BUDGET PERSPECTIVES 2022 PAPER 1 May 2021

OPTIONS FOR RAISING TAX REVENUE IN IRELAND

THEANO KAKOULIDOU AND BARRA ROANTREE





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PAPER 1

Available to download from www.esri.ie

https://doi.org/10.26504/bp202201

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ACKNOWLEDGEMENTS

We are grateful to the Central Statistics Office (CSO) for facilitating access to the Survey of Income and Living Conditions (SILC) Research Microdata File used to construct the database for the SWITCH tax-benefit model, and to the Irish Social Science Data Archive for facilitating access to the Household Budget Survey (HBS). This work was carried out with funding from the ESRI's Tax, Welfare and Pensions Research Programme (supported by the Department of Public Expenditure and Reform, the Department of Social Protection, the Department of Health, the Department of Children and Youth Affairs and the Department of Finance), which is gratefully acknowledged. The analysis uses the indirect tax model, ITSim, jointly developed by researchers from the ESRI and the Department of Finance. We would like to thank for their comments and suggestions the anonymous reviewers, Eddie Casey, Seamus Coffey, Cormac O'Dea, Karina Doorley, Mark Regan and Mairéad Ross. All views, error and omissions remain the sole responsibility of the authors.

This paper has been accepted for publication by the Institute, which does not itself take institutional policy positions. The paper has been peer-reviewed prior to publication. The authors are solely responsible for the content and the views expressed.

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ABBREVIATIONS

| CAT | Capital Acquisitions Tax |
|--------|-------------------------------------------------------|
| CGT | Capital Gains Tax |
| CSO | Central Statistics Office |
| DIRT | Deposit Interest Retention Tax |
| ESRI | Economic and Social Research Institute |
| EU | European Union |
| FDI | Foreign Direct Investment |
| GDP | Gross Domestic Product |
| GNI* | Modified Gross National Income |
| HBS | Household Budget Survey |
| HFCS | Household Finance and Consumption Survey |
| HMRC | HM Revenue & Customs |
| НТВ | Help to Buy |
| IFAC | Irish Fiscal Advisory Council |
| IMF | International Monetary Fund |
| LAET | Life Assurance Exit Tax |
| LPT | Local Property Tax |
| OECD | Organization for Economic Cooperation and Development |
| PAYE | Pay As You Earn |
| PPT | Percentage Point |
| PRSI | Pay-Related Social Insurance |
| SILC | Survey of Income and Living Conditions |
| SWITCH | Simulating Welfare and Income Tax Changes |
| USC | Universal Social Charge |
| VAT | Value-Added Tax |

ABSTRACT

Even before the pandemic, an ageing population, a potential over-reliance on corporation tax receipts and an inevitable decline in motor tax revenues combined to make the need for future tax rises likely. This paper examines a range of options that a government seeking to raise or replace tax revenues might consider, assessing what is known about how much they would raise, who would bear the burden and what economic effects they might have.

SECTION 1

Introduction

The outbreak of the COVID-19 pandemic has seen government expenditure rise substantially, from &87.2 billion in 2019 to &105.9 billion in 2020, and a forecasted &109.2 billion in 2021.¹ This has been used by the Government to provide extensive supports to individuals and businesses affected by the public health measures required to suppress the spread of the virus, facilitated by low-interest rates which are in part the product of the interventions staged by the European Central Bank (Allen-Coghlan et al., 2020). Temporary deficit-financed increases in spending are the appropriate fiscal response to an event of this nature and, as argued by the OECD (2021) and the IMF (2021a) among others, should not be withdrawn prematurely through reductions in spending or increases in taxation in the short run.

However, both the Irish Fiscal Advisory Council (2020a) and Conefrey et al. (2021) have highlighted substantial, permanent increases in non-COVID-related spending of more than €5 billion in Budget 2021. This comes on top of commitments made to reform the health system and expand social welfare entitlements (Government of Ireland, 2020) which – as argued by the IMF (2021c) – are likely to require further substantial, permanent spending increases in the years ahead. So too will maintaining the existing level of public services and the state pension in the face of an ageing population, with the share of those aged 65+ forecast to rise from 14 per cent in 2020 to almost 28 per cent by 2050 (IFAC, 2020b).

Such substantial, permanent increases in spending cannot – even at ultra-low interest rates – be sustainably financed in the medium-to-long run through higher deficits, but instead require reductions in other expenditure or increases in government revenue (Barnes et al., 2021). Yet it is difficult to envisage expenditure cuts of the magnitude that would be required to finance these longer-run spending pressures given the commitments made by all major parties in the 2020 general election to protect many areas of existing spending while increasing others.² It therefore seems likely that there will be some need for sizeable tax increases in the years ahead.

This need is made more pressing by structural deficiencies in the revenue base. Foremost among these is what many have pointed to as an over-reliance on

¹ See Table 11 in Budget 2021 Economic and Fiscal Outlook, available at http://budget.gov.ie.

² See the Irish Election Manifesto Archive available at http://michaelpidgeon.com/manifestos/election.html.

volatile corporation tax receipts, heavily concentrated among just a small number of firms.³ In addition, the planned shift towards electric vehicles puts at risk more than €3 billion per year of taxes related to motoring which are closely linked to the carbon dioxide emissions of vehicles.⁴

This paper sets out a range of options that a future government seeking to raise or replace tax revenues might consider, providing a brief review of each tax and the potential economic and distributional impact of reforming it. In doing so, it does not seek to advocate any particular tax-raising measure as ultimately those are political decisions which depend on a government's distributional goals, value judgements and wider priorities. Rather, it seeks to provide evidence for policymakers who are in a position to make these decisions.

Since we are interested in measures that would raise revenue in the longer run, we use costings from the Office of the Revenue Commissioners (henceforth Revenue) and SWITCH, the ESRI tax and benefit microsimulation model, that were collected before, and abstract from, the impact of the ongoing COVID-19 pandemic on firms and households. These are also modelled taking as given the behaviour of households and firms. While we discuss the ways in which many of the reforms considered might affect behaviour, neither our costings nor those of Revenue take account of such responses, or of the wider macroeconomic impacts that higher levels of government taxation and spending may have.

The paper proceeds as follows. Section 2 briefly outlines the level and composition of government revenues. Section 3 examines increases in broad-based taxes that would affect large sections of society. Section 4 focuses on tax increases that would primarily affect the better-off, while Section 5 turns to restrictions on tax reliefs and exemptions. Section 6 concludes and presents a summary table of the options considered, the revenue they would raise and their distribution impact.

³ See Irish Fiscal Advisory Council (2019), Conefrey et al. (2019), Parliamentary Budget Office (2018), European Commission (2020), IMF (2019), McQuinn et al. (2019), Roantree et al. (2018) and Department of Finance (2019b). The latest Revenue statistics show that just 10 firms paid 51 per cent of corporation tax receipts in 2020, up from 40 per cent in 2019 (Revenue, 2021).

⁴ This include Fuel Duties, Motor Tax, Vehicle Registration Tax and carbon tax on auto fuels which Revenue statistics show raised a combined €3.5 billion in 2019, the latest year for which figures are available. See https://www.revenue.ie/en/corporate/documents/statistics/excise/net-receipts-by-commodity.pdf.

SECTION 2

The level and composition of government revenue

Gross current government revenue is expected to reach \notin 77 billion in 2021, \notin 3.4 billion higher than its level in 2020 and \notin 2.7 million more than in 2019. This amounts to 21.5 per cent of Gross Domestic Product (GDP) in 2021, a similar share to recent years which Figure 2.1 shows was among the lowest in the OECD. However, this comparison is rendered misleading by the contribution the activities of multinational corporations make to GDP in Ireland. A more informative comparison is yielded by modified Gross National Income (GNI*) which adjusts GDP for a number of factors, notably depreciation on foreign-owned intellectual property, R&D service imports and aircraft leasing (Honohan, 2021).

Figure 2.1 shows that scaling government revenues by GNI* instead of GDP moves Ireland from collecting almost a third less of economic activity in government revenue than the average OECD country to a tenth more. While some of this revenue is comprised of non-tax sources (e.g. EU structural funds and dividends from semi-state companies), the vast majority of it – more than 90 per cent in recent years – comes from taxation.

FIGURE 2.1 GOVERNMENT REVENUE AS A SHARE OF ECONOMIC ACTIVITY, 2018



Source: OECD's Global Revenue Statistics Database, Global revenue statistics database, available at https://stats.oecd.org/. Notes: Ireland (per cent of GNI*) figure calculated by authors.



FIGURE 2.2 TAX REVENUE AS A SHARE OF GDP AND GNI*

Source: Table 4, Department of Finance Databank (available at http://databank.finance.gov.ie/BES_Reports.aspx?rep=T4) and CSO National Income and Expenditure Tables.

Notes: Includes Exchequer tax revenue as well as that from PRSI (including health levies), training levies and Local Property Tax while excluding motor vehicle duties. GDP and GNI* series constructed by authors using GDP and 'Modified gross national income at current market prices' series from 2019 CSO National Income and Expenditure Tables, backcasted using growth in 'Gross domestic product at market prices' and 'Gross national income at current market prices' series respectively, both from the CSO's Historical National Income and Expenditure Tables.

Figure 2.2 plots the evolution of tax revenues as a percentage of GDP and GNI* over time and shows that the divergence between the two series has become more significant. Although tax revenues as a share of GDP have declined almost inexorably from their peak of 34.4 per cent in 1988 to 19.4 per cent in 2019, tax revenues as a share of GNI* have fallen only slightly, from an average of 34.3 per cent over the 1980s and 1990s to an average of 32.7 per cent in the new millennium.

Figure 2.3 plots the composition of tax revenues for the most recently available year (2019). This shows that tax revenues in Ireland are drawn from four primary sources: 33.1 per cent from income tax (including the Universal Social Charge, USC); 21.8 per cent from value-added tax (VAT); 15 per cent from pay-related social insurance (PRSI), and 15.7 per cent from corporation tax. Together, these account for more than 85.7 per cent – \leq 59.3 billion – of overall tax revenues. Excise duties and customs is the largest of the residual components at 9.1 per cent (\leq 6.3 billion).



FIGURE 2.3 COMPOSITION OF GOVERNMENT TAX REVENUE, 2019

Source: Authors' calculations using figures from the Department of Finance databank.

Notes: Total taxes defined as Exchequer taxes plus PRSI (including health levies), training levies and Local Property Tax while excluding motor vehicle duties. Other receipts include stamp duty, local property tax and customs.

Another $\notin 3.1$ billion of revenues was raised in the form of stamp duties, Capital Gains Tax (CGT) and taxes on gifts or bequests (Capital Acquisitions Tax, CAT), together accounting for 4.5 per cent of overall tax revenues. The Local Property Tax (LPT) raised $\notin 473$ million in 2019, little more than when introduced in full in 2014 despite the increase in the value of properties on which it is levied.⁵

⁵ This in part reflects exemption of properties built since 2013 and the continued use of initial valuations, as discussed in Section 3.5.

SECTION 3

Broad based tax increases

The most straightforward way for any government hoping to raise significant tax revenues is to increase the main rates of the four largest taxes: income tax (including the USC), PRSI, VAT and corporation tax. In this section we consider the distributional and economic effects of such tax increases, alongside similarly straightforward increases to excise duties and the LPT, two other sources of taxation that affect large sections of society.

3.1 INCOME TAX AND USC

Income tax and the USC raised a combined €22.9 billion in 2019. Both are levied on a progressive basis, under schedules which subject higher levels of income to higher rates of tax. However, the base on which the two taxes are levied differs. Income tax is assessed on a joint basis for most married couples compared to an individual basis for the USC, which also applies to a broader definition of income (including e.g. pension contributions) and with a smaller exempt amount. In addition, lower rates of USC apply to those age 70+ or in receipt of a Medical Card.⁶

Revenue (2020) estimate that a 1 percentage-point increase in all rates of income tax would raise €983 million: €664 million from the standard rate (currently 20 per cent) and €319 million from the higher rate (currently 40 per cent). A 1 percentage-point rise in all rates of the USC would generate about €1 billion in revenue: €272 million from the lower rate of 0.5 per cent, €203 million from the 2 per cent rate, €376 million from the 4.5 per cent rate and €160 million from the 8 per cent rate.⁷

Using SWITCH, Figure 3.1 illustrates the impact of these tax rises across the distribution of income, with households divided into 10 equally sized groups (deciles) on the basis of their disposable income – that is, after taxes are paid and benefits received – adjusted (equivalised) for household size.⁸ The lines in Figure 3.1 plot the average loss within each decile from the tax increases as a percentage of disposable income. They show that increases to all rates of income tax and the

⁶ See https://www.citizensinformation.ie/en/money_and_tax/tax/income_tax/ for an overview of these taxes.

⁷ Revenue's costing for what increasing the 8 per cent rate of USC would raise includes revenue from raising the 3 per cent surcharge on non-PAYE income exceeding €100,000 per year, which we estimate in Section 4.1 amounts to c.€15 million.

⁸ Appendix I provides further details on the model used to estimate these distributional impacts and some revenue yields.

USC are broadly progressive, with smaller losses for those in lower- than higherincome deciles.

However, increases to the standard rate of income tax and the lower (0.5 and 2 per cent) rates of the USC affect those in the top two deciles less than others in the top half of the income distribution. This is because more of their income is subject to the higher rates of income tax and the USC, and therefore the impact of increases to the lower rates is smaller. Figure 3.1 also shows that increases to these higher rates of income tax and the USC are unambiguously and strongly progressive, with losses for those in the highest-income decile (at 0.8 per cent and 0.4 per cent of disposable income respectively) larger than for any other decile.

