nor lose when their underlying council tax bill changes, as can be seen in Table 7.2 (86% would see a change of £50 a year or less, compared with 66% among all low-income households). And as among the low-income population as a whole, of those who would see a change in their net council tax bill, it would much more likely be a fall than an increase.

Figure 7.1. Change in average council tax bill (assuming full take-up of the CTRS) from a continuous and proportional council tax, by income level and age of oldest household member



Note: Assumes full grant adjustment and full take-up of CTRS. Incomes are measured after taxes and benefits but before housing costs are deducted and equivalised using the modified OECD equivalence scale.

Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

Table 7.2. Percentage of gainers and losers from a continuous and proportional council tax (assuming full take-up of the CTRS) for pensioner households by income level

	Income quintile group		
	Poorest	2 nd	3 rd
Pensioner households			
Gain >£200	5.8	29.1	28.0
Gain £50–£200	5.9	10.8	14.8
Lose or gain £0–£50	85.8	47.3	27.6
Lose £50–£200	1.2	4.9	5.5
Lose >£200	1.3	7.9	24.1
Average gain among gainers (£)	101	256	240
<i>Measured as % of net income</i>	0.8%	1.4%	0.9%
Average loss among losers (£)	30	297	804
<i>Measured as % of net income</i>	0.2%	1.6%	3.2%

Note: Assumes full grant adjustment and full take-up of CTRS. Incomes are measured after taxes and benefits but before housing costs are deducted and equivalised using the modified OECD equivalence scale.

Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

Residents of more expensive parts of Wales

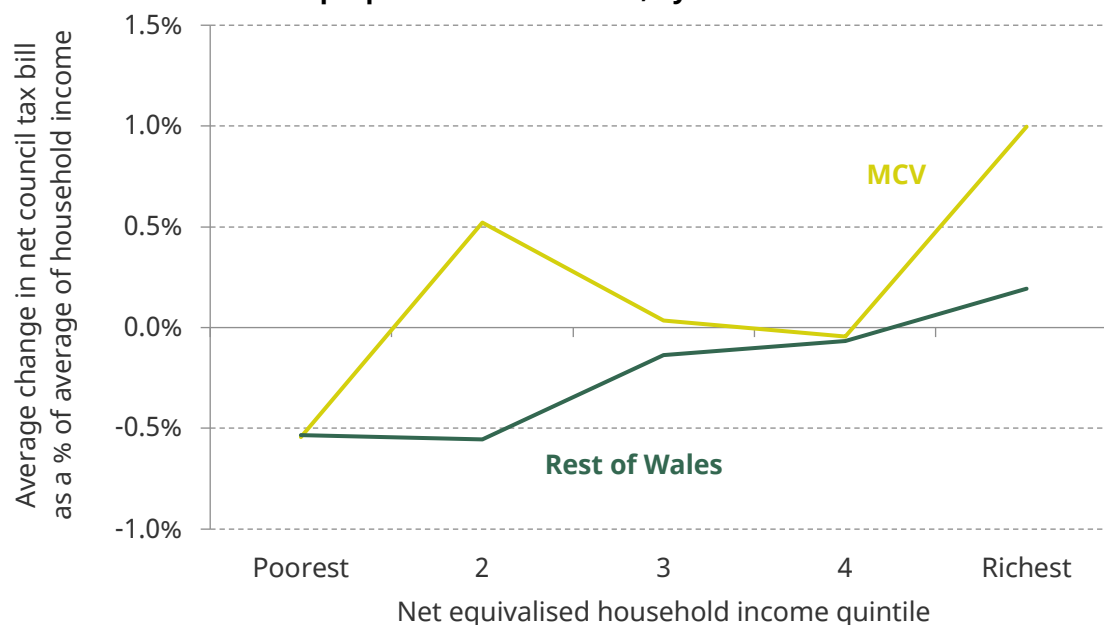
Low-income residents of more expensive parts of Wales would also be more likely to lose from a continuous and proportional system than residents of cheaper areas – although this effect would only be significant if the grant funding given to LAs were adjusted to compensate for changes in local tax bases.³³

Figure 7.2 illustrates this, showing that households of most income levels in relatively expensive Monmouthshire, Cardiff and the Vale of Glamorgan (MCV) see smaller gains or bigger losses, on average, than in the rest of Wales.

But it is still the case that more low-income households in these council areas would gain rather than lose from a continuous and proportional tax, as shown in Table 7.3. And, as for the low-income population as a whole, the CTRS would insulate many such households from the full extent of both losses and gains as a result of moving to such a council tax system.

³³ If it were not, the councils with high-value properties would retain the benefits of their larger tax bases in full, and could reduce the tax rate they charge, meaning no change in the average tax bill charged by a council, as already highlighted in Chapter 4. Low-income households in high-value areas would therefore generally gain or lose similar amounts to those in parts of the country with low-value properties.

Figure 7.2. Change in average council tax bill (assuming full take up of the CTRS) from a continuous and proportional council tax, by income level and area



Note: Assumes full grant adjustment and full take-up of CTRS. Incomes are measured after taxes and benefits but before housing costs are deducted and equivalised using the modified OECD equivalence scale. MCV stands for Monmouthshire, Cardiff and the Vale of Glamorgan.

Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

Table 7.3. Percentage of gainers and losers from a continuous and proportional council tax (assuming full take-up of the CTRS), for residents of MCV by income level

	Income quintile group		
	Poorest	2 nd	3 rd
Households in MCV			
Gain >£200	18.2	16.4	39.1
Gain £50–£200	1.4	14.1	17.3
Lose or gain £0–£50	79.6	38.7	16.8
Lose £50–£200	0.3	4.6	8.6
Lose >£200	0.6	26.3	18.1
Average gain among gainers (£)	323	214	647
<i>Measured as % of net income</i>	2.4%	0.8%	2.0%
Average loss among losers (£)	65	406	659
<i>Measured as % of net income</i>	0.5%	1.6%	2.0%

Note: Assumes full grant adjustment and full take-up of CTRS. Incomes are measured after taxes and benefits but before housing costs are deducted and equivalised using the modified OECD equivalence scale. MCV stands for Monmouthshire, Cardiff and the Vale of Glamorgan.

Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

7.2 What policies could be used to ameliorate the impacts of revaluation and reform on these groups?

Despite the fact that significantly more low-income households would gain than lose from a more proportional council tax, and the CTRS insulates them from changes in their bills in either direction, one may still be concerned about the impact on those who do not claim under the CTRS as they are entitled and/or those above the income cut-off for CTRS but still of relatively modest means. What other policies could further ameliorate the impacts?

Transitional relief arrangements – i.e. phasing in increases in tax bills due to revaluation and reform over a period of several years. For example, under a pure revaluation, households moving up more than one tax band could be provided with relief so that their net tax bill increases by the equivalent of moving up only one band each year.³⁴ Under a more proportional council tax system, households could be provided with relief limiting the increase in their bill as a result of revaluation and reform to a particular percentage or cash-terms amount per year. Such arrangements would give households facing a big increase in their tax bill time to adapt – including by selling and moving to a less expensive property – before facing the full change in tax bill.

The cost of phasing in increases in tax bills could be paid for by phasing in decreases in tax bills for those due a reduction as a result of revaluation and reform. This is how the transitional relief scheme that operates in England when non-domestic properties are revalued works. Alternatively, the Welsh Government could fund a transitional scheme by providing additional grant funding to Welsh LAs specifically to provide relief to those households seeing large increases in their tax bills as a result of revaluation and reform. This is how the transitional relief scheme that operates in Wales when non-domestic properties are revalued works. And, perhaps more importantly, this was the approach taken for funding the transitional relief scheme that accompanied the last revaluation in Wales in April 2005 (based on April 2003 values).

It is important to note that a transitional relief scheme would involve a degree of additional complexity for both the Welsh Government and LAs. A scheme would need to be designed, approved and legislated for. And LAs would need to operate the scheme alongside a council tax system that is already complex (given the number of exemptions, discounts and premiums), which may require changes to software provided by external providers. There is therefore a trade-off between the potential benefits of phasing in big changes in tax bills against the potential administrative costs (and revenue costs, if the scheme is funded by the Welsh Government) involved.

Deferred implementation – i.e. deferring the implementation of any changes in tax bands and tax bills for a period of several years after they have been announced. This would mean households could take action (again, including moving house) once they knew their new tax band and likely new tax bill, but before that band and bill come into effect. Of course, delay would mean living with an out-of-date and regressive council tax structure for longer. And there would be an increased risk that political difficulties or opportunism would lead to a cancellation of the changes before they come into effect:

³⁴ Note that properties would still technically move to their new tax band immediately at the point of revaluation: this is required by legislation. But they would be taxed as if they moved up only one band per year.

opposition politicians could campaign on the basis of cancelling revaluation and reform, and government ministers could face significant lobbying over time.

Deferred payment – i.e. allowing at least some households that own their property and have equity in it to defer paying part or all of their bill for a period of time – for example, until sale or death, or some fixed time period (say 5 or 10 years) – by taking out a loan to cover the part they do not pay immediately. Such schemes are in place in parts of the US and Canada and in Ireland. And in the UK, somewhat similar schemes are available for people facing high social care costs – with the council paying in the short term, and being repaid when they sell their property or die.

There would, of course, be costs associated with administering and designing a deferral scheme, which would need to be traded off against the potential benefit to beneficiaries' immediate financial position. Drawing on Adam (2013), Box 7.1 discusses a number of important issues that must be taken into account when designing a deferral scheme, including how widely to make it available. Probably the key risk with such a scheme would be political: a future government could forgive the deferred tax liabilities as a result of political pressure or in anticipation of political gain. This could mean that restricting eligibility to only those who are assessed to be unable to pay their council tax bill out of their current income could be wise, in order to limit the potential costs involved from the risk of a possible future write-off of deferred tax liabilities.

Box 7.1. Issues and options for deferred payment schemes

The purpose of offering deferral would be to deal with situations where the taxpayer was not permanently poor but rather lacked the liquidity (income) to immediately pay the tax that they would be liable for. It would only be suitable for those with assets against which the deferred tax could be secured – such as homeowners with positive equity. It would not be suitable for those who lack both income *and* assets – support for this group is better provided via the CTRS, which in effect pays their council tax bills in full or part.

