



Fairer taxation? The case for and against more progressive consumption taxes in the UK

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Executive Summary

The UK's income and consumption taxes are broadly progressive, yet asset and income inequality is worsening for many households across the country. This report reviews how a progressive consumption tax (PCT) could be implemented, how the transition from the current system could be taken forward and investigates the distributional consequences of introducing such a tax. It finds that a direct consumption tax could be implemented without a loss of tax revenue and that it can be modelled in such a way as to reduce inequality if that is a desired policy outcome.

Direct consumption taxation is distinct from an indirect tax on current expenditure such as Value Added Tax (VAT) because it is a tax on an individual's total consumption across a year, rather than taxation at the point of expenditure every time a purchase is made. A PCT, suitably designed, enhances welfare in three ways. First of all, it helps households to smooth their consumption over the life cycle. The reason is that consumption tends to increase steadily with age up to the mid-40s and then decrease sharply later in life, but people experience higher lifetime satisfaction when they are able to engage in more stable consumption throughout adult life.

A PCT evens out consumption over time because it allows individuals to earn and save during their working life without tax disincentives and plan smooth consumption paths over their lifetime. Furthermore, progressive taxes on consumption only set in once a certain threshold is reached (e.g. a tax-free threshold of £100 per week), which enables low-income households to consume more of their income.

Secondly, a PCT enables households to make more flexible decisions about the balance between labour and leisure by incentivising employment for all households, not only low-income households but also higher income ones because their labour is not taxed, only what they consume. Thirdly, a PCT enables households to accumulate wealth because it generates incentives to increase saving for all income groups.

Our research analyses three different types of PCT: (1) replacing VAT and consumption duties with a direct 15 per cent flat-rate tax on consumption; (2) replacing VAT, consumption duties and direct income taxes and national insurance contributions, off-set by flat-rate direct consumption tax rate to 41.3 per cent; (3) replacing indirect consumption and direct income taxes with a progressive, direct consumption tax, which consists of a flat-rate direct consumption tax rate of 78 per cent and adds a tax-free threshold (£100 per week) to the direct consumption tax.

Based on data that covers approximately 40,000 individuals (aged 18 or above) from 20,000 households and that is representative of the entire UK population, our research compares the three types of PCT over a 30-year simulated time horizon. We conclude that (3) a progressive, direct consumption tax, has several advantages compared with (1) and (2). One advantage is that it supports higher consumption early in life when households tend to have lower incomes but higher needs (e.g. the costs of housing and child-rearing).

Another advantage is the reduction in hours worked before the age of 25 and from the age of 55. While this means increased hours during prime working years between the ages of 25 and 55 (about 1.5 hours more), it does mean greater flexibility between labour and leisure at the start of working life and before retirement. A third advantage is that the minimum threshold for tax payment (£100 per week) allows households in the bottom 20 per cent of the income distribution to respond to savings incentives and increase their assets while also benefitting from bequests at prevailing rates of inheritance tax.

Introducing a progressive, direct consumption tax raises a number of transition issues, such as whether it would apply in the same way to imported goods and services, how to avoid double taxation for pensions and registered assets and how to address differential capital taxation (e.g. corporate capital vs housing and inherited capital). One way of dealing with these transition issues is to phase in gradually a progressive, direct consumption tax, which would help people who maintain a high level of consumption from inherited capital. That is because moving from one tax system to another will change assets value, imposing a burden on wealth accumulated before the reform and on the generation who holds the capital at the time. Another way is to allow for exemptions, especially tax-free thresholds.

While the benefits of a progressive, direct consumption tax are clear, it is also the case that such a system has drawbacks, such as a long transition, the difficulty of distinguishing different kinds of income and expenditure (e.g. inheritance) and questions related to cross-border movements of goods and services.

But at a time of increasing income and asset inequality, introducing a progressive, direct consumption tax would help poorer households consume more tax-free, have greater incentives to increase hours worked and save more, all of which would reduce wealth disparities.

1. Introduction: inequality and consumption taxes

The UK's tax system is designed, besides raising general state revenue, to narrow the gap between the rich and the poor by providing resources for health and social care, education, welfare, defence, to name but a few public services and public goods. Despite this, however, both asset and income inequality are still high in the UK compared with other advanced economies (Ravallion, 2018; Haldane, 2021). Disparities have been exacerbated by recent shocks such as the Covid-19 pandemic, in particular for people from BAME groups, older workers and those with disabilities (House of Commons Women and Equalities Committee, 2020; Oung and Elias, 2020; Runge et al., 2021; Mortimer-Lee and Pabst, 2022). The impact of policy choices – both fiscal and monetary policy – on disparities of wealth is also a matter of intense debate both nationally and internationally.

In a context of low economic growth and flatlining productivity since the 2008-09 financial crisis, the debate in the UK has recently focused once more on taxation – with the Liz Truss government building its economic strategy on a combination of tax cuts and supply-side reforms. What is the right level of income tax, both the bottom and the top tax rates? Should the UK consider introducing new wealth taxes, whether on individuals or on corporations, for example land taxes (Kumhoff, 2022) or a special tax for technological platforms? What about windfall taxation, for instance on energy companies? Yet discussion of consumption taxes tends to be restricted to the question of whether to cut Value Added Tax (VAT), either on certain goods such as petrol and energy or across the board. So far, the debate on taxation in the UK has not taken a broader approach to consumption.

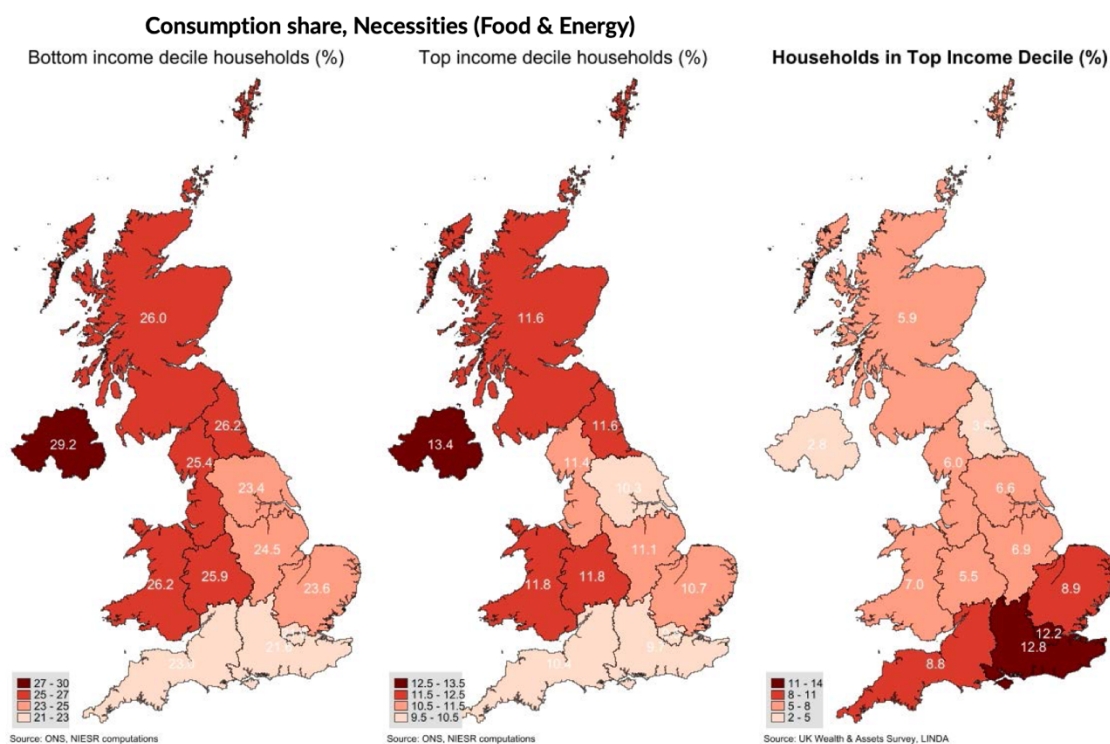
Research by the National Institute of Economic and Social Research (NIESR) has highlighted two aspects of increasing inequality that are closely connected with the question of consumption. First, destitution – where people lack income to cover their basic needs (food, shelter, clothing) – is projected to rise from about 0.75 per cent of households in the financial year 2018-2019 to over 2.5 per cent in the financial year 2022-23 (Bhattacharjee et al., 2022a), potentially reaching as many as 1 million households (Bhattacharjee et al., 2022b).¹ The sharp

¹ NIESR has been using destitution as a concept to measure extreme poverty. Specifically, the income component of the Joseph Rowntree Foundation's definition (Fitzpatrick et al., 2020) is used as a benchmark, whereby a single person household is considered destitute when their income falls below £70 per week, with any additional adult requiring another £30 per week and a child needing £20 per week. This measure assumes a fixed basket of necessities at the destitution threshold, which is clearly inadequate in the current context where low-income households are often having to choose between skipping a meal or switching their heating off (Richardson, 2022).

escalation in inflation and the associated cost-of-living crisis are exacerbating this and could push destitution to over 1.5 million households, besides 11 million households whose combined disposable income and savings will not suffice to cover escalating food and energy bills (Bhattacharjee et al., 2022c).

Second, there is a strong spatial aspect to higher income and consumption inequalities. The devolved nations (Scotland, Wales, and Northern Ireland) as well as the Midlands and the North-West have a much lower concentration of households in the top income decile. Correspondingly, the poorest households (those in the bottom decile) living in those regions have a comparatively higher consumption share in food and energy, which are particularly subject to high inflation. Households in the bottom decile spend 23 per cent of their total expenditure on food and energy as compared with 16 per cent for the median household. Soaring energy and food prices will have a significant impact on household income and consumption. The households in the lowest income decile are heavily concentrated in some of the most economically deprived areas of the country (Fig. 1), including parts of the North West, Scotland, Wales, Northern Ireland, as well as pockets in London and the South East (Bhattacharjee et al., 2022a). In short, the worsening costs-of-living crisis is hitting the lowest income households hardest, as they spend a greater proportion of their income on fuel and food, while neither wage growth nor welfare benefits compensate for fast-rising inflation.

Figure 1: Consumption and income inequalities across UK devolved nations and regions



Both income and consumption taxes in the UK are progressive, as incomes in the top half of the distribution are subject to higher marginal tax rates while lower VAT applies to essential goods such as food which account for a higher proportion of budgets of lower-income households. Previous NIESR research has found that households in the bottom decile tend to spend about 23 per cent of their total consumption expenditure on food and energy as compared with 16 per cent for the median household. And it is also the case that the poorest fifth are paying around three times as much of indirect taxes as the richest fifth in terms of proportion of their disposable income (ONS, 2021). All of this raises fundamental questions about fair taxation and how to deal with deepening disparities in incomes and assets. One way to address this might be to tax consumption in a manner that reduces income inequality.

Against this backdrop, we explore in this policy report the case for and against an update of the UK tax system from current income and consumption tax to a direct consumption (or expenditure) taxation. An expenditure or consumption tax is distinct from an indirect tax on current expenditure such as VAT because it is a tax on an individual's total consumption across a year, rather than taxation at the point of expenditure every time a purchase is made.

Our research reviews different ways in which a direct progressive consumption tax (PCT) could be designed and implemented, and how the transition from the current system of income taxes and VAT to a PCT could be managed. The policy review sections analyse different models with

varied tax rates, and address questions about implementation and some key issues that would arise in the transition from the current tax system to one that focuses on progressive consumption taxation.

The key contribution that our report makes is to provide a new empirical evidence base for mapping the distributional effects of introducing a PCT. Using NIESR's own dynamic microsimulation model LINDA (Lifetime income distributional analysis; NIESR, 2016), we examine three counterfactual scenarios: first, replacing simulated VAT and duties (indirect taxes on consumption) with a direct tax on consumption; second, replacing indirect consumption taxes and direct income taxes with a flat-rate direct consumption tax; and, third, replacing indirect consumption taxes and direct income taxes with a progressive direct consumption tax.

We find that all three counterfactuals achieve their respective neutrality objectives – revenue neutrality (all three scenarios) and distribution neutrality (Scenarios 1 and 3). The main point of comparison between them lies in the consumption and work incentives that they offer over the life course. Counterfactual 3 (with indirect consumption and direct income taxes both replaced by a more progressive, direct consumption tax) presents some clear advantages over the other two. It (1) enhances lifetime consumption and smooths the trend over the life cycle, (2) allows flexibility of work, and (3) enhances wealth, including bequests.

2. Key distributional consequences of the current tax system

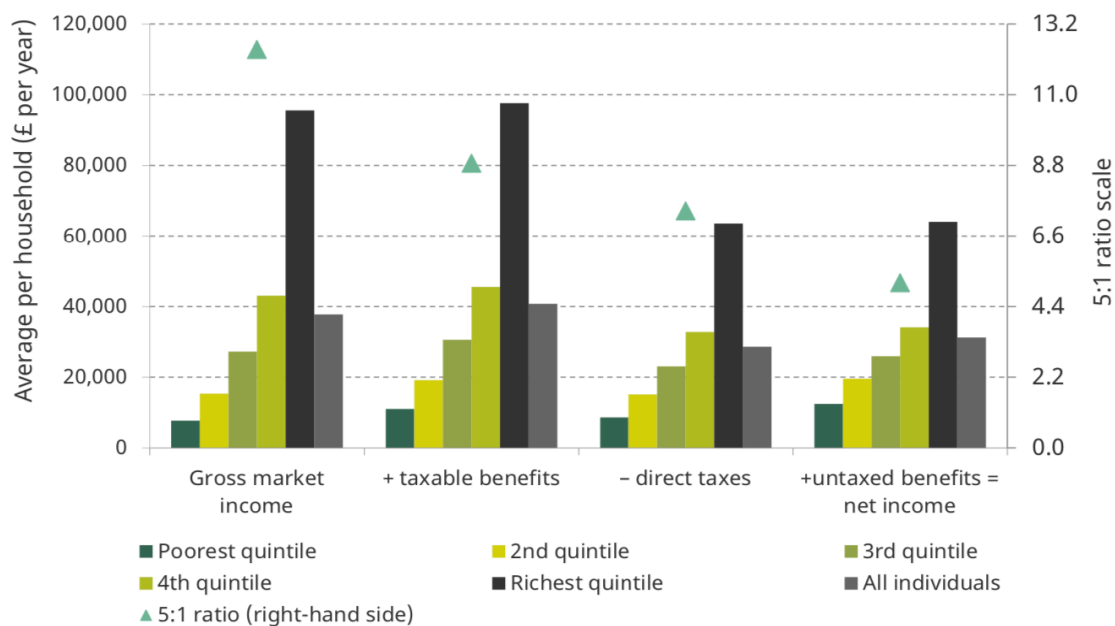
In this section of the policy report, we aim to review the distributional consequences of the current tax system, with a particular focus on the consequences for low-to-middle income households.