FIGURE 3.1 DISTRIBUTIONAL IMPACT OF A 1 PPT INCREASE IN MAIN RATES OF INCOME TAX AND USC



 Source:
 Authors' calculations using SWITCH v3.1 run on data from the 2017 Survey of Income and Living Conditions (SILC), updated to 2020 terms using outturn and forecast wage growth from the ESRI and Central Bank of Ireland.

 Note:
 Deciles calculated on the basis of equivalised disposable income using CSO national equivalence scales.

Decires calculated on the basis of equivalence apposable income using eso national equivalence scales.

All these tax increases can be expected to affect financial incentives to work, though the effect on behaviour is theoretically ambiguous. Raising marginal rates of tax on work lowers the reward from additional after-tax earnings due to the decreased amount of goods and services that additional earnings can buy. This

reduces the opportunity cost of leisure, which will tend to reduce the labour supplied by those facing a higher marginal rate (*the substitution effect*). However, affected workers may also want to work more in order to obtain the same standard of living because of their decreased after-tax income (*the income effect*). A large body of empirical evidence has shown that the substitution effect typically dominates the income effect, suggesting that the likely economic effect of these tax increases would be to lead to some reduction in the labour supply of affected workers (Blundell and Macurdy, 1999; Keane, 2011; Meghir and Phillips, 2011).

While evidence is more limited on the magnitude of these responses in Ireland, Acheson et al. (2018) find that estimates of responsiveness (with an elasticity of taxable income of 0.168) here are in the bottom half of the range internationally. However, in keeping with this international literature, they also find that higherearning and self-assessed taxpayers are much more responsive to taxes than lower-earning and PAYE taxpayers, in part because – as we discuss in Sections 4.3 and 5.4 – they have a greater ability to switch the form in which their income is taken (e.g. to capital gains). This suggests that the more progressive measures presented in Figure 3.1 are also likely to result in larger behavioural responses, raising an equity-efficiency trade-off that is common in many areas of public finance.

Increases in income tax and USC will also affect the incentive to save. Both taxes apply to most forms of income, including that from investment. Increasing their marginal rates can therefore be expected to discourage saving by reducing the net-of-tax return. Increasing income tax and the USC will also incentivise forms of savings that are more tax-favoured such as pension savings, which are exempt from income tax up to an annual and lifetime limit although they continue to be subject to USC (see the discussion in Section 5.3). However, we are not aware of any evidence on how responsive savings decisions are to tax rates in Ireland, so the magnitude of such behavioural responses is highly uncertain.

3.2 PRSI

PRSI raised more than €10 billion in 2019. It is levied on the earnings of employees and the self-employed at rates that depend on the level of earnings and occupation of the worker. While receipts are nominally paid into the Social Insurance Fund (SIF) to finance certain social welfare payments, in years when its balance was not sufficient to do so it has been topped up from general taxation, while in years when contributions exceeded payments the surplus was saved in an investment fund (Meaney, 2015). PRSI receipts are therefore better considered a supplementary tax on earnings than continental European-style social insurance contributions.

We estimate that a percentage-point rise in the main rates of Class A employee PRSI and Class S self-employed PRSI would raise approximately €700 million and €110 million respectively.⁹ Costings from Revenue estimate that a percentagepoint increase in the main Class A rate of employer PRSI would raise about €850 million.¹⁰

Figure 3.2 shows the distributional impact of these increases to employee and selfemployed PRSI. Again, these are both broadly progressive, raising more as a share of disposable income from higher- than lower-income households. For example, a 1 percentage-point increase in the main Class A rate of employee PRSI would result in losses of more than 1 per cent of disposable income for those in the highest three income deciles compared to less than 0.4 per cent for those in the lowest three income deciles. However, those in the second and third lowest income deciles would on average see slightly smaller losses than those in the very lowest income decile, as these deciles contain a larger share of adults above the state pension age who are not subject to PRSI on their income.

FIGURE 3.2 DISTRIBUTIONAL IMPACT OF A 1 PPT INCREASE IN MAIN RATES OF PRSI



Source: Authors' calculations using SWITCH v3.1, run on data from the 2017 Survey of Income and Living Conditions (SILC), updated to 2020 terms using outturn and forecast wage growth from the ESRI and Central Bank of Ireland.

Note: Deciles calculated on the basis of equivalised disposable income, using CSO national equivalence scales.

⁹ These estimates are produced using SWITCH, run on SILC data as outlined in Appendix I.

¹⁰ This costing was provided by the Department of Finance (2020) in advance of Budget 2021, Labour Party Costings, and is available at https://www.gov.ie/en/publication/fc14f-political-party-costings-pre-budget-2021/

Figure 3.2 does not display the distributional impact of an increase to Class A employer PRSI. This is because we assume that the initial short-run incidence of this tax falls in line with its statutory burden on employers, a proposition for which there is good empirical evidence (e.g. Adam et al., 2019). However, much of the increase is likely to be passed on over time to workers through lower wages or employment – possibly leading to lower tax receipts – and to consumers through increased prices (Gruber, 1997; Anderson and Meyer, 1997; Anderson and Meyer, 2000). Given this, the longer-run distributional impact of employer PRSI is probably best thought of as being similar to (if not the same as) employee PRSI.

As with increases to rates of income tax and USC, raising PRSI would affect financial incentives to work and save. Acheson et al. (2018) find that PAYE workers – the vast majority of those subject to Class A employee PRSI – are far less responsive to these incentives than self-employed workers. Thus behavioural responses to an increase in Class A PRSI are likely to be smaller than to those in Class S (self-employed) PRSI or the rates of income tax and USC discussed above.

However, increasing rates of PRSI would also have very different impacts across generations as would increasing rates of income tax or the USC. This is because PRSI is not levied on the income – even earnings – of those above the age of 65. As a result, while the burden of increasing income tax or the USC would be borne by both younger and older generations, extra revenue raised from increased rates of PRSI would be collected from younger generations.

3.3 VAT

VAT raised €15.1 billion in 2019. It is levied at a standard rate of 23 per cent and reduced rates of 13.5 per cent and 9 per cent. In addition, a wide range of goods are subject to a zero per cent rate or exempt from VAT entirely (with VAT on inputs to the latter not reclaimable from government). Revenue (2020) estimate that a 1 percentage-point increase in the standard and reduced rates of VAT would raise €690 million of additional revenue: €440 million from an increase in the standard rate of 23 per cent and €250 from a rise in the reduced rates of 13.5 per cent and 9 per cent.

As shown in Figure 3.2, such increases in VAT would be regressive with respect to income. A 1 percentage-point increase of both VAT rates would result in losses of 0.7 per cent of disposable income for the lowest-income decile compared to a 0.25 per cent loss for those in the highest-income decile. This is because low-income households on average spend a lot relative to their incomes and therefore pay a lot of VAT at any given point in time. However, looking at losses from an indirect tax rise as a proportion of income can give a misleading impression (Mirrlees, 2011). Households cannot spend more than their income indefinitely, as over a

lifetime income and expenditure must equal except for bequests and the possibility of dying in debt. Large losses as a share of income arise because of households experiencing temporary periods of low income but borrowing or drawing down savings to maintain their levels of consumption (Brewer et al., 2017).¹¹ Nevertheless, for these households, an increase in VAT could constitute a particular burden.

When looked at as a percentage of expenditure, as suggested by Mirrlees (2011), the distributional pattern is less clear. The additional tax burden for most households is similar across the distribution of income. Households in the lowest two income deciles are no more affected by an increase in the standard rate of VAT than households on average, but those in the highest two income deciles are slightly less affected. The distributional impact of an increase in the reduced rate of VAT is even flatter, with average losses as a per cent of expenditure varying only between 0.16 per cent and 0.18 per cent across deciles. While increases in the main rates of VAT might therefore be considered distributional neutral rather than regressive, they are not progressive like increases to income tax, the USC and PRSI, largely because there is no VAT-free allowance on the first slice of household expenditure as with those taxes (Adam and Roantree, 2013).

¹¹ Such temporarily low incomes can arise for a variety of reasons including periods of study, unemployment, and time out of the labour market to raise children, as well as retirees drawing on past savings.



FIGURE 3.3 DISTRIBUTIONAL IMPACT OF A 1 PPT INCREASE IN STANDARD AND REDUCED RATES OF VAT

Source: Authors' calculations using the 2015–16 Household Budget Survey.

Notes: Deciles of household income equivalised, constructed using CSO national equivalence scales. Incomes and expenditures uprated to 2020 levels using average hourly earnings and Consumer Price Index growth from the CSO.

Like a rise in income tax, the USC or PRSI, increasing VAT would weaken financial work incentives by reducing the value of what can be consumed net-of-tax from disposable income (Mirrlees et al., 2011). However, unlike those tax increases, raising VAT also reduces the value of out-of-work transfers and pension income, which mitigates its impact on financial work incentives. There is also some evidence that people are less responsive to less salient taxes such as VAT (Chetty et al., 2009).

Raising the standard and reduced rates of VAT would also exacerbate the magnitude of the existing bias created by the tax system towards zero-rated, reduced-rated and exempt goods. By raising the relative price of standard-rated goods, this encourages individuals to buy more of these goods than they would under a neutral tax system. As discussed in Section 5.1, Ireland stands out as an outlier in Europe in terms of the share of total spending that is subject to these zero- and reduced rates, which suggests the scale of the bias is also likely to be larger than elsewhere.

3.4 EXCISE DUTIES

Excise duties raised €6 billion in 2019. They are levied on the consumption of alcoholic beverages, tobacco products and certain fossil fuels (in the form of both the carbon tax and mineral oil tax, often called petrol or diesel duty). Excise duties

are set as a fixed amount per unit of consumption, with different amounts charged depending on the specific product (e.g. a different excise duty is charged on a litre of beer than on a litre of wine).

Revenue (2020) estimate that a 10 per cent increase in the excise duties on alcoholic beverages and tobacco products, together with a similar increase in the carbon tax, would raise around 440 million, whereas a 5 per cent increase in the excise duties of fuels would yield about €85 million.¹²

As with VAT, Figure 3.4 shows that increasing alcohol duties is regressive when expressed as a share of disposable income but more neutral when done as a share of expenditure. The same is not true for increases to tobacco duty, mineral oil tax and the carbon tax. Figures 3.4 and 3.5 show that each of these tax increases remains regressive (if somewhat less so) when expressed as a share of spending. The reason for this is that such goods make up a larger share of the spending of lower-income households.

Perhaps more than for other taxes, excise duties are motivated by more than just raising revenue. Indeed, most are explicitly aimed at changing behaviour and encouraging consumers to purchase less of goods that are seen as in some way damaging to individuals and/or society at large; what economists called Pigovian taxes designed to correct 'externalities'. From this perspective, the behavioural responses induced by raising excise duties might be regarded as less of an issue than those associated with higher taxes on personal income.

However, there is a strong argument for setting these taxes at a level determined by their cost to society rather than some rate designed to raise a given amount of revenue (Diamond, 1973; Griffith et al., 2019). Furthermore, the aim of discouraging societally harmful behaviour sits uneasily with that of raising additional tax revenue as, to the extent that the taxes are successful in the first aim, they will undercut the second. This perhaps leaves excise duties as poorly suited to addressing the topic of interest in this paper: raising additional tax revenue in the medium to long run.

¹² Estimations about additional revenue are from Revenue (2020), scaled to fit the increases simulated.



FIGURE 3.4 DISTRIBUTIONAL IMPACT OF INCREASES IN ALCOHOL AND TOBACCO EXCISE DUTIES

Source: Authors' calculations using the 2015–16 Household Budget Survey.

Notes: Deciles of household income equivalised, constructed using CSO national equivalence scales. Incomes and expenditures uprated to 2020 levels using average hourly earnings and Consumer Price Index growth from the CSO.



FIGURE 3.5 DISTRIBUTIONAL IMPACT OF INCREASES IN FUEL EXCISE DUTIES AND CARBON TAX

Source: Authors' calculations using the 2015–16 Household Budget Survey.

Notes: Deciles of household income equivalised, constructed using CSO national equivalence scales. Incomes and expenditures uprated to 2020 levels using average hourly earnings and Consumer Price Index growth from the CSO.

3.5 CORPORATION TAX

Receipts from corporation tax amounted to €10.9 billion in 2019, representing about 16 per cent of tax revenues. Statistics from Revenue (2021) show that 51 per cent of these receipts were paid by just 10 companies, raising concerns about over-reliance on a potentially volatile source of tax revenues.

This also creates considerable uncertainty around what an increase to the main 12.5 per cent rate of corporation tax would actually yield, as it is highly dependent on the actions of a small number of companies. Research suggests that foreign direct investment (FDI) and the decisions of multinationals to locate in Ireland are highly sensitive to rates of corporation tax. For example, Conefrey and FitzGerald (2011) estimate that the reduction in corporation tax in Ireland from 40 per cent in 1994 to 12.5 per cent in 2003 added almost 4 per cent to the level of economic output by 2005 and around €2 billion in corporation tax revenues. Lawless et al. (2014) simulate that, if the rate of corporation tax were 22.5 per cent instead of 12.5 per cent, half as many affiliates of multinational corporations would have located in Ireland over the period 2005–2012, while Davies et al. (2016) estimate that a 1 percentage-point increase in the rate of corporation tax would reduce by 4.6 per cent the probability of Ireland being chosen as the location for new FDI from outside the EU. Largely because of this uncertainty, Revenue – in contrast to other major taxes such as income tax, USC and VAT - do not provide any estimate of what an increase in corporation tax rates would raise, nor does any other available source that we know of. There is a question mark, therefore, over how much the government could raise in additional revenue by increasing rates of corporation tax.