It is crucial that any deferral be with interest, so as to not encourage those who could pay to instead defer the bill and earn interest on what they have saved in the meantime, and because of the potential for default. For example, Ireland charges a 4% rate of interest currently for its deferral scheme, and British Columbia charges rates between 1.95% and 3.95% depending on household characteristics.

In designing a deferral scheme, a key decision would be to decide who was eligible for deferral. In principle, if interest were charged at an appropriate rate, the Welsh Government / LAs should be indifferent about whether people paid up front or deferred and paid with interest: in present-value and risk-adjusted terms, they would receive the same tax revenues either way. But, in practice, most countries restrict eligibility to certain groups. Ireland, for example, uses income thresholds – individuals with income below €15,000 and couples with income below €25,000 can defer in full, while individuals and couples with incomes below €25,000 and €35,000, respectively, are able to defer half of their bill. British Columbia operates deferral schemes for the over-55s, widows and widowers, people with disabilities and families with children.

It would be important to ensure the deferred tax is secured against the value of the property the tax is liable for, in order to reduce the risk of default. For example, the deferral scheme for social care costs requires LAs to register a charge against a property with the Land Registry. This is unproblematic for homes owned outright but is not always possible for properties with a mortgage still in place – as some mortgage contracts do not allow other charges against a property until the mortgage is paid off. Mortgagees in such circumstances would be unable to take part in a deferral scheme.

The Welsh Government or LAs would also need to decide how long payments could be deferred for. Sale of property and death of a sole resident make sense as points at which deferred taxes (with interest) become due. But one may also want to put a time limit on deferral – for example, 5 or 10 years – especially for households headed by working-age adults, to avoid the accrual of large tax debts.

The biggest risk with a deferral scheme would probably be political: a future government could forgive the deferred tax liabilities as a result of political pressure or in anticipation of political gain. This may be especially likely if a future government reformed (or even abolished) council tax: insisting on payments of deferred taxes under the old system (presumably replaced because it was seen as flawed or unfair in some way) could be difficult in such circumstances. A revenue-neutral deferral scheme would become *ex post* a costly exemption scheme. And if taxpayers anticipated this risk, they might opt to defer their council tax bill even if they could afford to pay immediately and interest were charged – precisely because they anticipate some chance of not having to pay the deferred tax bill at all. Hence, restricting eligibility to only those who cannot pay out of their current income could be wise, in order to limit the potential costs involved from a possible future write-off of deferred tax liabilities.

Another type of risk is that take-up could be low among those low-income high-wealth individuals a deferral scheme would be focused on helping, as with the CTRS. As it would be a new scheme, significant investment in publicity would likely be needed to encourage take-up.

More generous CTRS – i.e. extending eligibility to people with higher incomes or assets than covered at present. Currently, those with capital assets of more than £16,000 (excluding the value of their own home) are excluded from the CTRS unless they are a pensioner entitled to the guarantee element of pension credit; assets below that level reduce the amount of support from the CTRS that households are entitled to. On the income side, working-age households with incomes at or below the maximum amount of means-tested benefits (for example, income support, jobseeker's allowance and universal credit) they could be entitled to, as well as pensioner households in receipt of the guarantee element of pension credit, have their council tax covered in full by the CTRS. This works out at, for example, £73.10 per week for a single working-age person and £167.25 per week for a single pensioner. For each £1 of income above these levels, a household has to pay 20p towards its council tax bill until it pays it in full.

The generosity of the scheme could be increased by increasing the capital limits, increasing the income thresholds, or reducing the taper rate at which support is withdrawn as income rises. Each option would target somewhat different groups. For example, the same amount of money would help more households if spent on reducing

the taper rate than if spent on raising the income thresholds, but less of the additional support would be targeted at those just above the current thresholds.

It is also worth noting that changing the thresholds and taper rate in this way would affect work incentives. For example, reducing the taper rate would increase the incentive for those currently on the CTRS taper to increase their earnings or hours of work a bit, as less would be lost in the form of paying more towards their council tax. On the other hand, those households not currently entitled to the CTRS but who would be entitled to some after the reduction of the taper rate would face weaker work incentives – as they would now lose some of this support as their income rises.

Increases in the generosity of the CTRS could be funded via the Welsh Government, or via increases in the tax rates charged by LAs in order to offset the loss of council tax revenue associated with a more generous CTRS.

Changing other taxes. It would also be possible to change other taxes to partially offset the impacts of reforming council tax for particular groups of households, although the differences in tax bases mean it would not be possible to target such measures precisely. If one were particularly concerned about the impact of reforming council tax on property values for high-value properties and/or in expensive parts of the country, one option would be to reduce rates of land transaction tax (LTT) – which has a highly progressive structure currently – on them. The revenue to pay for such a reform could be raised through increases in LTT on lower-value properties or through increases in the level of council tax. The Mirrlees Review, for example, argued that reducing the economically inefficient LTT (which disincentivises mutually beneficial property sales) and offsetting the reductions in revenue via increases in council tax would be sensible policy (Mirrlees et al., 2011).

7.3 Why is the application of different band thresholds in different parts of the country a poor idea?

Another policy that has been suggested for ameliorating the impact of revaluation and reform of council tax on households in more expensive parts of the country more generally is to have band thresholds that vary across the country. In particular, the idea is that by setting lower band thresholds in cheaper parts of the country and higher band thresholds in more expensive areas, two issues can be addressed:

- **A lack of differentiation in tax bills across properties within some localities and regions.** Currently, in some parts of the country, large shares of properties find themselves in just one or two bands. Consider Blaenau Gwent, for example, where low property values mean we estimate that 48% of properties would be in Band A and 90% in Bands A–C following a pure revaluation using national thresholds. This would mean properties in quite different parts of the local and regional property value distributions facing the same or very similar council tax bills. Application of region-specific council tax bands could avoid this problem by ensuring band thresholds are set with reference to regional price distributions.
- **Big differences in tax bills for similar properties in different localities and regions resulting from big differences in property value levels.** Consider a three-bedroom

terraced house. In Blaenau Gwent, the median three-bedroom terraced house would be a Band A property under revalued council tax bands, but in Cardiff it would be a Band D property. That means the tax due on such a property would be 1.5 times higher in Cardiff if the same Band D rate were set as in Blaenau Gwent (and it would be 2.7 times higher under a system where band relativities were proportional to the median price of each band). Region-specific council tax bands could be set so that similar properties in different regions would find themselves in more similar bands, perhaps making some adjustment for differences in regional income levels as well.

However, varying bands in this way **conflates two issues** and would make decisions about the extent to which the council tax system redistributes between parts of the country with high and low property values **opaque and inflexible**. There are better ways to address these issues:

- **Lack of differentiation in tax rates across properties can be addressed by adding additional bands or moving to a continuous-value system.** With additional bands at the lower end of the property value distribution in particular, there would be more differentiation in tax bands and hence bills even in localities and regions with low average property values. For example, splitting Bands A and B into four bands would see around 33% of properties in Blaenau Gwent in the lowest band (A1). And a continuous-value system would mean tax bills differ according to the exact estimated value of a property, as in Northern Ireland (although in Northern Ireland there is a cap affecting the properties with the very highest values).
- **Differences in average tax bills across regions are a result of grant funding being distributed to reflect differences in local tax bases,³⁵ not the use of national tax bands per se.** As discussed in Chapter 4, if grant funding is *not* adjusted to reflect changes in tax bases following revaluation and reform of the council tax, while tax bills would change *within* police and crime commissioner (PCC) areas, the average tax bill of PCC areas would not change. This is because each LA and PCC would need to raise the same amount of council tax as previously if it wanted to maintain spending. Thus while properties in the parts of the country where values have increased less may find themselves in a lower tax band following a pure revaluation, and those where values have increased more may find themselves in a higher tax band, they would on average see little change in their bill. This is because Band D rates would need to increase in the former areas to maintain average tax bills despite properties moving down bands, and Band D rates could be cut in the latter areas to maintain average tax bills even though properties are moving up bands. It is if grant funding is adjusted to reflect the changes in tax bases that large changes in average tax bills in different parts of the country arise – to offset those changes in grant funding.

It would be up to the Welsh Government how much, if at all, to change grant funding in response to changes in tax bases following revaluation and reform. In Chapter 4, we showed two options – no adjustment and full adjustment – both to illustrate the importance of this choice and because historically the Welsh local government finance system has aimed at fully equalising differences in tax bases across the country to allow

³⁵ As well as a result of different local decisions on what tax rate to set in order to spend more or less than average.

different LAs to afford comparable levels of service for the same council tax rate, despite differences in tax bases.

But other options are available, including capping changes in grant funding (for example, at a certain cash amount per person or at a percentage of existing grant levels) or only offsetting a proportion of the change in tax bases (for example, 50% or 60%). Doing this would imply average tax bills would change by more across police authority areas and across LA areas as a result of revaluation and reform than if grants were not adjusted, but by less than if grant funding were fully adjusted.

To illustrate this, Figure 7.3 shows the change in average tax bills by LA under a continuous and proportional council tax if grant funding offsets 100% (left-hand panel) and 60% (right-hand panel) of the changes in tax bases that would result.