In the most recent ONS bulletin on the effects of taxes and benefits on UK household income, the authors stress that despite the redistributive power of taxes and benefits, the Gini coefficient, after taxes and benefits, is rising by 0.2 percentage points every year. Reasons for increasing inequality are mainly related to taxes and benefits, such as decreased effectiveness of cash benefits, and indirect taxes, which is the main reason the ONS identifies. As a proportion of disposable income, the poorest fifth of households paid 32.9 per cent on indirect taxes in FYE 2020 compared with 11.4 per cent for the richest fifth of people (ONS, 2021).

The ongoing once-in-a-generation shock to prices is exacerbating this situation, as neither wages nor benefits keep pace with inflation, which will peak at over 10 per cent in 2022 and remain well above the 2 per cent target for many months to come. Recent fiscal events, notably the statement by the former Chancellor of the Exchequer on 23 September 2022 in which he announced substantial tax cuts, triggered some severe financial turmoil that has led to higher mortgage rates and repayment costs. Moreover, lower income households also face soaring prices of essential consumption goods such as food and energy.

There is ample evidence that in the UK benefits do reduce inequality more than direct taxes (IFS, 2019). Accounting for taxes and benefits, income in the top fifth is 5 times higher than in the bottom fifth, which is reduced from 12-fold before redistribution (Fig. 2). Only 20 per cent of this is due to direct taxation. Once again this highlights the importance of reforming the tax system.

Figure 2: Income components by income quintiles, 2016–17

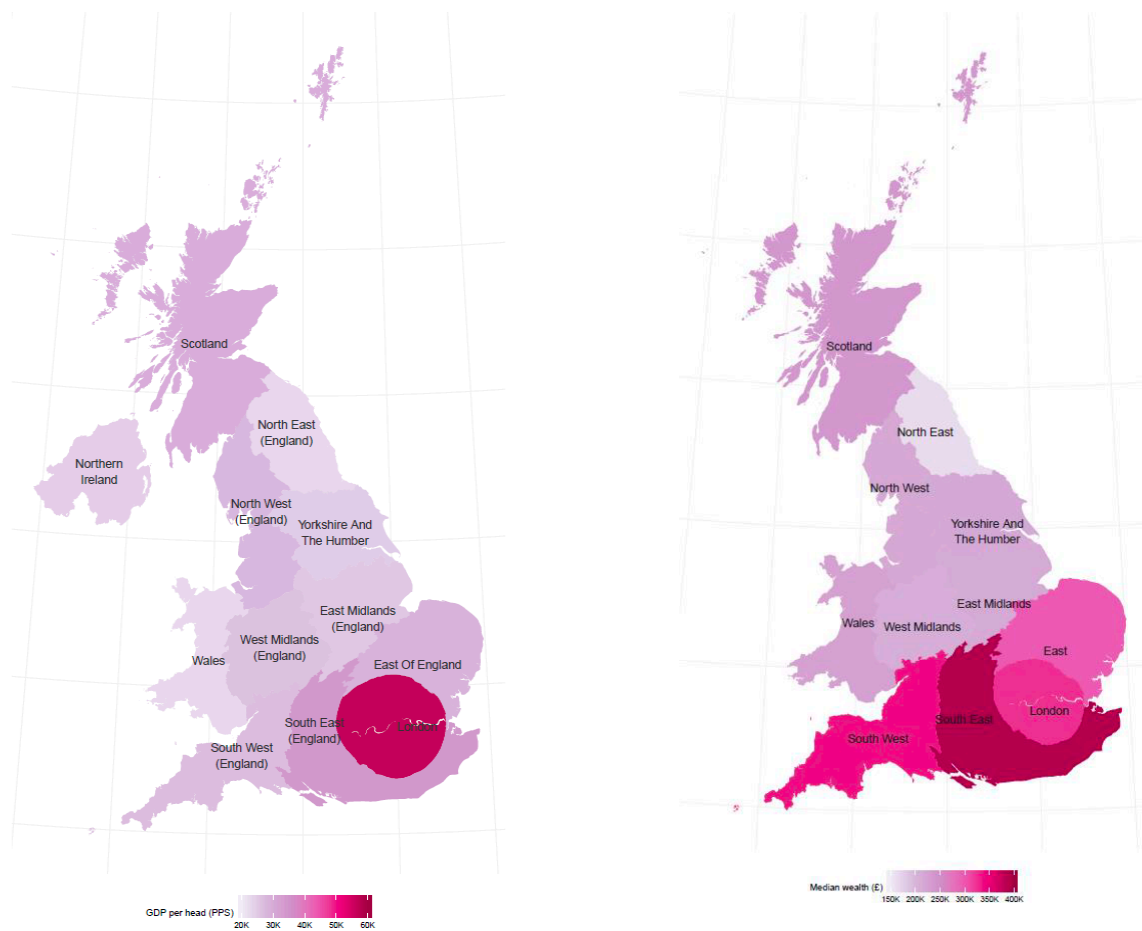


Source: Pascale Bourquin and Tom Waters, IFS, 2019.

Figure 2 shows estimates for average household income by quintiles. So far, the focus of this review has been on the inequalities between the poorest and the richest, but the evidence shows that the richest fifth have almost double the average income of the households that are in the fourth quintile. Given that the receipt of benefits between these groups is rather equal, it is clear that the reduction of the inequality gap requires changes to the direct and indirect taxation methods.

Another aspect, which should be addressed by the remodelling of the tax system, is the intergenerational wealth inequality. As pointed out by Advani et al. (2020a), wealth is largely held by older households in the population, where research suggests that the young will not have the same wealth in the future. It is also the case that taxes on wealth have fallen relative to total wealth. The result is widening asset inequality, in addition to increasing income inequality. There is a clear regional dimension to both forms of inequality, as the highest incomes and highest wealth levels are overwhelmingly concentrated in London and/or the South East, as Figure 3 underscores:

Figure 3: Income per head and wealth per household



Source: ONS and Bank of England.

Although our research is not focusing on wealth taxation, there are ways to reduce wealth inequality via taxing the consumption of the wealthiest households. Since the 2008 crisis, the already wealthy have become even wealthier, not through increased savings, but rather through rising financial asset prices (Advani et al., 2020b).

3. A brief statement of core problems of the current tax system

A comprehensive analysis of the problems with existing income and consumption taxes and the interaction with the welfare system is beyond the scope of this policy review. However, not having a clear statement of the problems with the existing tax system is a barrier to change. Drawing on a number of reviews of the UK tax system, in particular Meade (1978) and Mireless (2011), the core problem is high effective marginal tax rates, combined with the often-regressive nature of VAT whereby lower-income households face the same levels of taxation than higher-income households yet spend a much larger proportion on essential consumption goods. Linked to this is the complicated and regressive nature of the interaction between income taxes and the benefits system, despite the recent reduction to the taper rate from 63 per cent to 55 per cent in relation to Universal Credit (Bhattacharjee et al., 2022a).

Other core problems include

- (1) Complexity and administrative burden of the current system of income tax, National Insurance Contributions (NICs), VAT, and corporation tax;
- (2) ‘Income’ tax only covers some sources of income, but it is increasingly difficult to measure income accurately in a world of multiple employment and complex sources of ‘unearned’ income;
- (3) There are various forms of tax penalty depending on the different types of employment (employees, the self-employed, owner-managers);

In addition, the current context seems favourable to re-examine the problems of the UK tax system and to consider various reforms. After the Covid-19 pandemic and the ensuing rise in public expenditure, HM Treasury have recently adopted a number of changes to taxation, including an increase in NICs in April 2022 and then its reversal, a reduction in business taxes via the super deduction scheme announced in the 2021 budget but then a rise in corporation taxes from 19 per cent to 25 per cent announced on 14 October 2022. The Truss government have also pledged to cut the basic rate of income tax from 20 per cent to 19 per cent. All this raises questions about the right mix of taxes on labour and capital and it opens once more the space for a debate about how best to tax consumption.

4. Survey of the literature examining the effects of consumption taxes

There is a vast literature on consumption taxes. The intellectual roots of an expenditure tax stretch back to Alfred Marshall, Arthur Cecil Pigou, J.S. Mill and even Thomas Hobbes, and more recently, Nicholas Kaldor's book *An Expenditure Tax* (1955). In this report we review the key contribution with a focus on the policy implications of progressive consumption taxation. One area of the literature focuses on the fundamental policy changes that are available. For example, Correia (2010) suggests that it is possible to replace the current progressive capital- and labour-income taxes with a flat consumption tax, and that this would lead to a decline in inequality and an increase in welfare for the relatively poor. The proposal by Hall and Rabushka (1985) is to some extent similar and includes an exemption level, whereas Correia advocates a lump-sum transfer to every household.

There are previous studies that have examined empirically the effects of inequality in terms of wealth, income and earnings, or welfare. Another area of the literature on consumption taxes uses detailed population data for taxpayers and constructs distributional tables for the existing and suggested fiscal regimes. Two examples from the US include Feenberg, Mitrusi and Poterba (1997) as well as Gentry and Hubbard (1997). Feenberg et al. (1997) use individual data on consumption, income and tax liabilities and find that the tax burden on high-income households is generally lower under a regime with consumption taxes. Similarly, Gentry and Hubbard (1997) use data on the composition of household portfolios and find that a consumption tax regime can be progressive.

A third area of literature, which includes Correia (2010), use artificial economies to understand the aggregate and individual effects of a tax reform. Using cross-sectional data for the US she finds that the reform brings gains in both efficiency and equality, in contrast with most the existing literature which suggests a flat tax on consumption would increase inequality in terms of wealth, income and earnings, or welfare. Correia (2010) uses a general equilibrium model, with heterogeneous, infinitely lived households. It maximises utility of agents given their consumption and work choices. Most tax codes include progressive taxes on capital and on labour income. The status quo policy is simplified in the model by assuming that the taxes on capital and labour income are flat and constant over time. Correia then models several alternative systems. The first alternative eliminates the tax on capital income, financing the loss in revenue with the labour income tax. The second and third alternatives replace part of the labour-tax revenue with a consumption tax, and in the fourth alternative, public consumption is

financed exclusively with taxation of consumption. Together with the result that the consumption tax improves efficiency, Correia (2010) finds that the more the tax system is based on consumption taxation, the stronger are the positive effects on the welfare of the welfare-poor agents. Another key finding is that the high concentration of wealth is critical to evaluating the consequences of tax reform.

Other General Equilibrium type studies similar to Correia include studies by Fullerton and Rogers (1996) and by Jorgenson and Wilcoxon (1997). Both articles study only the long-run effects of introducing consumption taxes and conclude that the effects are regressive. Ventura (1999) uses age and innate differences in labour productivity and idiosyncratic earnings shocks as sources of heterogeneity and compares the steady-state distributions of income and wealth before and after the reform. He concludes that a flat consumption tax exacerbates inequality in the distribution of both income and wealth.

Altig et al. (2001) model several different taxes, including a proportional (flat) income tax, a proportional consumption tax and a flat tax. The proportional consumption includes full expensing of investment expenditures, and the tax is a combination of a labour-income tax and a business cash-flow tax. They find large aggregate income gains, but they also find the change is regressive, with lower life-time income groups being hurt by this kind of reform. The flat tax they model modifies the proportional consumption tax by including a standard deduction of US\$9,500, and by exempting implicit rental income accruing from the ownership of housing and consumer durables.

They model two further proposals that modify the flat tax to ameliorate distributional concerns. The first of these is a flat tax with transition relief which aids existing asset holders by permitting continued depreciation of old capital (capital in existence at the start of the tax reform). The second proposal is a progressive tax, which aids lower-income taxpayers by substituting the flat tax's single rate wage tax with a progressive wage tax. This can be thought of as a high-rate flat tax with a progressive subsidy to wages.

Altig et al. (2001) compute the entire transitions in a dynamic general equilibrium life-cycle model with intragenerational heterogeneity, concluding that the poor members of present and future generations lose with flat consumption taxes. In both Ventura (1999) and Altig et al. (2001), the main sources of heterogeneity are age and labour efficiency, and they abstract from voluntary bequests. Simulation results show long-run increases in output for some tax reforms.

For other tax reforms, namely those that seek to insulate the poor and initial older generations from adverse welfare changes, long-run output gains are modest. Interestingly, Correia (2010) argues that when agents differ only in terms of labour efficiency, the change to a consumption tax will have an effect on equity contrary to the one that she finds.

For their part, Gentry and Hubbard (1997) argue that consumption and income taxes treat capital income similarly, in contrast to the common perception that consumption taxation eliminates all taxes on capital income. Contrary to an income tax, a consumption tax exempts only the tax on the opportunity cost of capital. They argue that “in contrast to a pure income tax, a consumption tax replaces capital depreciation with capital expensing. This change eliminates the tax on the opportunity cost of capital, but does not change, relative to the income tax, the tax treatment of capital income arising from a risk premium, inframarginal profit, or luck” (Gentry and Hubbard, 1997: 25). As these components of capital income are more heavily skewed toward the top of the income distribution, a consumption tax is more progressive.

Not all of what is called capital income escapes consumption taxation. Gentry and Hubbard (1997) decompose capital income into four components:

- (1) the opportunity cost of capital (the return to waiting);
- (2) the expected risk premium for investing (the return to risk-taking);
- (3) inframarginal returns to investment (“economic profit”);
- (4) a remainder that reflects realisations differing from expectation.

Both the income and consumption tax bases treat the last three components similarly. A consumption tax exempts the first component, the opportunity cost of capital, in contrast to an income tax.

Gentry and Hubbard (1997) go on to argue that moving the current US tax base to a broad-based consumption tax base would entail two reforms: (1) a move from the current income tax to a broad-based income tax with uniform capital taxation, and (2) a switch from this pure income tax base to a consumption tax base. We will discuss these issues in greater depth when reviewing the literature on how to implement a more progressive consumption tax.