Leaving aside this question, increasing rates of corporation tax would have impacts across a range of economic channels. In addition to multinationals, higher rates of corporation tax would affect domestic firms, including small and medium enterprises, which accounted for almost two-thirds of employment in 2018.¹³ Lawless et al. (2020) estimate that over 80 per cent of these undertook investment in fixed assets, intangible assets or staff every year since 2016. Raising the rate of corporation tax would reduce the net-of-tax return on (and so the attractiveness of) these investments, as well as reducing the availability of internal funds, which are the overwhelming source of finance for investments made by domestic firms in Ireland (Lawless et al., 2020).

Furthermore, although corporation tax is statutorily levied on the profits of businesses, it will ultimately be paid by different groups of people. This includes the shareholders of companies, given that higher corporation tax means lower

¹³ See Table BRA08 Business Demography NACE Rev 2, available at https://data.cso.ie/table/BRA08.

dividends and capital gains on shares. While such assets are disproportionately directly held by higher-income individuals, those with private pensions would also be affected given that most funds are at least partly invested in Irish firms. However, research from both the United States (e.g. Auerbach, 2006; Suárez Serrato and Zidar, 2016) and Europe (Fuest et al., 2018) suggests that a large share of the burden of increases to corporation tax is also likely to be borne by workers in the form of lower wages. This can arise from (domestic and multinational) firms deciding to invest less, leading to lower capital and lower labour productivity and wages. Similarly, landowners and consumers are also likely to bear some of the burden of higher corporation tax, though research suggests a smaller share than for company owners and workers (e.g. Suárez Serrato and Zidar, 2016).

A final consideration in relation to raising corporation tax is the international environment. It has long been argued that the responsiveness of multinational investment and location decisions limits the ability of governments to raise corporation tax rates (e.g. Devereux and Sorensen, 2006; OECD, 2007; Johansson et al., 2008). However, there are suggestions that international negotiations spearheaded by the OECD may soon lead to an agreement that would impose a global minimum corporation tax rate.¹⁴ In addition, the UK government has recently announced that it will raise its main rate of corporation tax from 19 to 25 per cent in 2023, while the Biden administration has proposed raising the main rate in the USA from 21 to 28 per cent in the coming years.

While these developments may provide more scope – and political pressure – for a future government to raise the main rate of corporation tax in Ireland, they are also likely to substantially alter the amount of revenue raised by corporation tax. Indeed, the Department of Finance (2021b) has made a provisional allowance in its latest forecasts for a ≤ 2 billion reduction in corporation tax reviews by 2025. However, the eventual impact could be much larger or smaller depending on the detail of any agreement eventually reached. As a result, there may be arguments for leaving the main rate (and structure) of corporation tax unchanged until the implications of any international agreement are fully understood.

3.6 LOCAL PROPERTY TAX (LPT)

The Local Property Tax (LPT) is levied on the assessed market value of most residential properties at a standard rate of 0.18 per cent up to \leq 1,000,000 and 0.25 per cent on anything above that. It raised \leq 473 million in 2019 – little more than when initially introduced in 2013 despite the substantial increase in the value of properties on which it is levied (Horan et al., 2021). This reflects both the exemption of owner-occupied properties built since 2013 and the continued use

¹⁴ See https://www.ft.com/content/847c5f77-f0af-4787-8c8e-070ac6a7c74f, accessed on 9/5/2021.

of valuations made in 2013. Statistics from the CSO show that just over 100,000 new dwellings have been completed since 2013 – around half of which were sold to owner-occupiers – and that the average value of properties sold increased by 75 per cent between 2013 and 2020.¹⁵

Revenue from the LPT could most straightforwardly be increased by bringing recently built properties into scope and using updated valuations for all properties. A recent review of the LPT (Department of Finance, 2019a) estimated that doing so in 2019 would have increased LPT revenues by around 55 per cent, raising an additional €275 million. While this could lead to sharp increases in tax liabilities for some property owners who have seen substantial capital gains in recent years, the Government could simultaneously increase the income limits below which one can defer the liability – currently set at €25,000 for a full and €35,000 for a partial deferral for a couple with no mortgage – if it had concerns about the impacts of such a tax rise on 'asset-rich income-poor' households.

Efforts to mitigate these impacts by reducing the rates levied in certain bands or local authorities would complicate the LPT (leading to over 600 different rates in one option considered by the Department of Finance review) and could transform it from a progressive tax – with an average rate that is rising in the tax base – to a regressive one.

Revenue could also be raised from the LPT by increasing the rates at which the tax is levied. Estimates from the Revenue Commissioners suggest that increasing the rates by 15 per cent – i.e. the main rate from 0.18 per cent to 0.207 per cent and the higher rate from 0.25 per cent to 0.2875 per cent – would raise at least ξ 72 million per year, and more if combined with measures to update valuations and bring exempted dwellings into scope.

While the burden of higher rates of LPT would fall on current owners in the short run, the rates would likely be capitalised into the price of residential property in the longer run (Gravelle, 2007).¹⁶ As a result, higher rates of LPT would be likely to dampen the growth of house prices, particularly that linked to credit growth and purchases driven by the anticipation of capital gains. From this perspective, higher rates of LPT could have positive effects on financial stability as well as raising revenue. In addition, given that the vast majority of household wealth is held in the form of residential property (Lyon et al., 2021), the LPT functions as an effective tax on wealth – one of the topics that we consider in the next section.

¹⁵ See CSO series NDA02 (New Dwelling Completions), HPA02 (Residential Dwelling Property Transactions) and HPA13 (Residential Property Price Index).

¹⁶ This may be more complicated where rates are set at a hyper-local level and closely linked to the quality and quantity of public services, as in the United States. See Oates and Fischel (2016) for a discussion of these issues.

SECTION 4

Tax increases on the 'Better-off'

A future tax-raising government might decide it would prefer to raise extra revenue from those deemed more able to bear an additional burden. Indeed, TDs both supporting and opposing the current government have recently suggested that, in response to spending pressures arising from the pandemic, taxes should be increased on those with higher levels of income or wealth.¹⁷ This section therefore examines various options for raising revenue from those who might be considered better-off in terms of their income or wealth. Throughout the paper, we do not seek to advocate any particular measure(s) as ultimately those are political decisions which depend on a government's distributional goals, value judgements and wider priorities.

4.1 INCREASING TOP RATES OF USC

In addition to the main rates of the USC considered in Section 3.1, a higher 11 per cent rate applies to non-PAYE income in excess of $\leq 100,000$ per year. We estimate that increasing this surcharge by 1 percentage-point would raise a modest ≤ 14 million per year. This, however, is subject to much more uncertainty than increases to the other rates of USC – in part because, unlike the Revenue (2020) estimates provided for most other tax increases, ours is derived from household survey data which is likely to under-record incomes at the very top of the distribution (Bollinger et al., 2019). While this may mean the estimated revenue yield is understated, economic research – including that for Ireland discussed in Section 3.1 (Acheson et al., 2018) – suggests that higher-income and self-employed individuals are much more responsive to taxes than lower-income and PAYE workers, meaning that our estimate may be significantly overstated.

However, there is strong evidence that this relative responsiveness to taxation is driven by the greater opportunities available to the self-employed and company owner-managers to – both legally and illegally – avoid taxes (Saez et al., 2012). This can involve simply not declaring taxable income on self-assessment returns, which Advani (2020) shows is much more likely for self-employed than PAYE workers in the UK (more than half of self-employed workers subject to a random audit were found to be non-compliant, owing tax amounting to more than 40 per cent of that paid). This suggests a greater level of auditing could itself yield additional revenue.

¹⁷ See, respectively, https://www.irishtimes.com/news/politics/covid-19-minister-seeks-solidarity-tax-on-high-earnersand-firms-highly-profitable-in-pandemic-1.4535421 and https://www.thejournal.ie/readme/covid-budget-5234298-Oct2020 (accessed 05/05/2021).

In addition, those who own and manage their own business have more control and flexibility to direct profits within their company and realise this income as capital gains, which – as we discuss in Sections 4.3 and 5.4 – is subject to much lower rates of taxation. Miller et al. (2019) show that this accounts for the entirety of company owner-managers' relative responsiveness to tax in the UK, rather than reductions in real business activity. An important implication of this evidence is that higher rates of tax – including the USC – could raise more revenue if accompanied by measures to restrict reliefs, such as those discussed in Section 5 below.

Nevertheless, the blue series in Figure 4.1 shows that – assuming it elicits no behavioural response – the impact of and revenues from such a tax rise would fall primarily on those in the very highest income decile. The average loss for individuals in this decile amount to 0.07 per cent of disposable income compared to less than 0.01 per cent for those in lower-income deciles. This represents a small impact for the top decile on average because the tax rise applies only to non-PAYE income.

Figure 4.1 also shows the distributional impact of introducing an equivalent 3 per cent USC surcharge on PAYE income, which we estimate would raise around €110 million per year. This increase would again primarily affect those in the very highest income decile, with an average loss of just over 0.50 per cent of disposable income, compared to less than 0.10 per cent for others in the top half of the income distribution and negligible impacts for those in the bottom half. Potential behavioural responses to this tax rise are likely to be smaller than increases to the 3 per cent USC surcharge, reflecting the fact that PAYE workers have fewer opportunities to avoid higher taxes by holding income within an owner-managed company or shifting the form in which income is taken.



FIGURE 4.1 DISTRIBUTIONAL IMPACT OF INCREASES TO HIGHER RATES OF THE USC

Source: Authors' calculations using SWITCH v3.1 run on data from the 2017 Survey of Income and Living Conditions (SILC), updated to 2020 terms using outturn and forecast wage growth from the ESRI and Central Bank of Ireland. Note:

Deciles calculated on the basis of equivalised disposable income, using CSO national equivalence scales.

4.2 **INCREASING INCOME TAX RATES ON HIGHER EARNERS**

Extra tax revenue could also be raised by increasing rates of income tax on higher earners. Previous governments have considered removing the PAYE and Earned Income tax credits – which reduce final income tax liabilities – from taxpayers with incomes above €100,000 per year (Department of Finance, 2019b). Withdrawing these tax credits would further complicate what is already guite a convoluted tax schedule, shown in Figure 4.2 for the PAYE employment earnings of a single adult without children.

The effective marginal tax rate from income tax, the USC and class A (employee and employer) PRSI rises sharply at around €20,000 of gross annual income. This is because individuals face the standard 20 per cent rate of income tax from €16,500 per year while individuals' class A PRSI credit is withdrawn at a rate of 1/6 on top of income tax, PRSI and the 4.5 per cent rate of USC from €18,304 per year. This gives rise to an effective marginal rate of just over 50 per cent for a short range of income at around €22,000 per year, which falls back down to 35.6 per cent before again rising to more than 50 per cent with the higher rates of income tax and USC, at around €33,000 and €70,000 per year respectively. Withdrawing PAYE and Earned Income tax credits at the previously proposed rate of 5 per cent from those with taxable income above €100,000 would create an effective rate of 64.2 per cent between €100,000 and €120,000 per year, shown by the dotted line in Figure 4.2.



FIGURE 4.2 TAX SCHEDULE ON PAYE INCOME FOR SINGLE ADULT WITHOUT CHILDREN, 2021

Source: Authors' calculations.

Notes: Assumes single adult (no children) with PAYE income only, paying class A PRSI. Ignores infinite marginal rates created by discrete jumps ('notches') in USC and PRSI schedules.

A more straightforward and transparent way to increase income tax on higher earners would be to introduce a new rate of income tax from $\leq 100,000$. Revenue (2020) estimate that a new 43 per cent rate would raise around ≤ 315 million per year and – as shown in Figure 4.3 – primarily affect those near the top of the income distribution, with an average loss of 0.84 per cent of disposable income for those in the highest-income decile. However, such a tax rise would be less progressive than an analogous increase to the USC as income tax is levied on the joint income of most married couples. As a result, more people would pay the additional rate of income tax than would pay the new rate of USC considered above.

The joint nature of income tax also means that the extent of behavioural responses might be more substantial than to analogous increases in the USC. This is because some second-earners – predominantly women – would also be affected by the tax increase. The empirical literature shows that this group is typically more responsive to financial incentives than primary earners, both at the intensive and extensive margins (Meghir and Phillips, 2010). Furthermore, Doorley (2019) showed that previous reforms to income tax that primarily affected women induced substantial behavioural responses. It is therefore likely that behavioural responses would reduce the yield from a new rate of income tax above $\leq 100,000$, though to what extent – and whether this would be materially offset by the underreporting of high incomes in our survey data – is uncertain. However, as with increases to the USC, it is also likely that more revenue could be raised if accompanied by measures to restrict reliefs, such as those discussed in Section 5.



FIGURE 4.3 DISTRIBUTIONAL IMPACT OF NEW 43 PER CENT RATE OF INCOME TAX ABOVE €100,000

4.3 CAPITAL GAINS TAX (CGT)

CGT is a tax charged on the increase in value of an asset between its acquisition and disposal. It raised just over ≤ 1 billion in 2019, three times its yield in 2009. This reflects the cyclical and volatile nature of receipts, which Revenue statistics show are also highly concentrated among a small number of taxpayers realising very large gains: almost ≤ 500 million was raised from just 527 taxpayers reporting chargeable gains of more than ≤ 1 million each. The first $\leq 1,270$ of gains in any year are exempt from CGT; gains above that amount are taxed at 33 per cent.