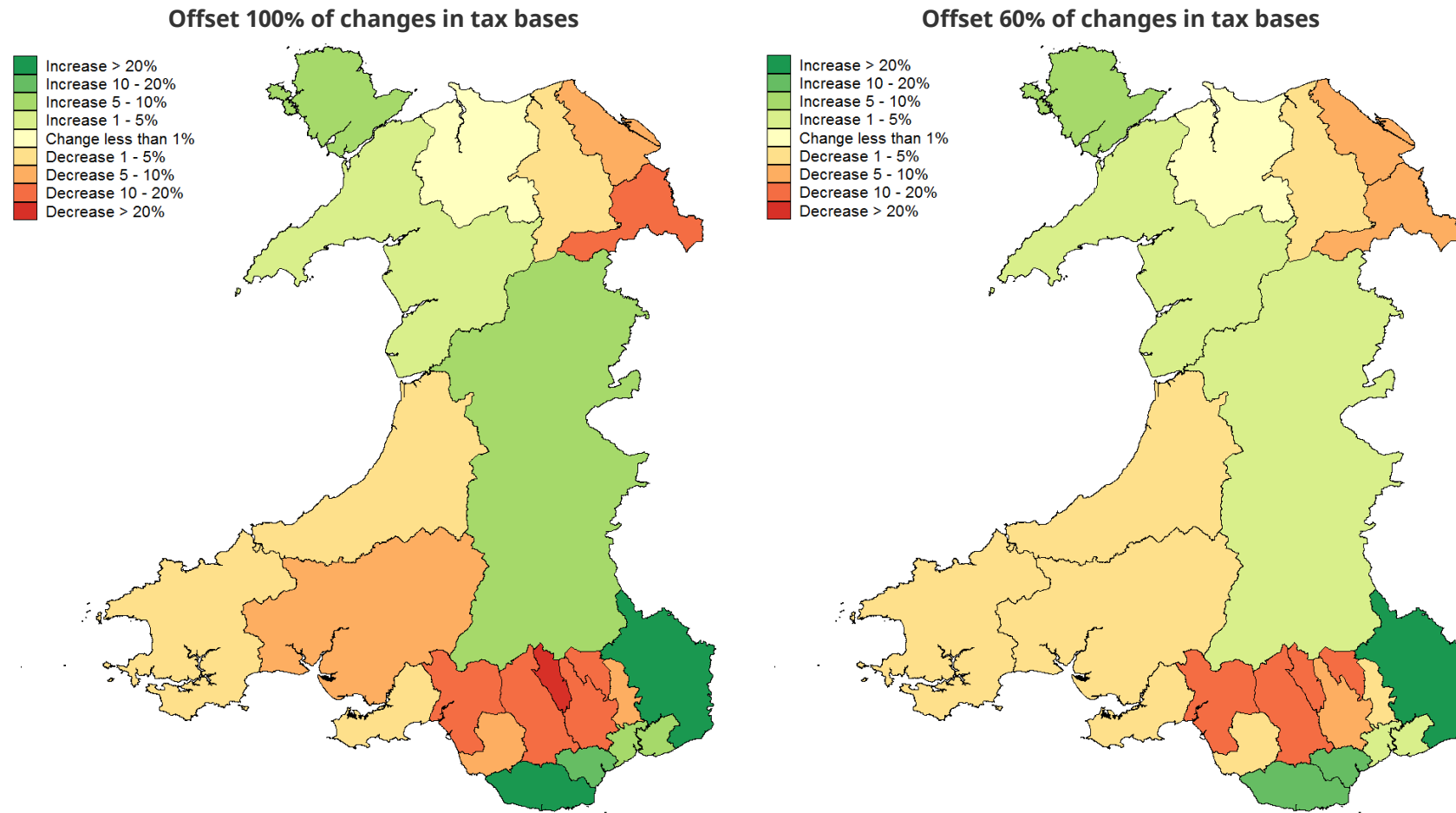
It shows that if grant funding were only partially adjusted to offset changes in tax bases, changes in average tax bills across LAs would be smaller (notice the paler greens and reds in the right-hand panel). However, in some cases, the changes would still be significant (although smaller than under full adjustment of grants): the average tax bill of households in Monmouthshire would still increase by more than 20%.

But note that unless Monmouthshire council chose to spend more than average, it would be able to set a lower percentage tax *rate* than in cheaper parts of Wales – as, with only partial equalisation, it would be able to keep some of the benefit of its additional tax base to keep its tax rate down (although, of course, it could choose to spend more instead). The same would be true of other LAs with high average property values such as Cardiff and the Vale of Glamorgan. Conversely, LAs with low average property values whose tax base would fall under a continuous and fully proportional council tax system – such as Valleys LAs – would have to charge a higher tax rate unless they chose to spend less than average.

For a pure revaluation or other banded system, setting higher band thresholds in Cardiff, Monmouthshire and the Vale of Glamorgan and lower band thresholds in the Valleys could be used to achieve a similar effect. But the degree of resource equalisation across the country would be much less transparent, and would be less flexible: once set, the band thresholds would remain in place until the next revaluation. Given governments may have different preferences over how redistributive grant funding systems should be in the context of differences in local tax bases (and annual changes in tax bases), both a lack of transparency and a lack of flexibility are problematic. A lack of transparency could mean governments set different band thresholds in ways that significantly change the degree of redistribution in the local government system without proper scrutiny. And a lack of flexibility means governments would not easily be able to change the system to reflect their redistributive preferences.

There would also be issues about which LAs to include in which band threshold groups – with a strong incentive for each LA to argue that they should be included in groups with higher thresholds so that their residents have to pay less, but they get compensated by Wales's redistributive grant system. This issue would not arise if reforms were made to the redistributive grant system itself (as a continuum of choices would be available).

Figure 7.3. Change in average tax bills from a continuous and proportional council tax system under two scenarios for grant adjustment



Source: Authors' calculations using HM Land Registry (2019), Valuation Office Agency (2019) and Welsh Government (2019c and 2019d).

We therefore think that the idea of setting different band thresholds in different regions is not very compatible with a local government funding system where at least some *resource equalisation* is undertaken. Moreover, for a continuous and proportional council tax, there is no obvious analogue to setting different band thresholds as no thresholds exist. If the Welsh Government wants to limit differences in tax bills that result from differences in property values between different parts of the country, it is better to do that via the allocation of grant funding.

8. Conclusions

This report started by arguing that council tax should be revalued and reformed. Why?

First, the fact that in Wales properties are subject to tax bands based on their estimated value as of April 2003 means that the tax bills different households face are increasingly arbitrary and unfair – although the decision to revalue in the mid 2000s means the situation is not as bad as in England and Scotland, where 1991 values are still in use. The funding different local authorities (LAs) get from central government also reflects the values of properties in their areas 17 years ago, rather than today.

Second, the current banded structure is highly regressive with respect to property value and, as a result, is regressive with respect to incomes. A progressive tax system does not require that every tax should be progressive – what matters is the effect of the system as a whole – but regardless of how redistributive we want the tax system to be overall, it is hard to see why a tax on housing wealth or housing consumption should be less than proportional to value, especially given rising concerns about geographical and wealth inequalities.

And third, the single-person discount encourages the inefficient use of properties, contributing to both underoccupation and overcrowding.

Revaluation and reform can address these problems and move Wales towards a fairer and more efficient property tax: up to date, proportional to value, and less distortionary. It is therefore very welcome that the Welsh Government is reviewing council tax as part of its review of the local government funding system.

Of course, there would be losers as well as winners. The losers are likely to be more vocal, so such reforms would not be without their political challenges. But it is untenable for council tax to continue to be based on 2003 values indefinitely, and the longer revaluation is delayed, the bigger and more difficult the eventual changes to tax bills will be.

The desirability of revaluing and reforming council tax is something that IFS researchers and a range of other organisations have highlighted previously. The key contributions of this report have been to provide a detailed assessment of the effects on different LAs and household types, recognising how these depend critically on the wider local government finance system and how the property market responds to changes in council tax bills.

What our analysis has shown is that revaluation and reform, done on a revenue-neutral basis, could:

- lead to many more winners than losers, especially among those who are on low and middle incomes, those who are younger, and those who have disabilities – though across the population as a whole, the average losses of those who did lose would be bigger than the average gains of the winners; and
- depending on how other funding for LAs is adjusted at the same time, redirect central government funding to, and reduce average tax bills in, places where economies and property values are lowest and have fallen behind more affluent areas.

We have also highlighted crucial decisions that the Welsh Government would need to take if – as we argue it should – it does revalue and reform council tax.

First is the extent to which funding from the Welsh Government would be reallocated to reflect the changes in council tax bases that revaluation and reform would lead to. Without reallocation, tax bills would be updated to reflect changes in relative property values *within* LA areas, but not across them. It is only if Welsh Government funding were adjusted that the average tax bills faced by residents of different LAs would change to reflect today's property values, rather than those of 17 years ago.

Historically, the aim of the local government finance system in Wales has been to take full account of differences in council tax bases, so that each LA can charge the same Band D tax rate if it chooses to spend at the level the Welsh Government deems necessary. But if central government does not want to redistribute its funding as much as this would imply, it could decide to only partially adjust for the changes in revenue-raising capacity that council tax reform would lead to. Similar questions arise whether considering revaluation or increasing the progressivity of council tax.

There is, of course, a regional and political dimension to these decisions. Property values in north-east Wales have risen by less than average since the last revaluation, for example. A revaluation and redistribution of grant funding would therefore see a degree of redistribution to areas such as Flintshire and Wrexham, which would enable cuts to council tax or higher spending by councils on services. A proportional council tax and associated redistribution of grant funding would benefit these areas too, but would be of most benefit to the South Wales Valleys, where property values, as well as employment and incomes, are lowest.

Changes to funding from the Welsh Government could, of course, be made without actually revaluing individual properties. But that would only address inequities between LAs. It would still leave unfairness within LAs, with residents of properties with the same value today facing tax bills hundreds of pounds apart just because they were worth different amounts in 2003. Only revaluing individual properties can address this issue too.

A second big decision for the Welsh Government relates to what measures it should put in place to ease the transition to a new regime and to mitigate adverse impacts on particular households or places, such as people with low incomes living in properties with high and/or significantly increased values.

Our analysis has shown that moving to a proportional council tax system in particular would mean far more low-income winners than losers, and that the council tax reduction scheme (CTRS) insulates many low-income households – and especially low-income pensioners – from increases (as well as from reductions) in their gross council tax bill. But, especially in more expensive parts of Wales, there would be some low-income losers, at least if Welsh Government funding for councils were largely or fully adjusted, as discussed above.

Several options exist for mitigating these impacts and the big changes in tax bills that some middle- and higher-income households would also face. The Welsh Government would almost certainly want transitional arrangements to phase in big increases in tax bills. Particular support could be provided to low-income households by increasing the

generosity of the CTRS – although, unlike in England, Wales has maintained a national scheme that covers bills in full for the poorest working-age as well as pensioner households. And asset-rich, cash-poor households (such as the ‘grannies in mansions’) could be given the option of deferring their tax payments until their property is sold or they die, or for some other fixed time period. Getting the design of such schemes right is important – appropriate interest must be charged to ensure LAs are not left out of pocket – and careful consideration of who should be eligible for such schemes would be needed. The Welsh Government should start the process of scoping and developing such schemes alongside preparations for revaluation and reform of council tax itself.