For now, we will revert to the effects of introducing greater progressivity in the consumption tax system. Fullerton et al. (1985) suggests there are three broad arguments in favour of consumption taxation. These are equity, economic efficiency, and administrative efficiency. The equity argument is that it is better to tax withdrawals from the economic system rather than on additions. The economic efficiency argument is that a welfare loss occurs because an income tax distorts intertemporal consumption choices. Saving has to be made out of net of tax income, and the earnings of investments are further taxed before future consumption can occur. However, Fullerton et al. (1985) point out that while a consumption tax involves less distortion in terms of the intertemporal consumption choice, it may introduce an efficiency loss on other margins such as the labour/leisure margin, which might become greater under a consumption tax if a smaller tax base with a consumption tax necessitates higher tax rates. The case for a consumption tax in terms of administrative efficiency is that it would no longer be necessary to have separate taxes on corporate income, capital gains, and welfare and welfare transfers.

Under one version of a consumption tax each household would have a qualified account. All financial savings that qualify for tax deduction would go through such an account. For example, interest, dividends, and sales of corporate stock might remain in the account. These would not be taxed until they were withdrawn and spent. Measuring the tax base would be easy since it would only include labour and rental income and withdrawals from the qualified account. Another important administrative relates to the difficulty of taxing consumption of individuals as it occurs. Therefore, many proposals have opted for a consumption tax it would be operated as an income tax with a saving deduction. For example, the 1977 blueprints for basic tax reform from the US Department of the Treasury contains a proposal that is based on a tax base equal to yearly income with a deduction for financial savings (once again, please see below where we outline this proposal in more detail).

The proposal in *Blueprints* is a mixture of two methods of consumption taxation: the *prepayment* method and the *deferral* or *post-payment* method. The qualified account is an example of the deferral method. Under this method, assets are purchased with dollars that have been shielded from tax. Taxes are not levied until the assets are withdrawn from the qualified account for consumption purposes.

Fullerton et al. (1985) model eight different tax packages, including the US tax system at the time in 1985. One alternative would raise the fraction of sheltered savings in the federal

personal tax from 30 percent to 80 percent, which would effectively remove all of savings from the tax base. Another alternative is the consumption tax (80 percent of savings deductible) combined with corporate tax integration. In their fourth plan they model, all income is taxed (including the imputed income from housing), while all savings are deductible.

These options highlight in different ways the balance in the existing evidence towards the view that a flat consumption tax would disproportionately favour wealthier households that consume more and thereby increase inequality. If the policy aim is to reduce overall levels of inequality, then a direct progressive consumption tax would be preferable. In turn, this raises the crucial question of how a direct progressive consumption could be implemented, to which we turn in the following section of this policy review.

5. How could a progressive consumption tax be implemented?

5.1. Meade Report on a progressive expenditure tax

The primary theme of the 1978 Meade Report was the case in favour of a major switch in the emphasis of direct taxation from income towards expenditure. The Report argued that an expenditure tax would constitute an administratively feasible mechanism for removing distortions in the capital market; that it would insulate direct taxes from inequities resulting from inflation, and that it would provide a basis for progressive taxation. The report discussed the characteristics and merits of several possible forms that an expenditure tax could take. The report also considered a comprehensive income tax.

To levy a rate of tax which rises progressively with a taxpayer's consumption, it is necessary to estimate for each year the total consumption of each taxpayer, and the only way to do this is indirectly by analysing total 'incomings' on both the capital and current account and then deducting non-consumption 'outgoings'. The Meade Report outlines four different methods of applying an expenditure tax in principle, which it calls

- (i) the income adjustment method (in which an individual's total consumption is calculated indirectly by taking the total receipt of funds and subtracting from that total any payments made for anything other than consumption);
- (ii) the value-added method;
- (iii) the method of 100 per cent capital allowance;
- (iv) the method of tax remission on yield.

Of these four methods, only the first one makes possible a progressive schedule of expenditure tax rates, and the Meade Report calls this a *universal expenditure tax* (UET). However, it would also be possible to combine method (i) with methods (ii), (iii) and/or (iv). It calls such a combination of taxes a *two-tier expenditure tax* (TTET).

Under (i) total income is calculated by adding up personal income (which would include wages/salaries, dividends, interest, rent, profits and royalties), capital receipts (realisation of capital assets, borrowing, receipt of repayment of past loans, reduction in money balances), and windfall earnings (such as inheritances and gifts). From this total income, non-consumption outgoings would be deducted, which would include the acquisition of assets, lending,

repayment of past borrowings, increase in money balances). The remainder represents the total expenditure on consumption on which a tax could be levied.

The value-added method (ii) could be implemented by a uniform and universal tax on value levied on all consumption goods and services, with any tax previously paid on the purchase of the inputs of raw materials, capital goods etc being repaid to the producer of the consumption goods and services. This would differ from current VAT as no goods or services would be exempt and all goods and services would be taxed at the same rate. In method (iii) the equivalent result is achieved through a basic rate of income tax with 100 per cent capital allowances. The income which is saved and invested is taxed, but the yield on the investment is not taxed.

5.1.1. Meade: Universal expenditure tax (UET)

A progressive UET must be operated on the income adjustment method of an expenditure tax. This means that all purchases of assets as well as the income yield on all assets should be added to the tax base. It would be necessary on administrative grounds to omit some assets, and they therefore distinguish between ‘registered’ and ‘unregistered’ assets. Only transactions in registered assets would be debited to, or credited against, taxable income. Unregistered assets would receive the normal income tax treatment. Registered and unregistered assets can be used, under a progressive tax regime, as a method of averaging out tax liabilities on lumpy expenditures. Assets which are likely to give rise to substantial capital gains should in all possible cases be registered. Cash and ordinary personal consumption goods would be excluded from the range of registered assets on administrative grounds.

There would have to be a wide band of expenditure subject to the same basic tax rate. On administrative grounds, it would be sensible to treat durable goods used for personal consumption purposes as unregistered assets. This would cover normal clothes, furniture, other household effects, cars for personal use, etc. There are problems that arise in relation to the treatment of exceptionally valuable items, such as an individual’s possession of a Rembrandt picture or similar. For the above reason, it would be desirable that indexed capital gains on such assets should be taxed, subject to fairly generous roll-over provisions.

As part of an UET, there are two possible methods for gifts and bequests: either exclude them from donor’s taxable expenditure and impose a separate tax. Or levy a tax on wealth transfers

by treating a gift as part of the donor's taxable expenditure as well as part of the donee's expenditure when they in turn spend or give away.

In turn, this raises questions about the treatment of real estate property under an UET. Meade (1978) suggested charging annual values to expenditure tax, based on imputing to each house an appropriate annual rental value, exclusive of cost of repairs and maintenance. The object would be to tax the occupier or consumer of housing space on what they are spending on that space. This would mean to treat houses held as assets by private landlords and owner-occupiers as registered assets in the following two ways:

- (i) Purchase of a house or the payment of interest and repayment of principal upon a mortgage debt would be deducted from the taxpayer's tax base. The sale of a house or mortgage debt would be added to the tax base.
- (ii) No indexation for capital-income adjustment would be needed to offset the effects of inflation.

In terms of corporation tax, Meade (1978) recommended further shifting corporation tax towards a cash-flow base. That would mean treating real and financial cash flows the same way. Cash inflows would be taxed and cash outflows would be deducted: the sale of goods/services/assets and of interest/dividends, and borrowing are all taxable. The purchase of materials, assets, wages, the repayment of borrowing, and interest paid are all deductible.

5.1.2. Meade: Two-tier expenditure tax (TTET)

This method involves a combination of two separate taxes, namely (i) for the lower tier of a taxpayer's expenditure, either an income tax with 100 per cent capital allowances or a form of universal and uniform tax on value added to cover the long basic rate band combined, for the upper tier of taxpayer's expenditure. This is coupled with (ii) a surcharge on levels of expenditure above the basic rate band, liability to this surcharge being assessed by the income adjustment method.

Thus, a TTET would be a combination of two taxes:

- (1) A progressive surcharge on expenditure above a fairly high limit, such as £20,000 a year, applied through an expenditure tax adjustment to income as the tax base;

- (2) A proportionate rate of tax at the basic rate applied through either an income tax with 100% capital allowances or through a tax on value added.

In terms of the basic rate, it could combine a true income-tax system (approximating a comprehensive income tax) for the basic rate with a true expenditure surcharge on high levels of consumption. Alternatively, the basic rate of tax could be transformed as far as possible into an effective expenditure tax by extending the principle of 100 per cent capital allowances against liability to income tax to cover all or virtually all forms of capital expenditure on items of physical investment, or the use of some form of tax on value added.

The problems of administering the upper tier tax would be in many ways the same as those of UET. The problem would, however, be on a smaller scale as the expenditure tax adjustment would have to be made for a much smaller number of taxpayers. Another problem with this taxation would arise from deciding which taxpayers should have their affairs reviewed each year to discover whether they were liable to the upper-tier expenditure surcharge. Everyone would be taxed at a proportionate rate on their income (above some threshold level); but those who were living at exceptionally high standards of consumption would be taxed progressively on their extra expenditure.

One of the limitations of the TTET system is the need for a wide band at the basic rate of tax. A TTET, in contrast to a UET, would imply that there is a large range of incomes over which the same basic rate of tax is imposed. The rate of tax could not be varied according to the level of the total consumption of the individual taxpayer. One disadvantage is restricting the degree of progressivity of the marginal rate of tax at the lower end of the scale. TTET might also impose some difficulties for popular understanding as it is a more complex system.

But on the other hand, there is a relative ease of transition to a TTET. It has an advantage over a UET in that its introduction would present less formidable transitional difficulties. The number of people with drastic alterations to taxes would be much smaller. A TTET could be attained in a much more gradual process than could a full UET.

5.2. US Treasury Blueprints for Basic Tax Reform (1977)

The main way that a consumption tax differs from an income tax is that it excludes savings from the tax base. This means that net savings, as well as gifts made, are subtracted from gross receipts to compute the tax base. The 1977 US blueprints argue that a version of a consumption

base tax called the “cash flow tax” has several advantages over a comprehensive income tax, for example depreciation rules, inflation adjustments, and allocation of undistributed corporate income, because all forms of saving would be excluded from the tax base. The blueprints also argue that the cash flow tax is more equitable because it treats individuals alike who begin their working lives with equal wealth and the same present value of future labour earnings. They are treated differently under an income tax, depending on the time pattern of their earnings and the way they choose to allocate consumption expenditures among time periods.

They suggest two methods for computing the base for a tax based on consumption. The first method would include all monetary receipts in a given time period, including withdrawals from past savings and gifts and bequests received, and exclude from the tax base current savings, gifts made, and certain itemised expenditures also allowed as deductions under the comprehensive income tax. Therefore, the full proceeds of asset sales would be taxed if used for consumption rather than for purchase of other assets. The inclusion of asset sales and the deduction of asset purchases from the tax base make it possible for the tax base to measure an individual’s annual consumption without actually tallying up his purchases of consumption goods and services.

A second method is to exempt all capital income from tax. Accordingly, dividends, interest, capital gains, and profit from a personal business would be excluded from an individual’s tax base. Interest receipts would be excluded from the base, and interest payments on loans would not be deducted. The purchases of productive assets would not be deductible, because the returns from them would not be included in the base.

Both methods result in a tax base with the same present value. The deferral of tax in the present leads to payment of the same tax plus interest when the asset is sold for consumption. However, the payment of taxes occurs later under the method which allows a savings deduction than under the method which allows an interest exemption. By removing disincentives to saving, the cash flow tax would encourage capital formation, leading to higher growth rates and more capital per worker and higher before-tax wages.

5.3. The X-tax, flat tax and other approaches

The X-tax suggested by Bradford (1987) has some similarities to the “flat tax” proposed by Hall and Rabushka (1985), except that it has progressive rates even beyond the zero-rate

bracket. This represents an important aspect, as a key problem of an income tax is that it penalises saving, which leads to a low accumulation of capital. Carroll et al. (2008) and Carroll and Viard (2012) argue that a pro-growth, simple and fair tax system should have three attributes: it should tax consumption rather than income, it should not require households to report financial transactions, and it should be sufficiently progressive to meet a society's notion of fairness.

They argue that some suggested consumption taxes fall short of meeting all three of these criteria. A personal expenditure tax (PET) falls short, as it still requires households to report financial transactions. A retail sales tax or VAT also falls short. The retail sales tax is collected from the firm that sells to the consumer with no tax on sales between firms. The VAT is a modification of the sales tax. When a firm sells to another firm, a tax is imposed on the selling firm (and passed along to the buyer), but the buying firm deducts the purchase against its tax (or, equivalently, claims a credit for the tax imposed on the selling firm). A sales tax or VAT meets two of the three objectives because it is a consumption tax, and it does not require households to report financial transactions. However, the sales tax and VAT are not progressive.

Already in 1985 Hall and Rabushka proposed a "flat" tax, which is a two-tier VAT. In this tax, firms would compute value added, as they would under conventional VAT, but then deduct wage payments to obtain a remainder called "business cash flow." Workers are then taxed on their wages. The total tax base is the same as under a VAT and therefore the same as under a retail sales tax. Because the VAT is a consumption tax and the flat tax is simply a two-part VAT, the flat tax is also a consumption tax.

Under this approach the purpose of taxing wages and business cash flow separately is to promote progressivity. Firms are taxed at a single flat rate, perhaps 25 percent, on business cash flow, while workers are taxed at that same rate on wages above a substantial exemption amount. Workers with earnings below the exemption amount pay zero tax, and those with incomes moderately above the exemption amount pay a small fraction of their wages in tax, while those with high earnings pay close to 25 percent.

The flat tax achieves some progressivity but may not be regarded as being sufficiently progressive. Bradford (1986) has suggested a modification which he calls an X-tax. First, wages

from more than one employer are added together, and the total is taxed at graduated rates, with an exempt amount. His suggested marginal rates are 3, 5 and 7 per cent on successively higher levels of compensation. Second, Bradford suggests that the X-tax could be administered in conjunction with existing income tax. In other words, Bradford's solution is to propose that the flat tax be modified to feature a full set of graduated rates. As with the flat tax, workers with earnings below the exemption amount would pay no tax, and the highest earners would pay a rate equal to the firms' tax rate. Workers with intermediate wages would face a range of intermediate rates.