Revenue (2020) estimate that increasing the rate of CGT from 33 to 34 per cent would raise €33 million per year, although this estimate is highly uncertain given the volatile and concentrated nature of CGT receipts.¹⁸ There is evidence that capital gains realisations are quite sensitive to tax rates (e.g. Dowd and McClelland, 2019; Miller et al., 2019; Lavecchia and Tazhitdinova, 2021), which has prompted some to propose temporary or permanent reductions in CGT to try to stimulate economic activity and investment (e.g. Department of Finance, 2018).

However, while research finds that the realisation of capital gains might be very responsive to tax rates (especially in the short run), it also finds that investment is not. Instead, company owner-managers appear to respond to reduced rates of CGT by realising profits that have been retained within their business (Miller et al.,

¹⁸ For example, a similar rise in the UK's higher rate of CGT is estimated to reduce revenues (HMRC, 2021).

2019). This suggests that higher rates of CGT might be more likely to raise revenue if accompanied by measures to remove or restrict some of the significant reliefs that are discussed in Section 5.4, such as entrepreneurs' or retirement relief.

Nevertheless, raising rates of CGT would reduce the incentive to save and invest. It would also exacerbate existing distortions if done without reforming the base on which the tax is currently levied. For example, because CGT is only charged when gains are realised, individuals holding assets whose value has increased are artificially discouraged from disposing of these. Mirrlees et al. (2011, pp.285-346) proposed addressing these issues – and other anomalies in the taxation of savings – by introducing a rate-of-return allowance (RRA) for holdings of shares and similar assets, as exists in Norway. This would effectively provide a tax-free allowance equal in value to the normal ('risk-free') rate of return on the purchase cost of an asset, which could be deducted from actual returns, with any remaining 'excess' returns subject to full taxation. Such a system would eliminate disincentives to save and tax-induced distortions to the form that saving takes, while simultaneously capturing a share of any above-normal or 'excess' returns.

It would also allow for the equal treatment of capital gains and cash income, which currently have separate allowances and rates for reasons that are hard to justify. The effect of this is to leave better-off taxpayers whose income comes exclusively from employment or rental income subject to a higher effective tax rate than those with the same income but from both employment and capital gains. Conversely, the differential treatment encourages those with lower levels of income to take that in the form of earnings rather than capital gains.

This treatment inhibits the ability of government to raise income tax revenues from higher earners, given the ability of company owner-managers to convert income into capital gains. For these reasons, Adam and Miller (2021) and the Office for Tax Simplification (2020), among others, have proposed aligning the rates of tax on capital gains with those on employment income in the UK.¹⁹ Harmonising the treatment of these different income sources would provide more scope for a future tax-raising government to increase not only rates of CGT, but rates of income tax and USC too.

4.4 CAPITAL ACQUISITIONS TAX (CAT)

Capital Acquisitions Tax (CAT) is paid on the value of inheritances or gifts received. It is levied at a rate of 33 per cent on the amount that exceeds a lifetime threshold determined by the relationship between the person that receives the benefit (the

¹⁹ In an Irish context, such alignment would also need to take account of Deposit Interest Retention Tax (DIRT) and Life Assurance Exit Tax (LAET).

beneficiary) and the person who gives it (the disponer). A threshold of €335,000 applies in cases where the beneficiary is the child of the disponer or a parent who takes full and complete ownership of the inheritance (Group A). A threshold of €32,500 applies when the beneficiary is the parent (in cases of limited interest), the grandparent, the grandchild, sibling or nephew/niece of the disponer (Group B). A threshold of €16,250 applies to any other relationship (Group C), with the exception that, if the disposer is the beneficiary's spouse or civil partner, the inheritance or gift is exempt from CAT.²⁰

CAT raised a little over €500 million from just 16,000 payees in 2019. Less than €60 million of these receipts came from the taxation of *inter vivos* gifts. The vast bulk of revenue arose from 14,500 payments of CAT on the receipt of inheritances.²¹ Since, on average, more than one beneficiary is associated with each estate and that the number of deaths has exceeded 30,000 per year in recent years, this implies that far less than half of deaths were associated with an inheritance that led to a CAT liability.²² Revenue statistics also show that the average Group A CAT liability in 2019 was €85,605, which implies that the average Group A taxpayer has received almost €600,000 of inheritance or gifts from their parents (or children) over their lifetime. Using earlier data from the 2013 Household Finance and Consumption Survey (HFCS), Lawless and Lynch (2017) show that fewer than 40 per cent of households had received or expected to receive a gift or inheritance. In short, CAT is a tax primarily paid by a small number of individuals receiving large bequests or gifts.

Revenue (2020) estimate that increasing the rate of CAT by 1 percentage-point would yield ≤ 13 million in extra revenue, a relatively small amount that reflects the exemption of most gifts and inheritances. Reducing these group thresholds could yield more significant amounts of revenue: ≤ 63 million from reducing the Class A threshold to $\leq 250,000$ (its level until 2012); ≤ 20 million from reducing the Class B threshold to $\leq 25,000$, and a mere ≤ 3 million from reducing the Class C threshold to $\leq 13,000$.

Such increases in CAT would not have the same negative impacts on financial incentives to work as increases in taxes on labour or to invest as increases in CGT. Indeed, economic theory suggests that the receipt or even expectation of bequests acts to reduce labour supply, suggesting that increases in CAT may have a positive impact on the employment and hours worked of beneficiaries. Research on this issue provides mixed evidence on the size of such responses. While Kindermann et

²⁰ There also exist numerous CAT exemptions and reliefs which we discuss in Section 5.5.

²¹ See https://www.revenue.ie/en/corporate/documents/statistics/receipts/cat-receipts.pdf.

²² According to the CSO Vital Statistics, there were 31,134 deaths in Ireland in 2019, https://www.cso.ie/en/releasesandpublications/ep/p-vsys/vitalstatisticsyearlysummary2019/.
al. (2020) estimate that an additional Euro of bequest tax revenue in Germany would generate an additional 9 cents of labour income tax revenue in present value terms through higher labour supply of heirs, Doorley and Pestel (2020) – who also examine Germany – find more limited effects. Brown et al. (2010) find that bequests are positively correlated with the probability of early retirement in the USA, especially when the inheritance is unexpected and large. This suggests that another channel that higher CAT might operate through is delaying the retirement of those who would otherwise receive larger bequests or inheritances.

4.5 WEALTH TAX

An obvious way of raising additional revenue from the better-off would be to levy a tax on the stock of accumulated wealth. As is the case internationally, wealth is highly unequally distributed in Ireland. Figures from the HFCS show that 50 per cent of the total in 2018 – estimated to amount to $\in 667.4$ billion – was held by the top 10 per cent of households (Horan et al., 2020). This suggests that a recurrent tax levied on wealth could raise substantial amounts of revenue.

However, the same data shows that the vast majority of household wealth – about 60 per cent – is held in the form of households' main residence, and another 30 per cent made up by other property. Property holdings are also the most important source of wealth for the wealthiest fifth of households; only around 10 per cent of assets are held in another form. Thus most household wealth – including that of the wealthiest – is already subject to tax in the form of the LPT (which as discussed in Section 3.6 is levied at a higher rate on properties worth more than $\pounds 1$ million).

Furthermore, using an earlier (2013) edition of the HFCS, Lawless and Lynch (2018) show that, to raise significant revenue, a wealth tax would have to contain few exemptions and apply from a relatively low level of wealth. For example, they show that a tax at the rate of 1 per cent which applied to wealth in excess of \leq 1 million for a single adult (double that for a couple), and excluded principal private residences, farms, businesses and pensions, would raise just \leq 53 million from only 4,000 (0.25 per cent of) households. Applying the tax to wealth above the same threshold but removing these exemptions would raise \leq 248 million from 26,000 (1.5 per cent of) households, while applying the tax with the same exemptions but from a lower level (\leq 125,000 for a single adult and \leq 250,000 for a couple) would raise \leq 329 million from 96,000 (6 per cent of) households. While aggregate wealth holdings have increased significantly since 2013 (most notably because of an increase in house prices), these broad patterns will continue to hold: that is, a wealth tax will need to apply from a low level, with few exemptions, if it is to raise substantial revenues.

Lawless and Lynch (2018) also show that, although the bulk of tax revenue would be raised from households who have both high levels of income and high levels of wealth, tax liabilities under the latter two scenarios would, on average, amount to more than 15 per cent of gross income per year for the lowest-income tenth of households. While the disproportionate impact of a recurrent wealth tax on such groups could be mitigated with a maximum payment cap, such a measure would reduce revenues significantly and introduce a strong disincentive for those in households affected by the cap to increase their income.²³

A recurrent wealth tax would also have other important economic impacts. If it included significant exemptions, it would create – or exacerbate existing – distortions to save in a tax-favoured form. This could have particularly pronounced effects in the case of owner-occupied housing, which is already subject to tax-favoured treatment through, for example, its exemption from CGT (discussed in Section 5.4 below). Bestowing further tax-advantaged status would be likely to increase demand for and thus the price of owner-occupied housing, which could undercut the Central Bank of Ireland efforts to dampen house price volatility (Kelly et al., 2018; McQuinn, 2021).

In addition, Adam et al. (2013) argue that a recurrent tax on stocks of wealth is inferior to one raising the same revenue on the *returns* from these stocks, because it imposes a higher rate on assets that yield lower returns. Such preferential treatment of 'excess' returns to saving is difficult to justify given both that high-return assets are precisely the type that will continue to be in demand even if more heavily taxed (making the tax less distortionary) and that high-return assets are more likely to be held by wealthier households (Fagereng et al., 2016, 2020).

As Adam and Miller (2020) argue in their contribution to the UK Wealth Tax Commission (Advani et al., 2020), there is a far more convincing economic rationale for a once-off tax on wealth. If credibly once-off and levied on a measure of wealth that was fixed before the tax was announced (or expected), such a tax would – like any other retrospective windfall tax – have no effect on people's behaviour and therefore generate no economic inefficiency.

However, it would be difficult for any government introducing such a tax to credibly commit to it being once-off (particularly given the experience of the pension levy that was introduced in 2011 for a temporary three-year period, but

²³ Consider a PAYE worker with annual earnings of €50,000 per year in a household benefiting from a payment cap of the kind suggested by Lawless and Lynch (2018), set at 33 per cent of gross income. They would keep only 18.5 cent of any additional euro in gross earnings because of the interaction of the payment cap with rates of income tax (40 per cent), the USC (4.5 per cent) and PRSI (4 per cent).

then extended through to 2016, with some discussion of it becoming a permanent feature).²⁴ People might as a result respond by saving less and holding wealth in forms less likely to be taxed in the future. In addition, a once-off wealth tax would still raise complex problems in relation to the valuation of assets (Emmerson et al., 2010) and would not address the issues motivating this section: the need for permanent increases in tax revenue to replace existing sources in terminal decline and finance increased demands for public spending.

²⁴ See O'Donovan (2020) for a discussion of this and the history of other once-off wealth taxes.

SECTION 5

Restricting reliefs and exemptions

In addition to the broad-based tax rises considered in Section 3 and tax increases for the 'better-off' examined in Section 4, a future government could decide to restrict some of the reliefs and exemptions that apply to these taxes. There are a large number of such reliefs and exemptions, as illustrated by the twenty-page list contained in a recent Department of Finance (2020a) report on tax expenditures, many well targeted at achieving legitimate policy aims. We focus attention here on some of the larger reliefs that have a more questionable underlying economic rationale or are poorly targeted at achieving their stated aims.

5.1 STANDARDISING RATES OF VAT

With the departure of the UK from the EU, Ireland is now the only European Union country that applies a zero rate of VAT to a large share of spending (Adam et al., 2011). In addition, a comparatively large share of expenditure is subject to reduced rates of VAT, notably heating fuels, building and many hospitality and tourism-related services. Revenue (2020) estimate that increasing the zero and reduced rates of VAT to the standard rate of 23 per cent could raise ≤ 2.2 billion and ≤ 2.4 billion per year respectively.

Figure 5.1 shows that increasing these zero and reduced rates of VAT to 23 per cent would result in larger losses as share of disposable income for lower-income than higher-income households. However, as argued in Section 3.3, this can present a misleading impression because households experiencing temporary periods out of work typically spend a lot relative to their incomes at any given point in time, but cannot do so indefinitely.

When examined relative to expenditure (which provides a better measure of longer-run or lifetime income), increasing reduced rates of VAT is close to distributionally neutral, but increasing VAT on items that are currently zero-rated is regressive with respect to spending. This is because items subject to the zero rate of VAT – such as books, children's clothing and many types of food and drink – make up a larger share of spending for low-income households. The reverse is true for many items subject to the reduced rates of VAT, in particular hospitality and tourism-related services (Coffey et al., 2020). However, this does not result in a progressive distributional pattern when expressed as a share of spending because reduced rates of VAT also apply to heating fuels and electricity, which make up a larger share of the spending of lower-income households.



FIGURE 5.1 DISTRIBUTIONAL IMPACT OF EQUALISING ALL VAT RATES WITH THE MAIN VAT RATE

Source: Authors' calculations using the 2015-2016 Household Budget Survey.

Notes: Deciles of household income equivalised, constructed using CSO national equivalence scales. Incomes and expenditures uprated to 2020 levels using average hourly earnings and Consumer Price Index growth from the CSO.

Nevertheless, such tax increases would amount to about 3.5 per cent of household income on average if spending patterns did not respond – a significant tax increase for all households. However, because they spend far more in cash terms, the vast majority of revenue raised from the tax increase would be from higher-income households. As a result, it would be possible to spend some of the additional revenue from the tax rise to compensate lower-income households while still raising substantial amounts of revenue. Indeed, Müllbacher et al. (2013) find that it is possible to fully compensate the four lowest-income deciles in Ireland from such a tax increase using just 22 per cent of revenues, leaving 78 per cent – an estimated \pounds 1.7 billion by Revenue's estimate – for other purposes.