Third is to decide how up-to-date property values would be estimated. When properties were valued the first time round for council tax, information technology (IT) was far less developed than now. Properties were valued manually, with valuation agents visiting them to record their characteristics and place them in value bands. One of the reasons the Conservative party has used in the past to argue against a revaluation in England is that such a process is ‘intrusive’.

But with better IT, the Valuation Office Agency (VOA) could use statistical valuation techniques broadly of the kind we have used in this report to estimate the value of properties,³⁶ potentially making the valuation process quicker and cheaper. We do not discuss the merits of statistical versus manual valuation here (or how they might be combined). But in planning for a revaluation – and regular future revaluations – the Welsh Government and the VOA should investigate the options carefully. And they should invest in linking the various public and other government-held data on properties and their characteristics and carefully consider which should form the basis of valuation, so that estimated values would be most appropriate and reliable.

The Welsh Government should also put in place plans to ensure that the country does not find itself in a similar situation to now in another 17 years. Regular revaluations – every three years, for example, or even annually – should take place, as they do with business rates, and indexation based on published regional or LA-level price indices should be introduced for the years in between revaluations. This would ensure council tax more fairly reflects contemporaneous property values, and would generally mean smaller, less jarring changes to council tax bills than if changes in relative values are allowed to build up over decades.

Finally, and in the context of broader discussions about fiscal devolution, the Welsh Government may also want to consider whether it gives local government greater discretion over council tax. Devolving the valuation and banding process itself, so that council tax would potentially be based on different valuation dates and different

³⁶ Using publicly available information on properties and locales, our equation can explain around 85% of the variation in observed property transaction prices. This is far from a perfect prediction, but perfect prediction is probably the wrong benchmark. Some of the variation in actual transaction prices will reflect the fact that some transactions may take place at prices a bit above and others a bit below ‘market value’, depending on the specific buyers, sellers and circumstances involved. Moreover, some of the variation in transaction prices will reflect differences in property characteristics that the statistician cannot observe and which the VOA would not want to take account of anyway. For example, in order to avoid discouraging homeowners from keeping their properties in a good state of repair and presentation, when valuing properties for council tax purposes, the VOA probably does not want to take account of whether a property has top-end kitchen units, or has terrible decor, damp and an overgrown garden. Some difference between actual transaction prices and the estimated values used for council tax purposes is therefore probably desirable.

structures in each LA, seems unappealing in practical terms, and would make the allocation of funding from the Welsh Government much more complicated and less transparent. But LAs could be allowed to change the relative tax liabilities attached to high- versus low-value properties. Or perhaps they could be given greater freedom on exemptions and discounts. Our view is that the single-person discount is highly distortionary and should be abolished. But LAs could be given discretion over it. Given the need to raise additional revenues to cope with rising service costs and demands, LAs could then decide whether their priority is to keep council tax low for single-adult households (via the single-person discount) or everyone (via the Band D rate).

When allocating funding across LAs, the Welsh Government would still need to use a single, common measure of LAs' ability to raise their own revenue (as it already does in respect of the treatment of second and empty homes): a benchmark system. The more council tax varies across the country, the more contentious the choice of benchmark becomes, as the distribution of funding is in essence a zero-sum game.³⁷ So even if the Welsh Government decides to devolve additional powers over council tax exemptions, discounts and tax rates, it would remain the case that the process of revaluation and reform needs to start with and be led by it. With a commitment to make council tax fairer and more progressive, this is a process it should start.

³⁷ One possible option would be to use the average policy used by LAs across Wales. LAs would still gain or lose if they made their exemptions and discounts less or more generous, for example – the effect of a change in any one of their policies would only have a very modest effect on the national average policy. But the benchmark system would track the changes being made by the sector as a whole, in an automatic and mechanical way that could reduce political frictions.

Appendix A. Methodology

This appendix provides further detail on our methodology. Section A.1 provides information on the hedonic regressions we use to estimate property values for all properties in Wales using data from the Valuation Office Agency (VOA) and the Land Registry, including the sensitivity of our value estimates to changes in sample and specification. Section A.2 provides information on the hedonic regressions we use to estimate property values for properties in Wales in the Understanding Society survey used for our household-level analysis. Section A.3 provides further information on our modelling of council tax, including assumptions about discounts, exemptions, premiums and the council tax reduction scheme (CTRS).

A.1 Hedonic regressions for LA-level analysis

Matching transactions and property characteristics data

The first stage of our analysis is to match data on property transactions from the Land Registry to data on property characteristics from the VOA's Council Tax and Property Attribute data set. We match properties on the basis of their street addresses and postcodes, achieving an overall match rate of 87%.

Table A.1 shows that our match rate is lower for flats than it is for houses. However, even for flats we match in around two-thirds of cases, meaning that sample size is not a particular concern. However, if the properties that we are unable to match for differ in some unobservable way that is important to their value from those we can match for, our estimates of values may be biased upwards or downwards. Controlling for unobserved differences in properties is difficult and beyond the scope of this project though. And observable differences in property characteristics – i.e. those in our data such as the number of bedrooms, number of bathrooms, size, etc. – can be and are accounted for by our hedonic regressions.

Further analysis shows that match rates are higher in more urban parts of Wales and lower in more rural parts of Wales, especially those areas where Welsh is spoken. For example, whereas the match rate is 95% for Neath Port Talbot, 94% for Caerphilly, Newport and Torfaen and 93% for Merthyr Tydfil and Rhondda Cynon Taf, it is just 75% for Gwynedd, 74% for the Isle of Anglesey and 63% for Ceredigion. This means there is more risk that our estimated values are subject to a degree of bias in rural parts of Wales. The lower match rates in these regions likely reflect the prevalence of properties with Welsh names, which may be more likely to be subject to spelling mistakes or variations in our two input data sets. This suggests that in a real-world revaluation and reform, particular attention should be paid to the process of matching named properties, and especially those with Welsh names.

Table A.1. VOA-Land-Registry match rate

LA area	Detached	Flat	Semi-detached	Terraced
Match rate	82.8%	65.7%	92.8%	93.1%

Source: Authors' calculations using HM Land Registry (2019) and Valuation Office Agency (2019).

We also merge in locality-level data using postcodes to match, achieving a 100% match.

Main hedonic regression specification

Our main hedonic regression includes the following property and area characteristics:

- dwelling type, which includes information on whether a property is a flat/maisonette, bungalow or house and whether it is terraced (mid or end), semi-detached or detached; for flats and maisonettes, it includes information on whether they were purpose built or converted from other properties;
- number of bedrooms, capped at 8;
- number of bathrooms, capped at 5;
- number of other rooms, capped at 15, with 10–14 as a single category;
- the size of the property in square metres, with the effect of an additional 1% increase in size allowed to vary depending on three size categories, which were determined by statistical analysis: less than 98 square metres; 98–183 square metres; and more than 183 square metres;
- the type of parking available (none, garages of various sizes, driveways of various sizes, designated parking spaces, undesignated street or communal parking, unknown);
- the type of conservatory the property has, if it has one (double glazed, single glazed, greenhouse/lean-to, other);
- the age of the property (pre 1900, 1900–18, 1919–29, 1930–39, 1940–54, 1955–64, 1965–72, 1973–82, 1983–92, 1993–99, 2000–08, 2009–14 and 2015 or later);
- a range of ‘value significant characteristics’ recorded by the VOA (whether it has a view, whether it is social housing, whether it is in a gated estate, whether it has restrictive covenants, whether it is modernised, whether it is a penthouse, whether it has an annex, whether it is part of a property with commercial space, whether it has outside space where such space would be unexpected, and whether it is associated with agriculture such as a farmhouse);
- the current council tax band the property is in, interacted with the LA it is located in;
- the LSOA the property is located in;
- the deprivation of the LSOA the property is located in;
- the population density of the LSOA the property is located in; and
- the year and quarter the property transaction took place in, interacted with the LA the property is located in, to allow for differential time trends by LA.

Table A.2. Estimated coefficients for main hedonic regression specification, selected variables

Variable	Coefficient	Standard error
Bedrooms		
Bedroom count = 2	0.0424***	(0.00716)
Bedroom count = 3	0.0648***	(0.00728)
Bedroom count = 4	0.0718***	(0.00749)
Bedroom count = 5	0.0708***	(0.00823)
Bedroom count = 6	0.0469***	(0.0105)
Bedroom count = 7	0.0435**	(0.0161)
Bedroom count = 8	0.0488**	(0.0170)
Bathrooms		
Bathroom count = 2	0.0167***	(0.00157)
Bathroom count = 3	0.00201	(0.00338)
Bathroom count = 4	-0.0310***	(0.00829)
Bathroom count = 5	-0.0872***	(0.0193)
Bathroom count = missing	0.0243	(0.0125)
Other rooms		
Other room count = 2	0.0431***	(0.0105)
Other room count = 3	0.0803***	(0.0110)
Other room count = 4	0.0785***	(0.0111)
Other room count = 5	0.0797***	(0.0111)
Other room count = 6	0.0893***	(0.0113)
Other room count = 7	0.102***	(0.0115)
Other room count = 8	0.115***	(0.0121)
Other room count = 9	0.149***	(0.0136)
Other room count = 10–14	0.167***	(0.0157)
Other room count = 15	0.149***	(0.0254)
Other room count = missing	0.0198	(0.0250)
Property size		
Log of floor area (<98 square metres)	0.174***	(0.00426)
Log of floor area (98–183 square metres)	0.256***	(0.00439)
Log of floor area (>183 square metres)	0.117***	(0.00885)
Property type		
Detached bungalow	-0.0872	(0.0664)
End-terraced bungalow	-0.179**	(0.0673)
Semi-detached bungalow	-0.129	(0.0664)