More specifically, the X-tax, as outlined by Bradford (1986), is a system with two components: a business tax (paid by all types of businesses) and a compensation tax (paid by all who receive compensation as employees). All businesses pay tax on profits (sales receipts less purchases from other businesses and less payments to workers) of say 7 per cent. All workers pay tax on the amount received from their employer. Payments from more than one employer are added together, and the total is taxed at graduated rates, with an exempt amount. Bradford suggests marginal rates of 3, 5 and 7 per cent on successively higher levels of compensation. No other sources of income for workers such as interest, dividends etc are included in the compensation tax base. The top rate of rate of compensation tax is the same as the single flat rate of business tax. Bradford suggests that the X tax could be administered in conjunction with existing income tax. The tax is essentially a tax on a broad measure of consumption with a subsidy to employment for relatively low earners.

This raises a question over the definition of consumption, and whether aggregate sales to households is what is really meant by consumption. The definition here includes sales of new consumer durables including owner-occupied housing. The X tax applies what has come to be called the "tax prepayment" approach to these outlays. The tax paid on a new house or car is a payment in advance of the expected present value of taxes that would otherwise be collected over time on the flow of services if they were actually measured. This provides a simple solution to applying the same rate of tax to housing services as other forms of consumption.

Another question that arises is whether there is any equivalence between income and consumption taxation. A wage tax is levied on payments to labour, whereas a consumption tax is levied on purchases of consumption goods by the household, regardless of whether the source of funds is from labour or capital income. Once in place, Bradford (1986) argues that these

taxes have the same effect on a household's options over time, i.e., the household's budget constraint over time makes the two types of tax into the same thing. Owning capital is obtained by saving out of labour earnings, therefore a household that pays a flat 25 percent of its earnings in tax will face the same opportunities as does the household that pays no tax on its earnings but a flat 25 percent tax on outlays for consumption. Bradford argues that despite equivalence in terms of the household's budget constraint, there is a useful distinction in terms of transition. The incidence of the tax can differ during transition, even if it amounts to the same thing once in place.

There are other challenges in relation to implementing the X tax. It may be difficult to match the current system's progressivity for households at the very highest income levels, such as those in the top 0.1 per cent. These households receive a large fraction of their income from the returns to capital, so they would receive a reduction under the X tax. However, research suggests that a substantial portion of the burden of the current corporate income tax falls on workers rather than owners of capital (Arulampalam et al., 2012; Suárez et al., 2016).

6. Some transition issues

There are several issues that arise in the transition from the current UK tax system to one that taxes consumption in a more progressive manner. One such transition issue includes the international dimension. Conventional VATs are border-adjusted, with taxes imposed on imports and rebated on exports. A question for an X tax is whether similar import taxes and export rebates should apply.

A second transition issue is in relation to the difference between wages and business cash flow. Unlike a sales tax, VAT, or PET, the X tax must distinguish wages from business cash flow, which is taxed at a flat rate at the firm level. Wages received by the highest earners would also be taxed at that rate, while the majority of employees would be taxed at lower rates. However, there are contexts where the distinction between wages and business cash flow is not clear, for example sole traders or limited companies.

A third transition issue concerns the question of equity. In some cases, a more progressive consumption tax would entail double taxation for those who have already saved and invested. On the other hand, it is possible to create sensible exemptions, e.g. pensions would be exempt as they are already subject to an expenditure tax rather than an income tax regime. But there is also the problem of disturbances on the capital market. Taxpayers who held unregistered rather than registered assets on D-day would be at a great advantage. Therefore, there would be an incentive for the sale of registered assets in order to hold unregistered assets at D-day. However, it is also true that these disturbances can be mitigated by phasing in the change gradually.

Gentry and Hubbard (1997) suggest that for the US to move from the current tax system to a broad-based consumption tax would entail first moving from the current income tax to a broad-based income tax with uniform capital taxation, before switching from this pure income tax base to a consumption tax base. They further note that the short-run and long-run distributional consequences of moving from the current tax system to a consumption tax might differ. The short-run effects would depend on the transition rules and on the overall distribution of different asset types. The elimination of differential capital taxation in the short run would affect asset prices favouring heavily taxed assets (such as corporate capital) over lightly taxed assets (e.g. housing).

Moving to an income tax with uniform capital taxation would not necessarily change the average level of capital taxation. Depending on general equilibrium effects, it may favour households that prefer goods produced with currently heavily taxed assets. The second reform, moving to a consumption tax, would reduce the taxation of capital income. The long-run distributional effects of this change depend on how after-tax rates of return change and the distribution of different components of capital income.

More specifically, the main transition problems connected to an UET would be as follows. It is possible to introduce an UET gradually over say, 10 years. For example, in first year the tax base would be income plus 1/10th of the expenditure tax adjustment; in second year, income plus 2/10^{ths} of adjustment, etc. But a number of problems arise:

- (i) Incentives before each jump to hold abnormally high unregistered assets for exchange into registered assets after the jump;
- (ii) A UET would impose a heavier burden on people who maintain a high level of consumption from inherited capital; the phase-in would mean this would not bite for some time;
- (iii) Some administrative advantages of a UET would be postponed.

Similarly, there are problems with the transition to a TTET. The main problem is determining the items in the expenditure tax adjustment. It would be on a smaller scale as it would be for a much smaller number of taxpayers. But there would be a need to identify taxpayers who would be liable for the surcharge. The transition could be made on the 'radical' principle that virtually all assets would be treated as registered assets. And only the annual expenditure that is above some exemption level £X would be subject to the surcharge. As with an UET, the introduction of a TTET could also be phased in.

7. Policy simulation: existing evidence and options

Several previous studies have empirically examined the effects on inequality of a PCT. As already mentioned, Altig et. al. (2001) model a proportional consumption consisting of a labour-income tax and a business cash-flow tax. They find large aggregate income gains, but they also find that the change is regressive, with lower life-time income groups hurt by the reform. The flat tax modifies the proportional consumption tax by including a standard deduction of US\$9,500, and by exempting implicit rental income accruing from the ownership of housing and consumer durables. They also model a flat tax with transition relief, and an X-tax with a progressive wage tax, as alternatives to ameliorate distributional concerns. Correia (2010) suggests that it is possible to replace current US capital and labour income taxes with a flat consumption tax, including a lump-sum transfer to every household. As we show below, such a system would lead to a decline in inequality and an increase in welfare for the relatively poor.

In our study, we model three different scenarios: (i) replace indirect consumption taxes with a flat-rate direct consumption tax; (ii) replace indirect consumption and direct income taxes with a flat-rate direct consumption tax; and (iii) replace indirect consumption and direct income taxes with a progressive direct consumption tax. In the next subsections we briefly describe the model and outline our simulated scenarios.

7.1. *Overview of the model*

In order to evaluate the distributional and aggregate impacts of different tax systems we use NIESR's *Lifetime INcome Distributional Analysis* (LINDA) model, which is designed to investigate the impact of policy changes on households' circumstances through time (NIESR 2016). The model unit is the 'benefit unit', which is defined as a single adult or partner couple and their dependent children.

LINDA starts with data describing the circumstances of individuals for a reference population cross-section. These 'circumstances' describe a wide range of characteristics, including age, household finances, labour market interaction, health, education, and family demographics. Our base data, for the year 2017, is drawn from the nationally representative UK Wealth and Assets

Survey Round 6 (Round 6 covers 2016-17 and 2017-18).² LINDA works on a calendar year basis, so 2017 provides the latest available data. The database does not include data for Northern Ireland, but we add a pseudo sample matching income and wealth profiles of Northern Irish households. This provides information for approximately 40,000 individuals (aged 18 or above) from 20,000 households in a way that is representative of the entire population of the United Kingdom. Using the data for the reference cross-section, LINDA projects the changing circumstances of each individual at annual intervals through time, generating synthetic data for their entire life course.³ Thus, we can follow simulated individuals through relationship formations and dissolutions, birth and raising of dependent children, periods of unemployment and poor health, taxes and benefits, retirement and ultimately exit via death or emigration. Forward projections are also designed to account for entry and exit to the population cross-section via birth, mortality, and migration. All of the above transitions into different states of household and economic life are modelled using probabilities from aggregate data for the relevant time periods (van de Ven, 2017a).

LINDA is different from most dynamic microsimulation models as it projects the two principal economic decision making of private individuals – the labour/leisure and consumption/savings decisions – as responses to the evolving incentives that individuals face. In contrast, most other microsimulation models project decisions using statistical (reduced-form) functions. Essentially, it means that LINDA is robust to the Lucas critique, i.e. that it is naive to predict the effects of a change in economic policy entirely on the basis of relationships observed in historical data. This has had a greater influence on macro- than micro-economic model design (van de Ven, 2017a).

With such modelling using LINDA it is possible, for example, to consider how annual income inequality compares with lifetime income inequality, or to explore how these distributions could be expected to change following proposed reforms to taxes, stamp duties and benefit systems. Such evaluations of the impact of policy changes or economic shocks is based on comparing two pseudo-populations over time – one under existing policy structures (factual) and another under a proposed different structure of tax and benefit systems or under an alternate economic shock (counterfactual). The comparison can focus on the entire population or any

² We use this version rather than the more recent version of WAS (Round 7, 2018-2020) because the latter is skewed by Covid-19 and therefore not representative.

³ For details on the model and calibration see van de Ven (2017a).

specific sub-population by region, household composition, age, wealth and income profiles (van de Ven, 2017b).

7.2. Consumption taxes in the model

LINDA uses two complementary methods to simulate taxes and benefits that can be used separately or together. The first method projects transfer payments based on a reference database generated by a third-party tax-benefit-calculator, in this case, UKMOD.⁴ The second method projects transfer payments using a programming code that is integrated with LINDA.

Consumption taxes and duties can be either imputed from a reference database or imputed by LINDA. If they are imputed, aggregate consumption (which is simulated endogenously) is disaggregated into the consumption categories that are subject to alternative tax rates using reduced form regressions. Hence, the model accounts for income effects associated with indirect taxes (i.e. the reduction in aggregate purchasing power), but not price effects (i.e. the influence of indirect taxes on relative prices of alternative consumption subgroups).

LINDA is also designed to facilitate analysis of counterfactual tax schemes that apply a step-wise multi-rate structure to consumption, rather than income as is commonly observed in practice. Consumption taxes can be simulated using up to four alternative marginal tax rates, with a structure that can be evaluated either on observed or equivalised consumption (van de Ven, 2022).

Simulating consumption taxes in the UK is complicated due to the different rates of Value Added Tax (VAT) and excise duties that are payable on different goods and services, which contrasts with the aggregate measure of non-durable consumption projected by LINDA. To accommodate this variation, we have estimated a series of reduced form regressions that describe the fraction of total non-durable expenditure on each of six consumption categories:

- (i) goods liable to the full rate of VAT
- (ii) goods liable to the reduced rate of VAT
- (iii) alcohol

⁴ UKMOD is a static tax-benefit microsimulation model that originates from the UK component of EUROMOD. It permits analysis of the effects of taxes and social benefits on household incomes and work incentives for the population of each nation in the UK. UKMOD is developed by the Centre for Microsimulation and Policy Analysis (CeMPA) at the University of Essex and funded by the Nuffield Foundation.

- (iv) tobacco
- (v) fuel
- (vi) insurance premia

We distinguish those goods and services that are liable to the standard or to higher rates of tax. The reduced form models are used to approximate benefit unit consumption of each of the six expenditure categories during each year, and the associated tax burden is evaluated by multiplying by the relevant tax or duty rate.

To investigate the impact of different policy scenarios, we compare our base simulation that is designed to reflect observed survey data (representative of the UK population as of 2017) with counterfactual simulations where the only difference is the policy in question. We consider multiple alternative policy scenarios, including variations based on different parameter values. The choice of parameter values is informed by discussions during the project as well as results from previous policy evaluations.

7.3. Simulated scenarios

Direct consumption taxes allow for considerable control over both the government tax-take and the degree of progressivity in taxation. The current analysis compares simulated counterfactuals with policy parameters designed to achieve budget neutrality with the base simulation. Distributional neutrality with the base simulation is also sometimes targeted, focussing on inequality of adult equivalised consumption.

Base Simulation

Our base model is parameterised to reflect a range of survey data, as described in van de Ven (2017a). The policy context is imputed in part from data generated by UKMOD to reflect (direct) tax and benefit payments prevailing in the UK in 2017 (see van de Ven et al., 2022), augmented by a stylised specification to reflect VAT and consumption duties applicable for the same year, and contributory state pensions.

Two important concerns have guided our choice of counterfactual scenarios. First of all, each of the three counterfactuals is aimed to achieve budget neutrality, i.e., they all enable the government to raise the same amount of revenues through taxes as in the factual. However, since the impact of policy changes assumed to be introduced in 2017 would only be internalised

by individuals and households through their behaviours over their ensuing lifetime, it would take several years for a new distribution structure to emerge in equilibrium. We assume this period to be 30 years. This consideration ensures that potential counterfactual consumption tax scenarios have no implication for government revenues, or any distributional impact that variation in fiscal policy may have.

Second, we consider a progressive consumption tax counterfactual scenario. Here, progressivity can be reverse engineered to match any desired distribution of income across individuals and households, and in particular, any degree of inequality. Thus, progressive consumption taxes in principle have no specific implications for inequality or income distributions, beyond what can be equally achieved by progressive income taxes and targeted benefits. Hence, we also ensure that this counterfactual scenario has distribution neutrality, i.e., it matches inequality observed in our base simulation.

If not in revenues or distributions/inequality, where might the impact of consumption taxes be found? As highlighted in our policy review, there are likely behavioural impacts on both the consumption/savings and labour/leisure decisions over the lifetime. In effect, when in the lifetime of individuals would individuals work and consume, and how would this pattern change as one moves across the distribution by income/wealth? This question is the central focus of the analyses reported below. In addition, there may also be effects of more progressive consumption taxation upon aggregate and individual welfare. However, this second aspect is more challenging to evaluate as it would critically depend upon making many more model assumptions and evaluating alternate models by these assumptions. This is retained for future policy-focused research.