5.2 EQUALISING PRSI TREATMENT OF SELF-EMPLOYED AND EMPLOYEES

Economic activity carried out via self-employment is subject to less tax than that carried out through employment. This is because, while income tax credits and the main Class A (employee) and Class S (self-employed) rates of PRSI are the same (4 per cent), employers are required to make PRSI contributions of between 8.8 and 11.05 per cent on behalf of their employees. For example, Figure 5.2 shows that a gross employee salary of \leq 40,000 is associated with \leq 12,768 in tax overall: \leq 5,640 in income tax, \leq 1,108 in USC, and \leq 6,020 in PRSI (\leq 1,600 in employee PRSI and \leq 4,420 in employer PRSI). A similar self-employment income is associated with \leq 8,348 in tax overall: \leq 5,640 in income tax, \leq 1,108 in USC but only \leq 1,600 in PRSI.

This generates a substantial gap in the total tax burden associated with each form of employment, which Roantree et al. (2018), NESC (2020) and Milanez and Bratta (2019) have argued may lead some people to operate as self-employed when they would otherwise be employed. While the lack of entitlement to certain contributory benefits has traditionally been advanced as a reason for why the self-employed pay less PRSI than employees, recent reforms have extended eligibility for the vast majority of these benefits to the self-employed. The Department of Employment Affairs and Social Protection (2020) found that these changes mean that self-employed workers now have access to around 93 per cent of the contributory benefits that employees do, in value terms, while making much fewer contributions.



FIGURE 5.2 TOTAL INCOME TAX, USC AND PRSI ASSOCIATED WITH ANNUAL INCOME OF €40,000

Source: Authors' calculations.

Notes: Assumes single individual with no income tax deductions beyond the standard personal and PAYE/Earned Income tax credit, liable to class A employee and employer PRSI if employed, and class S PRSI if self-employed. Employer PRSI includes National Training Fund Levy of 1 per cent.

We estimate, using SWITCH, that increasing the rates of PRSI paid by the selfemployed to match those made on behalf of PAYE workers would raise about €1.150 billion in revenue. Figure 5.3 shows the distributional impact of this reform, with the tax rise amounting to 1.4 per cent of disposable income on average. Losses for those in the highest-income decile would be just over twice the figure for households on average, while losses for those in the lowest-half of the distribution would be less than half the average.



FIGURE 5.3 DISTRIBUTIONAL IMPACT OF EQUALISING SELF-EMPLOYED AND EMPLOYEE'S PRSI

 Source:
 Authors' calculations using SWITCH v3.1, run on data from the 2017 Survey of Income and Living Conditions (SILC), updated to 2020 terms using outturn and forecast wage growth from the ESRI and Central Bank of Ireland.

 Note:
 Deciles calculated on the basis of equivalised disposable income, using CSO national equivalence scales.

While many self-employed are involved in 'entrepreneurial activities' such as employing others, innovating and investing, those operating as self-employed include everyone from taxi-drivers to IT consultants and barristers. Blanket lower rates of tax – including PRSI – are therefore poorly directed at encouraging entrepreneurship or business start-ups. Rather, as argued by Adam and Miller (2019), government intervention should be targeted towards areas where there is clear evidence that markets are failing to provide appropriate incentives such as research and development (where those who carry out such activities may not be able to capture the full reward from their innovation).

5.3 RESTRICTING PENSION TAX SUBSIDIES

Ireland – in common with most other advanced economies – taxes pensions under a regime that can be broadly characterised as 'exempt-exempt-taxed' (EET), whereby income is exempt from tax when first received and paid into a pension; exempt from tax as the returns accrue, and taxed when funds are withdrawn from the pension (Yoo and de Serres, 2004). Mirrlees et al. (2011) argue that, by exempting from taxation the normal return to savings, this regime comes close to avoiding distorting the timing of individuals' consumption decisions towards either spending more now and less in the future, or *vice versa*.

However, there are some important exceptions to this broadly EET regime in Ireland:

• Employee pension contributions are (since 2011) subject to both employee PRSI and the USC.

- Pension income drawn down in retirement is subject to the USC, but not (employee or employer) PRSI.
- Individuals can draw down a large tax-free lump sum in retirement.
- Contributions are subject to annual limits that vary with age.

These exceptions mean that neither employee nor employer PRSI is ever levied on the overwhelming majority of employer pension contributions. This is because PRSI is not charged on the incomes of those above the state pension age, and only – since 2014 – on certain forms of unearned income. In other words, employer pension contributions are subject to an exempt-exempt-exempt (EEE) PRSI regime. The government could address this anomaly by levying PRSI on the pension income of those aged above the state pension age. This would have the advantage of harmonising the income tax and PRSI treatment of employer pension contributions to an EET regime, but leave employee pension contributions subject to PRSI both when made and when drawn down in retirement.

Alternatively, since employee pension contributions are already subject to employer and (since 2011) employee PRSI, the Government could instead levy both employee and employer PRSI on employer pension contributions when they are made. This would amount to a tax-exempt-exempt (TEE) PRSI regime for both types of pension contributions, which – while inferior to an EET regime, because it leaves untaxed any above-normal returns – might still be preferred to the EEE PRSI regime currently in operation for employer contributions (Mirrlees et al., 2011). However, this approach could raise both intergenerational concerns (as only future contributions would be affected, with those who have already retired or accumulated substantial pension pots unaffected) and implementation issues (in respect of levying employee PRSI on defined benefit pensions). No official estimate is available for what revenue either of these approaches could yield.

Substantial revenue could also be raised by restricting the size of the tax-free lump sum that can be withdrawn from a pension pot on retirement. This is currently capped at \pounds 200,000 and was estimated by Revenue to cost \pounds 134 million in 2014 (the latest year for which data is provided).²⁵ The tax-free lump sum is poorly targeted at lower to middle earners as it provides a much larger bonus for higher-rate income tax payers in retirement than for basic-rate payers. It also encourages the withdrawal of large lump sums even though the primary concern of policy is, arguably, to encourage individuals to ensure a regular stream of income in retirement (Department of Social Protection, 2019).

²⁵ See https://www.revenue.ie/en/corporate/documents/statistics/tax-expenditures/costs-tax-expenditures.pdf

The current tax-free lump sum could be replaced by alternative subsidies better targeted at lower-to-middle earners, including (further) reduced taxation of income drawn from a pension in retirement (e.g. higher personal tax credits for those over the state pension age), or – as suggested by O'Dea and Roantree (2018) in their submission to the Interdepartmental Pensions Reform and Taxation Group – a top-up to pension funds if and when the fund is annuitised. This latter option could be seen as a pension variant of the SSIA scheme introduced in 2001, and has the potential attraction of perhaps being more salient than increases to personal tax credits. It could also be easily tailored to meet a government's preferred distributional aims, with, for example, contributions initially subsidised at a generous rate and these subsidies capped at a maximum cash amount per person to effectively target those with smaller pension pots.

Finally, a government could raise additional revenue by reducing the lifetime or annual limits on what may be contributed to a pension tax-free. Reductions to the lifetime limit would primarily affect those with very large pension pots, given that the Standard Fund Threshold is currently set at ≤ 2 million – down from the level of ≤ 5 million that applied until 2005. Such reductions might be preferred on the grounds of simplicity to those in annual contribution limits, which are already complicated by age-related restrictions that are difficult to justify. Consider two individuals with the same level of lifetime earnings, which are concentrated at different points in life; it is not clear why someone whose earnings peak earlier in life should be discouraged from making the same level of contributions to a pension as someone whose earnings peak much later in life. Again, unfortunately, no official estimate is currently available on the cost of these reliefs.

5.4 CAPITAL GAINS TAX (CGT) RELIEFS

Principal Private Residence (PPR) relief

(PPR relief exempts from CGT any gains made on the disposal of property which was for the whole period the seller's main residence and used solely as their home. Partial relief applies in cases where the property was only for some period the seller's main residence or if part of it was used for business purposes.

While Revenue no longer publishes estimates of the cost of this relief, the Commission on Taxation (Daly et al., 2009) cites a figure of \in 2.4 billion from 47,340 cases in 2006. This amounts to an average of \notin 51,500 in relief per case, implying an average taxable gain of \notin 156,000. The exemption of PPRs from CGT creates a strong bias to save in the form of owner-occupied housing, with research unsurprisingly finding that such exemptions contribute to higher house prices (Hendershott et al., 2020). The relief also creates a distortion towards living in a residential property since, while income from rent is subject to income tax, that from selling owner-occupied housing is tax-free.

However, imposing CGT on PPRs could – as with any asset – generate a 'lock-in' effect, with people discouraged from selling a residence whose value had risen, due to profits realised from the sale being subject to tax. This effect could be exacerbated if people believed that the policy could be reversed in the future (Adam and Roantree, 2015). Mirrlees (2011, pp.395-403) proposed addressing this issue by introducing a recurrent tax on the imputed rent from owner-occupied housing at a homeowner's marginal income tax rate and providing a rate-of-return allowance, as discussed in Section 4.3, that would include residential property. This would in fact lead to some refunds at the point that properties are sold and neutralise the potential for 'lock-in' effects to undermine the long-run viability of the tax. While removing this relief would need to form part of a wider and radical reform of housing taxation, it would provide a means of raising substantial revenues while reducing the bias towards home ownership embedded in the tax system.

Entrepreneur relief

Entrepreneur relief is a reduced CGT rate of 10 per cent that applies to chargeable gains – up to a lifetime limit – on certain eligible assets. Foremost among these are assets owned by a trading company (or holding company of a trading group) of which the shareholder has been a full-time employee or director and who has owned at least 5 per cent of the shares for a continuous period of three years in the five years immediately prior to disposal. The office of the Revenue Commissioners estimates that 875 taxpayers availed of the relief in 2018 (the latest year for which data is available) at a cost of \notin 92.4 million, significantly more than the \notin 27 million per year anticipated when the measure was introduced.²⁶ This implies an average cost of more than \notin 100,000 per claimant, with almost 200 claims for more than \notin 1 million of relief.

As argued by Roantree and Miller (2019), entrepreneur relief creates an array of economic distortions. First, it provides a strong incentive to set up a business in which to retain profits, putting pressure on anti-avoidance rules which attempt to define when companies are 'artificial' avoidance devices. Second, it gives companies an artificial incentive to ensure that any individual employee's shareholdings are above an arbitrary 5 per cent threshold. Third, it encourages owner-managers of companies to retain profits in the company rather than take them out as dividends or salary, and self-employed individuals and partnerships to retain business assets until they are ready to stop doing business altogether. Entrepreneur relief creates these incentives regardless of whether – in the absence of tax considerations – business owners would rather spend their money sooner or could invest it more profitably elsewhere, or whether assets could be more profitably used by others. This potentially exacerbates what Bloom and van Reenan

²⁶ See https://www.revenue.ie/en/corporate/information-about-revenue/statistics/tax-expenditures/entrepreneurrelief-statistics.aspx and http://www.budget.gov.ie/budgets/2016

(2010) suggest are already poor levels of management practices among domestic firms in Ireland by discouraging the disposal of business assets to those who could manage them better.

The justification for applying lower tax rates to people who own their own business than to the rest of the population is far from clear. Preferential capital gains rates are often defended as essential to reward difficult and risky entrepreneurial activity. But the difficulty and risk associated with entrepreneurship do not in themselves justify favourable tax treatment as these are typically rewarded through a higher pre-tax return. What is needed (though not sufficient) to justify the existence of entrepreneur relief is some rationale as to why the market will lead to too few entrepreneurs when the tax system is neutral between legal forms (Adam and Miller, 2021). A good example of this is there being insufficient investment in research and development (R&D) because innovators do not reap sufficient rewards from their innovation, with some spilling over to other businesses that can learn from the experiences of the innovator. This provides a good rationale for policies such as the R&D tax credit, which a Department of Finance (2016) evaluation found was a reasonably effective if expensive way of stimulating R&D activity by private firms.

However, there is little evidence to suggest that reduced rates of CGT are well targeted at alleviating any concerns around business start-ups, or that those who qualify for entrepreneur relief carry out activities associated with large spillovers. Indeed, evidence from the UK shows that few entrepreneurs who availed of a similar relief there knew of its existence when starting their business, and even fewer reported it having influenced the timing or nature of their disposal (HMRC, 2017). This suggests that the relief is more likely to generate efforts to avoid tax on retirement than its intended purpose of spurring entrepreneurship or investment – something that Miller et al. (2019) find good evidence to support. Indeed, this evidence was cited by the British Treasury in its decision to restrict the similarly designed relief in that jurisdiction, now called Business Asset Disposal (BAD) relief. This move by the British government may provide more scope than previously available for a future tax-raising Irish government to follow suit, alongside a more comprehensive review of the incentives provided for start-ups and whether they are achieving their stated aims.

Other CGT reliefs

A number of other reliefs with questionable targeting or economic rationales apply to CGT. At present, no CGT is levied on assets transferred at death. Instead, such assets are treated as being acquired at their market value by the beneficiary at the date of the original owner's death if and when the beneficiary comes to dispose of them. While such treatment is sometimes supported on the grounds that it prevents the double taxation of bequests that are subject to CAT (e.g. Commission on Taxation, 2009), there also exists a CAT credit available to beneficiaries for CGT paid by disponers on certain assets.²⁷ In any case, Adam et al. (2013) point out that double taxation is inherent to the taxation of wealth transfers, with CGT designed to serve an entirely different purpose (the taxation of the returns to saving) and no equivalent relief for income tax already paid on gifts or bequests. Exempting assets transferred at death from CGT creates an extremely strong incentive for older individuals to hold on to assets, such as investment properties, until death in order to bequest them tax-free to children, potentially contributing to lower levels of living standards and higher rates of poverty through retirement (Beirne et al., 2020).