Mid-terraced bungalow	-0.202**	(0.0671)
Non-purpose-built flat, self-contained	-0.183**	(0.0666)
Purpose-built flat, self-contained, detached block of two	-0.249***	(0.0678)
Purpose-built flat, self-contained, end terrace	-0.299***	(0.0678)
Non-purpose-built flat with lift	-0.285***	(0.0690)
Other purpose-built flat, self-contained with lift	-0.322***	(0.0665)
Non-purpose-built flat without lift	-0.253***	(0.0683)
Non-purpose-built flat, not self-contained	0.109	(0.0826)
Other purpose-built flat, self-contained without lift	-0.318***	(0.0664)
Purpose-built flat, self-contained, semi-detached block of four	-0.298***	(0.0666)
Purpose-built flat, self-contained, mid-terrace	-0.343***	(0.0671)
Purpose-built flat, self-contained, unknown built form	-0.150	(0.0850)
House in a cluster	-0.267***	(0.0689)
House, detached	-0.118	(0.0664)
House, end-terraced	-0.219***	(0.0664)
House, semi-detached	-0.180**	(0.0664)
House, mid-terraced	-0.253***	(0.0664)
Non-purpose-built maisonette, self-contained	-0.185**	(0.0678)
Non-purpose-built maisonette with lift	-0.188*	(0.0759)
Purpose-built maisonette, self-contained	-0.277***	(0.0669)
Mobile home or houseboat	-0.157	(0.0836)
Build date		
1900–18	0.0107***	(0.00183)
1919–29	0.0505***	(0.00255)
1930–39	0.0533***	(0.00237)
1940–54	0.0465***	(0.00263)
1955–64	0.0264***	(0.00226)
1965–72	0.00791***	(0.00220)
1973–82	0.0215***	(0.00219)
1983–92	0.0295***	(0.00231)
1993–99	0.0526***	(0.00254)
2000–08	0.0543***	(0.00239)
2009–14	0.117***	(0.00270)
2015–18	0.119***	(0.00294)
Parking		
Garage (2 cars)	0.0409***	(0.00238)

Garage (3 cars)	0.0502**	(0.0179)
Garage (4+ cars)	0.119**	(0.0364)
Drive (1 car)	-0.0102***	(0.00136)
Drive (2 cars)	0.00729**	(0.00242)
Drive (3 cars)	0.0224*	(0.00920)
Drive (4+ cars)	0.0215	(0.0145)
Offsite garage	-0.00679	(0.0246)
Allocated parking (1 car)	-0.0114	(0.0274)
Allocated parking (2+ cars)	0.0421	(0.0525)
Parking on street	-0.0506***	(0.00157)
No parking	-0.0144	(0.0128)
Unknown parking	-0.0367***	(0.00154)
Conservatory		
Single-glazed conservatory	-0.0204	(0.0139)
Greenhouse/Lean-to	-0.0520***	(0.0113)
Other conservatory	-0.0411***	(0.00600)
No conservatory	-0.0386***	(0.00318)
Unknown conservatory	-0.0422***	(0.00306)
Value significant codes		
Unexpected outside space	-0.181***	(0.0129)
Part of a business property	0.0510	(0.0550)
Has an annex	-0.0176	(0.0529)
Penthouse	-0.210	(0.110)
Leisure facility	-0.144***	(0.0220)
Modernised	-0.173***	(0.0141)
Restrictive covenant	-0.351***	(0.0239)
View	-0.167***	(0.0125)
Gated estate	-0.301***	(0.0270)
Subsidised housing	-0.301***	(0.0112)
Other valuable attribute	-0.262***	(0.0130)
No value significant factor	-0.237***	(0.0111)

Note: Excluded categories for different variables are: bedroom count: 1; bathroom count: 1; other room count: 1; property type: annex; build date: pre 1900; parking: garage for 1 car; conservatory: double glazed; value significant code: agricultural building such as farmhouse. Statistical significance identifiers: * is significant at the 0.05 level, ** at the 0.01 level and *** at the 0.001 level.

Source: Authors' calculations using HM Land Registry (2019) and Valuation Office Agency (2019).

The hedonic regression is run in log-log form, whereby the log of the property transaction price is regressed on the above variables in either indicator form (for example, separate dummy variables indicating whether a property has 0, 1, 2, 3, 4, 5, 6, 7, or 8 or more bedrooms) or in log form (for example, log of the property size). Data from the period 2010–18 are included.

There are thousands of explanatory variables in the regressions (most of which are the LSOA and LA×time interaction dummy variables), meaning the full set of estimated regression coefficients cannot be shown here. However, Table A.2 shows the estimated coefficients for the main property characteristics. They need to be interpreted carefully, because they show the effect of each variable *conditional* upon all other variables. Hence, the value uplift from having five bedrooms relative to one is estimated at just 7%, and having six, seven, or eight or more bedrooms is estimated to lead to an even smaller increase in property value, but these effects are conditional upon property size, among other things.

Sensitivity of price estimates to hedonic regression specification

In order to have confidence about our estimates, we tested a number of variants of our hedonic regressions with different specifications. These include:

- Specifications where the years of transactions included were restricted to the period from 2014 onwards, or 2016 onwards. If there have been different time trends between different neighbourhoods within LAs, restricting the estimation sample to more recent years may provide better estimates. However, restricting the period of analysis like this may mean estimates for some neighbourhoods within LAs may be based on very small sample sizes, which may weaken predictions for properties that have not transacted.
- A specification where rather than allowing underlying values to vary by LSOA, they are allowed to vary by larger medium super output areas (MSOAs). The trade-off is between the potential for greater accuracy using LSOAs but larger sample sizes for MSOAs.
- A specification where rather than truncate bedroom, bathroom and other room numbers, untruncated versions of the variables are included. The trade-off is again between the potential for greater accuracy and sample sizes.

Table A.3. Correlation coefficients between property value estimates

Specification	Main	5 years	3 years	MSOA	Untruncated
Main	1.000	-	-	-	-
5 years	0.998	1.000	-	-	-
3 years	0.983	0.989	1.000	-	-
MSOA	0.993	0.991	0.977	1.000	-
Untruncated	0.996	0.995	0.981	0.991	1.000

Note: 'Main' is the main specification used in our analysis; '5 years' is the specification using data from 2014 to 2018 only; '3 years' is the specification using data from 2016 to 2018 only; MSOA is the specification using MSOA rather than LSOA dummies; and 'Untruncated' is a specification using untruncated versions of bedrooms, bathrooms and other rooms data.

Source: Authors' calculations using HM Land Registry (2019) and Valuation Office Agency (2019).

Table A.3 shows the correlation coefficient between the predicted values from our main specification and those of the alternative specifications. Table A.4 shows the median predicted value as of Q4 2018 by LA for each of the specifications (note that the figures for the main specification differ from those in Table B.1, which are updated to Q1 2019 levels). Table A.5 shows the distributions of the percentage differences in predicted property values between our main specification and each of the other specifications: the top panel for all properties and the other three panels for the properties in the top 10% (excluding the top 1%), top 1% and bottom 1% of the property value distribution.

Table A.4. Median estimated values (£s, Q4 2018) by LA under different specifications

LA area	Main	5 years	3 years	MSOA	Untruncated
Blaenau Gwent	75,139	75,193	76,074	72,064	74,930
Bridgend	132,786	133,698	134,178	132,926	132,816
Caerphilly	115,738	115,911	116,845	114,113	116,206
Cardiff	182,419	182,721	182,336	182,521	183,017
Carmarthenshire	123,151	123,756	124,014	122,018	122,950
Ceredigion	170,767	170,368	171,433	172,653	170,677
Conwy	151,548	152,131	151,137	151,601	152,375
Denbighshire	133,074	133,940	134,674	133,012	133,884
Flintshire	147,563	147,972	148,053	146,942	147,576
Gwynedd	142,320	142,517	141,597	141,499	142,474
Isle of Anglesey	168,631	167,355	167,818	165,891	168,632
Merthyr Tydfil	81,320	81,080	80,894	78,918	80,899
Monmouthshire	239,376	237,866	236,418	238,433	238,095
Neath Port Talbot	94,854	95,539	95,864	92,616	94,713
Newport	141,175	141,819	142,583	140,560	141,129
Pembrokeshire	154,890	154,217	154,211	151,682	154,741
Powys	178,899	179,592	178,384	180,507	179,607
Rhondda Cynon Taf	92,428	92,601	92,488	93,724	92,753
Swansea	126,764	126,929	126,158	127,543	126,784
Torfaen	127,141	127,041	126,841	127,386	127,138
Vale of Glamorgan	202,297	202,284	202,779	202,599	202,281
Wrexham	129,229	129,542	129,977	126,956	129,274

Note: 'Main' is the main specification used in our analysis; '5 years' is the specification using data from 2014 to 2018 only; '3 years' is the specification using data from 2016 to 2018 only; MSOA is the specification using MSOA rather than LSOA dummies; and 'Untruncated' is a specification using untruncated versions of bedrooms, bathrooms and other rooms data.

Source: Authors' calculations using HM Land Registry (2019) and Valuation Office Agency (2019).

Table A.5. Maximum percentage differences in values between main and variant hedonic regression specifications for given percentages of properties

LA area	5 years	3 years	MSOA	Untruncated
All properties				
<i>% of properties</i>				
50%	1.4%	2.3%	3.6%	0.4%
75%	2.5%	4.0%	6.5%	0.7%
90%	3.9%	6.1%	10.0%	1.2%
95%	4.9%	7.7%	12.4%	1.7%
99%	8.1%	12.7%	19.1%	3.9%
Top 10% of properties (excluding top 1%)				
<i>% of properties</i>				
50%	1.5%	2.6%	3.7%	0.7%
75%	2.7%	4.4%	6.9%	1.4%
90%	4.1%	6.7%	10.3%	2.4%
95%	5.1%	8.1%	12.8%	3.3%
99%	8.5%	13.8%	17.4%	6.2%
Top 1% of properties				
<i>% of properties</i>				
50%	2.3%	3.7%	4.4%	1.6%
75%	3.7%	6.3%	8.0%	3.1%
90%	6.6%	10.1%	12.3%	5.7%
95%	10.9%	14.4%	14.5%	10.2%
99%	24.7%	44.1%	21.8%	39.3%
Bottom 1% of properties				
<i>% of properties</i>				
50%	2.5%	3.3%	8.3%	0.6%
75%	3.8%	5.3%	12.7%	0.9%
90%	5.4%	7.9%	19.7%	1.5%
95%	6.5%	10.4%	21.8%	1.7%
99%	10.3%	17.8%	28.2%	2.5%

Note: 'Main' is the main specification used in our analysis; '5 years' is the specification using data from 2014 to 2018 only; '3 years' is the specification using data from 2016 to 2018 only; MSOA is the specification using MSOA rather than LSOA dummies; and 'Untruncated' is a specification using untruncated versions of bedrooms, bathrooms and other rooms data.