Counterfactual 1: replacing indirect consumption taxes with a flat rate direct consumption tax

The first simulated counterfactual replaces the provisions for VAT and consumption duties simulated under the base simulation with a direct flat-rate tax on consumption. The tax rate was set at 15 per cent, to obtain approximate budget neutrality with the base simulation over a 30-year simulated time horizon.⁵

Counterfactual 2: replacing indirect consumption and direct income taxes with a flat-rate direct consumption tax

⁵ Net payments to the government are worth an additional £1.16 per week per adult on average under counterfactual 1 relative to the base simulation during the 30 years between 2017 and 2046.

Counterfactual 2 augments counterfactual 1 by also omitting direct income taxes and national insurance contributions imputed under the base simulation, off-set by a rise in the (flat-rate) direct consumption tax rate to 41.3 per cent.⁶

Counterfactual 3: replacing indirect consumption and direct income taxes with a progressive direct consumption tax

Counterfactual 3 augments counterfactual 2 by adding a tax-free threshold to the direct consumption tax, which is calculated as:

$$tax = t_r \cdot c - d \cdot s$$

where *tax* is levied from benefit units, t_r denotes the (flat) consumption tax rate, c (benefit unit) consumption, d a tax-free threshold, and s the (benefit unit) equivalence scale. The equivalence scale assumed for analysis is the revised OECD scale, which assigns a value of 1 to the first adult, 0.5 to each subsequent benefit unit member in excess of age 13 and 0.3 to each benefit unit member under age 14. The tax-free threshold was set to £100 per week in 2017, with real growth of 2 per cent per annum; these values were selected to obtain approximate distributional neutrality of adult equivalised consumption over a 30-year simulated time horizon, measured in terms of the Gini coefficient. The tax rate was set to 78 per cent to obtain approximate budget neutrality over the same 30-year simulated time horizon.⁷

⁶ Net payments to the government are worth £0.73 per week per adult less on average under counterfactual 2 relative to the base simulation during the 30 years between 2017 and 2046.

⁷ Net payments to the government are worth an additional £0.54 per week per adult on average under counterfactual 3 relative to the base simulation during the 30 years between 2017 and 2046.

8. Results

Our analysis focuses upon behavioural responses to policy counterfactuals, which addresses the main arguments in support of consumption taxes listed in the policy review sections. The model produces simulated averages for population deciles, specified by equivalised disposable benefit unit income, for a population cross-section.⁸ The results focus on the cohort of individuals born in 1999, aged 18 in 2017 (first year of adulthood) – simulate 65 years from 2017 (to 2081), hence the cohort represents those individuals that are alive (and not emigrated) and aged 82 at the end of simulated horizon.

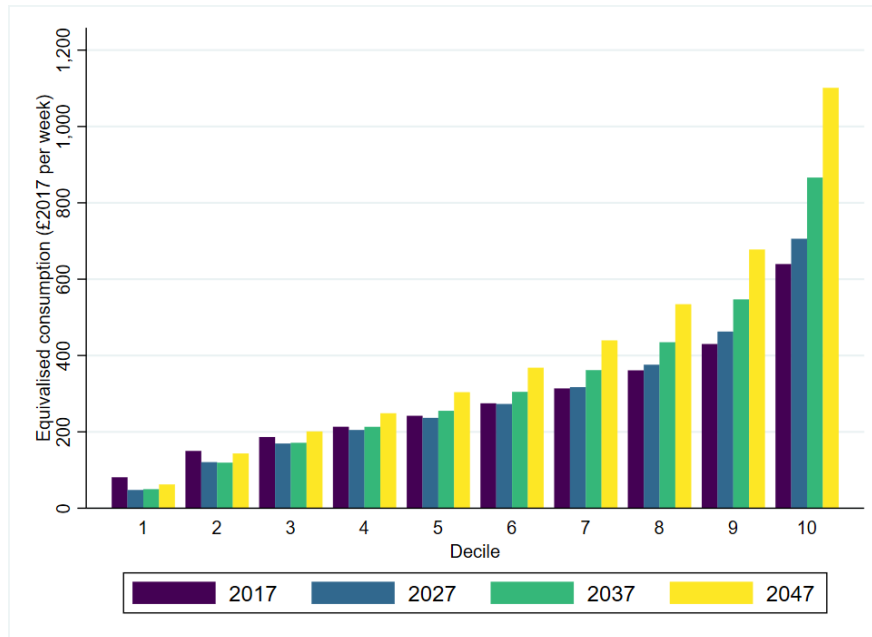
8.1. Distribution of consumption in base simulation

The base simulation represents the *status quo* scenario for analysing the effects of a policy counterfactual. Thus, before looking into the different policy scenarios, Figure 4 and Figure 5 present some descriptive statistics for the starting point considered in this study. As expected, equivalised consumption increases as lifetime income increases (Figure 4, Panel A). The disparity between the bottom and the top of the income distribution is significantly large, with people at the first decile consuming less than £100 per week in 2017, and over £600 per week at the top decile. Over time, this inequality gets even worse. While consumption increases for the top deciles of the income distribution in 10, 20 and 30 years simulated horizon, it remains stable at the lower end (and perhaps even decreases for the bottom decile).

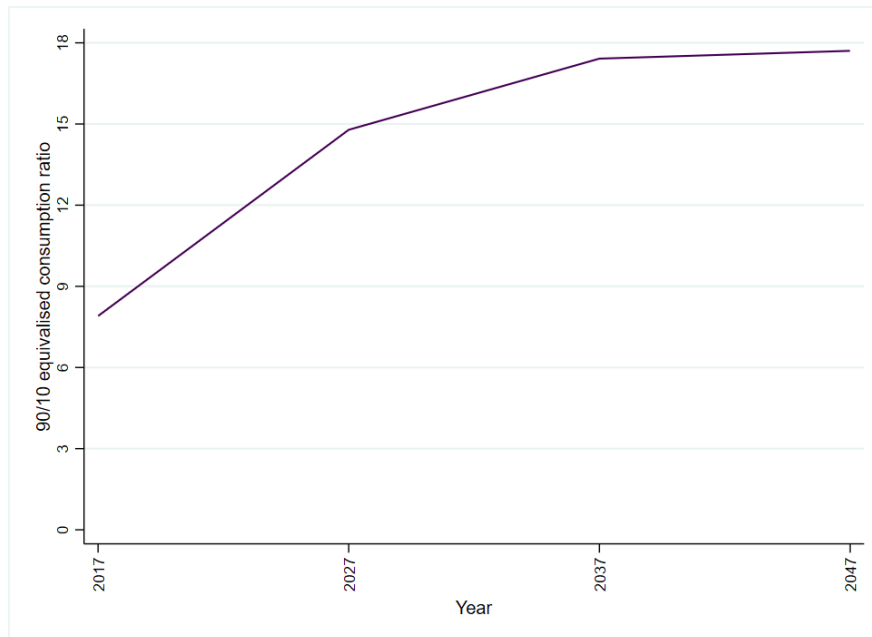
For instance, at the first decile, consumption reduces somewhat from £81 per week in 2017 to £62 per week in 2047. At the top decile, on the other hand, there is a continuous increase in levels of equivalised consumption from £640 per week in 2017 to £1,101 per week in 2047. This implies significant increase in consumption inequality over time in the factual. For instance, the richest 10% of the population consume 8 times more than the poorest 10% in 2017. In the next 20 years, the ratio more than double and equivalised consumption is 17.7 times higher at the top compared to the bottom of the income distribution (Panel B).

Figure 4: Equivalised consumption by income and year

⁸ The revised OECD equivalence scale is used to adjust disposable incomes.



Panel A: cross-sectional distribution

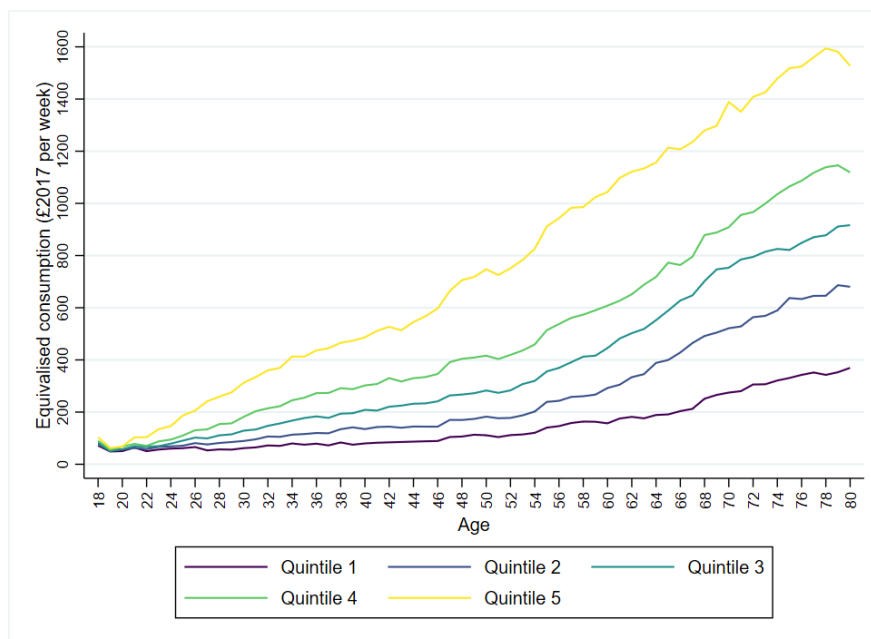


Panel B: 90/10 inequality ratio

Source: Authors' calculations using simulated data.
 Notes: Consumption equivalised using the revised OECD scale.

Looking at lifetime consumption, Figure 5 shows that individuals consume more as they age. At early stages of life, individuals are more constrained and levels of equivalised consumption are similar for the different quintiles of the income distribution. From the age of 25, however, the quintiles start to diverge from each other, with higher quintiles displaying larger levels of equivalised consumption for all ages.

Figure 5: Average equivalised consumption of cohort born in 1999 by lifetime equivalised income quintile



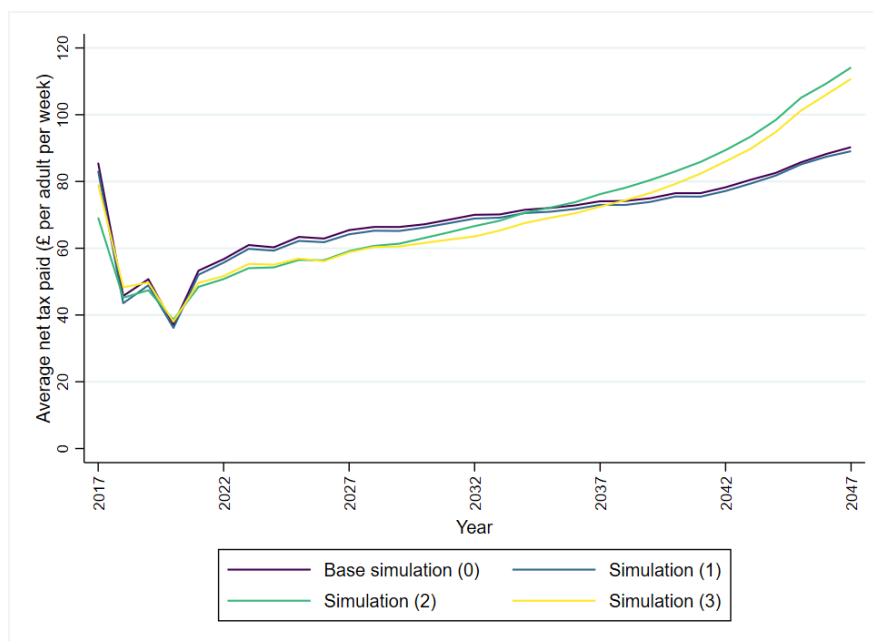
Source: Authors' calculations using simulated data

Notes: Consumption equivalised using the revised OECD scale. Quintile groups evaluated on year specific equivalised income aggregated over the simulated lifetime.

8.2. Taxes and inequality

As previously mentioned, the current simulations are designed to achieve budget neutrality with the base simulation over 30 years simulated horizon, and whenever relevant, distributional neutrality focusing on inequality of consumption. Despite our simulations are intended to have distributional neutrality in order to preserve the same degree of inequality of the base simulation, the progressive consumption tax could be used to match any degree of income inequality desired by society, if that is the desired policy outcome.

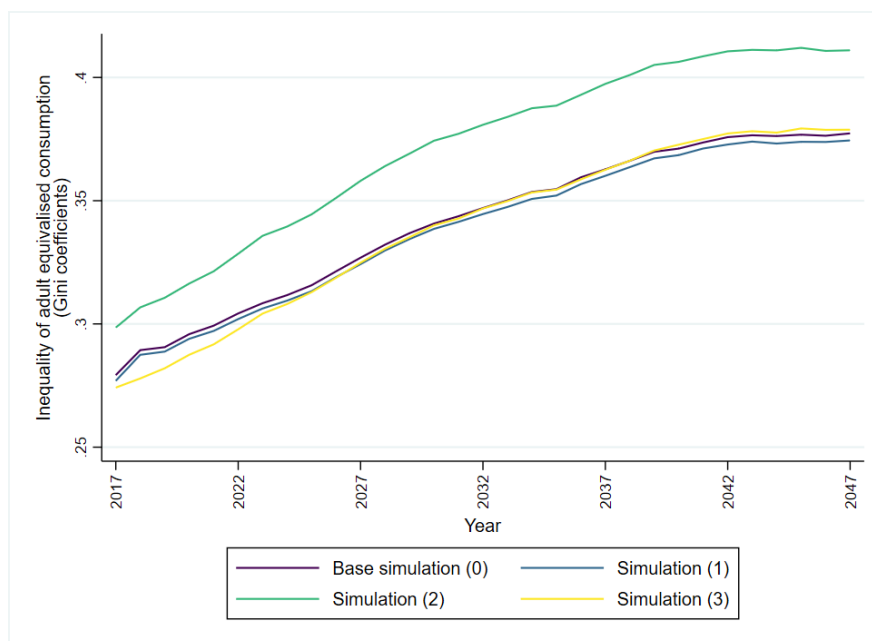
Figure 6 shows that the average net tax paid per adult per week in simulation 1 (replacing indirect consumption taxes with a flat-rate direct tax) is very similar to the base simulation over a 30-year horizon. Despite the sharp decrease in the first few years of the simulated period, average net tax paid increases continuously recovering its initial level. Simulations 2 and 3 (where direct income taxes are also replaced by consumption tax), on the other hand, are similar to the baseline only at the first 3 years, then averages taxes are slightly lower until 2034 and 2037, respectively. After this period, the average taxes paid are higher than the base scenario until 2047, reaching £114 (Simulation 2) and £110 (Simulation 3) per adult per week, while the base simulation is around £90 per adult per week. Notwithstanding these slightly variable time profiles, however, the scenarios are by design revenue neutral over the 30 years, by and large.