Another questionably targeted relief is that applying to the transfer or disposal of certain business or farming assets by individuals aged 55+. Although termed CGT Retirement Relief, this does not in fact require an individual to retire from the business or farming, but simply dispose of or transfer beneficial ownership of the assets.²⁸ A limit of €3 million for full relief applies on disposals or transfers to children or certain other close relations if made after the age of 66, while no limit applies to those made between the age of 55 and 66. Similarly, a lower limit of €500,000 applies to transfers or disposals made to third parties after the age of 66, with earlier such transfers or disposals subject to a higher limit of €700,000. Partial relief applies to transfers or disposals above these thresholds. The stated rationale for this relief is to support succession in small family businesses and farms, but also to encourage the transfer of small businesses and farms to new non-family owners (Commission on Taxation, 2009, pp.288-289). However, the relief also further advantages the already favourable tax treatment of income taken in the form of capital gains compared to that from employment, with the associated consequences for equity and economic efficiency discussed in Section 4.3.

A final significant (and economically dubious) relief from CGT is that given to property acquired between 7 December 2011 and 31 December 2014. Any gains in respect of land or buildings in any European Economic Area state acquired between these dates are exempt from CGT provided they were held for at least four and up to seven years continuously, and were sold on or after 1 January 2018. Partial relief is available on property held for more than seven years, at a rate given by dividing seven by the number of years the property has been continuously owned. For example, an investment property bought for $\leq 100,000$ in 2012 and sold for $\leq 400,000$ in 2018 would be entirely exempt from CGT but attract a liability of $\leq 97,730$ if bought in November 2011 (abstracting from any allowable expenses such as solicitor's fees and improvements). While the stated rationale for this relief was to 'restore some confidence and to renew activity in the construction,

²⁷ See https://www.revenue.ie/en/gains-gifts-and-inheritance/credits-you-can-claim-against-cat/credit-for-capitalgains-tax-cgt.aspx

²⁸ The former owner can continue to work on the farm or for the business as an employee or consultant.

development and property sectors',²⁹ it is difficult to see why doing so would require completely exempting capital gains experienced by investors for a period of seven years. Given that the CSO's Residential Property Price Index has increased by 75 per cent nationally since 2013 (an annualised growth rate in excess of 8 per cent per year), it is likely that most investors have made substantial windfall gains in addition to any rental income they received from the asset. The office of the Revenue Commissioners estimates that only 632 taxpayers took advantage of the relief in 2018 (the latest year for which data is available), at a cost of €113 million.³⁰

Unfortunately, no official costings are available as to what abolishing or restricting the rest of these reliefs might raise. However, statistics from Revenue show there were more than 1,400 beneficiaries of CGT retirement relief in 2018, while stampduty returns provided by the CSO show that 4,411 residential properties were bought by non-owner occupiers for a combined €600 million between 2012 and 2014.³¹ These figures give some sense of the scale of revenues that might be available to a future government that wanted to raise taxes by restricting some of the more questionably targeted CGT reliefs in operation today.

5.5 CAPITAL ACQUISITIONS TAX (CAT) BUSINESS AND AGRICULTURAL RELIEF

In addition to annual and lifetime CAT-free allowances, individuals who inherit or receive a gift of certain business or agricultural assets can avail of Business or Agricultural CAT Relief.³² This reduces the taxable value of eligible assets by 90 per cent, which – combined with the lifetime allowance of €335,000 – means that a business or farm worth up to €3.35 million can be gifted or bequeathed by a parent to a child without giving rise to any CAT liability. Similarly, a business or farm worth up to €10.05 million can be gifted or bequeathed entirely CAT-free by a parent of three children to those children if given in equal shares.

The stated rationale for these reliefs is – as with CGT retirement relief – to support the growth of and succession within small family farms and businesses (Department of Finance, 2018, 2014). However, Revenue statistics show that in 2019 there were 648 claims for Business Relief at a cost of €200.4 million and 1,413 claims for Agricultural Relief at a cost of €158.6 million: an average cost per claim of €309,259 and €112,243 respectively.³³ This suggests that the primary beneficiaries – of Business Relief in particular – are not those inheriting or being

²⁹ See http://www.budget.gov.ie/budgets/2012/FinancialStatement.aspx

³⁰ See https://www.revenue.ie/en/corporate/documents/statistics/tax-expenditures/costs-tax-expenditures.pdf

³¹ See https://www.revenue.ie/en/corporate/documents/statistics/tax-expenditures/costs-tax-expenditures.pdf and CSO series HPA02 (Residential Dwelling Property Transactions) respectively.

³² See https://www.revenue.ie/en/gains-gifts-and-inheritance/cat-reliefs/business-relief/index.aspx and https://www.revenue.ie/en/gains-gifts-and-inheritance/cat-reliefs/agricultural-relief/index.aspx for full details, including what types of assets are eligible.

³³ See https://www.revenue.ie/en/corporate/documents/statistics/tax-expenditures/costs-tax-expenditures.pdf

gifted *small* family farms or businesses, but far more substantial ones. Furthermore, given that there is strong evidence that inherited family-owned and -run firms are, on average, very poorly managed (Bloom and van Reenan, 2010), the goal of supporting the growth of and succession within family businesses should be weighed against the wider economic costs of discouraging the disposal of business assets to third parties.

Citing excess generosity to those inheriting larger farms and businesses, the Commission on Taxation (2009) recommended reducing the rate of both reliefs to no more than 75 per cent, with a cap of \notin 3 million on eligible assets. While no costing is available for what capping the relief would raise, Revenue (2020) estimate that almost \notin 60 million would be raised by reducing both reliefs to 70 per cent and \notin 135 million by reducing both to 50 per cent.

5.6 HELP TO BUY

Help to Buy (HTB) provides a refund of income tax and Deposit Interest Retention Tax (DIRT) paid in the previous four years to first-time owner-occupiers taking out a mortgage to self-build or buy a new-build residential property. Introduced as a temporary measure in 2016 with an estimated cost of €130 million over 2.5 years, the relief has been expanded and repeatedly extended, capped at the smallest of 10 per cent of the purchase price/completion value, the amount of income tax and DIRT paid in the last four years, or €30,000. Revenue statistics show that 23,149 claims for HTB had been made by the end of 2020, with an estimated cost of €370 million – almost three times the originally anticipated amount.³⁴

The Department of Finance (2019c) estimates that HTB costs approximately ≤ 100 million per year. While restricting or abolishing the scheme might reduce the affordability of new-build homes for some first-time buyers, Revenue statistics show that more than half of claims were for properties valued at more than $\leq 300,000$ (the median price paid for a new-build home by first-time buyers in 2017) and that 40 per cent had a loan-to-value of less than 85 per cent.³⁵ That so many claimants are purchasing more-expensive-than-average properties and already had the required minimum 10 per cent deposit suggests that the scheme is poorly targeted towards its stated aim of providing support to first-time buyers of new-build homes in meeting their deposit requirement.³⁶

This suggestion is reinforced by Figure 5.4, which shows claims for HTB in 2020 as a share of new dwelling completions by county. These are highest in Leitrim and

³⁴ See https://www.revenue.ie/en/corporate/documents/statistics/tax-expenditures/help-to-buy-annual-report-2020.pdf

³⁵ Median property price from CSO series HPA02 (Residential Dwelling Property Transactions).

³⁶ See https://www.oireachtas.ie/en/debates/question/2016-11-29/282/speech/629/

the Midlands, amounting to more than 50 per cent in Meath and 47 per cent in Kildare. However, claims for HTB represent less than 20 per cent of new dwelling completions in Dublin, where issues of affordability for first-time buyers are most acute and supply constraints greatest (Morgenroth, 2016).

This suggests that, to the extent that HTB has stimulated construction activity, it has done so in areas where supply constraints are least rather than where demand is greatest – as what Carozzi et al. (2020) argue was the effect of the UK's Help-to-Buy equity loan scheme.³⁷ Restricting the scheme may therefore have limited effects on the first-time buyers and self-builders it is supposed to help.

5.7 ELIMINATION OF ENVIRONMENTAL TAX RELIEFS

The CSO estimates that fossil-fuel subsidies amounted to ≤ 2.4 billion in 2019, with the majority (89 per cent) of these accounted for by tax reliefs.³⁸ Restricting these tax reliefs could generate a significant amount of revenue while simultaneously promoting environmental objectives. The CSO estimates that the largest of these reliefs was the exemption from excise and carbon taxes of jet kerosene used for commercial flights, costing ≤ 634 million per year, while lower rates of excise duty on autodiesel than petrol cost ≤ 400 million per year.

De Bruin et al. (2019) show that Ireland has the second highest level of fossil-fuel subsidies among OECD countries. They find that removing these subsidies (other than means-tested allowances for electricity, gas and fuel) would have small impacts on average household disposable income, with higher-income households more affected than lower-income households. However, as with excise duty increases, to the extent that policy is successful in reducing the use of fossil fuels, the less revenue restricting such reliefs would raise.

³⁷ Carozzi et al. (2020) also showed that the UK's Help-to-Buy equity loan scheme resulted in higher new-build prices, with no effect on construction volumes in the supply-constrained Greater London Area, benefiting existing landowners and housing developers rather than first-time buyers as intended.

³⁸ See https://www.cso.ie/en/releasesandpublications/er/ffes/fossilfuelsubsidies2019/



FIGURE 5.4 HELP-TO-BUY CLAIMS AS A PERCENTAGE OF NEW DWELLING COMPLETIONS, 2020

Source: Authors' calculations using statistics on Help to Buy claims from Office of the Revenue Commissioners and on New Dwelling Completions from the CSO.

SECTION 6

Conclusions

Even before the outbreak of the COVID-19 pandemic, an ageing population, commitments to future spending increases, overreliance on corporation tax receipts from a small number of companies and an inevitable decline in motor tax revenues combined to make likely the need for future tax rises. This paper has examined a range of options that a future government seeking to raise or replace tax revenues might consider, highlighting the potential distributional impact of such policies and the possible economic effects.

Table 6.1 summarises these options, setting out the estimated revenue that could be raised from each. Figure 6.1 provides a means of comparing the distributional impact of these tax increases where estimates are available, showing the share of revenue paid by each decile as well as their share of total income and expenditure. Measures that raise more than that decile's share of total income (spending) can be classified as progressive with respect to income (spending), while those that raise less can be classified as regressive with respect to income (spending).

TABLE 6.1 REVENUE YIELD OF POSSIBLE TAX RISES

| Measure | Section | Revenue raised (€ million) |
|----------------------------------------------------------------------------------------|---------|-------------------------------|
| Income tax and USCs | 3.1 | |
| Increase standard rate of income tax by 1 ppt | | 664 |
| Increase higher rate of income tax by 1ppt | | 319 |
| Increase 0.5% rate of USC by 1 ppt | | 272 |
| Increase 2% rate of USC by 1 ppt | | 203 |
| Increase 4.5% rate of USC by 1 ppt | | 376 |
| Increase 8% rate of USC by 1 ppt | | 160 |
| PRSI | 3.2 | |
| Increase Class A employee PRSI rate by 1 ppt ^a | | 700 |
| Increase Class A employer PRSI rate by 1 ppt ^b | | 850 |
| Increase Class S self-employed PRSI rate by 1 ppt ^a | | 110 |
| VAT | 3.3 | |
| Increase standard rate of VAT by 1 ppt | | 440 |
| Increase reduced rates of VAT by 1 ppt | | 250 |
| Excise duties | 3.4 | |
| Increase alcohol excise duties by 10% | | 225 |
| Increase tobacco excise duties by 10% | | 80 |
| Increase fuel excise duties by 5% | | 84 |
| Increase carbon tax by 10% | | 138 |
| Local property tax | 3.6 | |
| Update values for all properties ^c | | 275 |
| Increase all local property tax rates by 15% ^c | | 72 |
| Increase top rates of USC | 4.1 | |
| Increase 1% USC surcharge for self-employed income above €100,000 | | 14 |
| Introduce new 3% USC surcharge on PAYE income above €100,000 | | 110 |
| Increase income tax rates on higher earners | 4.2 | |
| Introduce a new tax rate of 43% for income above €100,000 | | 315 |
| Capital gains tax | 4.3 | |
| Increase rate of CGT by 1 ppt | | 33 |
| Capital acquisitions tax | 4.4 | |
| Increase CAT rate by 1 ppt | | 13 |
| Reduce Group's A threshold to €250,000 | | 63 |
| Reduce Group's B threshold to €25,000 | | 20 |
| Reduce Group's C threshold to €13,000 | | 3 |
| Wealth tax | 4.5 | |
| Introduce wealth tax rate of 1% for wealth above €1m with exemptions ^d | | 53 |
| Introduce wealth tax rate of 1% for wealth above €1m without exemptions ^d | | 248 |
| Introduce wealth tax rate of 1% for wealth above €125,000 with exemptions ^d | | 329 |
| Standardize the VAT rates | 5.1 | |
| Increase zero rate of VAT to standard VAT rate | | 2,200 |
| Increase reduced rate of VAT to standard VAT rate | | 2,400 |
| Equalise PRSI treatment | 5.2 | |
| Equalise self-employed PRSI treatment to employees ^a | | 1,150 |
| | | Contd. |

TABLE 6.1 CONTD.

| Measure | Section | Revenue raised (€ million) |
|----------------------------------------------------------------------------|---------|-------------------------------|
| Restrict pension tax subsidies | 5.3 | |
| Cost of tax-free pension lump sum ^e | | 134 |
| Capital gains tax reliefs | 5.4 | |
| Cost of CGT Principal Private Residence Relief | | 2,400 |
| Cost of CGT Entrepreneur Relief ^g | | 92 |
| Cost of CGT relief under section 604A ^g | | 113 |
| Capital acquisitions tax reliefs | 5.5 | |
| Cost of CAT Business Relief ^g | | 200 |
| Cost of CAT Agricultural Relief ^g | | 159 |
| Reduce CAT Business and Agricultural Relief to 70% | | 60 |
| Reduce CAT Business and Agricultural Relief to 50% | | 135 |
| Help to Buy | 5.6 | |
| Cost of Help to Buy scheme ^h | | 100 |
| Environmental Tax Reliefs | 5.7 | |
| Cost of environmental tax reliefs ⁱ | | 2,400 |
| Cost of jet kerosene's exemption from excise and carbon taxes ⁱ | | 634 |
| Standardising excise duty on autodiesel with petrol ^j | | 400 |

Source: Revenue's Ready Reckoner (2020) (unless stated otherwise).