Source: Authors' calculations using HM Land Registry (2019) and Valuation Office Agency (2019).

Taken together, the tables show that:

- The correlation between estimated values under our different specifications is very high. Restricting the sample to the last three years of data and including MSOA rather than LSOA dummies have the biggest impacts overall.
- Estimates of the median property value by LA are robust to changes in sample and specification. Further analysis (not shown) shows that the same is true of other percentile points, although the differences are somewhat larger for the very top and very bottom of the distribution (for example, the 5th percentile and below, and the 95th percentile and above).
- Differences in estimated values for specific properties are generally small. For example, when considering all properties, in 75% of cases the difference between specifications based on data from 2010 onwards (main sample) and 2014 onwards ('5 years') is 2.5% or less. And in 95% of cases it is 4.9% or less. However, differences are larger toward the very top of the value distribution and, to some extent, the very bottom of the value distribution. For example: among all properties, for 1% of properties the difference between our main and five-year samples is 8.1% or more; among the top 1% of properties by value, for 1% the difference is 24.7% or more; and among the bottom 1%, for 1% the difference is 10.3% or more. The greater sensitivity of estimates towards the very top and very bottom of the property value distribution suggests that in a real-life revaluation, estimates for properties in these parts of the distribution should be subject to additional checks and/or be supplemented via manual valuations if statistical valuation is used more generally.

Ad hoc investigations have also shown that estimates of the values of atypical properties that transact infrequently are particularly sensitive to specification used. This includes purpose-built student accommodation (which is exempted but still subject to valuation), annexes to properties (which are sometimes exempted), and park homes and static caravans used as permanent residences. As with properties at the very top (and bottom) of the property value distribution, it is likely that more bespoke approaches to valuation would be required for such properties.

Table A.5 also shows that the choice of geographical dummy (LSOA or MSOA) makes more difference across the bulk of the property value distribution than other choices we test. This suggests that taking account of localised differences in land values and property values is likely to be important in any statistical revaluation. For rural areas where LSOAs can cover large geographical areas, methods using geographical coordinates, for example, may be more appropriate. We tested these as part of this project but were unable to produce robust results in the time available.

A.2 Hedonic regressions for household-level analysis

The Understanding Society data contain self-reported property values for homeowners, which we uprate to Q1 2019 using the LA-level House Price Index (HPI) for the appropriate dwelling type (detached, semi-detached, terraced etc.). We find that the distribution of uprated self-reported property values closely matches the distribution of Land Registry property values in 2019 by dwelling type in Wales. For households that acquired their

properties in or after 2000, the distribution of self-reported property values also closely matches the distribution of reported purchase prices, uprated using the LA- and dwelling-type-level HPI. This provides reassurance on the quality of self-reported property prices in the survey data we use.

We regress property values for homeowners on property characteristics (dwelling type, number of bedrooms and other rooms, existing council tax band), location characteristics (local authority, rurality, population density, LSOA deprivation levels³⁸) and household characteristics (income, household composition and demographics³⁹). The estimated coefficients from this regression are then used to predict property values for renters. Note that the aim of the exercise is to predict property prices as closely as possible, *not* to model the price of specific housing amenities – it is not a ‘hedonic regression’ in the traditional sense of the term. As such, variables that do not directly affect property values that are nonetheless predictive of property values, such as household incomes and the number of children in the household, are included in the regression.

The regression explains 79% of the variation in property values for homeowners in Wales. Regression coefficients for the main characteristics are listed in Table A.6. Property prices are regressed in log form. To impute values for rental properties, a random error (drawn from the distribution of errors among homeowners) is added to the predicted log property price, which is then converted back into pound values. To ensure that our results are robust to these random draws, we impute 20 property values for each household based on 20 randomly drawn error terms. The results we present are averages over all 20 imputations for each household.

It is possible that the approach of imputing property values for renters based on a regression for owner-occupiers could lead us to overstate (understate) the values of rented properties, if they are systematically less (more) desirable than owner-occupied properties with the same observed characteristics. This would in turn lead us to overestimate (underestimate) the council tax liabilities of households that rent after revaluation and reform. However, controlling for unobserved differences is difficult and beyond the scope of this project.

Table A.6. Regression of log property prices, selected coefficients

Variable	Coefficient	Standard error
<i>Dwelling type (ref: detached)</i>		
Semi-detached	-0.100	(0.053)
Terraced	-0.105	(0.064)
Flats/Maisonettes	0.171	(0.170)
Other dwelling type	-0.105	(0.260)

³⁸ Based on deciles of specific components of the Index of Multiple Deprivation (IMD): income, employment, housing, education and health.

³⁹ These include whether the household contains a couple, the number of adults, the number of children in different age groups, the highest qualification in the household, the age of the oldest household member and whether anyone in the household is in receipt of disability benefits or reports having a long-standing illness or disability.

Dwelling type unknown	0.120	(0.095)
<i>Number of bedrooms (ref: 1)</i>		
2	0.260	(0.169)
3	0.394	(0.174)
4	0.529	(0.167)
5	0.724	(0.195)
6	0.558	(0.207)
7 or more	0.074	(0.307)
<i>Number of other rooms (ref: 1)</i>		
2	0.022	(0.045)
3	0.104	(0.054)
4	0.242	(0.085)
5	-0.078	(0.181)
6	0.617	(0.245)
7 or more	0.250	(0.180)
<i>Council tax band (ref: Band D)</i>		
A	-0.320	(0.102)
B	-0.232	(0.066)
C	-0.172	(0.052)
E	0.201	(0.048)
F	0.321	(0.086)
G	0.458	(0.135)
H	0.813	(0.163)
Interview quarter	Yes	
Household composition (couple, number of adults, number of children aged 0-2, 3-4, 5-11, 12-15)	Yes	
Demographics (highest qualification, age of oldest household member, self-reported disability or long-standing illness, disability-related benefits)	Yes	
Location (rurality, upper-tier LA dummies, population density and squared, LSOA-level deprivation deciles)	Yes	

Source: Understanding Society wave 8.

A.3 Further information on modelling council tax

Further information on modelling council tax in the LA-level analysis

In order to model reforms to council tax, we need information on: up-to-date property values (see Section A.1); existing bands and tax rates; and eligibility for discounts, exemptions, premiums and the CTRS.

Our information on the existing council tax bands for each property is from March 2019, courtesy of the VOA. Tax rates are from 2018–19, the last full financial year for which data are available. Information on the tax base, including discounts, exemptions, premiums and the CTRS, is as of 2018.

Information on tax rates and eligibility for discounts, etc. is available only at the LA level, separately by tax band. In reality, however, tax rates and eligibility for discounts, etc. vary within LA areas. For example, different community councils charging different precepts cover different neighbourhoods, and eligibility for discounts, etc. is defined at the individual property level. We therefore cannot model changes in tax bills *within* LA areas, and have to approximate the impact of discounts, etc. on tax bases, following revaluation and reform.

To make the approximation, we use information on the proportion of properties in each tax band in each LA that are eligible for different discounts, exemptions, premiums and the CTRS, and the share of properties that are in each tax band in each LA. For example, suppose that in a particular LA 20% of properties are in Band A and that, taken together, discounts, exemptions, premiums and the CTRS reduce the amount of tax paid by those properties by 30%. Following revaluation, we assume that, taken together, discounts, etc. will reduce the amount of tax paid on the 20% lowest-valued properties in that LA by 30%, whatever band they end up in. So, for example, if 10% of properties end up in Band A and 10% in Band B following revaluation, we assume that discounts, etc. would reduce the amount of tax paid by properties in both Band A and Band B by 30%.

In principle, given we know both existing and estimated post-revaluation bands for Wales, we could track individual properties. However, such data are not available for England (where the VOA determined it did not have a legal basis to share data as analysis was not commissioned by a public authority) and we have used a common modelling framework for England and Wales given the time available to us for analysis. However, it is highly unlikely that this will have a significant effect on our results.

To model the CTRS fully accurately, full information on the incomes and assets of every household in Wales would be required. This is because some households not currently entitled to the CTRS may gain entitlement following revaluation and reform, and vice versa. This means changes in tax bills can lead to non-linear changes in CTRS costs. Unfortunately, the data available to us only allow us to take account of the linear effect of people currently eligible being eligible for more or less support. Again, however, it is highly unlikely that this will have a significant effect on our results.

Further information on modelling council tax in the household-level analysis

To model reforms to council tax at the household level, we need (a) up-to-date property values, (b) current council tax bands and (c) council tax liabilities at the LA level, taking into account LA-specific tax rates, eligibility for discounts and exemptions (such as the

single-person discount and student exemptions) and the CTRS. We abstract from empty homes discounts, since our data only capture information on primary residences, and from disability-related discounts that cannot be identified in the data.

The process for deriving up-to-date property values was given in Section A.2.

We use linked VOA data to determine households' current council tax bands. It is worth noting that the Understanding Society data also contain self-reported council tax bands. However, we consider these to be less reliable than the council tax bands from the administrative data: they differ from the VOA data in a third of all cases, and the distribution of self-reported council tax bands differs from the VOA data on all properties in Wales. (Specifically, self-reports tend to overstate the share of properties in Band D, which may reflect the fact that the Band D rate is often listed at the top of council tax bills.)

Linked VOA data are not available for 23% of the households in our data. Where possible, we impute their council tax bands using their reported house values or rent, local authority and property characteristics. This is done using an ordered logistic regression, run separately for homeowners, private renters and social renters. For each tenure type, we regress VOA-linked council tax band on self-reported house price or monthly rent (whichever is relevant), housing characteristics (house type interacted with number of rooms), location characteristics (rurality, IMD decile) and LA dummies. We then randomly select a council tax band for those with missing values from the predicted probability distribution.

Because of the small sample size in Wales, the imputation is done jointly for England and Wales, controlling for country and upper-tier LAs and allowing the effects of IMD deciles to differ for Wales and England (because they are separately defined). The results are robust to alternative imputation methods, including an ordered probit regression and nearest-neighbour matching based on reported house value or rent, dwelling type, upper-tier LA and the number of rooms.