Figure 6: Average net tax paid by simulated scenario

Source: Authors' calculations using simulated data.

Notes: Net taxes projected based on UKMOD data generated for 2017, plus imputed indirect taxes and duties, plus simulated direct taxes on equivalised consumption, less simulated contributory state pensions. Simulated counterfactual (1) omits indirect taxes and duties, and includes a direct tax on all (equivalised) consumption of 15%. Simulated counterfactual (2) is the same as (1), but also omits income taxes from UKMOD data generated for 2017, and assumes a direct consumption tax rate of 41.3 per cent. Simulated counterfactual (3) is the same as (2), but simulates direct consumption taxes subject to a tax-free threshold on equivalised consumption worth £100 per week in 2017, growing at 2 per cent per annum, and a tax rate on all other consumption of 78 per cent. Tax rates on equivalised consumption adjusted to obtain approximate budget neutrality over a 30-year simulated horizon. Tax-free threshold of counterfactual (3) adjusted to obtain approximate distributional neutrality of adult equivalised consumption over a 30-year simulated horizon.

Looking at the inequality of equivalised consumption, one can see that inequality increases in all scenarios over the 30-year simulated horizon (Figure 7). Again, Simulation 1 is very similar to the base simulation. On the contrary, Simulation 2 presents higher levels of inequality compared to the other scenarios. The way counterfactual 2 is designed, by replacing indirect consumption taxes and direct income taxes with a flat-rate direct tax on consumption, prevents one from keeping distributional neutrality of equivalised consumption. This is because there is no mechanism in this counterfactual to replace progressivity in current direct taxes. In simulation 3 (progressive consumption tax scenario), the tax-free threshold was adjusted to achieve distributional neutrality of adult equivalised consumption over the period. Hence, the series displays slightly lower levels of inequality than the base simulation for the first initial years, but then it stays around the same level as the baseline for the rest of the 30 years period.

Figure 7: Inequality of equivalised consumption

Source: Authors' calculations using simulated data.

Notes: Net taxes projected based on UKMOD data generated for 2017, plus imputed indirect taxes and duties, plus simulated direct taxes on equivalised consumption, less simulated contributory state pensions. Simulated counterfactual (1) omits indirect taxes and duties, and includes a direct tax on all (equivalised) consumption of 15%. Simulated counterfactual (2) is the same as (1), but also omits income taxes from UKMOD data generated for 2017, and assumes a direct consumption tax rate of 41.3 per cent. Simulated counterfactual (3) is the same as (2), but simulates direct consumption taxes subject to a tax-free threshold on equivalised consumption worth £100 per week in 2017, growing at 2 per cent per annum, and a tax rate on all other consumption of 78 per cent. Tax rates on equivalised consumption adjusted to obtain approximate budget neutrality over a 30-year simulated horizon. Tax-free threshold of counterfactual (3) adjusted to obtain approximate distributional neutrality of adult equivalised consumption over a 30-year simulated horizon.

In summary: the counterfactual scenarios have the designed effects of maintaining revenue and distribution neutrality, by and large. However, there are some moderate variations over time, perhaps the most significant of which is rising inequality even in the factual. The initial decrease in taxes reflects the Covid-19 pandemic and recent declines in productivity, which also contribute to rising inequality. Future policy will need to address this issue through progressive tax and benefit schedules.

8.3. Behavioural effects

This section reports the behavioural effects of the three simulated policy counterfactual described in section 7.3. Results depict the difference between the simulation in question and the base simulation for the 1999 birth cohort. Dynamic optimisation of behaviour over the lifetime typically results in somewhat noisy profiles over the course of life. Aggregating into age-groups or smoothing would provide more pleasing plots. However, here we have decided to abstract from this issue.

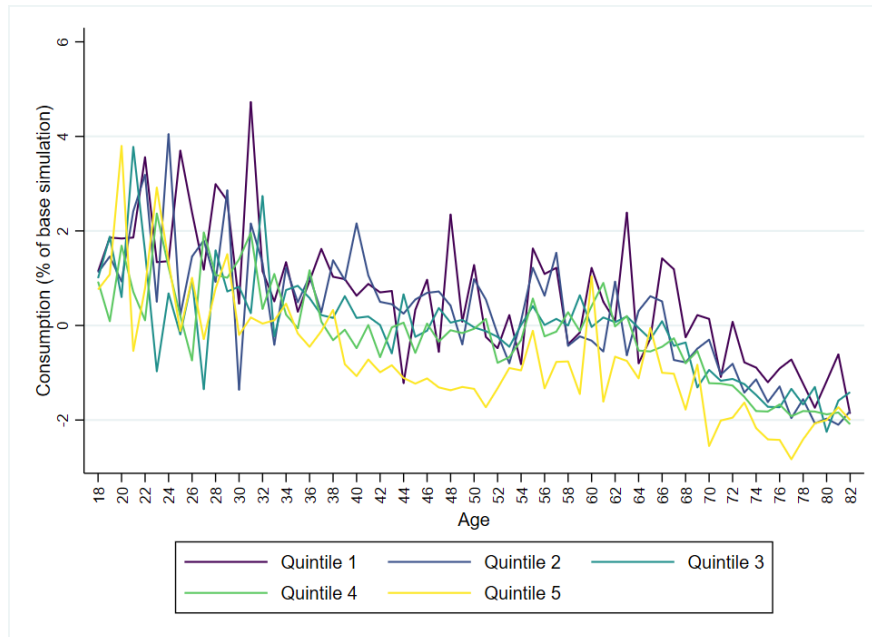
8.3.1. Simulation 1: Replacing VAT and duties with a flat-rate direct consumption tax

Replacing simulated VAT and duties (indirect consumption taxes) with a direct tax on consumption of 15 per cent has minor impact on simulated profiles. Consumption increases marginally – less than £10 per week – compared to the base at early years of life for all quintiles (Figure 8A). From the age of 40, there is a decrease in consumption for the top quintile of the income distribution. For the rest of the income distribution the decline is less pronounced and occurs later in life, at around the age of 65, which is around the time individuals leave the labour market into retirement. Consumption effects, measured as percentage of consumption projected under the base simulation, vary mainly within a band of 1 per cent (± 1 per cent), highlighting the minimal differences with the base simulation (Figure 8).

Figure 8: Consumption effects of replacing VAT and duties with direct tax on aggregate consumption; cohort born in 1999, by lifetime equivalised income quintile



Panel A: consumption effects in £ per week

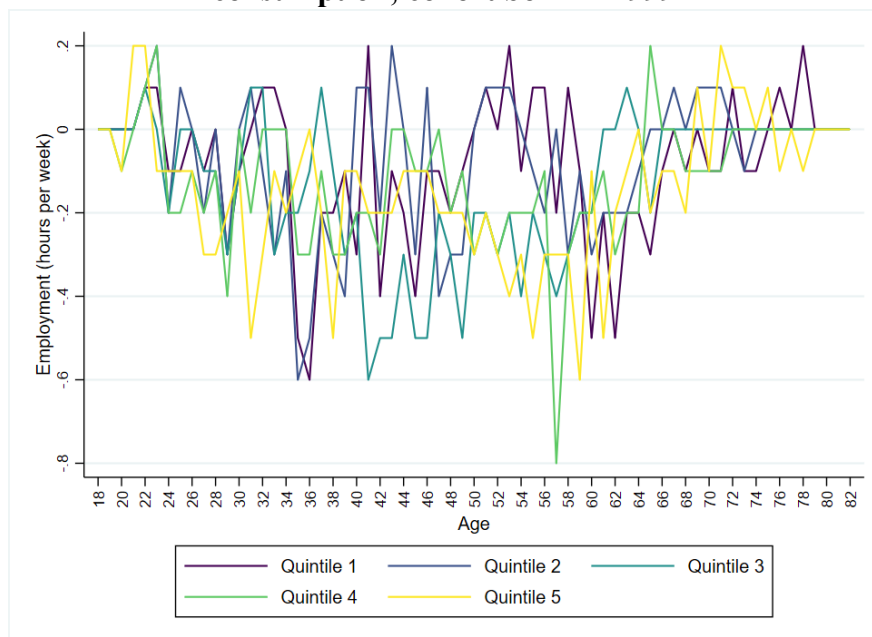


Panel B: consumption effects as percentages of base simulation

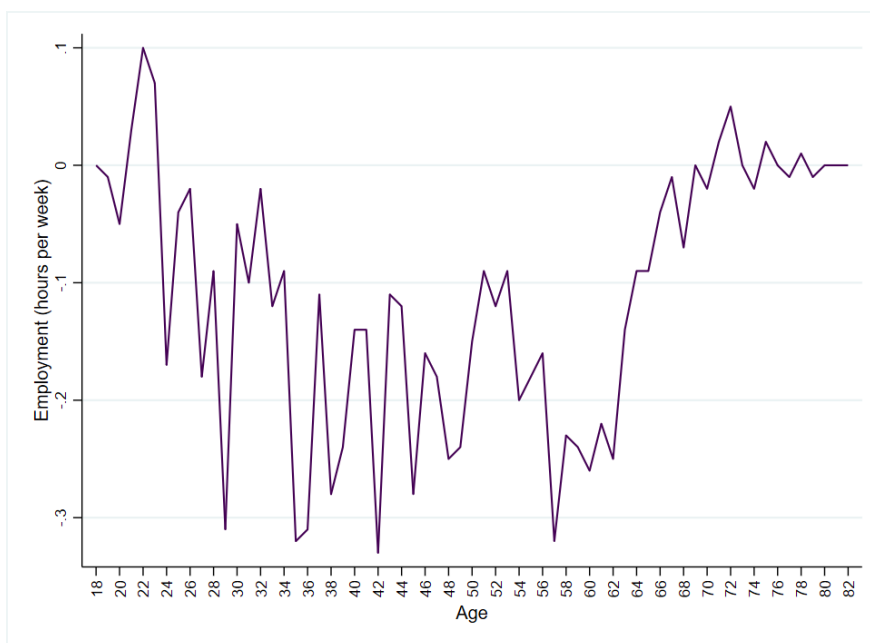
Source: Authors' calculations using simulated data.

Notes: Figure displays statistics evaluated by subtracting quintile averages evaluated for a base policy environment designed to capture tax and benefits policy applicable in the UK in 2017 from the same statistics calculated from a counterfactual policy environment that is identical to the base environment except that it replaces simulated indirect taxes and duties with a direct tax on all (equivalised) consumption of 15 per cent. The two policy environments are approximately budgetary neutral over a 30-year simulation horizon between 2017 and 2046. Population quintiles evaluated on lifetime equivalised disposable income projected under the counterfactual simulation.

Figure 9: Employment effects of replacing VAT and duties with direct tax on aggregate consumption; cohort born in 1999



Panel A: lifetime equivalised income quintiles



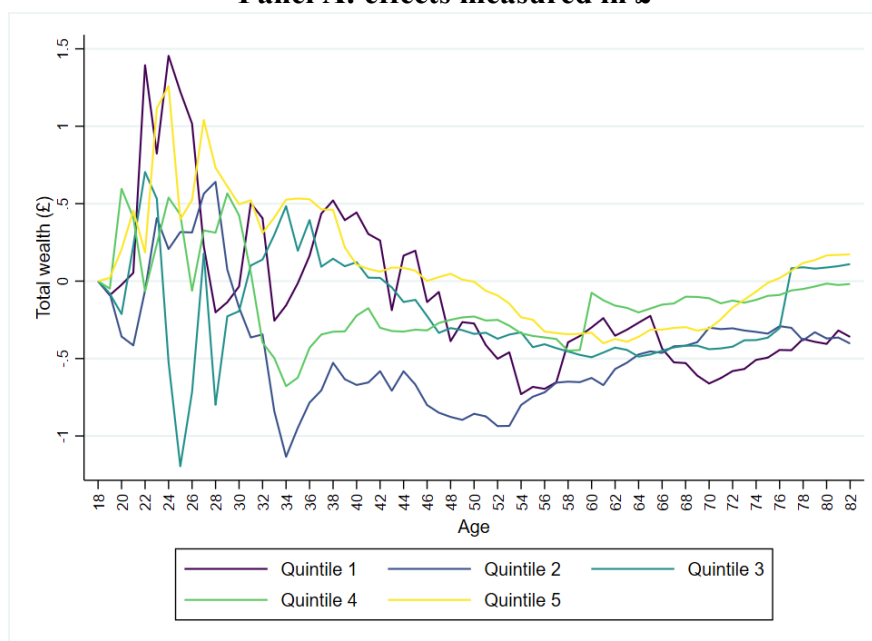
Panel B: population averages

Source: Authors' calculations using simulated data.

Notes: Figure displays statistics evaluated by subtracting quintile averages evaluated for a base policy environment designed to capture tax and benefits policy applicable in the UK in 2017 from the same statistics calculated from a counterfactual policy environment that is identical to the base environment except that it replaces simulated indirect taxes and duties with a direct tax on all (equivalised) consumption of 15 per cent. The two policy environments are approximately budgetary neutral over a 30-year simulation horizon between 2017 and 2046. Population quintiles evaluated on lifetime equivalised disposable income projected under the counterfactual simulation.

Employment decreases on average for all quintiles (Figure 9A), but the decrease is very marginal relative to a standard 35 hour working week (bearing in mind that this standard does not apply to a number of professions and to those on fractional employment contract). Overall, employment reduces by around 7 minutes, on average, and for people aged 18-65 it decreases by 9 minutes, on average (Figure 9B).

Figure 10: Wealth effects of replacing VAT and duties with direct tax on aggregate consumption; cohort born in 1999, by lifetime equivalised income quintile



Source: Authors' calculations using simulated data.