Note: a. Authors' calculation's using SWITCH v. 3.1.

b. Department of Finance (2020), Political Party Costings – Pre Budget 2021, Labour Party Costings, available at https://www.gov.ie/en/publication/fc14f-political-party-costings-pre-budget-2021/

c. Department of Finance (2019a).

d. Lawless and Lynch (2018).

e. Revenue (2014), available at https://www.revenue.ie/en/corporate/documents/statistics/tax-expenditures/costs-tax-expenditures.pdf.

f. Commission of Taxation (2009).

g. Revenue, see https://www.revenue.ie/en/corporate/information-about-revenue/statistics/tax-expenditures/entrepreneur-relief-statistics.aspx

h. Department of Finance (2019c). CSO, available at

https://www.cso.ie/en/csolatestnews/pressreleases/2021pressreleases/pressstatementfossilfuelsubsidies2019/.



FIGURE 6.1 DISTRIBUTIONAL IMPACT OF POSSIBLE TAX RISES

Source: Authors' calculations using SWITCH v3.1 run on data from the 2017 Survey of Income and Living Conditions (SILC), updated to 2020 terms using outturn and forecast wage growth from the ESRI and Central Bank of Ireland for the estimations about the share of income, the income tax, USC and PRSI. Authors' calculations using the 2015-2016 Household Budget Survey for the estimations about the share of expenditure, VAT and excise duties.

It is clear from Figure 6.1 that the majority of revenue from almost all the tax increases considered would come from those in higher income deciles. This in part reflects the unequal distribution of income and spending across the population, with, for example, 22.4 per cent of total income and 16.6 of total spending associated with the very highest income decile. However, it also reflects the fact

that taxes on personal income are levied on a progressive basis, with most levied only above a certain threshold(s). As a result, increases to even broad-based taxes like the standard rate of income tax raise can be considered broadly progressive,

While there are many ways of further focusing revenue increases on the 'betteroff', the options we have considered would struggle to raise substantial amounts of revenue without being levied at very high rates. Furthermore, there is good evidence to suggest that better-off taxpayers – particularly the self-employed and company owner-managers – are especially responsive to taxes. This raises considerable uncertainty around how much extra tax such increased rates might raise relative to the estimates provided here.

However, the evidence also shows that the reason these better-off taxpayers are more responsive is because of the greater opportunities they have to avoid taxes. It might therefore be possible to raise more substantial revenue from the better-off if higher rates were accompanied by restrictions to some of the reliefs and exemptions that apply to existing taxes – to CGT and CAT in particular. Restricting some of the less well targeted reliefs and exemptions that apply to these taxes could not only contribute to raising significant sums of tax revenue but also result in a simpler, more efficient (and arguably fairer) tax system. Similarly, eliminating some of the fossil-fuel tax reliefs could generate a significant amount of revenue while simultaneously promoting a cleaner environment.

A recurring issue highlighted throughout the paper is the large number of anomalies in the current tax system. These find expression in reliefs and exemptions, as well as in the differential tax treatment of income based on its source. Increasing tax rates while keeping the tax base unchanged would amplify the distortions these create. There is, therefore, a good case for a government seeking to raise taxation to also address these anomalies as part of a wider reform of taxation.

Nevertheless, the most straightforward way of raising substantial tax revenue is through increases to the main rates of income tax, the USC, PRSI, VAT and the LPT. Even small increases to any of these broad-based taxes could generate considerable revenue, precisely because they affect almost all households. Such tax rises can also be designed to meet a range of distributional objectives, with increases to higher rates of income tax and the USC the most progressive, and increases to the main and reduced rates of VAT the least progressive.

However, the distributional objectives of governments are not limited to income. Roantree et al. (2021) show that Ireland – like the United States and Britain – is experiencing growing inequality across generations, with younger adults hit hardest in the labour market by both the financial crisis and the pandemic. Future governments seeking to address this growing inequality may wish to focus tax increases on other age groups. From this perspective, increases in the LPT, taxes on pension income and the restrictions to pension tax subsidies we discuss are all relatively well targeted at those from previous generations who have benefited most from strong growth in earnings and house prices in recent decades.

Ultimately the decision of how much to raise taxes and which taxes to raise is a political decision that a future government must take by balancing the impact of tax increases on factors such as the incentives to work and invest with other goals like equity and simplicity. But the likely need for significant tax increases also provides an opportunity to reassess how effective various parts of the tax system are at achieving their objectives. Doing so could result in a tax system that not only raises the revenue necessary to finance desired levels of public spending in the years ahead, but that is better designed to meet the challenges of the coming decades.

REFERENCES

- Acheson, J., B. Stanley, S. Kennedy and E.L.W. Morgenroth (2018). *The elasticity of taxable income*. Department of Finance: Dublin.
- Adam, S. and H. Miller (2021). *Taxing work and investment across legal forms: pathways to well-designed taxes.* The Institute for Fiscal Studies: London.
- Adam, S. and H. Miller (2020). *The Economics of a Wealth Tax*. Wealth Tax Commission: London.
- Adam, S., J. Browne, D. Phillips and B. Roantree (2020). 'Frictions and taxpayer responses: evidence from bunching at personal tax thresholds', *International Tax and Public Finance*.
- Adam, S., D. Phillips and B. Roantree (2019). '35 years of reforms: A panel analysis of the incidence of, and employee and employer responses to, social security contributions in the UK', *Journal of Public Economics*, 171, 29-50.
- Adam, S. and B. Roantree (2015). 'Options for increasing tax', *IFS Green Budget*. The Institute for Fiscal Studies: London.
- Adam, S., C. Emmerson and B. Roantree (2013). 'Broad shoulders and tight belts: Options for taxing the better-off', *IFS Green Budget 2013*. The Institute for Fiscal Studies: London.
- Adam, S., T. Besley, R. Blundell, S. Bond, R. Chote, M. Gammie, P. Johnson, G. Myles and J.M. Poterba (2010). *Dimensions of Tax Design*. Oxford University Press.
- Advani, A. (2017). 'Who does and doesn't pay taxes?', Institute for Fiscal Studies Briefing Note.
- Advani, A., E. Chamberlain and A. Summers (2020). A Wealth Tax for the UK. Wealth Tax Commission Final Report. Wealth Tax Commission: London.
- Allen-Coghlan, M., K. McQuinn and P. Varthalitis (2020). 'Sovereign debt after COVID-19: How the involvement of the ECB can impact the recovery path of a Member State'. ESRI *QEC* Special Article, December 2021. Economic and Social Research Institute: Dublin.
- Anderson, P.M. and B.D. Meyer (1997). 'The effects of firm specific taxes and government mandates with an application to the US unemployment insurance program', *Journal of Public Economics*, 65(2), 119-145.
- Anderson, P.M. and B.D. Meyer (2000). 'The effects of the unemployment insurance payroll tax on wages, employment, claims and denials', *Journal of Public Economics*, 78(1-2), 81-106.
- Auerbach, A.J. (2006). 'Who bears the corporate tax? A review of what we know', *Tax Policy and the Economy*, *20*, 1-40.
- Beirne, K., A. Nolan and B. Roantree (2020). *Income adequacy in retirement: Evidence from the Irish longitudinal study on ageing (TILDA)*. Research Series No. 107. Economic and Social Research Institute: Dublin.

- Bloom, N. and J. Van Reenen (2010). 'Why do management practices differ across firms and countries?', *Journal of Economic Perspectives*, 24(1), 203-24.
- Blundell, R. and T. MaCurdy (1999). 'Labor supply: A review of alternative approaches', *Handbook of Labor Economics*, 3, 1559-1695.
- Boadway, R., Chamberlain, E. and C. Emmerson (2010). 'Taxation of wealth and wealth transfers', *Dimensions of tax design: The Mirrlees review*, 737-814.
- Bollinger, C.R., B.T. Hirsch, C.M. Hokayem and J.P. Ziliak (2019). 'Trouble in the tails? What we know about earnings nonresponse 30 years after Lillard, Smith, and Welch', Journal of Political Economy, 127(5), 2143-2185.
- Brewer, M., B. Etheridge and C. O'Dea (2017). 'Why are households that report the lowest incomes so well-off?', *The Economic Journal*, 127 (605), F24-F49.
- Brown, J. R., C.C. Coile and S.J. Weisbenner (2010). 'The effect of inheritance receipt on retirement', *The Review of Economics and Statistics*, *92*(2), 425-434.
- Brys, B., S. Perret, A. Thomas and P. O'Reilly (2016). 'Tax Design for Inclusive Economic Growth', OECD Taxation Working Papers, No. 26, OECD Publishing, Paris, https://doi.org/10.1787/5jlv74ggk0g7-en.
- Carozzi, F., C.A. Hilber and X. Yu (2020). *On the economic impacts of mortgage credit expansion policies: evidence from Help to Buy*. Centre for Economic Performance: London.
- Chetty, R., A. Looney and K. Kroft (2009). 'Salience and taxation: Theory and evidence', *American Economic Review*, 99(4), 1145-77.
- Coffey, C., K. Doorley, C. O'Toole and B. Roantree (2020). The effect of the COVID-19 pandemic on consumption and indirect tax in Ireland. Budget Perspectives. 2021 (3). Economic and Social Research Institute: Dublin.
- Conefrey, T., R. Hickey and N. McInerney (2021). 'COVID-19 and the Public Finances in Ireland', *Economic Letter*, Vol. 2021 (3). Central Bank of Ireland: Dublin.
- Conefrey, T., R. Hickey and G. Walsh (2019). 'Debt and Uncertainty: Managing Risks to the Public Finances', *Economic Letter*, Vol. 2019 (11). Central Bank of Ireland: Dublin.
- Conefrey, T. and J.D.F. Gerald (2011). 'The macro-economic impact of changing the rate of corporation tax', *Economic Modelling*, *28*(3), 991-999.
- CSO (2021). Fossil Fuel Subsidies 2019, available at https://www.cso.ie/en/csolatestnews/presspages/2021/fossilfuelsubsidies2019
- Daly, F., T. Arnold, J. Burke, M. Collins, F.J. Convery, T. Donohue, E. Fahy, C. Hunt, S. Leech,
 C. Lucey, D. McCoy, F. O'Rourke, M. O'Sullivan, M. Redmond, W. Soffe and M.
 Walsh (2009). *Commission on Taxation report 2009*.
- Davies, R.B., I. Siedschlag and Z. Studnicka (2016). 'Corporate Taxation and Foreign Direct Investment in EU Countries: Policy Implications for Ireland', *ESRI Quarterly Economic Commentary*. Economic and Social Research Institute: Dublin.
- De Bruin, K.C., E. Monaghan and A.M. Yaku (2019). *The impacts of removing fossil fuel* subsidies and increasing carbon tax in Ireland. Economic and Social Research Institute: Dublin.

- Department of Employment Affairs and Social Protection (2020). *Pay Related Social Insurance for Self-Employed Workers.* Tax Strategy Group, 20 (04). Government of Ireland: Dublin.
- Department of Finance (2021a). *Budget 2021: Economic and Fiscal Outlook*. Government of Ireland: Dublin.
- Department of Finance (2021b). 'Draft Stability Programme Update 2021. Incorporating The Department of Finance's Spring Forecasts'. Government of Ireland: Dublin, available at https://www.gov.ie/en/press-release/07c73-minister-donohoepublishes-stability-programme-update-2021/.
- Department of Finance (2020). 'Political Party Costings Pre Budget 2021, Labour Party Costings', available at https://www.gov.ie/en/publication/fc14f-political-party-costings-pre-budget-2021/
- Department of Finance (2019a). *Review of Local Property Tax. The report of the Interdepartmental Group – March 2019.* Government of Ireland: Dublin.
- Department of Finance (2019b). *Budget 2020: Addressing Fiscal Vulnerabilities*. Government of Ireland: Dublin.
- Department of Finance (2019c). *Budget 2020: Summary of 2020 Taxation Measures*. Government of Ireland: Dublin.
- Department of Finance (2018). *Capital and savings taxes Capital Gains, Capital Acquisitions Taxes.*
- Department of Finance (2014). *Report of the agri-taxation working group to the Minister for Finance and the Minister for Agriculture, Food and Marine.*
- Department of Social Protection (2019). 'A Roadmap for Pensions Reform 2018 2023'. Government of Ireland: Dublin, available at https://www.gov.ie/en/publication/abdb6f-a-roadmap-for-pensions-reform-2018-2023/
- Devereux, M.P. and P.B. Sørensen (2006). *The corporate income tax: international trends and options for fundamental reform*. Directorate-General for Economic and Financial Affairs, European Commission: Brussels.
- Diamond, P.A. (1973). 'Consumption externalities and imperfect corrective pricing', *The Bell Journal of Economics and Management Science*, 4 (2), 526-538.
- Doorley, K. (2017). Barrington Lecture 2017-18: 'Taxation, work and gender equality in Ireland', *Journal of the Statistical & Social Inquiry Society of Ireland*, 47.
- Doorley, K. and N. Pestel (2020). 'Labour supply after inheritances and the role of expectations', *Oxford Bulletin of Economics and Statistics*, vol. 82, issue 4, 843-863.
- Dowd, T. and R. McClelland (2019). 'The bunching of capital gains realizations', *National Tax Journal*, 72 (2), 323-358.
- Ebrill, M.L.P., M.M. Keen and M.V.P. Perry (2001). *The modern VAT*. International Monetary Fund: Washington D.C.
- European Commission (2020). *Country Report Ireland 2020*. European Commission: Brussels.