Table A.7 shows the distribution of council tax bands using different data sources. It shows that the distribution of council tax bands in Understanding Society (USoc), using linked VOA data and including imputations (row 4), closely matches the distribution of council tax bands in Wales as a whole (row 1). We further reweight our data so that they match the distribution of council tax bands in the administrative data. The final sample closely matches the (representative) overall Understanding Society sample in terms of the distributions of income, local area deprivation (IMD), age of the oldest household member and household size.

To calculate council tax liabilities, the impacts of reforms are modelled using the IFS tax and benefit microsimulation model, TAXBEN. This contains council tax rates at the local authority level, as well as information on the Welsh CTRS. We model reforms under the 2018–19 tax and benefit system (which corresponds to Q1 2019), assuming universal credit is fully rolled out and that benefit cuts that apply to new claimants or children (such as the two-child limit) are fully in place. This allows us to capture the long-run effect of revaluation and reform.

Table A.7. Distribution of council tax bands in different data sources (%)

Data source	Council tax band								
	A	B	C	D	E	F	G	H	I
1. VOA: all Wales	14.7	21.0	21.7	16.1	13.4	8.1	3.7	0.9	0.4
2. USoc: self-reported	13.1	20.4	18.6	20.5	13.1	6.1	5.9	2.2	0.0
3. USoc: VOA	14.2	23.6	20.7	15.3	14.6	7.1	3.8	0.5	0.3
4. USoc: VOA with imputations	14.4	23.2	20.7	16.0	14.1	7.1	3.7	0.5	0.3

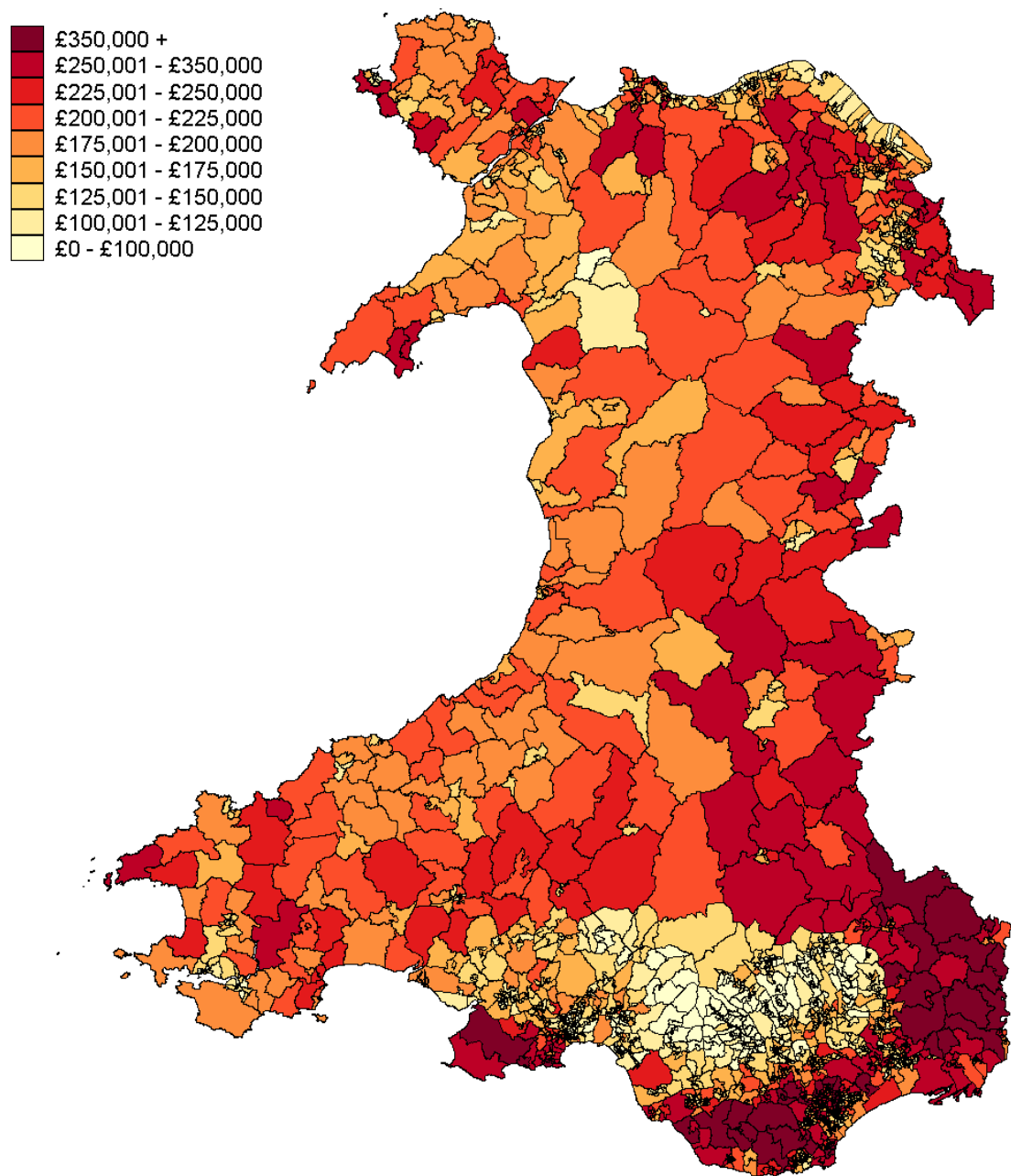
Source: Valuation Office Agency (2018) and Understanding Society wave 8.

Appendix B. Additional results

Table B.1. Percentile of estimated property values (Q1 2019), by LA

Local authority	5 th	10 th	25 th	50 th (median)	75 th	90 th	95 th	Mean
Blaenau Gwent	48,848	54,700	66,804	84,817	113,885	167,148	214,166	100,639
Bridgend	59,442	69,306	92,068	130,792	188,586	262,628	319,466	152,511
Caerphilly	60,512	69,254	88,178	117,762	164,877	229,122	279,702	137,371
Cardiff	82,876	98,819	133,477	188,029	273,816	393,846	491,283	225,386
Carmarthenshire	64,645	73,087	91,878	126,809	192,079	270,147	323,981	154,182
Ceredigion	78,004	90,847	120,268	167,023	225,997	288,082	332,179	180,733
Conwy	71,675	84,679	110,578	151,484	213,444	294,968	359,185	176,145
Denbighshire	64,922	76,885	102,673	140,182	200,238	290,397	358,639	166,090
Flintshire	68,880	80,832	105,955	143,246	200,218	276,596	333,041	165,030
Gwynedd	65,712	76,942	101,847	143,323	208,223	287,319	346,560	168,318
Isle of Anglesey	71,734	82,809	110,257	160,782	231,612	316,268	384,018	185,025
Merthyr Tydfil	47,742	53,417	64,663	82,252	117,344	186,825	234,970	103,013
Monmouthshire	110,430	132,150	174,223	244,508	358,037	501,043	608,550	288,233
Neath Port Talbot	52,731	60,079	75,202	99,190	139,535	198,202	242,993	117,442
Newport	72,047	83,351	107,845	148,939	218,630	319,284	395,740	180,878
Pembrokeshire	62,726	75,923	103,713	148,194	214,860	294,233	352,385	171,109
Powys	70,266	84,457	117,580	175,857	255,299	347,025	414,393	200,054
Rhondda Cynon Taf	44,878	51,063	64,892	90,955	141,521	212,962	265,866	114,841
Swansea	60,108	69,455	90,276	128,082	192,310	291,174	373,575	160,663
Torfaen	61,945	72,196	93,636	124,614	173,707	250,242	307,607	146,158
Vale of Glamorgan	89,438	104,146	137,391	200,723	306,134	462,890	589,990	250,677
Wrexham	61,226	71,409	92,218	127,047	185,238	267,559	334,213	153,416

Source: Authors' calculations using HM Land Registry (2019) and Valuation Office Agency (2019).

Figure B.1. Estimated mean property values, Q1 2019, by LSOA

Note: Arithmetic mean property price predictions for Q1 2019.

Source: Authors' calculations using HM Land Registry (2019) and Valuation Office Agency (2019).

Table B.2. Proportion of properties by band following revaluation (existing 9-band system), by LA

Local authority	A	B	C	D		E	F	G	H	I
Blaenau Gwent	41.99%	32.37%	13.65%	6.08%		3.96%	1.63%	0.28%	0.03%	0.01%
Bridgend	15.94%	22.99%	23.71%	16.62%		12.20%	6.24%	1.97%	0.27%	0.07%
Caerphilly	16.90%	29.11%	25.28%	14.36%		9.11%	3.99%	1.05%	0.13%	0.06%
Cardiff	3.91%	11.44%	20.25%	20.45%		19.33%	13.58%	7.74%	2.18%	1.11%
Carmarthenshire	14.06%	27.05%	22.20%	14.76%		12.66%	6.90%	2.04%	0.23%	0.11%
Ceredigion	5.26%	15.60%	23.15%	22.95%		20.95%	10.00%	1.99%	0.09%	0.01%
Conwy	7.49%	18.73%	25.96%	19.98%		15.52%	8.31%	3.17%	0.62%	0.24%
Denbighshire	10.86%	20.76%	26.76%	17.66%		12.45%	7.49%	3.36%	0.58%	0.09%
Flintshire	8.95%	20.65%	27.14%	19.39%		13.78%	7.25%	2.41%	0.32%	0.10%
Gwynedd	10.83%	21.14%	24.16%	17.64%		14.76%	8.06%	2.71%	0.47%	0.23%
Isle of Anglesey	7.96%	18.28%	21.40%	18.91%		18.09%	10.16%	4.31%	0.71%	0.17%
Merthyr Tydfil	45.60%	27.72%	11.41%	7.39%		5.39%	2.13%	0.33%	0.01%	0.01%
Monmouthshire	0.92%	4.49%	12.45%	18.62%		22.04%	19.88%	14.41%	4.94%	2.24%
Neath Port Talbot	28.83%	31.75%	19.98%	10.26%		6.21%	2.32%	0.54%	0.07%	0.03%
Newport	7.69%	20.38%	25.16%	18.07%		13.97%	9.02%	4.46%	0.92%	0.34%
Pembrokeshire	11.33%	19.15%	22.84%	18.38%		15.86%	8.79%	3.09%	0.47%	0.10%
Powys	7.80%	14.76%	19.49%	18.19%		19.17%	13.56%	5.87%	1.01%	0.15%
Rhondda Cynon Taf	39.62%	23.65%	15.94%	9.53%		6.92%	3.40%	0.86%	0.07%	0.00%
Swansea	16.32%	24.37%	22.38%	14.65%		10.86%	6.69%	3.45%	0.90%	0.37%
Torfaen	13.93%	26.68%	27.50%	14.62%		9.87%	5.49%	1.68%	0.17%	0.05%
Vale of Glamorgan	2.49%	10.98%	19.50%	18.13%		18.58%	14.43%	9.79%	3.92%	2.18%
Wrexham	14.81%	25.58%	24.21%	15.31%		10.92%	6.01%	2.52%	0.53%	0.12%

Source: Authors' calculations using HM Land Registry (2019), Valuation Office Agency (2019) and Welsh Government (2019c and 2019d).