Notes: Figure displays statistics evaluated by subtracting quintile averages evaluated for a base policy environment designed to capture tax and benefits policy applicable in the UK in 2017 from the same statistics calculated from a counterfactual policy environment that is identical to the base environment except that it replaces simulated indirect taxes and duties with a direct tax on all (equivalised) consumption of 15 per cent. The two policy environments are approximately budgetary neutral over a 30-year simulation horizon between 2017 and 2046. Population quintiles evaluated on lifetime equivalised disposable income projected under the counterfactual simulation. Total wealth disaggregated in the model between pension, housing, and other wealth.

Effects on wealth of the substitution of the indirect consumption taxes with a direct tax of 15 per cent are more pronounced in level for the top quintile of the income distribution (Figure 10A). Despite the large differences in level, Figure 10B shows that wealth effects, measured as

percentage of wealth projected under the base simulation, typically vary within a band of 1 per cent (+/-1 per cent), corroborating once again the marginal differences in the behavioural responses with the base simulation.

8.3.2. Replacing VAT, duties and (direct) income taxes with a flat-rate direct consumption tax

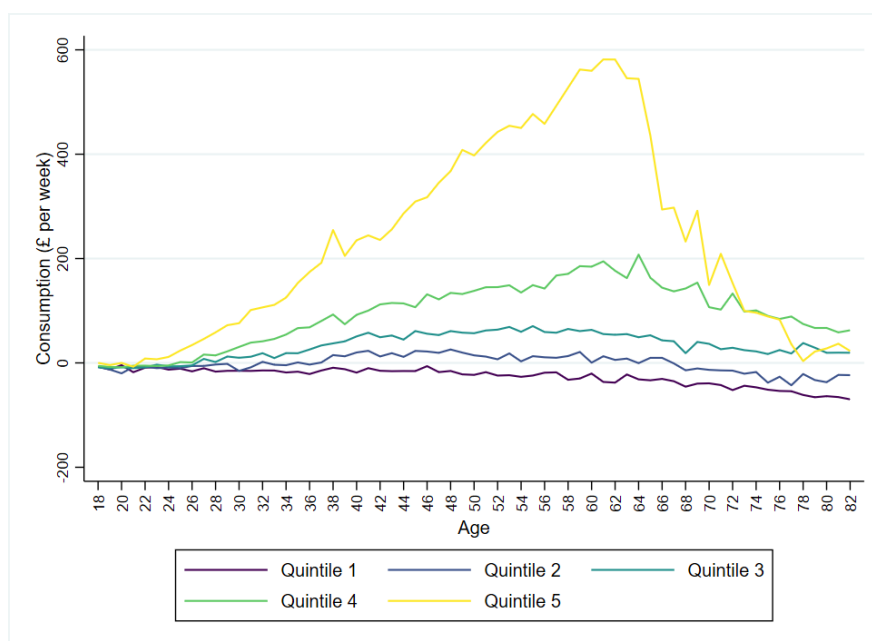
Replacing indirect consumption taxes, i.e. VAT and duties, and income taxes with a flat-rate direct tax on consumption of 41.3% is disproportionately favourable to higher lifetime income individuals.

As a result of removal of progressive direct income taxes, inequality of equivalised consumption increases significantly as expected (Figure 11A and Figure 11B). This increase in inequality reflects distinctions in projected lifetime profiles. The direct consumption tax depresses consumption by a widening margin over age for people at the lowest quintile of the lifetime income distribution. Conversely, consumption increases for those at the highest quintile, peaking at early 60s, with people consuming almost £600 more per week compared to the baseline projection (Figure 11A). Over the lifetime projection, the bottom quintile suffers a reduction of consumption of around 10 per cent, on average, while the highest quintile experiences an increase of approximately 20 per cent, on average (Figure 11B).

Labour supply increases in this scenario, as employment increases throughout the distribution, with higher incentives for working towards the lower quintiles (Figure 12A). This is an outcome of the withdrawal of progressivity, but as discussed earlier, this also contributes to sharp increase in inequality. On average, there is an increase in the number of hours worked of around 3 hours per week per adult between the ages of 18 and 65 (Figure 12B). The effects on consumption and employment are both sharply distinct from the first counterfactual scenario.

Figure 13A indicates that savings increased significantly for all but the bottom lifetime income quintile. The effects are strongest at the top of the distribution until age 55, after which wealth effects dampen responses of the most affluent. At the peak, individuals in the top 3 quintiles tend to accumulate just under 30 per cent more under the flat-rate consumption tax (Figure 13B).

Figure 11: Consumption effects of replacing indirect consumption and income taxes with a flat-rate direct tax on consumption; cohort born in 1999, by lifetime equivalised income quintile



Panel A: consumption effects in £ per week



Panel B: consumption effects as percentages of base simulation

Source: Authors' calculations using simulated data.

Notes: Figure displays statistics evaluated by subtracting quintile averages evaluated for a base policy environment designed to capture tax and benefits policy applicable in the UK in 2017 from the same statistics calculated from a counterfactual policy environment that is identical to the base environment except that it replaces simulated indirect taxes and duties and income taxes with a direct tax on all (equivalised) consumption of 41.3 per cent. The two policy environments are approximately budgetary neutral over a 30-year simulation horizon between 2017 and 2046. Population quintiles evaluated on lifetime equivalised disposable income projected under the counterfactual simulation.

Figure 12: Employment effects of replacing indirect consumption and income taxes with a flat-rate direct tax on consumption; cohort born in 1999



Panel A: lifetime equalised income quintiles

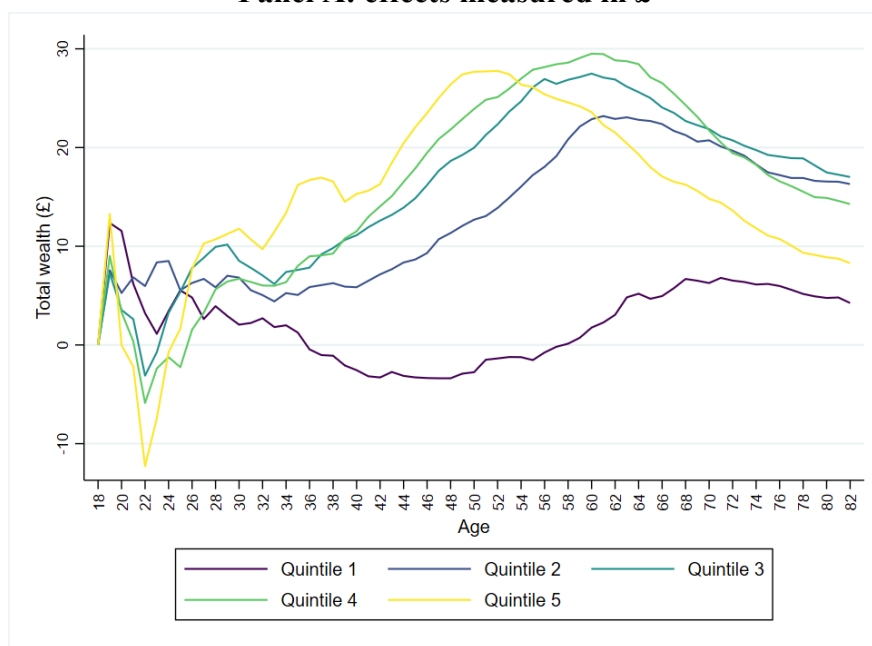
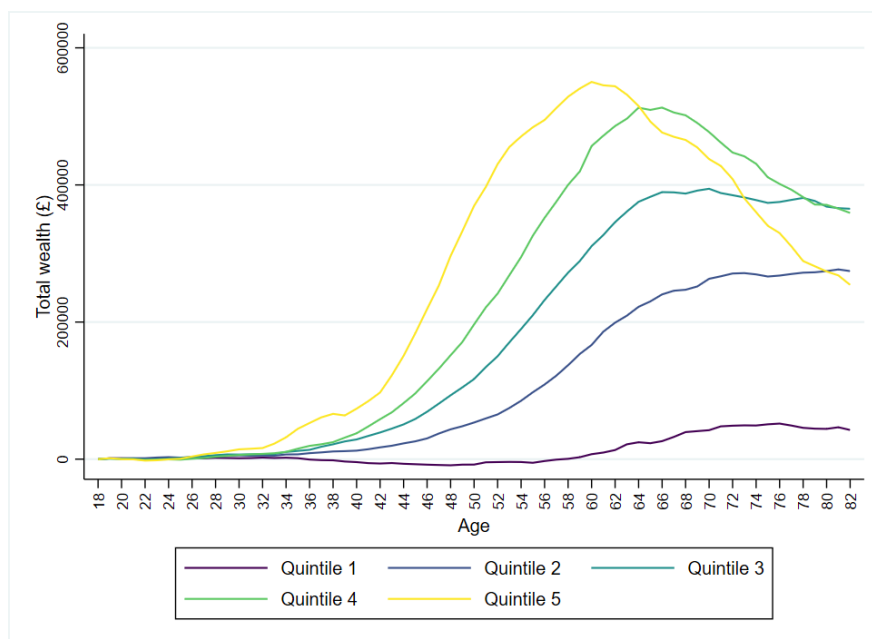


Panel B: population averages

Source: Authors' calculations using simulated data.

Notes: Figure displays statistics evaluated by subtracting quintile averages evaluated for a base policy environment designed to capture tax and benefits policy applicable in the UK in 2017 from the same statistics calculated from a counterfactual policy environment that is identical to the base environment except that it replaces simulated indirect taxes and duties and income taxes with a direct tax on all (equalised) consumption of 41.3 per cent. The two policy environments are approximately budgetary neutral over a 30-year simulation horizon between 2017 and 2046. Population quintiles evaluated on lifetime equalised disposable income projected under the counterfactual simulation.

Figure 13: Wealth effects of replacing indirect consumption and income taxes with a flat-rate direct tax on consumption; cohort born in 1999, by lifetime equivalised income quintile



Source: Authors' calculations using simulated data.

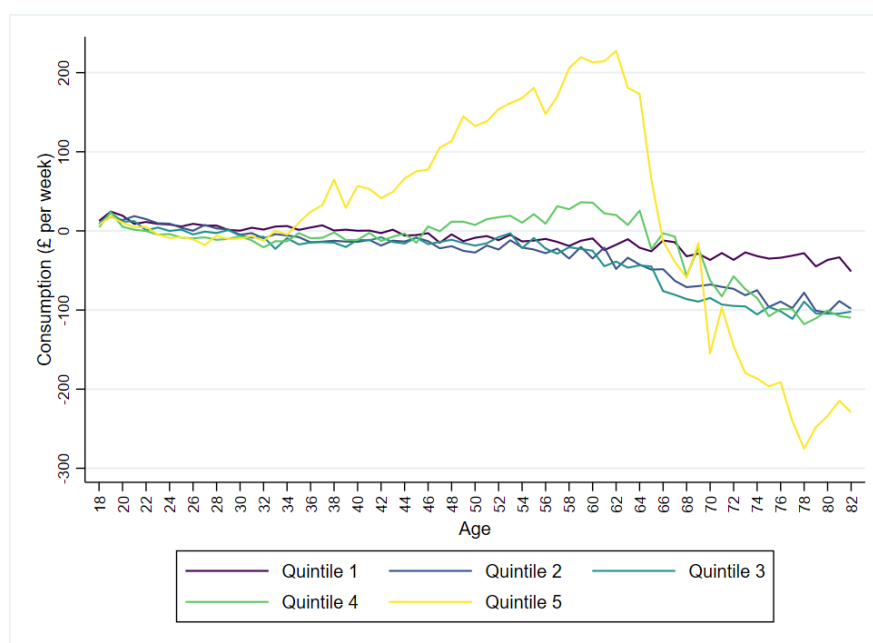
Notes: Figure displays statistics evaluated by subtracting quintile averages evaluated for a base policy environment designed to capture tax and benefits policy applicable in the UK in 2017 from the same statistics calculated from a counterfactual policy environment that is identical to the base environment except that it replaces simulated indirect taxes and duties and income taxes with a direct tax on all (equivalised) consumption of 41.3 per cent. The two policy environments are approximately budgetary neutral over a 30-year simulation horizon between 2017 and 2046. Population quintiles evaluated on lifetime equivalised disposable income projected under the counterfactual simulation. Total wealth disaggregated in the model between pension, housing, and other wealth.

8.3.3. Replacing VAT, duties and (direct) income taxes with a progressive direct consumption tax

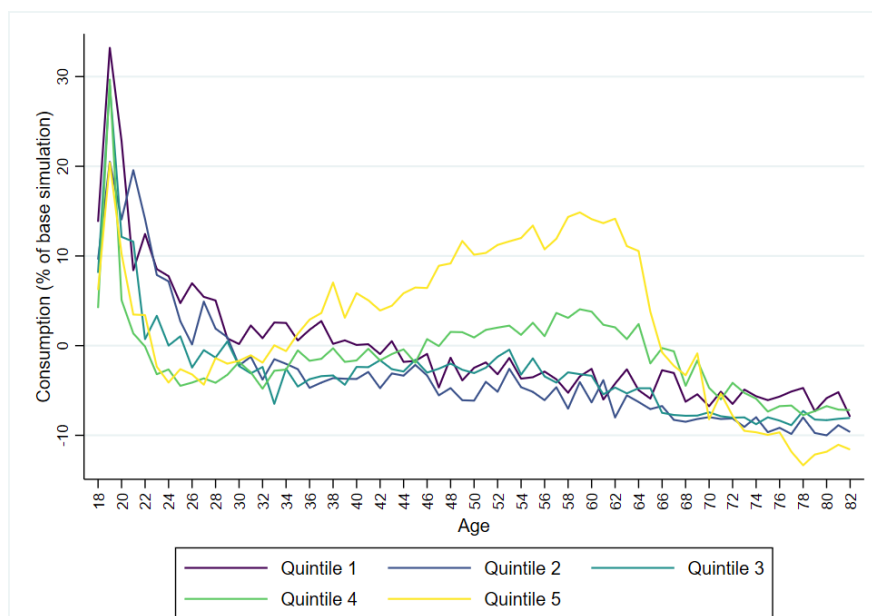
Finally, we turn to the behavioural responses of replacing indirect consumption taxes and direct income taxes with a progressive consumption tax, that is both broadly budgetary neutral and distributionally neutral relative to the base simulation.