- Fagereng, A., L. Guiso, D. Malacrino and L. Pistaferri (2020). 'Heterogeneity and persistence in returns to wealth', *Econometrica*, *88*(1), 115-170.
- Fagereng, A., L. Guiso, D. Malacrino and L. Pistaferri (2016). 'Heterogeneity in returns to wealth and the measurement of wealth inequality', *American Economic Review*, 106(5), 651-55.
- Fuest, C., A. Peichl and S. Siegloch (2018). 'Do higher corporate taxes reduce wages? Micro evidence from Germany', *American Economic Review*, *108*(2), 393-418.
- Government of Ireland (2020). *Programme for Government: Our Shared Future*. Available at https://www.gov.ie/en/publication/7e05d-programme-for-government-our-shared-future/
- Gravelle, J. (2007). 'Who Pays Property Taxes? A Look at the Tax Effects of Property Taxes Across the States', in *Proceedings of the 100th Annual Conference on Taxation*, 94–97. National Tax Association, Washington, DC.
- Griffith, R., M. O'Connell and K. Smith (2019). 'Tax design in the alcohol market', *Journal of Public Economics*, 172, 20-35.
- Gruber, J. (1997). 'The incidence of payroll taxation: evidence from Chile', *Journal of Labor Economics*, *15*(S3), S72-S101.
- Hendershott, P.H., K.H. Kim, J.M. Lee and J.D. Shilling (2020). 'Announcement Effects: Taxation of Housing Capital Gains in Seoul', *The Journal of Real Estate Finance and Economics*, 1-23.
- HMRC (2021). 'Direct effects of illustrative tax changes', available at https://www.gov.uk/government/statistics/direct-effects-of-illustrative-tax-changes
- Honohan, P. (2021). *Is Ireland really the most prosperous country in Europe?* Central Bank of Ireland: Dublin.
- Hora D., R. Lydon and T. McIndoe-Calder (2020). 'Household wealth: what is it, who has it, and why it matters', *Research Technical Paper*. Vol. 2020 (7). Central Bank of Ireland: Dublin.
- IMF (2021a). 'Fiscal Monitor Update, January 2021'. International Monetary Fund: Washington D.C., available at https://www.imf.org/en/Publications/FM/Issues/2021/01/20/fiscal-monitorupdate-january-2021/
- IMF (2021b). 'Fiscal Monitor Update, April 2021'. International Monetary Fund: Washington D.C., available at https://www.imf.org/en/Publications/FM/Issues/2021/03/29/fiscal-monitorapril-2021#Full%20Report
- IMF (2021c). 'Staff concluding statement of the 2021 Article IV Mission'. International Monetary Fund: Washington D.C., available at https://www.imf.org/en/News/Articles/2021/05/12/mcs051221-ireland-staffconcluding-statement-of-the-2021-article-iv-mission.
- IMF (2019). 'Ireland Staff Report for the 2019 Article IV Consultation', *Country Report No.* 19/164. International Monetary Fund: Washington D.C.

- Institute for Fiscal Studies, CPB Netherlands Bureau for Economic Policy Analysis, CAPP, CASE, ETLA, IFO and HIS (2011). A retrospective evaluation of elements of the EU VAT system. European Commission: Brussels.
- Irish Fiscal Advisory Council (2020). *Fiscal Assessment Report: December 2020*, Irish Fiscal Advisory Council: Dublin.
- Irish Fiscal Advisory Council (2019). *Fiscal Assessment Report: June 2019,* Irish Fiscal Advisory Council: Dublin.
- Irish Fiscal Advisory Council (2018). *Pre-Budget 2019 Statement*, Irish Fiscal Advisory Council: Dublin.
- Johansson, Å., C. Heady, J. Arnold, B. Brys and L. Vartia (2008). 'Taxation and Economic Growth', OECD Economics Department Working Papers, No. 620, OECD Publishing, Paris, https://doi.org/10.1787/241216205486.
- Keane, M.P. (2011). 'Labor supply and taxes: A survey', Journal of Economic Literature, 49(4), 961-1075.
- Kelly, R., F. McCann and C. O'Toole (2018). 'Credit conditions, macroprudential policy and house prices', *Journal of Housing Economics*, *41*, 153-167.
- Kindermann, F., L. Mayr and D. Sachs (2020). 'Inheritance taxation and wealth effects on the labor supply of heirs', *Journal of Public Economics*, 191: 104127.
- Koeniger, W. and J. Prat (2018). 'Human capital and optimal redistribution', *Review of Economic Dynamics*, 27, 1-26.
- Lavecchia, A.M. and A. Tazhitdinova (2021). *Permanent and Transitory Responses to Capital Gains Taxes: Evidence from a Lifetime Exemption in Canada*. National Bureau of Economic Research.
- Lawless, M., M. Martinez-Cillero, C. O'Toole, E. Gargan, L. Cantwell and P. McGoldrick, (2020). SME investment report 2019. Economic and Social Research Institute (ESRI) Research Series.
- Lawless, M. and D. Lynch (2018). *Scenarios and Distributional Implications of a Household Wealth Tax in Ireland*. ifo DICE Report 2/2018 June Volume 16.
- Lawless, M. and D. Lynch (2017). 'Gifts and inheritances in Ireland'. ESRI WP579, December 2017.
- Lawless, M., D. McCoy, E. Morgenroth and C. O'Toole (2014). *The importance of corporation tax policy in the location choices of multinational firms*. An Roinn Airgeadais, Department of Finance, Economic and Social Research Institute.
- Lydon, R., D. Horan and T. McIndoe-Calder (2021). 'Changes in Irish Households' Finances from 2013 to 2018: Evidence from the Household Finance and Consumption Survey', *The Economic and Social Review*, *52*(1, Spring), 75-99.
- McQuinn, K. (2021). *House prices and mortgage credit: Empirical evidence for Ireland An update*. Economic and Social Research Institute: Dublin.
- McQuinn, K, C. O'Toole, M. Allen-Coghlan and C. Coffey (2020). *Quarterly Economic Commentary*, Autumn 2020, Economic and Social Research Institute: Dublin.

- McQuinn, K, C. O'Toole, M. Allen-Coghlan and P. Economides (2019). *Quarterly Economic Commentary*, Winter 2019, Economic and Social Research Institute: Dublin.
- Meaney (2015). *Vote Management and the Social Insurance Fund*. IGEES Staff Paper. IGEES, Dublin.
- Meghir, C. and D. Phillips (2010). 'Labour supply and taxes', *Dimensions of tax design: The Mirrlees review*, 202-74.
- Milanez, A. and B. Bratta (2019). 'Taxation and the future of work: How tax systems influence choice of employment form'. OECD Taxation Working Papers, No. 41, OECD Publishing: Paris, available at https://doi.org/10.1787/20f7164a-en.
- Miller, H., T. Pope and K. Smith (2019). 'Intertemporal income shifting and the taxation of owner-managed businesses' (No. W19/25). IFS Working Papers.
- Mirrlees, J., S. Adam, T. Besley, R. Blundell, S. Bond, R. Chote, M. Gammie, P. Jonson, G. Myles and J. Poterba (2011). *Tax by Design: The Mirrlees review*. Oxford University Press: Oxford.
- Morgenroth, E. (2016). *Housing Supply and House Price Trends: a County Level Analysis.* ESRI Research Notes 2016/1/1, Economic and Social Research Institute: Dublin.
- Müllbacher, S., R. Hyee, L. Bettendorf, H. Rojas-Romagosa, P. Veenendaal, M. Baldini and S. Adam (2013). A study on the economic effects of the current VAT rates structure: Final Report; Study on behalf of the European Commission, TAXUD; in consortium with CAPP, CASE, DEPII, ETLA, IFO, IFS.
- NESC (2020). *The Position of the Self-Employed*. Background Paper (151/2). National Economic & Social Council: Dublin.
- Oates W.E. and W.A. Fischel (2016). 'Are Local Property Taxes Regressive, Progressive, or What?', National Tax Journal, 69:2, pp. 415-434
- O'Connor, B., T. Hynes, D. Haugh and P. Lenain (2016). 'Searching for the Inclusive Growth Tax Grail: The Distributional Impact of Growth Enhancing Tax Reform in Ireland', *The Economic and Social Review*, 47(1, Spring), 155-184.
- O'Donovan, N. (2020). *One-off wealth taxes: Theory and Evidence*. Wealth Tax Commission Evidence Paper, 7, Wealth Tax Commission: London.
- OECD (2021). OECD Economic Outlook, Interim Report March 2021, Organisation for Economic Co-operation and Development: Paris, https://doi.org/10.1787/34bfd999-en
- OECD (2007). OECD Tax Policy Studies Tax Effects on Foreign Direct Investment: Recent Evidence and Policy Analysis (No. 17). Organisation for Economic Co-operations and Development: Paris.
- Office of Tax Simplification (2020). *Capital Gains Tax review first report: Simplifying by design.*
- Parliamentary Budget Office (2018). *Pre-Budget 2019 Commentary*. Houses of the Oireachtas: Dublin.
- Revenue (2021). 'Corporation Tax 2020 Payments and 2019 Returns', available at https://www.revenue.ie/en/corporate/documents/research/ct-analysis-2021.pdf

Revenue (2020). 'Revenue Ready Reckoner - Post Budget 2021'.

- Roantree, B., B. Maître, I. Privalko and A. McTague (2021). *Poverty, Income Inequality and Living Standards*. Economic and Social Research Institute: Dublin.
- Roantree, B., M. Bercholz, K. Doorley, C. Keane and M. Regan (2018). 'Budget 2019: tax and welfare changes', *QEC* Special Article. Economic and Social Research Institute: Dublin.
- Roantree, B. and C. O'Dea (2018). 'Submission to the Interdepartmental Pensions Reform and Taxation Group', available at https://assets.gov.ie/96450/b92f50f7-9154-4b0c-bf73-0f39f1b3c290.pdf
- Saez, E., J. Slemrod and S.H. Giertz (2012). 'The elasticity of taxable income with respect to marginal tax rates: A critical review', *Journal of Economic Literature*, *50*(1), 3-50.
- Suárez Serrato, J.C. and O. Zidar (2016). 'Who benefits from state corporate tax cuts? A local labor markets approach with heterogeneous firms', *American Economic Review*, 106(9), 2582-2624.
- Yoo, K.Y. and A. De Serres (2004). *Tax treatment of private pension savings in OECD countries and the net tax cost per unit of contribution to tax-favoured schemes*. Organisation for Economic Co-operation and Development: Paris.

APPENDIX I

The results presented in this paper are derived from SWITCH, the ESRI's direct tax and benefit microsimulation model, and ITsim, an indirect tax microsimulation model jointly developed by researchers at the ESRI and the Department of Finance.

ITsim estimates the indirect taxes (VAT and excise duties, including carbon taxes) paid by Irish households on the basis of their reported expenditure, collected by the CSO's nationally representative Household Budget Survey (HBS). This is conducted every five years, with respondents asked to keep a diary of their expenditures over a two-week period, but the survey also contains information on less frequent expenditure items, such as insurance and durable goods. We use data from the latest edition of the HBS (conducted between February 2015 and 2016), uprating incomes and expenditures to 2020 terms using official statistics. Our model categorises which rates of VAT and excise duty each expenditure item is subject to, with the carbon content of fuels taken from official estimates. We then apply the 2020 rates of VAT³⁹ and excise duties to these uprated quantities to estimate the amount of indirect taxes paid by each household, and – holding quantities of goods and services purchased constant – how much indirect taxes they would pay if the rates were increased.

While the HBS also collects information on income, it does not do so to the level of detail required to determine the direct tax liabilities and benefit entitlements of households. To estimate the impact that possible direct tax and PRSI increases would have on different income groups, we use SWITCH. This simulates the direct tax liabilities and social welfare entitlements of the Irish population using the nationally representative SILC. SILC is an annual household survey conducted by the CSO that collects detailed information on individuals' incomes, along with detailed demographic information. We uprate these quantities to 2020 terms in the same way as those in the HBS, without taking into account the COVID-19 effect, then use SWITCH to simulate the net change in household disposable income for each of the reforms examined in the paper.

Both sets of estimates assume that households' behaviour remains unchanged in response to a change in relative prices of goods/services and labour/leisure for the HBS- and SILC-derived estimates respectively. This means the results are best interpreted as showing the initial 'first round' effects of the reforms considered.

³⁹ For the main VAT rate we used the rate applied before COVID-19, as the lower main rate of VAT was a temporary measure.

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