Table B.3. Proportion of properties by band following revaluation (12-band structure), by LA

Local authority	A1	A2	B1	B2	C	D	E	F	G	H	I	J
Blaenau Gwent	27.45%	21.43%	15.43%	10.05%	13.65%	6.08%	3.96%	1.63%	0.28%	0.03%	0.01%	0.01%
Bridgend	9.56%	9.83%	9.83%	9.71%	23.71%	16.62%	12.20%	6.24%	1.97%	0.27%	0.04%	0.03%
Caerphilly	9.52%	11.77%	12.48%	12.24%	25.28%	14.36%	9.11%	3.99%	1.05%	0.13%	0.02%	0.04%
Cardiff	1.88%	3.39%	4.43%	5.65%	20.25%	20.45%	19.33%	13.58%	7.74%	2.18%	0.51%	0.60%
Carmarthenshire	7.02%	11.33%	11.83%	10.93%	22.20%	14.76%	12.66%	6.90%	2.04%	0.23%	0.03%	0.09%
Ceredigion	2.52%	4.56%	6.12%	7.66%	23.15%	22.95%	20.95%	10.00%	1.99%	0.09%	0.00%	0.00%
Conwy	4.02%	5.66%	7.48%	9.06%	25.96%	19.98%	15.52%	8.31%	3.17%	0.62%	0.11%	0.13%
Denbighshire	6.31%	7.33%	8.22%	9.75%	26.76%	17.66%	12.45%	7.49%	3.36%	0.58%	0.08%	0.01%
Flintshire	4.89%	6.64%	8.19%	9.89%	27.14%	19.39%	13.78%	7.25%	2.41%	0.32%	0.07%	0.03%
Gwynedd	6.12%	7.58%	8.79%	9.48%	24.16%	17.64%	14.76%	8.06%	2.71%	0.47%	0.09%	0.14%
Isle of Anglesey	3.84%	6.80%	7.88%	7.71%	21.40%	18.91%	18.09%	10.16%	4.31%	0.71%	0.09%	0.08%
Merthyr Tydfil	30.84%	21.03%	13.33%	8.13%	11.41%	7.39%	5.39%	2.13%	0.33%	0.01%	0.00%	0.01%
Monmouthshire	0.33%	1.05%	1.66%	2.37%	12.45%	18.62%	22.04%	19.88%	14.41%	4.94%	1.23%	1.01%
Neath Port Talbot	17.76%	16.95%	14.29%	11.58%	19.98%	10.26%	6.21%	2.32%	0.54%	0.07%	0.00%	0.03%
Newport	3.76%	6.53%	8.10%	9.69%	25.16%	18.07%	13.97%	9.02%	4.46%	0.92%	0.18%	0.16%
Pembrokeshire	6.93%	6.97%	7.75%	8.83%	22.84%	18.38%	15.86%	8.79%	3.09%	0.47%	0.07%	0.03%
Powys	4.45%	5.36%	6.01%	6.73%	19.49%	18.19%	19.17%	13.56%	5.87%	1.01%	0.11%	0.04%
Rhondda Cynon Taf	29.04%	15.30%	10.64%	8.30%	15.94%	9.53%	6.92%	3.40%	0.86%	0.07%	0.00%	0.00%
Swansea	9.44%	10.77%	10.56%	9.92%	22.38%	14.65%	10.86%	6.69%	3.45%	0.90%	0.22%	0.15%
Torfaen	7.96%	9.55%	11.11%	11.99%	27.50%	14.62%	9.87%	5.49%	1.68%	0.17%	0.03%	0.02%
Vale of Glamorgan	1.07%	2.43%	4.25%	5.71%	19.50%	18.13%	18.58%	14.43%	9.79%	3.92%	1.02%	1.16%
Wrexham	8.38%	10.23%	10.88%	10.90%	24.21%	15.31%	10.92%	6.01%	2.52%	0.53%	0.08%	0.04%

Source: Authors' calculations using HM Land Registry (2019), Valuation Office Agency (2019) and Welsh Government (2019c and 2019d).

Table B.4. Proportion of gainers and losers from revaluation by household type

	No. of households (000s)	Gain >£200 (%)	Gain £50-£200 (%)	Lose/gain £0-£50 (%)	Lose £50-£200 (%)	Lose >£200 (%)
Household composition						
Single, working age	187	8.2	13.4	60.7	9.4	8.3
Single pensioner	278	8.0	9.8	67.6	6.5	8.1
Lone parent	74	3.5	17.1	62.2	11.4	5.7
Working-age couple	182	16.0	9.6	43.1	15.3	15.9
Pensioner couple	214	16.8	6.9	49.9	6.7	19.7
Couple with children	192	19.4	13.4	45.2	7.2	14.8
Multi-family	290	14.5	14.3	56.6	6.3	8.2
Age of oldest household member						
Under 35	143	14.1	14.2	52.7	11.2	7.8
35-44	182	13.6	17.5	56.0	5.7	7.2
45-54	266	14.7	14.3	49.3	10.6	11.1
55-64	281	14.1	9.2	52.2	10.6	13.9
65 and older	545	11.3	8.9	60.2	6.1	13.5
Disability status						
On disability benefits	245	8.9	5.4	73.8	6.5	5.3
Other disabled	643	14.1	13.0	51.5	7.6	13.7
Not disabled	529	13.8	12.9	51.1	10.1	12.3
Ethnicity						
White British	1,327	13.0	11.4	55.5	8.6	11.5
Other	90	14.8	14.7	51.2	4.6	14.7
Housing tenure						
Own	953	17.1	11.8	49.5	7.9	13.7
Rent private	159	12.4	16.9	52.2	9.2	9.4
Rent social	290	0.9	8.4	75.8	8.4	6.5

Note: Assumes full grant adjustment and full take-up of CTRS.

Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

Table B.5. Proportion of gainers and losers from a continuous and proportional system by household type

	No. of households (000s)	Gain >£200 (%)	Gain £50-£200 (%)	Lose/gain £0-£50 (%)	Lose £50-£200 (%)	Lose >£200 (%)
Household composition						
Single, working age	187	37.1	14.6	38.2	6.0	4.1
Single pensioner	278	21.3	14.0	51.2	4.1	9.4
Lone parent	74	32.1	11.6	45.1	5.4	5.8
Working-age couple	182	38.0	18.3	14.1	9.6	20.0
Pensioner couple	214	25.0	12.5	26.8	7.4	28.2
Couple with children	192	45.3	14.0	14.8	9.3	16.6
Multi-family	290	41.2	10.9	22.0	4.8	21.1
Age of oldest household member						
Under 35	143	49.5	14.6	25.0	4.0	6.9
35-44	182	44.4	13.4	23.6	7.7	10.9
45-54	266	41.9	14.4	21.3	5.9	16.5
55-64	281	32.2	14.1	25.5	8.5	19.7
65 and older	545	23.6	12.8	39.1	6.0	18.5
Disability status						
On disability benefits	245	22.2	7.9	59.2	4.7	6.0
Other disabled	643	35.0	14.9	24.4	5.9	19.7
Not disabled	529	38.6	14.7	22.1	8.0	16.7
Ethnicity						
White British	1,327	34.0	13.8	30.2	6.1	15.8
Other	90	36.0	10.3	20.6	11.7	21.5
Housing tenure						
Own	953	35.5	15.0	20.1	7.7	21.7
Rent private	159	40.0	11.9	36.1	5.1	6.9
Rent social	290	26.7	10.3	56.0	2.9	4.0

Note: Assumes full grant adjustment and full take-up of CTRS.

Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

Table B.6. Percentage of gainers and losers from revaluation and from a continuous and proportional council tax system, by income level, assuming no take-up of the CTRS

	Income quintile group				
	Poorest	2 nd	3 rd	4 th	Richest
Option 1. Revaluation					
Gain >£200	9.1	10.3	13.1	16.0	28.7
Gain £50–£200	22.0	18.6	19.4	12.5	7.9
Lose or Gain £0–£50	39.2	39.4	38.9	41.7	40.0
Lose £50–£200	14.8	16.8	14.8	14.2	4.1
Lose >£200	15.0	14.9	13.7	15.5	19.3
Average gain among gainers (£)	186	204	237	273	326
<i>Measured as % of net income</i>	1.2%	0.9%	0.8%	0.7%	0.5%
Average loss among losers (£)	129	137	134	122	146
<i>Measured as % of net income</i>	0.9%	0.6%	0.5%	0.3%	0.2%
Option 5. Continuous and proportional					
Gain >£200	54.1	51.9	50.8	44.3	32.9
Gain £50–£200	18.2	18.3	17.8	17.1	14.9
Lose or gain £0–£50	11.1	6.9	7.5	9.4	8.4
Lose £50–£200	7.7	7.7	7.5	11.4	7.3
Lose >£200	8.9	15.2	16.4	17.7	36.5
Average gain among gainers (£)	309	322	331	294	315
<i>Measured as % of net income</i>	2.1%	1.4%	1.2%	0.7%	0.5%
Average loss among losers (£)	333	606	680	480	780
<i>Measured as % of net income</i>	2.2%	2.7%	2.4%	1.2%	1.2%

Note: Assumes full grant adjustment and no CTRS. Incomes are measured after taxes and benefits but before housing costs are deducted and equivalised using the modified OECD equivalence scale.

Source: Authors' calculations using Understanding Society wave 8 and TAXBEN, the IFS microsimulation model.

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