Consumption is higher early in life, and lower later in life, with some evidence that individuals with higher lifetime income also benefit from higher consumption late in their working life (Figure 14). For instance, Figure 14A shows an increase in consumption just over £200 per week for the 5th quintile at late 50s, early 60s. Similarly, but to a lesser degree, consumption increases by around £35 per week for the 4th quintile at the same age. In terms of percentage of the base simulation, the increase is more pronounced early in life for the lower quintiles, e.g. 33 per cent for the lowest quintile and 20 per cent for the highest quintile at age 19. After the working life age, on the contrary, the decrease is more pronounced at the top of the income distribution, with a decrease of 13.3 per cent and 4.7 per cent for the 5th and 1st quintiles, respectively, at age 78 (Figure 14B). Against the context of consumption increasing over age in the baseline (Fig. 5), this evidence points towards better consumption smoothing over the lifetime.

Figure 14: Consumption effects of replacing indirect consumption and income taxes with a progressive direct tax on consumption; cohort born in 1999, by lifetime equivalised income quintile



Panel A: consumption effects in £ per week



Panel B: consumption effects as percentages of base simulation

Source: Authors' calculations using simulated data.

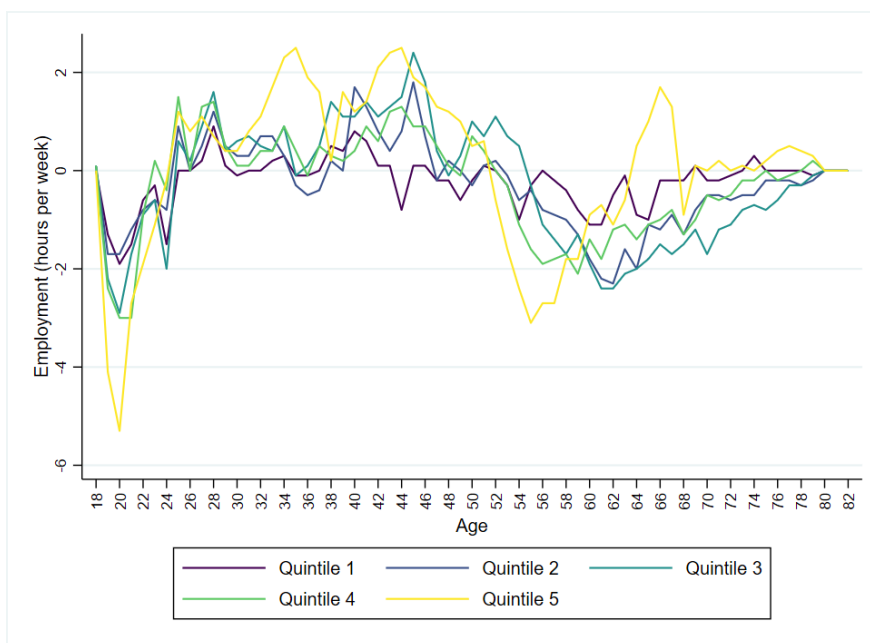
Notes: Figure displays statistics evaluated by subtracting quintile averages evaluated for a base policy environment designed to capture tax and benefits policy applicable in the UK in 2017 from the same statistics calculated from a counterfactual policy environment that is identical to the base environment except that it replaces simulated indirect taxes and duties and income taxes with a direct tax of 78 per cent on all (equivalised) consumption in excess of a threshold equal to £100 per week in 2017 indexed at 2 per cent. The two policy environments are approximately budgetary neutral over a 30-year simulation horizon between 2017 and 2046. Population quintiles evaluated on lifetime equivalised disposable income projected under the counterfactual simulation.

In the case of a progressive consumption tax, employment effects are mixed. Figure 15A shows that employment is weakened early and late in the working life, offset by an increase in hours worked during prime working years (age 25 to 55). These shifts in employment incentives are more pronounced at the top of the lifetime income distribution. Presumably, progressivity in consumption taxes allows young persons enhanced option to wait for appropriate good jobs and the elderly to enjoy retirement. Looking at population averages, one sees that these shifts are also smaller in scale than under the flat-rate consumption tax (scenario 2) and vary within a band of +/- 1.5 hours per week (Figure 15B).

Figure 16 indicates broadly similar effects on wealth of the progressive consumption tax to those projected under a flat-tax rate consumption tax (Scenario 2). However, at the bottom of the distribution there is more consistent accumulation of wealth as well as less drawdown at higher ages (Figure 16A). This implies reduced inequality across generations through bequests, which is quite different from Counterfactual 2, even if the effects are relatively small. The minimum threshold for tax payments allows the lowest lifetime income quintile to respond to the stronger savings incentives associated with the progressive consumption tax. Individuals in

the bottom quintile tend to accumulate just over 15 per cent more later in life under the progressive consumption tax. Despite that, savings incentives disproportionately benefit higher lifetime income individuals.

Figure 15: Employment effects of replacing indirect consumption and income taxes with a progressive direct tax on consumption; cohort born in 1999



Panel A: lifetime equivalised income quintiles



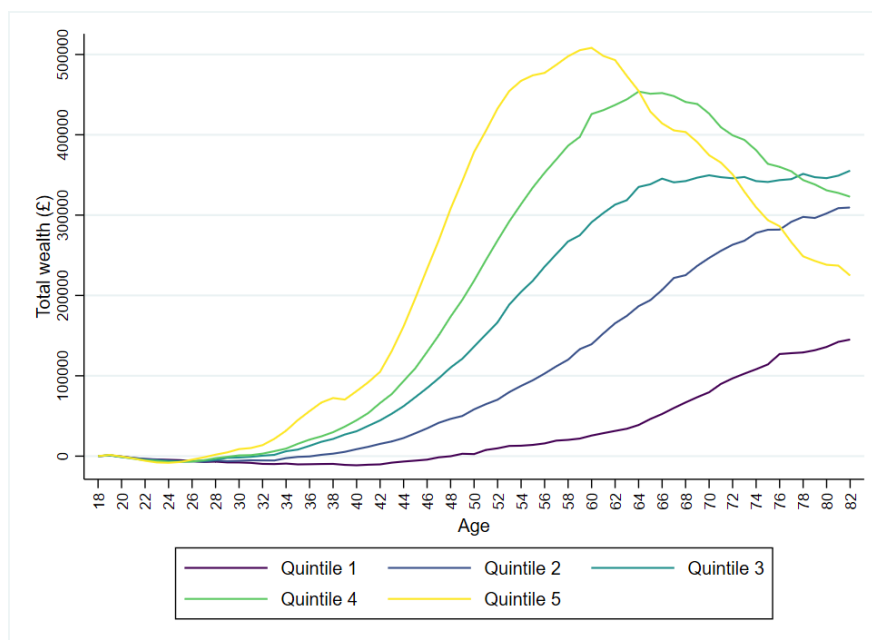
Panel B: population averages

Source: Authors' calculations using simulated data.

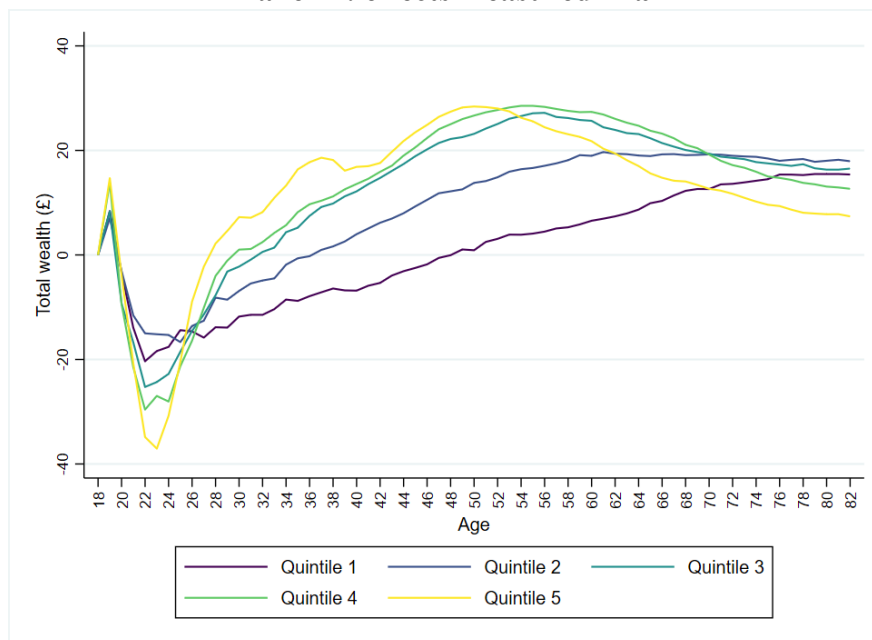
Notes: Figure displays statistics evaluated by subtracting quintile averages evaluated for a base policy environment designed to capture tax and benefits policy applicable in the UK in 2017 from the same statistics calculated from a counterfactual policy environment that is identical to the base environment except that it replaces simulated indirect taxes and duties and income taxes with a direct tax of 78 per cent on all (equivalised) consumption in

excess of a threshold equal to £100 per week in 2017 indexed at 2 per cent. The two policy environments are approximately budgetary neutral over a 30-year simulation horizon between 2017 and 2046. Population quintiles evaluated on lifetime equivalised disposable income projected under the counterfactual simulation.

Figure 16: Wealth effects of replacing indirect consumption and income taxes with a progressive direct tax on consumption; cohort born in 1999, by lifetime equivalised income quintile



Panel A: effects measured in £



Panel B: effects as percentages of base simulation

Source: Authors' calculations using simulated data.

Notes: Figure displays statistics evaluated by subtracting quintile averages evaluated for a base policy environment designed to capture tax and benefits policy applicable in the UK in 2017 from the same statistics calculated from a counterfactual policy environment that is identical to the base environment except that it replaces simulated indirect taxes and duties and income taxes with a direct tax of 78 per cent on all (equivalised) consumption in excess of a threshold equal to £100 per week in 2017 indexed at 2 per cent. The two policy environments are

approximately budgetary neutral over a 30-year simulation horizon between 2017 and 2046. Population quintiles evaluated on lifetime equivalised disposable income projected under the counterfactual simulation. Total wealth disaggregated in the model between pension, housing, and other wealth.

Overall, in terms of policy design, the first point to make is that all three counterfactuals achieve their respective neutrality objectives – revenue neutrality (all three scenarios) and distribution neutrality (Scenarios 1 and 3). The main point of comparison between them lies in the consumption and work incentives that they offer over the life course. Here, Counterfactual 3 (with indirect consumption and direct income taxes both replaced by a more progressive, direct consumption tax) presents some clear advantages over the other two. It (1) enhances lifetime consumption and smooths the trend over the life cycle, (2) allows flexibility of work, and (3) enhances wealth, including bequests.

Also, clearly, Counterfactual 2 is the option with the greatest drawbacks. Replacing progressive direct income taxes with direct fixed-rate consumption taxation harms the poor severely and exacerbates inequality. Replacing indirect consumption taxes with direct fixed-rate consumption tax has very few effects, even if this reform would be the easiest to implement.

For the purposes of this analysis, it is important to reiterate that at the outset all three counterfactual scenarios are intended to have distributional neutrality, which means that none of them is designed to change the inequality of the base simulation. If any given society decides it wishes to reduce the level of inequality, then consumption taxes can be designed in such a way as to reduce inequality.

9. Conclusion

This study focuses on different ways of taxing consumption. It explores how varied types of consumption tax could be designed and implemented, and how the transition from the current income taxes and indirect consumption taxes such as Value Added Tax (VAT) to a direct, progressive consumption tax (PCT) could be managed. The report covers different models with varied tax rates, questions of implementation and implications for households across the income distribution.

Our research develops a new empirical evidence base for understanding the distributional effects of introducing a direct, progressive consumption tax. We analyse data that covers approximately 40,000 individuals (aged 18 or above) from about 20,000 households and this data is representative of the entire UK population. Using our own household-level microsimulation model, we compare three types of PCT over a 30-year simulated time horizon: (1) replacing simulated VAT and duties (indirect taxes on consumption) with a direct tax on consumption; (2) replacing indirect consumption taxes and direct income taxes with a flat-rate direct consumption tax; and (3) replacing indirect consumption taxes and direct income taxes with a direct, progressive consumption tax.

We find that (3) – a direct, progressive consumption tax – has several advantages compared with (1) and (2). The first advantage is that such a tax supports higher consumption early in life when households tend to have lower incomes but higher needs, for example the costs of housing (renting or mortgages) and child-rearing and childcare. The second advantage is the reduction in hours worked before the age of 25 and from the age of 55 onwards. While this means increased hours during prime working years between the ages of 25 and 55 (about 1.5 hours more per week), it does mean greater flexibility between labour and leisure at the start of working life and before retirement. The third advantage is that the minimum threshold for tax payment (£100 per week) allows households in the bottom 20 per cent of the income distribution to respond to savings incentives and increase their assets while also benefitting from bequests at prevailing rates of inheritance tax.

Introducing a progressive, direct consumption tax raises a number of transition issues, such as whether it would apply in the same way to imported goods and services, how to avoid double taxation for pensions and registered assets and how to address differential capital taxation (e.g.

corporate capital vs housing and inherited capital). One way of dealing with these transition issues is to phase in gradually a progressive, direct consumption tax, which would help people who maintain a high level of consumption from inherited capital. That is because moving from one tax system to another will change assets value, imposing a burden on wealth accumulated before the reform and on the generation who holds the capital at the time. Another way is to allow for exemptions, especially tax-free thresholds – and it is of course possible to raise the threshold from £100 per week to higher levels.

While the benefits of a progressive, direct consumption tax are clear, it is also the case that such a system has drawbacks, such as a long transition, the difficulty of distinguishing different kinds of income and expenditure (e.g. inheritance) and questions related to cross-border movements of goods and services. But at a time of increasing income and asset inequality, introducing a direct, progressive consumption tax would help poorer households consume more tax-free, have greater incentives to increase hours worked and save more, all of which would reduce wealth disparities.

There are at least two areas for further research. One relates to how elements of progressive consumption taxation can be introduced into the existing tax system, not least in light of current policies aimed at cushioning the impact of the cost-of-living crisis – especially freezing the energy price cap or alternative options such as a variable energy price cap whereby the cost of energy per unit rises with usage (NIESR, 2022). The other area of further work concerns the question of political will and the role of policymakers: what levers are available to build sufficient support to adopt different forms of consumption taxes and what good practices can policymakers learn from to design, deliver, assess and possibly revise a system that taxes consumption in ways that reduce inequality.

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